

FUNDAMENTAL TENETS OF A RURAL-BASED ENTREPRENEURIAL UNIVERSITY: A SOUTH AFRICAN PERSPECTIVE

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ABSTRACT

This study aims to identify the key initiatives that should characterize a rural-based higher education institution experimenting with the entrepreneurial university concept in South Africa. Using an exploratory case study design, primary data was collected from key stakeholders and analysed using Atlas-ti v8 software for thematic analysis and inferential statistics through IBM SPSS Amos v27. The results generated five fundamental tenets - entrepreneurial knowledge-building that resonates with practical skills, enterprise formation/commercialization, integration of indigenous entrepreneurship concepts, embedding resourceful stakeholders in the value chain, and engaged scholarship. The findings indicate that integrating indigenous concepts is aligned with the development of entrepreneurial knowledge-building and commercialization efforts; together, these tenets promise a successful rural-based entrepreneurial university in the study area, although stakeholder engagement and community partnership are also crucial components for success. In the context of this study, the concept of a rural-based entrepreneurial university is oriented towards inclusive economic development, social relevance, and mutual benefit, in contrast to profit-driven models seen in many entrepreneurial universities worldwide. These findings provide valuable insights for policy and research, paving the way for developing an index to guide rural-based universities in South Africa and beyond. It is recommended that the University of Venda, where this study was conducted, integrates the key findings into its strategic plans and utilizes them effectively to advance its entrepreneurial university aspirations.

KEYWORDS: Afrocentric pathways, entrepreneurial university, rural areas, local economy

JEL CLASSIFICATION: C83, E24, M13

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INTRODUCTION

Towards the end of the 20th century, numerous higher learning institutions in Africa encountered substantial challenges. These universities faced rampant strikes due to issues like, inadequate wages, overcrowding caused by increased enrollment amidst infrastructure deficiencies, limited access to knowledge facilities, and complex funding arrangements. These challenges were exacerbated by a lack of political will and accountability, reduced state support for education, and the impact of Western colonization, which perpetuated epistemic discord between African indigenous knowledge systems and higher education ethos in low-income countries (Habib et al., 2008; Adewuyi & Okemakinde, 2013; Akintoye & Uahunmwangho, 2018; Awojobi et al., 2020; Mbah et al., 2021). Over the years, there have been various calls for the recognition of indigenous African knowledge systems (Mbah et al., 2021) and the implementation of government policies and reforms to increase relevance of the continent's compromised education system (Habib et al., 2008; Heleta, 2016; Heleta & Bagus, 2021; Mbah et al., 2021), although, a conservative standpoint also exists, emphasizing the necessity of internal transformation (Baporikar, 2019; Chetty, 2020; Kapondoro, 2020). In this context, transformation refers to the shift from a traditional to an entrepreneurial higher learning institution, where the latter takes charge of its professional development and growth.

An entrepreneurial institution of higher learning, as defined by Clark (1998 in Shattock, 2009), aims to become an independent and influential entity, making a significant impact on its terms. This transformation involves a substantial shift in organizational character, enabling a university to innovate and fulfil its mandate, without compromising its core mission (Etzkowitz, 2016; Alfalih & Rasmoun, 2020). The University of Venda, like many other institutions of higher learning globally, is also striving to become an entrepreneurial university. The University's vision, adopted in 2007, is to be at the forefront of providing quality and innovative tertiary education for rural and regional development in Southern Africa. Coupled with its intention to reduce reliance on government subsidies for financial sustainability (University of Venda Strategic Plan 2021-2025), drive local innovation, produce skilled graduates, foster graduate employability, and contribute more towards combating poverty and promoting development in rural areas (Francis et al., 2016; Netshandama et al., 2021), the development of an entrepreneurial university was embedded, as a key component of the four strategic thrusts in the University's five-year (2021-2025) intervention and development plan. The entrepreneurial university approach offers a promising pathway to drive economic growth, address societal challenges, and empower the surrounding communities, through knowledge-building, innovation, and job creation. While a clear vision and mission, along with a strong commitment to realizing an entrepreneurial university, have been demonstrated, there exists a missing link—a scientific pathway evolving from empirical foundations to strategically guide the University's endeavors. In simpler terms, what remains unknown is a robust tool constructed on scientific grounds to bolster existing theoretical discourses and other forms of empirical engagement that assert the entrepreneurial university agenda in this context. This gap is concerning because policy imperatives devoid of scientific foundations inherently lack strength and are destined for failure.

