ANALYSIS OF BUSINESS INCUBATORS IN UGANDA
A CASE STUDY OF UGANDA INDUSTRIAL RESEARCH INSTITUTE
(UIRI)

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FOREWORD

DECLARATION

I, Kadama Franco declare that this research report is truly my original work and it has never at any one time been submitted for award of a degree in any University and that the material is my original work.

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APPROVAL

This dissertation has been submitted for examination with my approval as the university Supervisor.

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Abstract

The study was carried out to analyze the growth of business incubators in Uganda. Business Incubation is a unique and highly flexible combination of business development processes, infrastructure and people, designed to support entrepreneurs, nurture and grow new and small businesses, products and innovations through the early stages of development and or change (Rice, 2002; Philips, 2002).

This study recommends the creation of a business incubator focused upon attracting large numbers of early stage entrepreneurs into an entrepreneur community- a hub- where business owners share communal space and partake in a well managed array of social and business interactions. This model, called Co-work incubation, serves early stage entrepreneurs with mostly opt-in communal space rather than offices or labs, then creates a cyclical flow of intimate and formal interaction between the community, entrepreneurs, investors, talent, researchers, existing business and innovators. And furthermore, the survey recommends that for incubators not to incur the burden of being wholly responsible for their cost. Incubation space can be designed to encourage peer-to-peer networking through the provision of communal spaces such as common rooms and canteens located in visible and accessible areas.

The study recommends that a new organization be developed under Ministry of trade Uganda, with representation from all of the community stakeholders including members of the entrepreneurial community to guide and fund this project. Such an organization would bring a fresh program to Uganda without any commonly held perceptions associated with any other organization and offer an opportunity to create a unique brand to attract and engage the entrepreneurial community with services clearly exclusive of existing programs and services.
CHAPTER ONE

1.0 Introduction

Business Incubation

Business Incubation is a unique and highly flexible combination of business development processes, infrastructure and people, designed to support entrepreneurs and nurture and grow new and small businesses, products and innovations through the early stages of development and/or change (Rice, 2002; Philips, 2002). There are several definitions and approaches to business incubators available in academic literature and many have been adopted by industry associations and policy makers in different countries reflecting local cultures and national policies. However, the general definition of business incubator by the National Business Incubation Association as mentioned on their website (www.nbia.org) is: Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable. A business incubator’s main goal is to produce successful firms that will leave the program financially viable and freestanding. The most common goals of incubation programs are creating jobs in a community, enhancing a community’s entrepreneurial climate, retaining businesses in a community, building or accelerating growth in a local industry, and diversifying local economies.

Despite the efforts to develop a general definition for business incubation, there are still a variety of models of business incubators. In business incubation, there is some degree of Government, Academia and industry involvement (Chandra, 2007). The most common classification of business incubators is based on funding. There are those that are: (i) public funded such as those set up by government agencies in science/technology/business parks, research institutions and universities (ii) privately funded such as those in privately run organizations and enterprises. Recent studies introduced the mixed-models of business incubators such as public-private partnerships incubators (Lalkaka, 2000).

The term ‘incubator’ was derived from the fundamental meaning of the term: The artificial nurturing of the chicken egg in order to hatch them faster in a sheltered environment. The same hatching concept is applied to the incubating of companies; it speeds up new ventures’ establishments and increases their chances of success. An incubator thus hatches new ideas by providing new ventures with physical and intangible resources (Becker and Gassmann, 2006).
Business incubation concept rests on the argument that if weak but promising new businesses with a potential of growing into successful ventures can be identified at an early stage and helped, failures, loss of resources can be reduced and more ideas can be developed (Hamdani, 2006). Business incubation originated in the U.S in the late 1950s in an effort to re-use abandoned or underutilized buildings, create wealth and employment and contribute to local and regional economic development (Wiggins and Gibson, 2003; Hackett and Dilts, 2004). However, the concept has evolved over time contrary to what was originally claimed. Incubators are of basic importance in the process of establishing links between research and business. They provide support services to start-up firms, “temporarily”; enabling young entrepreneurs with a scientific background to build up their business management know-how and develop their innovative businesses. Incubation takes place in both physical and virtual incubators. The later use the internet to provide support services to the enterprises, which could not be located in the limited physical space available for start-ups. Across the incubator movement, the management problems of incubator clients are met with the delivery of a variety of value-added management services. The driving force (in incubator programs) is the supply of expertise, capital and support that comes from assistance activities directed towards filling the voids in entrepreneurs’ abilities (Duff, 1994).

1.1 Study Problem
Phan et al. (2005) acknowledged incubator development as one of the main prongs of business incubator-incubation research, alongside research done at the incubatee level, entrepreneur level, and system level. Research suggests that incubator level research involves issues that generally relate to the institutional aspects of the incubator; for example, profile of incubators, examination of the physical constitution of incubators, benefits of co-locating within incubators, types of services at the incubators, best practices of business incubators and critical elements of success of the incubators. Extensive incubator level research has been undertaken with the purpose of profiling the incubator types according to their objectives, services, and facilities offered and their role in enhancing economic development. Among the studies that have been conducted at the incubator level, Allen and Rahman (1985) studied positive environment for entrepreneurs within incubators and Cooper (1985) investigated the role played by incubator organizations in promoting growth-oriented firms. Both studies discussed incubator characteristics and the
relationship between incubators and small firms. Similar-themed studies were also conducted by Carroll (1986) and Martin (1997) who examined topics including business incubator life cycle, types of funding available for incubators, benefits of incubation, and how incubators play a role in developing new enterprises. Another key area of investigation was undertaken by Tornatzky, Batts, McCrea, Lewis and Quittman (1996) who suggested that business incubation is an effective development tool and requires modest investment while providing excellent return on investment to regional economies.

Despite extensive research conducted on business incubation, the literature suggests that limited academic research on incubation development in Uganda has been undertaken and even less so on SME incubators. Information regarding business incubation in Uganda is, to date, primarily descriptive, originating from consultant survey reports and government white papers, and provides a rather narrow perspective on the incubation system. This research fills this gap and provides a response to the Government of Uganda concerning incubator operators and incubatees improving their knowledge and practices regarding the incubation process and management.

1.2 Purpose and Objectives

The major purpose of this research was to analyze the growth of business incubators in Uganda. Specific Research Objectives:

- To define and understand the concept of business incubators in Uganda.
- To study the historical overview trend of business incubators worldwide in respect to industrial development and government support.
- To identify the different types of business incubators in Uganda.
- To study the rationale for selection in business incubators.

1.3 Research Questions:

- What is business incubation?
- What are the different classifications of business incubators?
- What are the basic services offered by Incubators in Uganda?
- What are the selection criteria/strategies for choosing business incubators?
1.4 Significance of the Research
The outcomes of this research are significant for current and future entrepreneurship research, especially in the area of business incubation, as it provides empirical analysis of the components that influence SME business incubation performance in Uganda.

Findings from this research allow understanding of better incubation management practices leading to possible generation of more sophisticated Business start ups with greater potential for growth and sustainability, by the incubators.

1.5 Scope
1.5.1 Conceptual
This paper analyzed the growth of business incubators in Uganda. A case of Uganda Industrial Research Institute (UIRI).

1.5.2 Geographical
The study was conducted in Kampala district where UIRI has its headquarters situated in Nakawa Division, Kampala and also focus on Start ups and affiliates.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction:

Business incubators have proven to be an economic development tool for the communities they serve. Since 1980, incubated companies have created over 250000 jobs, thereby increasing the tax base, occupying additional commercial real estate space, contributing to local business infrastructures and creating even more jobs in other industry sectors (Wiggins & Gibson, 2003).

The first business incubator is known to be established in 1959, in Batavia, New York. In the following decades, many more incubator initiatives followed. To illustrate the growth in the number of business incubators: in the year 1980, there were only 12 incubators in the US, but in the year 1995, this number amounted to 600 (Wiggins & Gibson, 2003).

The main purpose of a business incubator is to create a favorable business environment for start-up firms to compensate for the lack of financial, knowledge and networking resources they generally have (Commission, 2002). The start-up firms in an incubator are in general provided with office space, shared equipment, administrative services and other business related services (Bøllingtoft, 2012). Nevertheless, as different generations of incubators have evolved (Bruneel, Ratinho, Clarysse, & Groen, 2012), the processes, organizational forms, the sector of operation and value-added elements in business incubation have significantly changed (Ghasemizad, Kazemi, & Abbasi, 2011). The classification of ‘business incubator’ is increasingly becoming an ‘overarching’ word, referring to a heterogeneous reality (Bøllingtoft & Ulhøi, 2005). In other words, business incubators are still defined as a homogenous entity, in spite for the fact that differences between several models are very significant (Bruneel et al., 2012).

2.2 Definition:

The term ‘incubator’ was derived from the fundamental meaning of the term: The artificial nurturing of the chicken egg in order to hatch them faster in a sheltered environment. The same hatching concept is applied to the incubating of companies; it speeds up new ventures’ establishments and increases their chances of success. An incubator thus hatches new ideas by providing new ventures with physical and intangible resources (Becker and Gassmann, 2006).
There is no one standard definition of business incubation. Nearly three dozen definitions are available in the academic literature and just as many have been adopted by industry associations and policymakers in different countries, reflecting local cultures and national policies. Germany, for example, targets innovative start-ups, while France and the Netherlands promote the university-incubator model (Aernoudt, 2003). Differences in definitions are largely in emphasis and detail although some are substantive. Furthermore, incubators go by different names in different countries. For example, in Canada, technology incubators sponsored by the National Research Council are called Industrial Partnership Facilities (Carty, 2003).

It is useful to begin with a description of activities the incubators perform. Merrifield (1987) provides a list. According to him, incubators:

- Provide secure, affordable, flexible, well equipped physical space in which the entrepreneur can work (often night and day).
- Provide readily accessible support services.
- Provide professional, business, management, and technical consulting together with access to seed and working capital, state and federal grants, loan financing, venture capital, and R&D partnership funding, public and private stock offering, and state equity financing.
- Are often associated with a university that can provide additional access to highly specialized, analytical, computing and test facilities in an array of disciplines.
- create an interactive community of entrepreneurs, academic and business interests that stimulate and encourage the fragile incubation process; and finally
- Often operate as a community bridge with the community, and established enterprises that seek a window on emerging technologies and may provide growth capital for equity participation.

