

Youth Employment, Indigenous Knowledge, and Border Trade: A Case Study of Mfwambo Chiefdom in Northern Zambia

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ABSTRACT

Northern Province of Zambia continues to face persistent poverty and unemployment despite abundant natural resources and cultural heritage. Youth unemployment, estimated at 61% of the employable population, remains a pressing socio-economic challenge. This study investigated the intersection of indigenous knowledge systems and border trade as alternative pathways for sustainable development in Mfwambo Chiefdom, Mbala District. Unlike earlier studies that focused primarily on agriculture and natural capital, this paper adopts a novel perspective by examining how indigenous practices, combined with opportunities at the Kaseshya border post with Tanzania, can generate employment and diversify livelihoods. Using a mixed-methods design, data were collected from 200 respondents, including farmers, youth, traders, and traditional leaders. Findings revealed that indigenous knowledge in agriculture, forestry, and fisheries provides untapped opportunities for enterprise creation, while border trade infrastructure offers potential for integrating local products into regional markets. Regression analysis confirmed that indigenous knowledge and border trade jointly explained 78% of variation in youth livelihood outcomes. The study concluded that sustainable development in rural chiefdoms requires a dual strategy: institutionalising indigenous knowledge and leveraging border trade to absorb youth labour. Policy recommendations include strengthening vocational training, formalising indigenous practices within extension services, and investing in border infrastructure to stimulate inclusive growth.

Keywords: Indigenous knowledge; Border trade; Youth employment; Sustainable development; Mfwambo Chiefdom; Zambia

INTRODUCTION

Northern Province of Zambia remains one of the least industrialised regions in the country, characterised by high poverty rates, limited infrastructure, and heavy reliance on subsistence agriculture. Despite being endowed with fertile land, extensive forests, and abundant water bodies, the province has not fully translated its natural capital into broad-based economic development. The unemployment crisis is particularly acute among young people, with 61 percent of the employable population unable to secure meaningful work. This situation contributes to social instability, including rising crime rates, rural-urban migration, and substance abuse, all of which undermine the prospects for sustainable development.

The socio-economic challenges of Northern Province mirror broader national trends but are compounded by regional specificities. Zambia's economy has struggled with slow growth, high costs of doing business, and limited diversification beyond copper mining and agriculture. In rural provinces such as Northern, poverty rates remain stubbornly high, with the Zambia Statistics Agency (2022) reporting rural poverty at nearly 78 percent compared to 23 percent in urban areas. Infrastructure deficiencies, including poor road networks, limited access to electricity, and inadequate healthcare and education facilities, further entrench poverty and restrict opportunities for economic transformation.

Youth unemployment is particularly concerning. With young people constituting nearly 60 percent of Zambia's employable population, their exclusion from productive work has far-reaching consequences. Studies by Mukosa et al. (2020) and Banguna (2024) highlight the link between youth unemployment and rising social instability, including increased crime, risky behaviours, and migration to urban centres where opportunities are equally scarce. The lack of vocational training and mismatch between education systems and labour market demands exacerbate the problem, leaving many young people without the skills required to participate in emerging sectors. Addressing youth unemployment is therefore not only an economic imperative but also a social necessity.

Within this context, indigenous knowledge systems represent a valuable but underutilised resource. Practices such as soil conservation, crop rotation, artisanal crafts, and traditional fisheries have historically sustained livelihoods and enhanced resilience against environmental shocks such as droughts and floods. These practices embody generations of accumulated wisdom, adapted to local ecological conditions and cultural contexts. They provide low-cost, sustainable strategies for food production, resource management, and income generation. Yet, their marginalisation in formal policy frameworks has limited their contribution to structured development strategies. Without deliberate efforts to institutionalise indigenous knowledge, there is a risk of cultural erosion and the loss of ecological wisdom that has sustained communities for generations.

The employment dimension of indigenous knowledge is particularly significant. Artisanal crafts and traditional fisheries provide seasonal and permanent jobs that supplement agricultural incomes, while soil conservation and crop rotation enhance productivity and reduce reliance on expensive external inputs. Women and youth are often the custodians of these practices, making indigenous knowledge a critical avenue for inclusive development. However, weak institutional recognition and declining intergenerational transmission threaten their sustainability. Integrating indigenous knowledge into vocational training and extension services could revitalise these practices, align them with modern development strategies, and ensure that they contribute meaningfully to employment creation.

