

Gordon Institute of Business Science

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The benefits of self-sustaining business incubation

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Abstract

Small to medium enterprises (SMEs) are key contributors to economic growth, and business incubation is widely acknowledged as a mechanism for improving the survivorship and growth of newly formed SMEs. Persistently poor performance over recent years by the SME sector has, however, drawn into question whether prevailing models of business incubation continue to be effective in creating a fertile entrepreneurship-enablement environment. The predominantly non-profit orientated nature of business incubators may have become out of tune with the principles of commercial viability that they preach, and a change towards more self-sustaining business incubation may be required.

A qualitative research study was carried out with decision makers in the incubation environment, using a questionnaire that elicited indicators of self-sustainability, internal and external challenges, funding sources and challenges relating to the distribution of institutional funding.

This research found that profit and non-profit business incubators alike are evolving their business models to incorporate revenue-generating activities as a means to minimise the volatility of institutional sources of funding. The ineffective distribution of institutional funding and the ever-changing policies that govern funding allocations are also necessitating higher levels of self-sustainability among incubators. A model was derived to explain the interplay between different categories of business incubation and the changing role and benefits of self-sustainability across these categories.

Key Words

Business Incubation

Entrepreneurship Enablement

Financial Self-sustainability

Self-sustainability

SME Sector Development

Start-up Incubation

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Pierre Fourie

9 November 2015

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List of Abbreviations and Acronyms

BIC	Business Innovation Centres
DSBD	Department of Small Business Development
DTI	Department of Trade and Industry
ED	Enterprise development
ESD	Enterprise and supplier development
GEM	Global Entrepreneurship Monitor
ISP	Incubation Support Programme
NBIA	National Business Incubation Association
NPAT	Net profit after tax
NPO	Non-profit organisation
PDI	Previously disadvantaged individual
Seda	Small Enterprise Development Agency
SME	Small and medium enterprises

Chapter 1:

Introduction to Research Problem

1.1 Research Title

The benefits of self-sustaining business incubation

1.2 Research Problem

The research assesses self-sustainable business incubators as a catalyst for more effective entrepreneurship enablement. After assessing the extent of self-sustainability, the researcher suggests success factors associated with self-sustaining business incubator practices and the resulting benefits that can be derived from broader adoption of these practices in the entrepreneurship-enabling environment.

1.2.1 Entrepreneurship Enablement through Incubation

Throughout the world, governments, universities and the private sector are jointly and severally investing time and money into business incubators as a means of offering targeted resources and services to small businesses, with the aim of achieving a higher probability of new venture success (Woodrow Whitt, 2014). But how is the investment of substantial amounts of public and private-sector funding justified when experts and academics alike have failed to recognise a standard approach for measuring the impact of business incubation (Pompa, 2013)?

Graham (2010) suggests that a business incubator can only truly be successful if the output of its operations are sustainable small businesses that make a significant contribution to the economic wellbeing of a country. South Africa, like other developing economies such as Brazil, is allocating substantial amounts of public funding to business incubation. According to Mavuso (2015) the 2015–2018 budget allocation is in excess of R1 billion. Although there is no uniform measurement of incubator success, recent measurements of small and medium enterprises (SME) performance in South Africa indicate less than satisfying results (Darrol, 2015). This signals that a closer look may be required at the mechanisms through which business incubation facilitates new venture growth. One of the key concerns with these mechanisms involves the distribution of external funding to business incubators and the subsequent allocation of these funds to small businesses subscribed to the incubator programmes. As Chandra (2009) observes, many incubators in developing economies, which were set up as an intervention tool to address market failure, such as gaps in new venture

financing, are run as non-profits and have trouble meeting financial self-sustainability goals themselves. By entrusting the responsibility for distributing growth-sustaining small business funding to institutions that are not financially self-sustainable themselves, there is a risk of creating an unsustainably expensive distribution mechanism that cannibalises the very funding that it has been mandated to invest. This perspective also questions whether a non-profit, externally funded business incubator, which is not exposed to the full effects of a competitive market like its incubatees are, can effectively facilitate the entrepreneurial enablement requirements that will bring about sustained economic growth.

1.2.2 Investment in the Entrepreneurship-Enabling Environment

An example of the entrepreneurship-enabling environment in a developing country is that of South Africa, where its government is attempting to provide fertile ground for small businesses through three major mechanisms. All three mechanisms involve the distribution of public and private funds to small businesses through predominantly non-profit intermediaries:

- enterprise and supplier development through preferential procurement and BEE codes
- tax incentives for entrepreneurs and big business who work with entrepreneurs
- provision of grant funding and soft loans.

According to Khan (2014), the most prominent programmes under these three mechanisms are those shown in Table 1.1.

Table 1.1: Mechanisms for entrepreneurship enablement in South Africa

Mechanism	Programme(s)	Objective	Funding Mandate
Enterprise and Supplier Development	Prominent enterprise development incubation organisations include: RaizCorp, Shanduka Black Umbrellas and The Hope Factory	Assisting or accelerating the development, sustainability and ultimate financial and operational independence of black-owned SMMEs in South Africa	According to the revised Broad-Based Black Economic Empowerment Codes of Good Practice, companies are required to contribute 1% of net profit after tax (NPAT) towards enterprise development to qualify for 5 points available in terms of the scorecard and to contribute 2% of NPAT towards supplier development to qualify for 10 points available in terms of the scorecard
Department of Trade and	Incubation Support Programme (ISP)	This grant is aimed at initiating entities to allow them to develop incubator	The ISP is available on a 50:50 cost-sharing basis between the government

Mechanism	Programme(s)	Objective	Funding Mandate
Industry (DTI Grant Funding)		programmes and thereby create employment within the communities and in turn strengthen the economy	and the private sector. The ISP must offer the SME a cost-sharing ratio of 60:40. This is capped at R10 million a year for three years
	Small Enterprise Development Agency (Seda) Technology Programme (STP)	This grant is aimed at improving the delivery of small business support services to entrepreneurs and small enterprises	This programme provides for a maximum grant of R1 million. Of this R1 million, R800 000 is to be used for tools, machinery and equipment of which 35% is contributed by the DTI. The remaining R200 000 is to be used in the business development programme on a 50:50 basis
	Small Enterprise Financing Agency (Sefa)	Sefa provides facilities to Micro Finance Intermediaries to on-lend to SMME's requiring funding of up to R50 000 for the purpose of growing their income and asset base	The funding amount starts at R500 000 and is capped at R5 million. The fund will contribute 90% and the remaining 10% must be contributed by the entity. The entity must be owner-managed. The loan must be repaid within five years
	Cooperative Incentive Scheme (CIS)	This scheme is offered to South African cooperatives that are operating in emerging sectors within rural and semi-urban areas while abiding by the principles of cooperatives. This scheme is biased towards woman, youth and disabled individuals. Significant emphasis has been placed on this area by the DTI	This scheme aims to promote cooperatives on a 90:10 cash basis grant by assisting cooperatives to meet their start-up requirements. The maximum amount that this scheme offers is R350 000

During his 2015 budget speech, South African Finance Minister, Nhlanelhla Nene, revealed that the Department of Small Business Development (DSBD) would be allocated R3.5 billion for

the three-year period between 2015 and 2018, which is to be spent on the promotion and development of small businesses and cooperatives.

According to Mavuso (2015), approximately 30% of these funds have been earmarked for allocation to business incubation activities, clearly signalling determination on the part of the South African government to stimulate entrepreneurship as a vehicle for achieving sustainable economic growth.

1.2.3 Poor Results for Entrepreneurship Enablement

The mere allocation of funding, however, does not address the issue of small business survivorship and stifled growth. The SME Growth Index compiled by Darrol (2015), reports stagnation in both turnover and employment growth among South African small businesses over the past four years. These worrying trends call into question the effectiveness with which business incubation initiatives are implemented and managed. According to Darrol (2015):

Contrary to global trends where small and medium enterprises (SMEs) constitute the largest employer in either developed or developing economies, smaller firms in South Africa are showing stagnation in both turnover and employment growth. Both these measurements are important – turnover has a strong bearing on the wealth being created in the economy, while employment is vitally important for South Africa's social stability (p. 1).

Incubation is an expensive process that deploys large amounts of resources to support only a few truly promising entrepreneurs. This creates a problem, particularly in developing economies where public funding for small enterprise development programmes is limited. The South African government is further attempting to boost new venture development through introducing corporate procurement policies such as Broad-Based Black Economic Empowerment (B-BBEE) that favour the small business sector. These policies allow large corporates to make direct investments in enterprise development programmes, towards achieving compliance with government procurement requirements. While this approach has generated a more steady flow of funding for business incubators, it is seen by critics as a mere “box ticking” exercise.

According to the first Enterprise Development Report by Frohlicher and Pothering (2013), which polled 60 companies of the JSE Top 100, the money invested in enterprise development (ED) has not realised its potential to date nor accomplished the underlying intentions of the B-BBEE policy, this despite the corporate sector committing billions of rand to ED every year. As ED is not generally a key concern of most corporations, it has often defaulted to an exercise of B-BBEE compliance. More than half of the participants that contributed to the findings of the report acknowledge that without the pressure imposed by new government procurement

policies, most would not engage in new venture development of their own accord (Dludla, 2014).

Findings from the SME Growth Index by Darrol (2014), a multi-year project conducted over a sample of 500 South African small businesses operating across various industries, are further indicative of the ineffective implementation of entrepreneurship enablement programmes. Participation in entrepreneurship-enablement initiatives is generally reserved for a select few, due to small businesses either not being aware of available incentives, or not knowing whom to contact to access them (Darrol, 2014). The red tape implications of participation also had a significant effect on uptake, with a significant number of small businesses not participating in support programmes saying that the amount of paperwork involved dissuaded them from applying.

Amid the lack of awareness among small businesses relating to available entrepreneurship-enablement initiatives, Darrol (2014) suggests that relevant, well-designed and accessible programmes would find a receptive audience.

1.2.4 Self-Sustainability as a Guiding Principle for Entrepreneurship Enablement

According to the United States National Business Incubation Association (NBIA), it is best-practice for business incubators to pursue financial self-sustainability through ensuring reliable, long-term funding and developing and implementing a realistic business plan. The policy implications of a study by Chandra (2009) also promote the pursuit of incubator self-sustainability by proposing that incubators reduce excessive dependence on any one funding source and base performance criteria on external market factors.

Although there is strong business and academic backing for self-sustaining business incubation, many new venture development programmes are still strongly rooted in a non-profit, single funding-source operating model. The implied downside of this model is a high level of vulnerability to fluctuations in the funding cycle, as is often experienced in the South African context as a result of changing ED policies. Frohlicher and Pothering (2013) support the notion of self-sustainability by suggesting that ED should be driven with an investor's mindset, where funding decisions are made through thorough due diligence and taking potential returns into account. It is further suggested that if the corporate sector adopted an impact investing approach, it would enable companies to more methodically and meaningfully propel ED's transformational capacity by building lasting small and growing businesses while also reflecting their own interests.

1.3 Research Objectives

The operations of small business incubators have attracted as yet only limited scholarly attention despite their growing popularity among policymakers and local economic development practitioners (Masutha & Rogerson, 2014).

It is suggested by Schwartz (2013) that in order to truly understand the incubator's contribution to new venture growth and survival, further research be focused on comparing the differences between profit versus non-profit incubation models. This research builds on that of Schwartz (2013) by proposing that the achievement of self-sustainability, as opposed to profit generation alone, be assessed within business incubators. In comparing levels of self-sustainability among business incubators and isolating the contribution that self-sustainable practices make to the effectiveness of funds distribution, this research aims to complement the body of knowledge related to the contribution of incubators to new venture survival.

Therefore this research aims to identify whether the proposed pursuit of self-sustainability in business incubation has any influence on funding access for small businesses subscribed to a business incubator. It will also seek to identify whether a relationship exists between incubator self-sustainability and effective funds distribution.

The results of the research could have policy implications in terms of the way in which public and private funds are allocated and distributed to and by new venture development programmes.

Chapter 2:

Literature Review

2.1 Introduction

It is evident from Chapter 1 that entrepreneurship is a key driver of economic growth and employment in South Africa. This chapter forms the basis for the research questions posed in the following chapter. The literature review is organised into the following theoretical constructs to create an understanding of the scope of the qualitative research.

2.1.1 Theoretical Constructs

Table 2.1: Structure of literature review

Theoretical Construct	Area of Focus
2.1 New Ventures	2.1.1 Defining new ventures 2.1.2 The role of new venture growth in domestic economic development
2.2 Business Incubation	2.2.1 Definition of business incubation 2.2.2 Types of incubation 2.2.3 The role of business incubators in new venture growth
2.3 Financial self-sustainability	2.3.1 Micro-equity as an emerging vehicle for new venture financing 2.3.2 A case for self-sustaining business incubators 2.3.3 Achieving self-sustainability through increased earned revenue 2.3.4 Self-sustainability as a principle in non-earned revenue distribution
2.4 Conclusion	Academic underpinning of the need for this study

The literature review provides direction for the types of question to be used in the interviews and also looks at other research papers on the incubation environment.

New venture development is high on the agenda of most economic development programmes in the world and one of the prevailing vehicles for stimulating sustained new venture growth, in both efficiency- and innovation-driven economies, is the business incubator (Chandra, 2009). Current research in the field of business incubation can be delineated across four main quadrants, namely funding and support models, incubator operating models, determinants of incubatee success and the role of incubators in enabling entrepreneurship. This study has predominantly drawn from prevailing theory in quadrants 1 and 3 (Figure 2.1) to assess the benefits that can be extracted from applying self-sustainability practices in the management of business incubators.

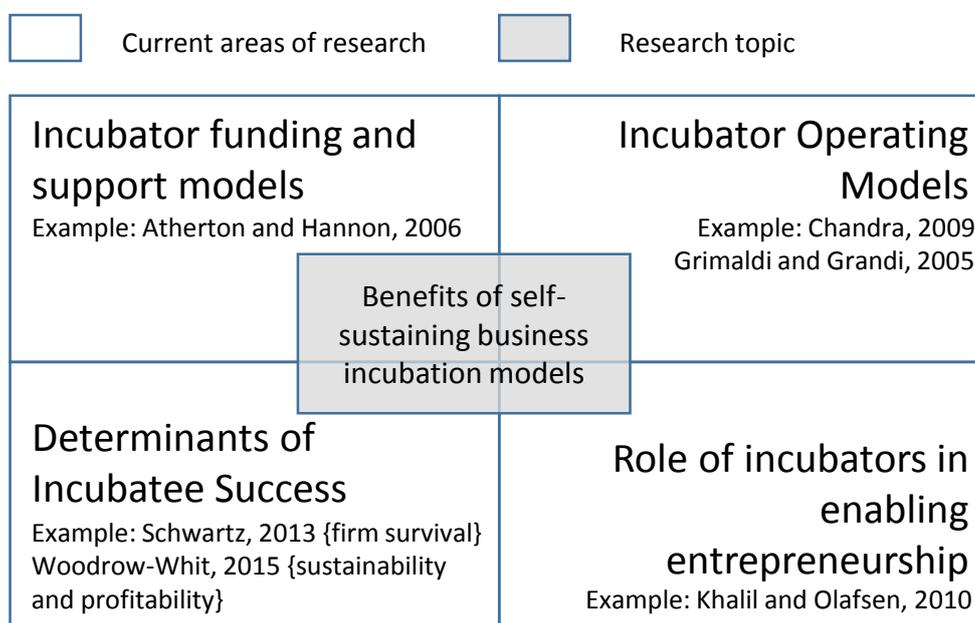


Figure 2.1: Conceptual positioning of the research relative to current literature

2.2 New Ventures

2.2.1 Defining New Ventures

A broad definition of new ventures is offered by Ries (2011): “A human institution designed to create a new product or service under conditions of extreme uncertainty” (p. 8). This broad definition, however, does not provide any insight into the attributes or life-cycle of a new venture and does not answer the question as to when an organisation ceases to be a new venture. A universally accepted framework for categorising new ventures through the activities of the entrepreneur is offered by Singer, Amorós and Arreola (2015) through the entrepreneurship process. The Global Entrepreneurship Monitor (GEM) model proposed by Singer et al (2015) draws a distinction between four types of entrepreneurs, namely the

potential entrepreneur, nascent entrepreneur, and owner-manager of a new business and owner-manager of an established business. New ventures are those involved in early-stage entrepreneurial activity, which means that the entrepreneur is either in the process of setting up the venture or has been managing the business for a period shorter than three-and-a-half years.

