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SMEs and Sustainable Entrepreneurship in South Africa: Impact Analysis of Contextual Factors in the Services Sector

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Abstract: Sustainable entrepreneurship (SE) is becoming increasingly important for every society. However, the dynamics of sustainable entrepreneurship is not much known or not in existence amongst SMEs in South Africa. Previous studies have largely ignored the dynamics of contextual factors, particularly, as it affects SMEs sustainability. This article x-rays the influence of these factors on sustainable entrepreneurship in the services sector for SMEs in South Africa. Additionally, it identifies the correlation between the contextual factors and sustainable entrepreneurship. The trustworthiness test of the study instrument was done, using test re-test reliability method, which yielded an R-value of 0.70 and internal consistency of 0.875 as measured by the Cronbach Alpha index. The Binary Logistic technique and Spearman Rank Correlation were used in the analysis. Results indicate that the characteristics of an SME, Government Support, Management Skill, Good employee-employer relationship, and Start-up Capital are correlated to sustainable entrepreneurship. However, the logistic regression only showed three of the factors as having a significant impact on the increase or otherwise of sustainable entrepreneurship amongst the SMEs. Our findings suggest that entrepreneurs and business partners must maintain a posture that continuously pursues novel ideas as per the features of an SME; maintain an opportunity-seeking perspective with employees; and control risks associated with high-risk ventures that bring financial achievements. It has therefore, become imperative for an overhaul of interventions that will enhance the SME sector as an important vehicle for economic growth, and equity. The South African Government and other developing countries needs to commit themselves to creating an environment that bolsters sustainability for entrepreneurship to thrive.

Keywords: Business Success; Entrepreneurship; South Africa

JEL Classification: A14; M20; M21; M38; O30; O38

1. Introduction

SMEs constitute the majority of enterprises in developing countries and are considered as one of the most important factors in economic and social growth, employment, local development (Shafiei & Jafarian, 2012), and poverty reduction (Ayyagari et al., 2007). Considering the growing importance of SMEs, many researchers have focused on the issues related to its development and it has therefore,

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become the main topic for a number of analyses. Many countries at different stages of development have recognised the importance of entrepreneurship in the economy. Entrepreneurship has been identified as a necessary tool that enhances job creation, alleviates poverty, and facilitates national economic growth. It is noted that countries with higher entrepreneurial activities have absorbed substantial amounts of human and material resources, and in turn experienced growth (Moufawad, 2012). Entrepreneurship, though a critical variable in the attainment of economic growth, is often defined in terms of innovation and new venture creation. People who set up new ventures or social organisations are called entrepreneurs. They are change agents with distinctive traits and skills, who stimulate economic activities by doing things uniquely (Caree & Thurik, 2005). Sustainability factors are sometimes referred to as success factors. They are crucial elements required for the growth and continuity of business ventures (Ketelhöhn, 1998; Walker & Brown, 2004). Thus, sustainability factors refer to the availability of all good things needed for growth and development while constraints and challenges are the absence or short supply of all good things needed for growth and development. Sustainability factors are, therefore, important throughout the life of a business but some factors could be more critical at certain phases than others. For instance, entrepreneurial personality traits ranked high for a business start-up but they are not important in predicting long-term business success (Frank et al., 2007).

Sustainable entrepreneurship acts at the interface of politics, business, and civil society to mobilize new resources, aimed at a structural change towards socially, and environmentally sound economic activities. With its innovative business models, sustainable entrepreneurship develops new markets, generate new sources of income – particularly for socially disadvantaged population groups – and contribute to a sustainable approach to the economy (Green Economy). As producers of innovative products and services, sustainable entrepreneurship tap new low-income buyers at the "Base of the Pyramid," especially in emerging and developing countries. Sustainable entrepreneurship is therefore, connected to the business model concept, which leads to the conclusion that business models matter for sustainable entrepreneurship because they can increase the likelihood of sustainable value creation with and for a broad range of stakeholders. Thus, sustainable entrepreneurship has emerged as a new way of rectifying environmental problems through entrepreneurial activities. However, due to the lack of a universally accepted definition of sustainability, measuring sustainable entrepreneurial practice remains a challenging task. Schaltegger and Wagner (2011) characterise sustainable entrepreneurship as contributing "to solving societal and environmental problems through the realization of a successful business" and promoting "sustainable development through entrepreneurial corporate activities. Sustainable entrepreneurship is, in essence, the realization of sustainability innovations aimed at the mass market and providing benefit to the larger part of society." Schaltegger and Wagner (2011) states that "by realizing such (radical) sustainability innovations sustainable entrepreneurs often address the unmet demand of a larger group of stakeholders." Thus, Schaltegger and Wagner (2011) see sustainable entrepreneurship as a progression of ecopreneurship, social entrepreneurship, and institutional entrepreneurship, each of which shows a different emphasis on the solution of ecological or social issues, the importance of financial success, and the need to influence societal norms. Theoretically, speaking, sustainable entrepreneurs bring forth sustainability innovations that convert market imperfections into business opportunities, replace unsustainable forms of production and consumption, and create value for a broad range of stakeholders (Hockerts & Wüstenhagen, 2010; Lüdeke-Freund et al., 2016; Schaltegger & Wagner, 2011).

