ANTECEDENTS THAT INHIBIT THE PERFORMANCE OF BUSINESS INCUBATORS IN SOUTH AFRICA

Thobekani Lose, Walter Sisulu University-Centre for Entrepreneurship Rapid Incubator
Miston Mapuranga, Walter Sisulu University-Centre for Entrepreneurship Rapid Incubator

ABSTRACT

The purpose of the study was to determine the factors inhibiting the performance of the business incubators in South Africa. The study is a descriptive employing quantitative approach where a structured questionnaire was administered to 121 purposively way employing selected business developers, incubation specialists, and managers. Data were analysed using descriptive statistics and exploratory factor analysis. The results indicate that the key inhibitors of business incubators include lack of financial sustainability, shortage of skills, limited knowledge and business skills, poor incubatee selection criteria, limited business space, and intense competition. This study conveys rich implications to academics by making a significant contribution to the business incubation ecosystem and entrepreneurship literature by way of exploring the factors that inhibit the performance of business incubators.

Keywords: Business Incubators, Factors, Performance, South Africa.

INTRODUCTION

Research shows that a great number of entities agree that a business incubation programme is an economic and social programme that provides intensive support to start-up ventures, and assists them in accelerating their development and success through a business assistance programme (Lose, 2016). The main goal is to establish successful start-up companies that will leave the incubators financially viable and freestanding. In addition, the graduate companies' outcomes are employment creation, technology transfer, commercialisation of new technologies, and creation of wealth for economies (Allen & Levine, 1985). Business incubators are established in order to address the problem of small business failure and unemployment (Lose, 2016). These incubators provide support to SMEs by way of equipping them with the necessary skills, resources, and a conducive environment in which to run their businesses, especially during the start-up phase of a business (GIBS, 2009). Business incubation programmes are imperative to SMEs as they help to reduce the risk and failure rate and necessitate survival and growth during the early stages of a business. Previous research regarding the situation in the Western Cape status conducted by Choto (2015); indicates that entrepreneurship education enables learners to have confidence in their entrepreneurial abilities, equips them with an understanding of business and financial matters, and gives them the desire to pursue entrepreneurship and to further their education.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

LITERATURE REVIEW

The literature was reviewed under the headings: 'Business incubators in South Africa' and 'Challenges faced by incubators'.

Business Incubators in South Africa

According to Lose and Tengeh (2015); small and medium ventures, in South Africa, are churning out in numbers but suffer a high propensity to fail. One may then argue that making sure that small and medium sized enterprises (SMMEs) are self-sustaining, would be the right step towards ensuring economic sustainability. Business incubators have been proven to provide the platform for nurturing businesses. According to Lose and Tengeh (2015), business incubators are seen globally as an essential tool for the development of SMMEs and considerable amounts of resources are invested in them. The major role of the business incubator is to minimise the risk of failure and increase the probability of success of incubated enterprises. Hence, the significant incubator impact is in the long term success of incubated enterprises and is usually after graduation. Graduated clients contribute through their growth and job creation potential. SMMEs will create significant revenue for owners of the business and therefore should be seen as a wealth creator (Lose, 2019). The strategy fits perfectly with the semi to rural set up in a number of provinces in the country, particularly the North West Province, which is predominately mining and agricultural -based. Incubatees would be trained in manufacturing and other critical activities of their business. This has the following advantages: Increases the skills base in the rural areas, Improves the basic knowledge of manufacturing, quality and general business knowledge in the rural areas, and Results in skills transfer and technology diffusion in the rural to semi-urban areas of the province. The strategy also contributes to the increase of the manufacturing growth point over and above the fact that it serves as an entry lever for entrepreneurs to the value addition sector, which is a driver of economic growth (Lose, 2019).

Challenges Facing Business Incubators

Access to qualified staff

According to Cullen et al. (2014:83), critical factors that contribute to the success or failure of business incubators include access to staff who are qualified in managing the functioning of incubators, and managing the growth of the incubated entrepreneur-owned enterprises. Without experienced and qualified staff in incubator programmes, sustainable and quality services will be limited to entrepreneurs. Trade and Industry Minister Rob Davies acknowledged that five out of every seven small businesses in South Africa fail within one year and identified the lack of skilled staff as one of the chief impediments to growth (SACBC, 2014). This is despite the country's numerous efforts to assist SMMEs. Furthermore, Gabcanova (2011) argues that staff are the greatest asset of an organisation. However, development and growth is one of the possible challenges facing human resources management. In line with this argument, it is vital for incubators to recruit staff that are knowledgeable in management, technical and consulting services in order to support entrepreneurs in growing successful enterprises.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

