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# The Digitalisation of Rural Entrepreneurship

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Additional information is available at the end of the chapter

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## Abstract

The main primary purpose of this chapter is to present new established understanding and knowledge of the digitalization of rural entrepreneurship, how it can help entrepreneurial survival and growth in rural industries, and what are the theoretical and practical implications. The digitalization concept of businesses is the issue of interest in the world today; however, it is still of concern in the rural South African entrepreneurship sector. Collection of primary data was done from 501 owners/managers operating in rural of the KwaZulu-Natal (KZN) province. The mixed questionnaire of quantitative and qualitative was used as the survey instruments. The questionnaire was distributed at the entrepreneur's business premises, and they were given 7 days to respond while researcher and research assistants were always available to assist where necessary. The findings of this survey revealed that the large number of participants are not using their digital technology for the business purpose, but rather they use it for other things such as private communications and social friendship. The survey was confined in one province of South Africa; therefore, the generalization of the results should be done with care. This study has indicated some recommendation and suggested further research which may include other provinces as well as other countries.

**Keywords:** rural, entrepreneurship, digitalisation, orientation, entrepreneurs, digital technology

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## 1. Introduction

*'New digital revolution for rural industrialization is the right path to success'.*

Lekhanya [1]

In recent times, it has become vitally important for policymakers to begin thinking in terms of rural industrialisation, to allow all possible communities to participate in the national economy and contribute to South Africa's gross domestic (GDP) per capita. The industrialisation of rural

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entrepreneurship is perceived as an idea that will assist entrepreneurs operating in rural locations to survive and grow beyond the next decade. Today, rural entrepreneurship significantly impacts many issues, including economic development, employment, food supply and social security. With increasing numbers of people moving from rural to urban areas due to poor employment opportunities, and the complexity of running their own businesses, the problem of potential social unrest, amongst others, becomes more credible. It is therefore crucial that researchers, particularly in those countries with large rural populations, investigate this problem and provide ways of solving it. Such challenges facing entrepreneurship in remote or rural places require modern, innovative business leaders, skilful political thinkers, greater numbers of trained professionals, and academics who can think dynamically, and bring their ideas into broader societal use.

New approaches to enhance innovation and invention within rural businesses are required in the contemporary world of business, and a broad knowledge and understanding of digital technology, how it can be used, when it can be used, where it can be used and why it is used, by rural entrepreneurs should be properly defined in order to achieve this. Promotional marketing strategies using digital technology should be a central issue, and their benefit should be better understood by business owners and managers worldwide. Access to global markets, efficient distribution of products and higher brand awareness can also provide competitive advantage and ensure effective business communication.

## **2. Problem statement**

Many studies conducted in the rural places of South Africa indicated that rural enterprises are confront by many challenges. However, it is also anticipated that this could be a global problem that needs to be addressed by professionals as well as academics. Therefore, this writing aims to provide some workable solution to these challenges.

## **3. Aims and objectives of this study**

This study aimed to establish the understanding and knowledge of digitalisation of rural entrepreneurship, and how it can be used by rural entrepreneurs for the survival and growth, and its implications.

## **4. Literature review**

### **4.1. Definition of rural entrepreneurship**

Enterprises operating in rural environments disconnected from primary metropolitan sites can be defined as part of rural entrepreneurship, and such enterprises function under extremely

complex and turbulent business conditions presented by remote and underdeveloped areas, where local production is primarily committed to subsistence farming. Rural areas are perceived to be entirely different from intensively settled urban and suburban areas, and are also distinct from natural landscapes or wilderness, such as forests or mountains. Rural enterprises can benefit from the use of local resources and can produce products or services to meet local demands, since they are able to access cheap labour from within their communities. Although it is acknowledged that no single, unified and accepted definition for the term 'entrepreneurship' exists, it is one dimension of strategic posture, which encompasses the risk-taking propensity of businesses, their ability to compete aggressively, their proactive initiatives and their product innovations, which are all entrepreneurial activities, and which indicates that all manner of organisations therefore behave entrepreneurially [2, 3].

Rural entrepreneurship implies the emergence or establishment of entrepreneurial activities in rural areas; in other words, the establishment of industries; which also implies that rural entrepreneurship is synonymous with rural industrialisation [4, 5]. Rural entrepreneurship represents the informal sector of the economy, characterised by small-scale businesses, including small traders and artisans. Rural entrepreneurship can be considered an important solution for reducing poverty, minimising rural-urban migration, addressing economic disparities and alleviating unemployment in developing rural and underdeveloped areas. Rural entrepreneurship presents a major opportunity for those who instead migrate from rural to semi-urban or urban areas, and most rural entrepreneurs are faced with the multiple problems presented by the unavailability of primary amenities in these areas of developing countries [6]. Due to this exodus of skills, a lack of educated individuals, financial limitations and insufficient technical and conceptual abilities, together make it difficult for rural entrepreneurs to successfully establish locally based industries.

#### **4.2. Rural entrepreneurs**

In most practical cases, individuals who conduct their businesses in rural areas do so by utilising locally available resources [7]. Their business activities improve the standard of living for local communities by creating employment opportunities for people living in proximate villages and provide sources of entrepreneurial activity to establish industrial and business units in this rural sector of the economy. Similarly, rural entrepreneurship can further be described in terms of rural industrialisation [8]. The existence of rural entrepreneurship which leads to viable economies in rural areas is therefore of extreme importance. Regardless of the extent to which rural entrepreneurs engage in a variety of activities, which range far beyond simply agriculture, they are still not fully industrialised in their thinking and approach, due to the number of challenges that confront them in rural regions worldwide [9].

Such challenges lead to the success of ambitious start-ups remaining low, with factors such as market sizes, government policies and geographical profiles continuing to influence their long-term performance [10]. There is ostensibly little difference between rural and urban enterprises in terms of their structure, of how such businesses are organised and managed, and of how the characteristics of individual entrepreneurs are exhibited. Thus, it would appear that there is no specific category for, or definition of, rural entrepreneurs, beyond being individuals who manage

business ventures in rural settings. Rural areas are, however, no longer found to be dominated by employment in agriculture and production farming but cover a kaleidoscope of economic activities which increasingly mirror those found in more urban areas [11].

### 4.3. Theoretical perspective on the survival and growth of SMEs

The process of growth in enterprises is defined by their development from small to large, and from weak to strong [12]. Enterprise growth encompasses the development process which enterprises follow in encouraging tendencies for balanced and stable growth in total performance levels, including their outputs, sales volumes, profits and gross assets, and whose benefits continue to be realised by significant enhancements to their total performance in stages spanning their levels of quality development. Strong principles exist that govern the survival and growth of enterprises, which are treated as collections of internal and external resources that assist enterprises in growing and realising their competitive advantage [13].

The size of businesses is incidental to their process of growth, and whereas business growth is determined by the effective and innovative management of internal resources, the external availability of top managerial and technical talent is also an important factor in their growth [13]. Ignorance of such factors can result in loss of competitive advantage and business failure, however, and many different non-geographically focused approaches have been used to identify factors which affect the survival and growth of small businesses, with considerable variation in results. Such approaches have identified many factors, both internal, but particularly also environmental and external to small and medium enterprises (SMEs), that exist beyond the ability of these businesses to control [14], and which impact significantly on their performance and growth [15].

