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Small enterprise development in South Africa: The role of business incubators

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Abstract. Business incubation is a relatively new phenomenon in scholarship and policy development for small enterprise development. Business incubators offer targeted business support and technical support services to accelerate the growth of emerging and small start-up business enterprises into financially and operationally independent enterprises. South Africa has adopted business incubation as one vehicle for upgrading the SMME economy. This article examines the evolution of policy towards business incubation, current progress, institutional issues and emerging geographies of business incubators as part of the unfolding and dynamic SMME policy landscape in South Africa. Considerable differences are observed between the activities of the network of state-supported incubators as opposed to private sector operated incubators.

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Contents

1. Introduction

Since South Africa's democratic transition in 1994 the promotion and upgrading of small, medium and micro-enterprises (SMMEs) has been a continuous thread and objective in national government policy (Rogerson, 2004, 2008a; Timms, 2011; Malefane, 2013). The SMME economy is considered a vital element for addressing several of the major objectives for post-apartheid reconstruction and development, including for economic restructuring and poverty alleviation. In addition, the promotion and support of the SMME economy is seen as an important vehicle for job creation particularly in the context of the slow growth of new employment opportunities taking place in large formal enterprises. A landmark in policy development for South Africa's economy was the production of the White Paper on National Strategy for the Development and Promotion of Small Business in South Africa, which launched new directions for supporting small business enterprises (Department of Trade and Industry, 1995). From 1995 national government began to roll out a set of policy initiatives and institutions which were targeted to support the SMME economy based on international 'best practice' (Rogerson, 2004; Malefane, 2013). Further support was channelled to upgrade the capacity and potential opportunities for SMMEs which are involved in South Africa's higher growth or priority economic sectors (Rogerson, 2008b).

Given the country's history the policy focus of national government is particularly upon attaining a transformation of the prospects for those enterprises owned by black South Africans who formerly were disadvantaged under apartheid. The details of the difficulties and constraints which face this large and diverse community of SMMEs, many of them informal sector enterprises, are explored elsewhere (Rogerson, 2004, 2006, 2008a, 2008b; Kongola, 2010; Smit, Donaldson, 2011, Rogerson, 2013). However, at the heart of the difficulties facing these SMMEs, particularly in urban areas, are a complex of factors around their continued inability to access market opportunities, lack of access to finance/ /credit and of delivery failings in the support environment. At the sub-national level added shortcomings are disclosed in the inadequate support so far provided to SMMEs by both provincial and local levels of government across South Africa as part of 'place-based' economic development programming (Rogerson, 2007; Rogerson, Rogerson, 2010, 2012; Sibanda, 2013; Rogerson, 2014). Arguably, the major achievements of the first decade of SMME support relate to the establishment of a new architecture for support of the SMME economy, which had been largely neglected throughout the apartheid era. This said, assessments undertaken of the impacts of government initiatives upon the SMME economy have disclosed several areas of underperformance relating to the first decade of government SMME policy initiatives (Rogerson, 2004). Of particular concern are disappointments that few of the groups of targeted SMMEs were growing businesses and that in terms of the limited funding allocated to programme support only a limited amount was reaching out to assist the communities of blackowned enterprises. Factors accounting for this poor policy performance include policy funding constraints, weak policy coordination and implementation, and that a major share of benefits from unfolding policy initiatives have been taken up by the group of medium-sized enterprises (often whiteowned enterprises) instead of the core target groups of emerging black owned SMMEs which continued economically marginalized rather than incorporated into the mainstream economy (Rogerson, 2008a, 2013).

In light of continued high levels of unemployment and poverty across the country SMME development continues as a policy priority for government in South Africa 20 years after democratic change. The establishment in 2004 of the national Small Enterprise Development Agency (SEDA) was a vital signal of government commitment to improve the coordination of national support for small enterprise development. One further indicator of the high level of policy commitment to SMME development in South Africa is the creation in 2014 of a dedicated Ministry for small business as part of government restructuring. Further evidence of the critical role of SMMEs finds expression in the significance attached to SMME development in national economic development planning. Within the New Growth Path, the major guiding economic strategy and policy documents of the Department of Trade and Industry (DTI), the lead government ministry responsible for the economy and with a mandate for enterprise development, continued emphasis is placed upon support for the SMME economy (Department of Economic Development, 2010; DTI, 2012a). In the National Development Plan (NDP), which offers a vision for 2030, a commitment to the importance of upgrading the SMME economy is reasserted (National Planning Commission, 2011). Indeed, in relation to its Vision for 2030 the NDP sets forth an ambitious target of generating 11 million new employment opportunities in South Africa of which 90 percent are expected to be created within the SMME economy.

