

Incubatee performance: The impact of public business incubators in the Northern Cape Province of South Africa

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ABSTRACT

Purpose of the study: SMMEs play a significant role towards countries' GDP and economies. However, SMMEs tend to fail before becoming established. As such, initiatives such as business incubators have been established to support the successful development of SMMEs. It is key to investigate the actual impact that business incubation support has on the incubated SMMEs. Consequently, the purpose of this research is to determine the impact of public business incubators on the performance of the incubatees in the Northern Cape Province of South Africa..

Design/methodology/approach: A qualitative methodological approach was used. Semi-structured face-to-face focus group interviews were conducted with 17 business incubatees across the four public business incubators in the Northern Cape Province, and the data were analysed, interpreted and coded using ATLAS.ti.

Findings: The findings of the study were reported thematically. The public business incubators were shown to contribute to the incubatees' performance mainly through the provision of elementary support services needed to start the businesses. However, incubatees lacked the support of significant services needed to operate the business optimally.

Recommendations/value: The study responds to the body of literature on business incubator impact on incubatees' performance and provides the Northern Cape public business incubators with significant recommendations on how to better contribute to the enhanced performance of their incubatees.

Managerial implications: The business incubators should align their support services with the particular needs of the business incubatees in order to best support them and make a significant impact towards their overall business performance. These needed support services move beyond the primary ones currently offered by the Northern Cape first-generation public business incubators, towards more advanced and impactful ones.

Keywords: Business incubatees; business performance; Northern Cape Province; public business incubators; SMMEs

JEL Classification: L26

1. INTRODUCTION

Small, Medium and Micro-sized Enterprises (SMMEs) across the world, including those in South Africa, are viewed as the cornerstone of their countries' economies and societies because they make significant contributions towards the Gross Domestic Product (GDP), employment and overall economic welfare (Ncube & Zondo, 2022). This practice has resulted in SMMEs commanding considerable attention and their establishment receiving significant traction and support.

In the year 2019, before the coronavirus (COVID-19) overtook the world and shook countries' economies, SMMEs were taking pre-eminence on the world business stages because they accounted for approximately 95% of the enterprises worldwide as well as 60-70% of employment (Global National Action Plans (NAPs) 2019). In the South African context, SMMEs accounted for approximately 42% of the operational enterprises (Bosma & Kelley, 2019). However, the negative impact of the COVID-19 pandemic was harsh on numerous businesses and, consequently, the Global Entrepreneurship Monitor (Bowmaker-Falconer & Meyer, 2022) reported that a significant number of start-ups and early-stage businesses inescapably became stillborn as a result of the decline in economic activities, dissolving of markets and loss of a myriad of jobs.

More particularly in South Africa, the failure of SMMEs continued at a high rate, thus adversely affecting the country's employment rate. This fact became evident in Statistics South Africa's report (StatsSA, 2024) that indicated a decline in the employment levels of the country, which resulted in the unemployment rate soaring to 33.5% in the second quarter of 2024. In the Northern Cape Province, the official unemployment rate was reported at 32.0% for the second quarter of 2024 (StatsSA, 2024). This decline in employment rates, with the failure of SMMEs being a catalyst, has had a significantly negative impact on the overall economy of both the province and the country.

Following this consistent decline in the performance of SMMEs, reviewed literature (Nicholls-Nixon & Valliere, 2021; Rathore & Agrawal, 2021) reveals that the private and public sectors have developed initiatives to support the establishment, growth and sustainability of SMMEs through organisations such as business incubators that provide the necessary business support services to the SMMEs (referred to as 'incubatees' going forward) they house. Business incubators are envisaged as providing incubatees with customised interventions in the form of business support services for their businesses for a typical period of three years (Msimango-Galawe & Hlatshwayo, 2021; Zhou & Gumbo, 2021). These business support services include, but are not limited to, physical capital such as office space, financial

resources, training and development, technology resources, e.g. access to Wi-Fi and networks, and mentorship (Lose, 2016). These services can range from access to physical facilities to internationalisation opportunities, depending on the type of business incubator and its aims (Mrkajic, 2017). However, even with this supportive incubation environment, many incubatees continue to experience poor performance and inevitable failure. Globally, incubatees in business incubators do not function as well as expected. Although they perform better than their counterparts outside the incubation environment, incubatees' poor business performance continues to be a concern (Dludlu, 2021; Zhou, 2022).

More particularly, in developing countries such as South Africa, the impact of business incubators is questionable, especially in reference to inculcating a culture of innovation and creativity amongst the incubatees (Hewitt & van Rensburg, 2020). According to Van der Spuy (2019), the Northern Cape business incubators do not effectively support the incubatees towards enhanced performance. Unfortunately, this ineffectual support appears to be greater in the public business incubators that comprise the majority of the incubators in this province (Motlhaudi, 2024) and which are the focus of this paper. The implications of poor performing incubatees are far-reaching for the Northern Cape Province that experiences extremely high unemployment rates, declining industries and dire socio-economic challenges (StatsSA, 2022). This situation reiterates the need for incubatees to be incubated successfully towards better business performance so that they can contribute effectively towards the economy of both the province and South Africa. The gap in the reviewed literature, coupled with these aforementioned challenges, necessitated this paper's investigation of the specific impact that the Northern Cape public business incubators have on the business performance of their incubatees.

2. LITERATURE REVIEW

This section provides the literature review on business incubators, specifically the public incubators in the Northern Cape Province, the impact of business incubators on the performance of incubatees and the theoretical lens that underpins this paper.

2.1 Business Incubators

2.1.1 *Public business incubators vs private business incubators*

The purpose of business incubation, a practice that is regarded by Rathore and Agrawal (2021) as an umbrella term for the services offered by all types of business incubators, is to provide support for start-up and early-stage business enterprises. This backing includes assisting them to access quality resources and affording an overall supportive environment

from which they can establish themselves and grow exponentially (Simango, 2022). Although from a broad perspective, public and private business incubators have similar overall objectives, they differ significantly in terms of their primary goals, source of profit, business models and range of support services and resources they provide their incubatees. Stephens and Lyons (2022) emphasised that business incubators vary in that their service offering may be sector-specific or even generic; however, their similarity lies in their clear intention to assist and support incubatees in a way that enables them to survive beyond the vulnerable start-up stages and, eventually, accomplish sustainable growth. Overall, business incubators are key in providing strategic platforms to stimulate the incubatees' innovation and creativity, providing them with market access opportunities as well as connections to financial institutions (Hou et al., 2020). More importantly, Ramar et al. (2020) contend that business incubators ought to develop and implement programmes that are geared towards assisting the incubatees through customised support that meets their specific business needs.