The growth experienced by enterprises can be identified using four theoretical perspectives, which include the resource-based, motivation, strategic adaptation and configuration perspectives [10]. The resource-based perspective focuses on the use and management of enterprise resources for the expansion of business activities, and of financial resources, and the availability of specifically educated staff. This indicates that, to identify successive phases of growth and development, business resources need to be restructured during transitions between growth stages. The resource-based perspective also relates to the theories of social capital and innovation, because the analysis of social networks has, in the preceding few decades, evolved into one of the most important tools employed for business estimation of enterprise growth, competitive strength and innovation. The resource-based perspective is a conception of strategic management which attempts to clarify the background for enterprise existence, and its various occurrences in the broader context of enterprise theory. The broad layer of productive resource definitions available includes such factors as the teamwork abilities of senior management, their entrepreneurial capabilities and their ability to perceive the benefits of implementing new products or services, although the full impact of these factors remains untested in rural business environments.

The characteristics of small businesses situated in rural contexts include them being in locations that face various challenges which can impede economic development, and which are not

frequently encountered in urban settings [16]. What is highlighted is that rural areas tend to be characterised by low population densities, economic dependence on natural resources and agriculture, and operating in locations isolated by distance and time (Deavies, 1992). The concept of entrepreneurial individuals with distinguishing characteristics is, however, central to entrepreneurial theory, and the existing division is based on both psychological and non-psychological motivational factors, which determine the distinguishing personal characteristics of rurally based entrepreneurs [17].

An adoption of the correct set of entrepreneurial characteristics is crucial to the survival and growth of rural SMEs, with psychological motivating factors furthermore including the need to achieve risk tolerance, autonomy/independence, self-esteem, self-efficacy and locus control. The need to achieve is the principal determinant of entrepreneurial behavioural orientation. Many theories have been forwarded which demonstrate that the need to achieve survival and growth in business reflects individuals' orientation, their willingness to assume risk and their drive for satisfaction from a sense of accomplishment. This can be achieved by employing foresight in remaining dedicated to the tasks involved in succeeding, which frequently require prioritisation and the sacrificing of personal activities and time. Based on these theories, SME owners/managers operating in rural areas need to demonstrate their tolerance for risk-taking, entrepreneurial orientation (EO) and entrepreneurial attitude towards growth, internal loci of control in their networking, human and financial and other relevant resources, when confronted with uncertain circumstances or conditions.

Human capital is considered to comprise non-psychological motivation factors, which include explicit knowledge, tacit knowledge and experience, age and marital status, and is also considered extremely important for entrepreneurial growth [18]. The theoretical literature is, however, limited in describing how these factors affect the survival and growth of rural SMEs. Configuration perspective focuses on the need for SMEs to collaborate in external networks to be successful, where it is considered that they should focus on their core competencies to achieve more efficient operations and co-operate with external partners to compensate for certain competencies or resources which they lack [19]. This is especially true for the development of new products, in which SMEs encounter specific problems when compared to larger businesses. In recognising the increasing importance of collaboration, however, the question remains how to organise these external networks to accommodate specifically rural SMEs. Entrepreneurial education and training is a major determinant in the growth and survival of enterprises, and according to the theory of human capital, by investing in the acquisition of knowledge, these increased skills and abilities will enhance the productive capabilities of individuals [20]. Rural environments are faced with challenges that tend to differ from those encountered in urban contexts, and because of this business, education and training cannot simply replicate that delivered in urban locations but must instead address the unique needs and perspectives of rural business owners.

Furthermore, in keeping with the theories already discussed, most literature supports the notion that the many constraints experienced by SMEs in developing countries, including South Africa, are the result of internal and external organisational barriers, which require in-depth examination [21]. Those impediments found within organisations, and which hinder the

adoption of new technologies, are considered internal barriers, while those found outside of organisations are considered external barriers, and relate to infrastructure, politics, legalities, society and culture. It has been suggested that enterprises are collections of internal and external resources which assist them in achieving competitive advantage, since in the long term, these factors can limit the growth of enterprises, but not their size, since growth is determined by the rate at which experienced managerial staff design and implement strategic business plans [13].

#### **4.4. Conceptual framework for rural entrepreneurial orientation**

It is held that EO is a multidimensional measure for business-level entrepreneurship, comprising innovation, proactivity and autonomy, all of which require to be implemented by SME owners/managers, including those operating in rural environments, to enable survival and growth [22]. Today's dynamic business environment demands that businesses be entrepreneurially oriented to ensure their survival and growth [23]. Enterprises with high levels of EO tend to possess enhanced abilities in identifying new opportunities for growth, which increase their competitive advantage [24]. EO contains two conceptual approaches, namely unidimensional and multidimensional, with operational methods shaped by how individual EO approaches are appraised [25]. In the unidimensional approach, EO is regarded as a unified conceptual entity, where its dimensions, although varying, complement one another. It is considered that high levels of risk in both dimensions need to be reduced immediately by entrepreneurially oriented enterprises, because this is a prime ingredient for the success of businesses, including those operating in rural contexts [26].

EO is therefore seen as a significant predictor of business growth, which indicates that positive EO in SME owners/managers supports business survival and growth [27]. Investigating this influence of EO on the success of those operating in rural environments is therefore crucially important. EO furthermore includes the processes, practices and decision-making activities which lead to fresh entrepreneurial endeavours, such as SME owners/managers launching and operating business in their respective areas. These entrepreneurial activities are informed and guided by experience gained from previously observed business practices and theories [14].

#### **4.5. The concept of rural entrepreneurship digitalisation**

Primary concepts in entrepreneurial practice involve independence, innovation, decision-making, forecasting, implementation and achieving success. However, rural entrepreneurship needs to be better developed to improve its broader economic participation. A transformation in how rural entrepreneurship is practised could attract greater business success, but effective economic activities can only be achieved by the digitalisation of rural entrepreneurship. Digitalisation can be described in terms of the infrastructural processes associated with digital technologies, in which analogue information is transcribed to digital form and applied in broader social and institutional contexts.

Understanding and implementation of rural entrepreneurial digitalisation are of critical importance if they are to be of benefit in the economic growth of the country. The digitalisation of EO

in rural environments must be broadened and capacitated by the relevant authorities, because such endeavours are currently either very limited or absent, and little data are available on rural areas of many countries. The involvement in promoting this type of development in rural areas by policymakers, government agencies, relevant business stakeholders, as well as rural entrepreneurs themselves, is therefore regarded as essential.

The importance of digitalisation is not restricted to products, services and manufacturing processes, but includes a broad spectrum of competencies, including marketing, business networking, promotional mix, product distribution, supply chain management, access to international markets and the management of growth to achieve competitive advantage. Digitalisation of all business processes is possible, and the outsourcing of certain services, or a shortage of human capital available to rural businesses, can thereby be easily surmounted, since digitalisation can be used to positively enable new start-ups and potential young entrepreneurs willing to operate in rural environments in this way.