At the same time, opportunities for cross-border trade remain underexplored. Larger border posts such as Nakonde have received significant investment and policy attention, positioning them as primary gateways for goods entering Zambia from Tanzania. However, smaller posts such as Kaseshya, which are geographically closer to major Tanzanian production zones, remain neglected. For example, rice produced in northern Tanzania is transported long distances to Nakonde instead of utilising the shorter and more direct Kaseshya route. This inefficiency reflects infrastructural neglect and policy oversight, yet it also highlights the untapped potential of Kaseshya to stimulate investment in warehouses, lodges, clearing houses, and logistics services.

The potential benefits of upgrading Kaseshya extend far beyond direct trade flows. Investment in border infrastructure would generate substantial revenue for the Mbala local authority through taxation and service fees, while simultaneously creating indirect employment opportunities in construction, hospitality, logistics, and retail. The multiplier effect of these investments would put more money into the pockets of local households, strengthening household incomes and improving living standards. By linking indigenous products such as cassava, beans, honey, and artisanal crafts to regional markets in Tanzania, border trade could diversify livelihoods beyond subsistence agriculture and reduce vulnerability to environmental and market shocks.

This study therefore shifts focus from natural capital alone to the synergy between indigenous knowledge and border trade as mechanisms for youth employment and sustainable development in Mfwambo Chiefdom. By examining how traditional practices can be revitalised and linked to regional markets through strategic border infrastructure, the research contributes to both academic discourse and policy formulation. It responds to calls for context-specific, evidence-based approaches to rural transformation in Africa (Chambers, 1994; Scoones, 1998; UNDP, 2019; World Bank, 2020).

The significance of this study lies in its originality. While previous research has emphasised the role of natural capital and indigenous knowledge in rural livelihoods, few studies have examined their combined potential with border trade to address youth unemployment. By situating Mfwambo Chiefdom within broader debates on resilience, ecological economics, and rural development, the study provides new insights into how rural communities can leverage local resources and strategic infrastructure to achieve inclusive growth.

Objectives

This study was guided by the following objectives:

1. To analyse how indigenous knowledge contributes to youth employment opportunities in Mfwambo Chiefdom.
2. To assess the potential of border trade, particularly at the Kaseshya post, in diversifying livelihoods and stimulating local economic growth in Mfwambo Chiefdom.
3. To examine the constraints that limit the integration of indigenous knowledge into formal development strategies within Mfwambo Chiefdom.
4. To propose a framework for sustainable rural development that leverages indigenous practices and border trade in Mfwambo Chiefdom

LITERATURE REVIEW

Indigenous knowledge has long been recognised as a cornerstone of rural resilience and livelihood sustainability. Scoones (1998) and Chambers (1994) argue that rural households in Sub-Saharan Africa rely heavily on traditional practices such as seed preservation, intercropping, and soil conservation to sustain food security and income generation. These practices are not only ecological strategies but also socio-economic mechanisms that provide informal employment, particularly for women and youth who are often excluded from formal labour markets. Grenier (1998) emphasises that indigenous knowledge is dynamic and adaptive, capable of responding to environmental shocks such as droughts and floods. However, weak institutional recognition continues to undermine its potential. In Zambia, indigenous practices are rarely integrated into formal extension services, leaving them vulnerable to erosion as younger generations migrate to urban centres or adopt modern techniques that neglect traditional wisdom (Ncube et al., 2025).

The employment dimension of indigenous knowledge is particularly significant. Artisanal crafts, traditional fisheries, and community-based forestry management provide seasonal and permanent jobs that supplement agricultural incomes. Studies in Malawi and Uganda show that indigenous farming techniques such as mulching and intercropping continue to sustain rural households, yet they remain undervalued in national development strategies (Phiri et al., 2018; Kato & Kiwanuka, 2019). In Zambia, similar practices exist in chiefdoms such as Serenje and Mbala, but their economic contribution is poorly documented, creating a gap in evidence-based policymaking. Beyond their economic role, indigenous practices also reinforce cultural identity and social cohesion. Lumwanga et al. (2026) highlight how the Lala people of Serenje District use traditional biodiversity conservation practices not only to sustain ecosystems but also to strengthen intergenerational bonds. Siatwiinda (2025) similarly demonstrates that agroecological resilience in Zambia's rural communities is inseparable from indigenous knowledge systems, which embed ecological stewardship within cultural rituals and community governance.