Shared physical space and support services are the most common attributes found in nearly all of the definitions. Lately, provision of coaching, mentoring, IP (intellectual property) management, and networking has been receiving more attention (Hansen, et al, 2000), although there is some
confusion as to what exactly networking is in this context. Some authors use the term narrowly to refer to networking among incubatees within an incubator while others extend it to cover access to networks of outside experts, and in some cases it means networking between incubatees and graduates of an incubator.

A useful definition that covers almost all of the common elements of a vast majority of views is provided by Hackett and Dilts (2004a and b): “A business incubator is a shared office space facility that seeks to provide a strategic, value adding intervention system of monitoring and business assistance with the objective of facilitating the successful new venturing development while simultaneously containing the cost of their potential failure. It is important to keep in mind the totality of the incubator; it is a network of individuals and organizations.”

At the 1998 Helsinki workshop, a business incubator was defined as: ‘A place where newly created firms are concentrated in a limited space. Its aim is to improve the chance of growth and rate of survival of these firms by providing them with a modular building with common facilities (telefax, computing facilities, etc.) as well as with managerial support and back-up services. The main emphasis is on local development and job creation.’ This definition dates back to 1990 and in light of developments since then arguably places too much emphasis on physical aspects of incubator operations.

An alternative definition that highlights the other services offered by incubators is provided by the US National Business Incubation Association (NBIA): ‘Business incubation is a dynamic process of business enterprise development. Incubators nurture young firms, helping them to survive and grow during the start-up period when they are most vulnerable. Incubators provide hands-on management assistance, access to financing and orchestrated exposure to critical business or technical support services. They also offer entrepreneurial firms shared office services, access to equipment, flexible leases and expandable space — all under one roof.’

The definitions adopted by the UKBI and German ADT are similar. Whilst the provision of physical space for start-ups is again seen as a defining characteristic of incubators, equal
emphasis is placed on other aspects including, in the case of the UKBI, entrepreneur training, mentoring and visibility which are not mentioned in the NBIA definition:

‘Business Incubation is a dynamic business development process. It is a term which covers a wide variety of processes which help to reduce the failure rate of early stage companies and speed the growth of companies which have the potential to become substantial generators of employment and wealth. A business incubator is usually a property with small work units which provide an instructive and supportive environment to entrepreneurs at start-up and during the early stages of businesses. Incubators provide three main ingredients for growing successful businesses - an entrepreneurial and learning environment, ready access to mentors and investors, visibility in the marketplace.’

In contrast, the definition used by ELAN in France does not mention the physical attributes of an incubator at all and instead puts the objectives of promoting new startups and helping existing firms to expand at the centre of its definition. A somewhat similar approach – with an emphasis on the ‘output’ side of the business incubation process rather than ‘inputs’ - is adopted by EBN.

This goes further than immediate outputs and stresses the wider, territorially orientated mission of business incubators: ‘The European Community Business and Innovation Centres (EC BICs) – as they are officially known – are support organisations for innovative small and medium-sized businesses (SMEs) and entrepreneurs … operating in the public interest, they are set up by the principal economic operators in an area or region, in order to offer a range of integrated guidance and support services for projects carried out by innovative SMEs, thereby contributing to regional and local development.’

For the purposes of this review, we use Hackett and Dilts’ definition as:

“A business incubator is shared-office space facility that seeks to provide its clients (tenant companies) with a strategic, value-adding intervention system of monitoring and business assistance. The incubator can control and link resources that assist in the development of its clients’ new ventures and simultaneously helps contain the cost of their potential failure… When discussing the incubator, it is important to keep in mind the totality of the incubator. Specifically, as a firm not just an office building, infrastructure, and articles of incorporation, the incubator is not simply a shared-space office facility, infrastructure, and mission statement. Rather, the
incubator is also a network of individuals and organizations including the incubator manager and staff, incubator advisory board, client companies and employees, local universities and university community members, industry contacts, and professional service providers such as lawyers, accountants, consultants, marketing specialists, venture capitalists, angel investors, and volunteers.” (Hackett and Dilts, 2004:57).

Within this definition, we also further refine our focus on to incubation activities that are primarily aimed at supporting new ventures seeking to create value from technology, and which have high growth potential.

2.3 A historical overview Trend of business incubators:

As defined by the European Commission in 2002, the word incubator is broadly used to include a wide variety of organizations and initiatives, which strive to help entrepreneurs in developing business ideas from the start, to commercialization and eventually the launch and independent operation of new business ventures (Commission, 2002). This can range from University Technology Centers, to Virtual Incubators. The specific variety of different models in the incubation industry will be elaborated on in following paragraphs.

The first known business incubator dates back to 1959 (Batavia, New York). Charles Mancuso, a wealthy owner of several businesses, decided to buy a multi-storage building, which was unoccupied and required a great number of renovations in order to be restored for its original use. He divided the building into small spaces and to rented it out to small business owners. With the purpose of eventually having enough tenants in the building to create a positive return on his investment. The same incubator, which is called the ‘Patavia Industrial Center’ and still exists nowadays, provides over 1000 people with a workplace. It would turn out to be a revolutionary idea of Mancuso, as there are currently thousands of business incubators worldwide. Though, there is a wide variety of different models in different industrial sectors and with different institutional missions (Almubartaki, Al-karaghouli, & Busler, 2010). The spread of the concept of business incubation as is know today, dates back to the late 1970s and the early 1980s (Wiggins & Gibson, 2003). In Western, industrialized countries, industries had collapsed and there was a rapid rise in unemployment. A great need for a new economic development tool
emerged, to restore these down going sectors (Commission, 2002). Since the concept has been introduced, it is recognized as a powerful tool for building up entrepreneurial communities, stimulating local economic development and creating jobs.

Most of the incubators were non-profit partnerships with local communities. Most of these were connected to universities, with the aim of teaching students business skills and giving them the opportunity to take new technologies to the market. The underlying motive here, to foster development and create employment (Chinsonboon, 2000).

Apart from the connection of new ventures with the academic world in the form of a university partnership, the earlier established incubators were also established for efficient use of real estate. As a result of industry downturns, unoccupied properties were subdivided and rented out to new ventures as office space. These would in turn generate an appreciation of the real estate value, as aimed for in 1959 by Charles Mancuso. Lastly, business incubators have been set up by experienced entrepreneurs, to transfer their knowledge and experience and to create an efficient use of their financial resources (Wiggins & Gibson, 2003).

As incubators turned out to be an effective economic development tool, they have been extensively growing in numbers. From only 12 incubators in the US in 1980, to over 600 incubators in 1995 (Wiggins & Gibson, 2003). Worldwide, there was an estimated number of around 3000 incubators, about a decade ago (Commission, 2002). Even in the more developing regions like China, the number of business incubators is growing at a fast pace. From 1991 to 2008, the number has been growing more than 15-fold, from 43 to 674 business incubators (Rong, 2009).

The extensive growth in numbers of business incubators could only be realistic if there are clear signals of its success. Indeed, this is the case. In 2000, European business incubators were creating around 30000 new jobs per annum. Furthermore, these jobs are created at a public cost of around €4500 per job (Commission, 2002). These costs are considerably lower than the cost of other publicly funded schemes (Commission, 2002). Supporting these findings on a more global scale, research from China shows that start-up firms participating in business incubators have a 70% chance of survival, which is said to be much higher than in society. Additionally, it is measured that the total annual investment from public sources comprises only a very small part of the revenue made by tenant incubator firms (Rong, 2009).
2.3.1 Different institutional missions in the business incubator industry

As mentioned in the previous paragraph, the purpose of the first business incubator is to efficiently utilize empty real estate by occupying it with start-up firms. A positive return on investment in the property was made, by making sure that enough start-up firms were working in the property and were paying their monthly rent. However, as more people and governments became aware of the possible benefits for society, the business incubator was increasingly used by the public as a means to support economic development.

The first purpose of a business incubator, from both the perspective of the management and the start-up firms, is the provided infrastructure and the shared office resources. Low rent (or free) provision of office space is perceived as the most important decisive factor for tenant companies to enter a business incubator (Bruneel et al., 2012). Next to this, the management of the incubator has a ‘real estate provision’ motive to start, because especially in the earlier years of the business incubator, rental income was by far the highest source of income in the incubation industry. This is clearly illustrated by the story of Charles Mancuso.

The second purpose of a business incubator is the desired positive impact on economic development. Business incubators aim to stimulate economic development by promoting entrepreneurship, innovation, employment creation and growth. Reducing the risk of starting up a new business (especially in economically vulnerable times) should be mitigated to ensure continuing economic development (Aerts, Matthys sens, & Vandenbempt, 2007). The European Union has appointed the development of the incubation industry as a key component of regional development policy (Commission, 2002). Economic development through the incubator industry, is stimulated by new business formation, business stabilization and business expansion. In other words, people with a business idea can enter a business incubator to realize their idea. People with an existing small business can enter a business incubator to reduce their chance of failure. Lastly, people can enter an incubator to expand their small business to a higher number of employees (Almubartaki et al., 2010). Viable firms, profits, technology diversification and jobs are created through incubators. Although the net number of jobs created seems relatively small, the cost effectiveness of a business incubator in pursuing this goal is beneficial and certainly not insignificant (Dilts & Hackett, 2004).

Despite the fact that the largest share of the total number of business incubators is still funded from primarily public sources and is for a large part non-profit, the third purpose of the
incubation industry can be defined as creating a positive return on investment, or making a profit (Commission, 2002).

2.4 Different models in the business incubation industry

2.4.1 The ‘Business Incubator Continuum’ and another framework to classify business incubators

Business incubators are not easily comparable, because they are not a homogenous phenomenon. This fact was soon realized by (Allen & McCluskey, 1990), who have developed a framework in which they have distinguished between business incubators between different time ’generations’, namely the first, second and third generation business incubators. This framework distinguishes on a number of crucial areas in business incubators, such as the value proposition, the service offerings, their institutional mission, financing and business model. Next to the ‘Business Incubator Continuum’ of (Allen & McCluskey, 1990), another way to categorize different business incubators was developed by (Grimaldi & Grandi, 2005), who distinguished between ‘Public’ or ‘Private’ business incubators. Outside of these classification methods, several other models of business incubation have been identified and categorized. A ‘Networked Incubator’, a ‘New Economy incubator’, a ‘Bottom-Up Business Incubator’ and a ‘Business Accelerator’ are examples of more recently identified models, which will also be placed in the ‘BI continuum’ (Bøllingtoft & Ulhøi, 2005; Christiansen, 2009; Commission, 2002; Grimaldi & Grandi, 2005; Hansen, Chesbrough, Nohria, & Sull, 2000).

