




Sustaining SMEs through Indigenous Knowledge Systems: Exploring opportunities and challenges

**Authors:**

Muthuhadini B. Manyaga¹ 
Geoff A. Goldman¹ 
Peta Thomas¹ 

Affiliations:

¹Department of Business Management, College of Business and Management, University of Johannesburg, Johannesburg, South Africa

Corresponding author:

Muthuhadini B. Manyaga,
mukhavhulimb@gmail.com

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Background: Small and medium-sized enterprises (SMEs) play a crucial role in driving economic growth and development, necessitating innovative strategies to enhance their sustainability and resilience in an ever-evolving business landscape. The evolving business landscape requires innovative strategies for SMEs' sustainability and resilience. Recognising this imperative, the strategic incorporation of Tshivenda Indigenous Knowledge Systems (IKS) within SMEs emerges as a compelling avenue for exploration.

Aim: This study aims to provide insights into the challenges and opportunities faced by SMEs concerning the adoption of Tshivenda IKS to foster business sustainability.

Setting: The study focused on Tshivenda IKS as practised by SME owners who are Tshivenda speakers, located in Musina, Limpopo, South Africa, and in Beitbridge, Matabeleland South, Zimbabwe.

Methods: The study used qualitative research with a grounded theory design, interviewing 12 participants selected through theoretical sampling. Thematic coding was applied for data analysis.

Results: The study identifies greater collaboration, access to markets, brand differentiation and competitive advantage as opportunities, whereas cultural differences, a lack of strategic planning, and shortages in sustainable supply chains were identified as key challenges to SMEs incorporating Tshivenda IKS in their business operations.

Conclusion: The study sheds light on the challenges, opportunities and managerial implications associated with integrating Tshivenda IKS into SMEs for sustainability purposes. Leveraging Tshivenda IKS offers substantial opportunities for sustainable business practices and economic development in SMEs, despite the limitations.

Contribution: The study enriches understanding of the opportunities and challenges experienced by SMEs when using Tshivenda IKS in fostering business sustainability.

Keywords: sustainability; SME; entrepreneurship; IKS; agriculture; health care.

Introduction and background

Small and medium-sized enterprises (SMEs) play an integral part in the growth and resilience of the South African economy by creating jobs, innovating and developing economies (Ramsuraj 2023). However, these businesses encounter numerous problems that have an impact on their long-term viability and growth prospects. Quarshie, Salmi and Leuschner (2016) noted that sustainability in SMEs has become a focus in contemporary business literature, reflecting a rising acknowledgement for SMEs to operate sustainably. Small and medium-sized enterprises' sustainability is a recurring issue, with research continuously looking into how SMEs can reconcile economic viability with environmental and social responsibilities. Furthermore, Owusu and Okpoti (2019) highlighted the importance of committed leadership and a culture that values sustainability in driving the successful implementation of sustainable practices within SMEs. Meanwhile, Hari (2020) noted that limited attention has been drawn towards the integration of Indigenous Knowledge Systems (IKS) into commercial sustainability, unintentionally hindering the potential of using IKS to inform and contribute to sustainable practices. Slikkerveer (2019) argued that indigenous communities throughout the world possess a wealth of knowledge, especially rich environmental wisdom, which can be invaluable in addressing today's sustainability challenges. In agreement with Mapira and Mazambara (2013), Hari (2020) affirmed that indigenous communities have spent decades refining sustainable solutions based on their

experiences, leading to a comprehensive understanding of local ecosystems and natural cycles.

Hari (2020) further argued that IKS practices tend to embrace holistic perspectives that acknowledge the complex interactions between people and the natural environment. The holistic approach offered by IKS is essential in fostering an organisational culture that promotes sustainable practices. Mkhonza and Sifolo (2022) stressed the value of sustainability planning, cautioning SMEs to not undervalue it in their strategic planning procedures.

Although SMEs may not use strategic planning extensively, Mkhonza and Sifolo (2022) further contended that it is an essential tool that guides decision-making at all organisational levels. The incorporation of IKS into strategic and operational planning facilitates the adoption of sustainable practices from the grassroots level (Kom et al. 2023), influencing decision-making in relation to customer service, production processes and resource management.

This study aims to provide insight into challenges and opportunities encountered by SMEs in integrating Tshivenda IKS to enhance business sustainability. Given the vulnerability of SMEs to environmental changes, they face several obstacles that impede their sustainability efforts, often resulting in their demise. Consequently, incorporating IKS into business operations, from strategic planning to daily activities, provides SMEs with invaluable insights to thrive amidst challenging environmental conditions. Senanayake (2006) addressed the use of IKS to promote environmental sustainability, further noting the importance to recognise that businesses must balance the social and profitability aspects of sustainability. While the focus on environmental sustainability is valued, SMEs are increasingly acknowledging the need to also address social and economic dimensions (Quarshie et al. 2016). However, the foundational insights into integrating indigenous knowledge into business practices, particularly adopting a holistic approach encompassing all three pillars of sustainability, remain largely unexplored. Although earlier studies (Mehra 2024; Radcliffe & Parissi 2022) emphasised the importance of preserving and leveraging indigenous knowledge, there is no clear link established between implementing IKS and promoting sustainable business practices. Mehra (2024) argued for the usefulness of IKS in industries such as health care, agriculture and tourism. However, challenges related to integrating IKS and adapting indigenous practices to meet the demands of a rapidly changing business environment have yet to be thoroughly studied (Ademowo & Nuhu 2017). Consequently, a notable gap in the literature persists, underscoring the need for exploration to offer practical guidance for SMEs.

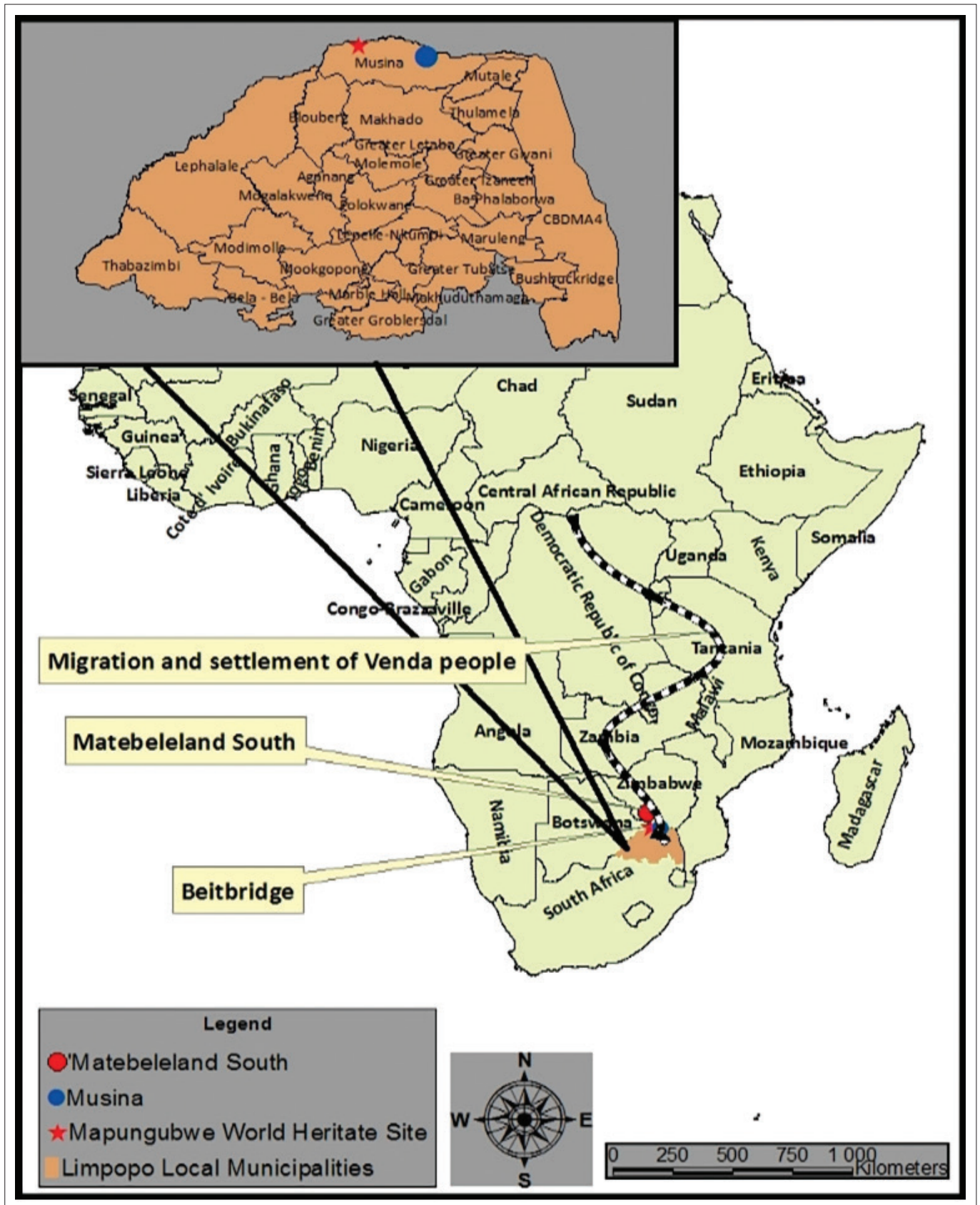
Focusing on investigating IKS practices within SMEs owned by Tshivenda-speaking individuals in Limpopo (Musina) and Zimbabwe (Beitbridge), this study successfully explores the opportunities and challenges experienced by SMEs.