Sustainability-oriented entrepreneurship can still be classified as entrepreneurial activity (Austin et al., 2006) and thus shares many characteristics of the entrepreneurship field. One problem in entrepreneurship research is that it has also been too focused on internal factors such as character traits and motivations of entrepreneurs and neglected the influence of contextual factors (Carlsson et al., 2013; Salimath & Cullen, 2010). Nonetheless, entrepreneurs do not operate in vacuums (Gartner, 1985). The environment or the context entrepreneurs operate in influence the entrepreneurial process from opportunity recognition to venture creation (Carlsson et al., 2013; Gartner, 1985). This context can include political and legal, economic, technological, environmental, social, and cultural factors. The review of the current literature indicates that the volume of theoretical writings on sustainable entrepreneurship has increased considerably over the last few decades (Cohen & Winn, 2009). According to Kuckertz and Wagner (2010), the main literature on sustainable entrepreneurship has often fixated on the environmental aspects of entrepreneurship only (Walley & Taylor, 2002), while other research in this area has mainly examined the social dimension of SE. Further, the effect of socioeconomic and demographic dimensions on SE has all been measured to varying degrees (Mazzarol et al., 1999). Consequently, Sinha (1996), Mazzarol et al. (1999), and Kristiansen (2003) and Kristiansen et al. (2003) identified some demographic variables that could considerably affect the success of entrepreneurial performance. The contextual factors in our model encompass SME characteristics, external environment, technical expertise, government support, education status of the owner, start-up capital, and age of the business owner. The issue of SE has become contemporaneous that understanding the contextual factors that determine the trend of SE has become imperative. This article tries to answer the following questions: to what extent does the *Contextual Dynamics influence Sustainable Entrepreneurship and what is the correlation between the Contextual Dynamics.*

1.1. Study Context: SMEs and the Services Sector in South Africa

Bhorat et al. (2016) indicate, that employment patterns in services reveal a segmentation that is characterised by high-productivity, high-wage services, low-productivity, low-wage services, and government services. For decades, the manufacturing and agricultural sectors were at the forefront of South Africa's services sector growth; however, with technology on the rise along with improved access to education and training programs for opportunistic natives, things have slightly changed (Bhorat et al., 2016). The advanced level of financial, retail, energy, communication, mining, tourism, transportation, health, and municipal services in the country have now undoubtedly become the very pillars that transformed South Africa into a global competitor (World Bank, 2018). The services sector in South Africa is large and continues to grow considerably (SEDA, 2019). Since 1994, the post-apartheid regime caused the services sector to play a significant role in the strategic expansion of South Africa's economy (Mosala et al., 2017). With local unemployment on the rise, one can argue that the services sector in South Africa might have trouble in the near future, but with the right approach, this exact difficulty can become the turning point in which opportunity lurks to further expand the economy (Statistics South Africa, 2018). Thus, ongoing and structural transformation in the services sector plays a key part, and this is where South Africa will continue to transcend past other African countries in terms of transformative SME and economic development (Chimucheka, 2013). Various studies have indicated that most newcomers in South Africa's SME sector now choose to focus more specifically on providing a combination of services, rather than a singular one. This is

believed to have become a key aspect encouraging export growth, direct foreign investment, and job-creation, which primarily drives GDP as a whole in the country (Mhaka & Jeke, 2018). Nonetheless, through innovation, self-discipline, and a transformed policy approach, several local entrepreneurs are now developing advanced organizational platforms that encourage value-added services along with taking a "green" approach towards nature and surrounding communities consistently (Viviers, 2009).

1.2. SMEs and Sustainable Entrepreneurship

Sustainability in entrepreneurship has been an aspect widely acknowledged by SMEs operating in a variety of industries and business sectors around the world (Shepherd & Patzelt, 2011). Researchers Dean and McMullen (2007, p. 57) define sustainable entrepreneurship as "the process of discovering, evaluating, and exploiting economic opportunities that are present in market failures which detract from sustainability, including those that are environmentally relevant." In general, SMEs represent the majority of businesses in several developing countries such as South Africa, Ghana, and Nigeria; therefore, it is evident that it plays a significant role in ensuring consistency and continuous economic development all round (Dalberg, 2011). Although sustainability in entrepreneurship might appear to be a positive aspect, it can also hold several disadvantages if not managed properly (Chongoo et al., 2016). Chongoo et al. (2016) posits that in Africa, "SMEs have caused environmental and social challenges such as environmental degradation, exhaustion of natural resources, poverty, disease, poor infrastructure, unemployment, and emission of dangerous gases." Thus, it remains critical that SMEs do not get fooled by overcompensating cultural and societal values at the expense of chasing profit-maximization in this regard (Chongoo et al., 2016). Tantau and Fratila (2018) support this fact and connect sustainable entrepreneurs operating SMEs to "the process of identifying, evaluating, and seizing entrepreneurial opportunities that minimize a venture's impact on the natural environment and therefore create benefits for society as whole and local communities." In South Africa, aspects such as a lack of access to adequate finance, administration, information, and rising crime rates have caused severe difficulty for SMEs to successfully adopt sustainable programs (Cant & Wiid, 2013).