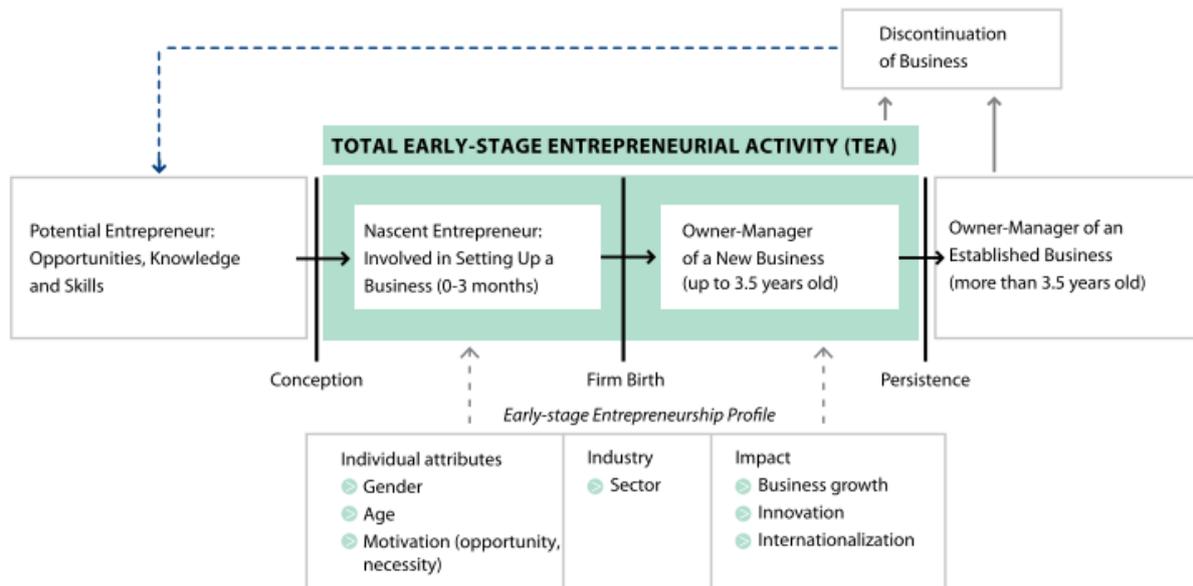


Figure 2.2: The Entrepreneurship process and GEM operational definitions

2.2.2 The Role of New Venture Growth in Domestic Economic Development

Bouri et al. (2011), use the contributing factors to GDP (exports, imports, consumption, investment and government spending) to illustrate how increased SME activity has a direct effect on GDP growth. The research also credits new ventures for indirect contributions towards GDP growth through innovation. Smaller firms tend to display higher levels of flexibility and innovation, and can be used as a testing-ground for new business ideas. Although a large percentage of new ventures are unsuccessful within the first five years of existence, a handful of them will grow into large firms, replacing the incumbents. According to Bouri et al. (2011), “this process yields positive structural changes to the economy, can lead to large productivity gains, and is shown to be linked to GDP growth” (p. 13).

Across the world, new ventures are playing a significant role in absorbing labour, accessing new markets and expanding economies through innovation and change.

It is, however, the high rate of new venture failure that has attracted the attention of policy makers. Although an accurate rate of new venture failure remains a contentious issue, it is

globally accepted that economic policy frameworks have to create an enabling environment to stimulate new venture growth.

2.3 Business Incubation

2.3.1 Definition of Business Incubation

According to Ndabeni (2008), “business incubators are generally operated by universities, private-sector business, economic development agencies and local governments” (p. 262), and are aimed at supporting the development and scaling of growth-oriented, early-staged enterprises (Khalil & Olafsen, 2010). Publicly funded incubators play an increasingly prominent role in urban and regional technology and innovation policies for the promotion of entrepreneurship, to support first-stage development of new technology-based firms, to strengthen academic–industry linkages, and to promote innovation activities (Schwartz, 2013)

The NBIA (n.d.) defines incubation as “a business support process that accelerates the successful development of start-up and fledgling companies by providing entrepreneurs with an array of targeted resources and services” (para. 1).

The South African Department of Trade and Industry (2013) defines the concept of business incubation as providing a nurturing, instructive and supportive environment for entrepreneurs during the critical stages of starting up a new business. This includes pre-incubation, which is defined by Khalil and Olafsen (2010) as assistance provided at the idea stage, involving less intensive assistance allowing the entrepreneur to investigate his or her idea further before starting the enterprise, and post incubation, which according to Woodrow Whitt (2014) is continued business network support after graduation from the incubator programme.

2.3.2 Types of Incubation

Grimaldi and Grandi (2005) differentiate between public incubators and private incubators based on their main objective and source of profit.

Table 2.2: Public and private incubation models

Incubator Category	Incubator Sub-category	Main Objective	Source of Profit
Public	Business Innovation Centres (BIC's)	Offering basic services like space, infrastructure, communication channels, and information about external financing opportunities and visibility	Fees for services provided and public funding from local, national and international schemes
	University Business incubators (UBI's)	UBIs provide support and services to new knowledge-	

Incubator Category	Incubator Sub-category	Main Objective	Source of Profit
		based ventures, similar to BICs, but with more emphasis on the transfer of scientific and technological knowledge from universities to companies	
Private	Corporate Business incubators (CPIs)	Owned and set up by large companies with the aim of supporting the emergence of new independent business units	Charging of service fees, as well as taking a percentage of revenues generated by incubated companies or liquidity events of incubatees.
	Independent Business incubators (IPIs)	Set up by single individuals or by groups of individuals, who intend to help rising entrepreneurs create and grow their business	

Source: Grimaldi and Grandi, 2005

The literature also identifies the emergence of a new incubation model that differentiates incubators based on the service mix offered to incubatees. According to Grimaldi and Grandi (2005) this emerging model comprises two types of incubators:

- incubators that focus on reducing start-up costs for tenants by providing tangible assets
- incubators that offer intangible assets such as finance and speed to market.

These are not mutually exclusive models as illustrated by Chandra (2009), where the incubator service mix was found to be closely aligned to its strategic orientation. The incubator strategic orientation is in turn a product of the macroeconomic objectives of a country or region. According to Schwartz (2013), incubators are mostly tailored to regional circumstances and to the characteristics of their target group and are expected to fulfil different roles in regional innovation systems. Brazilian incubation models, as an example, were found to have the strategic focus of fostering entrepreneurship, economic development, job creation and technology commercialisation. As a result, the service mix of the incubators in the study were a mix of tangible and intangible services.

Jang (2009) suggests that the linear classification offered by Grimaldi and Grandi (2005) is not applicable to more recent incubator programmes where public–private incubator partnerships are becoming more prominent.

For the purposes of this study, the researcher investigated various incubators at different intersections of the sponsorship continuum, ranging from private, profit-maximising incubators to private, non-profit incubators and ultimately public, non-profit incubators on the far side of

the spectrum. Through this approach, the researcher hoped to illustrate the impact of self-sustainability in a context agnostic of the funding source or profit orientation.

2.3.3 The Role of Business Incubators in New Venture Growth

Many local economic development agencies and other public institutions have adopted incubators as an instrument for reducing the likelihood of failure and accelerating the process of new venture growth (Grimaldi & Grandi, 2005). The influence and indeed also the success of business incubation in bringing about sustainable new venture growth has been the topic of many recent studies. However, the lack of standardisation in terms of a methodology for measuring incubator performance makes comparison between studies challenging (Pompa, 2013). This is exacerbated by the lack of consensus on a definition of incubator success and failure. According to Schwartz (2013) no two incubators are alike, which means that any valuation of outcomes will suffer from a lack of homogeneity. This is evident from the contradictory findings on the viability of business incubation with one study asserting that business incubators generally have a very high success rate in generating viable new ventures (Khalil & Olafsen, 2010) and another that being located in an incubator does not significantly increase the chances of long-term business survival (Schwartz, 2013).

It is suggested that in order to understand the incubator's contribution to new venture growth and survival, further research be focused on comparing the difference according to type of incubator, such as profit versus non-profit incubators (Schwartz, 2013; Grimaldi & Grandi, 2005).

The institutional organisation of business incubation in contemporary South Africa is executed with the Department of Trade and Industry assuming the lead role in partnering with universities, the private sector, industry leaders, labour, community-based organisations and provincial government. Private-sector involvement in business incubation is reflected in the establishment of private-sector business incubators and through corporate contributions to enterprise development (Masutha & Rogerson, 2014). The Department of Trade and Industry (2013) believes that through developing business incubators it will "contribute toward creating successful enterprises with a potential to revitalize communities and strengthen local and national economies" (p. 2).

Through the Incubator Support Programme, the South African government has called on large private-sector businesses to partner and participate meaningfully in national programmes for SMME development through skills transfer, supplier development and marketing assistance. The encouragement of partnerships with the private sector to support government SMME

development initiatives is reflected also in ESD policy steps which encourage programmes for supplier diversity through preferential procurement (B-BBEE points).

2.4 Financial Self-Sustainability

The United States NBIA defines financial self-sustainability as an incubator's ability to cover expenses with predictable, reliable sources of funding.

According to Cammarata (2002),

a self-sustainable incubator generates income that contributes to its operational budget; does not depend on a single source of external support; and makes sure that outside funding it receives is either reliable or replaceable. Some incubation programs take the concept a step further and make it a goal to cover all expenses from their own operations, known as financial self-sufficiency (para. 1).

The academic literature offers multiple cases of financially self-sustainable practices applied within an entrepreneurship enablement environment. This section critically evaluates the relationship between financial self-sustainability and entrepreneurship enablement.

2.4.1 Micro-Equity as an Emerging Vehicle for New Venture Financing

Ayayi (2012) suggests that micro finance institutions such as business incubators and accelerators move away from micro-credit as a means of financing new ventures and towards a model of micro-equity financing. Ayayi (2012) proposes that by binding the destinies of the parties, the new venture benefits from a tightly-bound relationship with the incubator, aimed at nurturing the new venture through the business, managerial and financial acumen of the incubator, skills that micro-entrepreneurs typically lack. By participating in the key decision-making process of the new venture, the incubator in turn reduces the risk of its investment through influencing the profitability of the new venture, thereby reaping the benefit of potentially higher returns.

When micro-enterprises are nurtured through a collaborative micro-equity model it aligns the needs of the micro-equity provider and the needs of the new venture. According to Ayayi (2012), "aligned interests offer a greater chance of success and cooperation than the arm's length model from micro-lenders" (p. 251). The proposed model is strongly rooted in financially self-sustaining principles. Firstly, future earned revenue generated by the incubator is tied to the performance of the new venture in which it is investing. In order for the incubator to realise the required return on its equity investment, it has to nurture and grow the new venture. This is a departure from the volume-driven orientation of many business incubators which are funded based on the number of entrepreneurs in their programmes or the number of jobs created by incubatees, as opposed to the quality of new ventures it produces (Masutha &

Rogerson, 2014, p. 151). Secondly, the returns generated from direct equity investment reduce the incubator's dependence on external sources of funding, thereby allowing it to become financially self-sustainable.

The societal benefits of micro-equity are illustrated by Ayayi (2012) through the contributions that successful entrepreneurs make to their social environment as a result of the returns generated by their businesses. Micro-equity allows for a more immediate social return as it does not place the burden of debt repayment on the new venture.

2.4.2 A Case for Self-Sustaining Business Incubators

Cammarata (2002) provides three foremost reasons for business incubators to pursue self-sustainability, the practice of which has been regarded by the NBIA board of directors as a business incubation best practice since 1996:

- Structuring for self-sustainability during the development stage provides a blueprint for sound future decision making.
- Achieving self-sustainability sets an example of responsible financial practices to incubatees.
- Most importantly, achieving self-sustainability reduces an incubator's vulnerability to the changing attitudes of funders. It helps ensure that an incubator will have a significant and long-term impact on its community. An incubation program that is not self-sustaining risks failure if one or more of its sources of financial support disappears (para. 1).

The importance of reliable, long-term funding is central to the growth prospects of the new venture; according to Beck and Maksimovic (2005) financing obstacles affect small businesses twice as much as they influence large businesses. The financial obstacles that significantly impact firm growth rates include:

- difficulties in dealing with banks, such as bank paperwork and bureaucracies, and the need to have special connections with banks
- collateral requirements and certain access issues, such as financing for leasing equipment
- high interest rates and lack of money in the banking system.

For this reason, academics agree on access to finance as being one of the driving factors of an enabling economic environment and therefore also one of the chief responsibilities of business incubation (Bouri et al., 2011). Better access to finance for small ventures will help them in overcoming the financial obstacles that are stifling their ability to grow.

Achieving enhanced access to new venture funding through financial self-sustainability is, however, not easily achieved. Financial self-sustainability, which Khalil and Olafsen (2010)

define as “earned revenue covering all business incubation expenses” (p. 73) is very rare in both the developed and developing world. Business incubators predominantly rely on an array of revenue sources, which include earned revenues and non-reimbursable funding from government and the private sector.

2.4.3 Achieving Self-Sustainability through Increased Earned Revenue

Table 1.1 lists a number of sources through which incubators earn revenue. Earned revenue excludes sources of income generated through public and/or private-sector funding. Revenue sources include fees charged for services provided, facilities rental and returns earned through taking a percentage of revenues generated by incubated companies or liquidity events of incubatees.

Through increasing earned revenue, the business incubator reduces its dependence on non-reimbursable government and private-sector funding, forcing a certain discipline on the business incubator that ensures that it stays market-oriented and provides services that are truly needed by its incubatees (Khalil & Olafsen, 2010).

Chandra (2009) supports the promotion of incubator self-sustainability by proposing that incubators need to consider gaining support from plural funding sources, both government and private, in order to reduce excessive dependence on any one funding source. Incubators need to have clearly articulated performance criteria in order to be exposed to the full effects of the market, in the same way as the new ventures they foster, with the aim of eventually becoming self-sustaining entities.

Khalil and Olafsen (2010) acknowledge that financial self-sustainability is not easily achieved. There are a number of considerations that need to be taken into account in order to ensure that self-sustainability as an objective does not detract from the incubator’s main objective of assisting entrepreneurs at the stage in their new venture life-cycle when they are most volatile and cash-strapped. An incubator overly driven by the need to meet revenue targets risks losing the trust of its incubatees due to uncertainty on the part of incubatees as to whether suggested strategies and services are critical, or whether they have been proposed so that the business incubator can meet its revenue targets.