In order to carry out their mandate of supporting incubatees, business incubators need funding. In the context of public business incubators, they are often funded and supported by governments because this practice usually falls within governments' scope to assist in employment generation, such as creating an enabling environment for SMMEs to perform well and thrive (Hewitt & Janse van Rensburg, 2020). Private business incubators, on the other hand, often operate using funding obtained from corporations, seed venture capitalists and real estate development partnerships that usually seek to earn a return on their respective investment (Bayhan, 2016). Due to the significant differences between public and private business incubators, it is key to note that, as mentioned above, this paper focused solely on the public business incubators in the Northern Cape Province of South Africa, in response to the dire economic challenges faced by this province.

2.1.2 State of public business incubators in a global context

The concept of business incubators is one that became popularised globally after the first one was established in the United States of America in 1959. Since then, the phenomenon of business incubators has grown significantly, and to date, over 10,000 business incubators exist globally (Sohail *et al.*, 2023). Scholars (Weele *et al.*, 2017) state that most of these business incubators are primarily supported by national governments and local organisations. They focus strongly on a wide array of fields such as technology, science, business management, marketing and economics.

The lists of rankings of the various types of business incubation programmes, inclusive of public business incubators and public accelerators, resulted from research conducted by

Universal Business Incubators (UBI) Global (2023). As per the World Rankings of the Top 5 Public Incubators in 2020/2021, countries in which these incubators operated included India, Turkey, Brazil and China, while the Top 5 Public Accelerators in the World were found in Europe, Canada, Spain and Italy. The author of this paper summarised the exact Public Business Incubators and Accelerators rankings below in Table 1.

Table 1: List of the World's Top 5 Public Business Incubators and Public Accelerators

WORLD TOP 5 PUBLIC INCUBATORS		WORLD TOP 5 PUBLIC ACCELERATORS	
Name of Incubator	Country	Name of Accelerator	Country
Kerala Startup Mission	India	EIT Health Accelerator	Europe
Bilgiyi Ticarilestirme Merkezi	Turkey	Accelerator Centre	Canada
MIDITEC	Brazil	Aceleradora mentorDay	Spain
NEXUS - Hub de Inovação do Parque Tecnológico São José dos Campos.	Brazil	NASStartUp	Italy
Shanghai Caohejing Hi-tech Park Innovation Center	China	York Entrepreneurship Development Institute	Canada

Source: UBI Global (2023)

The list of diverse countries, displayed in Table 1 above, is suggestive of the efforts made by governments and public sectors globally towards developing SMMEs via the vehicle of business incubation. In first-world contexts such as Europe, the European Business and Innovation Centre Network (EBN), a network of 150 business and innovation centres and 70 other organisations that provides support in the entrepreneurial ecosystem for start-ups effectively and efficiently, has recorded countless incubation success cases (Hewitt & Janse van Rensburg, 2020). For example, the EBN reported that their business incubators' support services enabled access to markets for 84% of their incubatees, access to finance to 83%, marketing services to 73%, innovation programmes to 68% and team development training to 65% of their incubatees. The impact of their services and interventions is reflected in the fact that the survival rate of their graduate incubatees three years after exiting the incubator has increased to 89%. The EBN accredits this survival rate success to the personal commitment of all the business incubators and the competence of their staff and in-house experts.

However, the author of this paper notes that, while the majority of the incubators and accelerators listed in Table 1 above are in first-world countries, there are some in third-world countries such as India and Brazil, but no African country is represented. As such, it is tempting

to speculate that this fact reiterates the questionable impact of African, South African and, more specifically, Northern Cape Province business incubators.

2.1.3 State of public business incubators in the South African and Northern Cape context

According to Buys and Mbewana (2007), the concept of business incubation in South Africa is one that is still fairly novel since its introduction in 1995 as part of the Small Business Development Corporation (SBDC) and the township hives that were focused on the development of the small business sector. These hives were zones that were specifically located in the townships of South Africa, which enabled entrepreneurs to gain access to developed infrastructure such as telecommunication, electricity and fostering of relationships between early-stage businesses and well-established businesses (InfoDev, 2010).

This new phenomenon of business incubation began to grow in South Africa to a point at which Masutha and Rogerson (2014) reported that in 2013, a total of 51 business incubators were fully operational nationally. However, this growth began to stagnate gradually and in 2019, Crampton (2019) reported that South Africa had a total of 58 business incubators across the country. This number continues to fluctuate depending on what type of establishment is characterised as a business incubator. This situation is witnessed in the fact that the Small Enterprise Development Agency (SEDA, 2018), an agency of the Department of Small Business Development (DBSD) that provides non-financial support to small enterprises, reported a total of 72 incubators under its support in 2018. Despite the uncertainty regarding the exact number of business incubators, it has remained evident over time that the movement of business incubation in South Africa has been strongly driven and endorsed by the government and the public sector.

According to Muriithi *et al.* (2018), business incubators have had a significant impact on incubatees, and this claim is supported by the fact that South African incubatees have experienced an 80% success rate after graduating from the incubation environment, which is greater than the 50% success rate of non-incubated businesses in the country. However, the author of this paper contends that these success rate numbers, unfortunately, do not reflect the context of the Northern Cape Province. This sentiment is corroborated by research undertaken on the province's business incubators (Babalola & Agbenyegah, 2016; Van der Spuy, 2019). The findings of these studies indicated that, despite the existence of enabling environments (i.e., business incubators), the incubatees in the Northern Cape continue to be challenged by issues such as a lack of the following: business and financial skills, appropriate information on probable funders, support to apply for financial grants and loans, access to

appropriate technology, business networks and a suitable workforce, as well as poor location due to the spatial complexities of the province.

Moreover, the Northern Cape business incubators themselves have often been reported to encounter numerous challenges, despite the countless resources that have been channelled towards business incubation programmes by both the public and private sectors. Lose (2016) opines that one such challenge in particular is the lack of relevant skills needed to make a significant contribution towards SMME development. This lack of skills is ascribed to the fact that a large number of employees in business incubators do not necessarily have any background in entrepreneurship and rarely possess the knowledge and experience to meet the skills required to assist the incubated businesses (Lose, 2016).