The regions of Beitbridge and Musina boast a distinctive cultural heritage, upheld through customs such as medicinal plant usage, storytelling, traditional agriculture, natural resource management and cultural ceremonies. These practices reflect a profound understanding of social cohesion, regional ecology and resource stewardship. It is imperative to document Tshivenda IKS for future generations, enabling the widespread sharing of invaluable knowledge, particularly in the face of threats posed by modernisation and globalisation to the continuity of indigenous practices.

The origin and migration of Vhavenda-speaking people

Matshidze (2013) clarified the meaning of the term 'Venda', pointing out that it refers to both the group of people known as Vhavenda and the area they live in. Before settling in northern South Africa in the early 1700s, Mulaudzi (2020) affirmed that the Vhavenda people had migrated from Central Africa, passing through countries including the Democratic Republic of the Congo, Malawi, Tanzania, Zambia and Zimbabwe. Mabiba (1994) noted that while their geographical origin has been a subject of debate for decades, diverse interpretations often point to the Democratic Republic of Congo as the potential source. Matshidze (2013) confirmed the enduring presence of Vhavenda communities in Zimbabwe. Currently, Vhavenda populations reside in both South Africa and Zimbabwe, as depicted by the migration patterns of Tshivenda-speaking people on the accompanying map, Figure 1. Worth noting, this study facilitates cross-border comparisons by interacting with Tshivenda-speaking communities in Zimbabwe and South Africa, providing insights into how IKS adapt to diverse cultural and geographical contexts. Such analysis enhances our comprehension of the adaptability and resilience inherent in these traditions.

The map (Figure 1) depicts the countries through which Tshivenda-speaking people travelled on their route to their current settlement regions, with dotted arrows signifying both their historical migration and the modern geographic areas where their culture thrive. The Venda homeland was given self-governance powers by the apartheid government of South Africa in 1963, when it was proclaimed the 'Republic of Venda' (Fokwang 2003). Nevertheless, this self-governance was not acknowledged globally and was commonly interpreted as an attempt to legitimise apartheid practices. Subsequently, Venda was reincorporated into the new South Africa as a part of the Limpopo Province after apartheid ended in 1994 (Mahosi 2020; Pienaar 2014). Sadly, colonisation and apartheid had a severe impact on the Vhavenda people's indigenous practices, alongside many other indigenous communities (Oliver & Oliver 2017). Their inhabited region was part of the greater European colonial expansion in the 19th century. During the Scramble for Africa, it was first conquered by the British before being administered by the South African Republic (Transvaal). Alemazung (2010) posited that the colonial era brought major changes to the socio-economic landscape, including forced labour, land expropriation and the establishment of colonial



Source: Manyaga, M.B., Thomas, P. & Goldman, G., 2023, 'The role of Indigenous Knowledge Systems in SME sustainable business practices', Unpublished PhD thesis, University of Johannesburg, Gauteng

FIGURE 1: The migration of Tshivenda-speaking people.

rule. These changes adversely affected the transmission, continuity and practice of Tshivenda IKS. Colonialism significantly impacted how native peoples governed themselves and transferred traditional knowledge. As a result, the transmission of Tshivenda indigenous knowledge and practices became challenging. Seroto (2019) argued that colonisers appropriated indigenous artefacts and knowledge, often relocating them to institutions and museums in Europe, resulting in the loss of IKS. Furthermore, according to Sparks (2019), colonialism often resulted in land dispossession, denying indigenous peoples access to their native territories. The disturbance impacted indigenous land management approaches, agricultural systems and ecological knowledge. The exploitation of natural resources for colonial advantage degraded the ecosystem and disrupted indigenous resource management approaches (Alemazung 2010).

In commercialised sectors, indigenous legal systems were either replaced by or coexisted with Western legal systems (Mukuka 2010). This reduced the power of traditional leaders and knowledge holders and had an impact on traditional governance and customary conflict resolution procedures. Colonial policies also promoted the growth of commercial crops and brought in modern yet unsustainable farming methods, disrupting indigenous agricultural knowledge, crop diversity and traditional farming systems (Iya 2017; Mukuka 2010). In recent years, indigenous communities have undertaken a concerted effort to maintain, revitalise and modify their IKS in the post-colonial age, despite these obstacles. Indigenous communities are revisiting traditional practices and finding innovative means to effectively apply IKS in modern-day living (Masenya 2024).

Literature review

Indigenous Knowledge Systems

Indigenous Knowledge Systems comprise a range of knowledge, abilities, customs and inventions that have been refined and passed down through the years by indigenous peoples (Khumalo & Mapotse 2023). Deeply ingrained in the spiritual beliefs and lifestyles of indigenous people, these systems have been integrated into a foundation of culture, traditions and local surroundings. Indigenous knowledge provides a comprehensive understanding of the world by addressing a wide range of topics, including astronomy, medicine, ecology, agriculture, storytelling and social organisation (Emeagwali & Sefa-Dei 2014). It incorporates interrelated understandings of human nature, relationships and spirituality. Indigenous knowledge is passed down orally from elders through ceremonies, songs, rituals and storytelling. It is best transmitted throughout generations (Gorjestani 2000). Intergenerational learning is prioritised by indigenous communities. This involves passing down knowledge from elders to younger generations in family and communal settings. This practice encourages continuity, identity and the retention of traditional knowledge (Batibo 2013). Furthermore, indigenous knowledge changes throughout time, adapting and inventing in response to shifting social, environmental and economic conditions (Hari 2020).

The argument over the role of IKS in mainstream economic activities continues in scholarly discourse, notably in terms of the effective integration of IKS practices into business environments, as well as their impact on diversity and inclusion policies (Loew et al. 2019; Vilakazi, Zengeni & Mafongoya 2022). Despite these arguments, IKS provide opportunities for SMEs to address and mitigate the concerns of global warming and climate change caused by unsustainable economic practices (Mugambiwa 2021). Indigenous Knowledge Systems have distinct characteristics that reflect the wisdom and tradition of indigenous communities. Their comprehensive approach not only delivers practical solutions, but it also instils a deep feeling of purpose and meaning, creating a healthy and peaceful lifestyle (Khumalo & Mapotse 2023).

The dynamic and participatory method to conveying IKS preserves the continuity and authenticity of knowledge, as community members actively learn from their elders and peers. Indigenous Knowledge Systems are strongly rooted in local surroundings, providing indigenous people with an in-depth knowledge of ecosystems and natural resources (Emeagwali & Sefa-Dei 2014). This information promotes sustainable resource management based on local demands, making IKS adaptable and dynamic.

Furthermore, the emphasis on community well-being within IKS highlights the importance of adopting IKS principles into SMEs' social responsibilities (Ndwandwe 2013). By promoting community welfare, SMEs can effectively incorporate IKS principles into their business practices.