For this reason Khalil and Olafsen (2010) recommend a multi-source revenue model that combines both earned and non-earned revenues. Woodrow Whitt (2014) supports the notion of multi-source funding by proposing that increased availability of capital requires incubators to continuously develop relationships with all possible sources of capital.

2.4.4 Self-Sustainability as a Principle in Funding Distribution

Khalil and Olafsen (2010) describe how public funding of business incubation programmes is justified:

Public investment to co-finance the start-up phase of business incubators is justified for at least two reasons: first, because effective business incubation yields economic development returns; second, because from a government budgetary perspective, several assessments have found that government contributions towards business incubation quickly pay for themselves, by generating tax revenues through the enterprises and jobs they generate (p. 74).

The mechanisms through which public and private funds are distributed to business incubators play a pivotal role in the ultimate outcome of the business incubation process. The policies that define these mechanisms should be aimed at fostering an entrepreneurship-enabling environment that breeds successful and sustainable new ventures. The study by Chandra (2009) found that incubators in Brazil operated under a Darwinian system, consisting of a range of government-funded programs which are designed to promote competition among incubatees and support the fittest by rewarding them for producing the most innovative proposals. “As a result, incubators in Brazil had to earn government monies rather than receive it as a matter of fact” (p. 83). Subject to this model, incubators could be deprived of continued funding unless they continue to generate competitively superior innovations. This creates an impetus for sustained performance as well as exposure to a competitive environment, such as that which new entrepreneurs will be exposed to once they have graduated from the business incubator.

The Brazilian model has achieved a significant return on public funds invested. As reported by the Brazilian Association of Science Parks and Business Incubators, from the 150 million reals in public funds that have been invested in business incubators over the last 30 years, it is now estimated that graduated enterprises generate 400 million reals annually in tax revenues (“ANPROTEC”, 2013).

The potential downside of such a model, however, is in the rivalry that it creates among incubators for a single source of public funding. This was found by Dutiro (2009) to be prevalent in the South African incubation landscape, and is cited as the primary reason for lack of collaboration among business incubators. According to Dutiro (2009), the benefits of improved collaboration are increased efficiency in decision making, exposure to indigenous business incubation and globally applicable best practice, consolidated lobbying strength for funding and the emergence of a well-developed business incubation ecosystem that will ultimately benefit the entrepreneur and the national economy.

It is clear from the literature that while financial self-sustainability practices such as the pursuit of multi-source funding, commercial viability of the incubator programme and an investor's mindset for non-earned revenue allocation is encouraged as principles for sound incubation management, overly profit-oriented incubation practices are also discouraged.

2.5 Conclusion

The aim of the literature review was to examine the business incubation environment in conjunction with the concept of financial self-sustainability, with the goal of identifying a potential relationship. What has emerged from the literature is that a financially self-sustainable incubator plays a pivotal role in ensuring adequate and sustained funding availability for new ventures subscribed to a business incubator, with adequate funding being identified as one of the most important factors influencing early-stage new venture survivorship. There is also significant evidence in the literature of the benefits enjoyed by incubatees under incubation models promoting equity sharing programmes and investment-oriented funding distribution.

The interviews which follow will firstly provide evidence of the extent of self-sustainability among business incubators and secondly a perspective on how challenges in the incubators' micro- and macro-environments could be overcome by adopting financial self-sustainability practices.

Chapter 3:

Research Questions

The study will aim to identify whether the proposed pursuit of self-sustainability in business incubation has any influence on funding access for entrepreneurs subscribed to a business incubator. It will also seek to identify whether a relationship exists between incubator self-sustainability and effective funds distribution.

In order to understand the benefits of self-sustaining business incubation, the following questions will be explored:

- **Research question 1:** Are business incubators self-sustaining or actively pursuing self-sustainability?
- **Research question 2:** Which internal challenges faced by business incubators could be overcome through adopting a self-sustaining business model?
- **Research question 3:** Could access to start-up and acceleration funding be improved if incubators pursue a self-sustaining business model?
- **Research question 4:** Can public and private SMME development funds be distributed more effectively by enforcing incubator self-sustainability?

The qualitative research questionnaire, through which the results of the study were obtained, appears in Appendix B. It seeks to identify the factors at play in the incubator landscape and will attempt to draw out as much relevant information on incubator self-sustainability as possible.

Chapter 4:

Research Methodology

This chapter provides a rationale for the choice of research methodology employed in the study as well as an overview of the strengths and weaknesses of the technique.

4.1 Research Method

4.1.1 Research Design

A qualitative, exploratory research approach was used in the study. In-depth, semi-structured interviews were conducted with 10 decision makers affiliated to 10 of the most prominent business incubators in South Africa. As far as possible, the interviews were conducted face-to-face, although some interviews were conducted via Skype video conferencing.

4.1.2 Methodology Rationale

The phenomenon of self-sustaining business incubation is recognised within the entrepreneurship-enablement industry, but not well researched. The researcher was eager to understand the extent of adoption of self-sustainability practices and the implicit benefits that these practices held.

According to Saunders and Lewis (2012), exploratory research is suited to gaining deeper insight into a phenomenon observed by the researcher. The exploratory study may well provide tentative answers to the researcher's initial questions, which need to be followed up with more detailed research. Saunders and Lewis (2012) further argue that expert interviews are the most frequently used and best suited research instruments for conducting exploratory research.

According to Zikmund (2003), qualitative exploratory research may be conducted to diagnose a situation, screen alternatives or discover new ideas about an phenomenon.

The open-ended interview questions allowed the researcher to gain deeper insights into the challenges faced by business incubators. Through the non-prescriptive nature of this interview technique, the researcher uncovered insights and contradictory views that would not have been possible through a quantitative study. This has positively contributed to the richness of discussion offered in Chapter 6 of this report.

4.2 Population and Sampling

4.2.1 Population

The population of relevance consisted of all categories of business incubators and accelerators. (Refer to Section 2.3.2 for categories of business incubators.)

4.2.2 Sampling Method and Size

The sample consisted of South African business incubators and was constructed to include equal representation by each incubator category, thereby preventing omission bias. In addition to the incubators, two consultants practising within the business incubation and enterprise development environments were interviewed. Through the inclusion of inter-category practitioners in the sample, the researcher hoped to enrich the depth of insight obtained from the study.

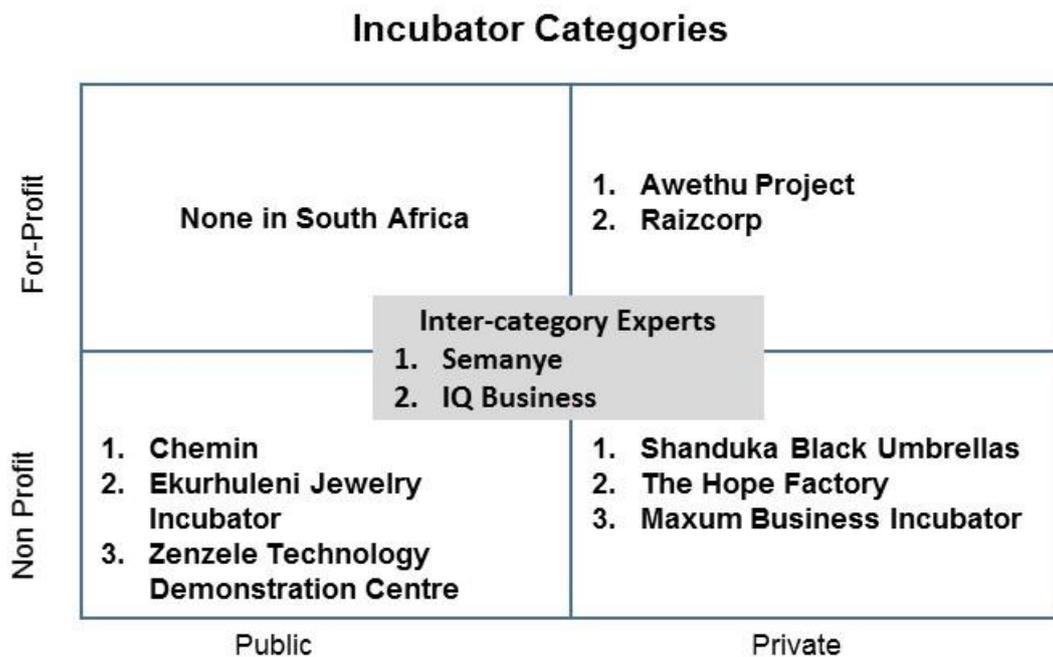


Figure 4.1: Conceptual categorisation of sample

Sample units were selected using a non-probability, heterogeneous–purposive sampling method (Saunders & Lewis, 2012). A heterogeneous–purposive sample contains sufficiently diverse characteristics to provide the maximum data variation possible. Through this, the researcher hoped to identify the emergence of patterns that represent key themes in the research results. The diverse characteristics of the three business incubator categories allowed the researcher to explore the phenomenon of self-sustainability within different contexts.

4.3 Unit of Analysis

The unit of analysis was business and technology incubators in South Africa.

4.4 Research Instrument

The selected research instrument was semi-structured, open-ended interviews which were predominantly conducted at the sample unit's premises and then transcribed and analysed to extract pertinent insights. The semi-structured interview was ideal for conducting exploratory research as a result of its flexibility (Gillham, 2005). The element of discovery was one of the major strengths of using this research instrument. This flexibility however, did not mean a lack of direction in the line of enquiry (Saunders & Lewis, 2012).

4.5 Procedure for Data Collection

An initial sample of 10 business incubators were identified and were emailed an invitation to participate in the research. This initial sample was constructed according to the approach defined in section 4.2.2. A low response rate to the email invitation required a follow-up by telephone, which resulted in the first two interviews being confirmed. Business incubators that declined to respond to either forms of invitation were discarded from the sample. Additional units were identified and added to the sample using a non-probability quota sampling technique, whereby sample units were purposefully contacted on the basis of their categorisation according to the incubator categories illustrated in Figure 4.1.

Interviews were conducted in accordance with the five stages of conducting an interview, as prescribed by Gillham (2005). The aim of this approach was to ensure that optimum value was derived from the interview process.

Gillham (2005) as cited by Dutiro (2009), outlines the five stages of conducting an interview, as follows:

The preparation phase, which begins before the interview takes place, involves consulting the convenience of the subject and ensuring that they understand the purpose of the interview. It is important that subjects are informed as to the planned length of the interview, as this will affect their attitude towards the interview.

The initial contact phase, which is primarily social but necessary to establish a rapport and gain the confidence of the subject.

The orientation phase, of which the primary task is to amplify the information already provided and steer the subject into the interview.

The substantive phase, which involves framing questions, being patient and attentive. Being attentive provides the interviewer with the opportunity to identify cues for probing and using a range of probes to encourage the subject to own the discussion.

The closure phase, which is the review and summary stage, invites the subject to add any other points which have been missed, which often adds valuable material to the interview. It is also a phase in which you display courtesy to and appreciation of the respondent (p 76.).

In order to ensure integrity of data and deep insight into the subject matter, interviews were conducted with only senior representatives from the incubators. Individuals in a management and decision-making capacity, whose daily responsibilities were directly related to the operations of the incubator, were deemed to be senior representatives. The interviews predominantly took place at the incubator's premises so as to ensure focused participation from the subject. Only in cases where the geographic location of the incubator presented a challenge for conducting face-to-face interviews, were Skype interviews conducted. This applied to four interviews.

Subjects were provided with an informed consent form (see Appendix C) which was signed and handed back to the researcher at the start of the interviews. In order to ensure that data could be accurately stored for analysis and to ensure the authenticity of important quotes, all interviews were recorded.

4.6 Data Analysis and Interpretation

Data analysis comprised the assessment and comparison of narratives both during and after the interview process. During the interviews, conflicting or corroborating narratives from previous interviews were referenced, to extract further insight from the interviewee. After the interviews, narratives were used to construct themes and subthemes that emerged from the data. Notes were taken during the interview to ensure that emerging themes and important quotes were highlighted. A mechanism was developed to organise notes and transcribed interviews into themes and subthemes. The themes and subthemes in turn were categorised into logical classifications based on the four research questions. In this way, the researcher was able to identify common responses and unexpected findings.

4.7 Research Methodology Limitations

- According to Zikmund (2003), interpretation of qualitative data is based on the judgement of the researcher, and could therefore be subject to interpreter bias.

- The nature of the research interview opens this study to potential interviewer bias, whereby the reference of the interviewer to corroborating statements from previous interviews or studies, may dissuade subjects from challenging certain standpoints.

Chapter 5:

Results

5.1 Introduction

In this chapter a summary of the qualitative research process, as collated from the 10 interviews, will be presented by question and respondent. The same 13 questions were posed to each interviewee, irrespective of the format, sector or funding source the incubator represented.

The following table illustrates how the interview questions were utilised to gain insight into the four research questions that this study aims to answer.

Table 5.1: Relationship between interview questions and research questions

Research Question	Corresponding Interview Questions
Are business incubators self-sustaining or actively pursuing self-sustainability?	i. Broadly describe the business plan or operating model of your incubator. ii. Describe the sources of funding employed in your incubation programme. (Are incubatees funded through business generated earnings, public funding, private-sector investment or a combination?) iii. Describe how your business incubation programme generates revenue.
Which internal challenges, faced by business incubators, could be overcome through adopting a self-sustaining business model?	iv. Describe the challenges faced by your incubator programme. v. Which macroeconomic issues are most relevant to your incubator? vi. What would you say is the biggest barrier to long-term incubatee success? vii. Do you believe that this barrier can be overcome by adopting self-sustaining business practices?
Could access to start-up and acceleration funding be improved if incubators pursued a self-sustaining business model?	viii. What in your opinion are the three largest contributors to new venture growth in an incubator?

Research Question	Corresponding Interview Questions
	ix. Research has shown that rivalry for a single source of public funding, which was also found by (Dutiro, 2009) to be prevalent in the South African incubation landscape, is the primary reason for lack of collaboration among business incubators. x. Would you say that your business incubation programme is subjected to funding rivalry? xi. Do you believe that access to funding can be improved by adopting self-sustaining business practices?
Can public and private SMME development funds be distributed more effectively by enforcing incubator self-sustainability?	xii. Do you believe that enterprise development funds are being distributed in an effective way that positively contributes to new venture development and growth? xiii. How can the distribution of enterprise development funds be further improved? xiv. What is your view on the future for business incubation in South Africa?

5.2 Overview of the Interviews and Incubators

Information about the respondents and the interview locations is shown in Table 5.1. The respondents were all decision makers within their respective incubators and had sufficient exposure to the incubation programme so as to provide insightful input. As far as possible, interviews were conducted on the premises of the respondent to ensure a comfortable environment. The interviews were also predominantly conducted in closed boardrooms with only the interviewer and the respondent present, to ensure that respondents were comfortable in voicing their opinions.