Additional challenges faced by these business incubators include limited access to venture capital, reduced innovation and creativity, poor growth rate, downsizing and decreased productivity (Hutabarat & Pandin, 2014). In addition to these multiple challenges, business incubators often have difficulty nurturing and developing incubates, a situation that places a threat on the expected long-term survival of the SMME (Escobar *et al.*, 2022). The business incubators' poor performance has a negative impact on the incubatees' performance because they are heavily reliant on the business incubators for the survival of their businesses (Motlhaudi, 2024). These challenges reiterate the importance of ensuring that business incubators contribute positively towards the successful performance of incubated SMMEs through the successful implementation of business incubation programmes.

2.1.4 Business performance defined in the business incubator and incubatee context

According to Bakkali *et al.* (2014), no one standard tool for measuring the performance of business incubators and incubatees exists. Limited literature exists globally on how best to measure the overall impact of business incubation on business incubatees. However, in the context of South Africa, a plethora of literature exists on the successes, challenges and performance of business incubators holistically. Still, very little data can be found on the direct impact that business incubation has on SMMEs' performance. Moreover, research on business incubators expresses the challenge with regard to finding an answer to the ongoing question, "Do business incubators have a positive impact?" As a means to aid in preempting the potential impact of the business incubator on the incubatees' performance, a study dating back to 1985 by Campbell *et al.* strongly purported that before joining a business incubator, prospective incubatees should take time to identify and select a business incubator that will best meet their business needs. The authors (Campbell *et al.*, 1985) suggested that this goal

could be achieved by posing key questions such as: Is this incubator a good business? Does the incubator possess adequate resources and acumen to serve my specific business needs? Does the incubator staff know the best possible marketing strategy for my business to penetrate the market? And does the business incubator have success stories? If so, what are they?.

In an attempt to contribute to the determination of the impact of the business incubators, this paper looked at the concept of business performance as a means to place a metric on performance. As such, business performance in this paper, pertaining to the incubators and incubatees, is referred to in terms of financial performance measures (sales and asset growth) and non-financial performance measures (employment growth). The financial performance measures comprised sales growth because sales are crucial to creating business revenue that eventually contributes to improved profitability potential (Lose, 2019). Another financial performance measure that the paper focused on was asset growth. The author accepts that asset growth incorporates increases in stock, equipment and machinery. Nevertheless, in the context of this paper, asset growth also incorporates a financial performance measure such as cash flow because it is relevant to the context of both business incubators and incubatees. Finally, the non-financial performance measure in this paper is employment growth. The high unemployment rates in the Northern Cape Province dictated this measure. In the second quarter of 2024, it was reported to be at an alarming 32.0% officially (StatsSA, 2024). Hence, the author agrees with the notion proposed by Lose (2021) that deems it vital for business incubators to perform well so that they are sufficiently capacitated to support incubatees effectively to enable them to enhance their performance that can lead to potential employment creation.

2.1.5 *Role of business incubation on incubatee performance*

Numerous benefits exist for businesses to undergo the business incubation process. According to Romein and Trip (2017), business incubators provide a supportive space and an enabling environment that permits start-up companies to be established and nurtured in order to survive their infancy – the period in which they are most vulnerable. The assistance provided by business incubators is expected to help grow incubatees into self-sustainable business ventures that can survive outside of the business incubator environment. This prospect is well aligned with the research conducted by Amezcua and McKelvie (2016), which states that incubated businesses, more especially those that women own, tend to perform extremely well compared to those of their counterparts that are not incubated, thus emphasising the importance and impact of business incubators.

Furthermore, business incubatees that graduated from a business incubator reported that being in such programmes assisted them to gain access to support services such as physical and financial resources, office space, business networks and assistance with how best to navigate the business environment. These support services assist incubatees with regard to successfully operating their businesses. In the research conducted by Tembe (2018), findings indicated that business incubation carries multiple positive outcomes for incubatees, including commercialisation of technologies, employment, innovation and diversification of local economies and exposure to an entrepreneurial climate, thus emphasising the significant role played by business incubators towards the performance enhancement of SMMEs. Studies by Tengeh and Choto (2015) showed that approximately 55.1% of entrepreneurs who had undergone business incubation programmes benefited significantly from these initiatives. The studies further indicated that business incubatees which have positive relationships and engagements with their respective business incubators progress effectively, a fact that has a positive effect on their prospect of enhanced success.

Conversely, research by Msimango-Galawe and Hlatshwayo (2021) cautioned that the claims of high success rates of incubatees in South Africa do not corroborate with the prevailing failure rate among its SMMEs. This claim is reiterated in other studies, which have revealed that, contrary to the statistics often released, business incubators do not have a significant impact on the improved sales, asset and employment growth of the incubatees, irrespective of the period spent in the incubation programme (Ayatse *et al*, 2017; Simango, 2022).

This situation, unfortunately, is also witnessed in the context of the Northern Cape Province, where research fieldwork by Van der Spuy (2019) revealed that of the total of seven business incubators that exist in the province, the majority (four) of them offered extremely low spectrums of services. Research by Van der Spuy (2019) further reported that the business incubators in the Northern Cape Province, on face value, seemingly offer a vast array of business support services for business incubatees. However, the business incubatees interviewed by Van der Spuy (2019) in all seven of the business incubators reported that the advertised wide service spectrum existed only in theory and not necessarily in reality. This fact is reiterated in Table 2, which depicts a summary of the presence and absence of key services in the business incubation space of the Northern Cape Province, according to the fieldwork by Van der Spuy (2019). A vast array of services usually offered in typical business incubators seemed not to be offered by the majority of the Northern Cape businesses, as seen in Table 2.