2. Conceptual Framework: Factors That Foster Sustainable Entrepreneurship

Contextual Factors

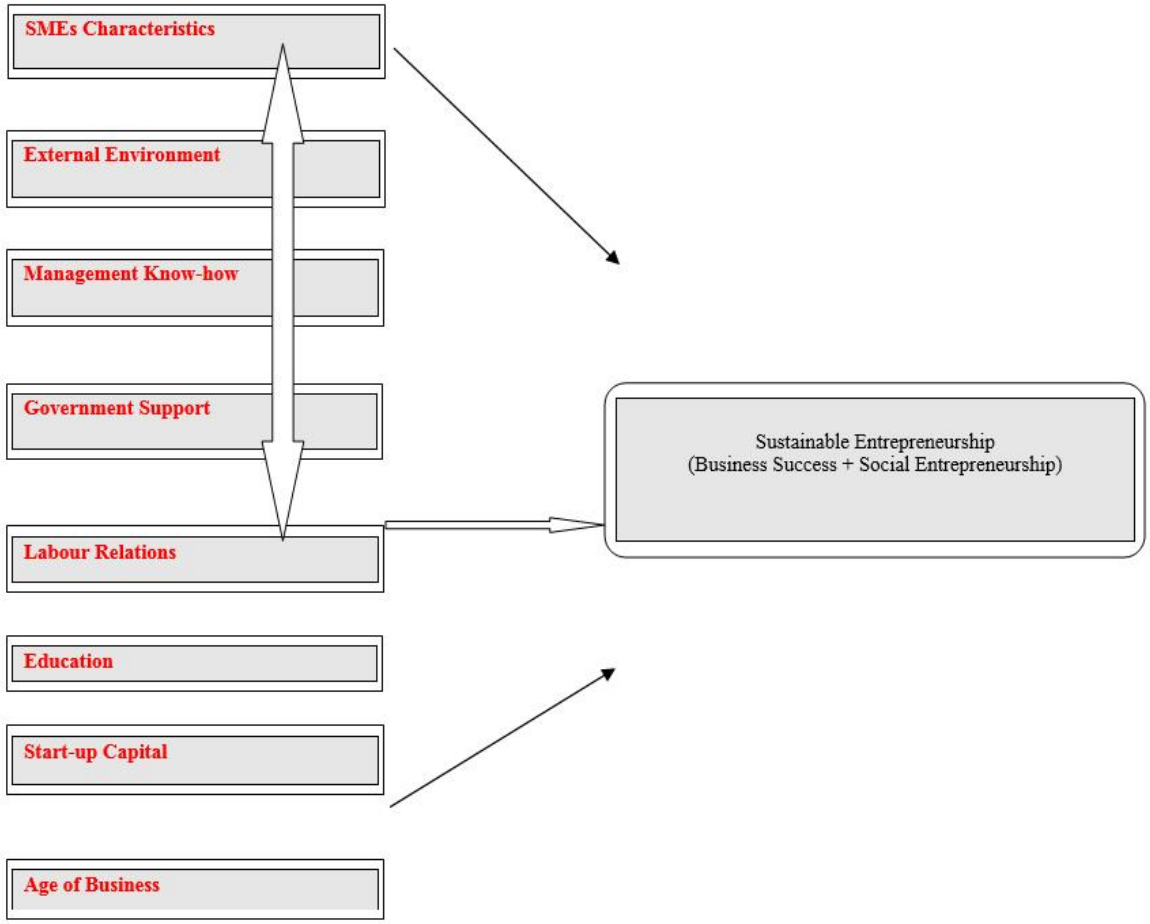

Figure 1. Conceptual Model for Logistic Analysis
Source: Author(s)

Entrepreneurship describes the process whereby an individual takes responsibility and makes judgemental decisions that affect the location, form, and use of goods, resources, or institutions (Hebert and Link, 1989). This definition incorporates the concept of agency and ownership structure in business activities. However, the distinguishing factor is the perception of economic opportunities and the introduction of new ideas into the market. Entrepreneurship is also seen as a personality trait that makes individuals behave in a particular way, different from others. On the other hand, an entrepreneur is defined as a creative person, a risk-taker, and an innovator, towards establishing a new business or reviving an existing business. Kao (1993) defines entrepreneurship as the process of doing something new and different for creating wealth and adding value to society. However, Bruyat and Julien (2001) reformulated these earlier definitions to reflect four aspects of entrepreneurship, namely: the individual, the object created (an organisation and/or innovation), the environment, and the process. To them, the entrepreneurial process could consist of two or more people coming together as a team without anyone being recognized as the leader.

SME Characteristics: In most developing countries, small and medium-sized businesses are being set up purely as a means of earning a livelihood. These include many trading and retail establishments while most developed countries compare SMEs to manufacturing services, while others adopt a broader definition and include retail as well. SMEs tend to be labour-intensive per se and can generate more jobs for every unit of investment, compared to their bigger counterparts. In South Africa, the characteristics of SMEs identified include small market, limited financing opportunities, lack of business and technical skills, high cost and shortage of raw materials, and inadequate transport and communication services (Mugobo & Ukpere, 2011). Conversely, Harvie et al. (2010) argued that the most important characteristics of SMEs are the behaviour and attitude of the entrepreneur because it is the characteristics needed by SMEs to upgrade their positions in production networks. While in Thailand, Chittithaworn et al. (2011) posit that SME characteristics include finance and resources, customer and market, and the external environment. According to them, these are the most influential success factors in any business. Chachar et al. (2013), reports that SME characteristics in India, include the level of education of the entrepreneur, entrepreneur age, management style, and family background. Demographic characteristics such as age and size of a particular business have also been identified as factors that determine the success of SMEs - especially in accessing finance (Zarook et al., 2013). Fatoki and Asah (2011) further identified geographical proximity to critical buyers and suppliers of produces that provide the opportunity for SMEs to easily identify and exploit growth opportunities in the market as overreaching characteristics of SMEs.

External Environment: Generally, both external and macroeconomic environments that are not under the control of the entrepreneur affect enterprises - this is often referred to as an institutional environment. Shirley (2008) explained that institutional settings comprise written and formalized constraints, for instance, norms, conventions, and self-imposed codes of conduct. SMEs, therefore, requires a positive and encouraging business environment for them to be able to articulate their tactics to survive as well as achieve good performance. In Malaysia, Khalid et al. (2009) found a direct relationship between environmental factors and SMEs' performance. According to them, the environment influences the decision taken by the owner-manager that affects the particular SME's operation. Freeman (2000) and Vaillant et al. (2005) stress that the institutional framework and good industry plays a significant role in determining entrepreneurial activities. They maintained that SME growth within any economy is predicated on the policies that favour the creation and stimulation of new enterprises. Verreynne and Meyer (2010) echoed the same sentiments that like bigger firms; SMEs utilize different approaches that will guide them through the industry life cycle. Therefore, understanding the regulatory environment and policy is imperative to the growth and survival of enterprises because small firms lack the monetary and managerial capabilities to deal with a complex procedure such as fiscal and monetary issues. The United Nations General Assembly (2014) affirmed the need for improved regulatory environments and policy initiatives. These initiatives will foster the development of SMEs and promote entrepreneurship through an emphasis on partnerships with the private sector. Hove and Tarisa (2013) elaborates that government strategies and policies for SMEs can positively improve both their growth and survival. Braidford and Stone (2016) add and state that enterprises' response to the external environment, which they have little or no control over, gives them the ability to survive and grow. Nonetheless, Holmes et al. (2013) explained that entrepreneurs and SME operations are always defined by political, regulatory, and economic factors that create rules and standards. Gonzalez (2014) concludes and stresses that to ensure a smooth operation of SMEs there

must be a good business environment, which is a key to achieving consistency in economic development.

