

# FACTORS DETERMINING THE ABILITY OF RURAL-BASED UNIVERSITIES TO NURTURE POSITIVE ENTREPRENEURIAL BEHAVIOUR AMONG UNIVERSITY STUDENTS

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## ABSTRACT

There is limited knowledge on how to promote the assimilation of positive entrepreneurial behaviour, which undermines start-up venture creation and job opportunities by and for graduates from rural-based universities. Although there is considerable research on the adoption of entrepreneurial behaviour, little has been done so far to enhance an understanding of how various factors influence the abilities of rural-based universities to nurture it. To bridge this gap, this paper uses a bibliometric assessment of the major factors that undermine the assimilation of entrepreneurial behaviour by students in most rural-based universities. Specifically, this study aimed to distill in the literature the constraints that hinder the abilities of rural-based universities to promote entrepreneurship in Africa, America, Asia, and Europe. Purposive and snowball sampling was used to select articles drawn from these geographical areas. Data were analysed using ATLAS.ti software. It was found that various factors largely influence and determine the assimilation of entrepreneurial behaviour. Among these is a) nature of training that institutional curricula provide; b) accessibility of funds and infrastructure; and c) loosely premised cultural orientations. Because of this, there is a need to explore ways to assimilate entrepreneurial behaviour in undergraduate students. We believe the criteria we present for use in assessing the ability of a rural-based university in entrepreneurial education are applicable and valuable in promoting positive entrepreneurial behaviour among students. We hope that this study will be a catalyst for further exploration of interventions that can help in creating an entrepreneurial society.

**KEYWORDS:** *Entrepreneurial behaviour, promote entrepreneurship, rural-based university, university students.*

**JEL CLASSIFICATION:** O1, I230, O15, O350.

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## INTRODUCTION

Unemployment is common in developing and developed countries (Haussen & Schlegel, 2019). In South Africa, for example, youth unemployment increased by 10.2 % from 2014 to 2021, with 40.3 % of those aged between 25 and 34 years being unemployed during the first quarter of 2021 (STATSSA, 2021). Consequently, researchers and policymakers have been continuously focused on the problem of youth unemployment and graduate employability (Davey et al., 2016). Although entrepreneurial education is a gateway to employment (Du Toit, 2021), it has failed to offer job opportunities to graduates. As such, impacting entrepreneurship attributes for enhancing graduate employability and creating opportunities for self-employment is the new approach in most universities globally. Defining a rural-based university is a critical task for entrepreneurship education researchers, as it has implications for the results of a study. In this study, universities were classified as rural-based if they were established in socio-economic and environmental settings that qualified them to be categorised as non-urban (Mlambo, 2018).

Impacting on entrepreneurship attributes is now part of intentional approaches by universities locally and internationally to imbue as graduate attributes. However, academic institutions in most rural areas continue to find it challenging to foster the assimilation of positive entrepreneurial behaviour (PEB) due to the following bottlenecks: (1) inadequate skills commensurate with the requirements of the job market (Oluwajodu et al., 2015); (2) limited relevant working experience (Davey et al., 2016; Dencker et al., 2021); (3) inadequate information on entrepreneurial opportunities (Mirjana et al., 2018); (4) high costs of seeking employment (Graham et al., 2019); (5) inadequate capacities of rural-based universities (RBUs) to produce appropriately skilled graduates (Rogan & Reynolds, 2016; Ohei, 2019); and (6) inability of institutions to turn challenges into opportunities (Cardon & Kirk, 2015; Purusottama, 2019). Limited abilities of RBUs to deliver on their mandates due to constrained capacities to produce skilled graduates that meet the job market requirements worsen the situation (Zapkau et al., 2017; Ojiaku et al., 2018). Most scholars (Alia and Abou, 2020; Mgaiwa, 2021) cite a limited understanding of the nature, causes and origins of the challenges when explaining the persistence of these constraints.

The inability to foster PEB (Hamilton et al., 2015) is another factor that undermines the capacities of RBUs to reduce unemployment. Presumably, the adoption of PEB addresses this challenge. This calls for RBUs to embrace strategies premised on scientific evidence to enhance the capabilities of students in nurturing PEB (Awan & Ahmad, 2017; Abbasianchavari & Moritz, 2020). Among these are (1) establishment of knowledge-based societies; (2) innovative adoption of environmentally sustainable livelihood and resource use practices. The approach was preferred because it offers broad-based opportunities to investigate the challenges confronting RBUs in inculcating PEBs. For example, the United States of America (USA) faces the challenge of creating employment opportunities for APTs of the magnitude of 5.9% of its population (STATSSA, 2021).

Although most RBUs have introduced strategies to cope with post-qualification employment challenges, various factors continue to undermine their abilities, viz.: (1) lack of adequate infrastructure and human resources (Karim, 2021); (2) inappropriate institutional training curricula (Astuti & Martdianty, 2012; Davey et al., 2016); (3) limited access to funding (Kumara, 2012; Al Bakri & Mehrez, 2017); and (4) loosely determined and defined cultural orientations (Ijaz et al., Chipeta, 2020). Addressing these limitations demands that APTs in RBUs promote the adoption of PEB (Davey et al., 2016). Positive entrepreneurial behaviour opens space for the creation of job opportunities, especially in view of increasingly limited employment opportunities (Raposo & Paço, 2011; Zapkau et al., 2017). To increase employment opportunities, RBUs should embrace training strategies that enhance the abilities of APTs to create self-employment (Muñoz & Kimmitt, 2019; Mgaiwa, 2021). The RBUs are strategically positioned to impart PEBs by their location in areas richly endowed with resources that can be exploited to create self-employment (UNESCO, 2016; Sonone, 2018; Muñoz & Kimmitt, 2019). Therefore, this article responds to this need by exploring strategies that enhance capacities that create green jobs for current and future generations. In the following sections, this article presents details of the systematic review methodology, presentation of the significant results using tables and ATLAS.ti 22 flow chart diagram, discussion and analysis, policy implications, and finally, a conclusion.