Previously, an exploratory study titled, "Towards a Conceptual Understanding of a Rural-Based Entrepreneurial University" (Iwara & Kilonzo, 2022) was conducted to map out the contextual entrepreneurial tenets that the University of Venda must consider in fostering its entrepreneurial university aspirations. From a total of 33 stakeholders, five fundamental tenets were distilled, namely: (1) innovative entrepreneurial knowledge and skills building, (2) integration of indigenous entrepreneurship development systems, (3) engaged scholarship, (4) value creation for commercialization and enterprise venturing, and (5) embedding resourceful stakeholders in the value chain. This initial study's sample size, however, did not provide sufficient evidence to generalize and inform actionable policies. Additionally, it was obvious that further examination was required to establish the significance of these tenets for policy consideration and practice. It is against these premises that the current study was undertaken to expand the scale of the research initiative for quality assurance. This new study analyzed the five tenets on a larger scale, drawing essential knowledge from a wider range of stakeholders to provide a comprehensive understanding of the pathway towards becoming a resourceful entrepreneurial university. The subsequent null hypotheses formulated for evaluation during the quantitative phase of the study include:

H₀₁: Entrepreneurial knowledge/skills building is a tenet of a rural-based entrepreneurial university.

H₀₂: Indigenous entrepreneurship development system is a tenet of rural-based entrepreneurial university.

H₀₃: Engaged scholarship is a tenet of a rural-based entrepreneurial university.

H₀₄: Enterprise formation and commercialization is a tenet of a rural-based entrepreneurial university.

H₀₅: Embedding resourceful stakeholders in the value chain is a tenet of a rural-based entrepreneurial university.

1 LITERATURE REVIEW

The transformation of traditional universities into entrepreneurial institutions of higher learning remains a critical task in Africa, which can be attributed to inconsistent policies and poorly articulated plans for higher education in many countries, on the continent. Nigerian universities, for instance, including the University of Nigeria, Nsukka, Abubakar Tafawa Balewa University, and others, face uncertainties due to inadequate funding and inefficiency stemming from substandard infrastructure and misplaced academic priorities (Ugwu et al., 2018; Ebehikhalu & Dawam, 2016; Awojobi et al., 2020). Clearly articulated, Nkamnebe (2008) astutely observes that heavy reliance on state funding for higher-learning institutions proves unsustainable, compelling a transition toward a market-oriented entrepreneurial university. This concept is particularly appealing for Africa, however, a significant challenge hindering this shift is the absence of clearly defined pathways to a successful entrepreneurial university. Efforts toward this transformation are in nascent stages and are complicated by various challenges, hence, there is a pressing need for a comprehensive and strategic approach that addresses these challenges and provides a roadmap for the successful transformation of African traditional universities into entrepreneurial entities.

In the context of the conclusions of Doh, Jauhiainen, and Boohene (2021), entrepreneurial transformation in selected African universities is underpinned by seven structural patterns across three levels. These patterns emerge from an exploratory study that examined the prospects of entrepreneurial universities and entrepreneurship patterns in English and French-speaking universities in Cameroon, Ghana, and Uganda. Specifically, at the system level, there are implied entrepreneurial institutions and comprehensive university patterns. At the university level, three structural patterns exist - specialized entrepreneurial establishments, entrepreneurial centres, peripheries, and islands; at the basic unit level, there are four patterns which encompass researcher-led, teacher-centred, student-centred, and student-led entrepreneurship. In a continent where a transition toward self-reliance and sustainability is imperative for institutions of higher learning, the significance of groundbreaking entrepreneurial university research, characterized by structural patterns at various levels, cannot be overstated. While these findings offer valuable insights for policy and research, paving the way for developing a framework to guide entrepreneurial university aspirations even beyond the study area, the study exhibits significant gaps. Firstly, they lack a comprehensive exploration of the role of indigenous entrepreneurship patterns in African university transformation, thereby, they overlook the significance of indigenous knowledge and practices for contextual relevance and sustainability. Secondly, the study fails to consider the specific contextual differences and challenges faced by each African sub-region in its analysis of entrepreneurship patterns, hence, neglecting the importance of tailoring strategies to address sub-regional nuances. Lastly, it focuses primarily on academic entrepreneurship patterns within universities, thus, downplaying the engagement of crucial non-university stakeholders, such as local industries and government agencies, which are essential for driving real impact and fostering a thriving entrepreneurial ecosystem.

Baporikar (2019) advocates for the adoption of the European Union (EU) and the Organisation for Economic Cooperation and Development (OECD) HEInnovate - Guiding Framework for Entrepreneurial Universities as a resourceful tool for assessing strategies and practices for entrepreneurship and innovation in Namibia's higher education institutions. Additionally, the success of Namibia's universities in achieving an entrepreneurial posture may require the adoption of Kaplan and Norton's (1996) model of the five Ps (project, profit, profile, persons, and process) as a five-year operational plan. In South Africa, efforts were made to apply the HEInnovate framework to existing endeavours towards building entrepreneurial universities in institutions like Durban University of Technology, Nelson Mandela University, and Stellenbosch University; the process focuses on measuring entrepreneurship interventions' impact, incentives, and capacity building for staff, generation of relevant research, and knowledge sharing (Chetty, 2021). Notably, this review aligns with the emphasis of Lose and Kapondoro's (2020) study, which highlights the criticality of building entrepreneurial intentions and output commercialization in the context of South Africa's

entrepreneurial universities. In a nutshell, emergence of entrepreneurial university concepts in South Africa and Africa is notable; however, a significant concern arises from their heavy reliance on data from developed economies, lacking local and grassroots content. This reliance raises questions about the comprehensive applicability, of findings from a systemic review of research on entrepreneurial universities in Western economies to Africa's unique context. Furthermore, the HEInnovate framework, proposed as a guiding tool for African entrepreneurial universities, is predominantly shaped by Western perspectives and may not fully align with the African context, particularly, in rural-based universities. This lack of contextual knowledge for rural-based universities is a notable gap in existing frameworks.