Lack of entrepreneurial skills

Despite considerable evidence that entrepreneurial skills are critical for the success of every business incubator, Lalkaka (2002) argues that a significant portion of business incubators are unable to deliver services to entrepreneurs, and this can be partially attributed to the fact that the majority of staff do not come from an entrepreneurial background and have little business experience. One may also draw on the InfoDev (2010a) site that argues that most business incubators lack the skills to adapt to the needs of entrepreneurs and more often provide educational programmes based on what they can afford and not necessarily what the entrepreneurs need. Grimaldi and Grandi (2005) also point out that the management of most profit-oriented business incubators provide capital, knowledge, managerial skills, and day-to-day support to new ventures, while the management of most not-for-profit incubators usually act as intermediaries, and are not directly involved in new ventures. Grimaldi and Grandi (2005) add that very often incubator staff do not have the required financial and advisory skills to assist entrepreneurs to achieve their mission. Further obstacles are quality of mathematics and science education. A study conducted by the World Economic Forum (as cited in SACBC, 2014) ranked "South Africa last out of 148 countries for the quality of its mathematics and science education. According to Alert (2014) the competiveness and growth of 500 SMMEs in South Africa, reports that one of the chief impediments to growth is lack of skilled staff. Entrepreneurial skill is considered a significant contributor to ensure the success of small business. Considering the grievances of a number of small businesses, the researchers believe that recruitment of staff with entrepreneurial skills will ensure well-developed and sustainable incubators as well as incubated entrepreneurs.

Access to advanced technology-based prototypes

Access to advanced technology-based facilities enhances the performance of business incubators. Lose and Tengeh (2015); Lose and Tengeh (2016) argue that a significant portion of business incubators in South Africa do not have access to intangible and tangible resources to demonstrate or to test a product. Thus, there is limited innovation and creativity for incubated entrepreneurs to complete the incubation programmes. Likewise, Ramluckan (2010), in a South African study, argues that incubators perform poorly in terms of delivering technological services to their clients. Overall, incubators should provide information on appropriate space and flexible leasing equipment facilities, and cost-effective ways to meet the needs of incubated entrepreneurs (Ndabeni, 2008; Lose & Kapondoro, 2020).

Access to funding and sponsorship

The traditional approach used to assess the effectiveness of management of an incubator is looking at its ability to attract sponsors, raise funds, and provide services to incubatees (Scaramuzzi, 2002; Tengeh & Choto, 2015). These researchers concur that most incubatees in developing countries are evolving, in business incubator programmes that rely on public funding. These programmes, however, face the challenge of limited funds when servicing survivalist entrepreneurs. In South Africa, the main public funders are the SEDA Technological Programme (STP) and Department of Trade and Industry (DTI) (Lose & Tengeh, 2015). Private business incubators do not normally get sponsorship and funding from these funders. As a result, private incubators depend on their own funds and sponsorships. Lose et al. (2016) found that universities and government/private agencies mostly fund universities and private incubators.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

Geographical areas

Although business incubators aim to provide an environment conducive to business creation and growth, considerable evidence indicates that business incubators are affected by the wider environment for business development. For instance, it is extremely difficult to access all survivalist entrepreneurs, located in remote rural areas in Africa, especially when electricity supply is limited. In line with this discussion, Buys and Mbewana (2007) recommend that business incubators should be located in environments where access to supporting infrastructure, and scientific and technical knowledge is available.

Lack of commitment from entrepreneurs

The success of survivalist businesses depends largely on the commitment of the entrepreneurs. However, Rolfe et al. (2010) contend that only a handful of survivalist entrepreneurs are committed to growing capital and have the potential to flourish. These authors further claim that the objective of survivalist entrepreneurs, especially in developing countries, is to generate minimal income while they wait for job opportunities in the formal sector, hence, only a select few create viable businesses (Rolfe et al., 2010). Furthermore, Buys and Mbewana (2007) assert that the success of incubator programmes depends on the commitment of incubatee entrepreneurs. The entrepreneur should be committed, be prepared to learn, and take calculated risks.

Government policies

There is substantial evidence that suggests that in developing countries, and in South Africa in particular, small businesses continue to struggle, and the success of incubator programmes depends on government policies. Government policies should support incubator programmes, not limit their funding, in order to fully support incubated entrepreneurs (Lalkaka, 2002; Buys & Mbewana, 2007). In line with this discussion, the South African government has created the Department of Small Business Development to reaffirm the importance of small business growth to South Africa's economy. Despite the country's ongoing efforts, though, small businesses continue to struggle. As a result, SACBC (2014) recommends that for the department to be effective in achieving its goals it must engage in substantive action to change the landscape for small businesses in South Africa.