The ‘BI Continuum’ consists of three generations of business incubators. All types of incubators still exist next to each other, but time has shown a shift in value proposition, mission and structure of incubator programs. In short, there has been a shift from real estate provision and appreciation to for-profit enterprise development, as the main starting point of business incubators (Aerts et al., 2007).

The first generation of business incubators, which has started to emerge mostly in the 1980s, has focused its main value proposition on infrastructure. This infrastructure provided to the start-up firms, consists of office space rented out at favorable conditions and shared practical resources (Bruneel et al., 2012). Although this was the main feature provided by first generation
incubators, it is still at the core of the value proposition of all of today’s business incubators (Allen & McCluskey, 1990). First generation incubators focused on real estate appreciation and job creation. By providing incubator space at favorable conditions, the value of the building would eventually increase and jobs would be created. Together with the advantage of benefiting from economies of scale, start-up firms would get the opportunity to have cheap office space (Bruneel et al., 2012).

The second generation of business incubators has been identified in beginning the 1990s. During this decade, there was a growing need for a larger added-value than the original model, in the form of counselling, skills enhancement and networking services. The latter was provided to ease the start-up firms’ access to capital and professional external relationships (Commission, 2002). It is argued that the need for second generation incubators has been coming from a specific range of companies, namely the technology-intensive ones. As these often lack the business expertise, marketing knowledge and sales skills, the previously mentioned additional elements of the second generation filled up this need (Bruneel et al., 2012). The business incubator had become more than only a physical and practical arrangement for the start-up firms.

As the previous generation of business incubators has spread out during the 1990s, there is already a third generation of business incubators to be identified. This generation puts the emphasis on developing the network of the incubator and therefore the network of the tenant firms. The network possibilities within an incubator in the third generation are the main value proposition and it can provide start-up firms with access to potential suppliers, customers, investors and technological partners. (Bruneel et al., 2012). Also, the third generation of incubators tends to focus on start-up firms in the ICT- and High Tech sector (Dilts & Hackett, 2004). As the European Commission indicated in 2000, there was a large growth trend of third generation incubators, which were primarily for-profit and were focusing mainly on ICT and high-tech companies (Commission, 2002). These so called ‘New Economy Incubators’ seem to correspond to the third generation of incubators, as they were increasingly financed by private sources and had a for-profit mission (Commission, 2002). The third generation encompasses the philosophy that networking is the most essential element in successful business incubation (Hansen et al., 2000).
Figure 1: ‘The BI Continuum’

The above figure clearly summarizes the ‘Business Incubator Continuum’. As said, the first generation business incubators are mostly on the left side of the figure, where emphasis is put on the real estate aspect. On the right side of the figure are the second generation incubators, where the emphasis is put on business development and creation. However, the third generation can also adequately be placed in this figure. As emphasis is put on networking activities, both internally and externally, we can see that the third generation incubators are seen as collaborative (in the middle), where firm-firm collaboration and business network development are the most essential elements. As third generation incubators also value business development very highly, it can be concluded that this generation of incubators combines both ‘collaboration’ as well as ‘business development’ out of the ‘BI Continuum’.

Next to the ‘Business Incubator Continuum’, (Grimaldi & Grandi, 2005) have used a different, but simple way, to differentiate between different sorts of business incubators. This method is also used by the National Business Incubator Association (NBIA) in the US and will be worth considering, together with the ‘BI Continuum’ (Bøllingtoft & Ulhøi, 2005) (Almubartaki et al., 2010). Public incubators were the first sort of incubators and were primarily financed by government institutions and other public sources. Their primary mission was economic development, by reducing the costs of doing business through the provision of practical facilities and mostly tangible assets. Their revenues came from service- and rental fees of the participating start-up firms. Within this definition, the distinction between BIC’s (Business Innovation Centers) and UBI’s (University Business Incubators) is made. Conversely, Private incubators have become increasingly popular since the IT revolution around the year 2000. Speed to market, synergy, network and strategic positioning have become more important for specifically ICT and high-tech start-up firms (Chinsonboon, 2000).

These market developments have stimulated private, for-profit incubators to emerge. These business incubators asked start-up firms for a percentage of equity in their firm, with their main revenue being comprised of profits from these stakes in participating start-up firms. The ‘private incubators’ have put their focus on the rapid creation of new businesses (Grimaldi & Grandi, 2005).

2.4.2 Several other models of business incubation

In this paragraph, an attempt will be made to place other identified business incubator models, into the ‘BI Continuum’ framework of (Allen & McCluskey, 1990) and the BI classification of (Grimaldi & Grandi, 2005). The purpose of this is, to provide an accurate overview of the development of the business incubator industry.

2.4.2.1 The ‘Networked Incubator’

The first model that will be considered out of existing scientific research is the ‘networked incubator’. This model has been identified by (Hansen et al., 2000) and also more recently by (Bøllingtoft & Ulhøi, 2005). (Hansen et al., 2000) published their research on the incubation industry, consisting of an in-depth analysis of the leading incubators and a telephone survey amongst 169 incubators. This research has shown that the ‘networked incubator’ sets itself apart
from the more traditional initiatives and it was stated that is was therefore more likely to be successful.

Citing Hansen et al. (2000), the ‘networked incubator’ has emerged due to the rising need for access, as the internet economy is very much a network economy in which access and connections can help quickly launch businesses, increase traffic at web sites and has the ability to speed up the diffusion of technologies.

Out of the 169 incubators in the sample, only 25% provided the asset of organized networking. The provision of an organized network has been identified as the distinguishing feature and is the foundation for specifying a separate incubation model: ‘the Networked Incubator’. It enables start-up firms to establish partnerships with other start-up firms and external business connections quickly, placing them ahead of competitors in the market. The ‘Networked Incubator’ model emphasizes the dynamic working environment, with start-up firms constantly working together, and informal interactions of managing partners with participants (Bøllingtoft & Ulhøi, 2005). Also, resource needs from start-ups are pooled together, so that the management is able to obtain attractive deals from service providers.

In this way, the internal network is utilized to maximally exploit economies of scale. Lastly, an external network of established firms is maintained by the ‘Networked Incubator’, to be able to provide the tenant firms with relevant contacts in the industry. This internal and external network access benefits decision making processes and creates business opportunities of all kinds (Hansen et al., 2000) (Bøllingtoft & Ulhøi, 2005). In exchange for these benefits, the networked incubator mostly holds an equity stake in the portfolio companies, which is at the same time the main source of revenues.

The ‘networked incubator’ embodies two critical characteristics (Hansen et al., 2000):

- Networking is institutionalized, meaning that the mechanisms that foster targeted networking are actually in place, before participating start-up firms possibly need them. This facilitates organized and scalable networking, as the start-up firms are not dependent on the connections of a few managers of the incubator or the venture capital firm in question.

- A networking mechanism leads to preferential access for start-up firms, to certain business connections.
It is argued that the kind of organizational model, which exploits the entrepreneurial drive and network access to the maximum, while preserving the benefits of scale and scope, will be most successful in the ‘‘new economy’’ (Hansen et al., 2000). Due to a focus of internal and external networking, the inter-firm collaboration and the for-profit nature of this model, it can be concluded that there are significant similarities with the third generation incubator definition, previously provided (refer to Figure 1). Taking the classification of (Grimaldi & Grandi, 2005) into account, the ‘networked incubator’ shows most similarities with the ‘private incubator’, as defined in the first section of this chapter.

2.4.2.2 The ‘New Economy incubator’

The European Commission has also identified and classified a separate type of business incubator: the ‘new economy incubator’ (Commission, 2002). It is defined as a for-profit incubator system, especially accelerating the start and growth of ICT ventures. According to a survey from the Harvard Business School, 356 of this type of incubators were found in 2000. In the second half of the 1990s, the share of ICT ventures in the total of ventures in business incubators, has increased dramatically: from 1 out of 25 in 1994 to 20 out of 25 in 1999 (Commission, 2002). Two important characteristics of a ‘new economy incubator’ are its for-profit nature and industry focus: the ICT sector. The main purpose of ‘new economy incubators’ is not job creation, but the establishment of successful ventures and making a positive return on investment. Furthermore, the main sources of revenue are the percentage equity stakes the incubator partners hold in the participating start-up firms. Also, it is argued that ‘New Economy Incubators’ have an essentially virtual presence, because they have financial and business services as their core offerings (Commission, 2002).

The ‘New Economy Incubator’ model seems to be similar to the ‘Networked Incubator’ model, on several areas. These similarities are the business model of both types of incubators, the for-profit mission and the important role of provision of financial and business services (through networks) to start-up firms. Additionally, (Hansen et al., 2000) also described the fact that a large number of the ‘networked incubators’ is aimed at nurturing ICT-based ventures. Nevertheless, the European Commission did not emphasize the importance of organized networking in the ‘new economy incubator’, which is an important difference. This model, as emphasized seems to
correspond to the third generation of incubators the most (Allen & McCluskey, 1990). Furthermore, it shows the most correspondence with the private incubator classification of (Grimaldi & Grandi, 2005).

2.4.2.3 The ‘Bottom-Up business incubator’
Interestingly, the following model of incubation has been defined and published in the beginning of 2012, significantly more recent than the other publications about the incubation industry that have been considered till this point. As a result, a range of models are defined in this research paper, covering the period from the start of the ‘third generation’ incubators (2nd half of the 1990s) and the present. This enhances the completeness of the industry overview provided in this sub-question.