Management Know-how: Over the years, entrepreneurial management know-how has proved to have a significant influence on the growth and success of businesses (Al-Tit et al., 2019). Al-Tit et al. (2019) name aspects such as the business owner's age, educational attainment, management skills, training, business size, and general business experience, as elements impacting the success of a business. From these factors, the attainment of good quality education, general age, and business experience is believed to result in higher managerial confidence and quickens the procedure of obtaining adequate business finance (Romano et al., 2001; Storey, 1994). Coleman and Cohn (2000) agrees with this fact and states that in general, entrepreneurial responsibility grows with both the level of education and on the job experience. Furthermore, Abdulsaleh and Worthington (2013) asserts that apart from human and social issues, the strategic use of internal finance by entrepreneurs can also hold several advantages. On the other hand, Ghodrati et al. (2014) state that the choice of obtaining external finance largely depends on the desired expansion trajectory of a particular entrepreneur or business. Thus, it highlights the importance of an entrepreneur having full control over business decision-making processes at all times (Barton, 1989; Philip, 2010). It is, therefore, evident that a successful business and the management thereof, have to possess several common factors that are considered critical for the growth and survival of the business (Dobbs and Hamilton, 2007; Lekhanya, 2016). In this context, effective managerial skills remain an utmost requirement to identify policies for the operations of the business and the consequent translation of such policies into policy action (McMahon, 1998). Gatukui and Katuse (2014) support this fact and indicate that a lack of financial expertise, a good marketing plan, entrepreneurial flair, practical planning, and management knowledge, can severely detriment firm growth.

Government Support: According to Kongolo (2010), SMEs operating in South Africa, contribute more than 56% of total GDP, account for about 91% of the formal entities and provide nearly 60% of all employment. Owawale and Garwe (2019) elaborate that the government has attempted to integrate various frameworks to support both financial and non-financial measures in the country. Owawale and Garwe (2019) further mentions that both the Small Enterprise Development Agency (SEDA), Khula Enterprise Finance, and the Apex Fund was constructed to serve as support measures to potentially extend micro-credit start-ups. Additionally, Agarwal et al. (2015) mention that a mere R508 000 000,00 (five hundred and eight-million South African Rand) were allocated to all three of these divisions as a mechanism to further boost the effectiveness thereof. Since the majority of SMEs in South Africa was established in the post-apartheid era (Kongolo, 2010), a Ministry of Small Business Development (MSBD) was established in 2014 in attempt to further multiply the growth of SMEs across South Africa and to boost the economy as a whole (Agarwal et al., 2015; Owawale & Garwe, 2019).

Labour Relations: Early studies on SMEs' growth in South Africa have shown that 35% of the country's GDP came from SMEs (Bantjes et al., 2006). Also, Liebenberg et al. (2007) have indicated that the sector is capable of employing about 55% of the labour force. This achievement is a result of progressive labour relations that were designed to protect the needs of both the employer and employees in the country. However, Liebenberg et al. (2007) argue that in many cases most labour laws operate to the advantage of workers at the expense of the employer. Thus, inappropriate labour

relations can act as a major constraint to sustainable entrepreneurship. Liebenberg (2007) observed that labour relations can pose a threat to the development of SMEs and, hence employment creation. Therefore, properly formulated labour relations that protect both stakeholders will create more sustainable enterprises and a stable economic environment (Baker, 2004). Accordingly, Solomon (2004) revealed that one of the common constraints in the growth of SE in SMEs is the prevailing labour regulation, which imposes additional costs on businesses. These are direct costs that manifested by increasing the input costs which in effect increases labour cost that prevent small businesses from being efficient and effective (Darroch & Clover, 2005). In small business management, the responsibility of labour relations is always undertaken by the owner-manager and this responsibility generally puts a great burden on the owner manager's performance. Bantjes et al. (2006), states that these responsibilities are significant enough to cause distractions on the ability of the owner-manager to focus on the factors that can lead to the success and growth of the enterprise in the long term.

Education: The influence of education on sustainable entrepreneurship has always been a subject of investigation. Numerous studies on this influence have recounted that very educated entrepreneurs tend to create firms that continued in operation for a long period (Bates, 1989). Peters et al. (2014) also established in their results, a positive association between the level of education of the SME owner and the growth of the business. In the same trajectory, scholars such as Soriano and Castrogiovanni (2012) showed that specific knowledge of the industry obtained before the SME ownership and broad knowledge of business acquired after ownership is positively related to both profitability and productivity. Guzman and Santos (2001) and Gibb and Scott (2007) believe that education brings to life a unique form of external motivation – the belief that there is always something to new and more to learn. Therefore, it is evident that firm growth holds a direct relationship with ongoing education (McPherson, 1995). Kangasharju (2000) supports this fact and states that with growth, whether personal or in business, comes improved decision-making ability. Thus, entrepreneurs can consciously make better industry choices based on rewards available to them (Lofstrom et al., 2014; Solomon et al., 2008). According to the human capital theory, investment in knowledge, skills, and abilities enhance the productive capacity of the individual (Njoroge & Gathungu, 2013). Entrepreneurship education and training, therefore, play a significant role in creating self-reliance on the individual, such as promoting new sets of attitudes and culture as well as a new cultural and productive environment for the attainment of future challenges (Arogundade, 2011). Additionally, Bawuah et al. (2006) and Isaacs et al. (2007) mention that advanced entrepreneurship education and training can make a significant contribution to job-creation and, ultimately, to poverty alleviation.