## **1 LITERATURE REVIEW**

The inability or limitations of RBUs to translate knowledge into tangible employment opportunities (Muñoz and Kimmitt, 2019) poses formidable challenges that must be addressed by embracing a culture of informed interest and a context-based approach to exploring these opportunities (Zapkau et al., 2017; Mirjana et al., 2018; Dencker et al., 2021; Du Toit, 2021). Numerous attempts have been made to determine the approaches that can be used to promote the uptake of PEB (Ijaz et al., 2012; Kumara, 2012; Manning et al., 2020). The most common approaches are behavioural changes that enable individuals to create self-employment by tapping into the knowledge they have acquired via formalised

academic training (Mirjana et al., 2018). Using the Botsaris and Vamvaka (2012) theory of planned behaviour, some scholars (Misoska et al., 2016) have emphasised the importance of entrepreneurial intentions. The theory predicts an individual's behaviour under diverse social and environmental settings. Most literature on PEB relates to what is translatable into actionable interventions (Astuti & Martdianty, 2012; Misoska et al., 2016). Ongoing efforts meant to move societal transformation into knowledge-based economies (Li et al., 2019; De Silva and Koggalage, 2020) demonstrate the importance of realising this goal. However, the persistent failure of RBUs to promote adoption of PEB (Kuckertz & Wagner, 2010; Zapkau et al., 2017) is of significant concern. It undermines the progressive assimilation of PEB. Partly, this deficiency originates from the lack of unified perspectives on what must be done and how. This paper analysed available scholarly literature to provide insights into how this can be addressed.

To that extent, the role of rural-based universities in facilitating the creation of an entrepreneurial society has become more pronounced over the few years (Devkota et al., 2022). While the above views have given rise to the need to promote university engagement in entrepreneurial education ((Dzionic-Kozłowska & Neneman, 2022), the university's role is not entirely accepted (Awan & Ahmad, 2017). There are still some doubts about whether the emphasis on integrating university education and entrepreneurial activities does not shift the focus from community goals toward institutional interests (Mgaiwa, 2021; Wachira, 2021). However, several studies highlight that students' entrepreneurial attitudes could be changed through education, emphasizing the importance of a university in fostering a positive mentality (Al Bakri & Mehrez, 2017). Thus, this study argues that student entrepreneurial capabilities and behaviours can be advanced through university education.

## **2 DATA, METHODOLOGY AND METHODS**

This study aimed to distill in the literature the constraints that hinder the abilities of rural-based universities to promote entrepreneurship. This paper is based on a review of literature on the factors that undermine the adoption of PEB. It is a product of grounded theory analysis emanating from the theoretical underpinnings of interpretivism. Interpretivism is a research approach that seeks to synthesize facts in qualitative secondary sources through a rigorous literature review (Willis, 2007; Denizlin & Lincoln, 2011; Rahman, 2016). In this study, this approach was chosen because it draws on a range of methods, tools, and techniques that deepen our understanding of entrepreneurial behaviour. Various scholars (Maqtar et al., 2017; Dean, 2018; Vigolo et al., 2018) report that harnessing what other researchers have observed in different localities worldwide can provide empirically informed understanding of the constraints that undermine the assimilation of PEB. The reasoning articulated above prompted us to analyse peer-reviewed materials that address some of the significant challenges confronting the assimilation of PEB.

We used search engines such as Google Search and Scholar, Web of Science, Ebscohost, and Science Direct. These databases were carefully chosen because they offer powerful search tools for narrowing results and provide access to the full text of an article (Cwiklicki & Wojnarowska, 2020). However, searching journal articles using the query-result mechanism resulted in retrieving duplicate results that matched the results from another search engine. The discrimination criteria involved de-duplicating articles using the following two selected reference management software packages: EndNote, and Mendeley. The above was necessary to eliminate false duplicates and to ensure a valid and reliable pool of studies for inclusion in a systematic review. The initial search yielded 234 articles, which were screened for relevance based on whether they addressed the determinants of PEB in RBUs.

Although none of the selected papers explicitly used the term rural-based university, efforts were made to confine the selection of RBUs by examining cues in each publication's materials and methods section. Categorisation of RUBs was refined using (a) physical addresses and ZIP codes as provided in

institutional websites and other online sources of information; (b) a Geographical Information System (GIS)-based spatial query of the x-y coordinate locations of institutions investigated; and (c) prior knowledge of the geographical locations of where these institutions are found. Various scholars explained this selection procedure in greater detail (Muchaku, 2020; Hu et al., 2021). Based on the above approach, three parameters were used to guide the identification of each institution's disposition toward rural areas and PEB. The variables chosen included 1.) population structure, 2.) university characteristics, and 3.) economic factors were used (Turhana et al., 2013; Zhou et al., 2020).

The published articles were further refined for the authenticity of reported findings and how recently they were published. Only articles contained in accredited journals published between January 2010 and May 2021 were selected for analysis. This was done to synthesise the body of knowledge and contemporary debates embedded in authoritative sources of peer-reviewed materials dealing with the factors that influence the uptake of PEB among undergraduates in RBUs. Snowball sampling was used with selected pointers that included the title, keywords in abstracts, and tracking down references (or citations) in journal articles to guide the identification of literature and each institution's disposition toward PEB. A snowball approach of the references was applied to the "more relevant" articles to identify peer-reviewed journal papers that may have been missed (Björklund & Johansson, 2018). Entrepreneurial behaviour, undergraduate courses, universities, Africa, America, Europe, Asia, and rural-based were used as the search index words. Thereafter, 58 articles were screened for further analysis using summarisation techniques provided in the ATLAS.ti software. The summarisation process involves focusing on terms related to the focus of the study in order to filter relevant articles (Khan et al., 2019).