Mentorship

According to Kirsty (2010), the success and failure of an entrepreneur depends on mentorship in the form of emotional support, funding, and friendship, which are crucial for the success of a business. Kirsty adds that entrepreneurs should look for mentors that are patient, tolerant of the possibility of failure, and have a long-term outlook. According to Lalkaka and Abetti (1999), culture shows a strong preference for organisational structure, evaluation modalities, and business strategies. The authors add that culture determines the structure and characteristics prevailing in firms and other organisations. Furthermore, Lalkaka and Abetti (1999) state that culture (in the form of community and family) plays a major role in people taking up entrepreneurial activities and this determines the success and failure of small businesses globally. This view also possibly applies to South Africa. However, Rwigema and Venter (2004) argue that there is a lack of role models for black entrepreneurs in South Africa and believe that a significant number of black families encourage their children to work for a

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

company or the government, rather than working for themselves. Nieman, Hough and Nieuwenhuizen (2003) add that having a role model increases the tendency of young people to become entrepreneurs.

Stakeholder support

Consistency, clarity and co-operation from the local business community, government, the broader community, venture capital providers, entrepreneurs, incubator managers and advisory boards are crucial for the functionality and success of business incubators (Buys & Mbewana, 2007). It is important that the support received from these groups is consistent with the objectives of business incubators. Therefore, for business incubators to be sustainable, management should look for stakeholders that can provide the support needed to run the incubators efficiently and effectively (Lose & Tengeh, 2015). However, Buys and Mbewana (2007) found in South Africa that there is a weak correlation between support from advisory boards and incubator success. This could be either because the advisory boards have not yet made an impact because incubation in South Africa is still in the early stages, or advisory boards are ineffective (Buys & Mbewana, 2007).

Qualities of entrepreneurs

The qualities that an entrepreneur should have include passion for a product or service, vision, energy and drive, self-starting abilities, decisiveness, (calculated) risk taking, multi-tasking, resilience, focus, persuasiveness, and leadership skills (Buys & Mbewana, 2007). Furthermore, Nair and Pandey (2006) add that entrepreneurial qualities include economic status of the family, age, technical education/training, work experience, and internal locus of control. There is a correlation between the quality of an entrepreneur and the success or failure of an incubator programme. Buys and Mbewana (2007) share a similar view and believe that the success of an incubator programme is dependent on the quality of entrepreneurs enrolled for the programme. These authors add that the incubator should ensure that they recruit incubatees who have the desire to succeed, willingness to learn, and preparedness to take calculated risks.

Competent and motivated management team

The success of an incubator programme depends on a competent and motivated management team (Buys & Mbewana, 2007; Masutha & Rogerson, 2014). The management team should have entrepreneurial and networking skills. They should set and monitor objectives and ensure that team members are incentivised in order to encourage performance (Khalid, Gilbert & Huq, 2012). In addition to this, by recruiting enthusiastic staff members into the management team, business incubators increase the probability of achieving their targets.

Networking

Through networking, incubators will be able to share information gathered from both achievement and failure. Partner networks assist entrepreneurs and graduates to identify expanding marketing opportunities. These networks include universities, lawyers, accountants, market specialists, venture capitalists, investors, clients, and volunteers (Buys & Mbewana, 2007).

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

Financial sustainability

The success of business incubators depends on financial sustainability. It is believed that for incubator businesses to be viable, their source of sustainability should be subsidised. Incubator programmes should possess dynamic models of operation. According to Buys and Mbewana (2007), there is a correlation between implementing a comprehensive business plan and the success of business incubators. However, in the South African context these authors found a weak correlation in this regard.

RESEARCH METHODOLOGY

A quantitative research method was employed for this study, by way of a questionnaire. A questionnaire was used due to the sample size and therefore the large amount of information that would need to be collected. The data were generated from a conveniently selecting a sample size of 121 incubator practitioner using a structured self-administered questionnaire. The sample size was guided and determined by the historical evidence the data was analysed using the Statistical Package for Social Sciences (SPSS) software where statistical inferences were drawn. Data were then presented in the form of tables and pie charts.

RESULTS AND DISCUSSION

Demographic Details of Respondents

Gender

Figure 1 is a graphical representation of the gender distribution of the sample. Males constitute 60.3 percent (n=73), and females constitute 39.7 percent (n=48) of the sample.