Start-up Capital: Myers (1984) posits that a firm's capital structure can be categorized as the combination of debt and equity the firm uses to finance its operations. Hutchinson and Xavier (2006) agree with this fact and mentions that capital structure decision-making is by far one of the most complex endeavours an entrepreneur will ever face. Hutchinson and Xavier (2006) add that various results have shown that a firm can, severely lower its cost of capital and improve shareholder's wealth through effective capital structure decision-making protocols. Besides, Gitman (2009) believes that the corporate finance theory of profit maximisation stipulates that the value of a firm is maximised when its cost of capital is minimised. However, it remains difficult to measure and determine the optimal combination of debt and equity financing of a company. Thus, the optimal capital structure is the combination of debt and equity at which the weighted average cost of capital of a firm is minimised

and shareholder's wealth is maximised (Gitman, 2009). The weighted average cost of capital is, therefore, the average cost of debt and equity funding weighted by the proportion of the firm's capital structure that the two components constitute (Gitman, 2009).

Age of Business: According to Stinchcombe (2000), both firm and individual experience comes with age. Additionally, Stinchombe (2000) posits that firm and business experience alone can lead to improved profit maximization. In a different study, however, Marshall (2004) found the opposite to be true, as he found that older firms and more individuals that are experienced adjust harder to a sudden change in a particular operating environment. Likewise, Evans (1987) and Huynh and Petrunia (2010) found that younger firms tend to grow much quicker, as enthusiasm is high and higher risks are more frequently taken compared to older firms. When it comes to financing, in general, older firms are known to more effectively weather tough economic times, whereas younger firms might find it harder to cope with (Chandler, 2009). Klapper (2010) believes that this exact motive is what often limits younger firms to obtain access to adequate finance, especially during the start-up phase. Bougheas et al. (2004) add that obtaining adequate finance in general, has become an extremely difficult task for businesses all-round. Ogubazhi and Muturi (2014) state that let alone the experience of owner/managers that have a significant impact on the success thereof, the particular industry in which a firm chooses to or currently operates in, often has the bigger say. Thus, aspects such as innovation, risk-taking proficiency, and the dynamicity of a particular firm or entrepreneur will continue to play a critical role – similar to age and organizational size, which impacts and ensures both the survival and growth of a firm simultaneously (Amyx, 2005; Nakano & Nguyen, 2011; Ogubazhi & Muturi, 2014).

3. Data and Methods

3.1. SE Construction and Study Sample

As methods of evaluating sustainable practice vary across different sectors of businesses and industries, there is truly a need to respond to the urgent call of developing a model that is suitable for measuring sustainable entrepreneurial practice. Based on the concepts and measuring models developed by previous researchers, this paper constructed a sustainable entrepreneurial practice based on financial and social factors and are embedded in our sustainable entrepreneurship index. The interviewees included owner-managers, entrepreneurs, and experts from active SMEs in the Mpumalanga Province, in South Africa. This paper uses the European Union's definition of SMEs (2003), which defines medium and small-sized enterprises as those with less than 250 and 50 persons, respectively. Thus, SMEs with less than 250 employees were chosen. Accordingly, questionnaires were distributed based on a stratified sample method.

3.2. Logistic Regression

A binomial logistic regression model was formulated to determine the relative impact of factors on sustainable entrepreneurship amongst SMEs. The dependent variable is a binary measure of SE, and the independent variables are potential contextual factors. Given the firm data on the characteristics of entrepreneurial ventures, the standard choice from the economist's toolkit is to run probit or logit regressions (Harada, 2003). This technique allows us to assess how well our set of predictor variables

predicts or explains the categorical dependent variable. It indicates the adequacy of the model (set of predictor variables) by assessing 'goodness of fit.' It further indicates the relative importance of each predictor variable or the interaction among the predictor variables. It provides a summary of the accuracy of the classification of cases based on the mode, allowing the calculation of the sensitivity and specificity of the model and the positive and negative predictive values. However, logistic regression does not make assumptions concerning the distribution of scores for the predictor variables; nonetheless, it is sensitive to high correlations among the predictor variables. Formally, the logistic model is:

$$\text{Log} = \frac{P(x)}{1-P(x)} = \beta_0 + x\beta$$

Solving for, this gives

$$\text{P}(x,b,w) = \frac{e^{\beta_0 + x\beta}}{1+e^{\beta_0 + x\beta}} = \frac{1}{1+e^{-(\beta_0 + x\beta)}}$$

$$success* = x\beta + \varepsilon \qquad (1)$$

3.3. Correlation Analysis

To discover the relationship between contextual factors and sustainable entrepreneurship, we used the Spearman Rank Order correlation analysis. This method was suitable because the variables are ordinal in nature and cannot be subjected to the assumptions of a parametric test. The technique was applied to understand the dynamics of each business location (Rural, Urban, and Semi-Urban as per Sustainable Entrepreneurship).

3.4. Demographics of Respondents

Table I. Socioeconomic Features of SME Entrepreneurs in the Services Sector

Education level		***Frequency***	***%***
1	Primary	27	5.4
2	Secondary	283	56.5
3	Tertiary	185	36.9
4	Others	6	1.2
5	Total	501	100.0
Age of Business		***Frequency***	***%***
1	Less than 5yrs	150	29.9
2	Between 5-8yrs	146	29.1
3	Between 8-10yrs	132	26.3
4	Above 10yrs	73	14.6
5	Total	501	100.0
Registered Business		***Frequency***	***%***
1	Yes Registered	225	44.9
2	Not Registered	276	55.1
3	Total	501	100.0
Business Location		***Frequency***	***%***
1	Rural	71	14.2
2	Urban	203	40.5

3	Semi-Urban	227	45.3
4	Total	501	100.0
Number of Employees		***Frequency***	***%***
1	Low Num of Employees	303	60.5
2	High Num of Employees	193	38.5
3	Total	496	99.0
4	System	5	1.0
5	Total	501	100.0
Gender		***Frequency***	***%***
1	Male	268	53.5
2	Female	233	46.5
3	Total	501	100.0