Indigenous Knowledge Systems and the commercial ecosystem

Indigenous Knowledge Systems in general, including Tshivenda IKS, play a vital role in various industries, notably health care and agriculture, where traditional practices intersect with modern approaches (Ademowo & Nuhu 2017). A historical example of this synergy is evident in the rise of the Kingdom of Mapungubwe as a significant trade centre in Limpopo. Mapungubwe, an Iron Age kingdom flourishing from the 9th to 13th centuries, held considerable importance in southern Africa (Pwiti 1991). Situated in present-day Limpopo, it served as a bustling hub for trade, connecting with regions as far as the Swahili Coast, India and China.

Mapungubwe thrived as a trade centre, facilitated by the exchange of valuable goods like gold, ivory and ceramics. This trading hub attracted diverse communities, fostering cultural exchange and economic growth (Wintjes & Tiley-Nel 2019). The interaction of traders and locals led to the sharing of knowledge, influencing agricultural practices, metallurgy and art. This dynamic cultural interchange contributed to Mapungubwe's unique identity and complex societal structure, supported by evidence of hierarchical leadership and craft specialisation (Woods 2012). However, environmental changes, trade route shifts and political shifts led to Mapungubwe's decline by the 13th century (Wintjes & Tiley-Nel 2019).

Nevertheless, its historical commercial activities were significantly influenced by Tshivenda IKS, highlighting the crucial role of IKS in commercial settings.

The recognition of indigenous medicine as a crucial part of basic health care began in 1978 when the World Health Assembly (WHA) encouraged countries to integrate indigenous medical practices into their health care systems (WHA 2003). Subsequently, Antwi-Baffour et al. (2014) contended that the high cost of Western pharmaceutical products limits their accessibility for many Africans. As a result, the majority of the African population still relies on indigenous medicine for their health care needs (Rankoana 2012).

Sustainability in small and medium-sized enterprises

Sustainability in SMEs encompasses environmental, social and economic aspects (Long 2019), yet these businesses face numerous challenges in achieving sustainability. Limited resources, financial constraints and a lack of awareness hinder the adoption of sustainable practices (Raderbauer 2011). In South Africa, SMEs are classified according to the *National Small Business Act*, which sets criteria based on employee count among other criteria. Micro-enterprises have fewer than 10 employees, small enterprises employ between 10 to 50 individuals, and medium-sized enterprises have 51 to 250 workers (Department of Small Business Development 2023). Within the SME landscape, perspectives on sustainability vary widely, and this diversity in perception is influenced by factors such as industry context, market demands and regulatory requirements (Long 2019).

While some businesses view sustainability as essential for responsible operations and a means of differentiation in the market, others perceive it as an additional financial burden and administrative hurdle (Porter & Kramer 2011). Despite concerted efforts by the South African government to foster the development of small businesses through policy frameworks, many SMEs struggle to maintain sustainability. Policymakers continue to prioritise small businesses as a driving force for local economic development (Department of Small Business Development 2023), yet challenges persist in translating these intentions into tangible outcomes. In fact, the failure rate among SMEs remains alarmingly high, with approximately 70% to 80% ceasing operations within the first 5 years (Adonis 2022). However, overcoming sustainability hurdles can yield significant benefits for SMEs, including enhanced brand image, attracting environmentally conscious consumers and long-term cost savings through energy efficiency. Subsequently, strategic planning can be a useful tool for fostering sustainability in SMEs (Gast, Gundolf & Cesinger 2017).

Although SMEs rarely engage in strategic planning, establishing a formalised business strategy is increasingly recognised as crucial for long-term success. Strategic planning significantly influences sustainable business practices in SMEs (Wang, Walker & Redmond 2009). A well-defined strategic

plan aligns sustainability goals with overall business objectives, integrating sustainability into daily operations. This approach enables SMEs to identify areas for improvement, allocate resources effectively and implement measures for long-term sustainability (Long, Looijen & Blok 2018). Moreover, strategic planning empowers SMEs to anticipate and adapt to market trends, regulatory changes and consumer expectations, fostering adaptability and long-term success. Developing clear goals, regularly assessing risks and opportunities, and investing in innovation are crucial for SMEs' survival and growth in an evolving market landscape (Wang et al. 2009).

Embracing sustainability can enhance market appeal, attract environmentally conscious consumers, and create a competitive edge. Furthermore, integrating sustainable practices can lead to cost savings through improved resource efficiency and energy conservation (Long et al. 2018). Accessing financial support and incentives from government initiatives promoting sustainability represents another opportunity for SMEs to integrate sustainability into their operations. It is imperative for strategic plans to have a specific focus on sustainability, ensuring a balanced strategic approach across the three sustainability pillars: social, economic and environmental (Porter & Kramer 2011). Small and medium-sized enterprises that embrace sustainability tend to demonstrate better resource efficiency, innovation and resilience.

Unfortunately, SMEs face many challenges in implementing sustainability efforts (Mene 2020). These include limited access to financial resources, insufficient awareness and understanding of sustainable practices, regulatory burdens, lack of technical expertise, and difficulties in measuring and reporting sustainability performance (Mene 2020). Overcoming these hurdles is crucial to leverage opportunities associated with sustainability (Long 2019), including meeting the growing demand for eco-friendly products and services. Subsequently, SMEs are urged to prioritise resource efficiency and environmental stewardship by implementing sustainable practices like energy and water conservation, waste reduction and recycling (Wang et al. 2009). These efforts not only minimise environmental impact but also lead to long-term financial benefits. Embracing renewable energy sources and eco-friendly materials can further enhance sustainability while driving innovation and competitive advantage. Additionally, fostering a culture of social responsibility and ethical conduct enhances trust and goodwill with employees, customers and stakeholders, bolstering long-term viability (Raderbauer 2011). Furthermore, cultivating partnerships and collaboration strengthens sustainability efforts, benefiting SMEs, suppliers, local communities and customers (Porter & Kramer 2011).

Research methods and design

The study employed a qualitative research approach, selected for its ability to provide a deep understanding of a phenomenon (Babbie & Mouton 2001), aiding the researchers to understand opportunities and challenges of integrating Tshivenda IKS in SMEs business operations to promote sustainable business practices. The research design adopted

was constructivist grounded theory, aimed at constructing an explanatory theory unique to the research issue (Cuban & Spiliopoulos 2010).

Grounded theory was chosen because of the lack of established theory regarding challenges and opportunities associated with using Tshivenda for sustainability efforts in SMEs. The methodology utilised inductive reasoning to analyse collected data, aiming to uncover overarching principles, relationships and theories.

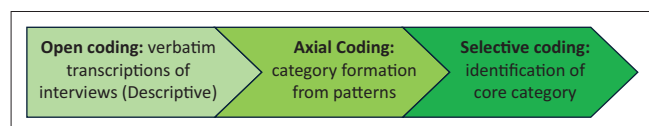
Data collection methods

The study employed theoretical sampling, focusing not only on gathering more participants but also on saturating concepts to build theory. The study involved a total of 12 voluntary participants, 7 participants from Musina (Limpopo) and 5 from Beitbridge (Zimbabwe), who met specific selection criteria including that SME owned by a Tshivenda-speaking individual, operating in agriculture or health care industries for a minimum of 3 years and registered with relevant authorities. Semi-structured individual interviews were conducted with these SME owners in both regions.

The study utilised a semi-structured interview schedule to allow participants to freely express their views and share knowledge (Adhabi & Anozie 2017) regarding challenges and opportunities in implementing Tshivenda IKS within their organisations. Interviews were audio recorded with participants' written consent. Interview durations varied based on participants' knowledge and willingness to share, averaging around 40 min to 50 min. Table 1 presents the participant demographics.

The grounded theory data analysis method, encompassing open, axial and selective coding, was conducted using Atlas.ti. In their analysis, Draucker et al. (2007) emphasised the close relationship between coding and theoretical sampling, the preferred sampling method in grounded theory research. Figure 2 provides steps applied during data analysis.

The researcher meticulously transcribed each interview verbatim, ensuring completeness and correctness, and



Source: Adapted from Strauss, A. & Corbin, J., 1990, *Basics of qualitative research: Grounded theory procedures and techniques*, p. 61, Sage, London

FIGURE 2: Data analysis process.