5.3 Description of the Interviews

Table 5.2: Interviews conducted

Incubator	Respondent	Respondent designation	Interviews conducted
Awethu Project	Mr Gareth Tailor	Senior Manager: Incubation	In person – Constitution Hill
Chemin	Dr Mkhethwa Maluleke	Trust and Enterprise Development Manager	In person – Chemin Midrand Offices
Shanduka Black Umbrellas	Mr Siyabonga Qwabe	Enterprise Development Manager	In person – SBU Pretoria Offices
The Hope Factory	Ms Busi Raphekwane	Manager: Programmes Service Offerings	In person – THF Johannesburg Offices
Raizcorp and The Motsepe Foundation	Ms Julie Dakers	Relationship Manager: Women & Youth & Other Sectors Incubation Mentor	In person – GIBS Campus
Simanye	Ms Lana Lovasic	Director: Economic Developmen	Skype Interview
Maxum	Mr Naim Rassool	Director: SARETEC - South African Renewable Energy Technology Centre Incubation Mentor	Skype Interview
IQ Business	Mr Stephen Smith	Head: Sustainability Practice	In person – IQ Business Park
Ekurhuleni Jewellery Incubator	Mr Zandi Botman	Head: Business Development	Skype Interview
Zenzele Technology Demonstration Centre	Ashok Chotoo	General Manager	Skype Interview

Most of the incubators have a combination of residential and satellite incubatees. Chemin, Zenzele and the Ekurhuleni Jewellery Incubator are affiliated to Seda. Shanduka Black Umbrellas and The Hope Factory are leading players in the ED landscape. The Awethu Project and Raizcorp are private for-profit accelerators.

5.4 Description of Incubators

Table 5.3: Incubators and experts interviewed

Incubator Name	Year Est.	Core Industry Focus
Awethu Project	2009	Industry Agnostic
RaizCorp	2000	Industry Agnostic
Chemin	2002	Chemical Industry
Ekurhuleni Jewellery Incubator	2009	Jewellery Manufacturing

Zenzele Technology Demonstration Centre	2001	Small scale mining
Shanduka Black Umbrella's	2005	Industry Agnostic
The Hope Factory	2001	Industry Agnostic
Maxum	2001	Industry Agnostic
Simanye	Enterprise development consultancy and social enterprise development partner	
IQ Business: Sustainability Practice	Management consultancy practice focused on measuring social return on investment	

5.5 Research Question 1

5.5.1 Are Business Incubators Self-Sustaining or Actively Pursuing Self-Sustainability?

To identify and assess levels of self-sustainability among the business incubators in the sample, the researcher made use of the definition of incubator self-sustainability developed by Cammarata (2002), as referenced in section 2.4. According to Cammarata (2002) there are three major elements that need to be present in order for an incubator to be considered self-sustaining:

- i. The incubator generates income that contributes to its operational budget.
- ii. The incubator does not depend on a single source of external support.
- iii. The incubator ensures that outside funding received is either reliable or replaceable.

Table 5.4 summarises the factors that contribute to self-sustainability, as they were observed during the interviews with incubators in the sample group.

Table 5.4: Factors contributing to incubator self-sustainability

Elements of Self-Sustainability	Private - For-profit	Private - Non-profit	Public - Non-profit
Characteristics of Incubation Model	High participation cost	Highly subsidised, minimal participation cost	Highly subsidised, minimal participation cost
	Strict selection criteria based on business viability (PDI quota)	Selection criteria focused on PDIs	Selection criteria focused on PDIs
	Industry agnostic	Industry agnostic	Industry clustered
	Emphasis on commercial viability of the incubator	Incubator operates as an NPO	Incubator operates as an NPO
	Option of equity stake taken in new venture	No direct investment by incubators	No direct investment by incubators

Elements of Self-Sustainability	Private - For-profit	Private - Non-profit	Public - Non-profit
	Commercial orientation	Services orientation	Technical training orientation
Sources of Funding	Multi-source funding: <ul style="list-style-type: none"> - In-house Investment Funds - Public grants - Corporate sponsorship models - Enterprise Development 	Ranges between single source and multi-source funding Predominantly ED funding and corporate donations	Public funding <ul style="list-style-type: none"> - Seda funding - Local government partnerships - Partnerships with parastatals - Public grants - ED funding
Sources of Revenue	<ul style="list-style-type: none"> - Participation fees - Return on equity investment - Merchandising 	<ul style="list-style-type: none"> - Subsidised participation fees 	<ul style="list-style-type: none"> - Subsidised participation fees - Consulting fees

In the light of comments recorded during research interviews with business incubators belonging to each of the three categories defined in section 2.3.2, and industry experts, evidence of the presence or absence of each of the three self-sustainability elements defined by Cammarata (2002) is now presented.

5.5.2 Element 1: The Incubator Generates Income that Contributes to Its Operational Budget

5.5.2.1. Comments from Private – For-profit Business Incubators

“The only way that we can have the type of scale that we want to have is if there is a commercial return that we can offer to our investors. If we can offer a commercial return to investors, it means that we are not limited to government or corporate social responsibility funding.”

“Sources of revenue for the programme include rental income, conference facilitation fees, income from the facilitation of school level entrepreneurship programmes, sale of merchandise under the founder’s personal brand and return on equity.”

5.5.2.2. Comments from Private – Non-profit Business Incubators

“We only charge the entrepreneurs that go onto the programme R500 commitment fee when they join. This is the only self-generated source of income for the incubator.”

“You cannot make a business out of incubation. The people that set up incubators in South Africa typically do it with public and private-sector funding in the form of either a grant or a sponsorship.”

“The vulnerable state that new ventures in incubators find themselves in makes it near impossible for incubators to demand market-related rentals. The incubators therefore need sponsorships from public and private sector in order to cover its financial responsibilities.”

According to the 2014 audited financial statements of one business incubator, operating income accounted for 5.6% of total income received for the year, with the balance consisting of enterprise development funding, grant funding and direct corporate investment. Only 5.9% of operating expenses is covered by operating income, making the incubator heavily dependent on its external funding sources.

5.5.2.3. Comments from Public – Non-profit Business Incubators

“At times we do jobs for the industry for which the centre is paid. This is however a very small percentage of total income, between R10 000 and R15 000 per month.”

“The incubator generates additional income through conducting feasibility studies and doing consulting at a fee. We are also planning to commercialise our laboratories.”

5.5.2.4. Comments from Industry Experts

“Commitment fees are typically very small amounts that are charged more for the sake of committing the incubatee to the programme, than generating revenue for the incubator. Profit-oriented incubators have been the subject of criticism lately, with critics disagreeing on their approach of profiting from the growth of micro businesses that they incubate.”

5.5.3 Element 2: The Incubator Does Not Depend on a Single Source of External Support

5.5.3.1. Comments from Private – For-profit Business Incubators

“Various forms of grant funding was used as runway or seed capital to establish the incubator’s for-profit model. In time the profit generated through this model will make the programme fully self-sustainable. We have designed our funding model to be commercially viable so as to not make it dependant on third-party hand-outs.”

“Funding is predominantly through the enterprise development model.”

5.5.3.2. *Comments from Private – Non-profit Business Incubators*

“The incubator receives the bulk of its funding through enterprise development and although there are some donations received, this only constitutes about 5% of total income.”

Public data from the 2014 audited financial statements of one of the business incubators indicate the composition of external funding sources:

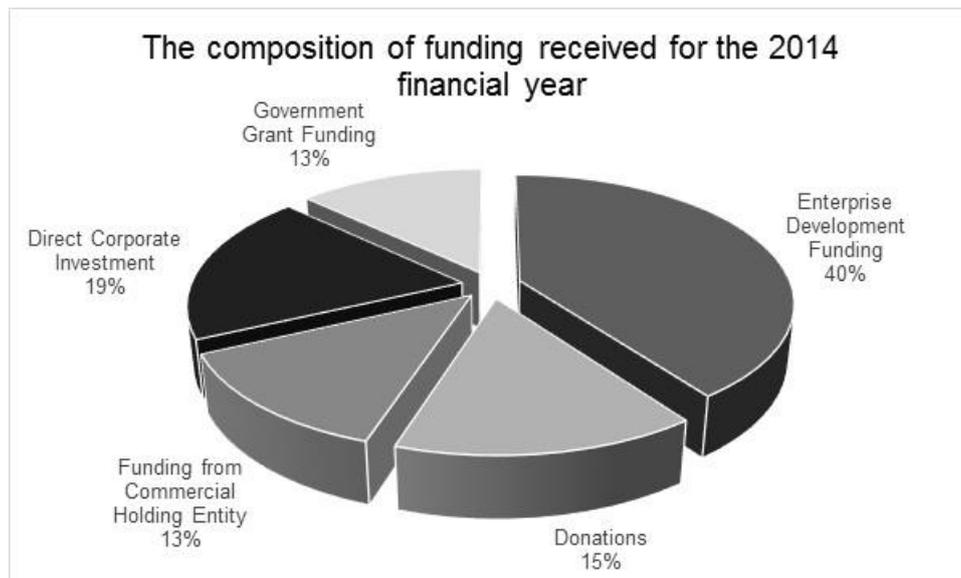


Figure 5.1: Composition of funding received for the 2014 financial year.

Source: Shanduka Black Umbrellas 2014 Annual Report (p.17)

5.5.3.3. *Comments from Public – Non-profit Business Incubators*

“We are heavily reliant on government funds, more than 90% of funding is from government. It is only recently that we have started to set up instruments to generate other sources of income.”

“Our operations are wholly funded by Seda. Other Chemin centres, such as those in Port Elizabeth and Mogale City are also funded through partnerships with local government institutions and municipalities. We are now on a drive to raise funds from various other external sources, including Transnet, with whom we have been in discussion.”

5.5.3.4. *Comments from Industry Experts*

There were no comments from the industry experts interviewed that suggest whether incubators are excessively dependent on a single source of external funding.

5.5.4 Element 3: The Incubator Ensures That Outside Funding Received Is Either Reliable or Replaceable

5.5.4.1. Comments from Private – For-profit Business Incubators

“The fact that the incubator was unable to shift its focus from enterprise development to Enterprise and Supplier Development at the time when the B-BBEE codes were amended, had caused us to lose a significant portion of revenue.”

5.5.4.2. Comments from Private – Non-profit Business Incubators

“A key challenge for us is to maintain secure income. Because the B-BBEE codes have changed we need to change the model of our operations, aligning it to the requirements of the new B-BBEE codes. The impact could be the potential loss of two thirds of income.”

“The incubator does not act as an intermediary for enterprise development fund distribution, instead it uses various government grants and other publicly funded entrepreneurship-enablement funds, such as the ISP, to fund its operations.”

5.5.4.3. Comments from Public – Non-profit Business Incubators

“Seda funding is insufficient for funding the needs of a highly capital-intensive industry.”

5.5.4.4. Comments from Industry Experts

“In South Africa a large portion of incubator funding is driven from B-BBEE codes [through enterprise development], so even though some incubators are self-sustaining, it is artificial in the sense that it is not the incubators that are paying for business to be developed, but indeed external parties (corporates through their ED budgets). So if those incentives were to be removed, those same incubators would no longer be sustainable based on their current models.”

Figure 5.2 illustrates the extent to which each incubator category displays evidence of employing each of the three self-sustainability elements. As an example, all private for-profit incubators generate additional revenue through their operations, whereas only 33% of private and public non-profit incubators generate earned revenue.

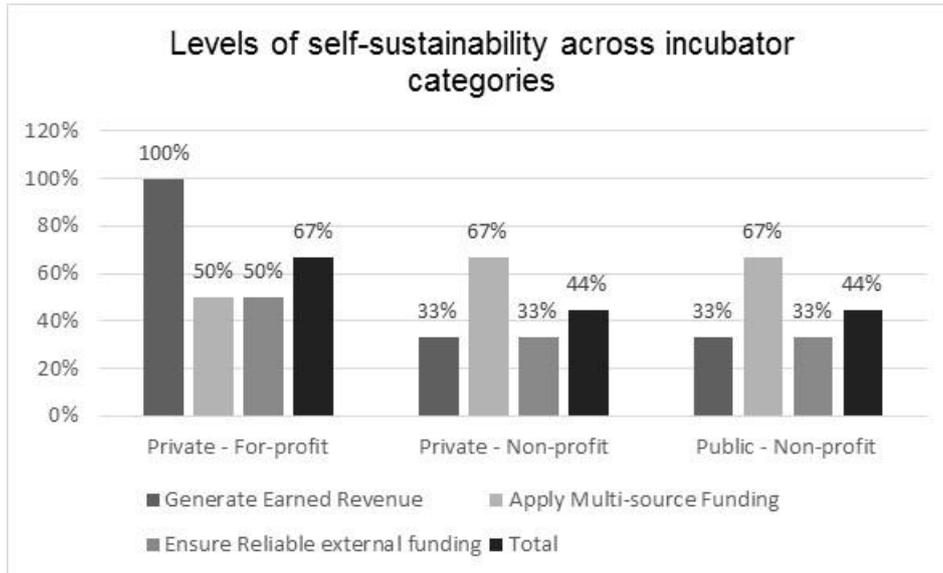


Figure 5.2: The presence of self-sustainability elements across the sample of business incubators

Source: Own compilation

The average across all elements can be used as a rudimentary gauge of overall self-sustainability, as it is an indication of the overall presence of self-sustainability elements among the sample of incubators that were interviewed.

5.6 Research Question 2

5.6.1 Which internal challenges, faced by business incubators, could be overcome through adopting a self-sustaining business model?

Table 5.5 summarises the responses to section 2 of the interviews (refer to Appendix B) by comparing the themes that arose from the different categories of business incubators. Section 2 of the interviews sought to identify the internal and macroeconomic challenges that are faced by business incubators. In addition, interviewees were requested to discuss the largest barriers to the success of entrepreneurs on the incubation programmes. The table illustrates the commonalities and differences in challenges faced by each category of incubator.

Table 5.5: Commonalities and differences in challenges

Challenges	Private - For-profit	Private - Non-profit	Public - Non-profit
Macroeconomic-economic challenges	Challenging market conditions impede new venture growth	Challenging market conditions impede new venture growth	Challenging market conditions impede new venture growth
	Poor implementation of social transformation policies	Poor implementation of social transformation policies	Poor implementation of social transformation policies
	Lack of funding alternatives for unsophisticated businesses	Poor performance of the private sector	Delays and bureaucracy in public administration processes
		Changing B-BBEE policies severely impacts sources of income	
		Lack of support from DSB Department of Small Business Development	
Largest barriers to incubatee success	Access to funding	Access to funding	Access to funding
		Access to markets due to high entry barriers	Access to markets due to high entry barriers
	Aligning the offerings of new ventures to the supply-chains of large corporates	Lack of business acumen and uninformed investment decision making	
		The advent of an unhealthy dependency of entrepreneurs on incubators	
Internal challenges	Volatility of ED funding due to changing B-BBEE codes	Volatility of ED funding due to changing B-BBEE codes	
	Lack of investable businesses	Lack of investable businesses	
	Incubator promiscuity (simultaneous participation by entrepreneurs in multiple incubation programmes)		Incubator promiscuity (simultaneous participation by entrepreneurs in multiple incubation programmes)

Challenges	Private - For-profit	Private - Non-profit	Public - Non-profit
		Attracting and maintaining sustainable funding	Attracting and maintaining sustainable funding
	Lack of commitment to training interventions by entrepreneurs	Lack of commitment to training interventions by entrepreneurs	
		Provision of capital is restrictive and oriented towards established businesses	Public funding is insufficient for funding the needs of highly capital-intensive industries
		Continued high rates of new venture failure	
		Lack of women entrepreneurs	

On the largest barriers to incubatee success, one respondent from a private non-profit incubator commented: "There is a concerning trend of entrepreneurs moving from one incubator to another in an attempt to secure additional funding and maintaining access to rent-free facilities."