Source: Author(s) Computations: SPSS vs26

Within the service sector, the educational level of SME entrepreneurs (respondents) shows that 57% obtained a secondary education, while 37% completed tertiary education, followed by 5.4% who completed primary education. The most educated group (*tertiary)* had the least number of educated persons; this is in line with a study in which only 15% of top entrepreneurs have an MBA whilst 85% do not have or are not that educated (Start-up Scaffold, 2019). Probably SME entrepreneurs are more interested in the business aspect more than the pursuit of education; as most of them are under-educated. Our results agree with existing literature that most entrepreneurs are under-educated as about 46% of them have completed senior secondary education compared to other groups; primary (6%), junior secondary (11%), college (30%), tertiary (2%), GSQ/GAQ (2.7%) and 3.3% for those who never attended any school. The majority (30%) of the respondents' businesses are less than 5-years old, while 29.1% businesses are between 5 to 8 years old; 15% are above 10-years old and 6.3% are between 8 to10 years old. This scenario is expected because of the history of South Africa (Pre and Post-Apartheid). Amongst the five hundred businesses in this study, only 45% SMEs were registered vs. a majority of non-registered (55.1%). This shows that most of these businesses do not place any value on registration. However, registering a business is beneficial as it enables the SME to start-up business bank accounts, accessing loans, worldwide customer legitimacy, customers' reputation, arrangements with suppliers, and employing workers. Many more SMEs are located within semi-urban (45.3%) and the urban areas (40.1%) compared to the rural areas (14.2%). In our sample, there are 60.5% businesses with few employees compared to 38.5% businesses with large numbers of employees. This is a representation of the feature of SMEs in South Africa. Concerning socio-economic development, SMEs account for 95% of all firms in both LDCs and DCs - which are vital as they contribute to income generation through job creation. There are more males (54%) than females (47%) in our sample. This could be because of the challenges female-owned SMEs face in South Africa as SMEs in South Africa widely appears to be a male-dominated sector.

4. Findings and Discussions

4.1. Correlation Analysis (Non-Parametric) of Contextual Factors and Sustainable Entrepreneurship

Spearman Rank Order correlation is designed for use with ordinal level or ranked data. Our variables have been ranked and Spearman's Rank Order Correlation (rho) was used to calculate the strength of the relationship between contextual factors of Sustainable Entrepreneurship. This technique is the non-parametric alternative to Pearson's product-moment correlation.

Table II. Contextual Factors Correlations Matrix

Correlations

			Sustainable Index Score (Bus + Social)	SME Xteristic Score	Ext Env Score	Mgt Know How Score	Govt Support Score	labour Relations Score	Re-Categorized Education Levels	Start-up Capital Amount	Re-Categorized Age of Business
Spearman's rho	Sustainable Index Score (Bus + Social)	Correlation Coefficient	1.000	-.118**	.076	.160**	.209**	.222**	.013	.146**	.072
		Sig. (2-tailed)	.	.010	.096	.000	.000	.000	.777	.002	.115
		N	482	482	482	479	482	465	482	464	482
	SME Xteristic Score	Correlation Coefficient	-.118**	1.000	.292**	-.074	-.060	-.075	-.008	-.105*	.036
		Sig. (2-tailed)	.010	.	.000	.099	.183	.098	.852	.022	.423
		N	482	501	501	498	501	484	501	481	501
	Ext Env Score	Correlation Coefficient	.076	.292**	1.000	-.034	.074	-.044	.138**	-.066	.020
		Sig. (2-tailed)	.096	.000	.	.448	.098	.339	.002	.149	.656
		N	482	501	501	498	501	484	501	481	501
	Mgt Know-How Score	Correlation Coefficient	.160**	-.074	-.034	1.000	.449**	.312**	.215**	.294**	.034
		Sig. (2-tailed)	.000	.099	.448	.	.000	.000	.000	.000	.448
		N	479	498	498	498	498	481	498	478	498
	Govt Support Score	Correlation Coefficient	.209**	-.060	.074	.449**	1.000	.318**	.041	.266**	.120**
		Sig. (2-tailed)	.000	.183	.098	.000	.	.000	.365	.000	.007
		N	482	501	501	498	501	484	501	481	501
	labour Relations Score	Correlation Coefficient	.222**	-.075	-.044	.312**	.318**	1.000	.077	.321**	.170**
		Sig. (2-tailed)	.000	.098	.339	.000	.000	.	.090	.000	.000
		N	465	484	484	481	484	484	484	464	484
	Re-Categorized Education Levels	Correlation Coefficient	.013	-.008	.138**	.215**	.041	.077	1.000	.151**	-.060
		Sig. (2-tailed)	.777	.852	.002	.000	.365	.090	.	.001	.183
		N	482	501	501	498	501	484	501	481	501

	Start-up Capital Amount	Correlation Coefficient	.146**	-.105*	-.066	.294**	.266**	.321**	.151**	1.000	.246**
		Sig. (2-tailed)	.002	.022	.149	.000	.000	.000	.001	.	.000
		N	464	481	481	478	481	464	481	481	481
	Re-Categorized Age of Business	Correlation Coefficient	.072	.036	.020	.034	.120**	.170**	-.060	.246**	1.000
		Sig. (2-tailed)	.115	.423	.656	.448	.007	.000	.183	.000	.
		N	482	501	501	498	501	484	501	481	501

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The Spearman Rank Order correlation analysis results in Table 2 above show that the External Environment, Education level of the SME owner and Age of Business is insignificant in terms of its relationship with SE. In contrast, a significant relationship exists between SME Xteristic (-.118 ^{xx}), Management Know-How (.160^{xx}), Government Support (.209^{xx}), Labour Relations (.222^{xx}), Start-up Capital (.146^{xx}) and Sustainable Entrepreneurship. They were all significant at the .01 level of significance.