Table 2: Northern Cape business incubators' business support service spectrum

Incubator	1	2	3	4	5	6	7
Physical premises				X	X	X	X
Equipment	X			X	X	X	X
Admin support	X	X					X
Finance	X			X	X	X	
Specialised skills & services	X			X	X	X	
Mentorship	X	X		X	X	X	X
Training for skills development	X	X		X			
Networks	X				X	X	

Source: Adapted from Van der Spuy (2019)

Table 2 above depicts the limited array of support services offered by the business incubators that fail to meet the specific business needs of the Northern Cape-based incubatees in the public business incubators. In the view of Stephens and Lyons (2022), this failure to meet the incubatees' needs may be a result of the incubators' misalignment with the actual needs of the individual beneficiaries. According to Muriithi *et al.* (2018), business incubatees fail as a result of a number of factors, such as insufficient access to appropriate technology, misappropriation of funds, no sustainable growth plans and a lack of professional management. Other studies have attributed the failure of business incubatees to the careless selection process conducted by incubators and recommend that business incubators should begin to intentionally accept only those applicants whose businesses have developed actual products or services. It is a fact that those businesses without products or services are often unsuccessful – a situation that contributes towards their eventual failure (Oxford, 2014). As such, research reiterates the need for business incubators to develop and utilise stringent relevant selection criteria against which applicants can be measured. The above-mentioned concerns of the Northern Cape business incubators in particular provide an impetus to investigate their impact on the incubatees' performance.

2.2 Theoretical foundation

Studies with a central view on business incubation often draw from conventional theories such as the Institutional Theory or Resource-Based Theory (Lose, 2021). While these theories remain relevant, they have the tendency to minimise the importance of business performance, which, in the case of this paper, is the dependent variable. Due to the absence of a persuasive theory that traverses both business performance and business incubation, the author looked to various theoretical lenses that considered multiple levels of analysis relating to business incubation and business performance. As such, to help aid the investigation on the performance of the incubatees and business incubators, the author of this paper relied on the Theory of Performance (ToP) established by Don Elger in 2007. Elger's (2007) theory is fairly new and offers some novelty through its fresh perspective that caters for the importance of business performance in the analysis, unlike other more traditional theories.

The ToP is based on the Learning Theory that describes how individuals attain and retain information and knowledge throughout the learning process (Ormrod, 2012). The ToP is rooted in performance studies that refer to three learning contexts, namely: traditional, non-traditional and organisational. These three learning contexts postulate that in traditional contexts, learning happens in settings that are traditionally related to learning, i.e., workshops or training development sessions for incubatees. In contrast, in non-traditional contexts, learning happens in contexts that are not traditionally viewed as learning environments, i.e., networking sessions or exhibitions attended by incubatees. Finally, in organisational contexts, learning happens in organisations through the idea of inspecting the organisation's level of performance, i.e., reporting by incubatees to the incubator.

In addition to the three contexts of the ToP mentioned above that underpin the essence of the incubation environment being one for learning and development, the author linked the concept of incubatee performance to what Elger (2007) refers to as the performance and performance improvements elements of the ToP, that also reinforce the crux of incubatees being in an incubator, i.e., performance enhancement. The author incorporated these elements to determine how best the performance of business incubators can be improved to allow them to function optimally and, in turn, enable incubatees to do the same. The researcher speculates that this overall goal of performance enhancement of the incubatees in the Northern Cape Province based public business incubators can be achieved by the incubators leveraging from the strengths of the ToP's theory (learning contexts and performance elements) through creating a conducive learning and developing environment that enables the incubatees to glean as much knowledge and experience as possible from the support provided in order to enhance their business performance.

2.3 Research question

What is the impact of public business incubators in the Northern Cape Province of South Africa on the performance of the incubatees?

3. METHODOLOGY

3.1 Research design

This paper employed the qualitative research method, which is linked with interpretivism, which entails “discovering unanticipated findings without depending on numerical measurements, and produces descriptive data obtained from interviews, questionnaires and participant observation in order to understand and describe specific social phenomena” (Cooper & Schindler, 2014).

3.2 Setting

The paper is set in the ecosystem of business incubation that comprises primarily of public business incubators and business incubatees within the Northern Cape context.

3.3 Population and sampling design: This paper encompassed business incubatees as the target population who were sourced from Kimberley and Upington in the Northern Cape Province because these are the towns in which all four public business incubators are located. A total of 17 business incubatees were interviewed using the purposive sampling method, which allowed the author to interview incubatees with similar characteristics and experiences at their respective business incubators.

3.4 Data collection: Semi-structured face-to-face focus group interviews were held with the business incubatees in the four public business incubators in the Northern Cape Province. This practice provided the author with insights into how the business incubatees think as a collective, as well as providing a deeper understanding of the phenomena being studied.

To further substantiate the data gathered through these interviews, the author collected quantitative data by requesting the respondents to answer a short questionnaire regarding the current performance contributing factors which are offered by their business incubator, which are important for enhancing their performance, as well as those they deem to be lacking. The author further required the respondents to rank these factors from the most important to the least important based on their needs.

3.5 Data analysis: The data collected from the semi-structured face-to-face focus group interviews with the business incubatees were analysed, interpreted and coded using the qualitative data analysis software, ATLAS.ti.

3.6 Ethical considerations: Ethical clearance was obtained from the relevant academic institution, and the necessary permission to conduct the research was elicited from the participants and the involved institutions was recorded on consent forms.

3.7 Open-ended questions

As a means to help answer the primary question, the following subsidiary questions were posed to the business incubatees throughout the interviews:

1. What factors have contributed the most to your current business performance?
2. What additional factors would you say you need to help improve your business performance?
3. What role has the incubator played in your business performance?
4. What additional factors do you need from the incubator to help improve your business performance?

4. FINDINGS AND DISCUSSION

It is a well-known reality that business incubators are established to support and develop SMMEs to maturity so that, upon graduation, they are able to survive outside the incubation environment (Romein & Trip, 2017). Therefore, the primary purpose of business incubators is to ensure that early-stage enterprises are developed sufficiently so that they are empowered to perform well and make their contribution towards the economy and society. As part of the data collection process, the author first asked the 17 business incubatees from the public business incubators in the Northern Cape Province to define their understanding of the incubators' purpose and then posed the question, "Is the business incubator fulfilling its purpose?" From the responses, 18% of the incubatees responded with "Yes", 47 percent responded with "No", while the remaining 35% responded with "Partially." The author of this paper found these responses alarming because they imply that a significant number of incubatees do not concur that the incubators in which they are housed are fulfilling their purpose and essentially meeting their personal business support needs.