(Bøllingtoft, 2012) has identified the ‘Bottom-Up Business Incubator’. The reason for the chosen name, is that the identified incubators are all established and ran by the entrepreneurs themselves. In other words, these incubators are not supported in any way by either public or private funds. Hence, they do not pose a cost to society (Bøllingtoft, 2012). According to (Dilts & Hackett, 2004), the key characteristics of the incubator (co-location of businesses, shared services, management assistance and networking), are also present in the ‘Bottom-Up Business Incubator’. As emphasized in the research, the exit policies of bottom-up incubators are relatively similar to the traditional model, as the tenant firms can stay until they ‘outgrow’ the incubator space. The average stay of tenant firms in an incubator is around 3 years (Commission, 2002). However, apart from the difference in the way these incubators are financed and ran, there are some other significant differences compared to the other business incubators from different generations (Allen & McCluskey, 1990). The screening criteria of a ‘bottom-up business incubator’ are mostly based on the sector: the dominant choice is ICT, media and telecommunication. Next to this, the entrepreneurs should focus on collaboration instead of competition. In traditional incubators, screening and admission is mostly based on business plan evaluation (Bøllingtoft, 2012). Another significant difference is that the ‘Bottom-Up Business Incubator’ does not provide external specialist business services, but these are only provided internally through networking with other tenant firms. The amount of internal networking activity between tenant start-up firms, seems crucial to the model of the ‘bottom-up business incubator (Bøllingtoft, 2012).
The ‘Bottom-Up Business Incubator’ model can also be placed in the third generation of incubator, in the BI Continuum of (Allen & McCluskey, 1990). Furthermore, it best fits the definition of the private incubator in the classification of (Grimaldi & Grandi, 2005).

While attempting to view the same overall trend, researchers have given other names to the phenomenon. Hereby pointing at the increasing number of for-profit, high technology, network driven business incubators that has been established since the second half of the 1990s. This seems to be a notable trend in the incubator industry, since it is already going on for more than a decade. The widespread establishment of business incubators in general, has only started since the 1980s (Commission, 2002).

2.5 How business incubators create value:

How business incubators help transform a business proposal into a successful final outcome depends on how they are conceptualized. Over time, business incubation has been viewed as a tool of urban renewal, a community development program, a means of technology transfer, a commercialization mechanism and an enabling technology for entrepreneurship. However, their role as an entrepreneurship strategy has been consistently present and lately dominant in the literature (OECD, 1999), whether entrepreneurship means helping new or fledgling firms get established in designated areas for community development and urban revitalization or anywhere in the country.

Secondly, views on sources of value and their relative importance vary, depending on how their proponents see incubators bringing various activities together to transform a proposal into a deliverable outcome. In the very first formulations, the emphasis was entirely on factors internal to the incubator Campbell et al., 1985). Subsequently, interactions with other organizations, notably government, local community and research institutions were added (Smilor and Gill, 1986), and finally its value as part of the innovation continuum was explicitly recognized (Hisrich, 1988).
Business incubators add value in a number of ways, but their main value proposition is in their core function, which is to help new and fledgling ventures survive in the early stages of operations. Dynamic economies go through a process of continuous rejuvenation. New technologies replace the old ones.

New firms enter the market to test new ideas and products, driving out old that do not adapt to change. But launching a new firm requires human and capital resources and organizational, managerial, technological and marketing competencies to anticipate and deal with unforeseen needs and demands. Failure rates are high and sometimes costly. In Canada, two in three firms that started up during the 1990s closed down within the first five years; four in five did not make it past the tenth year (Statistics Canada, 2006).

While the process of creative destruction, as formalized in the evolutionary theories of economic growth, inheres in market economies, studies of innovation show that chances of an idea reaching fruition can be significantly improved through a formal process of screening and monitoring (Cooper, 1993), freeing resources that might otherwise be absorbed by unpromising ideas and devoting them to ideas that have a higher probability of making it to the market and succeeding there. Success is not guaranteed but the probability of success improves rather significantly.

As there are thousands of ideas floating around evaluating them for viability is a critical function. Once the entrepreneur decides to proceed with the idea, incubators can play a significant role in evaluating it and help the entrepreneur to carry it through to completion.

This value added role begins with identifying:

• Applicants that cannot be helped through business incubation i.e. initial analysis shows that the chances of their survival are slim.
• Applicants that are weak but promising i.e. there is a resource gap and if helped, they have a high probability of growing into viable businesses, and finally
• Applicants that are promising but not weak, i.e. they can proceed on their own and will likely succeed.

Formalization of an efficient system of screening applicants minimizes the number of candidates that cannot be helped or do not need help and ensure that as many deserving and promising applicants get in as possible. Monitoring ensures that non-performing incubatees are removed as quickly as it can be established that the probability of their viability is slim.
A list of sources of value is provided below:

Internal (Campbell et al, 1985):
- Selecting and monitoring of application of business services;
- Diagnosis of business needs;
- Provision of financing; and
- Provision of access to the incubator’s network.

External (Smilor (1987; Smilor and Gill (1987):
- Development of credibility;
- Shortening of the entrepreneurial learning curve;
- Quicker solutions of problems; and
- Access to an entrepreneurial network

2.6. Rational for Selection in Business Incubators

2.6.1. Economic Perspective

It is widely accepted in literature that new venture creation contributes to economic development through job creation (Chandra, 2007, Echecopar, 2004, Glancey and McQuaid, 2000), advancement of technological progress, increase on competitiveness, economic revival of regions, innovation and technology transfer (Sternberg and Wennekers, 2005, Tilley and Tonge, 2003). As new ventures introduce new knowledge or utilise new knowledge produced by others to develop new products and services, they contribute to economic growth through innovation and competition and consequently restructuring through exits and mergers (Sternberg and Wennekers, 2005). Furthermore, new ventures mitigate market failures as they address societal problems at their cost (OECD, 2003). They develop and launch ‘generic’ new technologies that provide solutions to societal problems (Garnsey et al., 2007). Moreover, the benefits of new venture creation in a locality accrue even to those who do not create new ventures (Echecopar, 2004, Glancey and McQuaid, 2000). In view of the above, new venture creation is viewed as
critical to entrepreneurship and therefore economic development (Brush et al., 2008, Sternberg and Wennekers, 2005).

In spite of the general agreement on the importance of new venture creation to economic development, recent debates suggest that not all new venture creation contribute to economic growth (Fritsch and Schroeter, 2009, Shane, 2009, Acs and Stough, 2008, Atherton and Price, 2006, Sternberg and Wennekers, 2005, Tilley and Tonge, 2003). Recent evidence suggests that new ventures’ impact on the economy differs with the quality of the new ventures. Quality new ventures are those which have the potential to exert competition on existing firms (Fritsch and Schroeter, 2009, Shane, 2009) as well as contribute to economic growth and job creation (Shane, 2009).

According to Shane (2009) economic growth and job creation are a function of high quality, high growth companies. Therefore, to have an impact on economic development, policy interventions aim to promote formation of high quality new ventures as opposed to attainment of high numbers of new ventures (Fritsch and Schroeter, 2009). In fact, evidence suggests that new ventures that are supported for the purposes of generating more jobs through new venture creation tend to experience stunted growth (Clarysse et al., 2005). Hence, economic development policy instruments such as business incubators (Bergek and Norrman, 2008, Aaboen et al., 2006, Bhabra-Remedios and Cornelius, 2003), have to be selective in nature if they are to impact on economic growth. We examine the importance of selection in the next section.

2.6.2. Importance of Selection

Business incubation provides new ventures with resources that could minimise their chances of failure and lead to their speedy growth. As a result most new ventures aspire to grow in the protective environment of a business incubator. Because of the incubators’ limited resource base, business incubators strive to ensure that only deserving high growth potential new ventures are supported by the business incubator (Atherton and Price, 2006, Lofsten and Lindelof, 2002). Three types of firms could apply for admission into the business incubator (Hamdani, 2006). The first kind is new ventures that are already strong. This kind of new ventures may not benefit from the business incubator. The second are those that are too weak to benefit from the business incubator.
incubation process. The third kind is weak but has a high growth potential. If helped through business incubation, the weak but strong could reach their potential and contribute to economic growth of the locality. Hence business incubators have to be selective in nature so they could channel their resources to the most deserving new ventures (Hackett and Dilts, 2004b, Hannon, 2004, Lumpkin and Ireland, 1988). Albeit, at different degrees of selectivity depending on factors such as stage of development of the incubator, sponsorship of the incubator and objectives of the business incubator.

Notwithstanding, given that new ventures have no trading history, it becomes difficult to judge the quality of the new ventures before they start trading (Atherton and Price, 2006), debates have ensued on whether policy interventions should be selective or not. On one hand, those who do not support policy interventions to be selective, due to the difficulty in identifying potentially high growth new ventures for policy support, call for policy interventions to be open for all new ventures (Sternberg and Wennekers, 2005). In this case, new ventures are to be provided with indirect support by establishing favourable conditions (Sternberg and Wennekers, 2005). On the other hand, those arguing for policy interventions for promoting new venture creation find it wasteful to provide support to all new ventures, inclusive of those that will not impact on economic development (Atherton and Price, 2006). The latter argument is consistent with the economic development argument on the importance of business incubation which posits that business incubation could only contribute to economic development when they assist high growth potential new ventures (Fritsch and Schroeter, 2009, Shane, 2009, Acs and Stough, 2008, Atherton and Price, 2006, Sternberg and Wennekers, 2005, Tilley and Tonge, 2003). The need to be selective, it could be argued, is felt even more for policy interventions that attempt to support new ventures from a resource base such as business incubators.

The purpose of selection is to assess the new ventures’ potential capabilities to attain successful new venture creation (Lumpkin and Ireland, 1988). Efficient screening ensures that those who cannot be helped and those who do not need help are excluded from receiving support from the business incubator, hence support is only accorded deserving applicants (Hamdani, 2006). Additionally, the factors considered when selecting new ventures for assistance provide a predictive signal for new venture’s future success (Baum and Silverman, 2004). Also, through
selection business incubators ensure that they help new ventures that are aligned to the business incubator’s objectives (Centre for Strategy and Evaluation Services, 2002). Consequently, efficiency of selection practices of business incubators is one of the critical business incubation success factors.

Most studies acknowledge the importance of selection for successful business incubation, whereby selection is not only identified as a component of the business incubation process but as a critical success factor (Sun et al., 2007, Becker and Gassmann, 2006, Aaboen et al., 2006, Peters et al., 2004, Bizzotto, 2003, Lalkaka, 1996, Lumpkin and Ireland, 1988). However, in spite of the importance attached to selection, only a few studies examine the relationship between selection practices of business incubators and their performance in relation to new venture creation. Compared to studies on venture capitalists selection, selection in business incubators has received very little attention from researchers. This could be due to the fact that business incubation researchers have accepted the venture capitalists selection criteria as ideal for business incubation (Hackett and Dilts, 2008, Hackett and Dilts, 2004b) despite the difference in the two industries’ objectives. Whilst there is paucity of empirical evidence on selection practices of business incubators, an interest in selection practices of venture capitalists points to the potential for similar studies in business incubation as a field of study.