Few investigations have been performed into how digitalisation could improve the survival and development of rural enterprises, which has resulted in a lack of knowledge and understanding of its relationship with improving the success of rural industries. Knowledge concerning the benefits of digitalising rural businesses, and how this can improve business operation capacities, remains mostly assumptive amongst professionals and policymakers. Much evidence from an international perspective exists, however, to indicate that small business, which is generally found in rural areas, plays a crucial role in the creation of a variety of different economies. **Table 1** indicates significant statistics in justification of this claim.

Since small, micro- and medium enterprises (SMMEs) represent most of rural businesses and are also the largest employers of rural dwellers in many countries, digitalisation must be considered a primary strategic growth path for rural businesses, and its incorporation into the efficient formulation of policies and subsequent implementation should be a priority for governments in attaining the various goals that would essentially include balanced rural development in the country. This change in methods can encourage small rural businesses to adopt the use of digital technologies in conducting their business activities and could also

Country	Employment contributed by small industries	Industry contribution to GDP (%)
European Union (EU)	75 million people	99
Latin American		60
China	13 million people	60
Singapore		47
Asian Pacific		90
Ireland		90
South Africa		40

Source: Developed by author based on the reviewed literature.

**Table 1.** SME employment and GDP contribution per country.

assist in enhancing their use of human resources, and in realising the benefits to their survival and growth. Many challenges, such as insufficient working capital and marketing difficulties, inadequate social infrastructure, a lack of managerial skills and little support for SMME development from government programmes can easily be overcome by the digitalisation of rural businesses.

#### **4.6. The importance of rural entrepreneurship digitalisation**

The digitalisation of rural entrepreneurship is of extreme importance for the development and competitiveness of rural businesses [28]. Digitalisation is a highly effective strategic growth strategy for businesses in emerging markets of the world, and there is much evidence that, in many countries, the improvement of entrepreneurial activities is regarded as a strategy to boost national productivity and job creation, which also improves their economic independence. Entrepreneurial endeavours strengthen personal and collective capabilities amongst local communities, and SMEs are currently regarded as mechanisms for economic growth and equitable development in creating labour-intensive, capital-saving initiatives that ensure the creation of many new jobs [29].

Small-scale businesses play a survival role for poorer households in the development of self-confidence, business and other skills, and the socio-economic upliftment of women [30]. Small businesses provide employment opportunities for rural communities, specifically by minimising migration of rural populations to urban areas, improving standards of living for local communities and promoting rural tourism-related art activities [5]. Enterprise and entrepreneurship are the drivers of economic growth in rural Europe [31], which indicate that the ongoing challenges facing traditional rural sectors, and the future success of rural economies, are inextricably linked to the capacity rural entrepreneurs possess to innovate and identify new business opportunities that create jobs and income in these areas. In Vietnam, entrepreneurial development in the form of rural SMMEs has also emerged as a strong agent for socio-economic diversification [32].

Small enterprises are not only important in contributing to local economies, but, from an international perspective, play a vital role in the creation of national marketplace employment [33]. In the enlarged European Union (EU), amongst the 25 countries included, some 23 million SMEs provide approximately 75 million jobs, comprising 99% of all enterprise. The trend for job creation by the small business sector found in many EU countries has resulted in overall economies of growth, and improved standards of living are apparent within rural communities in these countries [34]. In Britain, for instance, small enterprises are regarded as the backbone of the British economy, which is a result of their productivity, despite having access to minimal resources and little formalised support [35]. In Asia-Pacific Economic Cooperation-member countries, approximately 90% of all enterprises fall into the category of SMMEs, which employ most of their working populations [36]. China's economy, which is amongst the largest in the world, is likewise largely supported by SMMEs, and the advanced technology employed in both China and India has assisted in industrialising their vast rural areas and allowed national penetration into widely diverse international markets [37].



#### **4.7. Rural entrepreneurial activities in other parts of the world**

In Vietnam, rural opportunity entrepreneurs are not often employment growth oriented, and therefore have limited capacity to generate non-arable employment for all households [38]. Contrarily, in Peru, many rural entrepreneurs create opportunities for employment, and rural entrepreneurship in the country is growing [39]. Further indicated is that where government and international funding organisations have provided training and financial support, this has enhanced the survival and growth of rural entrepreneurship. SMEs account for almost 99.8% of active enterprises in Ireland, where most of companies (90.8%) active in the economy are micro-enterprises employing less than 10 people [40].

Micro-enterprises are particularly prevalent in rural areas, where SMEs tend to be small and include a high number of sole proprietor businesses. It is possible to promote better economic and social conditions through entrepreneurial activities which benefit both the individuals involved and their communities [41]. Most of Latin American nations exhibit high levels of entrepreneurial activity, and more than 60% of working-age populations in most Latin American countries view entrepreneurship as a desirable career choice. This entrepreneurial spirit is due to their use of well-developed technologies for connectivity in the past 5 years, which has seen the percentage of Latin American households connected to the Internet to jump from 16% to more than 50% of total populations. In 2015, Latin America's cellular telephone traffic grew by 87% which, as a region, spent more time on social media than any other in the world [42]. Both past and recent experiences demonstrating the failure or non-performance of micro-businesses and enterprises underscore the importance of entrepreneurial competencies in both rural and urban environments, indicating that approximately half of the global population cannot simply be ignored, which includes rural women, who make important contributions to business creation, particularly in these areas [43].

Although the percentage of female entrepreneurs in the South Asian region [44], for example, is less than 13%, it contains 37% of all businesses globally, and generates USD 29–36 billion annually from business concerns operating in this region alone [45]. However, this percentage does not reflect the situation for the African region, including South Africa, where inadequate and unreliable infrastructure services, including a lack of online connectivity, transport, communication services and energy, are common in most of rural communities, and which influences the survival and development of SMEs in the rural areas of African countries immensely [46].

#### **4.8. The business environment and rural entrepreneurship sector**

Since environmental factors are directly related to SME performance [47], and therefore affect how SMEs operate and how strategic entrepreneurial decisions are made by their owners/managers, the use of digital technologies would assist in bringing new strategic business approaches to bear in rural areas, because such technologies would assist in obtaining a broader understanding of the environmental challenges confronting rural businesses in their survival and development in such environments.

A propensity for entrepreneurial activity is conditioned by the evolution of institutional frameworks and good industry environments [48, 49], for which it is maintained that the growth of SMEs within broader economic frameworks requires public administrations from all political ideologies and administrative levels to develop policies favouring and stimulating the creation of new enterprises. SMEs, as opposed to larger businesses, utilise different approaches to implement strategies that guide them through industry life cycles [50]. Conducive business environments are therefore required for them to articulate their strategies and attain good performances (The ILO, 1998, in [51]). In assessing strategy policies, legal and regulatory environments are therefore important, because small enterprises do not possess the managerial and monetary resources to deal with implementing complex procedures, or frequently variable fiscal policies.