New directions for supporting and upgrading the SMME economy continue to be explored in South Africa. One issue that has risen in policy prominence over the past decade is establishing a network of business incubators to nurture particular groups of emerging small enterprises (Masutha, 2014). In terms of international comparative data South Africa has one of the world's lowest survival rates of SMME start-ups with the country's Small Enterprise Development Agency (SEDA) estimating that as much as 80 percent of South Africa's SMMEs are failed businesses in their first year of existence (SEDA, 2010; Masutha, 2014). Across a range of both developed and developing countries small business incubators have been identified as potential strategic tools for helping to grow a country's entrepreneurial base while reducing the high mortality of SMMEs (InfoDev, 2010a). In the most mature case of the USA the initial business incubators "were the instrument of urban renewal and community development" (Jang, 2009: 16). By contrast, in developing countries such as Chile the focus is on developing businesses with high potential for economic development and job creation (Chandra, Narczewska, 2009). Overall, as is argued by Al-Mubaraki et al. (2013: 896) business incubators are viewed by many governments as a "vibrant tool for nurturing innovative ventures regarding economic development and job creation, and as critical components of entrepreneurial infrastructure".

Although the detailed definition of 'small business incubator' is disputed there is an emerging consensus that it offers a range of targeted business support and technical support services aimed at assisting the growth of emerging and small start-up business enterprises into financially and operationally independent enterprises (Chandra, 1997; Akcomak, 2009; Jang, 2009; InfoDev, 2010a). Small business incubators are identified as strategic tools to assist entrepreneurship and in particular to address the observed high mortality rates of SMMEs by targeting support to them during their early and most vulnerable stages of development (InfoDev, 2010a). According to one observer the services offered at a business incubator usually include the following: networking relationships with other businesses which provide support for each other and are potential customers or suppliers; financial assistance in terms of accessing bank loans or government support programmes, business and technical assistance through a combination of in-house expertise and community network supports, shared business services, and flexible space as well as flexible leases often below market rates (Ndabeni, 2008a: 84).

South Africa's national Department of Trade and Industry recognises business incubation as a viable tool to help SMMEs grow and become successful and globally competitive enterprises with the potential to create jobs, alleviate poverty, empower previously marginalized groups and thus contribute to the growth of both national and local economic development (Ndabeni, 2008a, 2008b; InfoDev, 2010b; Seda, 2010; Timm, 2012). It is against this background that the task in this article is to analyse the current progress, institutional development and emerging geographies of business incubators as part of the unfolding and dynamic SMME policy landscape in South Africa. The material presented draws from a number of sources. First, it uses documentary sources analysing over 10 years of annual reports on South African business incubators produced by the various agencies and institutions responsible for business incubation. Second, the discussion builds from a number of interviews which were conducted with key stakeholders and policy makers within the South African incubation industry and a survey conducted with entrepreneurs operating within incubators. Finally, the paper uses the limited existing secondary material on South African business incubators (Cassim, 2001; Buys, Mbewana, 2007; Ndabeni, 2008a, 2008b; InfoDev, 2010b; Ramluckan, Thomas, 2011).

Business Incubation in South Africa The Evolution of Government Policy

In examining national government policy for supporting business incubation in South Africa it

is useful to recognise a series of different phases each of which is denoted by changes in the directions of institutional support. Four different phases in the evolution of business incubation in South Africa must be acknowledged. These four phases are captured on Figure 1.



Fig. 1. Four Phases in the Policy Evolution of Business Incubators in South Africa *Source*: Authors

Many analysts locate the origins of the idea of business incubation in South Africa to the period of the mid-1990s (Fig. 1). In 1995, the Small Business Development Corporation (SBDC) launched what became known as the "hives of industry" (Rogerson, da Silva, 1988a, 1988b). These hives of industry were infrastructural initiatives and established in order to bridge the gap in opportunities for growth between small and large business enterprises in South Africa. The majority of hives were sited in old factories and other premises that were secured and funded by the SBDC (Buys, Mbewana, 2007). Geographically, many of these hives were situated within or on the edge of urban townships including Soweto (Rogerson, da Silva, 1988a, 1988b). These buildings offered much-needed space at a highly subsidized rent for emerging SMMEs, particularly for black entrepreneurs from the township areas (Rogerson, da Silva, 1988a). In addition to premises and cheap office space, the hives provided entrepreneurs with collective services in terms of affordable bookkeeping, electricity, telecommunications and storage facilities (InfoDev, 2010a). The hives were also a vehicle seeking to incorporate these emerging SMMEs into the supply chains of large enterprises through the promotion of sub-contracting linkages. However, despite having similar attributes to business incubators, Buys and Mbewana (2007) maintain that the SBDC hives do not fit the modern-day stylization of business incubators in certain critical respects, in particular because graduation out of the premises was not mandatory for hive tenants. The issue of graduation is viewed of central significance in international definitions of the activity of business incubation (Chandra, 2007; InfoDev, 2010a).