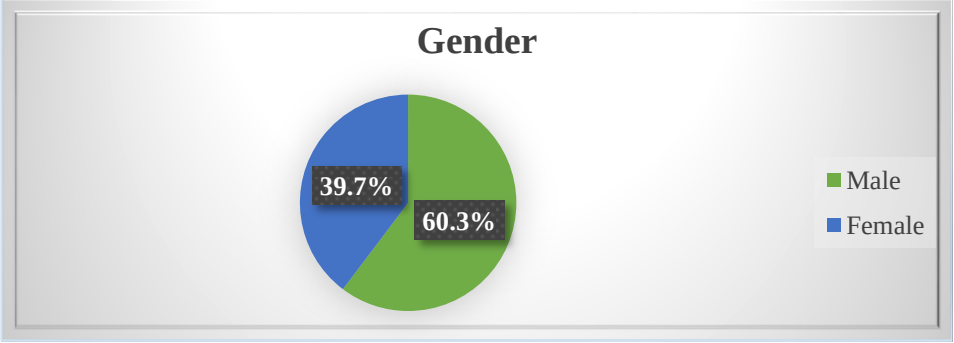

FIGURE 1
GENDER OF RESPONDENTS

Age

Figure 2 illustrates the age categories and distribution of respondents within each category. The majority (n=51: 42.1%) of the sample fell within the range of 26–35 years. The 36–45 age range comprised 35.5 percent (n=43) of the sample, while a smaller percentage (n=27: 22.3%) were 45 years and above.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

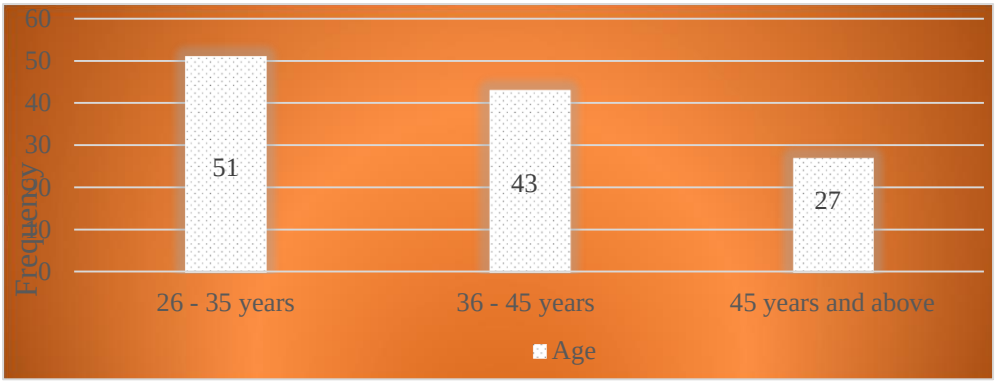

FIGURE 2
AGE OF RESPONDENTS

The Kaiser-Meyer-Olkin (KMO) test

According to Williams, Onsman, and Brown (2010), several tests should be used to assess the suitability of the respondent data for factor analysis, prior to the extraction of the factors, as these tests include the KMO measure of sampling adequacy. Thus, the values for the KMO index range from 0 to 1, with 0.50 being considered suitable for factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.825 for the Inhibitors to a business incubator scale.

The Bartlett's Test of Sphericity

The Bartlett's Test of Sphericity can be used to test the null hypothesis that the correlation matrix has an identity matrix variable, which is uncorrelated in the population. The approximate Chi-Square was 376.116 (df=36) for the Inhibitors to a business incubator scale. The Bartlett's Test of Sphericity is illustrated in Table 1.

The Bartlett's and KMO test values were above the recommended threshold and the factor analysis was suitable for EFA to be performed on the data.

Table 1
The KMO measure and Bartlett's test results

Constructs	Kmo Measure	Bartlett's Test		
		Approximate Chi-Square	Degrees of freedom	Significance level
Inhibitors to a business incubator	0.825	376.116	36	0.000

The next section shows the results of the exploratory factor analysis procedure that the constructs were subjected to.