The approach required is to improve regulatory environments and instigate policy initiatives that promote entrepreneurship and foster SMEs, encourage governments to take a co-ordinated and inclusive approach in promoting entrepreneurship, emphasise partnerships with the private sector and partner with other states in the region to strengthen entrepreneurship-promotion initiatives [52]. These initiatives will further encourage countries with significant rural populations to consider the establishment or strengthening of national centres for excellence in entrepreneurship, even calling upon the United Nations system to recognise entrepreneurship as a legitimate concern, and integrate its various forms into their policies, programmes and reports in support of national efforts in this regard.

Rural businesses do not operate in a vacuum [31], however, and there is a strong link between rural development policies and the growth of entrepreneurial activities in such areas. It is recognised that rural development policies contribute to achieving the objectives of social and territorial cohesion within the EU, for example, which implies that creating the conditions under which innovative rural businesses can thrive requires new approaches to the governance of these areas, the reorganisation of local markets and changes in consumer behaviour. In France, for example, communities and their support structures actively seek ways of removing potential barriers to job creation in rural areas, such as the high cost of land, although it is unclear if this reflects the problems found in corresponding South African areas.

Romania has demonstrated important rural growth potential and has experienced substantial improvement in both its rural business and socio-economic environments [53]. This indicates that industry life cycles for small businesses in rural Romania have changed from those ensuring survival to those associated with medium-sized enterprises. The impact of the rural business environment on SMEs shows that the survival and growth of micro-businesses are acutely dependent on responding appropriately to external conditions over which they have little or no control [54]. Environments in which families, societies and support systems operate are therefore not always favourable for encouraging rurally based individuals to take up entrepreneurship as a career, which may be due to a lack of awareness or knowledge of the entrepreneurial opportunities available to them [4].

#### **4.9. Internal/external environments and small rural business growth**

It is important to consider the impact of environmental dynamism, which comprises both internal and external environmental factors, on rural SME survival and growth in South

Africa. Environmental dynamism represents the rate of change within environments [55] and can be used when describing the pace at which customer preferences, and the products and services offered by enterprises, change over time [56]. Environmental dynamism is therefore also a measure of the levels of factor instability within business environments, and rural SME owners/managers therefore need to be cognizant of the rates of change and levels of factor instability in their operational areas to ensure the survival and development of their businesses addition [57]. Emergent levels of environmental dynamism lead to uncertainty in service development, and reduce the predictability of the effects of change, which make it important to obtain a broad understanding of how both internal and external environmental dynamic factors affect the EO, survival and growth of rural SMEs [58].

Internal factors, such as business entity size, business life cycle stage, technological and product innovation, organisational autonomy, centralisation and formalisation, market role and the importance of goal types, as well as all attendant external factors, exercise a significant impact on SME performance and effectiveness, including sales growth and the achievement of business goals. External factors include, for instance, the state of economic sectors and customer types [59]. Depending on the stage of business life cycle periods, and the general state of the economy, the activities of enterprises are frequently governed by opportunities for productivity, which represent dynamic interactions between internal and external environments, although external environmental factors are primarily considered to affect the survival and growth of small business entities [60]. EO is influenced by both internal and external factors, which indicates that a correlational relationship that should be tested exists between these areas that can directly influence the survival and growth of rural SMEs.

Part of the internal and external resources of any enterprise should be treated as strategically important, although, realistically, all resources can be considered strategic, depending on enterprise and industry type [61]. The complexity of the dynamics in external environments causes businesses not to rely solely on internal resources for their competitive advantages. SMEs, which are largely rural and agriculturally based, are faced with unique problems that affect their growth and reduce their ability to contribute effectively to national economic development. These unique problems range from a lack of access to credit, inadequate managerial and technical skills, and low levels of education, to poor access to market information and inhibitive regulatory environments. Electricity, government policies and fraudulent practices are found to be critical factors which negatively impact the survival and growth of such businesses [62]. Considering the relationship between EO and business performance in small companies, and the moderating effects of their external environments, rural SMEs owners/managers should utilise their resources more carefully in promoting innovation, proactivity, competitiveness and autonomy [63]. Proactive strategies should therefore be employed during product development stages, or when approaching new markets, or responding to competitor strategies, including being responsible when making business decisions.

Environmental dynamism and heterogeneity are found to be significant predictors of EO and exert a positive influence on it [64]. Access to resources enables entrepreneurs to aggressively exploit opportunities well in advance of their competitors because of environmental pressures [65]. A better understanding of environmental characteristics, in terms of resource availability and competition, as well as those conditions imposed by institutions governing economic

activities, will assist entrepreneurs not only in identifying new business opportunities but also to exploit them in establishing businesses that achieve profitability and generate wealth. Business performance is further found to be influenced by external environmental dynamic factors, which include industry, competitive and consumer changes [66]. Furthermore, eight factors have been identified which influence the success of SMEs as businesses, which include SME characteristics; management and skills; products and services; customers and markets; business methods; research and finance; and business strategies and external environments [67].

In parts of the world, such as South Africa, which are characterised by high levels of poverty, especially in rural areas, where approximately 70% of the country's impoverished population reside, incomes are constrained because rural economies are insufficiently vibrant to provide them with well-paying jobs or self-employment opportunities. External factors are more dominant than internal factors in contributing to entrepreneurial success in the case of rural SMEs. **Table 2** contains a more thorough breakdown of these internal and external environmental factors.

#### **4.10. Elements of rural entrepreneurship**

Classical determinants of business dynamics include company size, location, innovative capacity, prior owner experience and state institutions, which provide for both survival and growth, since the receipt of government support during start-ups has an independently positive influence on long-term business growth, especially for rural and non-household enterprises. Government policies are highlighted as a potential focus for absorbing some of the transaction costs, through the improvement of education, physical infrastructures and technology transfer. Other such important interventions include the provision of both formal and informal mentoring and training services for new managers, along with legal and financial management instruction. Public-private sector institutions can identify policies and strategies to increase the survival and growth rates of SMMEs if they are provided with more information concerning factors that constrain business performance, and the link between entrepreneurial quality and enterprise.

The significance of the location factor in the development of entrepreneurship and small business performance is critical and should therefore be given urgent consideration because it can positively affect SME performance. South African rural economic development has been impeded by poor infrastructure provision and unemployment, with little or no access to vibrant markets characterising many South African rural communities.

#### **4.11. Rural entrepreneurial attitudes and small rural business growth**

The effectiveness of rural SME owners/managers can be measured by investigating their entrepreneurial actions and attitudes, and it is necessary for these rural entrepreneurial actions to be positive in order for SMEs to survive and grow [97]. Small business owners conceptualise the different barriers to their growth differently to those of larger businesses, whose perceptions and mindsets are influenced by their practical experience of growth [98]. An industry-level EO measurement instrument can be used to assist in entrepreneurial education, which implies that such an instrument can also be used by rural SMEs to improve their innovation orientation, risk-taking and proactivity, as these correlate statistically with measures of entrepreneurial intention.