Interviewees were requested to comment on whether the challenges faced by their respective incubators could be overcome by adopting self-sustaining incubation practices.

The majority of incubators believe that self-sustainable practices can assist in resolving the challenges listed in Table 5.5. Figure 5.3 illustrates the responses per incubator category.

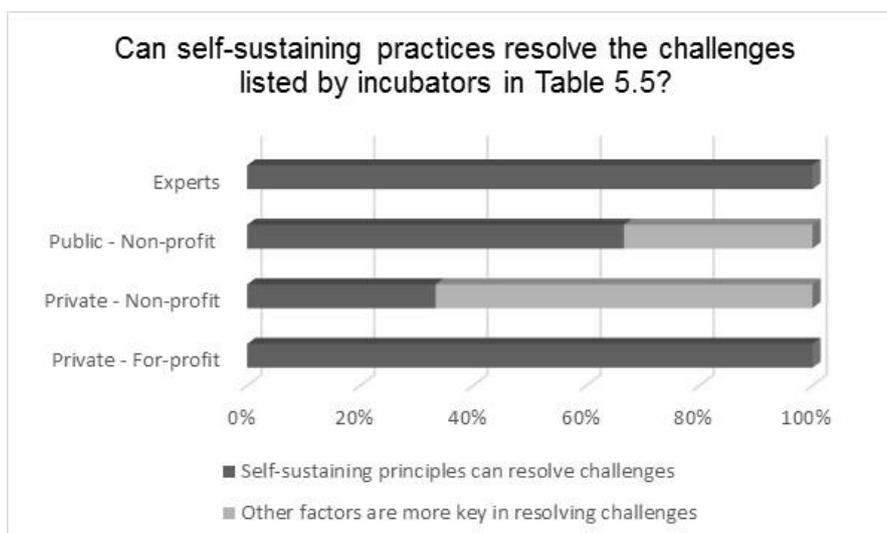


Figure 5.3: Responses per incubator category

Comments observed during the research interviews are quoted below and categorised according to those incubators and experts that believe that self-sustainability is the key to resolving the challenges, and those that suggested other factors.

5.6.2 Self-sustaining Incubation Practices Have a Role to Play in Resolving Business Incubation Challenges

5.6.2.1. Comments from Private – For-profit Business Incubators

“Lack of scale limits the incubator in terms of the number of people it is able to influence. Commercial viability allows the incubator to reach that scale and therefore help overcome some of the challenges faced by the industry.”

“Micro-business survivorship, especially in rural areas, can be greatly improved through collaboration between business incubators and cooperatives. An example of such a system is where incubators are used to train entrepreneurs in providing for the basic needs of the community. Upon completion of this training, entrepreneurs are allowed to form part of a cooperative where they get an opportunity to trade. Revenue generated through the cooperative is then shared between the entrepreneurs, and a portion is used to fund the incubator.”

5.6.2.2. Comments from Private – Non-profit Business Incubators

“The current income model, subscribed to by the majority of incubators, does not require the entrepreneur to make any significant commitment fee in return for access to an incubator. This has the potential to create co-dependencies. More significant investments by entrepreneurs will foster a culture of accountability and commitment.”

In contrast to the majority of interviewees, one private non-profit incubator identified access to markets, and not access to funding, as the primary barrier to long-term incubatee success:

“Access to markets, which is the single biggest challenge to incubatees, is not linked to the commercial orientation of the incubator. There are no immediate benefits that can be gained through the adoption of a financially self-sustaining business incubation model that would improve the incubatee's access to markets.”

5.6.2.3. Comments from Public – Non-profit Business Incubators

“We have set financial self-sustainability as a goal for ourselves and are actively working on developing relationships with large retailers to create a market for the products of our incubatees. Income generated from this market will be a source of additional funding for the centre and a platform for the growth of the new ventures in the centre.”

“We have recently established a commercial entity through which we aim to achieve a lower level of dependence on government funding. The commercial entity is aimed at unlocking additional sources of revenue, including a return on equity stakes taken in selected high-potential new ventures.”

5.6.2.4. Comments from Industry Experts

“When you are looking at incubators that fund formalised enterprises that already have an established business model, it makes sense to provide incubation services according to a benefit sharing or revenue sharing model.”

5.6.3 Other Factors Required to Resolve Business Incubation Challenges

5.6.3.1. Comments from Private – For-profit Business Incubators

“The solution to these challenges lie in creating an interchange or marketplace where the supply chain needs of corporates can be matched with the capabilities of small entrepreneurial ventures. Business incubators are perfectly positioned to facilitate such a marketplace.”

5.6.3.2. Comments from Private – Non-profit Business Incubators

“Connecting entrepreneurs with industry-specific private-sector funders will go a long way to improve the funding issues being experienced by the incubator.”

5.6.3.3. Comments from Industry Experts

“Incubator success should be measured through the extent to which new ventures are gaining access to markets and generating revenue. If those two factors are in place, the creation of jobs will be a natural consequence. If the emphasis however is foremost on job creation, the foundations of the new venture could very well be based on shaky ground, exposing the new venture to the risk of failure when it graduates to the open market.”

5.7 Research Question 3

5.7.1 Could access to start-up and acceleration funding be improved if incubators pursue a self-sustaining business model?

Several studies (Woodrow Whitt, 2014; Chandra, 2009; Bouri et al., 2011) cite access to funding as the largest contribution that business incubators make towards the growth of new ventures. The purpose of research question 3 was to establish whether this is also true for the sample of business incubators used in this study, and if it was the case, whether access to funding could be improved through adopting self-sustainable practices.

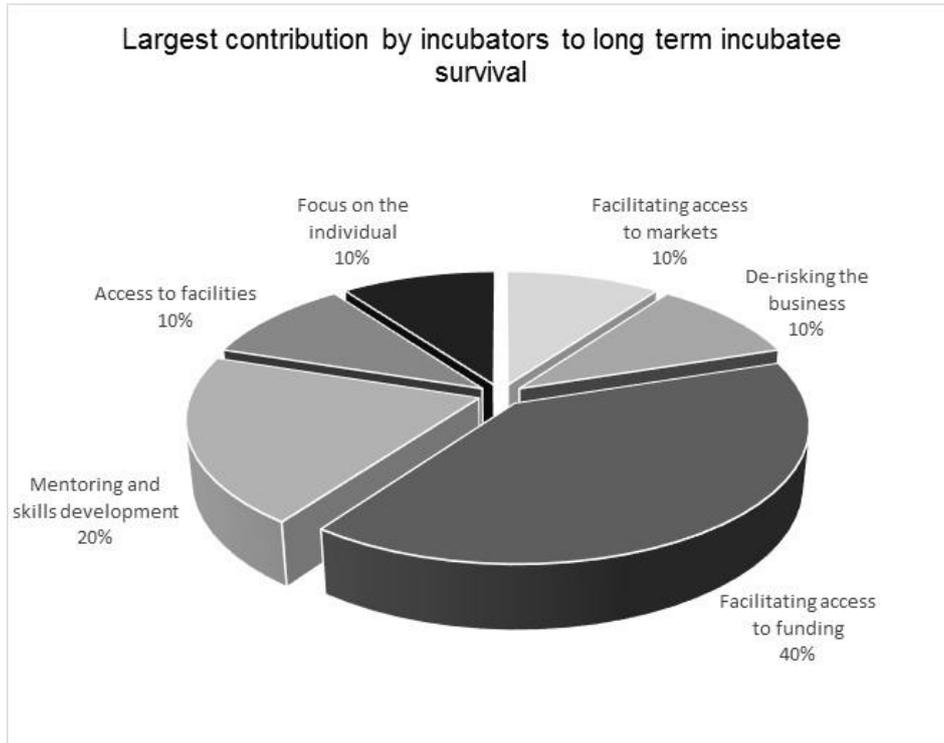


Figure 5.4: Results from the study on the largest contribution by incubators to incubatee survival

The findings support the literature in identifying access to funding as the most prominent contribution that incubation makes to the survival and growth of incubatees.

Table 5.6 summarises the key themes that emerged from the interviews. As in the previous section, the table illustrates the commonalities and differences in incubator contributions to new venture growth as proposed by each category of incubator.

Table 5.6: Incubator contributions to new venture growth

	Private - For-profit	Private - Non-profit	Public - Non-profit
Largest contributors to new venture growth	Facilitating access to funding	Facilitating access to funding	Facilitating access to funding
		Mentoring and skills development	Mentoring and skills development
	Facilitating access to markets	Access to facilities	
	De-risking the business	Focus on the individual supersedes focus on the new venture	

Research by Chandra (2009) has shown that rivalry for a single source of funding, which was found to be prevalent in the South African incubation landscape, is the primary reason for lack of collaboration among business incubators. Table 5.7 summarises the types of funding rivalry that was observed among the sample incubators interviewed.

Table 5.7: Types of funding rivalry

	Private - For-profit	Private - Non-profit	Public - Non-profit
Presence of funding rivalry	Rivalry to secure corporate ED investments	Rivalry to secure corporate ED investments	Rivalry to secure limited grant funding

Interviewees were requested to comment on whether access to funding for incubatees could be improved by adopting self-sustaining incubation practices. All interviewees agreed that self-sustainable operations would contribute to improving access to funding for new ventures and offered various examples of how this can be achieved. The comments observed during the research interviews are quoted below.

5.7.2 Access to Funding is Improved by Adopting Self-sustaining Incubation Practices

The following factors summarise how self-sustaining incubation practices are improving access to funding for new ventures subscribed to the incubators in the sample:

- self-sustaining incubation practices
- fuel incubator growth

- increase attractiveness to external investors
- facilitate and promote opportunities for incubatees to generate revenue during incubation
- emancipate the incubator from limitations and regulations of institutional funders.

These factors are elaborated on below through comments from each incubator category.

5.7.2.1. Comments from Private – For-profit Business Incubators

“Our incubator is for entrepreneurs, by entrepreneurs. We can hardly be a non-profit generating organisation and tell people how to run a successful business, if we are not doing it ourselves.”

5.7.2.2. Comments from Private – Non-profit Business Incubators

“By improving the reliability and predictability of its income, the incubator is able to control the impact that it has on the entrepreneur. This in turn leads to more sustainable growth for the new ventures in the programme.”

“When funders consider partnering with incubators, they are interested in the way that the incubator is ran and prefer that the incubator be commercially viable.”

5.7.2.3. Comments from Public – Non-profit Business Incubators

“Direct participation in the market allows the incubator to generate additional income to sustain its operations while creating a platform through which new ventures are exposed to the market. The role of the incubator in this system is also to ensure quality of products through association. Therefore government investment should be aimed at establishing opportunities for trade.”

“The capital requirements of bio-tech start-ups in the incubator far exceeds the funding that is being made available by Seda. We have therefore created a commercial entity and are working towards getting to a point where the majority of our funding is derived from a combination of private-sector investment and profit generated from incubator operations.”

5.8 Research Question 4

5.8.1 Can public and private SMME development funds be distributed more effectively by enforcing incubator self-sustainability?

Interviewees were asked whether they believe that entrepreneurship-enablement funds are being distributed in an effective way that positively contributes to new venture development and growth. Comments observed during the research interviews are summarised in Table 5.8.

Table 5.8: Summary of comments on funds distribution

	Private - For-profit	Private - Non-profit	Public - Non-profit
Effectiveness of funds distribution	Ineffective	Range from effective to ineffective	Ineffective
	Does not enable mutual interest in new venture development	National Empowerment Fund and Technology Innovation Agency are ineffective due to unnecessarily tedious credit approval processes	Mismatch between public funding and new venture growth needs
	Positive shift due to Supplier Development	IDC and DBSA are effective in distributing entrepreneurship-enablement funding	A prevalence of blind funding by Seda

Interviewees were requested to provide recommendations for how the distribution of entrepreneurship-enablement funds could be improved. Comments recorded during the research interviews are quoted below.

5.8.2 Recommendations for Improved Entrepreneurship-Enablement Funding Distribution

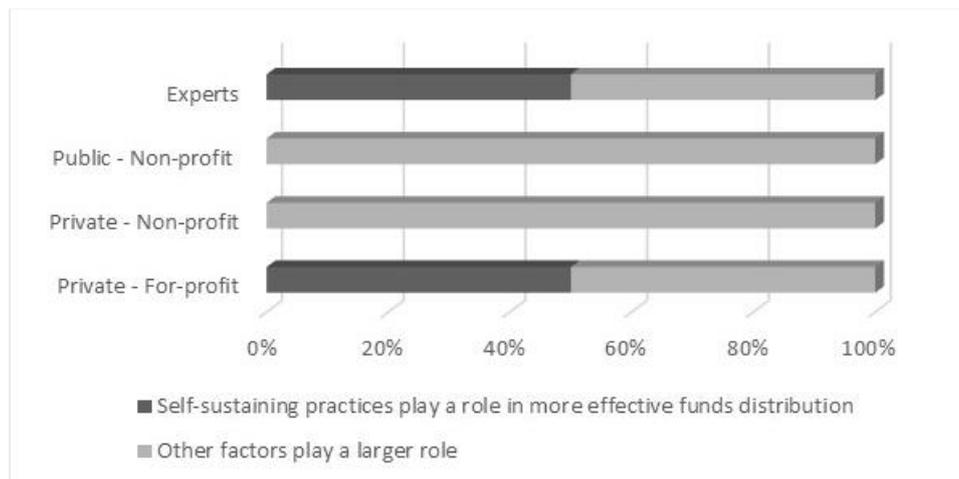


Figure 5.5: The role of self-sustainability in effective funds distribution

Figure 5.5 illustrates the extent to which incubators and experts believe that self-sustaining incubation practices can enable more effective funds distribution.

5.8.2.1. Comments from Private – For-profit Business Incubators

“Entrepreneurship-enablement funding can be improved by building access to markets through creating a marketplace where corporates and new ventures can trade on the basis of their common needs.”

“Commercial viability [of business incubators] should be the measure for allocating funds.”

5.8.2.2. Comments from Private – Non-profit Business Incubators

“Enterprise development funding must be distributed with incubator participation as a pre-requisite.”

“Internal processes and procedures need to be aligned to the goal of entrepreneurship enablement.”

“Funding institutions need to attract individuals with the appropriate skills and experience to ensure that funds are distributed more effectively.”

“Risk appetite among institutions are too low. This needs to be corrected to ensure effective enterprise development.”

5.8.2.3. Comments from Public – Non-profit Business Incubators

“There is not a shortage of money, but access to the funds is a challenge. Funding institutions need to develop a better understanding of the unique requirements of start-ups, specifically those that operate in highly capital-intensive industries.”

“Systems and policies for awarding and distributing funds should be aligned to the objective of ensuring sustainable enterprise growth.”

“More effective and consistent communication of application procedures by the various public funding institutions will improve the success rate of funding applications by incubators.”

5.8.2.4. Comments from Industry Experts

“Improved funding distribution can be achieved through alignment of incentives for new ventures and existing corporates.”

“Funding distribution can be improved by allocating funds to incubators based the commercial success of the incubator, as measured through an industry accepted certificate of excellence. The exception to this rule however is at the very bottom of the SMME scale. Unsophisticated micro start-ups at this end of the scale, need grant funding in order to catalyse the potential of the entrepreneurs running them. The intent of this type of incubation is to develop basic business skills that allow the micro start-up to develop into a profitable business.”