Exploratory factor analysis for the Inhibitors to a business incubator scale

The factor extraction through principal component analysis for the Inhibitors to a business incubator scale is reported on in Table 2 and shows that three factors were extracted.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

Table 2
THREE-FACTOR ROTATED STRUCTURE FOR THE INHIBITORS TO A BUSINESS INCUBATOR SCALE

Item Code	Description	Factor		
		1	2	3
H_4	Lack of physical resources	0.856	0.140	0.101
H_5	Lack of financial sustainability	0.722	0.095	0.207
H_6	Poor business plan	0.601	0.293	0.318
H_7	Stakeholder support not offering value to the incubator	0.046	0.804	0.313
H_8	Human resources management	0.172	0.846	0.240
H_9	Advertising	0.475	0.703	-0.044
H_1	Lack of skills	0.094	0.127	0.816
H_2	Lack of knowledge	0.212	0.217	0.780
H_3	Poor incubatee selection criteria	0.460	0.193	0.604
Eigen value		4.023	1.079	1.057
Reliability		0.705	0.780	0.736
Total variance explained		44.702	11.988	11.745
Cumulative percentage variance explained		44.702	56.690	68.435

Table 2 shows that three factors were extracted in the EFA. The three factors contributed to 68.44 percent of the variance in the Inhibitors to a business incubator scale. Factor 1 consisted of three items (H4, H5 and H6), was labelled as Resource limitation, and contributed 44.70 percent of the variance. Factor 2 consisted of three items (H7, H8 and H9), was labelled as Poor business networks and contributed 11.99 percent of the variance. Factor 3 consisted of three items (H1, H2 and H3), was labelled as Skills deficiency and contributed 11.44 percent of the variance.

Descriptive Statistics for Inhibitors to A Business Incubator (see Section H of questionnaire)

Resource limitation: descriptive statistics for inhibitors to the performance of an incubator

The first factor extracted in the EFA under inhibitors to a business incubator is *resource limitation*. The results of the descriptive statistics for Resource limitation to a business incubator are reported in Table 3.

Table 3
RESOURCE LIMITATION: DESCRIPTIVE STATISTICS FOR INHIBITORS TO THE PERFORMANCE OF AN INCUBATOR

Item code	Item description	Not a problem	Minor problem	Neutral	Problem	Serious problem	Standard deviation	Mean ($\bar{x}$)
H_4	Lack of physical resources	1 0.8%	4 3.3%	8 6.6%	53 43.8%	**55** **45.5%**	0.803	4.30
H_5	Lack of financial sustainability	-	1 0.8%	2 1.7%	53 43.8%	**65** **53.7%**	0.579	4.50
H_6	Poor business plan	-	1 0.8%	18 14.9%	**52** **43.0%**	50 41.2%	0.733	4.25
Overall scale							0.705	4.35
H10 (Leadership training and coaching) was excluded during factor analysis.								

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

Table 3 details the results of the Inhibitors to a business incubator scale. Regarding Item H4, which pertains to the *lack of physical resources* being an inhibitor to the performance of an incubator, 45.5 percent (n=55) saw this as a serious problem and a mean score of $\bar{x}$=4.30; SD=0.803 confirmed this result, which indicates the degree of seriousness of this challenge. Additionally, 43.8 percent (n=53) indicated it was a problem to the business incubator. Only 6.6 percent (n=8) remained neutral, 3.3 percent (n=4) viewed it as a minor problem, and 0.8 percent (n=1) felt it was not a problem. On Item H5, Lack of financial sustainability, the majority of respondents (n=65: 53.7%) found Lack of financial sustainability to be a serious problem for business incubators, which is supported by a mean score of $\bar{x}$=4.50; SD=0.579, while a further 43.8 percent (n=53) stated it was a problem. A minority 1.7 percent (n=2) remained neutral on this item and 0.8 percent (n=1) felt it was not a problem. Regarding the statement that a poor business plan is an inhibitor to the performance of business incubators (Item H6), 43.0 percent (n=53) of respondents viewed this as a problem, emphasised by a mean score of $\bar{x}$= 4.25; SD=0.733. In addition, 41.2 percent (n=50) of respondents indicated it was a serious problem, 14.9 percent (n=18) remained neutral, and 0.8 percent (n=1) believed it was not a problem. The results in Table 3 show that the majority of respondents indicated that the performance of business incubators faced a number of inhibitors. These results align with the findings of Hannon (2005:65) and Shrivastava (2018:104). Williams (2017:32) states that ‘‘Managers may not need to perform all the job duties but will need the technical expertise to train employees, provide guidance, and solve problems”.

Poor business networks: descriptive statistics for inhibitors to a business incubator

The second factor extracted in the EFA under inhibitors to a business incubator is *poor business networks*. The results of the descriptive statistics for poor business networks to a business incubator are reported in Table 4.