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**External factors**

**Political and legal:** The importance of SMEs to the economy of a country indicates how crucial it is for government policies to support SMEs, including regulations that enable them to operate efficiently and reduce their administrative costs (Harvie and Lee [68], in Govori [69]). Hence, the South African government needs to implement friendly policies for rural SMEs that enable them to survive and grow. South Africa does not currently have a focused SME policy to protect those operating in rural and underdeveloped areas. Initiatives by the South African government to promote and support SMEs to enhance their development and to reduce poverty lack a legal framework and are faced with bureaucracy, and a lack of proper administrative procedures, such as access to government agencies [70]. Politics is intrinsically linked to a government's attitude towards business, and the freedom with which it allows businesses to operate [71]. The types of action which governments may take that constitute potential political risks to businesses fall into three main categories. The first of these are operational restrictions, which can comprise exchange controls, employment policies, insistence on locally shared ownership and particular product requirements. South Africa should adopt a business policy that allows rural entrepreneurs to operate with fewer bureaucratic restrictions.

**Socio-demographics:** A significant socio-demographic influence exists from factors which shape the decisions of entrepreneurs to start their own business [72]. A high level of education does not necessarily guarantee entrepreneurial success, and older individuals do not necessarily achieve higher levels of entrepreneurial success. It is also noted that those who became unemployed in previous occupations frequently become successful entrepreneurs [73]. Many entrepreneurs also choose types of business to start based on socio-cultural values and personal traits, and in KwaZulu-Natal, rural SME owners/managers appear to consider socio-cultural values when adopting technology to promote their businesses, although, due to a lack of data, and the limited empirical research performed, it remains difficult to make a sound judgement in this regard. It is established, however, that demographic factors, in particular, business size, ownership type, owner age and business sector are factors which influence access to finance for start-ups, with smaller businesses having more credit constraints than larger companies. This is attributed to the fact that small businesses are often owned and operated by private individuals, with no legal obligation to report on the financial performance of their enterprises, or regularly audit their financial accounts. Another reason is that small businesses have fewer assets to forward as collateral and are associated with higher rates of failure when compared to larger enterprises.

**Socio-economics:** Socio-economic factors are key considerations influencing entrepreneurial behaviour and the operation of businesses. Economic growth is a function of growth in resources and the rate of technical change,

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**Internal factors**

**Management skills:** Management know-how, business practice and co-operation all influence the success of SMEs [84]. Consequently, it is highly advisable for SME owners/managers to possess management skills and capacities that allow them to run successful businesses, including those in rural areas, such as KwaZulu-Natal [85]. It is also important for them to adopt proper business practices and co-operation in these areas.

Many common factors exist within the category of business management which are, however, considered to play a role in determining the growth of small businesses, and which include financial management and marketing management skills. Management skills for small business growth should concentrate on identification of owner/manager policies and strategies for the operation and development of businesses, and the subsequent translation of such policies into managerial action. The growth of enterprises is limited by the available scope of managerial skills resources, specifically their ability to co-ordinate capabilities and to introduce new people into enterprises.

Considerable doubt exists regarding the quality of strategic planning and management in this crucial economic development sector, with policymakers indicating that particular weaknesses exist in innovation, financial acumen, marketing ability, entrepreneurial flair, practical planning, management knowledge and human resource management, and many businesses do not therefore reach their full potential and fail to grow [86, 87].

Rural markets offer great scope for concentrated marketing efforts due to recent increases in rural incomes, and the likelihood that such incomes will increase faster based on better production and higher prices for agricultural commodities [88]. Rural marketing is a developing concept of which marketers have recently realised the advantages, and, as a part of any economy, displays untapped potential. Improvements in infrastructure will also provide opportunities in ensuring a successful future for those operating rurally ([89]: 55; [90]).

**Technical skills:** Entrepreneurial skills assist SMEs to generate growth and initiate new ventures in developing economies, such as those observed in Kenya, Malaysia, South Africa and Nigeria ([91]: 1–21; [92]). In the UK, it was revealed that more than a third (36%) of the country's smaller companies admit to a shortage of skilled staff hindering their growth prospects, with the largest gap in the small business skillset being in sales (16%). A lack of IT skills (12%) and financial management (10%) expertise also rank highly as being problematic [93].

**Education and training development:** A key term in the economic development of many countries is that of entrepreneurial education, because such education and training is a major determinant in the growth and survival of enterprises [94]. According to the theory of human capital, investment in knowledge, skills and abilities enhances the productive capacities of individuals [20]. Rural small business owners face challenges that are not

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**External factors**

with land, labour, capital and entrepreneurial skill all considered as being resources in factors of production. The development of entrepreneurship is a primary resource for the institution of economic growth and is a main contributor to the growth of all nations. Entrepreneurs invent methods for achieving their objectives, amongst which are the innovations responsible for technological progress, and it can therefore be considered that it is not a growth in the quantity of other inputs which fosters economic development, but rather the efforts of entrepreneurs who take risks in innovation and organise and co-ordinate all business inputs.

**Technology:** New technologies are a major driver of innovation, with successful innovation leading to sustainable business growth. A need therefore exists for rural SMEs to acquire new knowledge, or adopt new technologies, to achieve competitive advantage through such innovation [74]. Technological capability is widely accepted as being a strategic source of growth and wealth at both national and company levels, and the role of imported technologies acquired by developing countries is a crucial factor in their ability to compete internationally [75]. However, although technological resources provide no direct survival benefits, an accumulation of such resources may become more important when businesses seek international expansion [76]. Limitations on resources, expertise, time and capabilities for the creation of in-house technologies force companies, especially SMEs, to focus on selecting or acquiring new technologies from external sources (Briggs et al., 2003). Technology can deliver timely, accurate and complete information to decision-makers at the lowest educational cost for the SME sector. The use of effective and efficient accounting information systems (AIS) within any small business can improve the flow of information and reduce costs, which can lead to higher profit margins. AIS in small businesses can be utilised tactically to outmanoeuvre competitors and improve market share.

The lack of AIS in SMEs can result in high lead times for business processes, high cycle times for business transactions, poor consumption of business resources [77], and a lack of overall productivity, amongst other problems. Poor telecommunication infrastructures and a lack of broadband connectivity in the rural areas of KwaZulu-Natal have, however, limited the use of technology by SME owners/managers [78].

**Competitive environment:** Competition is prevalent everywhere in the today's business environment, and the survival of SMEs depends on their ability to take full advantage of available resources [79]. By entering competition, companies attempt to achieve competitive advantage which greatly affects the success of enterprises [80]. SMEs are not usually very competitive in terms of their market knowledge, innovations, prudent investments, business operations and good management, which are important factors in improving quality delivery.

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**Internal factors**

generally present in urban locations, however, and as a result, require training programmes specific to their context [16].

Entrepreneurial education and training entails developing a philosophy of self-reliance and includes the creation of new cultural and productive environments, and the promotion of fresh sets of attitudes and business cultures for dealing with future challenges [95]. A major obstacle to economic growth for poor nations is a lack of educated entrepreneurs able to mobilise and co-ordinate production inputs [73]. By inference, financial institutions who lend funds to uneducated entrepreneurs who also lack managerial expertise are making unwise investments, since it is not financial capital that is lacking, but rather knowledge, ability and entrepreneurial skill. In South African schools, various problems exist which hinder the effective implementation of entrepreneurial education, some of which are poorly trained educators and a lack of adequate resources [96]. Better entrepreneurial education could make a significant contribution to job creation and, ultimately, to poverty alleviation.