A critical milestone in the development of business incubation is South Africa was the establishment in 2000 of the Godisa Trust programme (Buys, Mbewana, 2007; Ramluckan, Thomas, 2011). The term Godisa is a Setswana word for "helping grow". The GODISA programme was an outcome of a merger of several existing small business development organisations. These organisations included: *inter alia*, the National Technology Transfer Centre, the Technology Advisory Centre, the Technology for Women in Business, and the small business support activities of the South African Quality Institute (Buys, Mbewana, 2007). According to Cassim (2001) the Godisa Programme marked an important new phase in which South Africa began to consolidate its business incubation efforts for small enterprise development. The concept of Godisa emerged out of a sub-programme of the national Department of Science and Technology (Godisa Trust, 2004/5). Godisa was established through a partnership between South Africa's Department of Trade and Industry (DTI), Department of Science and Technology (DST) and the European Union (EU).

It is argued the activities of GODISA ushered in a new era of small enterprise development in South Africa (Buys, Mbewana, 2007; Godisa Trust, 2004/5; InfoDev, 2010b). An important aspect of the GODI-SA programme was that, unlike other small enterprise development initiatives, it was a multiple stakeholder-supported initiative (InfoDev, 2010d). GODISA stakeholders included NGOs, the private sector, as well as local, provincial and national levels of government (Buys, Mbewana, 2007; Godisa Trust, 2004/5). Some observers assert it was this multiple stakeholder approach to small enterprise development and the synergies between various stakeholders that underpinned the programme's success (Ravjee, 2013). In line with its multiple stakeholder approach, the Godisa programme reported to the Minister of Science and Technology and a Board of Trustees (Godisa Trust, 2004/5). This Board of Trustees comprised seven individuals representing various sectors; three representatives were drawn from the Department of Trade and Industry, one from the private sector and three from the Department of Science and Technology (Godisa Trust, 2004/5). In Godisa's first annual report for 2004/5, the programme's broad aims were listed as accelerating the development of technology-based small enterprises; to promote technology transfer/diffusion within the SMME sector; to enhance a culture of entrepreneurship and innovation thinking through effective and efficient business centre processes; to facilitate effective, efficient and economical technological and business skills and knowledge in centres; to establish and maintain networks among centres as well as with other similar organisations; to promote economic growth and the creation of employment opportunities through technological innovation;

to provide services such as training, consultation, business advice and other services necessary for the effective, efficient and economical functioning of centres; and to improve the standards through benchmarking and research (Godisa Trust, 2004/5).

These objectives were targeted to address South Africa's rising challenges of unemployment, inequality and poverty (Godisa Trust, 2004/5). In the 2005 annual report, the Chairperson of the Board of Trustees reported the primary aim was the desire to achieve maximum impact in small enterprise creation through technology transfer and diffusion. The approach taken by the programme was based on the creation and support for competitive SMMEs with a technology focus (Buys, Mbewana, 2007; Ndabeni, 2008b). Its premise was that a technological intervention would boost the capacity of South African SMMEs (Godisa Trust, 2004/5). Accordingly, Godisa initiated a series of business incubation projects aimed at enhancing the participation of previously marginalized groups in sectors historically dominated by white entrepreneurs (Buys, Mbewana, 2007). The biomedical and biotechnology sectors were specifically targeted by the Godisa programme. Enterprise development initiatives would be aligned to ensure economic transformation in these particular sectors with the South African government's efforts to enforce Black Economic Empowerment (Godisa Trust, 2004/5).