Specifically, studies in selection practices of venture capitalist have highlighted differences in focus and practices among the venture capitalists (Kollmann and Kuckertz, 2009, Cooper, 1993). This suggests that similar studies from the business incubation industry perspective could help explain differences in practice and performance within the business incubation industry. It could also serve as a springboard for discussions on the suitability of use of venture capitalists selection criteria by the business incubation industry. Recently, a few studies have started to focus on selection practices of business incubators, (Aerts et al., 2007, Lumpkin and Ireland, 1988, Macmillan et al., 1987). A few others examine selection as part of the business incubation process (Bergek and Norrman, 2008, Hackett and Dilts, 2008). Specifically, Lumpkin and Ireland (1988) and Aerts et al. (2007) examine the extent to which business incubators employ the selection criteria in the US and the EU respectively. However, these studies only catalogue the selection criteria used among business incubators and do not examine the relationship
between selection practice and successful business incubation as defined by successful new venture creation. Hackett and Dilts (2008) improve on these studies by examining the impact of selection, as one of the business incubation elements, on tenant firms’ performance. However, they realize their research is wanting on the relationship between business incubation process and new venture creation and call for future research to use their scales to test hypothesis on new venture creation. Bergek and Norman (2008) develop a framework for identifying best practice incubators which they validate through a study of 16 Swedish business incubators. However, their results were descriptive and also they concluded that because of the small sample size they could not be generalised. Consequently, the authors attempt to contribute to research in this area by developing a framework which will help address the following questions:

- Do the selection practices of business incubators affect, directly or indirectly, the performance of business incubators measured in terms of successful new venture creation?
- Are there other factors impinging on the success of incubating firms and if so to what extent does the selection process make a contribution to such success?

2.7. Selection Practices of Business Incubators

2.7.1. Selection Practices of Business Incubators Defined

There is not much evidence on the attempt by the business incubation literature to define election from the business incubation perspective. Most of the business incubation literature defines selection as the degree to which the business incubator behaves like a venture capitalist in selecting new ventures for business incubation (Shane, 2009, Colombo and Grilli, 2009, Hackett and Dilts, 2008, Hackett and Dilts, 2004a, Macmillan et al., 1987, Duff, n.d.). A few studies that define selection from the business incubation perspective define selection as ‘decisions to admit’ (Bergek and Norman, 2008). The Oxford Learners Dictionary defines ‘selection as the process of choosing something/somebody from a group’ (Hornby, 2005, p1376). We define selection criteria as the yard stick used to back up the decision to admit entrepreneurs, their teams and ideas for business incubation whilst selection practices refers to the inclination of business incubators to use certain selection criteria in selecting businesses for incubation.
2.7.2. Selection Factors

As highlighted above, business incubators tend to emulate venture capitalists by using similar selection criteria when selecting new ventures for incubation. Venture capitalists specifically seek to identify new ventures with high growth potential to support (Colombo and Grilli, 2009, Shane, 2009). According to venture capital selection practices literature, venture capitalists focus on the entrepreneur and their entrepreneurial skills, return on investment, products’ patentability, market acceptance and whether the product could be developed into a prototype as well as the products’ potential market growth rate (Zhutshi et al., 1999, Macmillan et al., 1987). Like venture capitalists, selection criteria used by business incubators are management team characteristics, financial characteristics, product differentiation characteristics and market characteristics (Ratinho et al., 2010, Bergek and Norrman, 2008, Hackett and Diltz, 2008, Aerts et al., 2007, Lumpkin and Ireland, 1988). Consistent with the venture capitalists literature, which suggests that selection factors are important signals for growth potential start-ups, the new venture creation literature argue that the factors stated above define the quality of the new venture (Fritsch and Schroeter, 2009, Gartner, 1985)?

Both venture capital and business incubation streams of literature find that selection of quality start-ups, that is new ventures with high growth potential, could increase the chances of success (Staf et al., 2008, Atherton and Price, 2006, Bizzotto, 2003, Zhutshi et al., 1999, OECD, 1997). This is due to the fact that being selective ensures that only high quality start-ups are assisted to start-up and grow (Staf et al.2008 p 25). The venture capitalists literature posits that selection criteria enables for the ‘exceptionally’ promising start ups’ to be selected for assistance (Baum and Silverman, 2004). Similarly the importance of selection for business incubator lies in that it enables for identification of new ventures with potential for growth and success (Patton et al., 2009, Soetanto, 2006, Bizzotto, 2003, Etzkowitz, 2002, Hackett and Diltz, 2004b, Hannon, 2004, Lofsten and indelof, 002, Lumpkin and Ireland, 1988). Because new ventures are selected on the basis that they display potential capabilities to attain successful new venture creation (Lumpkin and Ireland, 1988, Merrifield, 1987), we argue that selection criteria could be associated with successful new venture creation.
One of the selection criterion used by business incubators, which has emerged from literature, is selection based on management team characteristics (Hackett and Dilts, 2008, Bergek and Norrman, 2008, Aerts et al., 2007, Lumpkin and Ireland, 1988). The importance of the team characteristics is premised on the fact that successfully creating a new venture requires more skills than could be embodied in a single entrepreneur, hence the new venture creation becomes a collective effort (Wright and Vanaelst, 2009). Selection of new ventures based on management team characteristics enables for entrepreneurs and their teams to be assessed on their managerial and technical experience, which are essential for growing a successful new venture (Bergek and Norrman, 2008).

Management teams’ characteristics have also been previously used to explain differences in growth among firms (Fergusson and Olofsson, 2004). We therefore argue that management team’s characteristics could explain successful newventure creation among business incubators. In their study of selection practices of business incubators, Lumpkin and Ireland (1988) argue that management team’s capabilities are essential for success of new ventures.

They measure the management team characteristics using skills for (management, marketing, and financial skills), experience and growth rate projections. Others have correlated education and work experience with survival (Brudel et al, 1992 in Tornikoski and Newbert, 2007). Also background, skills, technical and business competencies have been found to influence firm growth (Ferguson and Olofsson, 2005). In fact, both educational attainment and experience are important for successful new venture creation.

Furthermore, evidence associates successful new venture creation with the entrepreneur attributes of experience and level of education (Chan and Lau, 2005, Peters et al., 2004, Ferguson and Olofsson, 2004, Colombo and Delmastro, 2002, Phillips, 2002). It has been suggested in literature that new ventures started by highly educated entrepreneurs who have little business experience tend to fail if they are not assisted with managerial issues (Chan and Lau, 2005, Ferguson and Olofsson, 2004). According to Peters et al. (2004) entrepreneurs’ lack of management skills account for about 90% of the failure rates in the first five years of new ventures. Notwithstanding, there is evidence to suggest that highly skilled entrepreneurs are better able to explore technology transfer (Phillips, 2002). Conversely, some studies suggest that
the entrepreneur attributes such education, work experience and industry specific experience is not important for the new venture creation process (Tornikoski and Newbert, 2007). With the amount of evidence that associate human capital with new venture creation, it could be argued that studies that have not found association between management team human capital and performance have examined the effect of these factors where there is no possible association. For example, Tornikoski and Newbert’s (2007) study did not find association between entrepreneur human capital and new venture creation process because they examined the effect of these factors on conferment of legitimacy for new ventures.

The management team selection factors alluded to above define the new ventures’ human capital. Human capital is defined as knowledge, skills, abilities and capacity to develop and innovate that are possessed by individuals in an organisation (Baron and Armstrong, 2007, Colombo and Grilli, 2009). Human capital is embodied in the competencies possessed by individuals (Colombo and Grilli, 2009) and are acquired from education, training and experience (Baron and Armstrong, 2007). New venture selection using management team characteristics criterion is based on competence, the characteristics of the team of entrepreneurs starting the venture and the idea (Bergek and Norrman, 2008).

From the human capital perspective, such competencies confer to the new venture a competitive advantage as it enables the new venture to better exploit opportunities (Colombo and Grilli, 2009) as such they are critical intangible assets for business success (Baron and Armstrong, 2007). Furthermore, management team characteristics are important because a competent management team will be able to mitigate external risk factors such as market, financial, technical and IP risks (Goddard and Chouk, 2006b).

In addition, diverse educational backgrounds and skills enable the team to develop problem solving capabilities (Wright and Vanaelst, 2009). Also a competent management team will be able to utilise incubator resources which could facilitates successful business incubation (McAdam and McAdam, 2008). Moreover, prior work experience facilitate speedy decision making since the team members do not waste time building trust and bonding as they already know how the other member thinks and operates (Wright and Vanaelst, 2009). Along the same
lines, previous studies on new venture creation have associated teams’ relevant education, work experience and industry experience with successful new venture creation (Gartner, 1985). We therefore argue that entrepreneurs’ selection using management team characteristics is important for the entrepreneurial process. Consequently we expect to find that:

Business incubator selection of new ventures for business incubation based on management team characteristics would be positively associated with successful new venture creation.

To successfully launch a venture, an entrepreneur needs to have access to other sources of finance such as venture capitalists and business angels. The extent to which the new venture is able to attract such investors shows the confidence investors have on the success of the business (Hackett and Dilts, 2008). Business incubators assess new ventures on their potential to attract investors as well as the new ventures’ ability to demonstrate profit potential based on the business plan (Hackett and Dilts, 2008, Aerts et al., 2007, Clarysse et al., 2005, Lumpkin and Ireland, 1988). The new venture’s potential financial strength is therefore important as it demonstrates the new venture’s potential to be successful.

We therefore expect to find that:
Business incubator selection of new ventures for business incubation based on financial characteristics would be positively associated with successful new venture creation.

Also, to be successful new ventures out to have access to have a larger market share than the competitors as well as a market with purchase capabilities (Roure and Maidique, 1986). Specifically, the extent to which the product has a high market growth potential, a larger target market with purchasing power has been previously found to lead to growth of new ventures (Hackett and Dilts, 2008).

We therefore expect to find that:

Business incubator selection of new ventures for business incubation based on market characteristics is positively associated with successful new venture creation In addition, the
extent to which a new venture is able to differentiate its products from the existing ones could ensure new venture success (Hackett and Dilts, 2008, Roure and Maidique, 1986).

Differentiation pertains to the extent to which the new venture is able to set apart its products, services and practices from its competitors (Hackett and Dilts, 2008). When new ventures introduce a new product, they attain a first mover advantage which accords them competitive edge over the existing firms and as such ensure their success.