Table 4
POOR BUSINESS NETWORKS: DESCRIPTIVE STATISTICS FOR INHIBITORS TO A BUSINESS INCUBATOR

Item code	Item description	Not a problem	Minor problem	Neutral	Problem	Serious problem	Standard deviation	Mean ($\bar{x}$)
H7	Stakeholder support not offering value to the incubator	-	2 1.7%	24 19.8%	**60** **49.6%**	35 28.9%	0.745	4.06
H8	Human resources management	-	2 1.7%	19 15.7%	**64** **52.9%**	36 29.8%	0.716	4.11
H9	Advertising	2 1.7%	5 4.1%	25 20.7%	**63** **52.1%**	26 21.5%	0.852	3.88
Overall scale							0.773	4.02
H10 (Leadership training and coaching) was excluded during factor analysis.								

Table 4 details the results of Item H_7, *stakeholder support does not offer value to the incubator*. A significant proportion of respondents (n=60: 49.6%) identified it as a problem, which is confirmed by a mean score of $\bar{x}$=4.06; SD=0.745. A further 28.9 percent (n=35) indicated it to be a serious problem for the incubator, 19.8 percent (n=24) remained neutral and 1.7 percent (n=2) felt it was not a problem. The results from the analysis of *human resource*

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

management of business incubators as being an inhibitor (Item H8), show that the majority of respondents (n=64: 52.9%) believed that human resource management is a problem, supported by a mean score of $\bar{x}$=4.11; SD=0.716. Another 29.8 percent (n=36) agreed that human resource management was a serious inhibitor to incubator performance, 15.7 percent (n=19) remained neutral on this item, and 1.7 percent (n=2) indicated it was not an inhibitor. Lastly, regarding Item H9, that *advertising* can inhibit the performance of a business incubator, 52.1 percent (n=63) felt it was a problem, supported by a mean score of $\bar{x}$= 3.88; SD=0.852. Furthermore, 21.5 percent (n=26) of respondents deemed advertising as a serious problem that could inhibit incubator performance, 20.7 percent (n=25) remained neutral on this aspect, 4.1 percent (n=5) felt it was a minor problem, and 1.7 percent (n=2) believed it was not a problem.

Skills deficiency: descriptive statistics for inhibitors to a business incubator

The third factor extracted in the EFA under inhibitors to a business incubator is *skills deficiency*. The results of the descriptive statistics for skills deficiency for inhibitors to a business incubator are reported in Table 5.

Table 5
SKILLS DEFICIENCY: DESCRIPTIVE STATISTICS FOR INHIBITORS TO A BUSINESS INCUBATOR

Item code	Item description	Not a problem	Minor problem	Neutral	Problem	Serious problem	Standard deviation	Mean ($\bar{x}$)
H1	Lack of skills	-	1 0.8%	2 1.7%	54 44.6%	**64** **52.9%**	0.579	4.50
H2	Lack of knowledge	-	2 1.7%	9 7.4%	54 44.6%	**56** **46.3%**	0.694	4.36
H3	Poor incubatee selection criteria	-	1 0.8%	11 9.1%	53 43.8%	**56** **46.3%**	0.681	4.36
Overall scale							0.651	4.41
H10 (Leadership training and coaching) was excluded during factor analysis.								

Table 5 details the results of possible inhibitors to the performance of business incubators. Item H1 indicates that 54.9 percent (n=64) of the respondents believed that *lack of skills* is a serious problem to the performance of incubation, while 44.6 percent (n=54) perceived it as a major problem for an incubator. A minimal 1.7 percent (n=2) remained neutral on this point and 0.8 percent (n=1) saw it as a minor problem. The mean score of $\bar{x}$=4.50; SD=0.579 corroborates the level of the problem. Regarding business incubator practitioners *lacking the necessary knowledge* (Item H2), 46.3 percent (n=56) of respondents deemed this a serious problem, supported by a mean score of $\bar{x}$= 4.36; SD=0.694. An additional 44.6 percent (n=54) of respondents viewed it as a problem, 7.4 percent (n=9) considered it a minor problem, while 7.0 percent (n=2) thought it was not a problem. On Item H3, whether *poor incubatee selection criteria* inhibited the performance of an incubator, a significant proportion of respondents (n=56: 46.3%) viewed this as a serious problem, which is confirmed by a mean score of $\bar{x}$=4.36; SD=0.681. A further 43.8 percent (n=53) considered it a major problem, 9.1 percent (n=11) of the respondents remained neutral and 0.8 percent (n=1) saw it as not a problem. Grimaldi and Grandi (2005); InfoDev (2010b); Lose et al. (2016), Lose and Tengeh (2016); Tengeh and Choto (2015) report that a lack of necessary skills, lack of knowledge, poor selection criteria, lack of

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

physical resources, lack of financial sustainability, poor business plan, minimal stakeholder support, and human resources management, are all inhibitors to incubator performance. Lalkaka (2002) argues that the inability of business incubators to perform has resulted in incubators failing to deliver adequate support to incubatees.