The programme was tasked with the development of a national business incubation framework. Through its experimentation with various incubation models, the programme was mandated to evolve a sustainable business incubation model for South Africa (Godisa Trust, 2004/5). Such an incubation model had to take into account the 'developing' nature of the South African economy and necessary support required by the struggling South African SMME sector (Ramluckan, Thomas, 2011). The programme was structured through the establishment of four pilot initiatives. First, was settingup technology demonstration centres in order to provide appropriate technologies, equipment and knowledge to foster the establishment and upgrading of existing SMMEs (Ndabeni, 2008b; Godisa Trust, 2004/5). Second, was the establishment of technology incubators to offer a variety of business support services and create an enabling environment favourable to the establishment of new start-ups as well as the accelerated growth of existing SMMEs. The first technology incubator established under the Godisa programme was the Softstart Technology Incubator (Godisa Trust, 2004/5). Five additional business incubators were launched. A third area of work was innovation support centres which sought to boost the commercialization and transfer of technologies to start-ups and existing SMMEs and thereby enhance their competitiveness and sustainability. The last element was the initiation of hybrid centres which resembled a combination of an innovation support centre, technology demonstration centre and technology incubator (Godisa Trust, 2004/5).

At the core of the programme was the setting up of six technology incubators. Softstart technology incubator was implemented in partnership with the Council for Scientific and Industrial Research, the University of Pretoria and Pretoria Technikon (Buys, Mbewana, 2007). The incubator provided infrastructural and business support services to assist the start-up and growth of small enterprises in the ICT sector. In addition, it provided technologically advanced facilities at a highly subsidized rate. The Acorn technology incubator likewise focused on developing start-ups and existing SMMEs within the biomedical, bioengineering and biotechnology sectors. Acorn aimed at establishing and supporting financially and operationally independent SMMEs in the arena of life sciences through facilitating access to funding and on-site business incubation. Acorn provided incubatees with business support services such as office space, administrative services, commercial and technical services, business mentoring and financial modeling (Godisa Trust, 2004/5). The Bodibeng Technology Incubator (BTI) was a 'virtual incubator' and targeted SMMEs in Information, Communications and Electronics Technology. This incubator, based in Johannesburg, sought to establish a 'virtual network' of entrepreneurs by providing tailor-made business support services in order to connect technology-based SMMEs in the targeted sectors with the global business community promoting competitiveness. The work of BTI was undertaken once again in partnership with a number of academic institutions; in this case with the (former) University of Potchefstroom, Rand Afrikaans University, University of the Witwatersrand and the Holland TSM Business School. Later BTI merged with the Softstart incubator to form the SoftstartBTI incubator (Godisa Trust, 2004/5). Other Godisa initiated business incubators included Timbali Technology Incubator, which nurtured the start-up and expansion of small and emerging farmers in the cut flower market, marking a departure from the early programmatic focus on the biomedical sector. The last two technology incubators were the South African Chemical Technology Incubator (Chemin) designed to support small enterprises in the downstream chemical industry and the Pretoria-based eGoli Bio technology incubator targeted at the biotechnology sector and assisting SMMEs in the commercialization of biosciences research, technology platforms, products and services.

A significant feature of the Godisa incubation programme was emphasis given to the development of partnerships with universities, local government municipalities as well as with departments of provincial governments (Ravjee, 2013). In addition to the pilot centres, the programme established more technology incubators in partnership with various local government municipalities. The programme recorded several achievements in terms of improving the survival rate of its start-up enterprises to over 80 percent after two years. This performance was in marked contrast to the high mortality rates recorded by SMMEs outside of such incubators. Overall, the largest numbers of businesses supported by the programmes were agri-businesses, ICT or chemicals enterprises (Masutha, 2014). As a whole it must be understood that during the period 2000-2006 when the programme operated, solid foundations were laid for a wider roll out of business incubators in South Africa in support of the national government objectives to build a robust SMME economy.

In March 2006 under an agreement between the Department of Trade and Industry (DTI) the Godisa programme merged with a number of other government initiatives to form the SEDA Technology Programme (STP). During 2008, the South African Quality Institute (SAQI) was integrated into the SEDA Technology Programme (STP). The merging of these different organisations was part of the South African government's plan to consolidate and rationalize small enterprise development activities following the establishment of SEDA in 2004 with a mandate to implement the national government's small business strategy (Godisa Trust, 2005/6). Arguably, the merger of these organisations was influenced also by the government's intention to increase the contribution of SMMEs to the national economy (InfoDev, 2010b). The formation of STP marked the third phase in the evolution of business incubators in South Africa. The STP was established to support strategically government efforts to achieve economic growth, job creation and the alleviation of poverty (Ndabeni, 2008a; InfoDev, 2010b). The STP executes its responsibility through the establishment and strengthening of structures and institutions which aim to support the start-up and growth of SMMEs, particularly those owned by South Africa's previously marginalized groups which are Blacks, women, youth and the disabled. The STP reports to SEDA. Its mission is defined as follows, viz.,: to increase accessibility to technologies and technical support for small enterprises; to facilitate the acquisition, development and transfer of technology to small enterprises, particularly those operating in the so-termed 'second economy'; to facilitate the establishment of women-owned small enterprises; to promote the use of quality systems and standards by small enterprises; to improve small enterprise performance and productivity; to enhance small enterprise profitability and growth; to improve small enterprise competitiveness; and, to reduce small enterprise failure rates (InfoDev, 2010b: 18).