TABLE 1: Demographic information of participants.

Participant Code	C.M P1	R.P.S P2	M.K P3	N.R P4	S.M P5	R.T P6	T.T P7	G.T P8	M.T P9	D.N P10	G.M P11	C.S P12
Geographic location	RSA	RSA	RSA	RSA	RSA	RSA	RSA	ZW	ZW	ZW	ZW	ZW
Business/Industry	Agriculture	Agriculture	Health Care	Agriculture	Agriculture	Agriculture	Agriculture	Agriculture	Agriculture	Agriculture	Health Care	Agriculture
No. of years in business/Industry	4	16	18	6	15	22	14	5	5	7	45	4

Source: Manyaga, M.B., Thomas, P. & Goldman, G., 2023, 'The role of Indigenous Knowledge Systems in SME sustainable business practices', Unpublished PhD thesis, University of Johannesburg, Gauteng RSA, Republic of South Africa; ZW, Zimbabwe.

eliminating errors. In the initial coding stage, common phrases from participant responses were identified by thoroughly reviewing interview transcripts. These quality-assured transcripts were then analysed using Atlas.ti, starting with open coding to identify themes from interview questions and participant responses. Themes were organised based on similarities and common phrases. Ultimately, opportunities and challenges were categorised, aligning with the study's research aim and objective.

Ethical considerations

The study obtained ethical clearance from the University of Johannesburg, identified by ethics clearance number 2018BM40. The four criteria of trustworthiness, as outlined by Lincoln and Guba (1985), were considered in developing the design: credibility through exploratory research with knowledgeable participants, dependability with a clearly described research process, confirmability with design components underpinned by supporting secondary research, and transferability, ensuring the design is reliable as a starting point for future research.

Results

During the analysis, terms such as limitations, challenges and opportunities were used to understand how SMEs integrate Tshivenda IKS for sustainability. Worth noting, selected interview excerpts (verbatim) are presented. However, additional evidence is available upon request from the authors.

Challenges encountered by small and medium-sized enterprises when using Tshivenda Indigenous Knowledge Systems for business sustainability

This theme primarily addresses the challenges encountered by SMEs in utilising Tshivenda IKS to enhance business sustainability. Identified challenges include lack of sustainability and strategic planning within SMEs, shifts within the business environment, shortage of sustainable supply chains, diversity and cultural differences.

Sustainability and SME strategic planning

Overall, most participants disclosed a lack of formally written business strategy documents outlining strategic plans for their businesses. While two participants mentioned having an informal strategy framework for future plans, and that it had not been formally documented or communicated to employees. Additionally, these SMEs indicated that their strategic plans lacked a specific focus on sustainability, but

instead emphasised future product and market expansion, predominantly prioritising economic sustainability over social and environmental pillars. Furthermore, only two out of the 12 participants had formalised their strategic plans, primarily motivated by the need to secure funding. The remaining eight participants, lacking both draft and formalised strategic plans, showed less inclination towards formalising a business strategy for sustainability, citing business size as a limiting factor (see Table 2).

While the responsibility of communicating the business strategy and aligning employees with its vision and missions sorely rests with the leader, in this context, the SME owners, the study identified a lack of commitment from leadership towards sustainability planning. Consistent with earlier research (Jansson et al. 2017), informal strategic planning was found to be prevalent among SMEs, placing them at a disadvantage regarding sustainable business practices. Because of inadequate planning, IKS practices requiring longer turnaround times were disregarded in favour of quicker and more accessible alternatives. Ultimately, sustainable business practices informed by IKS within the SMEs were not driven from a strategic point.

Shifts in the business environmental factors

Participant perspectives underline the significant influence of environmental factors in implementing Tshivenda IKS to advance sustainability. The findings indicate that changes in external environmental variables have presented both opportunities and threats to sustainability practices through Tshivenda IKS. While technology was commended for its ability to facilitate mass production, it was also criticised for undermining IKS practices and contributing to health concerns through the production of genetically modified products. Additionally, participants noted a rapid loss of

land and natural resources crucial for practising IKS because of globalisation, urbanisation, as well as policies and regulations that do not favour the preservation and protection of IKS. Moreover, climate change was observed to have reshaped traditional IKS knowledge regarding weather conditions, seasonal forecasts and overall ecosystem comprehension (see Table 3).

Health care participants expressed concerns about climate change leading to significant alterations in the ecosystem, rendering some IKS teachings obsolete and impractical. Participants attributed this to the ongoing depletion of natural resources and notable changes in plant genetic properties, compromising plants' healing abilities or rendering them unsafe for human consumption. Biodiversity loss has led to the encroachment on sacred sites and the disappearance of unique indigenous plants such as 'Muangaila', which held cultural and medicinal significance. 'Muangaila' was revered for its exclusivity, territorial growth and sacredness, with only trained individuals permitted to handle it. Health care practitioners demonstrated a protective stance towards IKS, especially concerning sacred and unique aspects of their practice as the business existence and operations largely rely on indigenous herbs.

Short of sustainable supply chain

The findings highlight significant concerns raised by participants regarding the crucial role of suppliers in promoting sustainable business practices. Participants highlighted challenges in securing reliable suppliers for Tshivenda IKS-related resources like indigenous manure and herbs, which are essential resources for sustainable operations. Without access to these IKS-produced suppliers, participants felt compelled to resort to chemically infiltrated Western alternatives because of their availability. In addition,

TABLE 2: Interview excerpts pertaining to strategic planning.

Participant number	Excerpts from interview with participant
P1	'... I do have a drafted strategy document ... It is not an official document and it's not a document that I could share with someone to read. In some instances, I just put the name of the location like Thohoyandou. In my head, I know that this is my next targeted location but anyone else who sees this would not be able to interpret it, hence I am saying it's not a document that I can share with anyone else.'
P3	'I do not have a business plan. I do not need a plan; I have been doing this for long. I plan things in my head, but it is not written...'
P7	'Yes, it is a written document. I recently applied for funding because I want to buy more land where I will be planting organic "mitebvu" ("Macadamia plants") that will be consumed in Europe, they will be exported.'
P4	'These days, the soil wants to be fertilised and because of poor planning, we run to buy processed manure because you cannot use indigenous manure such as ashes and plant your crops immediately because then the opportunities of the manure burning the crop are high. The manure has to rot and mature within the soil before crop planting can take place, this can be a time-consuming process and that is why people find it easy to use Western science when it comes to soil fertilisation.'

TABLE 3: Interview excerpts pertaining to environmental shifts.

Participant number	Excerpts from interview with participant
P3	'The same applies to plants that I need for herbs, if we keep burning and cutting trees to make entertainment and other business ventures, we will have nothing of Tshivenda IKS left. And when there is nothing of Tshivenda IKS left, my business will not be sustainable ... I think I am trying to show that sustainability, IKS and Business are interrelated and need each.'
P5	'Yes, but today, there is too much of cyclones and that, when you study about the movement of the wind you will be able to see how rain formation takes place. So, a lot of things have been affected because of the pollution.' 'The government instead of giving people land, they give us very small portions even though they can see you have the expertise to make the land profitable. And that is where our government is delaying and not assisting people'
P7	'You know urban areas have rules and are made of very diverse people. So, community leadership has an influence on the extent to which I can practice IKS'
P9	'...., we may be having so many pesticides as a result of environmental changes like lack of rain, extreme weather conditions and also something as simple as urbanisation.'
P11	'I mean things have changed; the environment has changed. Rainy seasons do not have rain anymore. The heat is way too much, and this has severe impact on the plants that we use. The plants we have today are not the same as the plants that our ancestors had and used. Yes, the names remained the same, but the quality and particles are not in the same conditions. The chemical balance in plants is affected by the natural surroundings'

IKS, Indigenous Knowledge Systems.

sustainable business practices, characterised by resource optimisation, were hindered by the adoption of unsustainable resources resulting from SMEs' poor planning. Bugwandin and Bayat (2022) reported that poor planning directly impacts resource management and supplier selection decisions. Despite this, Tshivenda IKS practices were preferred when they did not disrupt operational activities and service delivery. Consequently, the findings show how SMEs opted to adopt an integrated approach, combining Western science practices for convenience with intertwined IKS practices. Notably, health care SMEs faced challenges in integrating Western science and Tshivenda IKS because of their reliance on selling pure, organic herbs. In such cases, packaging and measuring tools from Western science were predominantly utilised to ensure product safety and provide clear dosage instructions.