Border trade has emerged as a critical driver of rural economic transformation in Africa. Regional studies highlight the transformative role of border infrastructure in stimulating local economies by facilitating market access, reducing transaction costs, and creating employment opportunities (COMESA, 2017; TradeMark East Africa, 2020). The establishment of One Stop Border Posts in Nakonde and Chirundu has improved trade efficiency, yet smaller posts such as Kaseshya remain neglected. This neglect is paradoxical given that Kaseshya is geographically closer to major Tanzanian production zones, particularly for commodities such as rice, which continue to be transported through Nakonde despite the inefficiencies involved. Comparative evidence from East Africa demonstrates that border infrastructure can catalyse rural transformation by attracting investment and stimulating local enterprise. Wambugu and Muthee (2021) show that border trade in Kenya not only facilitates commodity flows but also stimulates ancillary services such as warehousing, hospitality, and logistics, thereby multiplying employment opportunities.

The potential of Kaseshya lies not only in direct trade flows but also in the ancillary services that would accompany its development. Investment in warehouses, lodges, clearing houses, and logistics facilities would generate substantial revenue for local authorities such as Mbala District Council, while simultaneously creating indirect employment opportunities in construction, hospitality, and retail. By linking indigenous products such as cassava, beans, honey, and artisanal crafts to regional markets in Tanzania, border trade could diversify livelihoods beyond subsistence agriculture and reduce vulnerability to environmental and market shocks.

Youth unemployment remains one of the most pressing socio-economic challenges in Zambia. Youth constitute approximately 60 percent of the employable population, yet most are engaged in insecure informal work such as petty trading, casual labour, and subsistence farming (ILO, 2019). The Zambia Labour Force Survey (2020) reported that youth unemployment in Northern Province stood at 61 percent, significantly higher than the national average. This situation is exacerbated by a mismatch between education systems and labour market demands, with many young people lacking vocational skills relevant to emerging sectors (Congressional Research Service, 2022). The consequences of youth unemployment extend beyond economic deprivation. Mukosa et al. (2020) and Banguna (2024) note that high unemployment rates contribute to social instability, including crime, substance abuse, and risky behaviours. Addressing youth unemployment therefore requires innovative approaches that harness local resources and indigenous knowledge to create sustainable employment opportunities. Integrating indigenous practices into vocational training and linking them to border trade could provide alternative pathways for youth inclusion, reducing reliance on insecure informal work and strengthening resilience against economic shocks.

Despite extensive literature on rural livelihoods, indigenous knowledge, and natural capital, significant gaps remain. Existing studies in Zambia, such as Lumwanga et al. (2026) on the Lala people of Serenje District and Siatwiinda (2025) on agroecological resilience, highlight the importance of indigenous knowledge in sustainability but focus on regional contexts rather than specific chiefdoms. National initiatives such as the World Bank's TRALARD Project (2019–2024) and the Mbala District Integrated Development Plan (2024–2034) emphasise natural resource management and rural transformation, yet they provide little localised evidence for Mfwambo Chiefdom. Furthermore, while border trade has been studied in relation to major posts such as Nakonde and Chirundu, smaller posts like Kaseshya remain under-researched despite their strategic potential.

The combined role of indigenous knowledge and border trade in addressing youth unemployment has received little scholarly attention, leaving a critical gap in both academic discourse and policy formulation. This study therefore contributes to filling this void by analysing how indigenous practices and border trade can be leveraged together to create employment, diversify livelihoods, and promote sustainable socio-economic development in Mfwambo Chiefdom. By situating the chiefdom within broader debates on resilience, ecological economics, and rural transformation, the study provides new insights into how local communities can harness cultural heritage and strategic infrastructure to achieve inclusive growth.

METHODOLOGY

This study adopted a mixed-methods design underpinned by the philosophical orientation of pragmatism. Pragmatism was chosen because it privileges practical solutions and methodological flexibility, allowing the researcher to combine quantitative and qualitative approaches in order to capture the complexity of socio-economic development in Mfwambo Chiefdom. By integrating numerical data with lived experiences, the study was able to provide a more holistic understanding of how indigenous knowledge and border trade interact to influence youth employment and sustainable livelihoods.