In order to achieve these objectives the STP established three separate divisions, namely the Business Incubation Division, the Quality Assurance Division and the Technology Transfer Division. The business incubation division is responsible for the establishment of new business incubators and for strengthening existing incubators. The quality assurance division ensures the provision of training, accreditation and quality control and assessment services to start-ups and existing SMMEs. The technology transfer division complements these activities by providing SMMEs with the latest technologies and training in order to improve their productivity and competency. The activity of business incubation is at the heart of the STP's efforts to create financially and operationally sustainable SMMEs. All SMMEs in incubators are taken through three critical stages of pre-incubation, incubation and post-incubation or post-graduation, which are accompanied by appropriate support interventions (Ravjee, 2013). The STP's network of business incubators seek to provide infrastructural and business support services tailored to furnish an enabling environment for South African SMMEs to grow and become operationally and financially independent businesses (SEDA, 2010, 2011). This objective represents a continuation of the goals of business incubators as initiated under the Godisa Trust programme (Masutha, 2014).

One of the main achievements of STP has been to oversee the expansion in the network of public sector business incubators to reach a total of 42 incubators by 2012. All these 42 public incubators are government-owned and managed through SEDA which reports to the Department of Trade and Industry (Ravjee, 2013). All incubators are registered as independent entities, either as a Section 21 or a non-profit companies or trusts. The members of such structures are responsible for appointing nonexecutive directors and an incubator manager (InfoDev, 2010b: 20). Interviews with SEDA officials revealed the average incubation process takes approximately three years. Although the three year period is the norm it can vary as in certain sectors infant businesses require more time before incubatees are ready to graduate and exit the incubator. In terms of the type of incubators favoured in the STP the central focus has been upon supporting sector-specific forms of incubators. This continues the trend that was established in the Godisa programme.

Several performance indicators point to the positive impact of the STP. First, and most critically, the network of business incubators reduced the high mortality rate of SMMEs. It is estimated STP incubators achieved and maintained a survival rate of eight out of ten SMMEs as compared to a national failure rate of eight out of ten SMMEs not receiving support from business incubators. In other words, 80% of SMMEs under STP's incubators survive their first year of existence. Other positive indicators relate to job creation as STP incubators created an estimated total of 21 322 jobs between the years 2004 and 2009 when incubators supported 1900 SMMEs (Masutha, 2014). Of this total, the emphasis upon assisting disadvantaged groups is mirrored in statistics that 81% of all businesses supported by the STP incubators are owned by Blacks. Women- ownership is at a level of 36 %, a finding that suggests that the programme has under-performed in respect of objectives to empower women-owned small business (STP, 2011, 2012).

The fourth most recent phase in the evolution of business incubators in South Africa is part of national government SMME programmes which were initiated in 2012. During 2012 the Department of Trade and Industry (DTI) launched the so-called Incubation Support Programme (ISP). This marks the latest phase in the evolution and development of business incubation in South Africa. The ISP reconfirms the government's long-term commitment to business incubation as a vehicle to create sustainable enterprises. According to the DTI (2012a) the primary objective of the ISP is to build successful enterprises with the potential to create employment opportunities and revitalize and strengthen both local and national economies. Further, the ISP aims to broaden economic participation by ensuring that incubated SMMEs graduate into the mainstream economy. At the heart of the ISP is the notion of public-private-partnerships. The DTI identified public-private-partnerships as critical to promoting broader economic participation, uplifting South Africa's entrepreneurial base and encourage start up activities (DTI, 2012a). Through the ISP 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 parallel policy steps towards encouraging programmes for supplier diversity (Rogerson, 2012).