In an endeavour to answer the primary research problem of this paper (i.e., investigating the impact of public business incubators in the Northern Cape Province of South Africa on the performance of the incubatees) the author first asked the 17 business incubatees during the focus group interviews to identify the role of the business incubator in terms of their business performance. This enquiry was followed by additional questions to aid the study of the research problem. The business incubatees responded by stating the support services

currently offered to them by the four Northern Cape public business incubators in which they are incubated. These support services are delineated in Table 3.

Table 3: Support services offered by Northern Cape public business incubators according to the business incubatees

Business Incubator	Support services offered
Business Incubator 1	• Office space from which to operate, which is offered at a fee below market rate. This service assists with minimising operational costs and allows for finances to be directed towards other important areas of the business that make a direct contribution to improved performance.
Business Incubator 2	• Access to business resources. • Credibility associated with operating in a licensed building. • Security • Ease of facilitating international business because of the incubator's good reputation in the industry.
Business Incubator 3	• Administration and business compliance. • Technological resources. • Access to coaching. • Networking opportunities. • Access to markets.
Business Incubator 4	• Access to office space at a subsidised rental.

In addition to asking the incubatees to highlight the type of assistance and support services received from their respective business incubators, the author further inquired what impact the business incubator had on their business performance using sales, asset and employment growth as measures, as referred to earlier in the paper. In the focus group interviews held with the business incubatees, the author clarified that sales growth refers to the increase in the number of activities clearly established to help influence customer purchase decisions of a specific product or service. The incubatees were asked to measure the incubator's impact on their sales growth using scales ranging from "Less than 0% (Decreased), 0-20% 21-40%, 41-60%, 61-80% and 81%" or more over a period of 12 months. The findings indicate that a significant 88%(15 out of 17) of the participating business incubatees achieved sales growth ranging from 61-80%, while only 12% (2 out of 17) had less than 0% sales growth impact. This fact shows that a noteworthy number of the business incubatees who participated in this paper are achieving sales growth as a result of the incubator's interventions. An increase in sales is recognised by scholars (Rungani & Potgieter, 2018) as one of the ways to measure incubatee performance and success, alongside profitability, employee growth and period of operation.

With respect to asset growth, the author explained to the participating incubatees that asset growth is regarded as the appreciation in the resources that are controlled by a business from which there is an expectation of future economic benefit (Clark & Brown, 2013). The incubatees rated their asset growth impact based on the incubator's assistance, and the findings showed that 94% (16 out of 17) of the participating business incubatees attained some form of asset growth impact, ranging from 1-80%. In contrast, only 6% (1 out of 17) experienced a decrease. The author of this paper regards these findings as positive. This confidence is reiterated by the Resource-Based Theory, which states that business resources such as financial assets, manufacturing equipment, technological knowledge, management skills, brand name and marketing know-how play an important role in contributing to the performance and growth of businesses (Davis & Cobb, 2010).

Finally, with respect to the employment growth impact on the incubatees' business, a total of 23% of business incubatees did not have any growth pertaining to employment in their businesses. However, 0-20 percent employment growth was achieved by 53 percent (9 out of 17) of the incubatees, 21-40 percent was achieved by 6 percent (1 out of 17), 41-60 percent by 12 percent (2 out of 17) and 81 percent or more of employment growth was achieved by 6 percent (1 out of 17) of business incubatees. Although these statistics leave much to be desired, the author of this paper still welcomes them because they speak of the incubatees being supported sufficiently well to make their intended contribution towards employment creation (Czarniewski, 2016; Lukeš *et al.*, 2019).

In the continued attempt to investigate the public business incubators' impact on the incubatees' performance, the author sought the views of the incubatees regarding what their respective business incubators could perform differently to assist their development by posing the question: "What could the incubator do to improve its business support services? Please answer this [question] in detail." The responses from the incubatees across the four public business incubators were recorded thematically according to the following emerging themes, namely: incompetent and incapacitated business developers, misalignment between the incubator's service offering and the incubatees' business needs, and inappropriate business model. These themes are elaborated below.

4.1 Theme 1: Incompetent and incapacitated business developers

Research (Lose & Tengeh, 2015) has highlighted that one of the struggles facing public business incubators is the difficulty of attracting skilled and experienced professionals to satisfactorily perform the business functions of the incubators. The author of this paper is of the view that this struggle is prolonged by the fact that the employees who manage the

incubators and support the incubatees are often neither knowledgeable nor passionate about their work – a situation that jeopardises the quality of their support to incubatees.

The incubatees interviewed strongly expressed the need for skilled, experienced and competent incubator employees. The incubatees' sentiments are recorded below:

1. Business incubatee 1's response from business incubator 2:

"First of all, they need to capacitate their business developers with technical skills and business skills. Secondly, they need to improve their communication. Thirdly, they must have other business operational structures like accountants, lawyers and so on. Fourthly, access to markets..."

2. Business incubatee 1's response from business incubator 3:

"It boils down to a lack of will from the employees. There is a different sense of urgency from us as incubatees because we are not getting salaries, but the business developers are, and so we are not finding [incubatees and business developers] each other."

3. Business incubatee 3's response from business incubator 4:

"The incubator should better serve its incubatees by having enterprise developers that are well capacitated to help, design enterprise development frameworks and growth strategies that will be monitored and evaluated."

4.2 Theme 2: Misalignment between the incubator's service offering and the incubatees' business needs

Van der Spuy (2019) highlighted the importance of business incubators understanding the incubatees' needs and aligning their service offering to fulfil these needs. The author of this paper opines that, where necessary, incubation programmes need to be altered and tailored to serve the specific needs of the incubatees, to ensure incubatees are adequately supported to achieve business success. The incubatees' expressions below emphasised the experienced current misalignment of services offered by the incubators in which they are housed.

1. Business incubatee 2's response from business incubator 3:

"The business incubator needs to support incubatees based on their specific needs."

2. Business incubatee 3's response from business incubator 3:

"Identify the incubatees' specific needs and endeavour to meet those."

4.3 Theme 3: Inappropriate business model

According to the Global Forum (2013), no particular business model exists for incubators because each one has different goals. Many incubators do not have business models, and those that do do not necessarily implement them successfully. The author of this paper believes that this lack of specific business incubation models has perpetuated some of the challenges faced by business incubators. Business incubators could benefit immensely from adopting best practice models (Van der Spuy, 2019) aligned with their goals and incubatees' needs. Incubatees interviewed in this study expressed their views of their respective incubators' inappropriate business models below.