4.2. Binary Logistic Regression Analysis

Table III. Diagnostics

Case Processing Summary				
	Unweighted Cases[a]		N	%
		Included in Analysis	444	88.6
		Missing Cases	57	11.4
		Total	501	100.0
	Unselected Cases		0	.0
	Total		501	100.0
a. If weight is in effect, see classification table for the total number of cases.				
Dependent Variable Encoding				
	Original Value	Internal Value		
	Low Sustainable Index	0		
	High Sustainable Index	1		
Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	52.232	8	.000
	Block	52.232	8	.000
	Model	52.232	8	.000
Model Summary				
	Step	-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square
	1	562.958[a]	.111	.148
a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.				
Hosmer and Lemeshow Test				
	Step	Chi-square	df	Sig.
	1	13.750	8	.089

Source: Author(s) Computations: SPSS vs26

The Dependent Variable Encoding above indicates how we dealt with the coding of our dependent variable (low sustainability index). We wanted to make sure that the low sustainability index variable

was coded zero and the reverse coded one. The Omnibus Tests of Model Coefficients (goodness of fit test) gives us an overall indication of how well the model performed, over and above the results obtained when none of the predictors were entered into the model. The Sig value is .000 is highly significant (which means p<.0005). Therefore, the model (with our set of variables used as predictors) is better than SPSS's original guess in Block 0, which assumed that everyone would report a high sustainability index. Furthermore, the chi-square value, in the Omnibus test is 52.23 with 8 degrees of freedom. The Cox and Snell R Square and the Nagelkerke R Square under the model summary values indicate the amount of variation in the dependent variable explained by the model (from a minimum value of zero to a maximum of approximately 1). In this case, the two values are 0.111 and 0.148, suggesting that between 11.1% and 14.3% of the variability is explained by our independent variables (predictors). The results that are shown under the Hosmer-Lemeshow Test also support our model as being worthwhile. This test is the most reliable test of model fit available in SPSS and interpreted very differently from the Omnibus Test discussed above. For the Hosmer-Lemeshow Goodness of Fit Test poor fit is indicated by a significance value less than .05, so to support our model we actually want a value greater than .05. The chi-square value for the Hosmer-Lemeshow Test is 13.75 with a significance level of .089. This value is larger than .05, therefore demonstrating the robustness of the estimated model.

Table IV. Classification Table[a]

		Predicted		
		Sustainable Index Score (Bus + Social) (Binned)		
	Observed	Low Sustainable Index	High Sustainable Index	Percentage Correct
Sustainable Index Score (Bus Success + Social Entrepreneurship	Low Sustainable Index	157	71	68.9
	High Sustainable Index	84	132	61.1
Overall Percentage				65.1
a. The cut value is ,500				

Source: Author(s) Computations: SPSS vs26

Table 4 above shows an indication of how well the model can predict the correct category. We compared this with the Classification in Block 0, and results indicate an improvement in the model. The model correctly classified 65.1% of cases overall (sometimes referred to as the percentage accuracy in classification: PAC), an improvement over 51% in Block 0. The results displayed in this table were used to calculate the additional Statistics (The sensitivity of the model is the percentage of the group that has the characteristic of interest (SMEs with low sustainability index). In this analysis, we were able to correctly, classify 68.9% of the people who had a low sustainability index. The specificity of the model is the percentage of the group with the characteristic of interest (71%). The positive predictive value is the percentage of cases that the model classifies as having the characteristic that is actually observed in this group. To calculate this, we divided the number of cases in the predicted Low Index, observed cell (157) by the total number in the predicted low index cells (157 + 84 = 241), and multiplied by 100 to give a percentage. This gives us (157 divided by 241 × 100 = 65.1%). This indicates that our model accurately picked 65% of SMEs with a low sustainability index.

Table V. Variables in the Equation

								95% C.I. for EXP(B)	
	Contextual Factors	**B**	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**	**Lower**	**Upper**
Step 1[a]	SME Xteristic	-.450	.218	4.274	1	.039	.637	.416	.977
	Ext Env	.344	.222	2.394	1	.122	1.411	.912	2.181
	Mgt Know-How	.262	.238	1.213	1	.271	1.300	.815	2.072
	Govt Support	.554	.233	5.632	1	.018	1.740	1.101	2.748
	Labour Relations	.795	.220	13.038	1	.000	2.214	1.438	3.409
	Education Levels	-.266	.439	.368	1	.544	.766	.324	1.812
	Start-up Capital	.164	.225	.532	1	.466	1.179	.758	1.833
	Age of Business	.121	.228	.284	1	.594	1.129	.722	1.764
	Constant	-.628	.451	1.935	1	.164	.534		

a. Variable(s) entered on step 1: SME Xteristic Score (Binned), Ext Env Score (Binned), Mgt Know-How Score (Binned), Govt Support Score (Binned), labour Relations Score (Binned), Re-Categorized Education Levels, Start-up Capital Amount (Binned), Re-Categorized Age of Business

Source: Author(s) Computations: SPSS vs26

The Variables in the Equation table gives us information about the contribution and importance of each of our predictor variables. The test that we used is known as the Wald test. Three of our predictor variables (SME Xteristic, Government Support, and Labour Relations) show high statistic values as predictors in the column labelled Wald. This confirms how important the variables are in the model. Further, scanning down the column labelled Sig. looking for values less than .05; we observe that the same variables (SME Xteristic, Government Support, and Labour Relations) contributed significantly to the predictive ability of the model. In this case, we have three significant variables (SME Xteristic p = .039, Government Support p = .018, Labour Relations p = .000). Summarily, the major factors influencing an SME towards sustainable entrepreneurship are SME Xteristic, Government Support, and Labour Relations. External Environment, Management Know-How of the entrepreneur and Start-up Capital base were not significant in the analysis but have *high Odds Ratio* signifying the importance of the variables to sustainable entrepreneurship. The B values provided in the second column are equivalent to the B values obtained in a multiple regression analysis. These values help in the calculation of the probability of a case falling into a specific category. In our model, SME Xteristic and Education showed negative signs. This result is remarkable and confirms that if the stringent SME Xteristic in South Africa is relaxed, there is a possibility of the SMEs moving towards Sustainable Entrepreneurship and vice-versa. Currently, SMEs operating in South Africa have rigid features because it is mainly sole proprietorship and not dynamic as in advanced economies. In addition, the Education variable confirms a no-effect of the education Status of the SME owner on sustainable entrepreneurship.