The ISP became effective in September 2012 and is planned to roll out for 10 years until 2022. During 2012 the DTI announced the ambitious target of establishing a total of 250 business incubators in South Africa by 2015. The ISP is to function on a grant system. Approved incubators qualify for a maximum of R10 million per year government support for a period of three years. According to the DTI (2012a) the Incubation Support Programme covers the following costs: business development services (e.g. business advisory, coaching and mentoring, training, facilitation of funding, production efficiency and improvement, quality and standards acquisition); market access improvement; machinery, equipment and tools; infrastructure costs (i.e. buildings and furniture); feasibility studies for establishing and expanding incubators; product or service development; information and communication technology support; and, operational costs. The ISP builds upon and deepens a multi-stakeholder approach to business incubation development which can be traced back to the GODISA period (Ravjee, 2013). The institutional organisation of business incubation in contemporary South Africa is thus executed with the DTI assuming the lead role in partnering with universities, the private sector, industry leaders, labour, community based organizations, provincial and local government.

Private sector involvement in business incubation is reflected in the establishment of nine private sector business incubators by 2012. The major private sector actors in the landscape of business incubation are Shanduka Black Umbrellas, Raizcorp, Aurik, Sasol Chemcity, Maxum (Innovation Hub) and Bandwidth Barn (Masutha, Rogerson, 2014). The mode of operation of these private sector funded business incubators is different to those of public sector incubators as is highlighted below.

3. The current state of small business incubators in South Africa

3.1. National profile

A national audit of all incubators was conducted for this research. It shows that South Africa's incubation industry has evolved rapidly over the past decade. In 2001 there were only three public sector business incubators in South Africa. By 2004 there were four incubators, rising to 37 by 2011. By 2013 the total number of incubators had escalated to 51 in total. Of this national total, 42 or 82 percent of incubators are public sector driven through the activities of SEDA. Many of them are only recently established; in 2012 SEDA launched 11 new public sector driven business incubators. Nine incubators or 18 percent of the national total are private sector operated business incubators. In the international perspective of business incubator development it is apparent that the public sector in South Africa has strongly dominated the growth trajectory of the country's business incubator movement.

In respect of the character of South African business incubators 84 percent are sectorally specific and 16 percent are mixed in terms of the business category of incubatees. Looking at sectoral focus, at present, most operational incubators are involved with various forms of manufacturing activities which aligns with national government planning to renew industrial development in the country (DTI, 2012b; Rogerson, 2014). The greatest number of incubators is engaged with the sectors of furniture, agro-processing and chemicals. Other manufacturing activities in which sector-specific incubators have been established are jewellery, aluminium fabrication, and stainless steel production. Beyond manufacturingbased incubators there are several others dedicated to support SMME development in ICT, construction and small-scale mining. Furthermore, in agriculture there is support for small entrepreneurs involved in both floriculture and the production of essential oils. Significant differences occur, however, between the activities of the group of public sector as opposed to private sector operated business incubators in South Africa. It is revealed 95 percent of public sector incubators are sector-specific as only two of the 42 incubators function as mixed incubators. Of the large group of public sector incubators initiated by SEDA, the overwhelming majority are linked to manufacturing activity, including agro-processing, signalling the alignment with DTI industrial policy (DTI, 2012b). By contrast, two-thirds of the group of private sector incubators are mixed and only three are sector-dedicated incubators.



Fig. 2. Provincial distribution of different institutional forms of business incubators in South Africa *Source*: Authors

Business incubators are contributing to making a new geography of SMME support. In terms of their spatial distribution across South Africa Figure 2 maps the distribution of both public and private sector run incubators on a provincial basis. It shows the government's attempt to distribute such incubators across all provinces. The largest clusters of business incubators are currently located in the provinces of Gauteng and KwaZulu-Natal followed by Eastern Cape, Western Cape and Mpumalanga. Together these five provinces account for 90.2 percent of all business incubators. The provinces that are relatively sparse in respect of business incubators are Limpopo, North West, Free State and Northern Cape. Different geographies are observed by unpacking the pattern of incubators between those in public versus private sector ownership. The small group of private sector incubators is strongly clustered in Gauteng which hosts two-thirds of the existing total. The remaining private sector incubators are

located in Western Cape and KwaZulu-Natal. It is significant that private sector investment in business incubators has not occurred in the country's poorer provinces. By contrast, the geography of public sector investment in business incubators reveals attempts to disperse widely a network of public sector incubators. It is observed, for example, that in terms of public sector incubators Gauteng, South Africa's economic powerhouse and richest province, has a 26 percent share as compared to its overwhelming dominance in private sector incubators. Indeed, in the geography of public sector incubators the number of incubators located in the poorer provinces of Mpumalanga and Eastern Cape exceeds that of the Western Cape. These findings suggest that the public sector driven business incubators are part of the national government's wider programming to redress spatial imbalances in the South African economy as a whole by supporting incubator development outside of the richest provinces.