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External factors	Internal factors
<p>Developing countries compete with other countries, owing to globalisation and increased trade, although barriers and other restrictions generally do not favour these countries [81], because competition is increasing from international companies, because of the existence of Free Trade Agreements [82].</p> <p>Competition therefore presents a risk to the survival of independent enterprises, although it is what motivates companies towards higher productivity, which results in their growth and development. A primary barrier to SME survival is seen as ‘unfair competition’, which includes tax systems, informal economies and public services, and this has persisted with the same intensity throughout the post-war period [83].</p>	
<p><i>Source:</i> Lekhanya [1].</p>	

**Table 2.** External and internal environmental factors.

Entrepreneurial education, training and skills can assist in the growth of rural entrepreneurship intentions in underdeveloped and isolated areas. There are various impacts of the dimensions of individual EO, cost leadership and performance differentiation, on competitive strategy, which can also be interpreted as the leadership style contributed by rural SMEs owners/managers to the overall business performance percentage, including SME survival and growth.

Economic development is not the only factor that determines rates of entrepreneurial success, since entrepreneurial attitudes and perceptions also play an important role in creating entrepreneurial cultures, and are strong indicators of such attitudes and perceptions in efficiency-driven economies. Most policymakers recognise that entrepreneurs usually commence business with limited finances, due to SMEs operating in a range of industries and environments, which results in their policies generally supporting a broader scope of entrepreneurs. Policymakers often fail to recognise that benefits for entrepreneurs can vary dramatically, however, depending on entrepreneurial desires to build high-growth businesses in rural areas, which often lack such high-growth entrepreneurial endeavours.

A positive relationship exists between the attitudes of managers and actual growth outcomes of SMEs, since SME managers/owners are required to accommodate greater changes than managers of larger companies, and growth requires change and its effective management to ensure business success. Managing change effectively, the recognition that change requires altered attitudes and the positive behaviour of involved individuals are therefore all of prime importance, although it is generally accepted that many managers are unable to easily change their attitudes and behaviour to fit the changing needs of organisations.

## 4.12. Advantages and disadvantages of rural entrepreneurship digitalisation

### 4.12.1. Advantages

- Acceleration of manufacturing initiatives;

- Empowerment of indigenous entrepreneurs;
- Access to global markets;
- Marketing connections;
- Wider distribution of customer service improvements;
- Improved business transactions;
- Time-saving; and
- Minimisation of business costs.

#### 4.12.2. *Disadvantages*

- Advanced skills are required;
- High installation costs;
- Absence of privacy and data protection laws; and
- Lack of safe cybersecurity intelligence.

### 4.13. Drivers of rural entrepreneurship digitalisation

#### 4.13.1. *Technological development*

In order to achieve community development opportunities, academic improvements, social change and political and entrepreneurial growth, governments should prioritise the installation of fibre optic technologies, thereby making broadband connectivity accessible to rural communities. The provision of fibre optic connectivity to all residences in rural areas would not only cater for household communication but allow for the digitisation of rural business initiatives. It is believed that through strategic private sector partnership alliances, the public sector and governments of both developed and developing countries are enabling to create digital infrastructures that will ensure the digitalisation of all rural areas [1].

#### 4.13.2. *Socio-economic factors*

Socio-economic factors are core aspects influencing entrepreneurial behaviour and the operation of businesses. Economic growth is a function of both growth in resources and the rate of technological change, with land, labour, capital and entrepreneurship being resources in the factors of production. Economists, who have studied the effects of these resources or inputs in identifying the causes of economic growth, recognise the growth of entrepreneurship as their primary source. A primary contribution to the economic growth of all nations is that made by the entrepreneurial factor, because it is entrepreneurs who contribute methods for achieving specific objectives, which include those innovations responsible for technological progress. It is therefore not an increase in the quantity of the other inputs that fosters economic development,



but rather the efforts of entrepreneurs, who assume the risks for innovation, and organise and co-ordinate all business inputs.

#### *4.13.3. Societal levels of education*

Entrepreneurial education and training entails developing a philosophy of self-reliance, such as the creation of new cultural and productive environments, and the promotion of fresh sets of business attitudes and paradigms for the achievement of future challenges. Economists maintain that a major obstacle to the economic growth of poor nations is a lack of educated entrepreneurs able to mobilise and co-ordinate all relevant production inputs.

#### *4.13.4. Political willingness*

The importance of SMEs to a country's economy also indicates the significance of government policies that support SME initiatives, including regulations that enable them to operate efficiently, and reduce their administrative costs (Harvie and Lee [68], in Govori [69])). Governments hence need to adopt friendly policies for rural SMEs to enable their survival and growth. Currently, many underdeveloped and developing countries in Africa have not focused SME policies to address the needs of businesses operating in rural and underdeveloped areas. Government initiatives which promote and support SMEs in enhancing their development and reducing poverty lack a proper legal framework and are hindered by bureaucratic processes and other barriers, such as genuinely affective administrative procedures, including access to relevant government agencies. Politics intrinsically involves government attitudes towards business, and the operational freedom allowed to companies, and it is indicated that the types of governmental policy which may constitute potential political risks to businesses fall into three main categories. These include operational restrictions, exchange controls and employment policies, where requirements may exist dictating locally shared ownership, and also particular product requirements. Governments therefore need to implement business policies that allow rural entrepreneurs to remain operational, without having to contend with overburdening bureaucratic restrictions [71].

#### *4.13.5. Barriers to rural entrepreneurship digitalisation*

Rural entrepreneurship is faced with the challenges of financial shortages, deficiencies in networking, electricity, equipment, marketing, small and distant markets, poor transport systems and also corruption. In many countries, meagre infrastructural facilities, poor access to technology and a lack of broadband connectivity and serviceable roads are major developmental challenges for rurally based SMMEs. The productivity and effectiveness of SMEs in developing countries is primarily affected by the diffusion rate of technology in many rural communities. Even where the belief exists that the availability of state-of-the-art technology is an important driver for business expansion in rural areas, more resources are nevertheless required to ensure that fragmented rural villages are effectively digitalised and well positioned to access international markets. The essence of technology should therefore not be ignored, since it enables small companies to access mass markets, connect with global supply chains, cost-effectively track customers and enhance their internal operations.

#### *4.13.6. Infrastructure developments as determinants of success for rural SMEs*

The productivity and effectiveness of SMEs in developing countries are affected by the diffusion rate of technology, which is considered an important driver for business expansion in rural environments [99]. Technology should be regarded as an essential tool for business owners/managers, which cannot be ignored, since it enables small businesses to access mass markets, connect with global supply chains, cost-effectively track customers and enhance their internal operations [100]. In many countries, Information Communication Technology (ICT) can be used as an instrument for driving socio-economic development, such as poverty reduction, and more particularly in the SME environment to enable growth. Poor infrastructural facilities, such as roads and technology, have been mentioned as major obstacles for SME development and growth, and a need remains for both infrastructural (social, economic, ICT and other enabling infrastructures) and SMME development (agricultural processing, village markets and finance/credit facilities) [101].