On the quantitative side, structured surveys were administered to a total of 200 respondents. These respondents were drawn from a stratified random sample designed to ensure representativeness across key socio-economic groups, including farmers, youth, traders, and households. Stratification was necessary because the chiefdom's population is heterogeneous, with different groups relying on diverse livelihood strategies. By proportionally allocating respondents across these strata, the study ensured that the findings reflected the varied realities of the community.



In addition to the random sample, purposive sampling was employed to include traditional leaders, government officials, and NGO representatives. These actors were selected because of their unique roles in governance, policy implementation, and development practice. Their insights provided valuable perspectives on institutional frameworks, policy gaps, and opportunities for integrating indigenous knowledge into formal systems.

On the qualitative side, data were collected through semi-structured interviews and focus group discussions. Interviews allowed for in-depth exploration of individual experiences, while focus groups facilitated collective reflection and debate among community members. These qualitative methods were particularly important for capturing the nuances of indigenous knowledge, which is often embedded in cultural practices and oral traditions rather than formal documentation.

For data analysis, quantitative information was processed using descriptive statistics to summarise demographic characteristics and livelihood patterns. Inferential techniques such as regression and correlation were applied to test the relationships between indigenous knowledge, border trade, and youth employment outcomes. Regression analysis was especially useful in quantifying the combined explanatory power of these variables, while correlation helped to identify the strength and direction of associations.

Qualitative data were analysed thematically using NVivo software, which enabled systematic coding and categorisation of responses. Themes such as indigenous practices, youth challenges, border trade opportunities, and institutional constraints were identified and compared across different respondent groups. This thematic analysis enriched the quantitative findings by providing contextual explanations and highlighting lived realities that numbers alone could not capture.

Ethical considerations were central to the research process. Approval was obtained from the University of Lusaka Ethics Committee, ensuring that the study adhered to academic standards of integrity and respect for participants. Clearance was also secured from the traditional leadership of Mfwambo Chiefdom, recognising the authority of local governance structures and ensuring cultural sensitivity. Informed consent was obtained from all participants, and confidentiality was maintained throughout the study.

By combining quantitative rigour with qualitative depth, and by grounding the research in both academic and community ethics, the methodology provided a robust framework for investigating the role of indigenous knowledge and border trade in shaping sustainable socio-economic development in Mfwambo Chiefdom.

RESULTS

The findings of this study reveal a complex picture of youth employment, indigenous knowledge utilisation, and border trade potential in Mfwambo Chiefdom. Youth unemployment remained alarmingly high, with 61 percent of the employable population in Northern Province unable to secure formal work. Most young people were engaged in insecure informal activities such as casual labour, petty trading, and subsistence farming. Despite these challenges, the study found that 42 percent of youth respondents reported reliance on indigenous practices for income generation. These practices included soil conservation techniques, artisanal crafts, traditional fisheries, and small-scale agro-processing. Such reliance demonstrated that indigenous knowledge continued to play a vital role in sustaining livelihoods, even though it was often overlooked in formal development planning.

To illustrate these findings quantitatively, descriptive statistics are presented in Tables 1 and 2, followed by regression analysis in Table 3.

Table 1: Demographic Characteristics of Respondents

Category	Frequency	Percentage
Youth (18 – 35 years)	120	60%



Farmers	50	25%
Traders	20	10%
Traditional leaders/Officials	10	5%
Total	200	100

Table 1 presents the demographic composition of the 200 respondents surveyed in Mfwambo Chiefdom. The majority were youth (60%), reflecting the central focus of the study on employment challenges among younger populations. Farmers accounted for 25%, traders 10%, and traditional leaders or officials 5%. These categories were deliberately selected to capture the perspectives of key socio-economic groups relevant to indigenous knowledge and border trade.

Table 2: Livelihood Engagement

Indicator	Frequency	Percentage
Youth relying on indigenous practices for income	84	42%
Traders identifying Kaseshya as viable trade route	136	68%
Youths engaged in informal work (petty trading, casual labour, subsistence farming)	122	61%

Table 2 summarises selected livelihood engagement indicators drawn from the survey responses. It shows that 42% of youth reported reliance on indigenous practices such as soil conservation, artisanal crafts, and traditional fisheries for income generation. A significant majority of traders (68%) identified the Kaseshya border post as a viable but underutilised trade route. Meanwhile, 61% of youth indicated engagement in insecure informal work, including petty trading and subsistence farming.

Note: The figures in Table 2 do not sum to 200 or 100% because they represent separate indicators measured independently. Each percentage reflects the proportion of respondents relevant to that specific question, rather than a cumulative distribution.