RECOMMENDATIONS

Based on the results of this study, the following is recommended: Incubators should engage in networking and mentorship; Hire qualified staff and management that have entrepreneurial skills; Have a competent and motivated management team; Have access to advanced technology-based prototypes, funding and sponsorship; be situated in accessible geographical areas; receive robust commitment from entrepreneurs; be afforded government policies that support them, and financial sustainability.

CONCLUSION

The establishment of business incubators in South Africa was done to reduce entrepreneurial failure. A reduction in entrepreneurial failure means that there would be an increase in employment, innovation would be driven, and the country's prosperity would be enhanced. However, research seems to suggest that business incubators face challenges that inhibit them from performing successfully. The literature review, which was conducted indicates that challenges faced by business incubators include access to qualified staff, lack of entrepreneurial skills, access to advanced technology-based prototypes, funding and sponsorship, accessible geographical areas, lack of commitment from entrepreneurs, supportive government policies, mentorship, stakeholder support, competent and motivated management team, networking, and financial sustainability. Based on the survey done, inhibitors to incubator performance include lack of physical resources, lack of financial sustainability, poor business plan, stakeholder support not offering value to the incubator, human resources management, advertising, lack of skills, lack of knowledge, and poor incubatee selection criteria. In light of the inhibiting factors established, we can conclude that in order to ensure the success of business incubators, it is important to invest in their staff, grant them sufficient funding, formulate government policies in support of their functioning, place them in accessible geographical areas, and ensure that they have access to advanced technology.

LIMITATION OF THE STUDY AND FUTURE DIRECTION

Although this study makes significant contributions to both academia and practice, it was limited in some ways, and therefore some future research directions are suggested. First, the data were gathered from the incubated businesses in Eastern Cape province. Perhaps, the results would be more informative if data from other businesses in other provinces of the country are included. Future studies may be conducted by using data from other provinces across the country. Subsequent research should contemplate replicating this study in other developing countries for results comparisons.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

REFERENCES

Allen, D.N., & Levine, S. (1985). Small business incubators: A positive environment for entrepreneurship. *Journal of Small Business Management, 23*(3), 12-22.

Buys, A.J., & Mbewana, P.N. (2007). Key success factors for business incubation in South Africa: The Godisa case study. *South African Journal of Science*, *103*(9-10), 356-358.

Choto, P. (2015). The impact of business incubators on survivalist entrepreneurs in the Cape metropolitan area. Master's degree dissertation. Cape Peninsula University of Technology, Cape Town.

Tengeh, R.K., & Choto, P. (2015). The relevance and challenges of business incubators that support survivalist entrepreneurs. *Investment Management and Financial Innovations*, *12*(2), 150-161.

Choto, P., Tengeh, R.K., & Iwu, C.G. (2014). Daring to survive or to grow? The growth aspirations and challenges of survivalist entrepreneurs in South Africa. *Environmental Economics*, *5*(4), 93-101.

Cullen, M., Calitz, A. & Chandler, L. (2014). Business incubation in the Eastern Cape: A case study. *International Journal for Innovation Education and Research*, *2*(5), 76-89.

Gabcanova, I. (2011). The employees - the most important asset in the organisation. *Human Resource Management and Ergonomics*, *5*(1/2011), 1-12.

Gordon Institute Of Business And Science. (2009). The entrepreneurial dialogues. state of entrepreneurship in South Africa. November 2009, at the FNB Conference Centre. Available at http://www.gibs.co.za/SiteResources/documents/The%20Entrepreneurial%20Dialogues%20%20State%20of%20Entrepreneurship%20in%20South%20Africa.pdf [6 March 2020].

Grimaldi, R., & Grandi, A. (2005). Business incubators and new venture creation: An assessment of incubating models. *Technovation*, *25*(2005), 111-121.

Hannon, P.D. (2005). Incubation policy and practice: Building practitioner and professional capability. *Journal of Small Business and Enterprise Development*, *12*(1), 57-75.

Infodev. (2010a). *Global good practice in incubation policy development and implementation. South Africa Incubation. Country case study*. Washington. [Online]. Available at https://www.infodev.org/infodev-files/resource/InfodevDocuments_834.pdf Accessed: 07/04/2016.

Infodev. (2010b). *Global practice in incubation policy development and implementation. South Africa Incubation. Country case study*. Washington. [Online]. Available at: http://www.infodev.org/infodev-files/resource/Infodev Documents_838.pdf Accessed: 10/09/2018.