1. Business incubatee 1's response from business incubator 2:

"In addition, if I look at the whole incubation model in general, I think if you fix one problem it will cascade into fixing other problems...the people that are there are not passionate about what they do and because that passion is missing, the emphasis on assisting SMMEs does not become a priority to them... the incubator has to look at getting the right people into the right jobs so that they can give the right assistance and all of that is more or less linked to the idea of passion."

2. Business incubatee 2's response from business incubator 4:

"I also think that the incubator should revisit its entire model because the concept is a good one, but the implementation is wrong and does not serve the incubatees."

Based on the incubatees' responses, it became evident that there is limited capacity in the business incubators and that there is a disjuncture between the actual needs of the business incubatees and the support provided by the business incubators. In the view of the author, this situation once again is highly alarming because it paints a picture that the very vehicle (i.e., the business incubator) mandated to assist the incubated SMMEs is failing to do so, primarily because it does not understand the incubatees' actual business needs. Instead, services are being offered to business incubatees based simply on availability and the seemingly limited capacity of the business incubators.

5. MANAGERIAL IMPLICATIONS

5.1 Strengths

The primary strength of this paper is the fact that the findings regarding the impact of the public business incubators on the performance of their incubatees are sourced directly from the incubatees housed in the respective business incubators. The author of this paper contends

that personalised experiences of incubation are better studied through the thick descriptions of incubatees and incubators' encounters, activities and reflections in contexts, drawing on a qualitative approach, hence the preference for the employment of this approach in the paper. As such, the author used a qualitative approach to gain a deeper understanding of the factors that contribute to successful incubation performance.

5.2 Implications or recommendations

After conducting the necessary research on the key concept of public business incubators and their impact on the performance of SMMEs, for this paper, the author has made the following recommendations:

5.2.1 Recommendation for Theme 1: Hiring competent business incubator staff, i.e., business developers and retired business/industry experts as mentors

Business incubators should have an approved organogram, accompanied by clear job descriptions for each position, and only competent individuals with sufficient business acumen and relevant industry experience should be hired. This practice will contribute immensely towards providing the incubatees with the best training and specialised business support services, especially from business developers, also known as business development officers. Incubators should socialise their employees into understanding the importance of training and supporting incubatees adequately and successfully so that the incubatees are able to perform well and contribute to the economy.

Experience is a key life aspect for which there is no replacement, and this is also the case in the world of business. Numerous business and industry experts retire from their respective positions every year; however, it is important that their retirement does not result in the exclusion of their valuable knowledge, experience and networks. As such, business incubators should build relationships with these retired experts who have proven to have had long, successful track records from running businesses and operating in specific industries for, ideally, 10 years and longer. These retired experts should then be recruited to voluntarily serve on the business incubators' boards as advisors or even on the board of directors of the incubatees' businesses.

Alternatively, the retired experts could be asked to serve as business coaches or mentors in the business incubators or even as guest lecturers for masterclasses held by the business incubators. This type of structure will allow retired experts to share their practical knowledge, experience, skills and industry-specific tips and trades. Additionally, the incubatees will be

able to have access to fruitful networks, accountable partners, access to markets and relevant supplier information.

5.2.2 Recommendation for Theme 2: Understanding and servicing incubatees' specific business needs

One of the concerning key findings of this study is the blatant misalignment between the aims of the business incubators and the specific incubatees' needs. According to Msimango-Galawe and Hlatshwayo (2021), incubatees join business incubators seeking assistance with access to markets and finance, while business incubators primarily offer physical infrastructure such as office space and other minor support services. In Table 3, the incubatees mentioned the types of support services they currently receive from their incubators, and they also indicated the ones that they consider the incubators need to improve or introduce in order to have a better impact on their business performance. These services, highlighted by the incubatees, mainly included assistance from competent incubator staff with business acumen and relevant experience, access to markets and industry-specific mentorship to help them navigate the business sector waters smoothly.

5.2.3 Recommendation for Theme 3: Appropriate business incubation model

The author of this paper is of the view that the business incubation model has to speak to the needs of the incubatees as well as serve the incubators' purpose. Based on the primary data collected, it is clear that all four business incubators have business models; however, these models are flawed. The flaw lies in the fact that the models are not effectively developed to meet the incubators' aims and incubatees' needs, and the implementation of the models is inconsistent. As such, there is a need to revise the models to serve the unique aims of each public business incubator so that they are able to satisfy their funders. Moreover, the models should be tailored to meet the specific needs of the incubatees. These goals can be achieved through ensuring that theme 1 of competent staff and theme 2 of understanding incubatee needs, as stated above, are incorporated into the development and implementation of an appropriate business incubation model.

6. LIMITATIONS AND FUTURE RESEARCH

There is still a dearth of literature concerning the SMME landscape of the Northern Cape Province, together with its business incubation environment, and this gap causes a limitation for this paper. Moreover, the business incubation landscape of the Northern Cape Province is very small, even for public business incubators. This fact places a limit on the scope of the paper with regard to population and sample size. The paper intentionally focused on the four

public business incubators in the Northern Cape Province. This focus can be regarded as rather limiting because, compared to other provinces and countries, the number of public business incubators is very small – a fact that can hinder the type of data that researchers are able to gather.

As such, the author of this paper is of the view that further studies focusing on these key aspects in the province should be conducted. Research can also be extended to private business incubators, business incubation programmes or any SMME support initiatives and not only public business incubators.

7. CONCLUSION

SMMEs have great potential in terms of the contribution they can make towards their respective economies and societies. Coupled with this is the huge responsibility to materialise this potential so that their impact can be seen. Although SMMEs have struggled significantly in recent years, largely due to the negative impact of COVID-19's effects, SMMEs have previously proven that they are an asset to the economy. With the right support, they can once again match their former glory. However, for this to happen, it is key that SMMEs are adequately supported and developed. Hence, initiatives such as business incubators that carry a paramount obligation to assist SMMEs (who then become incubatees) cannot deviate from their mandates.

Nevertheless, the findings from this paper, together with those from the reviewed literature (Lose, 2016; Van der Spuy, 2019), have highlighted the shortcomings of business incubators in general, but specifically in the Northern Cape Province, in fulfilling their purposes of supporting new and early-stage entrepreneurs towards independence and improved performance. This fact is evident from the findings outlined in this paper, detailing the responses of the 17 business incubatees across the four public Northern Cape Province business incubators, which emphasised the minimal impact of the incubators upon their business performance. The primary reasons for this lack of business growth, as highlighted by the incubatees, are the incompetent and incapacitated business developers, the misalignment between the actual business needs of the incubatees and the support business services offered by the business incubators and the business incubation models.