### 3 RESULTS AND DISCUSSION

As reported above and shown in Tables 1 and 2, articles were identified. Out of the articles, initial identified, 58 were selected based on the discrimination criteria. Further assessment was conducted by verifying the articles' relevance to PEB in RBUs. The study was purposefully designed to provide representative coverage of the international situation by focusing on RBUs in Africa, America, Asia, and Europe (Table 2). In Figure 1, the results of the study are presented. It depicts the factors regarded as the major determinants of a RBU's ability to foster PEB among undergraduate students. Different combinations of all densities (D) and roundedness (G) in ATLAS.ti themes are presented to highlight the number of links among entities and respective quotations linked to a code, respectively (Figure 1).

*Table 1. Articles downloaded from each database*

Databases	Articles		***Inclusion rate (%)
	*Identified	**Included	
Google Scholar	42	22	52.4
Google Search	75	17	22.7
Web of Science	29	5	17.2
Science Direct	37	5	13.5
Ebscohost	51	9	17.6
<b>Total</b>	<b>234</b>	<b>58</b>	<b>-</b>
<i>Explanation:</i>	<i>* Based on online database screening; ** Selected based on online screening; *** Percentage of articles included in the sampling universe</i>		

(Source: Own processing)

It is worth noting that there is a likelihood that there is a bias towards countries in Africa. Most of the articles used were drawn from Africa compared to the other parts of the world. Nevertheless, the paper provides valuable insights that can help RBUs to mount programs to strengthen the nurturing of PEB among undergraduate students. Figure 1 below illustrates the scholarship on RBUs, presented using a flow chart diagram generated from ATLAS.ti 22 software. In the flow chat, abbreviations D (densities) show the number of links between entities or the number of other codes connected to a code, G (groundedness) refers to the number of quotations linked to a code (Friese, 2019), and P reflects the page numbers in selected journal articles.

*Table 2. Classification of the downloaded articles by geographical region of the world*

Continent		Articles identified	Articles included	Articles included in the study as % of those identified	
<i>Region</i>	<i>Examples of Countries</i>				
Africa	East	Kenya, Uganda	26	6	23.1
	West	Ghana, Nigeria	22	6	27.3
	North	Morroco, Tunisia	14	3	21.4
	Southern	South Africa, Namibia	45	13	28.9
America	Latin	Mexico, Chile	18	6	33.3
	North	USA, Canada	45	5	11.1
Asia	–	Malaysia, India	23	10	43.5
Europe	–	Spain, Turkey	41	9	22.0
<b>Total</b>	–		<b>234</b>	<b>58</b>	–

(Source: Own processing)

### 3.1 Institutional policies and culture

It is shown in Figure 1 that institutional support policies and practices inspire PEBs (Stephan et al., 2015; Li et al., 2019; Shu et al., 2019). A clear policy that is pro-entrepreneurship encourages conscious and voluntary assimilation of business thinking and acumen among undergraduate students (UGS) and staff (Davey et al., 2016; Abbasianchavari & Moritz, 2020). In Pakistan, for example, the government encouraged all the country's universities to incorporate entrepreneurship into their strategic plans, which helped accomplish this strategic intent (Iqbal et al., 2014). The groundedness (G) score of three (3) was obtained for institutional policies as a factor of the ability of RBUs to nurture PEB highlights the ease with which they interact with one another.

Malaysia and Turkey pursue policies similar to those that Pakistan adopted. This is achieved by creating an enabling environment for universities to invest in developing entrepreneurial skills (Misoska et al., 2016). Researchers (Davey et al., 2016; Muñoz and Kimmitt, 2019; Manning et al., 2020) acknowledge the positive outcomes of this strategy on entrepreneurship education, which confirms that undergraduate students in RBUs can assimilate PEB. However, entrepreneurial education success depends on academic institutions' preparedness and willingness to support the formulation and implementation of pro-entrepreneurial education policies.

Most universities do not have standard constructs for measuring the quality of entrepreneurship within academic departments (Muñoz & Kimmitt, 2019). Consequently, inconsistent, vague, and difficult to translate into practice policies are implemented. In addition, policies might not stipulate the nature of assistance that universities can provide (Awan & Ahmad, 2017; Alia & Abou, 2020). For example, universities fail to contribute effectively toward PEB due to a lack of curriculum development that promotes an entrepreneurial mindset amongst students (Pak et al., 2020). This requires RBUs to



(2019) and Muñoz & Kimmitt (2019) support this view, highlighting that clearly defined policies positively correlate with high ethical standards and establish a sense of accountability among staff. Thus, the importance of sound policies has been neglected, and most studies are limited because they fail to highlight the importance of contextual relevance. These limitations justify consideration of how RBU policy practices could motivate or demotivate critical players involved in entrepreneurship education.

To increase students' willingness and ability to start businesses, policymakers and other key players must focus on cultivating creative thinking (Botsaris & Vamvaka, 2012), generation of new ideas, and involvement in activities that create an environment that enables meaningful assimilation of PEB (Davey et al., 2016; Lv et al., 2021). Apart from this, universities should pay greater attention to creating and developing the entrepreneurial ecosystem within their institutions (Iqbal et al., 2014; Muñoz & Kimmitt, 2019). This can happen by introducing or increasing training programs that cover various aspects of entrepreneurship, investing in graduate attributes with an entrepreneurial focus, holding seminars, and convening outreach workshops that present examples of successful students or graduate-led businesses in a wide range of settings (Figure 1). This creates space for students with untapped competencies, knowledge, and skills to identify business creation and management opportunities worth harnessing.