Participants emphasised that securing stable suppliers of indigenous resources for sustainability efforts could lead to reduced production costs compared to current conventional methods. This contrasts with existing literature (Uhunamure et al. 2021) attributing higher production costs of indigenous and organic resources to factors like climate change, manual harvesting and supplier scarcity. Nevertheless, integrating sustainable supply chain activities with sustainable procurement supports sustainable business practices (Xu 2022). Given these challenges, SMEs should collaborate with suppliers to develop innovative solutions promoting sustainability (see Table 4).

Diversity and cultural differences

Employee behaviour, inefficiencies in operational planning, and general and established business norms emerged as key drivers of organisational culture and reception of Tshivenda IKS practices. The findings illustrate how proverbs and idioms form the basis for expectations regarding employee interactions with each other, suppliers, customers and other stakeholders. Participants emphasised the importance of traits such as compassion, respect, nobility and ethics, which are deeply rooted in the upbringing and teachings within the

Tshivenda community, as essential for interactions. However, stakeholder diversity, encompassing differences in ethnicity, race, tribe and religion, presents a challenge because of varying principles ingrained in different communities. Additionally, participants also face criticism of their IKS. For instance, within Tshivenda IKS, avoiding direct eye contact during interactions with seniors, age or position is seen as disrespectful, contrasting with other cultural norms where direct eye contact is a sign of confidence and respect. The inability to navigate these differing value systems was found to negatively impact business engagements (see Table 5).

The findings reveal a significant negative impact on IKS practices because of changes in religious beliefs, leading to a perception of IKS as culturally and religiously unfavourable. Christian consumers viewed IKS practices as 'unholy' and avoided their adoption and consumption (Ntombana 2015). This religious stigma resulted in SMEs being unable to cater to this customer segment. Abandoning IKS was common among consumers adopting religions that stigmatise its use, labelling IKS practices as 'witchcraft' and associating them with negative spiritual connotations. Despite these challenges, findings indicate that participants utilised Tshivenda IKS principles to shape interpersonal relationships with stakeholders.

Sustainability opportunities for small and medium-sized enterprises through Tshivenda Indigenous Knowledge Systems

Within this theme, opportunities emerged including greater stakeholder collaborations and engagements, access to local and international markets, and enhanced business attraction through the preservation of IKS.

Greater collaborations and stakeholder engagements

Viewed through the perspective of Tshivenda IKS, participants saw other businesses not as competitors but as collaborative partners in shaping and co-creating value within the chain. As such, common marketing practices such as criticising competitors' products or services to gain

TABLE 4: Interview excerpts pertaining to supply chain shortages.

Participant number	Excerpts from interview with participant
P2	'My business has a hybrid approach which includes Tshivenda IKS and Western science. I need Western culture for the machinery and other logistics in the business.'
P10	'I have not been doing that because I would need a large quantity of ash and there isn't really a supply for such so it is just easier to buy ash, I guess. You see this is why we use Western science; we are now trained to want quick solutions no matter what the cost.'

IKS, Indigenous Knowledge Systems.

TABLE 5: Interview excerpts pertaining to diversity.

Participant number	Excerpts from interview with participant
P3	'I must say that it is difficult with so many believes that we have now because for some Christians, taking medication from a Traditional Health Care Practitioner is seen as a sin. I think they are not taught the different between a Traditional Health Care practitioner and a witch doctor.'
P5	'For me as an African person. African man, growing up we were told that looking someone directly in the eye is a sign of disrespect and you would remember that respect is central to ubuntu. Right. So, when I go into meetings with people from other continents or countries, let us say we are going to farmer forums or approaching new clients for long-term contracts, people expect you to look them in the eye when you talk because if you look down or anywhere else you are assumed to either be lying, hiding something or you are a crook. ... For me, this is disrespectful but for them, it is respectful.'
P6	'We are now encouraged to use white man medicine and called "vhahedini" (sinners) if we use indigenous plants. But the same medication is made of plants and presented in a different format, they turn the plants into pills and tell you that using plants is sinful.'
P11	'African herbs are viewed as potentially inferior because it is said that we are not medically trained and so we do not fully know the human body. African Traditional Healthcare practitioners gets a lot of criticism as compared to Western doctors... For Western science, mostly, the training is very formal, and it is not restricted to family. Anyone can be a medical doctor if they want to.'
	'Because the current generation is mostly church-going people, some churches are against traditional herbs and that means that my client base reduces.'

market share were cautioned against because of the belief in 'udi o kela masimbe', translating to 'bringing curses to oneself'. Consequently, a strong spirit of collaboration was noted among SMEs and their competitors. In addition, SMEs were found to collaborate and leverage royal households for marketing purposes and strengthening customer confidence. The practice of 'usuma musanda' or 'u luvha musanda' was found crucial for business sustainability, as SMEs could face community disapproval for failing to follow indigenous protocol (see Table 6).

The findings reveal the concept of 'cooperative competition' or 'co-opetition' among competitors, which fosters benefits such as pooling resources, expanding networks, and sharing knowledge and skills (Luciana, Pierre & Yan 2021). Co-opetition facilitates market expansion through joint efforts (Riihikoski & Chuecas 2020), but considerations like trust, alignment of goals and legal compliance with regulations such as *the Competition Act 89 of 1998* are crucial to prevent anticompetitive behaviour. Competition is viewed as essential for SMEs to enhance their competitiveness against larger enterprises. The study found that traditional leadership structures, involving approval processes by royal councils, play a significant authoritative role in community recognition of businesses. This was more prevalent in SMEs operating in South Africa compared to those operating in Zimbabwe. South African SMEs adhering to indigenous protocol received community acknowledgement and benefits, while those disregarding it experience reduced community recognition, regardless of official business registration status.

Access to local and international markets

Participants recognised IKS as a catalyst for SMEs to penetrate both local and international markets. They noted the particularly high demand for organic goods in regions like Europe. Remarkably, participants perceived this demand as confirmation of the relevance of IKS practices, highlighting the opportunities for economic development through IKS-produced goods (see Table 7).

Earlier studies (Guanqi & Husnain 2022; Wang, Pham & Dang 2020) also reported a rise in environmental consciousness among consumers, noting a growing preference for products and services aligning with sustainable principles. Health-conscious consumers prefer products that are without genetically modified organisms (GMOs), pesticides and synthetic chemicals, believing them to be healthier for overall well-being. The demand for organic products exceeds local markets, with increasing interest observed in international markets. This demand presents opportunities for SMEs to access larger markets and export their products (Guanqi & Husnain 2022).

Enhance business attraction through IKS preservation

To create a competitive advantage, SMEs aimed for differentiation, partnerships and superior customer service by embracing IKS and Ubuntu principles. These principles guided various aspects including debt repayment and product exchanges, placing the customer at the forefront, embodying the ethos of 'murengi ndi mapfura ua doliwa' ('the customer is king') (see Table 8).

TABLE 6: Interview excerpts pertaining to collaborations and stakeholder engagements.

Participant number	Excerpts from interview with participant
P1	'I will then present my business intentions to the royal counsel who will then discuss it with the chief. In the next community meeting when the chief addresses the community, the chief would typically recognise the new businesses in the area, thereby promoting the businesses and assuring the community that the business has followed proper protocols.'
P2	'For an example, if we are dealing with a competitor. "U shela mavu" (to pour sand) would mean that I criticise the business and the product of the competitor so that I can serve the market alone. Criticising the quality of their products, the way it was sourced or produced. Doing this is also "udi okela masimbe" (loosely translated as inviting/attracting trouble), in a sense that others will start talking negatively about you and this results in negative brand perception.'
P3	'As a business owner and a local chief, my responsibility is to govern and make sure that I monitor the nature of businesses operating in my space. I have to check what we are exposing the community to and so, "Uluvha" can also be used to quality assure the business in terms of its safety and potential risks for the rest of community members.'