Learning from extant practices both locally and internationally is essential; however, it may be challenging to establish an entrepreneurial university in Africa using a European-based model without modifications to suit the continent's grassroots realities. The concept of the entrepreneurial university is relatively recent and multifaceted, with varying priorities for different stakeholders in different geographic areas. An insight from Rwanda, for instance, exemplifies the need to tailor entrepreneurial universities to suit specific social contexts. In the aftermath of the 1994 genocide, Rwanda's entrepreneurial university aimed to rebuild civil society and institutions, addressing humanitarian and economic needs while preventing a return to conflict (Ishiyama & Breuning, 2012; Nkusi, 2021); however, such aspects of social relevance are not well detailed in the HEInnovate framework, which is more focused on research, innovation, and commercialization, as seen in developed economies. In other words, direct replication of entrepreneurial university pathways from one region to another may compromise compatibility, validity and efficacy.

In light of these divergences, Gibb (2007) challenges traditional entrepreneurship paradigms in universities, prompting inquiries into the necessity of an entirely distinct entrepreneurship model for establishing entrepreneurial universities. The author focuses on the imperative to reassess existing models and expand the boundaries of entrepreneurship within the educational context. The results urge scholars and practitioners to reconsider the fundamental principles underpinning entrepreneurial education, a perspective crucial for fostering innovation and ensuring that entrepreneurial universities adapt to the dynamic demands of the contemporary world (Gibb, Haskins & Robertson, 2013; Gianiodis & Meek, 2020; Ilomo & Mwantimwa, 2023; Uctu & Al-Silefanee, 2023). Additionally, Clauss, Moussa and Kesting (2018) acknowledge the multifaceted nature of entrepreneurial universities, advocating for a stakeholder perspective in their approach. This type of engagement is essential in offering a comprehensive view of institutions' internal and external mechanisms necessary for shaping their entrepreneurial endeavours. An earlier recommended approach by Guerrero & Urbano (2012; Pinheiro & Stensaker, 2014) enriched the discourse on entrepreneurial universities by acknowledging diverse stakeholder interests and expectations, paving the way for a more inclusive and holistic model tailored to specific environments. Echoing these arguments, Baporikar (2020) posits that a structured entrepreneurial university framework, conceptualized and contextualized within the specific challenges of a region, especially around emerging economies, is pivotal in fostering a transformative imperative in the areas. At the heart of these discussions is the involvement of stakeholders at various levels in shaping universities' trajectories in alignment with contextual grassroots realities, promoting their pivotal role in regional development through entrepreneurial initiatives and strategic collaborations. The ubiquitous nature of the entrepreneurial university concept in contemporary discourse, however, has often led to the modelling of the concept solely based on theoretical discourse, potentially disconnected from specific contexts.

The complexities within the existing literature, combined with the insufficient research attention given to rural-based entrepreneurial universities in Africa, spurred this study. In the process, stakeholders were primarily engaged to enhance the understanding of what constitutes an entrepreneurial university in South Africa, thus expanding the global and African perspectives on this concept; although the study

centers on a rural-based university in South Africa, the findings can be extrapolated to assess their alignment with other rural-based universities not only within Africa but also across the globe, offering valuable comparative insights.

2 STUDY AREA

The University of Venda (Univen), a comprehensive rural-based institution of higher education situated in Thohoyandou, Vhembe District in Limpopo Province, South Africa, was established in 1982 to address the educational needs of the inhabitants of the Venda Bantustan, during the apartheid era. Presently, it caters to approximately 17,000 students across five faculties, offering diverse undergraduate and postgraduate qualifications. The University is a historically disadvantaged institution; it also faces challenges typical due to its location in the predominantly rural Thulamela Municipality. This area grapples with high unemployment and poverty rates, as well as service delivery backlogs resulting from past discriminatory policies. The University is situated in one of the United Nations Educational, Scientific and Cultural Organization (UNESCO) biosphere reserves and is near attractions like Mapungubwe National Park, Thulamela Archaeological Site, and Kruger National Park, among other natural resource endowments and tourist attractions. Presumably, its entrepreneurial aspirations will facilitate meaningful interactions and collaborative partnerships with various community stakeholders, fostering the exploration of its abundant resources for holistic development.

3 METHODOLOGY

An exploratory mixed-method case study design was utilised to comprehensively explore the University of Venda's entrepreneurial university aspirations. In Phase 1, guided by the saturation point principle, a convenient sample of 63 stakeholders, including Univen students, staff members, community members, municipal officials, and representatives from entrepreneurial agencies were interviewed, providing diverse perspectives on the proposed University's entrepreneurial journey. The qualitative data collection in this phase involved using a semi-structured questionnaire based on the adopted five entrepreneurial tenets. The data collection process utilized a hybrid method, combining physical and online platforms to effectively engage with participants, including remote options due to the COVID-19 pandemic, ensuring adherence to ethical considerations throughout the research process. The utilization of content and sentiment analysis as qualitative data analysis techniques ensures a systematic and rigorous consolidation of the acquired results into sub-themes. This approach provided valuable insights into participants' perspectives within the tenets, enhancing the understanding of the context.