### **3.2 Access to financial resources**

Besides emphasising the importance of university policies in determining the ability to foster PEB, some authors have explored the importance of funding. Kumara (2012) reports that a university's ability to influence and nurture PEB depends on access to financial resources. The Macedonian experience (Misoska et al., 2016) demonstrates how access to finance substantially influences entrepreneurial education. Similar studies in Croatia reveal that RBUs have limited abilities to mobilise resources, including funding (Al Bakri & Mehrez, 2017). Poorly-structured government priorities worsen this situation. Davey et al. (2016) report that incentivising students requires funding for establishing infrastructure such as research centers that champion the promotion or nurturing of PEB via providing quality entrepreneurial education (Figure 1). Financial resources determine the ability of universities to revolutionize their teaching methods (Zapkau et al., 2017). Davey et al. (2016) further argue that many potentially suitable programs have been initiated with the help of grants and crumble once the external funding source becomes unavailable.

The availability of financial resources makes it possible to create favourable environments that stimulate undergraduate students in RBUs to assimilate PEB. This limitation can be addressed by exploring innovative ways that sustain entrepreneurial education. For instance, sustainable funding for undergraduate studies can help increase employment opportunities (Alia & Abou, 2020; Dencker et al., 2021). However, studies to identify implementable strategies that can be used to leverage the required funding from multiple sources are scanty. Inadequate internal funding mechanisms and the capacity to creatively identify viable sources of home-based funding worsen this situation (Dencker et al., 2021). As such, RBUs should promote strategies that identify internal funding opportunities for the university, thereby creating a favourable environment that inspires undergraduate students to embrace PEB.

### **3.3 Professional development opportunities and variable quality of teaching**

In this investigation, professional development programs and recruitment of experienced and qualified staff were found to be some of the significant determinants of PEB. This is a somewhat intriguing finding because most literature focuses on the influence of hiring experienced or skilled professionals (Davey et al., 2016; Awan & Ahmad, 2017; Taha et al., 2017). The G (3) and D (1) values for professional development reflect a considerably strong foundation in literature. As Du Toit (2021) and Chuah et al. (2020) explain, variable quality of teaching in rural areas is a major challenge in most RBUs. This observation confirms the results of some studies which highlight the limited abilities of most RBUs to

attract quality staff (Figure 1). In India, for example, severe challenges constrain 63 % of RBUs because they cannot pay competitive salaries to hire and retain qualified and experienced academics (Taha et al., 2017; Sonone, 2018; Alia & Abou, 2020). The same situation prevails in South Africa, where the distribution of well-resourced universities is biased in favour of those located in urban areas (Dencker et al., 2021; Du Toit, 2021). Universities must provide an entrepreneurially friendly environment through capacity-building programs and recruitment.

Limited capacity to formulate innovative ways of mobilizing financial resources makes it difficult to address this challenge (Zellweger et al., 2011; Davey et al., 2016; Chuah et al., 2020). Successful mobilisation of financial and other resources in RBUs can assist in accomplishing more via providing incentives for academic staff to deliver and creating supportive environments that motivate staff to explore more opportunities (Botsaris & Vamvaka, 2012; Alia & Abou, 2020; De Silva & Koggalage, 2020). Incentives worth considering include Vice Chancellors' awards, recognition of acumen in scholarly publications, innovation partnerships, seed funding, and research grants, amongst others. The establishment of innovation hubs might also help strengthen PEB. How this can be realised remains elusive. Thus, scholarly studies exploring innovative ways RBUs can practice what they teach are needed. Finally, the importance of the capacity building is worth noting and addressing.

### **3.4 Nature of university infrastructure**

The nature of the infrastructure that the RBUs have determines the extent to which they can kick-start and sustain efforts to yield PEB among undergraduate students. Ahmad et al. (2014) reveal that high-quality infrastructure improves instruction and learners' academic performance. Despite this, studies have been carried out in Pakistan (Ijaz et al., 2012; Awan and Ahmad, 2017), South Africa (Thamahane et al., 2017; Chipeta, 2020), and Sri Lanka (Kumara, 2012; De Silva and Koggalage, 2020) have shown that provision of services to highly dispersed communities in most rural areas remains a major impediment to the promotion of PEB. In a closely related study, Raposo and Paço (2011) investigated the impact of infrastructure on education in Portugal. It was observed that the lack of standard facilities hampered the nurturing of PEB in students. In the universities, over-enrolment exacerbates the situation because it worsens workloads. This implies that there is a need to explore innovative ways of recruiting students, coupled with prioritising investment in infrastructural development.

### **3.5 Common factors to use as criteria to measure positive entrepreneurial behaviour**

Figure 1 depicts the outcome of reviewing literature on factors that influence PEB. The factors were found to be common in all geographical regions of the world. They are worth considering when making attempts to create favourable operational environments that foster PEB in RBUs. Further analysis was made to ensure how the practical elements could be utilized to develop criteria for measuring RBUs' ability to foster PEB. In this paper, the criteria to use to measure the ability of a RBU to stimulate PEB were the following: Institutional policies, infrastructure, academic reputation, intellectual property, funding and capacity building are major dimensions identified.

Enrolling students in pre-higher education programs, the amount of external funding secured, the number of students who start their self-employment ventures, and the student-staff ratio are measures that can be utilised to enhance the PEB. In Table 3, the criteria proposed for assessing PEB are grouped into six domains. The criteria presented in Table 3 help measure a RBU's ability to influence PEB among APTs and estimate its performance during a student's study period. Acceptable indicators and weights of RBUs' abilities to foster PEB were adapted to the conditions prevailing in a university. The six dimensions in Table 3 constitute the pillars of what might yield PEB. Self-employment is not broken down into rural and urban-based universities. Each RBU must determine the weight of each dimension.