TABLE 7: Interview excerpts pertaining to access to local and international markets.

Participant number	Excerpts from interview with participant
P1	'So, I will go back to the concept of organic farming again because it is indigenous farming. In recent times, there are people suffering from high blood pressure, sugar diabetes and when people go to Dieticians, they are advised to eat organic food. Food retailers like Woolworth prides itself in sourcing organic food, these are products that are produced using indigenous ways with no use of Western fertilisers or harmful chemicals.'
P7	'I recently applied for funding because I want to buy more land where I will be planting organic "mitevbu" (Macadamia plants) that will be consumed in Europe, they will be exported ... It is because there is an opportunity there and so organic food are on high demand in Europe due to health challenges associated with these artificial foods. They came and criticised our food, took our land and then introduced artificial food to us. Now there is a demand for the same food they criticised. If you also look in shops, you will see that organic food is more expensive than artificial food.'

TABLE 8: Interview excerpts pertaining to competitive advantage.

Participant number	Excerpts from interview with participant
P1	'My company has an agreement with an investment company. We use Tshivenda IKS to produce organic fertilisers which we sell to organic farmers. We target dams, rivers and ponds, clean them up and remove invasive aquatic plants in the water using a chemical-free process to harvest the plants.'
P2	'In addition to greeting this way, I also try my best to incorporate some element of Venda traditional wear in my formal wear, I find that this helps me stand out from the crowd and people often remember me by the way I greeted them and the way I dressed. In essence, you would say I am using the knowledge in which a Venda man should conduct himself to create brand differentiation.'
P8	'I sometimes reduce the price. Just for ... maybe give them a good discount on the amount required or allow them to pay the requirement amount but add more goods, we call this "Basela".'
P12	'When you listen to the customer request and honor the agreements with them, that is treating them right. But also, giving them a little bit more than they paid for as a top up. I think this is also part of Ubuntu.'

IKS, Indigenous Knowledge Systems.

The study found that SMEs integrated the aspects of IKS into their business operations, particularly in marketing through branding and differentiation. Tshivenda cultural practices like the greeting 'Ndaa' and traditional attire 'Minwenda' were used for brand differentiation purposes, effectively distinguishing their business and influencing public perception. In addition, previous studies (Grobler & Singh 2018; Laloo 2022) have linked principles like empathy, respect and cooperation promoted by Ubuntu to Tshivenda IKS, reinforcing its prevalence in the Vhavenda community. In SME customer service, Ubuntu's emphasis on recognising others' humanity positively impacts relationship-building, fostering loyalty and enhancing the overall customer experience and competitive advantage.

Discussion

The analysis of SMEs integrating Tshivenda IKS for sustainability reveals several challenges and opportunities. Challenges include the lack of formal sustainability planning within SMEs, with most lacking documented strategies specifically addressing sustainability pillars. This deficiency reflects a broader issue of leadership commitment to sustainability planning, with informal approaches prevailing and impeding the adoption of IKS practices that often require longer lead times. Environmental dynamics, including technological advancements and climate change, offer both prospects and risks to sustainability practices rooted in Tshivenda IKS. Changes in external environmental variables directly impact IKS knowledge and resource availability, thereby influencing business operations. Moreover, challenges in establishing sustainable supply chains for indigenous resources present significant hurdles for SMEs embracing IKS practices.

The reliance on Western alternatives because of supplier scarcity and inadequate planning undermines sustainability efforts and hampers authentic integration of IKS into business operations. Cultural diversity and disparities further compound these challenges, with employee behaviour shaped by varied cultural norms and values, leading to potential misunderstandings and conflicts. Additionally, religious beliefs contribute to negative perceptions of IKS, particularly among Christian consumers, impacting its adoption and consumption. However, amidst these challenges lie abundant opportunities for sustainability through Tshivenda IKS. Collaboration and stakeholder engagement foster a climate of cooperative competition among SMEs, facilitating resource sharing and market expansion.

Access to international markets, particularly in regions like Europe, offers avenues for SMEs to export organic goods produced through IKS practices, tapping into growing consumer demand for environmentally friendly products. Furthermore, embracing IKS principles not only enhances business attraction and differentiation but also enables superior customer service. While challenges persist, SMEs can strategically leverage Tshivenda IKS to achieve sustainability goals by addressing supply chain issues, fostering cultural understanding and embracing collaborative opportunities. By

integrating IKS principles into their business strategies and operations, SMEs can enhance competitiveness, penetrate new markets, preserve cultural heritage, and promote environmental stewardship in a holistic manner.

Managerial implications and recommendations

The study's findings offer valuable insights for SMEs seeking to strengthen sustainability through IKS. Overcoming challenges like the lack of sustainable supply chains and cultural disparities necessitates proactive managerial approaches. Collaboration with local suppliers and communities is vital for establishing dependable supply chains for Tshivenda IKS-related resources, while promoting cultural sensitivity among employees can foster an environment conducive to integrating IKS practices. The absence of formalised sustainability strategies underscores the importance of strategic planning. Small and medium-sized enterprises should prioritise the development of comprehensive sustainability plans encompassing economic, social and environmental aspects, promoting the integration of Tshivenda IKS principles into decision-making processes. Additionally, flexibility and innovation are crucial for adapting to changing business environments and addressing criticisms of IKS practices. Staying abreast of environmental trends and technological advancements enables SMEs to identify opportunities for leveraging Tshivenda IKS for sustainable practices.

Proactive engagement with stakeholders not only helps address criticisms but also enhances the legitimacy of IKS practices. This engagement is particularly crucial as SMEs explore international markets, where significant growth potential lies in promoting sustainability. Exporting organic products produced with indigenous knowledge allows SMEs to tap into the rising global demand for sustainable goods. However, to effectively preserve Tshivenda IKS for business attraction and differentiation, strategic branding and customer relationship management are essential. Integrating elements of Tshivenda culture into marketing strategies and fostering customer-centric values grounded in Ubuntu principles can significantly enhance the appeal of SME offerings. Subsequently, the study makes the following recommendations:

- Small and medium-sized enterprises need to develop formalised sustainability strategies encompassing economic, social and environmental dimensions, with specific goals and action plans for integrating Tshivenda IKS practices.
- To overcome challenges related to cultural differences, SMEs should invest in employee training programmes that promote culturally sensitive sharing of IKS, fostering a supportive and inclusive work environment.
- Small and medium-sized enterprises should establish resilient and sustainable supply chains for Tshivenda IKS-related resources by working closely with local suppliers and communities, diversifying sources and implementing ethical sourcing practices.

- Active collaboration with other businesses, academic institutions and government agencies is essential for sharing knowledge and best practices related to Tshivenda IKS and sustainability, fostering innovation and accelerating adoption.
- Exploring opportunities to export products produced using Tshivenda IKS to international markets requires market research, certifications and establishing distribution channels in target countries.
- Engaging with local communities, traditional leaders and regulatory authorities is crucial for gaining support and ensuring the legitimacy and acceptance of Tshivenda IKS practices in SME operations.
- Small and medium-sized enterprises should establish mechanisms for monitoring and evaluating the performance of their sustainability initiatives, conducting regular audits and soliciting feedback from stakeholders to ensure continuous improvement and accountability.

Conclusion

The study delved into sustainability through Tshivenda IKS within SMEs, exploring opportunities and challenges. Through rigorous analysis, the findings shed light on the challenges, opportunities and complexities SMEs experience. Despite the challenges, there were notable opportunities for SMEs through the preservation and application of Tshivenda IKS. Collaborations and stakeholder engagements were fostered, with SMEs viewing other businesses not as competitors but as potential collaborators in value creation. The concept of 'cooperative competition' emerged, emphasising the benefits of pooling resources and expanding networks to achieve mutual success. Moreover, access to international markets presented significant prospects, particularly in regions like Europe, where there was a high demand for organic goods aligned with IKS practices. Furthermore, SMEs leveraged Tshivenda IKS for brand differentiation and customer service enhancement, aligning with the principles of Ubuntu to prioritise customer-centric approaches. While challenges persisted, such as navigating cultural differences and addressing negative perceptions of IKS, SMEs demonstrated resilience and adaptability in integrating indigenous practices into their operations. Considering these findings, it is evident that Tshivenda IKS holds considerable potential for SMEs in driving sustainability and fostering competitive advantage. By embracing the richness of Tshivenda IKS while navigating contemporary business challenges, SMEs can chart a path towards sustainable growth and prosperity, rooted in indigenous wisdom and innovation.