Fig. 3. Local distribution of business incubators in South Africa *Source*: Authors

At the individual locality scale the distribution of business incubators is mapped on Figure 2. This reveals that over half of the existing business incubators are located in South Africa's leading metropolitan centres with Johannesburg having the greatest individual number of incubators. It is observed that all the group of private sector business incubators are situated in metropolitan areas and that none of the private sector driven incubators are situated in secondary cities or small towns. The geography of public sector incubators reveals, however, an outreach of SMME support by government into the country's secondary cities and small towns. Of note, for example, is the cluster of incubators in Nelspruit (Mpumalanga) and Mthatha (Eastern Cape) and of new incubators established recently at small towns such as Nkandla in KwaZulu-Natal. It is observed many of these public sector incubators which are found in secondary centres and small towns are related to furniture production, construction, or a range of agriculture linked activities, including floriculture and agro-processing.

Another finding is that business incubators are distributed unevenly between urban and rural areas (Masutha, Rogerson, 2014). All nine privately owned business incubators are located in South Africa's largest cities (Johannesburg, Cape Town, Durban and Pretoria) with none in rural areas or in townships. By contrast, whilst the network of public sector business incubators is also predominantly located in urban areas, as much as 20% is found the rural parts of the Eastern Cape and Kwazulu-Natal. Of note is the extension of the location of incubators into urban townships such as in Gauteng at Soshanguve (Pretoria) and most recently, with provincial government support, at Diepsloot, a low-income settlement which is part of metropolitan Johannesburg (see Odendaal, 2014).

3.2. Entrepreneurs in public sector incubators

This section provides an analysis of data on the profile and experience of incubatees which was gathered through on-site and telephonic interviews with entrepreneurs operating in public incubators. Due to the information confidentially contract which is signed between entrepreneurs and management of the private incubators, no responses were received from entrepreneurs in private incubators. The analysis of the entrepreneurs therefore only applies to those in public incubators. Of the total forty-six surveyed entrepreneurs, thirty-three responded implying a response level of 72%. The discussion provides a profile and analysis of the experiences of both the entrepreneur and his/her business and of incubation programme impacts.

The key findings from the survey are shown on Table 1. In line with the DTI's objective to broaden economic participation, public incubators are assessed based on the number of black- owned SMMEs supported and the number of womenowned SMMEs supported. Accordingly, this is reflected in the dominance of black entrepreneurs, most of whom were male. The average age of entrepreneur indicates that younger entrepreneurs are preferred within the network of public sector incubators. The oldest entrepreneur was 50 years old and the youngest was 25 years. Levels of education were higher than those reported in other surveys of SMME entrepreneurs with 20 percent having a tertiary qualification. Few entrepreneurs, however, had a post-graduate qualification. In terms of experience, most entrepreneurs (60%) owned a business before joining the incubator; the other 40% joined the incubator with a business idea that later was translated into a trading business. Before joining the incubation programme, however, many entrepreneurs were unemployed and 17 percent were students.

One of the enduring challenges facing SMMEs in South Africa is lack of start-up capital (Rogerson, 2008a). In a manner typical of SMMEs as a whole, the majority of entrepreneurs financed their startup businesses through their own or family savings (67%); the remaining 33% of the SMMEs were financed through bank loans. These findings are consistent with most entrepreneurs (90%) indicating that they joined the incubation programme out of their own drive. None of the entrepreneurs surveyed received any public financial support from the incubator. Instead, the role of the incubators was to facilitate networking opportunities for entrepreneurs to secure funding once they were enrolled at the incubator.