The importance of infrastructure in promoting PEB is highlighted. How much space and where on campus a university is willing to organise its engagement activities reveals its ability to promote PEB. The facilities should enable APTs to connect academic work and the realities of the adjoining communities before students graduate. The degree to which academic and technical requirements are aligned is an important measure. For instance, research centers and training facilities help RBUs to promote PEB. This means that many indicators can be used to determine an assessment's success. Thus, when assessing the performance of RBUs, a set of indicators should be considered.

*Table 3. Criteria for use in assessing the ability of a rural-based university in entrepreneurial education*

S/N	Criterion	Indicators
1	<i>Infrastructure (I)</i>	– Experiential learning, practical exposure
2	<i>Capacity building (CB)</i>	– Involvement of university stakeholders in setting up/monitoring community development projects
3	<i>Academic Reputation (AR)</i>	– Number of capacity building workshops per academic calendar year
		– University programs addressing the needs of the community and innovation partnerships
		– Requests for university assistance from the community
4	<i>Funding (F)</i>	– Acceptance by society because the university understands needs of the community
		– Impact with respect to achieving the UN Sustainable Development Goals
		– Students enrolled in training under pre-higher education programme
		– Amount of external funding mobilised
		– Provision of bursaries or scholarships specifically targeting students enrolled for entrepreneurial courses
		– Availability of funds to recruit and retain skilled human capital
5	<i>Institutional policy (IP)</i>	– Vice Chancellors' awards
		– recognition of acumen in scholarly publications
		– Number of students who start self-employment ventures
6	<i>Intellectual property</i>	– Staff-student ratio
		– Clear policies
		– Entrepreneurship-tailored programs
		– Number of interventions produced which improve lives of people

(Source: Own processing)

A RBU must have sustainable sources of funding for its programming. Availability of resources such as faculty development funds to support academic staff and students pursuing entrepreneurial programmes should be considered seriously. Ideally, the provision of bursaries or scholarships specifically targeting students enrolled in relevant courses enhances entrepreneurial education. This should be considered in unison with the university's academic reputation. In line with this, requests for university assistance from the community provide a solid benchmark for the entrepreneurial character.

The number of interventions produced and the degree to which a university succeeds in developing programs and demonstrate projects that improve people's livelihoods the ability to promote PEB. Furthermore, entrepreneurial behaviour and soundness of the curriculum are key indicators of institutional commitment to PEB. In this, RBUs need to embrace mission statements clearly show that entrepreneurial spirit is central to its core business. Regardless of their specific functions, departments within universities must also develop systems and procedures that allow UGS and staff to organise and document their work. Courses with an entrepreneurial component confirm that entrepreneurial education has been adopted.

#### **4 SIGNIFICANCE OF THE CURRENT STUDY**

Rural-based universities (RBUs) are an essential entry point for students interested in starting their businesses. Through this study, awareness of the factors a university should address to promote PEB successfully is likely to have increased. With entrepreneurship education increasingly becoming crucial to provide solutions to unemployment among graduates, this study has provided information that enables academics to be recognised and rewarded for programming that promotes PEB. Entrepreneurship education has a potentially significant impact on start-up ventures' creation, growth, and consolidation, Indonesia and Sri Lanka can testify to this (Kumara, 2012; Astuti & Martdianty, 2012). Currently, RBUs lack objective institutional self-assessment criteria for PEB. However, a fair assessment of academic and non-academic staff enables them to view each other as essential partners and to build an understanding of each other's goals and resources.

The criteria distilled in the current study can measure a RBUs' ability to nurture PEB among undergraduate students. The synthesis of this criteria appreciates that there has been a shift from structural workforce interventions to a position of 'employability security' (Woya, 2019), where individual workers are expected to constantly adapt to changing work environments, including latest technologies (Butterwick & Benjamin, 2006; Blustein, Kenny, Fabio, & Guichard, 2019). Thus, the universities should pay attention to entrepreneurship education curricula to ensure that they effectively nurture the development of PEB among undergraduate students, which might result in self-employment in an ever-changing economic landscape. Knowledge of the determinants of positive entrepreneurial attitude and behaviour can help develop tailor-made courses and programs to translate the student intention to actual behaviour that enhances self-employment. Although some tertiary institutions espouse a commitment to implementing PEB to produce unique graduates, successful stories are rare. Given that this study was published literature-based, it is imperative to reinforce the findings via empirical research, primarily to determine how to promote PEB among undergraduate students in RBUs.

#### **CONCLUSION**

In this paper, the ability of RBUs to influence the positive attitude and behaviour of UGS towards self-employment as an alternative career choice has been examined. The enduring vitality of the RBUs and the benefits of PEB create favourable conditions for creating green jobs in countries struggling with unemployment. It has been revealed that RBUs can effectively enable students to exploit emerging entrepreneurial opportunities. Although the literature reviewed emphasizes the importance of PEB, the unique challenges confronting RBUs are rarely considered. Rural-based universities struggle to strengthen the capacity of their staff or incentivise students and staff to implement entrepreneurial programs. The challenges covered in this paper can be used to compile a set of criteria for determining the resources, infrastructure, and policies that RBUs require to promote entrepreneurial education. This paper argues that universities must create linkages with others, introduce relevant policies and provide the infrastructure that supports entrepreneurship. While implementing their programs, universities should learn from each other and share widely new ways of supporting entrepreneurship in rural communities. Another argument we have advanced is that universities should strive for self-reliance by exploring multiple ways of mobilising funding for their work. The universities can introduce or increase training programs on entrepreneurship and/or organise seminars, workshops, and other approaches to showcase successful student-entrepreneurship. The result of this literature study is a generalised overview of this considerable body of literature. We focused more on rural-based universities, and there is a need for a comprehensive study on urban-based universities to ascertain students' experiences in these institutions

on PEB. Again, each concept could have been analysed much more deeply. However, this analysis has drawn out vital theoretical concepts that may inform practice or further research.