Table 1 **Participants' Demography**

		Gender (%)		Total
		Male	Female	
Designation	Undergraduate students (UG)	22.2	31.0	53.2
	Postgraduate students (PG)	8.2	9.4	17.5
	Academic staff (AS)	2.9	3.5	6.4
	Non-academic staff (NS)	2.3	2.3	4.7
	Community members (CM)	3.5	11.7	15.2
	Entrepreneurship agents (EA)	1.2	1.8	2.9
Total		40.4	59.6	100.0

(Source: Author's consolidation based on primary data)

In Phase 2, the set of initiatives identified in Phase 1 underwent further assessment utilizing a 5-point Likert-type scale data-collection tool, reflecting their significance. A total of 200 participants randomly selected from the aforementioned clusters was anticipated, however, only 182 participated, and 11 of the responses were deemed ineligible for analysis based on inclusion criteria. Thus, 171 responses were considered. Both data collection phases spanned from November 2019 to December 2021. Demographically, 40.4% of the participants were male, and the majority were undergraduate students (53.2%), followed by postgraduate students, community members, academic staff, non-academic staff, and entrepreneurial agents.

The data collected in Phase 2 allowed for the prioritization of initiatives using the five tenets as a proxy, which will provide valuable insights into the strategies needed to foster entrepreneurial transformation at the University of Venda. The quantitative data, collected on a 5-point Likert scale ranging from 1 (least disagree) to 5 (strongly agree), was captured, coded, and analyzed using IBM Statistical Package for the Social Sciences (SPSS) Amos software version 27. Structural equation modelling (SEM) was employed to determine the mean estimates of the observed variables and assess their significance levels. Additionally, the correlations among the variables were examined using SEM to understand how they collectively contribute to the establishment of an effective rural-based entrepreneurial university in the study area. SEM allows the assessment of both direct and indirect effects among the variables, providing a nuanced understanding of how they interact. Through the iterative model refinement, it was possible to modify the model to best fit the observed data, ensuring that any relationships identified align with the actual dynamics within the context of a rural-based university. This process enabled a holistic analysis, offering insights into the complex interplay of factors crucial for the University's effectiveness in the specific study area.

The adoption of a mixed-method approach in this study offers several advantages, in line with the complexity of the research topic and the involvement of a diverse range of stakeholders. Firstly, the use of a hybrid data collection method, incorporating both physical and online platforms, proved to be practical and efficient, particularly, during the COVID-19 pandemic. This approach accommodated participants' preferences and safety concerns, facilitating remote engagement without compromising the research's integrity. Secondly, by combining qualitative and quantitative methods, the study gained a robust and well-rounded investigation, contributing to a comprehensive understanding of the University of Venda's entrepreneurial university journey. The qualitative data collected provided in-depth insights into stakeholders' perspectives, offering rich and context-specific information. In contrast, the quantitative data allowed for statistical analysis and generalization, providing a broader perspective on prevalent views. Additionally, the mixed-method design enabled the researcher to triangulate findings, verifying and strengthening the validity and reliability of the results. Lastly, corroborating evidence from both qualitative and quantitative data enhanced the credibility of the study's conclusions and recommendations. Overall, the mixed-method approach was instrumental in achieving a comprehensive and holistic understanding of the University of Venda's transformation journey into an entrepreneurial institution of higher learning.

4 RESULTS

Table 1 summarizes the fundamental tenets and stakeholders' affirmation (represented with an 'x') of the corresponding initiatives identified from their responses. The initiatives encompassed various aspects - developing entrepreneurial knowledge and skills, integrating indigenous entrepreneurship concepts, engaging with society through research and projects, promoting enterprise formation and commercialization, as well as collaborating with stakeholders in the value chain. These initiatives highlighted the University's commitment to fostering an entrepreneurial mindset among students and staff, acknowledging the importance of indigenous knowledge, addressing societal issues, supporting ventures, and establishing partnerships for economic and social development.