The survey confirms that South African incubators support both start-ups as well as existing SMMEs (Table 1). In total 65% of all SMMEs surveyed were operational before joining the incubator. The remaining 35% of SMMEs were established from a business idea into a trading business in the incubator. Core challenges faced by entrepreneurs before joining the incubation programme included: lack of office space, lack of access to finance for expansion and diversification, lack of access to networking opportunities, lack of access to machinery and other necessary equipment, poor product quality and lack of access to professional bookkeeping services (Table 1). Correspondingly, most incubatees acknowledged that access to infrastructure, business advisory services and enhanced access to markets as benefits of joining an incubator. Some limited growth of businesses was reflected in the finding that on average one employee per enterprise had been added since joining the incubation programme. As pointed out by Ravjee (2013) one of the potential benefits for entrepreneurs is the potential to network and partner amongst themselves. Although networking occurred there was no evidence of cooperative partnerships between enterprises. Among concerns voiced by the surveyed entrepreneurs was the need for more business development practitioners, an imperative to enhance relationships between incubator management and incubatees, the need for greater sharing of good business practices between incubator SMMEs and for an improvement in channels of access to finance in order for enterprise expansion and diversification.

Table 1. The Profile of Incubator Entrepreneurs

Gender	The majority (70%) of entrepreneurs were male.
Age	The average age of entrepreneurs was 35 years.
Population group	The majority (60%) of entrepreneurs in the incubation programme are black (African) entrepreneurs.
Level of Education	Half of entrepreneurs had school leaving matric as their highest level of education
Entrepreneur's previous experience in business	The majority of entrepreneurs (60%) had experience of running their own business before joining the incubator.
Entrepreneur's recruit- ment into the Incubator	Most entrepreneurs were made aware about business incubation through networking (43%), media (23%), incubator campaigns (17%) or through friends and family (12%).
Entrepreneur's motiva- tion	The majority of entrepreneurs (90%) joined the incubation programme out of their own personal drive.
Previous occupation	The largest group of entrepreneurs (40%) owned a business prior to joining the incubator; 23% of entrepreneurs were unemployed before joining the incubator. The remaining 37% were either employed or students.
Source of initial start-up capital	The start-up of the majority of SMMEs (67%) was financed through the entrepreneur's per- sonal savings. None of the SMMEs received any funding from the incubator.
Challenges faced by SMMEs before join- ing the incubation pro- gramme	Lack of office space; lack of access to finance for expansion and diversification; lack of access to networking opportunities; lack of access to machinery and equipment; poor prod- uct quality; lack of access to business advisory services
Benefits since joining the incubator	Access to office space; access to mentorship, coaching and business advice; access to bet- ter equipment and technology transfer; access to efficient and industry standard machin- ery and technical support; access to marketing exhibitions and improved business image
Jobs Created	The average SMME has added at least one employee since joining the incubator.
Entrepreneurs' concerns	Most entrepreneurs complained about what seems to be a breakdown in communication between incubator management and their incubatees. Entrepreneurs were also concerned by business development practitioners who do not seem to have their interest at heart.
Partnership amongst in- cubates	None of the entrepreneurs surveyed had ever partnered with other SMMEs within the same incubator.
Target product Market	93% local and 7% international.

Source: Survey

4. Conclusion

As a relatively recent phenomenon, business incubators can be considered a new frontier for international research concerning small enterprise development (Akcomak, 2009; Al Mubaraki et al., 2013). The operations of small business incubators have attracted as yet only limited scholarly attention despite their growing popularity among policy-makers and local economic development practitioners. In particular, there is a need for greater attention to business incubator movements which are occurring in the developing world. In South Africa there is mounting interest in support of constructing a network of business incubators in order to reduce the high mortality rates which are experienced by start-up SMMEs. National and sub-national levels of government are therefore engaged in seeking to use business incubators as part of broader policy thrusts to upgrade the role of the SMME economy in national (and local) economic development programmes particularly for employment creation.

Although business incubation in South Africa is of recent origin, traceable to the mid-1990s, significant growth occurred only in the past 15 years. The evolution of the business incubator landscape in South Africa must be understood as an outcome of four policy phases of development in which a transformation and developmental approach towards upgrading SMMEs through business incubation has been adopted. Increasingly, South Africa has evolved a multi-stakeholder approach to business incubation which embraces involvement of the private sector as well as initiatives led by national or provincial governments to expand incubation activities across the country. The focus and emerging geographies of private sector as opposed to public sector incubators were shown as divergent. It is observable that private sector incubators are mainly mixed in focus and spatially highly concentrated in the major metropolitan centres, the major market areas of the country. By contrast, the pattern of public sector incubators is that they are sectorally-focused and geographically more widespread outside of the country's metropolitan areas which points to deliberate attempts to locate public sector incubators in poor areas as part of spatial redress. Essentially this research is an analysis of an unfolding project in SMME development in South Africa and a report on work in progress. Further monitoring of the shifting landscape of business incubation and of its impacts for local economic development in South Africa is recommended.

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