5.9 Summary of the Views on the Future of Incubation

Table 5.9: The future of business incubation

	Private - For-profit	Private - Non-profit	Public - Non-profit
View on the future of business incubation in South Africa	Positive outlook, but with some concerns	Positive outlook, but policy changes are key	Major concerns, policy changes are key
	Positive shift in the environment due to the introduction of supplier development in the new B-BBEE codes	Positive shift in the environment due to the introduction of supplier development in the new B-BBEE codes	Duplication of mandate across various government functions
	Unregulated environment has created a risk of unqualified entrants to the incubation industry	Predicting growth through stronger guidance from DSBD	Policies are not conducive to growing small businesses

“The future is in collaboration of incubators, enabled through the establishment of a regulatory board responsible for ensuring that programmes are impactful, guidelines are established for funds distribution and performance monitoring indicators are set to measure the impact of incubators on the economy” (Busi Raphekwane).

5.10 Conclusion

The relevant findings of the qualitative research process were presented in the sections above. The responses from each interviewee were recorded and grouped under each of the four research questions. In the following chapter the findings will be analysed and compared in the context of the literature review in Chapter 2.

Chapter 6:

Discussion of Results

6.1 Introduction

This section of the research report analyses the findings from the data in the context of the research questions and literature review. Each research question is addressed by looking at the themes that arose from the research interviews and analysing them against the theoretical constructs offered in Chapter 2 (refer to section 2.1.1). Conclusions are then offered on each research question.

6.2 Research Question 1

Are business incubators self-sustaining or actively pursuing self-sustainability?

6.2.1 Findings from the Research

The following prominent themes, relating to current levels of self-sustainability among incubators, emerge from the data.

6.2.1.1. *Ambitions of Increasing Earned Revenue*

Business incubators of all categories are making conscious efforts towards increasing the levels of earned revenue generated by their operations. The pursuit of increased earned revenue is structured around two objectives: reducing dependence on public funding through finding supplementary sources of income and creating joint commitment with the potential of mutual benefits for the incubator and incubatee.

For-profit incubators are further advanced in this pursuit with some incubators having reached trademark status to the extent that earned revenue includes the sale of merchandise that promotes the brand and methods of the incubator. Commitment fees at these incubators are much higher in comparison to non-profit incubators and entry criteria are stricter.

The ratio of earned revenue to total income for private non-profit incubators is the lowest among the three categories. This can be explained by the large influx of corporate funding to business incubators that has been the result of ED, driven by the B-BBEE codes.

Public non-profit incubators are harnessing technical skills and specialist facilities to generate earned revenue through their incubation operations. Public funding is not sufficient to meet the needs of these incubators, and as a result they are looking to other sources of income.

Earned revenue, however, constitutes only a very small portion of total income for these incubators.

6.2.1.2. Multiple Funding Sources

Incubators are tapping into a combination of public and private funding sources to sustain and grow their operations. Private incubators initially use public funding to establish their operations. Once these operations have reached a certain level of maturity, they become self-sustaining and therefore independent of further public funding.

Private funding is predominantly sourced through ED. Even though ED is the only funding source for private non-profit incubators, the funds originate from a variety of corporate benefactors and can therefore be regarded as a plural source.

Public non-profit incubators are wholly dependent on Seda to fund their operations. This funding, however, does not sustain the funding needs of incubatees. Incubatee funding is facilitated through applications to third-party institutions such as the DTI, DBSA and local government grants.

6.2.1.3. Under-Utilisation of Early-Stage Equity

Returns on early-stage equity investments take long to realise and are therefore not a preferred source of income among business incubators. Early-stage equity is predominantly used in cases where an established new venture with exceptional potential is incubated for rapid growth.

There is a negative perception among non-profit incubators about early-stage equity; it is regarded as placing undue performance pressure on the new venture during a stage in its life-cycle when it is at its most vulnerable.

6.2.1.4. High Levels of Dependence on Corporate Enterprise Development Funding

The main source of funding for most private incubators is corporate ED investment, but the recent change in the B-BBEE points system has disrupted the steadiness of this funding source. The new B-BBEE points system incentivises corporates for integrating SMEs into their supply chain. This has caused a shift in the focus of incubators away from solely focusing on entrepreneurial skills development, towards finding markets for SMEs within the supply chains of their corporate ED benefactors. This shift has caused a significant drop in income for private incubators who have not evolved their programmes to incorporate supplier development initiatives.

6.2.2 Important Points from the Literature

Cammarata (2002) proposes there are three elements that need to be present in order for an incubator to be considered self-sustaining:

- i. The incubator generates income that contributes to its operational budget.
- ii. The incubator does not depend on a single source of external support.
- iii. The incubator ensures that outside funding received is either reliable or replaceable.

The four principal reasons for business incubators to pursue self-sustainability are summarised by Cammarata (2002) as follows:

- i. It provides a blueprint for sound future decision making.
- ii. It sets an example of responsible financial practices to incubatees.
- iii. It reduces an incubator's vulnerability to the changing attitudes of funders.
- iv. It ensures that an incubator will have a significant and long-term impact on its community.

6.2.3 Conclusion on Research Question 1

Using Cammarata's (2002) three elements of incubator self-sustainability, the findings show that all three categories of incubators exhibit signs of self-sustainability, either in the way it currently operates or through the plans that it has put in place for the future. The most prevalent approach to reaching self-sustainability is through ensuring a diversified and multi-source funding plan.

The results of the study confirm Chandra's (2009) cautions against overreliance on single sources of funding. Although ED is regarded as multi-source funding, it is regulated centrally through B-BBEE policy, making incubators that rely solely on ED funding vulnerable to changes in the policy environment. This is why diversification of incubator funding is equally as important as multi-source funding in ensuring self-sustainability.

6.3 Research Question 2

Which internal challenges, faced by business incubators, could be overcome through adopting a self-sustaining business model?

6.3.1 Findings from the Research

The aim of research question 2 was to identify whether the challenges that the incubators face by their own admission currently face, could be addressed through adopting self-sustainability practices. The following six themes summarise the internal challenges that business

incubators are facing (refer to Table 5.5 for details of challenges compared across the three categories of incubators):

- i. access to funding
- ii. challenging market conditions that impede new venture growth
- iii. volatility of ED funding due to changing B-BBEE codes
- iv. lack of investable businesses
- v. incubator promiscuity (simultaneous participation by entrepreneurs in multiple incubation programmes)
- vi. poor implementation of social transformation policies.

Each of the sub-sections below represents a self-sustainability principle that was identified through the research as a potential solution to the internal challenges listed above.

6.3.1.1. Commercial Viability

Business incubation and commercial trade go hand in hand and need to be used collectively in business incubation programmes to: i) provide entrepreneurs with the targeted resources and services they need to grow their new ventures and ii) assist entrepreneurs with overcoming barriers to market entry. Some incubators use self-owned retail outlets, trade fairs and wholesale agreements to offer their incubatees formal opportunities for trade during the incubation process. Commercially viable business incubators are concerned with trading as opposed to just training and by sharing in the income generated from such trading activities, are able to generate a self-sustaining source of income, while simultaneously facilitating market exposure for the new ventures they incubate.

6.3.1.2. Supplier Development

If incubators are to continue their role as intermediaries for disbursing ED funding, a shift is required towards a supplier development imperative. Business incubators are however perfectly positioned to establish and coordinate a marketplace where the supply chain needs of corporates can be matched with the capabilities of small entrepreneurial ventures.

In addition to ED funding, this marketplace or interchange is a valuable trading asset through which incubators can generate commercial returns to sustain and grow its operations.

6.3.1.3. Commitment Fees

For a once-off participation fee of as little as R500, incubatees can get access to physical and technology facilities at an incubator, for which they would normally be required to pay a substantial fee. Although the provision of these facilities is aimed at accelerating the growth of new ventures, an unhealthy dependence on incubators has gradually emerged among some

entrepreneurs as an unintended consequence. In the pursuit of better facilities or additional funding, some incubatees are secretly involved in multiple incubation programmes. This behaviour is putting an unnecessary burden on entrepreneurship-enabling resources and is contradictory to the very aim of business incubation, which is ultimate graduation out of the incubation programme.

Findings from the research suggest that commitment fees must be used as a mechanism to establish a real commitment between the incubator and incubatee. By increasing commitment fees, incubators create a preventive barrier to simultaneous incubation. Phillips and Gully (2014) propose that one of the three ways individuals feel committed to an organisation is continuance commitment, which is described as staying with an organisation because of the perceived high economic and or social cost of leaving. A higher commitment cost of incubation will establish continuance commitment among its incubatees due to the opportunity cost of non-participation or abandonment, while simultaneously increasing the operational income of the incubator and contributing towards its levels of self-sustainability.

This approach does, however, also have potential negative consequences in the sense that it creates a financial barrier for those incubatees that do not have the means to absorb higher commitment fees. A further consequence of increased commitment fees would be the emergence of price differentiation among incubators and the competitive forces that this would create.

Although higher commitment fees could be a self-sustaining solution to the challenges faced by business incubators, it also poses further challenges to the industry and more research should be conducted to understand the influence of increased commitment fees on the success of incubatees.

6.3.2 Important Points from the Literature

According to Phillips and Gully (2014) organisational commitment reflects the degree to which an individual identifies with an organisation and wants to stay with that organisation. There are three ways in which individuals feel committed to organisations:

- i. affective commitment: positive emotional attachment to the organisation and strong identification with its values and goals
- ii. normative commitment: feeling obliged to stay with and organisation for moral or ethical reasons
- iii. continuance commitment: staying with an organisation because of perceived high economic and or social costs involved in leaving.

6.3.3 Conclusion on Research Question 2

Business incubators across all three categories agree that many of the challenges that they face can be mitigated or resolved through adopting self-sustainability principles. Figure 6.1 summarises the findings by illustrating how the self-sustainability principles explained in sections 6.3.2 to 6.3.4 impact the challenges listed in section 6.3.1. To illustrate the influence of each principle on the inherent self-sustainability of the incubator, each principle is also assessed against the three elements of incubator self-sustainability proposed by Cammarata (2002).

Internal challenge	Result measured in terms of influence on Camarata (2002) three self-sustainability elements			Overall impact of self-sustainability principles on resolving internal challenge	
	Self-sustainability principle for addressing the challenge	Income Generated	Multi sourced funding		Funding reliability and replacability
Access to funding	6.3.2 Commercial viability	↑	↑	▬	Additional income generated through commercial activities improves incubator cash flow position and attractiveness for investors
Access to funding	6.3.3 Supplier development	↑	↑	▬	Financial returns generated for facilitating supply chain integration improves incubator cash flow position. Corporate supply chain investment funded through ESD unlocks new venture funding opportunities.
Challenging market conditions that impede new venture growth	6.3.3 Supplier development	↑	▬	↑	Incubation focused up-front on establishing alignment between the supply chain needs of the corporate and the product offering of the new venture, ensures market acceptance.
Volatility of ED funding due to changing B-BBEE codes	6.3.2 Commercial viability	↑	↑	↑	Additional income generated through commercial activities reduce dependence of external funding sources
Lack of investable businesses	6.3.3 Supplier development	▬	▬	↑	Incubation that is focused on exploiting existing corporate supply chain needs de-risks the investment opportunity
Incubator promiscuity (simultaneous participation by entrepreneurs in multiple incubation programmes)	6.3.4 Commitment fees	↑	↑	↓	Increased commitment fees improve incubator cash flow and establish continuance commitment
Poor implementation of social transformation policies	None	▬	▬	▬	Applying self-sustainability principles at an incubator level will not resolve this challenge.

-  Positive influence on self-sustainability element
-  Negative influence on self-sustainability element
-  No influence

Figure 6.1: Impact of self-sustainability principles on internal challenges

Source: Own compilation

6.4 Research Question 3

Could access to start-up and acceleration funding be improved if incubators pursue a self-sustaining business model?

6.4.1 Findings from the Research

The results of this study reinforce the findings by Woodrow Whitt (2014), Chandra (2009) and Bouri et al. (2011) which cite access to funding as the largest contributor that business incubators make towards the growth of new ventures.

Funding rivalry takes on different forms within the different categories of incubators (refer to Table 5.7). For-profit incubators experience type 1 funding rivalry as they compete for the opportunity to manage the ED budgets of corporates in the private sector. Non-profit incubators on the other hand, experience type 3 funding rivalry as they are required to compete for a share of grant funding to which other Seda incubators also have a claim. Although the results of the research confirmed the prevalence of rivalry in the South African business incubator landscape suggested by Dutiro (2009), there is no evidence from the results to suggest that funding rivalry is a significant barrier to accessing funding.

Graham (2010) suggests that the traditional public incubator model, which relies on justification-based funding, carries a heavy administrative burden and tends to inspire a bureaucratic culture that is often out of sync with the private and for-profit businesses that they incubate. The results of this research confirmed the tendency, particularly among public non-profit incubators, to justify funding of the new venture proposal, rather than monetising the generated value that the new venture holds.

The following factors, listed in section 6.4.1.1, were elicited from business incubators as key contributions that a self-sustaining incubation model makes towards improving access to funding for incubatees.

6.4.1.1. Increasing Attractiveness to External Investors

According to Graham (2010) the incubator provides two primary functions: value-derived services to the new venture and risk mitigation for the external investor. Risk mitigation in this sense includes both the development of the new venture to a point where it is an investable proposition and the operation of an incubator facility that will be a sensible and profitable custodian of external investment funds. Self-sustainability is a reassurance to the external investor that their investment will be fully utilised for the promotion of the new ventures that they are invested in and not diluted to supplement the operational costs of the incubator. In this way the rand-for-rand return on invested capital generated through a self-sustaining

incubator will always be greater, making the investment proposition more attractive to the investment community.

6.4.1.2. Facilitating and Promoting Opportunities for Incubatees to Generate Revenue During Incubation

Incubatees who have developed their products and services into a viable commercial proposition should be encouraged to trade. The proceeds of trade are a valuable source of funding, both for the individual venture and the incubator. Incubators have the responsibility to create and facilitate a trading platform for incubatees, the proceeds of which should be equitably shared between the incubator and the incubatee that generated the sale. This creates a positive flow of additional income through which mature incubatees accelerate growth and infant incubatees are developed into commercially viable businesses.

The timeline below illustrates the role of early trade in relation to other sources of new venture funding in the start-up life-cycle.