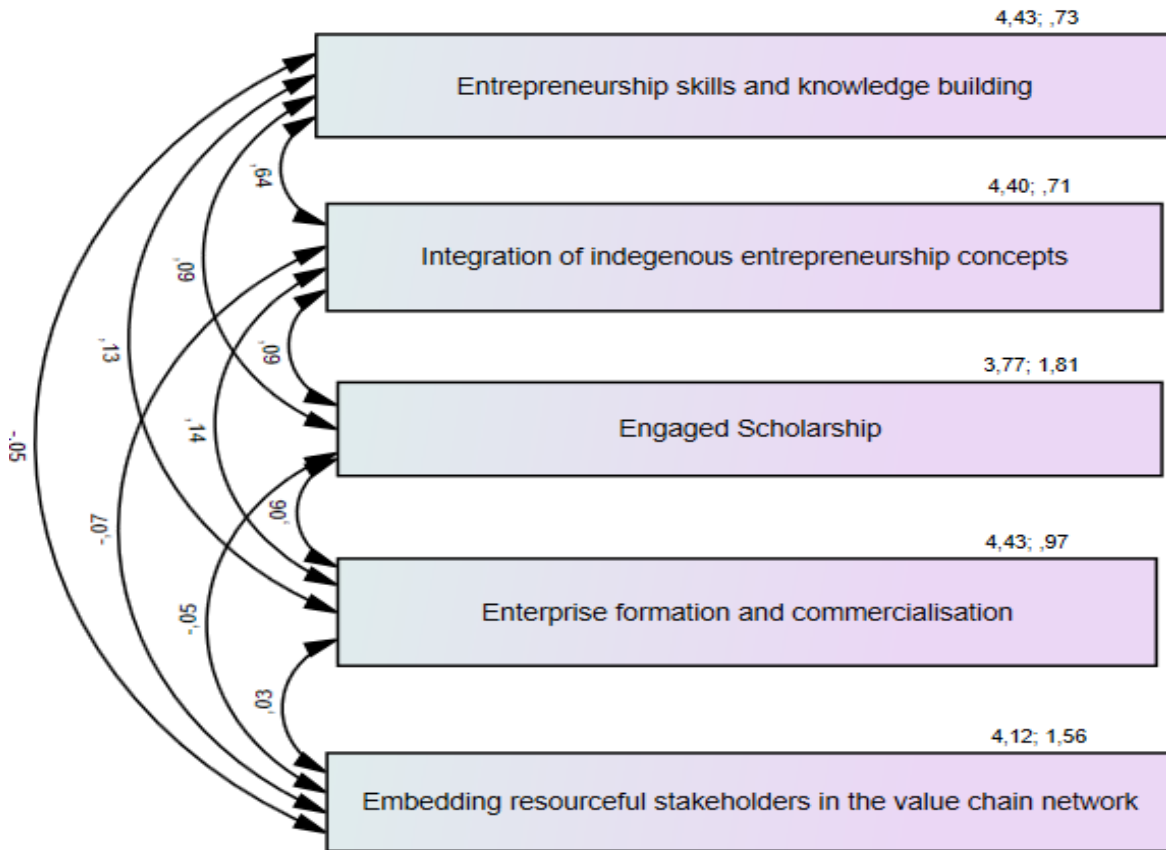
Table 2 Tenets for determining a rural-based entrepreneurial university.

Criteria	Initiatives	Participants					
		US	PS	AS	NS	CM	EA
<i>Entrepreneurial knowledge and skills building</i>	Periodic on-campus and off-campus entrepreneurship awareness activities	X	X	X	X	X	X
	Student and staff entrepreneurial competition events and rewards	X	X	X	X	X	X
	Entrepreneurial capacity development in basic education		X		X	X	
	Accessible entrepreneurship training centres for students and grassroots communities	X	X	X	X	X	X
	Compulsory entrepreneurship courses taught across disciplines	X	X	X	X	X	X
	Entrepreneurship projectization		X	X			X
	Service-learning through effective community engagement		X		X	X	X
	Student placements - internships, mentorships, and apprenticeships		X	X		X	X
<i>Integration of indigenous entrepreneurship concepts</i>	Indigenous entrepreneurship concepts/models integrated into the curriculum		X		X	X	
	Presence of SME support frameworks reflecting grassroots realities		X	X	X	X	X
	Evidence of traditional Afrocentric pathways for entrepreneurship development	X	X		X	X	
<i>Engaged scholarship</i>	Research intensification, focusing mostly on emerging societal issues rather than basic projects		X	X		X	X
	Integration of education with local and national developmental goals		X	X	X	X	
	Co-partnering in projects, research production, and business with grassroots communities	X	X	X	X	X	X
	MoUs with traditional authorities to facilitate citizen-centred community development			X	X	X	X
	Fostering university-business linkages with local and international ventures	X	X	X	X	X	X
<i>Enterprise formation and commercialisation</i>	Establishing a resource incubation system for short and long-term training		X	X	X	X	X
	Venturing into UNESCO biosphere, agro-business, bioenergy, eco-tourism & indigenous innovations	X	X	X	X	X	
	Support strategies for local SMEs to target market needs, scale up sales, and ramp up		X	X			
	Research expert scalability, motivation, efficacy and output commercialization		X	X	X		X
	Flexible policies and support mechanisms for student business formation/venturing	X	X	X	X	X	X
<i>Embedding resourceful stakeholders in the value chain network</i>	Collaborative partnership with industries, companies, firms, and foundations		X	X	X		X
	Re-enforcing ties with grassroots communities, especially with local entrepreneurs			X	X	X	X
	Partnership with local entrepreneurship agencies and international entities	X	X		X		X
	Collaboration with local municipalities and government authorities	X	X	X	X	X	X

(Source: Author's consolidation based on primary data) (X - affirmative for identification of that initiative)

Figure 1 illustrates the mean estimates and correlations of the criteria obtained from the observed variables. Based on the mean scores derived from the observed variables gathered using a 5-point Likert-type scale, the criteria skewed positively, between 4 and 5. This shows that participants re-affirm the criteria as determinants for a rural-based entrepreneurial university.