We therefore expect to find that:

Business incubator selection of new ventures for business incubation based on product differentiation characteristics is positively associated with successful new venture creation. Furthermore, it has emerged from the qualitative strand of this research that some business incubators provide pre-incubation, which is utilized as a means to select new ventures with high growth potential into the main incubator. This is consistent with nascent literature which points to the importance of pre-incubation stage in the incubation process as it facilitates the emergence of startups (Silva, 2003) and focuses on the development of the idea to enter the market (Bajmoc, 2006). Furthermore, new ventures that go through pre-incubation are assisted to ‘clarify their concepts, find partners and raise funds’ (Etzkowitz, 2002). Consequently, pre-incubation is viewed as a tool for training potential entrepreneurs (Silva, 2003, Costa-David et al., 2002, Centre for Strategy and Evaluation Services, 2002). It could as such facilitate development of potential entrepreneur and help them to consolidate their new business (Silva, 2003). Thus, from the client’s perspective pre-incubation helps new ventures deal with the problem of turning their business idea into market success whilst on the incubator’s side it helps to create a steady flow of clients into the business incubator (Bajmoc, 2006, Etzkowitz, 2002, Costa-David et al., 2002).

We therefore expected to find that:

Business incubators which pre-incubate new ventures generate successful new venture creation more than those which do not. In the next section we examine business development services and
business incubator management competencies as other factors that could have an effect on successful new venture creation.

2.8. The Effect of Business Development Services and Incubator Management Competencies on Successful New Venture Creation

2.8.1. Business development is an important activity because it allows for entrepreneurs and their ideas to develop into a real business (Campbell et al., 1985).

The reviewed literature attributes differences in attainment of successful new venture creation in business incubators to the type of services the incubator focuses. Specifically, provision of tangible and intangible services has been found to have a role in the facilitation of attainment of business incubator goals (Chandra, 2007, Grimaldi and Grandi, 2005, Lalkaka, 2002, Lofsten and Lindelof, 2002). Evidence suggests that most of the tangible services provided by business incubators are standard for all business incubators due to benchmarking efforts within the business incubation industry (Chandra, 2007, Peters et al., 2004, Costa-David et al., 2002, centre for Strategy and Evaluation Services, 2002). However, what makes the difference among business incubators performance is provision of value adding intangible services (Chandra, 2007, Goddard and Chouk, 2006a, Grimaldi and Grandi, 2005).

Furthermore, previous studies have found that coaching and mentoring make a difference in new venture creation, for example Bizzotto (2003) argues that although financial support, infrastructure and services are important for business incubation, ‘they are not [as] essential for generation and development of companies’ (Bizzotto, 2003 p8) as coaching and mentoring.

Also, Hackett and Dilts (2008) measure business development by looking at ‘the degree of comprehensiveness and quality with which the business incubators assist the incubatees’ the intensity of monitoring and business assistance as measured by the extent to which the business incubators validate the quality of service providers, the extent to which the business incubators undertake regular reviews of their services. They conclude that business incubation services are associated with business incubation performance. Consistent with these findings, the qualitative study that was undertaken to inform the development of the quantitative study finds business
development services and the extent to which the business incubators make continuous improvements to their services most important for successful business incubation.

Hence the quality and range of business support services provided by a business incubator are essential for successful business incubation (Hackett and Dilts, 2008, Chandra, 2007, Costa-David et al., 2002).
Chapter 3
Methodology

Introduction
The survey mandate was to collect and benchmark vital information on the business incubator sector of the Ugandan economy. The information is critical in assessing the business incubator sector and in developing programs to support them.
The researcher will use following research methodology.

Population of the study
The population of units actually covered are business incubators. A business incubator is a business unit that specializes in providing a variety of services ranging from providing space, services, advice and support, designed to assist new and growing businesses to become established and profitable. Incubators tend to be small businesses, but also include several government offices and universities. The focus will be on a total of 72 Business Incubators.

Sample size determination and selection
This survey is a census with a cross-sectional design and a longitudinal follow-up.

Data are collected from all units of the target population therefore, no sampling is done.

The sample size will be 72 Business incubators because most of them have been in existence for atleast 7 years but some have grown while other have remained constant.

Instrument design
The survey instrument is a questionnaire which will be intended to business incubator owners and it will be developed along with input from potential respondents and comments from business incubator industry experts/institutions.
Data Sources

Data are collected directly from survey respondents. Data will be collected through implementation of a mail-out and returned questionnaire. Data will be tracked, captured and edited via an in-house system. Follow-up will be done via direct telephone contact with respondents.

Procedure

Questionnaire will be distributed among 72 respondents. The respondents will be asked to answer both open and close ended questions regarding their experience with business incubators. In most of the cases self administered approach will be used to solicit factual responses in timely manner.

Data processing and analysis

Data obtained in this regard will be punched and analyzed using percentages and averages.

Limitations of the study

- Since I have chosen to include all business incubators in my study, differences regarding the services and resources available from each of those types of incubator may affect their performance relative to one another.

- Although the credibility of my qualitative research will be enhanced by my intent to share the results with the study participants upon its conclusion, the relatively small number of business incubators in the final sample may limit the degree of that credibility. This limitation could be addressed by increasing the sample size.
CHAPTER 4

This section describes definition of a Business incubator, type of tenants, purpose, type of incubator, source of funds, value creation, and selection processes. This section also includes graduation process, types of services provided and the significance of the challenges and barriers facing the success of business incubators and incubatees in Uganda.

The first structured question asked of each interviewee was “the definition of business incubator?” This question has been asked in previous studies and was considered important in ascertaining the perceptions, priorities and motivations of the respondents. More than half the participants (60% of the 66 respondents) marked Hackett and Dillts (2004)’s definition of an incubator as a shared office space facility that seeks to provide a strategic, value adding intervention system of monitoring and business assistance with the objective of facilitating the successful new venturing development while simultaneously containing the cost of their potential failure as significant, 26% understood a incubator as a place where newly created firms are concentrated in a limited space, 9% defined incubator as a dynamic business development process and 5% believe Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable.

Table 1: Meaning of Incubator

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a dynamic business development process.</td>
<td>6</td>
</tr>
<tr>
<td>A shared office space facility that seeks to provide a strategic, value adding intervention system of monitoring and business assistance with the objective of facilitating the successful new venturing development while simultaneously containing the cost of their potential failure</td>
<td>40</td>
</tr>
<tr>
<td>A place where newly created firms are concentrated in a limited space.</td>
<td>17</td>
</tr>
<tr>
<td>Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable.</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
</tr>
</tbody>
</table>

Source: Primary data
The second question put to the participants sought to identify the purposes the participant perceived as important to the operations of their business: “What are the main purposes of your business incubator?” Again, this is a question that has been addressed by numerous sources, in order to determine the aspects of the operation of the business incubator deemed most valuable but the question was answered by all participants, with many wanting to describe how valuable the business incubator had been to their businesses success and how important the following objectives;

- Provide infrastructure and the shared office resources
- To stimulate economic development by promoting entrepreneurship, innovation, employment creation and growth
- Expand their small business to a higher number of employees
- Creating a positive return on investment, or making a profit
- Provide readily accessible support services.
- Create an interactive community of entrepreneurs, academic and business interests that stimulate and encourage the fragile incubation process; and finally

Table 2 shows the types of incubators found in Uganda. A "mixed-use" incubator is one that serves tenants and clients in a wide variety of industries and markets. A "manufacturing" incubator caters to small and start-up manufacturing and assembly-oriented businesses. "Service" incubators have tenants who are in the service industries, while "technology" incubators work with tenants and clients who have some high-tech component to their businesses. "Targeted" incubators are an interesting category; they are defined as incubators that focus on a particular industry, typically an industry that is the focus of local economic and business development efforts. Among the targeted incubators in Uganda, the most common focus on software development (also referred to as "Tech Labs") and arts and crafts. Table 2 indicates that the most common type of incubator in Uganda is mixed-use, followed by technology. Manufacturing and service incubators are almost equally represented among Ugandan incubators, while targeted incubators make up the smallest category. A strong majority of Ugandan incubators consider themselves mixed-use (46% of the respondents). This is the most inclusive and flexible category of incubator.
Table 2: Number of Ugandan Incubators, by Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Response(s)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted incubators</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Technology incubators</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Service</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>Manufacturing incubators</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Mixed use Incubators</td>
<td>30</td>
<td>46</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary data

A key difference between a business incubator and a multitenant facility is the services and programs that an incubator offers to help small and start-up businesses grow and prosper. As part of the survey, incubators in Uganda were asked to indicate what programs and services they offer;

One category of services provided by business incubators is basic office services, phone answering, access to shared conference rooms, reception areas, equipment and furniture lease, lunchrooms, classrooms, access to copiers, fax, and Internet services

Figure 1 indicates which services are most often offered by Ugandan incubators. The most commonly offered basic office services are conference rooms (offered by 100 percent of survey respondents), photocopier/fax (96 percent), Internet access (91 percent), and lunchrooms (86 percent). The least common basic office service offered by the respondents is videoconferencing, offered by only 28 percent of the incubators.
The phone systems, answering services, and related receptionist services are provided by only 75 percent of the incubators and a receptionist can play a very important role in helping tenants handle incoming calls, greeting and directing visitors, and facilitating the receiving and sending of packages.

The Business incubators add value in a number of ways but their main value proposition is in their core function, which is to build or accelerate growth of a local industry in the early stages of operations and this supported by 41% of the respondents followed by creation of jobs reported by 28% of the respondents as show in table 3;
Table 3: Important objective of an incubator

<table>
<thead>
<tr>
<th>Objective</th>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating jobs in the local community</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>Creating international partnerships</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Building or accelerating growth of a local industry</td>
<td>26</td>
<td>41</td>
</tr>
<tr>
<td>Commercializing technologies</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Fostering a community’s entrepreneurial climate</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Encouraging minority or women entrepreneurship</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Primary data*

Rather than cater to all types of firms, business incubators typically introduce a selection process to target a particular group of firms. There seems to be agreement among researchers that selection is an important incubator management task (Hackett and Dilts 2004b; Bergek and Norrman 2008). Selection processes can be broadly split into those focused mainly on the idea or those focused primarily on the entrepreneur or team (Bergek and Norrman 2008). During the survey 52% of the 66 respondents reported that the most ideal selection criteria/strategy is Entrepreneur-focused selection and 48% reported Idea-focused selection strategy as shown in figure 3:

*Source: Primary data*
Most had an emphasis on ‘picking the winners’ but also had pre-incubation processes with a qualification process of ideas.