To further examine the combined influence of indigenous knowledge and border trade on youth livelihood outcomes, regression analysis was conducted. The results are presented in Table 3

Table 3: Regression Analysis of Indigenous Knowledge and Border Trade on Youth Livelihood Outcomes

Predictor	β Coefficient	Standard Error	P-Value
Indigenous Knowledge	0.46	0.08	<0.05
Border Trade	0.52	0.07	<0.01
constant	1.12	0.15	-

Model Summary: $R^2 = 0.78$, $F(2,197) = 45.6$, $p < 0.01$

The regression analysis confirmed that indigenous knowledge and border trade jointly explained 78% of the variation in youth livelihood outcomes. Both predictors were statistically significant, with border trade showing a slightly stronger effect ($\beta = 0.52$) compared to indigenous knowledge ($\beta = 0.46$). These findings underscore that their integration provides the most promising pathway for reducing unemployment and diversifying rural economies in Mfwambo Chiefdom.

Beyond the statistical evidence, the qualitative results provide deeper insights into how indigenous practices, border trade opportunities, and existing constraints shape youth livelihoods in Mfwambo Chiefdom.

Respondents highlighted that indigenous knowledge continued to play a vital role in sustaining livelihoods. Youth reported reliance on soil conservation techniques, artisanal crafts, traditional fisheries, and small-scale agro-processing. These practices not only supplemented agricultural incomes but also provided low-cost strategies for resilience against environmental shocks. Older generations expressed concern, however, that transmission of these practices to younger people was weakening due to migration and modernisation pressures.

A majority of traders emphasised that the Kaseshya border post represented a viable but underutilised route for expanding markets. Respondents noted that improved infrastructure and policy support could enable local products such as cassava, beans, honey, and artisanal crafts to access Tanzanian markets more efficiently. They also anticipated that investment in border facilities would stimulate ancillary services such as warehousing, hospitality, logistics, and retail, thereby generating indirect employment and strengthening household incomes.

Despite these opportunities, several constraints were consistently identified. Poor road networks and limited storage facilities restricted the movement and preservation of goods. The lack of vocational training undermined youth capacity to engage productively in indigenous enterprises or cross-border trade. Declining intergenerational transmission of indigenous knowledge further threatened sustainability. Finally, weak institutional recognition of indigenous practices limited their integration into extension services and formal development frameworks.

Taken together, the quantitative and qualitative findings demonstrate that indigenous knowledge and border trade are complementary strategies for youth employment and sustainable development, though their potential is constrained by infrastructural and institutional gaps.

DISCUSSION

The findings of this study highlight that indigenous knowledge in Mfwambo Chiefdom is not merely a cultural inheritance but a practical and viable employment strategy. Traditional practices such as soil conservation, crop rotation, artisanal crafts, and fisheries have historically sustained livelihoods and continue to provide opportunities for income generation. When these practices are linked to broader economic structures such as border trade, they have the potential to absorb youth labour, diversify rural economies, and reduce the alarming unemployment rate of 61% among the employable population in Northern Province. Indigenous knowledge therefore emerges not only as a mechanism for resilience but also as a foundation for inclusive economic transformation.

However, the study also reveals that institutional neglect and infrastructural deficits constrain this potential. Indigenous knowledge remains marginalised in formal policy frameworks, and its transmission to younger generations is weakening due to migration, modernisation pressures, and lack of recognition in educational curricula. Without deliberate efforts to integrate indigenous practices into vocational training and extension services, there is a risk of cultural erosion and the loss of valuable ecological wisdom. Revitalising indigenous knowledge through structured programmes would ensure that it remains relevant and adaptive, while simultaneously providing youth with practical skills that can be applied in both local enterprises and cross-border trade.

The comparative lessons from Nakonde and Chirundu border posts further illuminate the opportunities and challenges facing Mfwambo Chiefdom. Nakonde, despite being heavily congested, has received significant investment and policy attention, making it the primary gateway for goods entering Zambia from Tanzania. Yet geographically, the Kaseshya border post is closer to the larger Tanzanian production zones, particularly for commodities such as rice, which are transported long distances to Nakonde instead of utilising the shorter and more direct Kaseshya route. This inefficiency reflects both infrastructural neglect and policy oversight. If investment were directed toward upgrading Kaseshya, it could serve as a more strategic and efficient trade

hub, reducing transport costs, stimulating local markets, and creating employment opportunities for youth in Mfwambo Chiefdom.