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## REFERENCES

- Abbasianchavari, A., & Moritz, A. (2020). The impact of role models on entrepreneurial intentions and behavior: a review of the literature. *Management Review Quarterly*, 71, 1–40. <https://journals.sagepub.com/doi/pdf/10.1177/21582440211006709>
- Al Bakri, A., & Mehrez, A. (2017). Factors Influencing Entrepreneurial Intentions Among Arab Students. *International Journal of Entrepreneurship*, 21(3), 1-17.
- Alia, Y. M., & Abou, E. E. (2020). Determinants of entrepreneurial intention among Sudanese university students. *Management Science Letters*, 10, 2849–2860.
- Astuti, R. D., & Martdianty, F. (2012). Students' entrepreneurial intentions by using theory of planned behavior, the case in Indonesia. *The South East Asian Journal of Management*, 6(2), 100–143. <http://journal.ui.ac.id/index.php/tseajm/article/view/1317>
- Awan, N. N., & Ahmad, N. (2017). Intentions to Become an Entrepreneur: Survey from University Students of Karachi. *International Journal of Business, Economics and Law*, 13(2), 1-9.
- Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, Unemployment rate March 2021. Available at <https://www.bls.gov/opub/ted/2021/unemployment-rate-3-7-percent-for-college-grads-6-7-percent-for-high-school-grads-in-march-2021.htm> (visited September 06, 2021).
- Botsaris, C. A., & Vamvaka, V. (2012). Models of the determinants of entrepreneurial behaviour: a literature review. *Regional Science Inquiry Journal*, 4(3), 155–172. [http://www.rsijournal.eu/ARTICLES/Special\\_2012/155-172.pdf](http://www.rsijournal.eu/ARTICLES/Special_2012/155-172.pdf)
- Björklund, M., & Johansson, H. (2018). Urban consolidation centre – a literature review, categorisation, and a future research agenda. *International Journal of Physical Distribution & Logistics Management*, 48(8), 745-764.
- Cardon, M.S., & Kirk, C. P. (2015). Entrepreneurial passion as mediator of the self-efficacy to persistence relationship. *Entrepreneurship Theory and Practice*, 39(5), 1027–1050. DOI: 10.1111/etap. 12089
- Creswell, J.W. 2013. *Qualitative inquiry design: Choosing among five approaches*. Washington DC: Sage publications.
- Chen, Y., Sha, Y., Wang, J., An, L., Chen, T., Xiang Huang, Y. H. (2021). How entrepreneurship education at universities influences entrepreneurial intention: Mediating effect based on entrepreneurial competence. *Frontiers in Psychology*, 12, 1–12. <https://doi.org/10.3389/fpsyg.2021.655868>
- Chipeta, E. M. (2020). Effects of Gender on Antecedents to Social Entrepreneurship Among University Students in South Africa. *International Journal of Business and Management Studies*, 12(1), 18-33.
- Chuah, S.-C., Kamaruddin, J. N., & Singh, J. K. (2020). Factors Affecting Financial Management Behaviour among University Students. *Malaysian Journal of Consumer and Family Economic*, 15, 154-174.

- Davey, T., Hannon, P., & Penaluna, A. (2016). Entrepreneurship education and the role of universities in entrepreneurship. *Industry and Higher Education*, 30(3), 171–182. <https://doi.org/10.1177/0950422216656699>
- Dean, B. A. (2018). The interpretivist and the learner. *International Journal of Doctoral Studies*, 13, 1–8. <https://doi.org/10.28945/3936>
- Dencker, J. C., Bacq, S., Gruber, M., & Haas, M. (2021). Reconceptualizing necessity entrepreneurship: A contextualized framework of entrepreneurial processes under the condition of basic needs. *46(1)*, 60–79. <https://doi.org/10.5465/amr.2017.0471>
- Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research* (4<sup>th</sup> ed). Thousand Oaks, CA: Sage.
- De Silva, L., & Koggalage, R. (2020). Factors affecting for the entrepreneurship intention of undergraduates. *Journal of Multidisciplinary Engineering Science and Technology*, 7(5), 11923-11936.
- Devkota, N., Shreebastab, D. K., Korpysa, J., Bhattarai, K., & Paudel, U. R. (2022). Determinants of successful entrepreneurship in a developing nation: Empirical evaluation using an ordered logit model. *Journal of Internal Studies*, 15(1), 181-196.
- Drach, I. (2019). Policies and procedures for ensuring research integrity in Ukrainian universities. *Periodyk Naukowy Akademii Polonijne Journal*, 36(5), 41–47. <https://doi.org/10.23856/3604>
- Du Toit , A. (2021). Harnessing education through entrepreneurship in consumer studies to address youth unemployment in South Africa. *Journal of Consumer Sciences*, 49. Available at: <https://www.ajol.info/index.php/jfec/s/article/view/210186>, accessed 15 May 2020.
- Dzionek-Kozłowska, J., & Neneman, J. (2022). Are economic majors “indoctrinated” by their education? Public good game quasi-experiment. *Journal of Scientific Papers Economics and Sociology*, 15(2), 111-122.
- Graham, L., Williams, L & Charity Chisoro, C. (2019). Barriers to the labour market for unemployed graduates in South Africa, *Journal of Education and Work*, 32(4), 360–376. <https://doi.org/10.1080/13639080.2019.1620924>
- Hamilton, M., Carbone, A., Gonsalvez, C. & Jollands, M. (2015). Breakfast with ICT employers: What do they want to see in our graduates. Proceedings of the 17th Australasian Computing Education Conference (ACE 2015) 27(1) pp. 29–36, available at <https://crpit.scem.westernsydney.edu.au/confpapers/CRPITV160Hamilton.pdf>. Accessed 23 July 2021.
- Haussen, T & Schlegel, M. (2019). Unemployment reduction through solo self-employment: A gender question? *Empirical Economics*, 59, 3085–3105. <https://link.springer.com/article/10.1007%2Fs00181-019-01754-w>
- Hoyt, H. () *The Structure and Growth of Residential Neighbourhoods in American Cities* Washington, Federal Housing Administration.
- Ijaz, M., Yasin, G., & Zafar, M. J. (2012). Cultural factors effecting entrepreneurial behaviour among entrepreneurs. Case study of Multan, Pakistan. *International Journal of Asian Social Science*, 2(6), 908–917. <http://www.aessweb.com/pdf-files/ijass,%20pp.908-917.pdf>Iqbal
- Iqbal , A., Rehman, K. u., Ali, A., Khan, I., & Khan, F. A. (2014). Critical Analysis of the Problems of Education in Pakistan: Possible Solutions. *International Journal of Evaluation and Research in Education (IJERE)*, 3(2), 79~84.
- Iwu, C. G., Mandyoli, B., & Magoda, Z. (2018). Strengthening graduate employability in a developing economy through social entrepreneurs. In: Abereijo, I. O. (Ed.) *Entrepreneurship Education*, pp. 291-395, available at [https://www.researchgate.net/publication/324755444\\_Strengthening\\_graduate\\_employability\\_in\\_a\\_developing\\_economy\\_through\\_social\\_entrepreneurs\\_Complimentary\\_Contributor\\_Copy#fullTextFileContent](https://www.researchgate.net/publication/324755444_Strengthening_graduate_employability_in_a_developing_economy_through_social_entrepreneurs_Complimentary_Contributor_Copy#fullTextFileContent)
- Kumara, S. P. (2012). Undergraduates’ intention towards entrepreneurship: Empirical evidence from Sri Lanka. *Journal of Enterprising Culture*, 20(1), 105–118, <https://doi.org/10.1142/S0218495812500057>