Figure 1 Mean estimates and covariances of the criteria



(Source: Author’s consolidation based on primary data)

Table 3 Estimated mean and probability values of the criteria (n=171)

Criteria	Estimate	S.E.	C.R.	P
E1 Entrepreneurial skills and knowledge building	4,433	,065	67,877	***
E2 Integration of indigenous entrepreneurship concepts	4,404	,065	68,210	***
E3 Engaged scholarship	3,772	,103	36,520	***
E4 Enterprise formation and commercialisation	4,433	,076	58,664	***
E5 Embedding resourceful stakeholders in the value chain network	4,123	,096	43,066	***

(Source: Author’s consolidation based on primary data) (Cut-off p-value ($P \leq 0.05$))

The analysis of the estimated variables yielded a statistically significant test result ($P \leq 0.05$), with $p=0.00$ noted across the five observed tenets – E1, E2, E3, E4 and E5 (Table 3). This finding further supports the participants’ robust endorsement of the criteria. Consequently, the null hypothesis positing that the five observed variables constitute rural-based entrepreneurial university tenets is upheld. In descending order of priority, the highest-rated criteria were entrepreneurial skills and knowledge building (4.43) and enterprise formation and commercialization (4.43), indicating their significant

importance. Following closely were the integration of indigenous entrepreneurship concepts (4.40), embedding resourceful stakeholders in the value chain network (4.12), and engaged scholarship (3.77).

Note:

- Estimate refers to the calculated value representing the relationship between observed and latent variables. These estimates indicate the strength and direction of the connections specified in the model.
- S.E. (Standard Error) represents the standard deviation of the sampling distribution of a statistic and indicates the variability of an estimate. Lower standard errors suggest higher precision in the estimation.
- C.R. (Critical Ratio) assesses the significance of a parameter estimate. It is calculated by dividing the estimate by its standard error. A higher critical ratio (typically above 1.96 for a 95% confidence level) suggests that the estimate is significantly different from zero, indicating a meaningful relationship.
- P (p-value) represents the probability that the observed data (or more extreme results) would occur if the null hypothesis were true. A low p-value (usually less than 0.05) suggests that the estimate is statistically significant, indicating that the relationship in the model is not likely, due to random chance.

Among the observed variables, entrepreneurial knowledge building that resonates with practical skills development, and integration of indigenous entrepreneurship concepts showed the strongest positive correlation (63), and the probability value was 0.00, indicating statistical significance (Table 4). This suggests that these variables move together in a coordinated manner, and an increase in one variable is accompanied by a relative increase in the other, with both contributing to the advancement of an entrepreneurial university. Complementing the development of entrepreneurial skills and knowledge with the integration of indigenous entrepreneurship concepts can lead to a more effective approach.

Table 4 **Correlations of the estimated criteria (n=171)**

	Criteria		Estimate	S.E.	C.R.	P
E1	<-->	E5	-,047	,082	-,580	,562
E1	<-->	E4	,129	,065	1,974	,048
E1	<-->	E3	,093	,088	1,052	,293
E1	<-->	E2	,638	,074	8,671	***
E5	<-->	E2	-,067	,081	-,831	,406
E5	<-->	E3	-,054	,129	-,418	,676
E5	<-->	E4	,035	,094	,366	,714
E4	<-->	E2	,135	,064	2,100	,036
E3	<-->	E2	,092	,087	1,055	,291
E4	<-->	E3	,064	,102	,624	,532

(Source: Author’s consolidation based on primary data) (Cutoff p-value ($P \leq 0.05$))

Similarly, a positive correlation (0.13) was found between enterprise formation/commercialization and integration of indigenous concepts, which was also statistically significant ($p=0.03$). This implies that incorporating indigenous entrepreneurship concepts can enhance the process of enterprise formation and commercialization, and vice versa, thereby, contributing to the progress towards an entrepreneurial university. Another significant relationship was observed between entrepreneurial knowledge-building and enterprise formation/commercialization (correlation coefficient of 0.12) with a statistical significance level of 0.04. This suggests that the development of entrepreneurial skills and knowledge can positively influence the success of enterprise formation and commercialization, and vice versa, with both being vital components of an entrepreneurial university.

Engaged scholarship demonstrated positive correlations with entrepreneurial knowledge building, integration of indigenous entrepreneurship concepts, and enterprise formation/commercialization, although, these relationships were not statistically significant at the 0.05 level. The same lack of statistical significance was observed between enterprise formation/commercialization and embedding resourceful stakeholders in the value chain network.