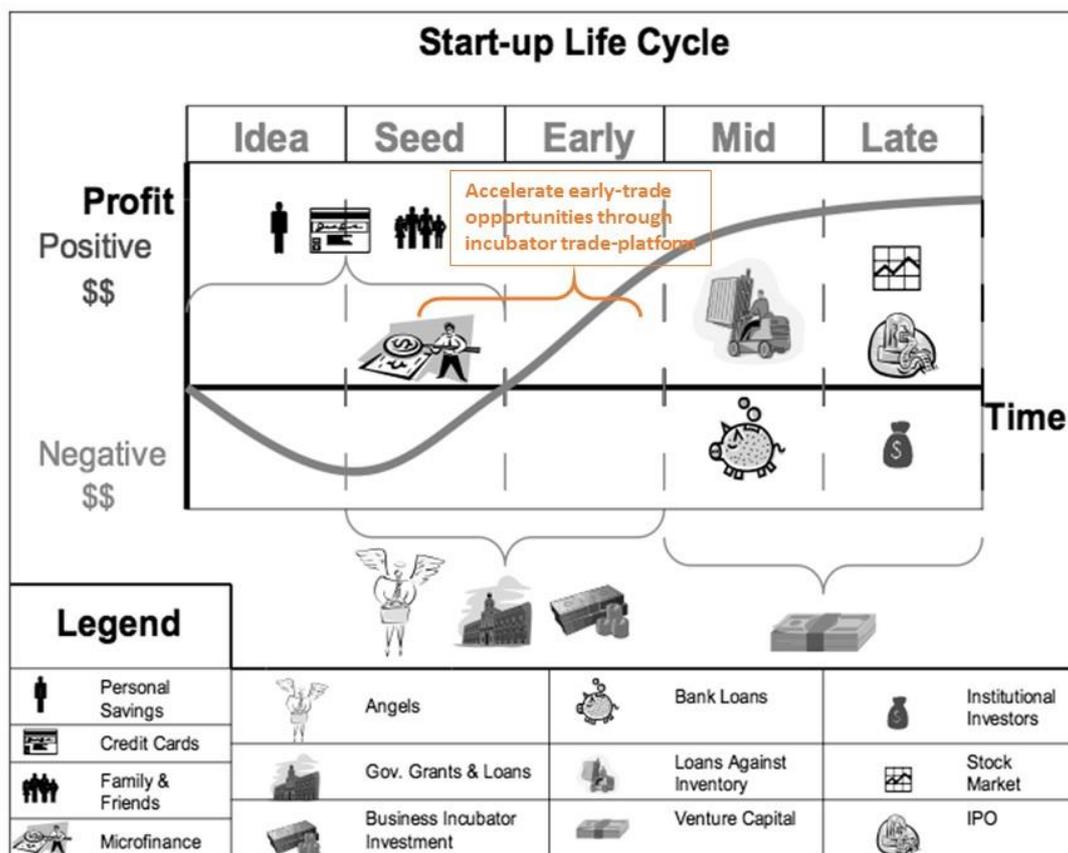


Figure 6.2: Start-up life-cycle

Source: Adapted from Chandra (2009, p.78)

6.4.1.3. *Emancipating the Incubator from Limitations and Regulations of Institutional Funders*

While government and institutional funders have a key role to play in funding business incubation, an incubator that is overly or continuously reliant on government grants or ED funding, runs the risk of detracting from the effects, culture and results of the program. The time and effort required to continuously apply for government and institutional funding also detract from the incubator's mission, vision and values, which should be the facilitation of jobs, improving the probability of new venture success, and improving the growth rate of incubatees. A self-sustaining business incubator primarily focuses resources on providing value to incubatees and investors alike.

6.4.1.4. *Fuelling Incubator Growth*

The combined impact of all the preceding factors allows the incubator the freedom to increase its capacity, thereby expanding its influence on successful entrepreneurship enablement. It also provides opportunities for the incubator to generate larger direct capital investments in capital-intensive industries.

6.4.1.5. *Important Points from the Literature*

Warren (2008) differentiates between three main forms of rivalry, which are equally applicable to commercial entities and non-profit sectors.

Type 1: The battle to win new customers who do not yet buy your kind of product from anyone (potential customers)

Type 2: The struggle to capture existing customers from rivals while keeping your own customers from switching to rivals

Type 3: The fight for the best possible share of business from customers who are not exclusively with you or anyone else

6.4.2 Conclusion on Research Question 3

Graham (2010) illustrates the relationship between the three key stakeholders in the incubation process through the incubator business arrangement concept.

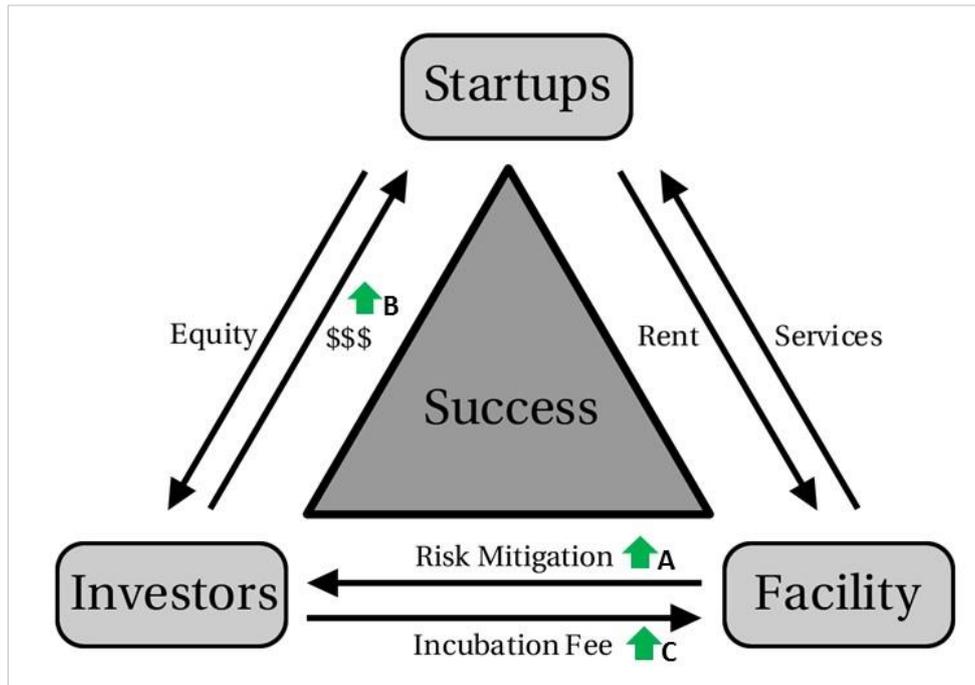


Figure 6.3: The incubator business arrangement concept

Source: Adapted from Graham (2010, para.6)

Success in this model is defined as profitability of the incubator and the start-up, adequate funding for the start-up and/or acquisition of the start-up. The impact of incubator self-sustainability on funding accessibility is illustrated by the points A–C.

Point A: A self-sustaining incubation facility is better positioned to mitigate the capital risk that an investor takes when funding a new venture (referred to in the Graham (2010) model as a start-up).

Point B: Better mitigation of capital risk makes investment in the self-sustaining incubator more attractive, increasing the number of investors and consequently the availability of start-up funding.

Point C: Successful start-ups emanating from this system allow the facility to reap benefits such as increased incubation fees, thereby completing the cycle and contributing further to the self-sustainability of the system.

6.5 Research Question 4

Can public and private SMME development funds be distributed more effectively by enforcing incubator self-sustainability?

6.5.1 Findings from the Research

The results of the research could not provide conclusive evidence of the influence of incubator self-sustainability on effective funds distribution.

The general sentiment from the respondents towards the effectiveness of SMME development funds distribution is that it can be improved. Bureaucratic and administratively intensive processes are the main challenges that need to be overcome among public incubators, whereas a generally risk-averse investment outlook and misalignment of incentives between new ventures and large corporates are the main challenges experienced by private incubators.

The results from the data analysis suggest that a better understanding by, and an improved alignment of public and private owners of capital to the unique funding needs of new ventures is key to achieving equitable distribution of funding.

A shared view between one of the private incubators and an expert is that funding distribution could be improved by allocating funds to incubators on the basis of the commercial success of the incubator. Both parties also agreed, however, that this will only be viable in an environment with high-maturity new ventures and that it will not be feasible for incubating unsophisticated micro start-ups.

6.5.2 Conclusion on Research Question 4

Self-sustainability of incubation cannot be universally applied as a measure for funds distribution. Although such a measure will be effective in promoting the principles of commercial viability that incubatees will require upon graduation into the open market, it is not conducive to developing unsophisticated micro start-ups that require capital and resource-intensive development prior to becoming commercially viable.

6.6 Conclusion to the Discussion on the Research Findings

Table 6.1 summarises the knowledge gained by the researcher from the interviews held compared with the literature review.

Table 6.1: Research evaluation

Research Question	Comments
Are business incubators self-sustaining or actively pursuing self-sustainability?	The research provided evidence of varied but increasing levels of self-sustainability, not necessarily delineated according to the profit orientation of the incubator. The research findings are in support of the literature, proposing self-sustainability as an orientation-agnostic principle.
Which internal challenges, faced by business incubators, could be overcome through adopting a self-sustaining business model?	The research elicited information in support of the literature review. Access to funding and challenging market conditions were revealed as the key internal challenges faced by incubators.
Could access to start-up and acceleration funding be improved if incubators pursue a self-sustaining business model?	The research findings were in support of the literature review: Increasing earned revenue reduces dependence on non-reimbursable government and private-sector funding, forcing a certain discipline on the business incubator that ensures that it stays market-oriented and provides services that are truly needed by its incubatees.
Can public and private SMME development funds be distributed more effectively by enforcing incubator self-sustainability?	Although the literature presented a case for improved funding distribution through incubator self-sustainability as a key metric, the research findings proved that this is not universally applicable.

Chapter 7:

Conclusion

7.1 Principal Findings

Profit and non-profit business incubators are evolving their business models to incorporate revenue-generating activities as a means to minimise the volatility of institutional sources of funding. This evolution is creating an awareness among incubators of the need to achieve higher levels of self-sustainability. Slow adapters to this change have had to endure financial difficulty or stifled growth due to the volatility of institutional funding sources.

Access to funding and markets, the two most prominent challenges faced by incubatees, can both be improved through applying self-sustainability practices in the business incubator. Other benefits of a self-sustaining incubator model include:

- Self-sustaining business incubation mirrors the goals and objectives of incubatees. By ensuring that the paradigm and culture of the incubator are in sync with those of the new ventures, the focus of the incubator can be on delivering value and results as measured by the success of incubatees.
- Self-sustainability is a far more attractive investment proposal for external investors, ensuring a constant inflow of fresh capital.
- Self-sustaining incubators demand a more rigorous evaluation of new ventures seeking to enter the incubation program. This cultivates an ecosystem of entrepreneurship and innovation from which the incubator draws its future tenants.

7.2 Implications for Management

Self-sustainability cannot be applied in a one-dimensional fashion to all business incubators. The role of self-sustainability evolves as the sophistication of the new venture grows into a mature and commercially viable investment proposition. The classification of business incubators that was used in the research can be augmented to illustrate the aim of incubation from the perspective of the incubatee, as opposed to the perspective of the incubator (profit vs non-profit). This perspective allows better insight into the role of self-sustainability within different classifications.

The emerging model from the research proposes a classification based on tiers:

Tier one represents grass-roots level incubation aimed at providing the basic entrepreneurial skills to allow formal trade. Tier-one incubation is focused on using entrepreneurship to stimulate community-based economies or ecosystems. These incubators provide the community with skills and resources to meet its own basic needs and those of surrounding communities.

Funding is mainly derived from government programmes and entrepreneurial grants. The opportunity also exists to partner these incubators with cooperatives whose role is to market the products and services that are incubated in the tier-one incubators.

Tier two represents a more sophisticated level of incubation, where the emphasis lies on aligning the incentives of SMEs and large corporates by developing new ventures into self-sufficient suppliers that can be integrated into the supply chains of large corporates. These incubators are mainly concerned with creating a platform where the supply chain needs of corporates can be matched with the products and services of the SME sector. Another primary role of tier-two incubation is to develop the resources and operating models of SMEs to the point where they are able to offer a commercially viable alternative to large foreign suppliers of goods and services.

Multi-source funding is a key attribute of tier-two incubators, allowing them a shield against the volatility of singular institutional funders or the administrative burden of public funding.

Tier three represents incubation aimed at accelerating already existing, high-potential ventures into highly profitable business propositions. Tier-three incubators or accelerators are highly selective of the type of business venture that they accept into the programme and use commercial viability and predicted profitability as the key metrics to determine acceptance. Incubation is strongly focused on building attractive investment propositions that are appealing to external investors.

Accelerators are funded primarily through earned revenue, which is made up of commitment fees, return on equity from previous investments and incubation fees (the concession that early investors pay the incubator for developing the new venture into a commercially viable entity).

The dimensions of self-sustainability are aligned to the objectives and funding needs of each of the three tiers. Figure 7.1 illustrates the role of self-sustainability in the context of the three-tier model.

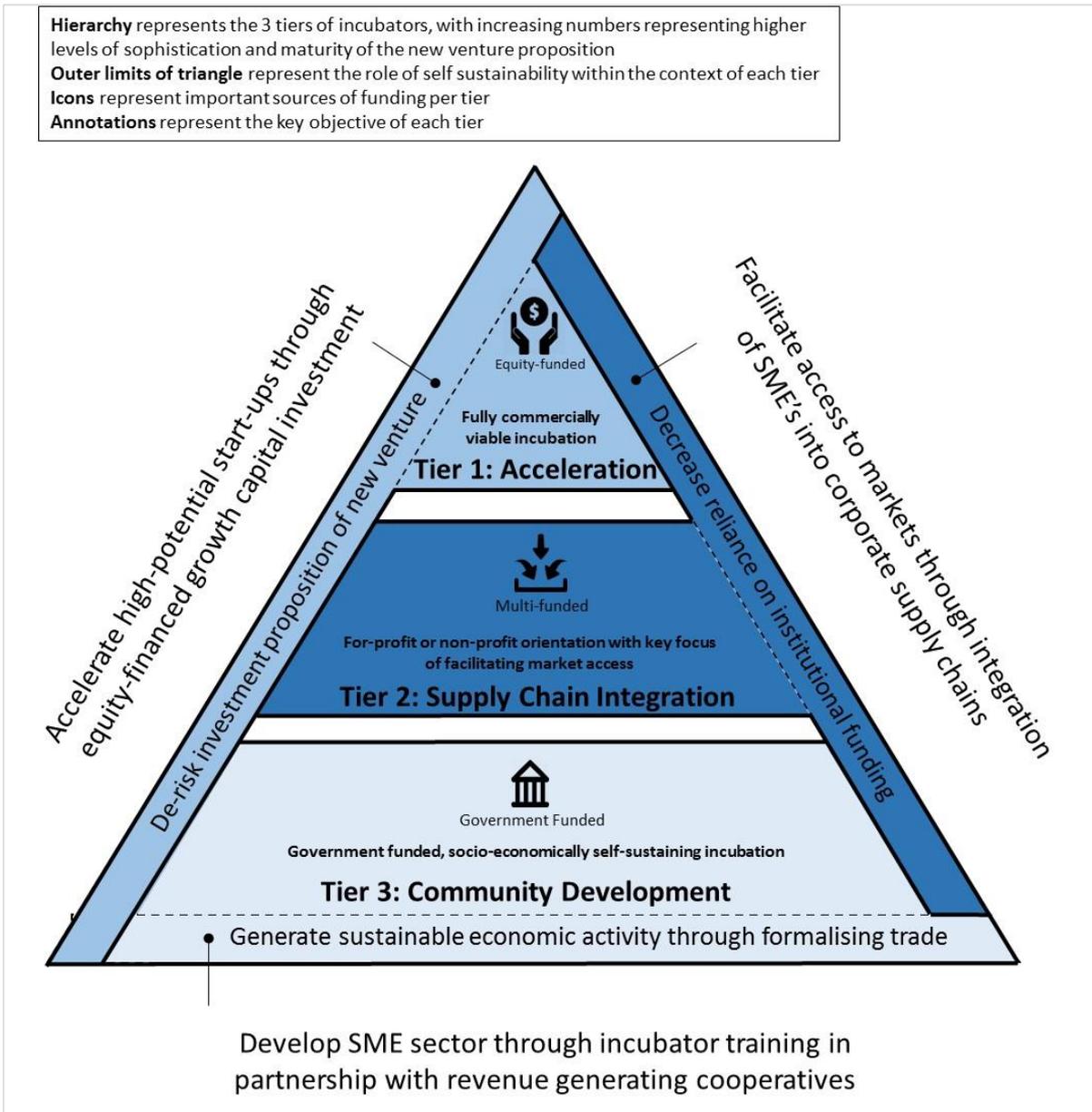


Figure 7.1: A model for the role of self-sustainability in business incubation

Source: Self-compiled

Tier three: Self-sustainability of the ecosystem

The aim of tier-three incubation is not to create highly attractive commercial opportunities, but to create targeted trade activity based on the needs of a community or ecosystem. Self-sustainability in this context is measured in the extent to which the incubator can provide for the needs of the community in a self-sustaining way that also uplifts the socio-economic conditions of the community.