- Lauder, H., & Mayhew, K. (2020). Higher education and the labour market: an introduction, *Oxford Review of Education*, 46(1), 1–9, <https://doi.org/10.1080/03054985.2019.1699714>
- Li, Y., Wang, J., & Long, D. (2019). How do Institutions Inspire Ambitions? Differentiating Institutional Effects on Entrepreneurial Growth Intentions: Evidence from China. *Entrepreneurship Research Journal*, 1-19.
- Lv, Y., Chen, Y., Sha, Y., Wang, J., An, L., Chen, T., . . . Xiang Huang, Y. H. (2021). How Entrepreneurship Education at Universities Influences Entrepreneurial Intention: Mediating Effect Based on Entrepreneurial Competence. *Frontiers in Psychology*, 12, 1-12.
- Mengesha, B.T. (2020). Determinants of entrepreneurial intention towards self-employment in the case study of Arba Minch University graduating class students, *Management*, 10(1), 23-34, DOI: 10.5923/j.mm.20201001.04
- Manning, L., Smith, R., Conley, G., & Halsey, L. (2020). Ecopreneurial education and support: Developing the innovators of today and tomorrow. *Sustainability*, 12, 1–19, <https://www.mdpi.com/2071-1050/12/21/9228>
- Maqtary, N., Mohsen, A., & Bechkoum, K. (2017). Group formation techniques in computer-supported collaborative learning: A Systematic Literature Review. *Technology, Knowledge and Learning* 24(2), 169–190, DOI: 10.1007/s10758-017-9332-1
- Mgaiwa, J. S. (2021). Fostering Graduate Employability: Rethinking Tanzania’s University Practices. *Original Research*, 1–14.
- Mirjana, B. P., Ana, A., & Marjana, M. S. (2018). Examining determinants of entrepreneurial intentions in Slovenia: Applying the theory of planned behaviour and an innovative cognitive style. *Economic Research*, 31(1), 453–1471, <https://doi.org/10.1080/1331677X.2018.1478321>
- Misoska, A. T., Dimitrova, M., & Mrsik, J. (2016). Drivers of entrepreneurial intentions among business students in Macedonia. *Economic Research-Ekonomska Istraživanja*, 29(1), 1062–1074. <https://doi.org/10.1080/1331677X.2016.1211956>
- Mlambo, V. (2018). An overview of rural-urban migration in South Africa: Its causes and implications. *Archives of Business*, 6(4), 63–70. <https://doi.org/10.14738/abr.64.4407>
- Muchaku, S. (2020). A sustainable framework for resolving conflicts involving traditional leaders and ward committees in a local municipality of South Africa. PhD thesis, Institute for Rural Development, University of Venda. Available at: <https://univendspace.univen.ac.za>
- Muñoz, P., & Kimmitt, J. (2019). Rural entrepreneurship in place: an integrated framework. *Entrepreneurship & Regional Development*, 31(9), 842–873. <https://doi.org/10.1080/08985626.2019.1609593>
- Nkomo, M., & Schoole, C. (2007). Rural-based universities in South Africa Albatrosses or potential nodes for sustainable development? *International Journal of Sustainability in Higher Education* 8(2), 234-246. DOI 10.1108/14676370710726689
- Ohei, K. N. (2019). Investigating the prevailing issues surrounding ICT graduate employability in South Africa: A case study of a South African university. *The Independent Journal of Teaching and Learning*, 14(2), 29–42. <https://journals.co.za/doi/pdf/10.10520/EJC-1d66cb012b>
- Ojiaku, O. C., Nkamnebe, A. D., & Nwaizugbo, I. C. (2018). Determinants of entrepreneurial intentions among young graduates: perspectives of push-pull-mooring model. *Journal of Global Entrepreneurship Research*, 1–17, <https://link.springer.com/article/10.1186/2147-40497-018-0109-3>
- Oluwajodu, F., Blaauw, D., Greyling, L., & Kleynhans, E. P. J. (2015). Graduate unemployment in South Africa: Perspectives from the banking sector. *SA Journal of Human Resource Management*, 13(1) Art. #656, <http://dx.doi.org/10.4102/sajhrm.v13i1.656>, accessed 11 June 2021.
- Purusottama, A. (2019). Revisiting students’ entrepreneurial intention in Indonesia: a theory of planned behavior approach, *Jurnal Manajemen dan Kewirausahaan*, 21(1). 64–73. DOI: 10.9744/jmk.21.1
- Rahman, M.S. (2016). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language “testing and assessment” research: a literature review. *Journal of Education and Learning*, 6(1), 102-112, DOI:10.5539/jel.v6n1p102