Khalid, F.A., Gilbert, D.H., & Huq, A. (2012). Investigating the underlying components in business incubation process in Malaysian ICT incubators. *Asian Journal of Social Sciences & Humanities*, *1*(1), 1-17.

Kirsty, D. (2010). *The state of entrepreneurship in South Africa*. White Paper: deliberation and key findings. [Online]. Available at https://www.fnb.co.za/downloads/commercial/State-of-Entrepreneurship-in-South-Africa.pdf Accessed: 03/03/2017.

Lalkaka, R., & Abetti, P.A. (1999). Business incubation and enterprise support systems in restructuring countries. *Creativity and Innovation Management, 8*(3), 197-209.

Lalkaka, R. (2002). Technology business incubators to help build an innovation-based economy. *Journal of Change Management*, *3*(2), 167-176.

Lose, T. (2016). The role of business incubators in facilitating the entrepreneurial skills requirements of small and medium size enterprises in the Cape metropolitan area, South Africa. Unpublished MTech thesis. Cape Peninsula University of Technology, Cape Town.

Lose, T. (2019). A framework for the effective creation of business incubators in South Africa. Doctoral thesis. Vaal university of technology, Vanderbijlpark.

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

Lose, T., & Tengeh, R.K. (2016). An evaluation of the effectiveness of business incubation programs: a user satisfaction approach. *Investment Management and Financial Innovations*, *13*(2), 370-378.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.

Lose, T., Nxopo, Z., Maziriri, E., & Madinga, W. (2016). Navigating the role of business incubators: a review on the current literature on business incubation in South Africa. *Acta Universitatis Danubius. Œconomica*, *12*(5), 130-140.

Lose, T., & Kapondoro, L. (2020). Functional elements for an entrepreneurial university in the South African context. *Journal of Critical Reviews*, *7*(19), 8083-8088.

Masutha, M., & Rogerson, C.M. (2014). Small enterprise development in South Africa: the role of business incubators. Bulletin of geography. *Socio-Economic Series*, *26*(26), 141-155.

Nair, K.R.G., & Pandey, A. (2006). Characteristics of entrepreneurs: An empirical analysis. *Journal of Entrepreneurship*, *15*(1), 47-61.

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.

Nieman, G., Hough, J., & Nieuwenhuizen, C. *eds*. (2003). *Entrepreneurship: A South African perspective*. Pretoria: Van Schaik.

Ramluckan, S. (2010). An exploratory study on the performance of the SEDA business incubators in South Africa. Unpublished Master's thesis. Stellenbosch University, Stellenbosch, Western Cape.

Rolfe, R., Woodward, D., Ligthelm, A., & Guimaraes, P. (2010). *The viability of micro-enterprise in South Africa.* Darla Moore School of Business, University of South Carolina, Columbia, SC.

Rwigema, R., & Venter, R. (2004). *Advanced entrepreneurship*. Cape Town: Oxford University Press.

SACBC (SOUTHERN AFRICAN CATHOLIC BISHOPS' CONFERENCE). 2014. *Small business in South Africa: what the Department of Small Business Development can do to stimulate growth*. Occasional Paper 35, September 2014. [Online]. Available at http://www.cplo.org.za/wp-content/uploads/2013/04/OP-35-Small-Business-in-South-Africa-Sept-2014_email.pdf Accessed: 07/05/2017.

SBP ALERT. (2014). *Examining the challenges facing small businesses in South Africa*. [Online]. Available at http://www.sbp.org.za/uploads/media/SBP_Alert_-_Examining_the_challenges_facing_small_businesses_in_SA_01.pdf Accessed: 23/10/2017.

Scaramuzzi, E. (2002). *Incubators in developing countries: status and development perspectives.* Working Paper, Report No. 26637. The World Bank: 1-35. [Online]. Available at http://documents.worldbank.org/curated/en/186751468770425799/Incubators-in-developing-countries-status-and-development-perspectives Accessed: 22/01/2017.

Shrivastava, V. (2018). Investigating the relationship between the success and failure factors of business incubators and those of micro-enterprises. Unpublished Masters Dissertation. University of the Witwatersrand, Johannesburg, South Africa.

WIlliams, B., Onsman, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, *8*(3), 1-13.

Williams, A. (2017). *Sustainability strategies for small business restaurant owners*. Walden University, Washington. [Online]. Available at https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=5683&context=dissertations Accessed: 17/08/2018.

Citation Information: Lose, T., & Mapuranga, M. (2022). Antecedents that inhibit the performance of business incubators in South Africa. *Academy of Entrepreneurship Journal, 28*(S1), 1-13.