Tier two: Reducing reliance on institutional funding, ensuring medium and long-term sustainability

The role of self-sustainability in tier-two incubation is that of ensuring that funding sources are reliable and predictable to the extent that the incubator can strategically plan the impact that they will have over the short, medium and long term, without being disrupted by volatile funding. The capital-intensive nature of tier-two incubation makes financial self-sustainability an integral part of the business model.

Tier one: De-risking the investment proposition of new ventures

Self-sustainability takes on a commercial viability dimension in tier-one incubation. Here, the emphasis of self-sustainability is on ensuring that the ventures selected have the potential to generate high returns that will sustain the incubator over the long term. Incubation is aimed at developing the new venture into a highly attractive investment proposition by removing the some of the risks inherent to newly formed business ventures. High commitment fees and equity stakes are used to tie together the destinies of the incubatee and the tier-one incubator in a way that facilitates the most desirable outcome for both parties.

7.3 Limitations of the Research

- Although the research sought to identify benefits of a self-sustaining business incubation model, the qualitative nature of the research does not provide indisputable evidence as to whether this model is more successful in enabling entrepreneurship in South Africa. The nature of the business incubation industry and the fiduciary responsibility of the incubator towards its incubatees, precludes the publication of detailed financial performance results of incubatees. This, coupled with the generally informal attitude held by micro-enterprises towards accurate financial reporting, makes an accurate quantitative assessment of incubator performance a very challenging undertaking.
- The sample was centred on incubators as the intermediaries responsible for disbursing public and privately sponsored entrepreneurship-enablement funding. A different perspective may have been obtained if the sample frame was extended to include all stakeholders in the entrepreneurship-enablement environment. By including stakeholders such as local and national government, the beneficiaries of business incubator services and corporates that participate in enterprise development programmes, the researcher might have reached a more universally relevant perspective.

7.4 Suggestions for Future Research

These are suggested areas of research that could be added to enrich the field of study.

A quantitative study could be undertaken on the impact of incubator promiscuity on the success of incubatees. Incubator promiscuity is an emerging trend among incubatees which refers to affiliation to more than one incubator, either simultaneously or consecutively.

The research focused on incubators as the intermediaries responsible for disbursement of public and private entrepreneurship-enablement funding, proposing that there are benefits to adopting self-sustainability principles in the mechanisms through which funds are disbursed. Further research is required to understand how self-sustaining principles at an institutional level, (i.e. at the level of the corporate or government institution making the funds available to the incubator), could contribute positively to entrepreneurship enablement.

References

- ANPROTEC. (2013). Retrieved November 7, 2015, from <http://anprotec.org.br/site/en/menu/publicacoes-2/estudos-e-pesquisas/>
- Ayayi, A. G. (2012). Micro-credit and Micro-equity: The David and the Goliath of Micro-enterprise Financing. *Economic Papers: A Journal of Applied Economics and Policy*, 31(2), 244–254. <http://doi.org/10.1111/j.1759-3441.2011.00144.x>
- Beck, T., & Maksimovic, V. (2005). Financial and legal constraints to firm growth: Does size matter? *Journal of Finance*, 60(1), 137 – 177.
- Bouri, A., Breij, M., Diop, M., Kempner, R., Klinger, B., & Stevenson, K. (2011). *Report on Support to SMEs in Developing Countries Through Financial Intermediaries*. Retrieved from http://www.eib.org/attachments/dalberg_sme-briefing-paper.pdf
- Cammarata, K. (2002). Resource Library - National Business Incubation Association. Retrieved April 28, 2015, from https://www.nbia.org/resource_library/review_archive/0202_01.php
- Chandra, A. (2009). Business Incubation in the United States, China and Brazil: *International Journal of Entrepreneurship*, 13, 67–86.
- Darrol, C. (2014). *Headline report of SBP's SME growth index*. Retrieved from <http://smegrowthindex.co.za/>
- Darrol, C. (2015). SME sustainability and growth should be an obsession for job creation in South Africa. Retrieved from <http://smegrowthindex.co.za/>
- Dludla, S. (2014). Enterprise development - Money versus impact. Retrieved April 30, 2015, from <http://www.smesouthafrica.co.za/Enterprise-development-Money-versus-impact/>
- Dutiro, G. (2009). *The benefits of collaboration in the entrepreneurship incubation environment in SA*. Gordon Institute of Business Sciences, Johannesburg.
- Frohlicher, P., & Pothering, J. (2013). *The Enterprise Development Report*.
- Gillham, B. (2005). *Research interviewing: The range of techniques*. Berkshire: Open University Press.
- Graham, I. (2010). Developing a Replicable and Sustainable Model of Business Incubation. *Technology Innovation Management Review*, (November 2010). Retrieved from <http://timreview.ca/article/395>
- Grimaldi, R., & Grandi, A. (2005). Business incubators and new venture creation: An assessment of incubating models. *Technovation*, 25(2), 111–121.
- Hackett, S. M., & Dilts, D. M. (2008). Inside the black box of business incubation: Study B - Scale assessment, model refinement, and incubation outcomes. *Journal of Technology Transfer*, 33(5), 439–471.

- Jang, Y. (2009). *Evaluating Technology Business Incubator As A Tool Of Government Intervention: Public vs. Private*. University Of Florida.
- Khalil, M. A., & Olafsen, E. (2010). *Enabling innovative entrepreneurship through business incubation. The innovation for development report 2009-2010: Strengthening innovation for the prosperity of nations*. Retrieved from http://siteresources.worldbank.org/INFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/ChapterKhalil_Olafsen.pdf
- Khan, A. (2014). Government Funds Available to SMEs in South Africa | GAA Accounting. Retrieved September 2, 2015, from <http://www.gaaaccounting.com/government-funds-available-to-smes-in-south-africa/>
- Masutha, M., & Rogerson, C. M. (2014). Small enterprise development in South Africa :, 26(26), 141–155.
- Mavuso, Z. (2015). Sefa's migration to DSBD aims to address funding concerns for SMEs and cooperatives. Retrieved September 1, 2015, from <http://www.engineeringnews.co.za/article/sefas-migration-to-dsbd-aims-to-address-funding-concerns-for-smes-and-cooperatives-2015-07-10>
- National Business Incubation Association. (n.d.). Retrieved April 27, 2015, from http://www.nbia.org/resource_library/what_is/
- Ndabeni, L. L. (2008). The contribution of business incubators and technology stations to small enterprise development in South Africa. *Development Southern Africa*, 25(3), 259–268.
- Phillips, J. M., & Gully, S. M. (2014). *Organizational Behavior: Tools for Success* (Vol. 2).
- Pompa, C. (2013). *Literature Review on the Impact of Business Incubation , Mentoring , Investment and Training on Start-up Companies*. EPS-PEAKS, London.
- Ries, E. (2011). *The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses*. New York: Crown Business.
- Saunders, M., & Lewis, P. (2012). *Doing research in business and management: An essential guide to planning your project*. Essex: Prentice Hall.
- Schwartz, M. (2013). A control group study of incubators' impact to promote firm survival. *Journal of Technology Transfer*, 38(3), 302–331.
- Singer, S., Amorós, J. E., & Arreola, D. M. (2015). *Global Entrepreneurship Monitor 2014 Global Report*.
- The Department of Trade and Industry. (2013). *Incubation Support Programme (ISP) Guidelines*.
- Warren, K. (2008). *Strategic Management Dynamics*.
- Woodrow Whitt, S. (2014). *Business incubator effectiveness in facilitating entrepreneurial accesses and the impact on incubator client firm sustainability and profitability*. The University of West Florida.

Zikmund, W. G. (2003). *Business research methods*. Ohio: South Western Cengage Learning.

Appendices

Appendix A: Consistency Matrix

Research questions	Literature review	Data collection tool	Analysis
Research question 1: Are business incubators self-sustaining or actively pursuing self-sustainability?	(Bouri et al., 2011) (Dutiro, 2009) (Cammarata, 2002) (Beck & Maksimovic, 2005)	Semi-structured interview	Content analysis on open-ended questions, to determine the extent of self-sustainability among the sample group
Research question 2: Which internal challenges faced by business incubators could be overcome through adopting a self-sustaining business model?	(Chandra, 2009) ("National Business Incubation Association," n.d.)	Semi-structured interview	Content analysis on open-ended questions, to identify whether key challenges can be resolved through self-sustaining practices
Research question 3: Could access to start-up and acceleration funding be improved if incubators pursue a self-sustaining business model?	(Hackett & Dilts, 2008) (Pompa, 2013) (Cammarata, 2002)	Semi-structured interview	Content analysis on open-ended questions, to identify proposed solutions to funding shortages
Research question 4: Can public and private SMME development funds be distributed more effectively by enforcing incubator self-sustainability?	(Darrol, 2014) (Graham, 2010) (Frohlicher & Pothering, 2013)	Semi-structured interview	Content analysis on open-ended questions, to identify proposed solutions for funding distribution challenges

Appendix B: Qualitative Interview Questions

- General Information

What is the format of your incubator?

Does it have a profit-maximising objective, or is it a non-profit organisation?

In what year was the incubator established?

Number of current, active Incubatees

Core industry focus

Number of jobs created by Incubatees over the last year

Cumulative Net Profit of Incubatees over the last year

Number of IPO's by Incubatees in the history of the Incubator

- Incubator Model

I. Broadly describe the business plan or operating model of your incubator.

II. Describe the sources of funding employed in your incubation programme. (Are Incubatees funded through business generated earnings, public funding, private-sector investment or a combination?)

III. Describe how your business incubation programme generates revenue.

- Challenges

IV. Describe the challenges faced by your incubator programme.

V. Which macroeconomic issues are most relevant to your incubator?

VI. What would you say is the biggest barrier to long-term incubatee success?

VII. Do you believe that this barrier can be overcome by adopting self-sustaining business practices?

- Funding

- VIII. What in your opinion are the three largest contributors to new venture growth in an incubator?
- IX. Research has shown that rivalry for a single source of public funding, which was also found by (Dutiro, 2009) to be prevalent in the South African incubation landscape, is the primary reason for lack of collaboration among business incubators.
- a. Would you say that your business incubation programme is subjected to funding rivalry?
- X. Do you believe that access to funding can be improved by adopting self-sustaining business practices?

- Distribution of Funds

- XI. Do you believe that enterprise development funds are being distributed in an effective way that positively contributes to new venture development and growth?
- XII. How can the distribution of enterprise development funds be further improved?
- XIII. What is your view on the future for business incubation in South Africa?

Appendix C: Informed Consent Form

Thank you for agreeing to participate in this study, which will take place from August to October 2015. This form details the purpose of my study, a description of the involvement required and your rights as a participant.

- Purpose of this study:

This research aims to identify whether the proposed pursuit of self-sustainability in business incubation has any influence on funding access for start-ups subscribed to a business incubator. It will also seek to identify whether a relationship exists between incubator self-sustainability and effective funds distribution.

- Benefits of the research:

The results of the research could have policy implications in terms of the way in which public and private funds are allocated and distributed to and by new venture development programmes.

- Your participation:

Your participation in this study will consist of an interview lasting approximately one hour. You will be asked a series of questions related to the research topic. You are not compelled to answer all the questions. You may pass on any question that makes you feel uncomfortable. You are encouraged to ask questions or raise concerns at any time about the nature of the study or the methods I am using. Our discussion will be audio taped to help me accurately capture your insights in your own words. The tapes will only be heard by me for the purpose of this study. If you feel uncomfortable with the recorder, you may ask that it be turned off at any time. You also have the right to withdraw from the study at any time. In the event you choose to withdraw from the study all information you provide (including tapes) will be destroyed and omitted from the final paper. Insights gathered by you and other participants will be used in writing a qualitative research report.

If you have any concerns, please contact my supervisor or myself (Our details are provided below).

By signing below I acknowledge that I have read and understand the above information

Signature of participant _____ Date _____

Signature of researcher _____ Date _____

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Appendix D: List of Codes

Codes for interview schedule section 1: Incubator Model
Areas of focus
Asset Based Community Development
Business as an asset
Business Maturity Assessment
Business Plan
Collaboration between Incubators
Commercial return to investors
Commercially viable institution
De-risking the business through management support
Early stage Equity
Entrepreneurship training academy
Equity Invested
Equity stake
Financial Self sustainability
Focus on the individual
Formalise Business
Incubation niche
Incubator Services
Investment by Entrepreneurs
Limited dependence on public funding
Minimise reliance on third parties
Multi source funding
Pre-Incubation
Rely on government funding
Scalable model
Self-generated revenue sources
Self-managed Investment fund
Setting Incubatee Objectives
Strict Entry Criteria
Subsidised Rental
Sustainable entrepreneurship
Technical Training

Codes for interview schedule section 2: Challenges
Access to Facilities
Access to funding
Alignment of New Ventures to Corporate Supply Chains
Areas of focus
Challenging Market Conditions
Changing ED policies
Collaboration between Incubators
Continued industry growth
Failure rate among small businesses
Failure to adapt the incubation model to changing policies
Incubator promiscuity
Incubator self-sustainability does not improve access to markets
Lack of Funding
Lack of investable businesses
Lack of support from Department of Small Business Development
Sense of entitlement by entrepreneurs
Self-sustainability though cooperative involvement
Sustainable entrepreneurship
Volatile funding Sources
Ineffective distribution of Public funds

Codes for interview schedule section 3: Access to Funding
Avoid dumb funding
BEE Codes
Collaboration between Incubators
Commercial return to investors
Commercially viable institution
Commitment Cost
Equity Invested
Equity stake
Financial Self sustainability
Funding GAP
Funding Rivalry

Grants
Investment by Entrepreneurs
Lack of Funding
Limited dependence on public funding
Minimise reliance on third parties
Multi source funding
Rely on government funding
Access to funding
Areas of focus

Codes for interview schedule section 4: Funding distribution
Collaboration between Incubators
Commercial return to investors
Commercially viable institution
Commitment Cost
Early stage Equity
Equity Invested
Equity stake
Financial Self sustainability
Incubator promiscuity
Ineffective distribution of Public funds
Internal Processes
Investment by Entrepreneurs
Lack of direct investment by private sector
Non-regulated industry
Positive outlook
Positive shift due to Supplier Development
Predicting growth through stronger guidance from DSBD
Regulatory Environment
Risk appetite
Skills