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M.B.M. conceptualised the study, designed the methodology and implemented it, analysed the results and drafted the manuscript. P.T. and G.A.G. provided supervision throughout the research process.

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Data availability

As this study contains sensitive information that could compromise the privacy of research participants and violate consent agreements, the data are not publicly accessible.

Disclaimer

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References

- Ademowo, A.J. & Nuhu, A.A., 2017, 'Indigenous knowledge and conflict management in Africa: a study of proverb use in conflict management among Hausas of Northern Nigeria', *International Journal of History and Cultural Studies*, 3(4), 36–44.
- Adhabi, E. & Anozie, C.B., 2017, 'Literature review for the type of interview in qualitative research', *International Journal of Education* 9(3), 86–97. <https://doi.org/10.5296/ije.v9i3.11483>
- Adonis,V., 2022, *70–80% of small businesses fail – Tips on how to stay afloat*, IOL, viewed 01 February 2024, from <https://www.iol.co.za/business-report/entrepreneurs/70-80-of-small-businesses-fail-tips-on-how-to-stay-afloat-4d1793c7-1b5d-4ed6-a209-bb8e09833ab0>
- Alemazung, J.A., 2010, 'Post-colonial colonialism: An analysis of international factors and actors marring African socio-economic and political development', *The Journal of Pan African Studies* 3(10), 62–84.
- Alfred, T. & Cornassel, J., 2005, 'Being Indigenous: Resurgences against contemporary colonialism', *Government and Opposition* 40(4), 597–614. <https://doi.org/10.1111/j.1477-7053.2005.00166.x>
- Antwi-Baffour, S., Bello, A., Adjei, D., Abdulai, S. & Ayeh-Kumi, P., 2014, 'The place of traditional medicine in the African society: The science, acceptance and support', *American Journal of Health Research* 2(2), 49–54. <https://doi.org/10.11648/j.ajhr.20140202.13>
- Babbie, E. & Mouton, J., 2001, *The practice of social research*, Oxford University Press, Cape Town.
- Batibo, H.M., 2013, 'Preserving and transmitting indigenous knowledge in diminishing bio-cultural environment: Case studies from Botswana and Tanzania', *Journal of African Study Monographs* 34(3), 161–173.
- Bugwandin, V. & Bayat, M.S., 2022, 'A sustainable business strategy framework for small and medium enterprises', *Acta Commercii* 22(1). <https://doi.org/10.4102/ac.v22i1.1021>
- Cuban, S. & Spiliopoulos, G., 2010, *The grounded theory method of analysis in the home/work study*, viewed 12 February 2024, from https://www.academia.edu/36597873/Strand_2-Grounded_theory_Data_Analysis
- Department of Small Business Development, 2023, *SMEs and Co-operatives funding policy for South Africa*, viewed 10 May 2023, from https://www.greengazette.co.za/documents/national-gazette-48483-of-28-april-2023-vol-694_20230428-GGN-48483.
- Draucker, C.B, Martsof, D.S., Ross, R. & Rusk, T.B., 2007, 'Theoretical sampling and category development in grounded theory', *Qualitative Health Research* 17(8), 1137–1148. <https://doi.org/10.1177/1049732307308450>
- Emeagwali, G. & Sefa Dei, G.J., 2014, *African Indigenous Knowledge and the disciplines: Anti-colonial educational perspectives for transformative change*, Sense Publishers, Rotterdam.
- Fokwang, J., 2003, *Chiefs and democracy in comparative perspective*, University of Pretoria, Pretoria.