Nonetheless, our three significant variables suggest high probabilities in terms of the Odds Ratio. According to Tabachnick and Fidell (2001), the odds ratio is "the increase (or decrease if the ratio is less than one) in odds of being in one outcome category when the value of the predictor increases by one unit." The significant variables are SME Xteristic (Odd Ratio of 0.637), Government Support (1.740), and Labour Relations is (2.214). In this instance, the odds of an SME moving towards Sustainable Entrepreneurship are 1.740 higher for SMEs with high Government Support than those without. Similarly, the odds ratio is 2.214 higher for SMEs that have good employer-employee relations and 0.637 higher for SMEs with a relaxed Xteristic feature. However, Start-up Capital, Age of Business, Management Know-How, and External Environment also showed high odds ratios but

were not statistically significant in the model. Despite not being significant, the variables show a strong probability of influencing SMEs towards the path of Sustainability if their scores increase. Our odds ratio is only a point estimate at the true value, based on our sample data. The confidence that we have in this being an accurate representation of the true value (from the entire population) is dependent largely on the size of our sample. For each of the odds ratios Exp(B) shown in the Variables in the Equation table, there is a 95% confidence interval displayed. In simple terms, this range of values encompasses the true value of the odds ratio. Despite not being significant at the 5% level, the External Environment variable in our model showed strong Odds Ration in influencing sustainable entrepreneurship. Studies such as Freeman (2000), Vaillant et al. (2005), Gonzalez (2014), and UNGA (2014) all concluded that the environment in which SMEs operate has a direct relationship with their success. This success can thus, be pushed towards sustainability. In the model, this variable exhibited strong Wald Statistics and a high Odds Ratio. Our results confirm Kongolo (2010) and Agarwal et al. (2015). The South African government is already supporting several SMEs through diverse ways and this has proven a major determinant in pushing SMEs towards sustainable entrepreneurship. Government support to SMEs in post-apartheid South Africa has been remarkable, 91% of SMEs were recorded in the current FinMark survey as against 8.7% in the apartheid era. On the other hand, literature has also shown the power of the SME characteristic in directing the future goals of SMEs. According to Harvie et al. (2010), in South Africa, attitude and behaviour is a strong component of this variable, in Thailand according to Chittithaworn et al. (2011), it encompasses resources and market access, whereas, in India, education of the entrepreneur, age, management style, and family background reinforces this variable (Chachar et al., 2013). Various empirical results suggest that this variable if managed properly is key to the success and growth of SMEs. Furthermore, it has the potential of creating markets for SMEs to leverage on. In our results, it exhibited a high significance as well as Government support. Good employee-employer relations showed a strong potential of influencing SE positively. This is in accordance with previous studies such as Solomon (2004) and Bantjes et al. (2006), which showed the link between the two variables.

5. Summary

Sustainable entrepreneurship contributes to solving social and environmental problems, particularly in emerging and developing countries. The results of this study have important implications for the practice and the planning of sustainable entrepreneurship in South Africa. This study investigated the factors that influence the drive towards sustainable entrepreneurship of SMEs to develop an understanding of the dynamics. The results showed that SME Characteristics, Government Support, and Labour Relations are the significant determinants of SMEs' Sustainable Entrepreneurship (SE) in the services industry. Moreover, the level of Start-up Capital, environment, and expertise showed a high odds ratio of impact but was insignificant. Such information is crucial when evaluating appropriate policies for promoting SMEs' sustainable development and poverty reduction as well as their overall development within an emerging country context. It also seems that such general entrepreneurship practices have a greater effect when identifying sustainable opportunities than addressing environmental and social concerns only. However, we recommend against neglecting environmental and social issues, improving knowledge for entrepreneurs in the service industry, and augmenting capital support to the furthest extent possible, as this might impact the action-orientation

of entrepreneurs and impact whether they actually follow-up on the opportunities identified for sustainable entrepreneurship.

5.1. Policy Implications

The goal of this article is to guide policymakers' decisions by recommending clear policy actions based on the results of our hypothesis testing. In light of the predictive power of the regression results, this study provides inputs on the determinants of sustainable entrepreneurship. This, will in turn, foster sustainable development in the country. By revealing the critical determinants affecting sustainable entrepreneurship, this study is a useful reference for development actors in their growth-oriented planning. As a practical implication, this study suggests that entrepreneurs operating SMEs in the services sector should "continuously learn the latest management knowledge" to "acquire new knowledge, new models and new methods" and to "reinforce their learning capability." Moreover, the South African Government should organize additional trainings for SME entrepreneurs to educate them on the importance of sustainability in their endeavours and its implication, and to consolidate their strategic orientation toward entrepreneurship. A specific implication of the study findings is that entrepreneurs and business partners must (1) maintain a posture that continuously pursues novel ideas as per the features of an SME that is pro-growth and new models related to business development; (2) maintain an opportunity-seeking perspective with employees; and (3) control risks associated with high-risk ventures that bring financial achievements.

5.2. Research Gaps and Future Direction

The limitations of this study are all linked to its limited scope. Firstly, a limitation of our study was that we only studied contextual factors that influence sustainable entrepreneurship in small and medium-sized enterprises and future studies could focus on big enterprises. Furthermore, our proposition that an entrepreneur can change their initial position from regular to sustainable practices by passing the social benchmark and being financially profitable under specific conditions is constant in this study. Secondly, the study is restricted to only two aspects of sustainable entrepreneurship as a dependent variable. It does not consider the environment in the SE index. Future studies can explore the three dimensions of the sustainable entrepreneurship framework (environmental, social, and economic). Thirdly, since the primary objective of the study was achieved through commonly known methods, future researchers may wish to employ other methods in assessing SE. Fourthly, since the field of SMEs is vast and diverse, many issues remain unresolved, other researchers could venture into studying other variables affecting the growth of SMEs in the greater African context that have not been examined in this study set in South Africa. The methodology, the approach, and the context of this study can serve as a practical model for future studies. Factors affecting the growth of SMEs in South Africa (as an emerging middle-income economy) may be i compared to other developed countries. This will reveal similarities and differences. This appears to be the right direction for future research and the findings of such studies would be of significance.

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