5 DISCUSSION

Entrepreneurial skills and knowledge building have been extensively researched and are considered crucial for universities aspiring to become entrepreneurial institutions (Krabel & Muller, 2009; Gibb et al., 2013; Gianiodis & Meek, 2020). Like most other studies conducted earlier (Krabel & Muller, 2009; Gibb et al., 2013; Durán-Sánchez et al., 2019; Ilomo & Mwantimwa, 2023), this study also found that Univen focuses on delivering entrepreneurial knowledge and skills through various activities, such as entrepreneurship campus awareness, competitions, formation of entrepreneurship-training centres, compulsory courses, and projectization. The study, however, highlights a lesser-known initiative, namely, becoming an entrepreneurial service hub that collaborates with primary and secondary schools for entrepreneurial orientation. This initiative addresses the issue of under-preparedness of first-entering students for tertiary education, a challenge identified in Univen's Strategic Plan 2021-2025. By preparing young learners entrepreneurially, this approach aims to facilitate a smoother transition to tertiary education and better job prospects post-graduation.

Furthermore, service-learning, through community engagement and student placement in internships, mentorships, and apprenticeships, is recognized as a resourceful means of nurturing young entrepreneurs and providing practical skills (Lady-Franca, 2016; Orugun & Nafiu, 2014; Gamede & Uleanya, 2017). This finding aligns with Gibb's (2007) argument that any conventional academic framework lacking a robust experiential and action-oriented approach is insufficient for preparing students to navigate the complexities of the modern entrepreneurial landscape. A holistic model of entrepreneurship education, integrating practical experiences, real-world problem-solving, and interdisciplinary collaboration, emerged as a critical imperative mechanism in fostering an entrepreneurial mindset. This approach encourages creativity, risk-taking, and adaptability among both students and faculties (Gibb, 2007; Uctu & Al-Silefanee, 2023). By embracing a more dynamic and innovative educational strategy, universities can better equip aspiring entrepreneurs with the skills and mindset essential to thrive in the rapidly changing global business environment.

The research findings indicate the importance of entrepreneurial skills and knowledge building, although, there are opposing discoveries in the literature regarding their significance in transforming universities into entrepreneurial institutions. For instance, focusing solely on entrepreneurial skills and knowledge may not be sufficient to achieve the desired transformation (Etzkowitz, 2016; Jardim, 2021; Iwara & Kilonzo, 2022). Arguably, overemphasising entrepreneurship may lead to neglecting other crucial aspects of university education, such as critical thinking, research, and academic excellence. In

this view, becoming too entrepreneurial-oriented might compromise the core mission of universities as centres of learning and knowledge dissemination. In other words, the pursuit of transformational learning or the adoption of a dynamic entrepreneurial and innovative educational approach must be carefully managed to avoid jeopardizing the university's focus on its primary mandates and mission imperatives.

On the other hand, the integration of indigenous entrepreneurship concepts is an area that lacks research attention and policy debates for reforms in African higher-learning institutions. In the current decade, many higher-learning institutions on the continent continue to prioritize Western ideologies in their curricula, overlooking the valuable potential of indigenous entrepreneurship models (Dei, 2014; Mbah et al., 2021). This oversight denies African learners the opportunity to grasp and apply the African perspective of entrepreneurship within their learning landscape; although critics argue that incorporating more traditional approaches could hinder the ability of graduates to compete in the international business landscape and limit their career prospects outside the local context (Kiggundu, 2002). The absence of systems tailored to indigenous orientation creates a gap between theoretical classroom learning and practical applications in real-world entrepreneurial environments. This disparity raises concerns among scholars about the need to decolonize the existing norms (Dei, 2014; Iwara, 2020a). One solution is to integrate indigenous entrepreneurial philosophies and systems with foreign best practices in entrepreneurial university systems, aiming to produce graduates who are locally and globally competitive.

Enterprise formation and commercialization are extensively discussed aspects of the entrepreneurial university concept, and Univen shares commonalities with existing literature. Most discussions about commercialization in the entrepreneurial university concept strongly focus on research-related outputs (Etzkowitz 2013, 2016; Alfalih & Ragmoun 2019; Cerver Romero et al., 2021), however, the present study delves deeper, emphasizing areas that could yield substantial personal and societal wealth. It is suggested that Univen's strategic location in a predominantly rural and agrarian district like Vhembe, coupled with its centrality in one of the UNESCO biosphere reserves, provide a competitive advantage in sectors such as agri-business, bioenergy, and eco-tourism. The University's proficiency in these domains should not only foster cutting-edge research but also create business imperatives with potential for socio-economic development in the region. This highlights the notion that entrepreneurial universities in Africa might not evolve in the same direction as their Western counterparts, due to regional and contextual disparities (Gianiodis et al., 2016; De Jager et al., 2017), thereby, emphasizing the importance of context-specific modelling of the concept instead of seeking generalizability. Nevertheless, the feasibility of focusing on specific sectors, such as agri-business and eco-tourism, in a rapidly changing global economy should be implemented cautiously and monitored closely. These sectors may face market fluctuations and uncertainties that could impact the University's overall sustainability. Similarly, prioritizing certain industries might overlook potential opportunities in emerging sectors that could be equally advantageous to the university and its region.