**Table 4: Most important factor in the selection process for applicants**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of financing</td>
<td>32</td>
<td>49</td>
</tr>
<tr>
<td>A sound management team</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>A technology or commercialization opportunity</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>A collaborative research opportunity</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>66</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: primary data*

The survey asked the incubators the most important factor in the selection process and out of the 66 respondents, 49% reported availability of finances as the most important factor in the selection process, sound management (27%), 14% supported a collaborative research opportunity and others (4%) specified a good business plan and opportunity as being a key factor in the selection process for applicants.

An important issue in the field of business incubation is the way in which incubators move tenants and clients through their programs. The term “graduation” is used to refer to tenants that leave the incubator with the promise of further growth and success, while “exit” is more encompassing and may include businesses that leave the incubator because they fail or close. In this incubator survey, respondents were asked if they have a policy regarding when a tenant must leave the incubator facility. Out of 66 responses to this question, about 70 percent indicated that they do have such a policy. Respondents were then asked to describe their graduation or exit policy and were provided a list of options.
Table 5: shows the responses;

<table>
<thead>
<tr>
<th>Policy (s)</th>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company has outgrown space available at the incubator</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>Client has spent the maximum time allowed in the incubator</td>
<td>20</td>
<td>31</td>
</tr>
<tr>
<td>Client company has achieved agreed-upon milestones</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Client has failed to meet certain benchmarks or milestones</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Business assistance needs of client are beyond what incubator can provide</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary data

The majority 20 respondents (31%) reported that a tenant must leave the incubator facility when has spent the maximum time allowed in the incubator, 28% Company has outgrown space available at the incubator, Client company has achieved agreed-upon milestones (16%), 14% Business assistance needs of client are beyond what incubator can provide and 11% when Client has failed to meet certain benchmarks or milestones.

The majority of the respondents (44%) noted that finding appropriate candidate clients is a significant challenge and barrier facing the success of incubators, 30% reported Obtaining funding for incubator operation, 14% government regulations or paperwork and 12% reported Insufficient technical skills in local community as shown in the table;

Table 6: Challenges and barriers facing the success of your business incubator

<table>
<thead>
<tr>
<th>Challenges/barriers</th>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finding appropriate candidate clients</td>
<td>29</td>
<td>44</td>
</tr>
<tr>
<td>Obtaining funding for incubator operation</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Insufficient technical skills in local community</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Government regulations or paperwork</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: primary data
The majority of the respondents (31%) reported Competition from larger firms both international and in Uganda as a significant challenge and barrier facing the success of incubatees, 23% reported Obtaining financing and finding appropriate markets for product, 8% reported Insufficient local skilled labour and customer acceptance, Complying with government regulations was supported by 3% and 1% reported entrepreneur’s unwilling to accept the incubator’s advice as shown in the table;

**Table 7: shows the challenges and barriers facing the success of your incubatees**

<table>
<thead>
<tr>
<th>Challenges/barriers</th>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition from larger firms both international and in Uganda</td>
<td>20</td>
<td>31</td>
</tr>
<tr>
<td>Insufficient local skilled labour and customer acceptance</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Obtaining financing and finding appropriate markets for product</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>Complying with government regulations</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Entrepreneurs are unwilling to accept the incubator’s advice</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>66</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: primary data*
CHAPTER 5

This chapter was endeavoured to make conclusion and recommendation basing on the evident findings found through the research as it had been discussed on the previous chapter.

5.1 Conclusions

The adopted definition of incubators is Hackett and Dillts (2004)’s which defines an incubator as a shared office space facility that seeks to provide a strategic, value adding intervention system of monitoring and business assistance with the objective of facilitating the successful new venturing development while simultaneously containing the cost of their potential failure as significant and this is supported by 60% of the respondents as shown in Table 1.

According to the survey, most participants (100%) identified the following purposes as important to the operations of their business and described incubators as valuable to their businesses success in the following ways

- Provide infrastructure and the shared office resources
- To stimulate economic development by promoting entrepreneurship, innovation, employment creation and growth
- Expand their small business to a higher number of employees
- Creating a positive return on investment, or making a profit
- Provide readily accessible support services.
- Create an interactive community of entrepreneurs, academic and business interests that stimulate and encourage the fragile incubation process.

The most common type of incubator found in Uganda is a "mixed-use" incubator - this is one that serves tenants and clients in a wide variety of industries and markets. A strong majority (46% of the 66 respondents as shown in Table 2) of Ugandan incubators consider themselves mixed-use. This is the most inclusive and flexible category of incubator, and therefore is best suited to the small towns and rural areas of Uganda, where it may be difficult to identify and attract enough entrepreneurs in more narrowly defined industry segments.
A key difference between a business incubator and a multitenant facility is the services and programs that an incubator offers to help small and start-up businesses grow and prosper. As part of the survey, incubators in Uganda were asked to indicate what programs and services they offer; the most commonly offered basic office services are conference rooms (offered by 100 percent of survey respondents), photocopier/fax (96 percent), Internet access (91 percent), and lunchrooms (86 percent). The least common basic office service offered by the respondents is videoconferencing, offered by only 28 percent of the incubators as in shown Figure 1. The phone systems, answering services, and related receptionist services are provided by only 75 percent of the incubators. A receptionist can play a very important role in helping tenants handle incoming calls, greeting and directing visitors, and facilitating the receiving and sending of packages.

The “basics” of conference rooms and photocopiers/fax machines not only are offered by most incubators, but also are heavily used by their tenants. This suggests that incubator tenants heavily value the basics and anyone who is thinking of starting an incubator should be sure to provide them. Internet access is not a luxury offered by few Ugandan incubators but is an important telecommunications tool that tenants use extensively. Not only is videoconferencing offered by relatively few incubators in Uganda, it is only lightly used in those incubators that do offer it. This raises the question of whether the investment in videoconferencing capability is worthwhile for most incubators, and whether the modest demand for this capability could better be met by incubator managers negotiating access for tenants at off-site videoconferencing facilities owned and operated by other entities in the community.

The most rated important objective of Business incubators is to add value in a number of ways but their main value proposition is in their core function, which is to build or accelerate growth of a local industry in the early stages of operations and this supported by 41% of the respondents as show in table 3 implying incubators exist to help businesses grow and contribute to the economy in terms of taxes paid to local authorities.

We have argued that selection is the most important activity in the business incubation process. This is due to the fact that selection enables for high growth potential new ventures to be identified and supported to start up and grow. Promotion of high growth ventures and not of creation of new ventures in general has a high potential to impact on economic development.
Notwithstanding the importance of selection to both the incubation process and economic development, there is paucity of empirical evidence on the role and effect of selection criteria used by business incubators. Business incubators typically introduce a selection process to target a particular group of firms. There seems to be agreement among researchers that selection is an important incubator management task (Hackett and Dilts 2004b; Bergek and Norrman 2008). Out of the incubators studied by Bergek and Norrman (16 Swedish VINNKUBATOR incubators) six were focused on the entrepreneur, seven on the idea with three having equal emphasis on both. Most had an emphasis on ‘picking the winners’ but also had pre-incubation processes with a qualification process of ideas. Only one had a survival-of-the-fittest approach where around 40% of candidates were accepted, though this incubator also had a significantly higher number of incubatees. Other incubators had a rejection rate of around 80% (Bergek and Norrman 2008).

Selection processes can be broadly split into those focused mainly on the idea or those focused primarily on the entrepreneur or team (Bergek and Norrman 2008) but according to the respondents of this survey 52% are in support of Entrepreneur-focused selection and 48% reported Idea-focused selection strategy as shown in figure 2. This implies screening processes should include a variety of factors. An alternative approach is for an incubator to carefully position their brand to enable ventures to self-select if they think the facilities and services are matched to their needs. As with a venture capital investor, incubators need ‘deal flow’. A selection process can only be imposed if the business incubator can afford to turn away potential tenants (Dee et al. 2011).

The majority of the respondents (49% of the 66 respondents) suggested that the most important factor in the selection process is availability of finances and this is a key ingredient for other factors to be put to use because it is hard to have a sound management team without financial resources.
The term “graduation” is used to refer to tenants that leave the incubator with the promise of further growth and success, while “exit” is more encompassing and may include businesses that leave the incubator because they fail or close. In this incubator survey, all the respondents (100%) reported that they had a policy regarding when a tenant must leave the incubator facility and out of 66 responses to this question, about 70 percent indicated that they do have such a policy. The majority 20 respondents (31%) suggested that a tenant must leave the incubator facility when has spent the maximum time allowed in the incubator implying that in all a client has to leave the incubator once her time allowed of stay has expired in order to create space for others.

The most significant challenge and barrier facing the success of business incubators in Uganda is finding committed and appropriate candidate clients to house/admit in the incubator facility and this is attributed to insufficient technical skills in local community and bureaucracy in government organizations as shown in the Table 6;

The main challenge and barrier facing the success of incubatees is competition from larger firms both international and in Uganda (supported by 31% of the 66 respondents) that charge cheap prices to out play the incubatees in the market and this has led to many incubates dropping out. Finally, business incubation is a value-added and a powerful instrument for economic development worldwide. A Business Incubation program is designed to assist businesses to become established and profitable during their start-up phase.

5.2 Recommendations:

The location of an incubator is likely to have a profound influence on the choice of strategy and its successful implementation. Location can be considered in terms of absolute location (where the incubator is), relative location (what it is near) and cognitive distance (how integrated it is with its regional innovation system) (Asheim and Gertler 2005; Moodysson et al. 2006; Huggins 2008). Consideration also needs to be given to the characteristics of the regional innovation system and what this may mean in terms of availability of accessible resources (Asheim and
Gertler 2005). The recommendation is that government should establish incubator parks near the market and suppliers so that it connects incubatees to the market and providers.

The Incubator should have a clear policy as to the entry criteria required of clients. Businesses should start their trading life within the incubator. The only exceptions to this would be firms who are very clearly in the preliminary stages of their trading life. This will help maintain the "in it together" situation of the facility. The survival rate can be increased by selecting firms who have either been through an existing pre start-up programme or whose business idea has been evaluated by either the business development staff of the incubator or a related agency. On this basis, evidence exists to suggest that up to 80% of the firms selected will still be in business after 5 years (Barcelona Activa, 1994). This would clearly link a place in the incubator.