- Gast, J., Gundolf, K. & Cesinger, B., 2017, 'Doing business in a Green Way: A systematic review of the ecological sustainability entrepreneurship literature and future research sirections', *Journal of Cleaner Production* 147(1), 44–56. <https://doi.org/10.1016/j.jclepro.2017.01.065>
- Gorjestani, N., 2000, *Indigenous Knowledge for Development: Opportunities and challenges. Indigenous Knowledge for Development Program the World Bank Online*, viewed 16 March 2019, from https://web.worldbank.org/archive/website00297C/WEB/IMAGES/IKPAPER_.PDF.
- Grobler, A. & Singh, M., 2018, 'Leadership in Southern Africa: A regional Afrocentric hierarchical taxonomy', *Insight on Africa* 10(2), 169–193. <https://doi.org/10.1177/0975087818772236>
- Guanqi, Z. & Husnain, M., 2022, 'Assessing the role of organic food supply chain traceability on food safety and consumer wellbeing: A mediated-moderation investigation', *Frontiers in Psychology* 13, 1073376. <https://doi.org/10.3389/fpsyg.2022.1073376>
- Hari, C.A., 2020, 'The relevance of Indigenous Knowledge Systems in local governance towards environmental management for sustainable development: A case of Bulawayo City Council, Zimbabwe', *Quest Journal of Management and Social Sciences* 1(2), 100–114. <https://doi.org/10.3126/qjms.v2i1.29024>
- Iya, P., 2017, 'Challenges and prospects for traditional leadership in Africa: Towards innovative ideas to enhance African values among the youth in South Africa', *Southern African Public Law* 29(2), 260–281. <https://doi.org/10.25159/2522-6800/3640>
- Jansson, J., Nilsson, J., Modig, F. & Hed Vall, G., 2017, 'Commitment to sustainability in small and medium-sized enterprises: The influence of strategic orientations and management values', *Business Strategy and the Environment* 26(1), 69–83. <https://doi.org/10.1002/bse.1901>
- Khumalo, S.B. & Mapotse, T.A., 2023, 'Building modern technology innovation on Indigenous Knowledge Systems in technology education', in M.T. Gumbo & P.J. Williams (eds.), *Indigenous Technology Knowledge Systems. Contemporary issues in technology education*, pp. 43–55, Springer, Singapore.
- Kom, Z., Nethengwe, N.S., Mpendeli, S. & Chikoore, H., 2023, 'Indigenous knowledge indicators employed by farmers for adaptation to climate change in rural South Africa', *Journal of Environmental Planning and Management* 66(13), 2778–2793. <https://doi.org/10.1080/09640568.2022.2086854>
- Laloo, E., 2022, 'Ubuntu leadership – An explication of an Afrocentric leadership style', *The Journal of Values-Based Leadership* 15(2), 22. <https://doi.org/10.22543/1948-0733.1383>
- Lincoln, Y. & Guba, E.G., 1985, *Naturalistic inquiry*, Sage, Newbury Park, CA.
- Loew, T., Coneho, N., Kruger, E. & Werner, F., 2019, *Frameworks for sustainability management briefly described: Brief descriptions of relevant frameworks and guidelines for sustainability management and reporting*, Institute for Sustainability. World Environmental Centre, Europe, Germany, Berlin.
- Long, T.B., 2019, 'Sustainable business strategy', in W. Leal Filho, A.M. Azul, L. Brandli, P.G. Özyay & T. Wall (eds.), *Encyclopedia of the UN sustainable development goals: Decent work and economic growth*, pp. 975–985, Springer, Cham, Switzerland.
- Long, T.B., Looijen, A. & Blok, V., 2018, 'Critical success factors for the transition to business models for sustainability in the food and beverage industry in the Netherlands', *Journal of Cleaner Production* 175(1), 82–95. <https://doi.org/10.1016/j.jclepro.2017.11.067>
- Luciana, G. & Pierre, B. & Yan, C., 2021, 'Collaboration among small and medium-sized enterprises as Part of internationalisation: A systematic review', *Administrative Sciences* 11(153), 1–27. <https://doi.org/10.3390/admsci11040153>
- Mahosi, T.N., 2020, 'An Afrocentric exploration of South Africa's homeland policy with specific reference to Vhavenda traditional leadership and institutions, 1898–1994', Unpublished Doctoral thesis, University of Limpopo.
- Manyaga, M.B., Thomas, P. & Goldman, G., 2023, 'The role of Indigenous Knowledge Systems in SME sustainable business practices', Unpublished PhD thesis, University of Johannesburg, Gauteng.
- Mapira, J. & Mazambara, P., 2013, 'Indigenous Knowledge Systems and their implications for sustainable development in Zimbabwe', *Journal of Sustainable Development in Africa* 15(5), 90–106.
- Masanya, T.M., 2024, 'Revitalization and digital preservation of Indigenous Knowledge Systems for sustainable development of Indigenous communities in South Africa', *The Serials Librarian* 84(5–8), 86–102. <https://doi.org/10.1080/0361526X.2023.2277962>
- Matshidze, P.E., 2013, 'The role of Makhadzi in traditional leadership among the Venda', Unpublished doctoral thesis, University of Zululand.
- Mehra, D., 2024, 'Preserving indigenous wisdom: Traditional knowledge and intellectual property rights', *SSRN Electronic Journal* 1, 1–30. <https://doi.org/10.2139/ssrn.4680758>
- Mene, C., 2020, *SME competitiveness outlook 2020: COVID-19: The great lockdown and its impact on small business*, ITC, Geneva.
- Mkhonza, V.M. & Sifolo, P.P., 2022, 'Investigating small, medium and micro-scale enterprises strategic planning techniques in Johannesburg central business district post-COVID-19 lockdown', *Southern African Journal of Entrepreneurship and Small Business Management* 14(1), a483. <https://doi.org/10.4102/sajesbm.v14i1.483>
- Mugambiwa, S.S., 2021, 'Evoking the epistemology of climate governance through Indigenous Knowledge Systems for sustainable development in rural Zimbabwe', *Jamba: Journal of Disaster Risk Studies* 13(1), a1024. <https://doi.org/10.4102/jamba.v13i1.1024>
- Mukuka, G.S., 2010, 'Indigenous Knowledge Systems and Intellectual Property Laws in South Africa', Doctoral thesis, University of Witwatersrand, Johannesburg.
- Mulaudzi, L.J., 2020, 'Historicising the politics of vuhosivhuhulu: The Venda polity and state formation in South Africa, c.1800s–2020', DPhil thesis, University of Pretoria, Pretoria.
- Ndwandwe, S., 2013, 'The contribution of Indigenous knowledge practices to household food production and food security: A case of uKhahlamba Local Municipality, South Africa', Thesis, University of KwaZulu-Natal.
- Ntombana, L., 2015, 'The trajectories of Christianity and African ritual practices: The public silence and the dilemma of mainline or mission churches', *Acta Theologica* 35(2), 104–119. <https://doi.org/10.4314/actat.v35i2.7>
- Oliver, E. & Oliver, W.H., 2017, 'The colonisation of South Africa: A unique case', *HTS Theological Studies Journal* 73(3), 1–8. <https://doi.org/10.4102/hts.v73i3.4498>
- Owusu, B.A. & Okpoti, E., 2019, 'The relationship between leadership commitment, environmentally sustainable operations and firm performance: Evidence from a survey of Ghanaian manufacturing firms', *Proceedings of the 1st International Conference on Industrial Technology* 1, 260–265. <https://doi.org/10.5220/0009445902590264>
- Pienaar J.M., 2014, *Reflections on the South African Land Reform Programme: Characteristics, dichotomies & tensions (Part 1)*, pp. 425–446, Juta and Company (Pty) Ltd, Cape Town.
- Porter, M. & Kramer, M., 2011, 'Creating Shared Value', *Harvard Business Review* 89(1–2), 62–77.
- Pwiti, G., 1991, 'Trade and economies in southern Africa: The archaeological evidence', *Zambia* 18(1), 119–129.
- Quarshie, A.M., Salmi, A. & Leuschner, R., 2016, 'Sustainability and corporate social responsibility in supply chains: The state of research in supply chain management and business ethics journals', *Journal of Purchasing and Supply Management* 22(2), 82–97. <https://doi.org/10.1016/j.pursup.2015.11.001>
- Radcliffe, C. & Parissi, C., 2022, 'Understanding and preserving indigenous agricultural knowledge: A suggested way forward for future research', *Global Knowledge, Memory and Communication* ISSN: 2514–9342, 1–20. <https://doi.org/10.1108/GKMC-03-2022-0058>
- Raderbauer, M., 2011, 'The importance of sustainable business practices in the Viennese accommodation industry', Thesis, University of Exeter.
- Ramsuraj, T., 2023, 'Assessing the role of entrepreneurship industry and SMEs to economic growth in South Africa', *International Journal of Research in Business and Social Science* 12(7), 283–291. <https://doi.org/10.20525/ijrbs.v12i7.2730>
- Rankoana, S.A., 2012, 'The use of indigenous knowledge for Primary Health Care among the Northern Sotho in the Limpopo Province', Doctoral thesis, The University of Limpopo, Polokwane, viewed 15 March 2024, from <http://hdl.handle.net/10386/752>
- Riihikoski, R. & Chuecas, F., 2020, 'Partnering with Competitors-SMEs' relationships in the Western European', Thesis, Uppsala University.
- Senanayake, S.G.J.N., 2006, 'Indigenous knowledge as a key to sustainable development', *The Journal of Agricultural Sciences*, 2(1), 87–94.
- Seroto, J., 2019, 'The embodiment of the indigenous people by European Travel Writers at the Cape Colony, Southern Africa', *Education as Change* 23, 24. <https://doi.org/10.25159/1947-9417/5643>
- Slikkerveer, L.J., 2019, 'The Indigenous Knowledge Systems' perspective on sustainable development', in L. Slikkerveer, G. Baourakis & K. Saefullah (eds.), *Integrated community-managed development. Cooperative Management*, pp. 33–66, Springer, Cham.
- Sparks, D.A., 2019, *Land in South Africa: Dispossession, constitutionalism, political expediency*, Bard College, Annandale-on-Hudson, New York, NY.
- Strauss, A. & Corbin, J., 1990, *Basics of qualitative research: Grounded theory procedures and techniques*, Sage, London.
- Uhunamure, S.E., Kom, Z., Shale, K., Nethengwe, N.S. & Steyn, J., 2021, 'Perceptions of smallholder farmers towards organic farming in South Africa', *Agriculture* 11(11), 1–17. <https://doi.org/10.3390/agriculture11111157>
- Vilakazi, B.S., Zengeni, R. & Mafongoya, P., 2022, 'Integrating Indigenous Knowledge Systems (IKS) with science-based strategies into climate variability mitigation and adaptation of farming communities in semi-arid Southern Africa', *Indilinga African Journal of Indigenous Knowledge systems* 21(1), 119–140.
- Wang, C., Walker, E., Redmond, J. & Breen, J., 2009, 'Contributions of home-based businesses to regional economic development', in *Proceedings of 23rd ANZAM Conference*, 01 December–04 December 2009, Melbourne, Victoria
- Wang, J., Pham, T.L. & Dang, V.T., 2020, 'Environmental consciousness and organic food purchase intention: A moderated mediation model of perceived food quality and price sensitivity', *International Journal of Environmental Research and Public Health* 17(3), 1–18. <https://doi.org/10.3390/ijerph17030850>
- Wintjes, J. & Tiley-Nel, S., 2019, 'The Lottering connection: Revisiting the "discovery" of Mapungubwe', *The South African Archaeological Bulletin* 75(1), 101–110.
- Wood, M., 2012, *Interconnections: Glass beads and trade in southern and eastern Africa and the Indian Ocean – 7th to 16th centuries AD*, Studies in Global Archaeology, Uppsala.
- World Health Assembly (WHA), 2003, *Fifty-sixth world health assembly*, Resolution and decisions annexes, World Health Organization, Geneva, viewed 30 April 2024, from <https://apps.who.int/iris/bitstream/handle/10665/259836/WHA56-2003-REC1-eng.pdf?sequence=1&isAllowed=y>.
- Xu, P., 2022, 'Supplier development practices for corporate sustainable development: a case study of ericsson', *södertörn university, school of social sciences*, Available 8 May 2024, from <https://www.diva-portal.org/smash/get/diva2:1678934/FULLTEXT01.pdf>