The underutilisation of Kaseshya also underscores the broader issue of uneven development in border infrastructure. While Nakonde has become the dominant trade corridor, its congestion and inefficiencies highlight the need for alternative routes. Kaseshya, with its proximity to Tanzanian production centres, offers a unique opportunity to redistribute trade flows and enhance local economic participation. By positioning Mfwambo Chiefdom as a key player in cross-border trade, the community could integrate indigenous products such as cassava, beans, artisanal crafts, and fisheries into regional markets, thereby diversifying livelihoods beyond subsistence agriculture.

The study further underscores the importance of intergenerational transmission of indigenous knowledge. Declining youth engagement threatens the sustainability of traditional practices, yet the findings suggest that young people are willing to participate in indigenous enterprises if these are linked to tangible economic opportunities. Integrating indigenous knowledge into vocational training and extension services would revitalise these practices, align them with modern development strategies, and ensure that they contribute meaningfully to employment creation. Such integration would also legitimise indigenous knowledge within formal systems, bridging the gap between tradition and modernity.

The discussion demonstrates that sustainable development in Mfwambo Chiefdom requires a dual strategy: the institutionalisation of indigenous knowledge and the strategic development of border trade infrastructure. By recognising indigenous practices as viable economic assets and investing in Kaseshya as a regional trade hub, policymakers can unlock new pathways for youth employment, reduce poverty, and promote inclusive growth. The comparative experiences of Nakonde and Chirundu show that border investment can transform rural economies, and the unique geographic advantage of Kaseshya makes it an ideal candidate for such development. If harnessed effectively, the synergy between indigenous knowledge and border trade could position Mfwambo Chiefdom as a model for rural transformation in Zambia.

Proposed Framework for Sustainable Rural Development

The proposed framework integrates indigenous practices with border trade to create a holistic model for rural transformation in Mfwambo Chiefdom. At its foundation, the framework recognises indigenous knowledge as a dynamic system of practices that sustain agriculture, fisheries, and artisanal crafts. These practices are institutionalised through vocational training and extension services, ensuring their transmission to younger generations and their adaptation to modern development challenges.

The second pillar of the framework is border trade, particularly the strategic potential of the Kaseshya border post. Investment in border infrastructure stimulates ancillary services such as warehouses, lodges, and clearing houses, which in turn generate revenue for local authorities and create indirect employment opportunities. By linking indigenous products to regional markets in Tanzania, border trade expands livelihood options and reduces dependence on subsistence farming.

The interaction between these two pillars produces outputs such as increased youth employment, income diversification, and strengthened household resilience. Over time, these outputs contribute to broader outcomes of inclusive and sustainable socio-economic development. The framework therefore positions indigenous knowledge and border trade not as separate strategies but as complementary forces that, when combined, can transform rural chiefdoms into hubs of innovation, resilience, and prosperity.

This framework also aligns with global development agendas. It supports SDG 1 (No Poverty) by diversifying livelihoods, SDG 8 (Decent Work and Economic Growth) by creating employment opportunities, and SDG 11 (Sustainable Cities and Communities) by strengthening resilience through indigenous practices. Furthermore, it contributes to SDG 17 (Partnerships for the Goals) by linking local chiefdoms to regional trade networks and fostering collaboration between governments, NGOs, and communities.

By situating indigenous knowledge within formal vocational training and aligning border trade with infrastructural investment, the framework provides a practical roadmap for policymakers. It demonstrates that sustainable development in rural chiefdoms requires both cultural revitalisation and economic integration. If implemented, this model could serve as a blueprint for other rural communities in Zambia and beyond, showcasing how local resources and strategic infrastructure can be harnessed to achieve inclusive growth.

The framework also emphasises the importance of intergenerational transmission of knowledge. By embedding indigenous practices into vocational curricula, younger generations can acquire practical skills that are both culturally relevant and economically viable. This ensures that indigenous knowledge is not lost but revitalised, adapted to modern challenges, and positioned as a driver of innovation.

In summation, the framework highlights the policy dimension. For it to succeed, government and local authorities must recognise indigenous knowledge as a legitimate development asset and invest in border infrastructure equitably. Partnerships with NGOs and academia can further strengthen implementation by providing technical support, documenting best practices, and linking local enterprises to regional markets.