The characteristics of actual or potential tenants also influence the choice of incubation strategy. The recommendation is that an incubator should choose to focus on a specific niche or be more generalist. Niche incubators can be seen in sectors such as renewable energy and biotechnology. The choice of niche will dictate what resources and services need to be provided, and the type of physical infrastructure provided. If the target niche requires a specific physical layout of buildings, and access to specialist capital equipment, this is likely to reduce the ability of the incubator to make significant changes in strategic direction in response to changing conditions and require potentially higher initial investment. In contrast, targeting potential incubatees from the consumer Internet and mobile applications sectors would result in the incubator needing only to provide more general-purpose office space and little need for capital intensive, fixed purpose infrastructure (Miller and Bound 2011).

This survey recommends that for incubators not to incur the burden of being wholly responsible for their cost. Incubation space can be designed to encourage peer-to-peer networking through the provision of communal spaces such as common rooms and canteens located in visible and accessible areas. Early studies of incubation emphasised facilities and administrative services, with more recent contributions emphasising the importance of business support and networks (Hansen et al. 2000; Hackett and Dilts 2004b).
The survey recommends Ugandan incubators to adopt both selection strategies because implementing appropriate selection processes for entry into an incubator enables a better ‘fit’ between the services it provides and the needs of tenants. It is a task subject to errors owing to the challenge of distinguishing between the potential of entrepreneurs operating with different types of uncertainty (e.g. technological, market, regulatory etc.). It has been argued that this is reason enough to let as many entrepreneurs try as is reasonably possible since ‘important qualities, for instance if the person is coachable, are not possible to fully detect at a screening meeting’ (Aaboen 2009 p.661). Selection processes can be broadly split into those focused mainly on the idea or those focused primarily on the entrepreneur or team (Bergerk and Norrman 2008) (Table 5). This implies screening processes should include a variety of factors. An alternative approach is for an incubator to carefully position their brand to enable ventures to self-select if they think the facilities and services are matched to their needs.

Further the survey recommends corporate funded incubators because this can reduce the reliance on a mixed revenue stream, but will require incubatees that fit with the goals of the corporation. These incubators tend to have particular goals such as providing an environment for the nurture of ideas unable to thrive within the corporate environment, or to attract in new ideas from outside the corporate (Ford and Probert 2009; Ford et al. 2010). Strategic alignment with the corporate is often critical, as is separating corporate decision making from incubator decision-making.

The price of the office space at the Incubator is a significant factor for incubatees locating and operating their business from the facility. This is not surprising given that the price for incubator space is regularly reported in studies as being a critical factor (Burnett, 2009; Hackett & Dilts, 2004b), since a favourable cost for rental or office space frees up funds to be spent on other activities, such as marketing and operations (Storey, 1994). The study recommends that incubators should charge its tenants favorably because cheap rent reduces the perceived risk of starting a business for the owner, by lowering monthly expenses and reducing the income required to be generated by the business. The business incubator also incorporates the cost of utilities into the price of the office space, allowing for accurate budgeting on the cost of the office without variable outgoings such as electricity that can fluctuate over a year.
However, cheap rent can have an adverse impact on the overall operation of the business incubator in the achievement of its economic development or community goals. Cheap rent allows businesses that may be marginal an increased chance of survival due to the reduced cost of office accommodation.

This study recommends the creation of a business incubator focused upon attracting large numbers of early stage entrepreneurs into an entrepreneur community- a hub- where business owners share communal space and partake in a well managed array of social and business interactions. This model, called Co-work incubation, serves early stage entrepreneurs with mostly opt-in communal space rather than offices or labs, then creates a cyclical flow of intimate and formal interaction between the community, entrepreneurs, investors, talent, researchers, existing business and innovators. Unlike traditional business incubation, Co-work incubators can serve large numbers of entrepreneurs at any given time and services are not formally assigned to members, instead entrepreneurs are engaged in an ongoing calendar of formal and informal networking and learning opportunities both online and in the facility.

The study recommends that a new organization be developed under Ministry of trade, with representation from all of the community stakeholders including members of the entrepreneurial community to guide and fund this project. Such an organization would bring a fresh program to Uganda without any commonly held perceptions associated with any other organization and offer an opportunity to create a unique brand to attract and engage the entrepreneurial community with services clearly exclusive of existing programs and services. In conclusion, to promote the business incubation process in Uganda, the government should spearhead the incubation process, first by enacting an incubation policy, to guide the stakeholders on incubator goals, roles and outcomes. Secondly, this policy should also address the financing aspect as most incubated activities are funded by governments in other countries.

Further Research;
The future research should focus on the following areas;

- Evaluation of the selection strategies used in Ugandan incubators.
- Critical success factors facing the success of a business incubator.
- Analyze the impact of Incubators on economic development
- Influence of incubatees on the activities of incubators in Uganda
REFERENCES


17. National Business Incubation Association (NBIA), (1997). University of Michigan,


20. NBIA, Ohio University and Southern Technology Council, Business Incubation Works.
   Athens, Ohio: National Business Incubation Association,


http://www.infodev.org/en/Publication.733.html


Appendix 1

Questionnaire/Survey of Business Incubation

Assistance: If you have questions about this survey or require assistance to complete the questionnaire, please contact Kadama Franco at +256 706 954 878, or email kadamafrank@gmail.com

Correct as required

Company name
________________________________
C / O
________________________________
Address
________________________________
City
Postal code
__________  __________

Section A: Definition of a Business Incubator

1a) Business Incubator is (Mark one only):

□ Is a dynamic business development process.

□ A shared office space facility that seeks to provide a strategic, value adding intervention system of monitoring and business assistance with the objective of facilitating the successful new venturing development while simultaneously containing the cost of their potential failure.

□ A place where newly created firms are concentrated in a limited space.

□ Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable.
b) What are the main purposes of your business incubator?

(Mark all that apply)

☐ Provide infrastructure and the shared office resources
☐ To stimulate economic development by promoting entrepreneurship, innovation, employment creation and growth
☐ Expand their small business to a higher number of employees
☐ Creating a positive return on investment, or making a profit
☐ Provide readily accessible support services.
☐ Create an interactive community of entrepreneurs, academic and business interests that stimulate and encourage the fragile incubation process; and finally
☐ Other, please specify:

_______________________________________________________

2. Please specify the basic services offered by your incubator.

(Mark all that apply, but limit responses to those services that your business unit actively supports)

<table>
<thead>
<tr>
<th>Industry group</th>
<th>Mark all that apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference rooms</td>
<td></td>
</tr>
<tr>
<td>Facility</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td>Photocopier/fax</td>
<td></td>
</tr>
<tr>
<td>Internet access</td>
<td></td>
</tr>
<tr>
<td>Videoconferencing</td>
<td></td>
</tr>
<tr>
<td>Computer Lab</td>
<td></td>
</tr>
<tr>
<td>Class/Lunchroom</td>
<td></td>
</tr>
<tr>
<td>Others Specify....</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION B: Objectives

3) Please rate the importance of the objectives of your Business Incubator

<table>
<thead>
<tr>
<th>Objective</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating jobs in the local community</td>
<td></td>
</tr>
<tr>
<td>Diversifying local economies</td>
<td></td>
</tr>
<tr>
<td>Creating international partnerships</td>
<td></td>
</tr>
<tr>
<td>Building or accelerating growth of a local industry</td>
<td></td>
</tr>
<tr>
<td>Retaining businesses in the community</td>
<td></td>
</tr>
<tr>
<td>Commercializing technologies</td>
<td></td>
</tr>
<tr>
<td>Generating net income for the incubator, sponsoring organization or investors</td>
<td></td>
</tr>
<tr>
<td>Fostering a community’s entrepreneurial climate</td>
<td></td>
</tr>
<tr>
<td>Encouraging minority or women entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>Moving people from social assistance to employment</td>
<td></td>
</tr>
<tr>
<td>Other, please specify</td>
<td></td>
</tr>
</tbody>
</table>
SECTION C: Selection Process

4 a) What is the selection process strategy used by your incubator?
   □ Entrepreneur-focused selection
   □ Idea-focused selection strategy
   □ Both
   □ Other, please specify:______________________________________________

b) Please rate the importance of the criteria that you utilize in the selection process for applicants?

<table>
<thead>
<tr>
<th>Goal</th>
<th>Degree of importance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Availability of financing</td>
<td></td>
</tr>
<tr>
<td>A sound management team</td>
<td></td>
</tr>
<tr>
<td>A good business plan</td>
<td></td>
</tr>
<tr>
<td>A technology transfer or commercialization opportunity</td>
<td></td>
</tr>
<tr>
<td>A collaborative research opportunity</td>
<td></td>
</tr>
<tr>
<td>Other, please specify:</td>
<td></td>
</tr>
</tbody>
</table>

SECTION D: Graduation Process

5 a) Indicate how often you use the following guidelines to dictate a client’s graduation from your program. (Mark all that apply, but limit responses to criteria that your business unit actively uses)
Criteria | Mark all that apply
---|---
The client company has spent the maximum time allowable in the program |  
The client company has outgrown space available at the incubator |  
The client company has achieved mutually agreed upon milestones (e.g., revenue levels, staff size and/or composition, market penetration, etc.) |  
No specific graduation policy |  
Other, please specify___________________ |  

Section E: Challenges and Barriers

6 a) Please rate the significance of the following challenges and barriers facing the success of your business incubator.

| Challenges/barriers | Mark all that apply |
---|---|
Finding appropriate candidate clients |  
Obtaining funding for incubator operation |  
Candidate clients have no startup financing |  
Insufficient technical skills in local community |  
Government regulations or paperwork |  
Other, please specify:__________________ |  

b) Please rate the importance of the following challenges and barriers facing the success of your incubatees?

| Challenges/barriers | Mark all that apply |
---|---|
Achieving self-sustaining business operation |  
Competition from larger firms both international and in Uganda |  
Competition from larger international firms |  

| Complying with government procedures to obtain support |
| Insufficient local skilled labour and customer acceptance |
| Obtaining financing and finding appropriate markets for products. |
| Complying with government regulations |
| Entrepreneurs are unwilling to accept the incubator’s advice |
| Other, please specify: _______________________ |

Comments: If you would like to offer advice or have any other comments, please print them below. ____________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
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__________________________________________________________________________________________

If you require help completing this survey or have any concerns about the confidentiality of your answers, please contact: Kadama Franco, Contact: +256 706 954 878 or email: kadamafrank@gmail.com

Thank you for participating. Your response is appreciated