Infrastructural developments include the ongoing expansions required for ICT in terms of bringing about improvements in the quality of life, empowerment and economic development of rural communities [102]. It is, however, not regarded as economically viable for SMEs to incur significant infrastructural costs, due to the fact that they are often located far from commercial centres, which can have a direct negative impact from any infrastructural shortfalls that exist [103]. Consequently, the inadequacy of infrastructural components, such as power supply, transportation, industrial estates and telecommunications, is a major barrier to effective SME start-ups in rural areas.

#### *4.13.7. Rural entrepreneurial resources*

Various resources, such as those of finance, human and social capital and also networking, have direct or indirect impacts on the survival and growth of SMEs, whose owners/managers must also possess the necessary capabilities to acquire and effectively utilise their business resources [104]. Rural SMEs must therefore demonstrate such capabilities if they intend to survive and develop, and the inability of small business owners/managers to match their products or services with the demands of external environments is therefore a major challenge to their strategic growth. SME owner/manager levels of formal education, access to and use of new technologies, along with poor management skills also contribute to limiting SME survival and growth ([13], and more recently [105, 106].

SME owners/managers themselves lack the necessary skills and capabilities required for business start-ups and operations, and with rural enterprises characterised by many difficult factors, such as limited resources, their small sizes and scattered and remote locations, the transaction costs for rural activities are high, which is largely the result of the time required to ensure that business standards are met [107]. Rural enterprises face risks that range from managing the power imbalances they experience compared to larger businesses, to buyers that can influence terms, conditions and standard requirements for making sales. In addition, rural enterprises have limited access to current market information, mainly due to weak transport and communication infrastructures, specifically in rural environments, which makes it extremely difficult for such enterprises to participate in high-value markets [108].

The growth of SMEs has been hampered by a variety of barriers, created directly or indirectly by the state of their operational environments [109]. Due to fiscal policy constraints, specifically high taxation, financial constraints in institutional environments remain major barriers to the success of SMEs, since their influence encourages many SMEs to conduct their activities in informal economic sectors, because the managers/owners of many SMEs are survivalists who require continuation of existence and growth beyond their business start-up phases. The informal sector is, however, often faced with challenges, such as market deficiencies and institutional faint-heartedness, which impede their growth. Governments should therefore encourage the growth of 'knowledge networks', which offer SMEs the opportunities to more easily exchange information with both domestic, and also in particular, large international companies.

#### *4.13.8. Rural enterprise networks*

Network relations can be a source for achieving a higher degree of EO and business performance, and rural SMEs therefore need to belong to properly formulated and reliable networks if they are to survive and develop [110]. Networking plays an important role in the managerial skills of SME owners/managers operating in informal settings, as is the case with many rural entrepreneurs, and strong relationships are thus built with other business individuals or organisations in order to survive and enhance their competitiveness [111]. SME owners/managers often identify new opportunities and gain valuable ideas, information and resources from the networks to which they belong [112].

How rural SMEs engage in networking in many countries is, however, largely unknown, and the improvement of networking between business leaders is suggested as an appropriate arrangement to improve business success in rural areas [113]. Operating within networks, through which formal arrangements between independent businesses are established to enhance member success, is generally accepted as an important strategy to assist small businesses to survive and prosper, because networking enables entrepreneurs to make significant contributions to social capital and increases the long-term likelihood of their success [114, 115].

In the past, the location of businesses was considered an important factor by business owners when launching their enterprises [116]. This is true only in highly populated urban areas, and not in rural areas, where networking is entirely dependent on word-of-mouth for referrals and increases in patronage, due largely to a lack of Internet connectivity, which suggests that rural entrepreneurs need to alter their business practices with regard to promotional marketing strategies in order to increase their business networking, and should begin by making use of modern technologies, such as social media, as their business networking tools [117].

#### *4.13.9. Human capital within the rural SME sector*

The human capital of enterprises is an important internal determinant of their survival and growth [118]. Human capital in entrepreneurship is defined as the attitudes, commitments, values, knowledge, experience, education, capabilities, skills and abilities that aid entrepreneurs in starting, running and growing their businesses [119]. Human capital is therefore a critical factor for the development and survival of enterprises, including the competitiveness of

ventures, since its use directly affects SME performance, and is therefore a crucial determinant of their performance ([120–122]). It is a fact that the vast majority of SMEs still hold negative training philosophies, and as such, merely pay lip service to human resource development.

Furthermore, human capital is generally regarded as a critical agent in SME performance to empower owners/managers with training that enables them to make the correct managerial decisions when dealing with factors from both external and internal business environments [123]. There is therefore a definite need to investigate the effects of training and human capital development management with regard to the growth and survival of rural SMEs [124]. The promotion of modernisation, capacity building and the sizing-up of SMEs are required, and human capital therefore remains the most important factor for productivity in today's economy, including the small business sector [125, 126].

#### *4.13.10. Institutional challenges to rural entrepreneurship*

South Africa's institutional restrictions take a variety of forms, including high borrowing costs, complex tax regimes and a cumbersome bureaucracy, which can lead to low entrepreneurial growth in transitional economies. SMEs are therefore confronted by many challenges, such as environmental legislation, inefficiency in supply chain networking, increased local and global market competition, uncertain domestic market conditions and shortages of funding and sustainability in expansion [127]. The growth and survival of rurally based SMEs particularly are largely affected by problems associated with government-imposed regulatory frameworks, relative to their urban counterparts. Rurally based entrepreneurs have demonstrated a rare ability to start, grow, compete and survive in business longer than many urban SMEs, even when voluntarily complying with government regulations and procedures. The basic policies, laws and regulations of the country influence the survival and growth of its SMMEs, and a lack of collateral and institutional support are factors that heavily impede the survival and growth of SMME agribusinesses in developing countries, such as South Africa, where many rural SMMEs fail to meet collateral requirements that qualify them for bank loans.

The unleashing of entrepreneurship requires an environment that enables entrepreneurs to create, operate, manage and, if necessary, close businesses, within a context where compliance with the rule of law governing disclosure, licencing and registration procedures and the protection of physical and intellectual property are guaranteed. The existing regulatory environment should encourage people to launch their own businesses, attempt new business ideas and to take calculated risks, while keeping administrative burdens to the minimum required to support sustainable public policy and development objectives.