While the author concludes that the concept of business incubation is a noble one, it is often implemented incorrectly, as is the case especially in the context of the Northern Cape Province. As such, there is an urgent need for business incubators to be intentional about supporting incubatees in a manner that will develop them sufficiently so their business

performance can be enhanced, and they can work towards making a sustainable contribution to the economy and society as proposed.

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REFERENCES

- Amezcuca, A., & McKelvie, A. 2016. Incubation for all? Business incubation and gender differences in new firm performance (Working Paper).
- Ayatse, F.A., Kwahar, N. & Iyortsuun, A.S. 2017. Business incubation process and firm performance: an empirical review. *Journal of Global Entrepreneurship Research*. 7:2. [<http://doi.org/10.1186/s40497-016-0059-6>].
- Babalola, S.S. & Agbenyegah, A.T. 2016. Rural entrepreneurship: An insight into impeding factors influencing micro-entrepreneurial growth. *Journal of Applied Business Research*, 32(6):1751–1760. [<http://dx.doi.org/10.19030/jabr.v32i6.9821>].
- Bakkali, C., Messeghem, K. & Sammut, S. 2014. Toward a typology of incubators based on HRM. *Journal of Innovation and Entrepreneurship*, 3(3):1–10. [<http://dx.doi.org/10.1186/2192-5372-3-3>].
- Bayhan, A. 2016. Business incubator process: a policy tool for entrepreneurship and enterprise development in a knowledge-based economy. Competitiveness Support Fund, USAID Government. [Internet: https://pdf.usaid.gov/pdf_docs/Pnadt103.pdf downloaded on 14 July 2022].
- Bosma, N. & Kelley, D. 2019. Global Entrepreneurship Monitor. [internet: <https://www.gemconsortium.org/report/gem-2018-2019-global-report>, downloaded 25 January 2023].
- Bowmaker-Falconer, A. & Meyer, N. 2022. Global Entrepreneurship Monitor South Africa 2021-2022 Report. [Internet: <https://www.gemconsortium.org/report/gem-south-africa-2021-2022-report>, downloaded on 20 January 2023].
- 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):357-358.
- Campbell, C., Kendrick, R.C. & Samuelson, D.S. 1985. Stalking the latent entrepreneur: Business incubators and economic development. *Economic Development Review*, 2(2):43–49.

-
- Clark, P. & Brown, J. 2013. Conceptual Framework: Asset and liability definitions, recognition and derecognition. London: IFRS.
- Cooper, D.R. & Schindler, P.S. 2014. Business Research Methods. 12th edition. New York: McGraw-Hill International Edition.
- Crampton, N. 2019. The definite list of South African Incubators for start-ups. [Internet: <https://www.natfingroup.co.za/2018/09/16/the-definitive-list-of-south-african-business-incubators-for-start-ups/> downloaded on 5 September 2023].
- Czarniewski, S. 2016. Small and medium-sized enterprises in the context of innovation and entrepreneurship in the economy. *Polish Journal of Management Studies*, 13(1):30-39. [<http://dx.doi.org/10.17512/pjms.2016.13.1.03>].
- Davis, G., & Cobb, J. 2010. Resource Dependence Theory: Past and Future. *Research in Sociology of Organizations*, 28:21-42. [[https://doi.org/10.1108/S0733-558X\(2010\)0000028006](https://doi.org/10.1108/S0733-558X(2010)0000028006)].
- Dludlu, J. 2021. Policy madness: SA's industrialisation policies have slowed economic growth. *Daily Maverick*. [Internet: <https://www.dailymaverick.co.za/opinionista/2021-04-22-policy-madness-sas-industrialisation-policies-have-slowed-economic-growth/> downloaded on 5 September 2023].
- Elger, D. 2007. Theory of performance. In S.W. Beyerlein, C. Holmes, & D. K. Apple (Eds.), *Faculty guidebook: A comprehensive tool for improving faculty performance*. (4th ed.) (pp.19-22). Lisle, IL: Pacific Crest.
- Escobar, D., De-Pablos-Heredero, C., MontesBotella, J.L., Blanco Jiménez, F.J. & García, A. 2022. Business Incubators and Survival of Startups in Times of COVID-19. *Sustainability*, 14:2139.
- Global Forum. 2013. 5th Global Forum on Innovation & Technology Entrepreneurship. [Internet: <https://globalforum2013.co.za/programme.php> downloaded on 15 August 2023].
- Global National Action Plans on Business and Human Rights. 2019. Small medium-sized enterprises. [Internet: <https://globalnaps.org/issue/small-medium-enterprises-smes/> downloaded on 16 May 2021].
- Hewitt, L.M.M. & Janse van Rensburg, L.J. 2020. The role of business incubators in creating sustainable small and medium enterprises. *Southern African Journal of Entrepreneurship and Small Business Management*, 12(1):a295. [<https://doi.org/10.4102/sajesbm.v12i1.295>].
- Hou, B., Hong, J. & Yang, Y. 2020. Geographical aggregation and incubator graduation performance: the role of incubator assistance. *European Journal of Innovation Management*. [<http://doi.org/10.1108/ejim-07-2020-0280>].
- Hutabarat, Z. & Pandin, M. 2014. Absorptive Capacity of Business Incubator for SMEs' Rural Community Located in Indonesia's Village. *Procedia Social and Behavioral Sciences*, 115:373–377. [<http://dx.doi.org/10.1016/j.sbspro.2014.02.443>].
- infoDev. 2010. ICT in non-formal education. In Information and communication technology for education in India and South Asia. [Internet: <http://www.infodev.org/en/Document.937.pdf>, downloaded on 12 March 2023].
- Lose, T. 2021. Business incubators in South Africa: A resource-based view perspective. *Academy of Entrepreneurship Journal*, 27(1).
- 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. Cape Peninsula University of Technology. (Master's dissertation).
- Lose, T. & Tenengeh, R. 2015. The Sustainability and Challenges of Business Incubators in the Western Cape Province, South Africa. *Sustainability*, 7(10):14344-14357. [<http://doi.org/10.3390/su71014344>].
- Lukeš, M., Longo, M.C. & Zouhar, J. 2019. Do business incubators really enhance entrepreneurial growth? Evidence from a large sample of innovative Italian startups. *Technovation*, 82-83:25-34. [<https://doi.org/10.1016/j.technovation.2018.07.008>].
-