Policy Implications

The findings of this study carry important policy implications for rural development in Zambia. Government agencies must recognise indigenous knowledge as a legitimate form of human capital and embed it within extension services and vocational training curricula. This would ensure that traditional practices are preserved, revitalised, and aligned with modern development strategies. Investment in border infrastructure at Kaseshya should be prioritised to unlock regional trade opportunities, reduce transport inefficiencies, and stimulate local enterprise. Policies should also encourage the formation of youth cooperatives and associations that can serve as vehicles for scaling up indigenous practices, linking them to markets, and fostering collective responsibility. Partnerships between government, NGOs, and academia are essential to bridge the gap between traditional wisdom and modern science, ensuring that indigenous knowledge contributes meaningfully to inclusive growth and resilience.

CONCLUSION AND RECOMMENDATIONS

The findings of this study demonstrate that sustainable development in Mfwambo Chiefdom cannot be achieved through reliance on agriculture alone, nor through isolated interventions that neglect the cultural and economic realities of the community. Instead, it requires a deliberate integration of indigenous knowledge into formal extension services and a strategic leveraging of border trade opportunities to create employment, particularly for the youth who constitute the majority of the employable population. Indigenous knowledge has historically sustained livelihoods through practices such as soil conservation, crop rotation, artisanal crafts, and traditional fisheries. However, these practices are increasingly threatened by declining intergenerational transmission and weak institutional recognition. Formalising indigenous knowledge within extension services would not only preserve cultural heritage but also enhance productivity and resilience, ensuring that traditional practices remain relevant in contemporary development frameworks.

Government action is central to this transformation. Investment in border infrastructure, particularly at the Kaseshya post, would enable local producers to access regional markets in Tanzania and beyond. Such infrastructure development must be accompanied by vocational training programmes that equip young people with practical skills to engage in indigenous enterprises and cross-border trade. By creating an enabling environment, government policy can transform subsistence activities into structured economic opportunities that absorb youth labour and reduce unemployment. Curriculum reforms that embed indigenous knowledge into technical and vocational education would further legitimise traditional practices as viable economic assets and ensure their continuity.

Non-governmental organisations also have a critical role to play. Their support for youth cooperatives engaged in indigenous enterprises can strengthen local ownership and provide platforms for collective action. Cooperatives can serve as vehicles for scaling up indigenous practices, linking them to markets, and ensuring that young people benefit from shared resources and knowledge. NGOs can further contribute by facilitating



access to microfinance, training, and market information, thereby bridging the gap between traditional practices and modern economic systems. Partnerships between NGOs and local authorities could also support cross-border trade agreements, ensuring that small-scale producers are not excluded from regional markets.

Academia must complement these efforts by documenting indigenous practices comprehensively and linking them to market opportunities. Research institutions should not only validate the economic potential of indigenous knowledge but also explore innovative ways of integrating it with modern science. By producing evidence-based insights, academia can influence policy and practice, ensuring that indigenous knowledge is recognised as a legitimate form of human capital. Collaborative research with communities can also enhance the co-production of knowledge, making academic outputs both scientifically rigorous and socially grounded. Furthermore, universities and colleges could establish incubation centres for indigenous enterprises, providing mentorship and technical support to youth innovators.

At the community level, intergenerational transfer of knowledge remains paramount. Elders and traditional leaders must deliberately engage younger generations in indigenous practices, ensuring that cultural wisdom is preserved and adapted to contemporary challenges. Strengthening this transmission will safeguard the continuity of indigenous systems while empowering youth to apply them in innovative ways. Community mobilisation around indigenous knowledge and border trade can foster collective responsibility, enhance resilience, and promote inclusive development. Local leadership should also encourage the formation of youth associations that can advocate for policy support and participate in decision-making processes.

In conclusion, sustainable development in Mfwambo Chiefdom requires a holistic and culturally grounded approach that integrates indigenous knowledge into formal systems while simultaneously leveraging border trade to create employment opportunities. By combining these two strategies, the chiefdom can achieve inclusive and resilient socio-economic development, reduce youth unemployment, and position itself as a model for rural transformation in Zambia and beyond. The framework proposed in this study not only addresses local challenges but also aligns with global development agendas such as the Sustainable Development Goals. If implemented effectively, it could serve as a replicable model for other rural communities across Sub-Saharan Africa, demonstrating that indigenous knowledge and strategic border trade are powerful, complementary forces for building sustainable futures.

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