- Raposo, M., & Paço, A. D. (2011). Entrepreneurship education: Relationship between education and entrepreneurial activity. *Psicothema*, 23(3), 453–457. Available at: <http://www.psicothema.com/pdf/3909.pdf>, accessed 21 August 2021.
- Rehman, K. U., Ali, A., Khan, I., & Khan, F. A. (2014). Critical analysis of the problems of education in Pakistan: Possible solutions. *International Journal of Evaluation and Research in Education*, 3(2), 79–84. <https://pdfs.semanticscholar.org/4e6e/4e8e04fa5892b0b638fd35203002571d84cc.pdf>
- Rogan, M. & Reynolds, J. (2016). Schooling inequality, higher education and the labour market: Evidence from a graduate tracer study in the Eastern Cape, South Africa. *Development Southern Africa*, 33(3), 343–360. <https://doi.org/10.1080/0376835X.2016.1153454>
- Shambare, R. (2013). Barriers to Student Entrepreneurship in South Africa. *Journal of Economics and Behavioural Studies*, 5(7), 449–459
- Shu, C., De Clercq, D., Zhou, Y., Liu, C. (2019). Government institutional support, entrepreneurial orientation, strategic renewal, and firm performance in transitional Chin. *International Journal of Entrepreneurial Behavior & Research*, 25(3), 433–456. <https://doi.org/10.1108/IJEER-07-2018-0465>
- Sivarajah, K., & Achchuthan, S. (2013). Entrepreneurial intention among undergraduates: Review of literature. *European Journal of Business and Management*. 5(5), 172–186. <https://core.ac.uk/download/pdf/234624613.pdf>
- Sonone, O. A. (2018). Challenges of rural higher educational institutions in supply of quality human resource. *Aadhar Publication Amaravati*. Available at [https://www.researchgate.net/publication/329091656\\_Challenges\\_of\\_Rural\\_Higher\\_Educational\\_Institutions\\_in\\_Supply\\_of\\_Quality\\_Human\\_Resource#fullTextFileContent](https://www.researchgate.net/publication/329091656_Challenges_of_Rural_Higher_Educational_Institutions_in_Supply_of_Quality_Human_Resource#fullTextFileContent), accessed 29 May 2021
- STATSSA - Statistics South Africa. (2021). *Statistics of liquidations and insolvencies*. Pretoria: Available at: <http://www.statssa.gov.za/publications/P0043/P0043March2019.pdf>, accessed 15 May 2021
- Stephan, U., Uhlaner, L. M., & Stri, C. (2015). Institutions and social entrepreneurship: The role of institutional voids, institutional support, and institutional configurations. *Journal of International Business Studies*, volume 46, 308–331.
- Taha, K. A., Ramlan, N. S., & Noor, M. I. (2017). The Factors Affecting Entrepreneurial Intentions of University Students in Malaysia. *International Journal of Business and Technopreneurship*, 7(2), 189–202.
- Thamahane, C. T., Chetty, N., & Karodia, M. A. (2017). Factors that Influence Entrepreneurship in University Students: A Case Study of two Departments at the University of the Western Cape, Republic of South Africa. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 6(6), 1–30.
- Turker, D., & Selcuk, S.S. (2009). Which factors affect entrepreneurial intention of university students?. *Journal of European Industrial Training*. 33(2), 142–159.
- UNESCO. (2014). *Regional report about reeducation for all in Latin America and the Caribbean* Global education for all meeting, 21–23 November, 2012. UNESCO, Paris. Available at: [http://www.unesco.org/new/fileadmin/multimedia/field/Santiago/pdf/regional-report-mexico-ingles\\_01.pdf](http://www.unesco.org/new/fileadmin/multimedia/field/Santiago/pdf/regional-report-mexico-ingles_01.pdf), accessed 16 September 2020
- UNESCO. (2016). Annual Report: Regional Bureau for Education in Latin America and the Caribbean. Santiago: Available at: [http://www.unesco.org/new/en/media-services/single-view/news/annual\\_report\\_2016\\_regional\\_bureau\\_for\\_education\\_in\\_latin\\_a/](http://www.unesco.org/new/en/media-services/single-view/news/annual_report_2016_regional_bureau_for_education_in_latin_a/), accessed 15 June 2021
- Vigolo, V., Sallaku, R., & Test, F. (2018). Drivers and barriers to clean cooking: a systematic literature review from a consumer behavior perspective. *Sustainability*, 10(11):432210. DOI: 10.3390/su10114322
- Zapkau, F. B., Schwens, C., & Kabst, R. (2017). The role of prior entrepreneurial exposure in the entrepreneurial process: A review and future research implications. *Journal of Small Business Management*, 55(1), 56–86. DOI: 10.1111/jsbm.12232
- Zellweger, T., Sieger, P., & Halter, F. (2011).

Should I stay or should I go? Career choice intentions of students with family business background. *Journal of Business Venturing*, 26, 521–536. DOI:10.1016/J.JBUSVENT.2010.04.001  
Zellweger, T., Sieger, P., & Halter, F. (2011). Should I stay or should I go? Career choice intentions of students with family business background. *Journal of Business Venturing*, 26, 521–536.

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