- Masutha, M. & Rogerson, C.M. 2014. Small business incubators: An emerging phenomenon in South Africa's SMME economy. *Urbani Izziv* 25:S47–S63. [<http://dx.doi.org/10.5379/urbani-izziv-en-2014-25-supplement-004>].
- Motlhaudi, G.G. 2024. A shift from surviving to thriving: evidence from SMME incubates on assistance needed from public business incubators. Social Sciences International Research Conference (SSIRC). Mauritius, 28-30 October 2024. North West University.
- Mrkajic, B. 2017. Business incubation models and institutionally void environments. *Technovation*, 68:44-55. [<http://dx.doi.org/10.1016/j.technovation.2017.09.001>].
- Msimango-Galawe, J. & Hlatshwayo, E.N. 2021. South African business incubators and reducing the SME failure rate – A literature review. *Problems and Perspectives in Management*, 19(2):194-205. [[https://doi.org/10.21511/ppm.19\(2\).2021.16](https://doi.org/10.21511/ppm.19(2).2021.16)].
- Muriithi, S.M., Ndegwa, C. & Juma, J. 2018. Business Incubators – The Missing Link to Small Business Survival. *The International Journal of Humanities & Social Studies*, 10(10):201-209.
- Nicholls-Nixon, C.L. & Valliere, D. 2021. Entrepreneurial logic and fit: a cross-level model of incubator performance. *International Journal of Entrepreneurial Behavior & Research*, 27(7):1696–1723. [<http://dx.doi.org/10.1108/IJEBR-11-2020-0801>].
- Ncube, T.R. & Zondo, R.W.D. 2022. Entrepreneurial Attributes responsible for Small and Medium Enterprise Growth in South Africa: Small and Medium Enterprise Owners' perspectives. *International Journal of Special Education*, 37(3):8223-8233.
- Ormrod, J. E. 2012. Human learning (6th ed.). Upper Saddle River, NJ: Pearson Education.
- Oxford, C. 2014. Trouble in paradise: Why business incubators don't work. *Forbes*. [Internet: <http://onforb.es/V4JTmP>, downloaded on 25 October 2023].
- Ramar, N., Muthukumar, C.K., Manida, M.M., Nandhini, M.B. & Parkavi, M.C. 2020. Role Of Business Incubation Centres In Promoting Entrepreneurship With Special Reference To Tamilnadu. *International Journal of Scientific & Technology Research*. 9.4344-4346.
- Rathore, R.S. & Agrawal, R. 2021. Performance indicators for technology business incubators in Indian higher educational institutes. *Management Research Review*, 44(11):1499–1520. [<http://dx.doi.org/10.1108/MRR-12-2019-0515>].
- Romein, A. & Trip, J.J. 2017. The role of business incubators in the development of sustainable clusters of cultural and creative industries. *International Journal of Sustainable Development Planning*, 12(3):435–445. [<http://dx.doi.org/10.2495/SDP-V12-N3-435-445>].
- Rungani, E.C. & Potgieter, M., 2018, The impact of financial support on the success of small, medium and micro enterprises in the Eastern Cape province, *Acta Commerci* 18(1), a591. [<https://doi.org/10.4102/ac.v18i1.591>].
- Simango, S.S. 2022. Examining the impact of business incubation on the growth of tourism SMMEs: The case of Pilanesberg Business Incubator Programme. Cape Town: University of Cape Town.
- Small Enterprises Development Agency (SEDA). 2018. SMME Quarterly Update 1st Quarter 2018. [Internet: <http://www.seda.org.za/Publications/Publications/SMME%20Quarterly%202018-Q1.pdf>, downloaded on 17 May 2021].
- Sohail, K., Belitski, M. & Christiansen, L.C. 2023. Developing business incubation process frameworks: A systematic literature review. *Journal of Business Research*, 162,113902. [<https://doi.org/10.1016/j.jbusres.2023.113902>].
- Stats SA. 2022. Quarterly Labour Force Survey Quarter 1:2022. [Internet: <https://www.statssa.gov.za/publications/P0211/P02111stQuarter2022.pdf>, downloaded on 26 July 2022].

-
- Stats SA. 2024. Quarterly Labour Force Survey Quarter 4: 2024. [Internet: <https://www.statssa.gov.za/publications/P0211/Presentation%20QLFS%20Q4%202024.pdf>, downloaded on 20 February 2025].
- Stephens, S. & Lyons, R. 2022. The changing activities of business incubation clients: an Irish case study. *Science and Technology Policy Management*, 13" 1-15. [<https://doi.org/10.1108/JSTPM-01-2021-0016>].
- Tembe, F. 2018. Business incubators and SMMEs' performance in South Africa. Johannesburg: University of the Witwatersrand. (Unpublished Doctoral Dissertation).
- 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.
- Universal Business Incubators (UBI) Global. 2023. The UBI Global World Rankings of Business Incubators and Accelerators 2023. [Internet: <https://www.ubi-global.com/incubator-accelerator-rankings>, downloaded on 25 August 2023].
- Van der Spuy, S.J.H. 2019. The state of business incubation in the Northern Cape: A service spectrum perspective. *Southern African Journal of Entrepreneurship and Small Business Management* 11(1):a271. [<http://dx.doi.org/10.4102/sajesbm.v11i1.271>].
- Weele, M.V., Rijnsoever, F.J.V. & Nauta, F. 2017. You can't always get what you want: How entrepreneurs' perceived resource needs affect the incubator's assertiveness. *Technovation*, 59:18–33.
- Zhou, H. 2022. The influence of key risk drivers on the performance of SMMEs in the manufacturing sector in KwaZulu-Natal. Durban: Durban University of Technology.
- Zhou, H. & Gumbo, V. 2021. Rural-urban comparison of manufacturing SMMEs' performance in KwaZulu-Natal province, South Africa. *African Journal of Development Studies*, 11(1):7-31. [<https://doi.org/https://doi.org/10.31920/2634-3649/2021/v11n1a1>].