Debates surrounding the practicality and effectiveness of community-engagement initiatives reveal that sustaining university-community partnerships in the long term can be challenging due to conflicting interests and expectations between academia and local stakeholders (Nkamnebe, 2008; Sathorar & Geduld, 2021). Furthermore, the resources and efforts required for extensive engagement may divert attention and funds from other critical university functions, potentially impacting the quality of academic programs. Engaged scholarship, however, was highlighted as integral to Univen's transformation into a rural-based entrepreneurial institution of higher learning. Engagement with local communities and society at large is deemed essential to invigorate core functions, stimulate innovation, and create entrepreneurial opportunities (Ruhiga, 2013; Iwara, 2020b; Sathorar & Geduld, 2021). Given the University's commitment to interacting with various stakeholders to foster inclusive development in the Vhembe rural areas and beyond, engaged scholarship remains a crucial

consideration. The concept of an entrepreneurial university, in this context, extends beyond profit-making and personal growth, emphasizing social relevance and mutual benefit. By actively interacting and partnering with key stakeholders and community-based projects, Univen can contribute to inclusive economic development, akin to the approach taken in Rwanda (Nkusi, 2021).

Similar to engaged scholarship, there is a concern that embedding resourceful stakeholders in the value chain, extensive involvement and collaboration with local government and traditional authorities might lead to their undue influence and politicization of the University's decision-making processes. Such relationships might also encounter bureaucratic challenges and slow decision-making, hindering the University's ability to adapt quickly to changing circumstances, although, embedding resourceful stakeholders in the value chain is a recognized strategy for entrepreneurial universities, involving collaborative partnerships with various entities (Guerrero & Urbano, 2012; Pinheiro & Stensaker, 2014; Chetty, 2021). In the current study, the need to interact with local government, traditional authorities, and local entrepreneurs emerged as additional initiatives. These stakeholders possess essential knowledge about grassroots realities and problems, which will enable Univen to design contextual strategies for growth and enhance university-business linkages with local ventures and the broader market. Moving forward, careful stakeholder selection and a well-defined Memorandum of Understanding, devoid of extraneous sentiments and characterized by attributes for mutual benefits, are necessary to ensure sustained well-thought-out partnerships.

CONCLUSION

The findings from this study offer valuable insights into the University of Venda's journey towards becoming an entrepreneurial institution. The identified criteria for an entrepreneurial university underscore the significance of fostering relevant knowledge and skills, integrating indigenous entrepreneurship concepts, engaging with the community, promoting enterprise formation and commercialization, and collaborating with stakeholders in the value chain network. These criteria align with the concept of an entrepreneurial university, emphasizing the need for universities to take a proactive approach to their development and make a positive impact on society.

The prioritization of entrepreneurial skills and knowledge-building reflects the recognition of the importance of equipping students and staff with the necessary tools to succeed in entrepreneurship and innovation. There is, however, a need to strike a balance between entrepreneurship and traditional academic pursuits to ensure that the core mission of the University is not compromised. The integration of indigenous entrepreneurship concepts represents a crucial step in decolonizing the University's curriculum and fostering a deeper understanding of the African perspective of entrepreneurship. This integration acknowledges the value of local knowledge and practices in driving economic and social development. Engaged scholarship emerges as a significant aspect of an entrepreneurial university, emphasizing an institution's role in actively engaging with the community and collaborating with local stakeholders. Such engagement can lead to robust knowledge co-creation, inclusive economic development and mutual benefit for universities and society. The importance of focusing on specific areas, such as agri-business, bioenergy and eco-tourism, that leverage the university's regional strengths to contribute to socio-economic development, was also emphasised, however, it is essential to remain adaptable and explore emerging sectors to ensure sustainability and relevance in a rapidly-changing global economy. Collaboration with local government, traditional authorities, and local entrepreneurs was highlighted as a strategic approach to foster university-business linkages and address grassroots realities. Effective community engagement and collaboration with stakeholders are critical for an entrepreneurial university's success.

The transformation of the University of Venda into an entrepreneurial institution presents an opportunity for higher-learning institutions in Africa to drive economic growth, address societal challenges, and empower local communities. The findings of this study can serve as a blueprint for other rural-based universities in Africa and beyond, providing insights into the process of becoming an entrepreneurial university and its implications for regional development. Recommendations include the need to foster entrepreneurial knowledge that resonates with relevant skills, integrating indigenous entrepreneurship concepts, engaging with the community, identifying strategic areas for enterprise formation and commercialization, as well as forming collaborative partnerships with stakeholders. As the University of Venda moves forward with its entrepreneurial aspirations, it is essential to continuously assess and adapt its strategies to remain relevant and impactful in a dynamic and rapidly changing environment.

LIMITATION

The primary limitation of this study stems from its exploratory research design, which, by its nature, lacks generalizability owing to its specific focus on a rural-based higher-education institution in South Africa. Consequently, while the insights gleaned are valuable, their universal applicability to diverse institutional contexts might be constrained unless carefully contextualized. This necessitates an approach where the findings are adapted and nuanced to align with the unique contextual realities of different institutions, emphasizing the importance of cautious interpretation and localized application of the study's outcomes.

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