## **5. Methodology used**

A comprehensive literature was conducted, and it was used as sources of questionnaire formulation for the empirical data collection. A total of 501 people who own or manage small and medium enterprise (SMEs) were asked to complete 10-page questionnaires to get empirical data. Mixed technique of quantitative and qualitative was employed composing closed and

Research area	Questions
Knowledge and understanding of digitalization	<b>Rural entrepreneurial digitalization described as:</b> <b>Alternative response:</b> Modern technologies; forms of electronic media; viral marketing; Internet marketing; using all business activities electronically
Attitude towards new social media networks	<b>Attitude towards rural entrepreneurial digitalization and use of new technologies by rural entrepreneurs:</b> <b>Alternative response:</b> Costs of Internet are very high; Internet is time-consuming; rural entrepreneurship can do without digitalization; rural entrepreneurship requires special skills
Benefits of digitalization	<b>Rural entrepreneurs benefit from following for using digitalization and new technologies:</b> <b>Alternative response:</b> Access to international markets; increase brand popularity; reduce marketing costs; easy business networking; increase sales
Factors contributing to the adaption of digitalization	<b>The following factors affect the use of rural entrepreneurship digitalization:</b> <b>Alternative response:</b> Political factors; economic factors; social factors; technological factors; legal factors
Methods of digitalization	<b>Most used rural entrepreneurship digitalisation methods are:</b> <b>Alternative response:</b> Emails; social media; text message; viral marketing; affiliate marketing
Implications of digitalization	<b>Rural entrepreneurship has been increased using digitalisation:</b> <b>Alternative response:</b> Minimise costs; promote brand; reduce advertising costs

**Table 3.** Summary of key questions.

open-ended questionnaire together. Questionnaires were distributed to the owners'/managers' business premises with the help of research assistants. The participants were given 7 days to complete questionnaire. Data were analysed using Statistical Package for the Social Sciences (SPSS) version 23.0 to test significance of the results and later presented (**Table 3**).

## 6. Research findings

The findings are outlined in this section based on the empirical research conducted in the various rural places in KwaZulu-Natal province of South Africa. All tested variables were constructed from the international literature review presented in the previous section, on the numerous problems confronting rural entrepreneurs in diffusing and adopting the use of modern technologies to achieve growth. The pick variables were scientifically tested and results are presented in **Tables 4** and **5**.

The results presented in **Table 4** show the various aspects associated with the attitude towards rural entrepreneurial digitalisation. The high costs of Internet 291 (58%) and special skills needed 80 (16%), followed by time-consuming in the Internet seem to be most concern amongst the respondents; however, there was also considerable number of 75 (15%) who still believe that rural entrepreneurship can do without been digitalised. This perception can be due to the resistance to change from old business practice or lack of knowledge and understanding of the

Attitude towards rural entrepreneurial digitalization			Method of digitalization			Benefits of rural entrepreneurial digitalization		
Variables	Frequency	Percentage	Variables	Frequency	Percentage	Variables	Frequency	Percentage
Costs of Internet are very high	291	58	Emails	85	17	Access to international markets	210	42
Internet is time-consuming	55	11	Social media	246	49	Increase brand popularity	30	6
Rural entrepreneurship can do without digitalization	75	15	Text message	110	22	Reduce marketing costs	100	20
Rural entrepreneurship requires special skills	80	16	Viral marketing	40	8	Easy business networking	55	11
Total number of participant	501	100	Affiliate marketing	25	5	Increase sales	105	21

**Table 4.** Variables tested on digitalisation of rural entrepreneurship.

Knowledge and understanding of rural entrepreneurial digitalization			Factors affecting rural entrepreneurial digitalization			Implications of rural entrepreneurial digitalization		
Variables	Frequency	Percentage	Variables	Frequency	Percentage	Variables	Frequency	Percentage
Modern technologies	110	22	Political factors	37	7	Minimise costs	40	8
Forms of electronic media	65	13	Economic factors	251	50	Promote brand	170	34
Viral marketing	25	5	Social factors	37	7	Reduce advertising costs	291	58
Internet marketing	261	52	Technological factors	150	30			
Using all business activities electronically	40	8	Legal factors	25	5			

**Table 5.** Variables tested on other critical issues on digitalisation of rural entrepreneurship.

benefits of digitalisation. About digital methods used by respondents, social media with 246 (49%) is dominating with high number, followed by text messages with 110 (22%). These findings indicate clear picture that digitalisation of the rural business is at the fancy stage, and therefore, need to be encouraged and managed more effectively. A large number of respondents

believe that rural entrepreneurs can benefit in the access to international markets. They also think that it can reduce marketing costs while increasing sales.

The results shown in **Table 5** revealed that 110 (22%) as well as 261 (52%) of the respondents have knowledge and understanding of modern technologies and Internet marketing. Therefore, these are making significant impact in promoting brand and reducing advertising costs. However, they are critical external factors influencing the diffusion and adoption of digital concept in the sector, these include economic factors with 251 (50%) and technological factors with 150 (30%) of the respondents affected by them. There are also concerns raised by respondents about political factors, social factors and legal factors that they are influencing their business strategies of doing day-to-day running of the business.

## 7. Limitations

The results used in this work are completely based on the survey conducted in rural places of KwaZulu-Natal province in South Africa. Therefore, the generalisation of these findings should be done with care. The survey was only done on the formal registered SMEs without considering informal businesses. The complexity of the South African geographical profiles also played significant role.

### 7.1. The research implications

All over the world, many entrepreneurs operating in rural places including those in urban as well as peripheral areas will benefit from this work. This work will provide most needed knowledge and understanding of rural entrepreneurship digitalization and how it can benefit their business popularity. The marketers and all business interest parties need to obtain broad understanding of the relevant theories such as rural entrepreneurial digitalization which can be applied when addressing complex problems faced by rural communities everywhere in the world. This brings new thinking about implementing concept of digitalization of rural businesses as a promotional strategy to connect fragment rural places with the international markets and business society. On the practical side, the utilisation of recommendation from this survey will help in providing what is lacking and what needs to be done about the digitalization of rural entrepreneurship and what are the pro and cons of these concepts.

## 8. Recommendations

This study recommends that due to the various challenges such as lack of broadband availability and electricity in many rural places, there is a lot of improvements need to be done to improve rural business and livelihood of rural communities as well. It has been found that rural entrepreneurs are also faced with barriers including poor telecommunications infrastructure, management incompetence, lack of marketing skills and insufficient entrepreneurial knowledge, therefore, this study recommends that governments and private sector should be

encouraged to work together to improve ICT co-ordination and its policy development for the rural places. National governments should establish steering agencies responsible for championing and ordinating rural entrepreneurial digitalisation and modern technologies networking systems for rural communities. Since the use and awareness of social media and social network gained significant growth in many countries thus, can be good promotional tool for rural enterprises, as these will help in minimising marketing while speeding up the sales of the products. The study recommends the use of digitalisation to an able rural business to reach out international market and enhance competitive advantage. Digitalisation will improve entrepreneurial knowledge skills, will help them to know their customers better, to know their customers need, who they are, where they buy, when they buy and how they buy.

## 9. Conclusion

Since the inception of Internet throughout the world, the use of new technologies such as social media and social network has shown rapid growth from the business and social sectors. However, it has been noticed that many rural enterprises are still not using modern technologies in promoting their businesses. Hence, the cost benefits and importance of digitalisation of rural entrepreneurship must be clearly understood and be encouraged as this will be an important promotional tool for strengthening company brand. The concept of digitalisation will improve and bring new changing trends in emerging markets including rural industries and scale up product development and product diversification, as well as promoting idea generation through use of Facebook, company emails, Company Tweets and Instagram.

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