

Project Title:

**Creating Rural Industrial Entrepreneurs Through Technical Skills and
Entrepreneurship Development: The Bushbuckridge Aluminium Enterprise Initiative**

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Summary of the Impact

South Africa faces high youth unemployment, especially in rural areas. Many young people are NEET, experiencing long-term economic exclusion and limited access to industry. In Bushbuckridge, ongoing unemployment, isolation, and lack of industrial opportunities have worsened youth participation in the formal economy. In response, the Tshwane University of Technology's Centre for Entrepreneurship Development (TUT CED), in collaboration with Wispeco Aluminium and Ehlanzeni TVET College, established the SpaZAL Enterprise Development Programme. The initiative aims to cultivate a new generation of rural industrial entrepreneurs equipped to engage in South Africa's aluminium fabrication and installation value chain. The programme specifically targeted eighteen unemployed young individuals from the greater Bushbuckridge and Acornhoek regions who were not participating in education or training and lacked prior exposure to aluminium fabrication, installation, entrepreneurship, or formal business systems.

By March 2026, all eighteen participants had registered businesses and opened business accounts, generating over R2 million in market activity through aluminium fabrication and installation projects during training. This shows rural NEET youth can move from economic exclusion to productive industrial participation when technical skills, entrepreneurship, coaching, and market access are combined.

Underpinning Research

The impact delineated in this case study stemmed from an emerging corpus of entrepreneurship scholarship produced by researchers affiliated with the Tshwane University of Technology Centre for Entrepreneurship Development over more than ten years. This body of research has examined the relationships among entrepreneurial environments, entrepreneurial intentions, entrepreneurship education, coaching, self-efficacy, and community-based enterprise development among economically marginalised populations.

Ebewo (2014) asserted that sustainable development in impoverished communities requires locally embedded enterprises to bolster endogenous economic activities, thereby laying the foundation for subsequent interventions by TUT CED. In 2020, Ebewo demonstrated that entrepreneurial environments are pivotal to entrepreneurial intentions, highlighting the importance of institutional support and ecosystems in fostering participation. Recent scholarly work by Ndlovu, Ebewo, Mlotshwa, and Shumba (2025) underscored the significance of entrepreneurial coaching and self-efficacy as fundamental components of entrepreneurship education and advocated integrating coaching into development programmes. Furthermore, research by Matlala, Shumba, Shambare, and Ebewo (2026) emphasised that entrepreneurs in rural areas of the Global South encounter distinctive challenges and stressed the need for support mechanisms to surmount the structural barriers faced by marginalised entrepreneurs.

The TUT CED Industrial Entrepreneurship Acceleration Model originated from integrating various research streams with practical implementation experience gained through entrepreneurship interventions in township and rural economies.

The model rests on four propositions:

- i. The quality of entrepreneurial environments influences entrepreneurial intentions;
- ii. Entrepreneurship education is strengthened through coaching and self-efficacy development;

- iii. Community-based enterprise development contributes to sustainable local economic development; and
- iv. Entrepreneurship support mechanisms require contextual adaptation to local realities.

The model was initially implemented through the SpaZAL programme in 2021 within the township economies of Soshanguve and Garankuwa in Gauteng Province. The Bushbuckridge implementation marked the first rural adaptation of the model. It offered an opportunity to assess its transferability within a context characterised by geographic isolation, underdeveloped entrepreneurial ecosystems, and elevated youth unemployment rates. The project, therefore, served as both a vehicle for societal impact and a laboratory for TUT CED to refine its inclusive industrial entrepreneurship approach.

Context and Nature of the Societal Challenge

The Mpumalanga Province is currently experiencing elevated youth unemployment (49.2% in Q1 2026), particularly in rural areas such as Bushbuckridge, where limited opportunities leave many young individuals marginalised, neither employed nor participating in training. These young people face significant barriers to engaging in productive pursuits, especially in sectors that demand technical skills, established networks, and market access. The eighteen (18) youths involved in the SpaZAL programme were classified as unemployed, NEET (Not in Education, Employment, or Training), with no prior experience in aluminium fabrication, business operations, or industrial value chains. An assessment conducted in July 2025 indicated a strong entrepreneurial drive; however, there was a notable deficiency in structural readiness, including systems development, financial management, compliance, market engagement, and operational capacity. Financial management was particularly weak, characterised by minimal income tracking and the absence of business banking or financial segregation. Awareness regarding business formalisation and compliance was limited, underscoring a disparity between entrepreneurial aspirations and actual capabilities.

The Intervention

Recognising that technical skills alone rarely translate into sustainable livelihoods and that entrepreneurship training alone seldom results in commercially viable enterprises, TUT CED developed the programme based on a different premise: cultivating participants concurrently as technicians, entrepreneurs, and business owners.

The initiative brought together three complementary partners.

- i. Wispeco Aluminium funded the SpaZAL programme and provided access to industry expertise and value chain opportunities.
- ii. Ehlanzeni TVET College provided training facilities and implementation support through its Mapulaneng Campus in Acornhoek.
- iii. TUT CED supplied the programme management and entrepreneurship architecture underpinning the intervention via its Industrial Entrepreneurship Acceleration Model.

Participants underwent comprehensive training in aluminium fabrication, installation, and entrepreneurship, encompassing opportunity recognition, design thinking, finance, business modelling, costing, compliance, customer acquisition, marketing, and management. All interventions were complemented by business coaching and mentorship. The program integrated training with economic participation, promoting early market entry to strengthen technical skills, entrepreneurial spirit, and commercial experience. The objective was to develop entrepreneurs who were actively managing businesses before graduation.

The Impact

The effects of the intervention were evident early on, with new enterprises producing quotations, attracting clients, and managing relationships even during the training phase. By February 2026, a reassessment demonstrated significant progress in areas such as legitimacy, market engagement, product definition, financial management, and operational procedures. Participants transitioned from informal activities to structured enterprises, enhancing customer targeting, pricing strategies, financial literacy, and operational systems. The evidence of this transformation was substantial. At the inception of the programme, none of the participants operated registered businesses engaged in active trading. By early 2026, all eighteen participants had established registered private companies with the Companies and Intellectual Property Commission and had implemented dedicated business banking facilities aligned with their commercial activities.

Participants without pricing models developed structured costing systems and achieved approximately 61% gross profit margins. The cohort facilitated market activity during training and before graduation. By February 2026, they had confirmed sales exceeding R1.19 million through aluminium fabrication and installation projects. Recent monitoring indicates that cumulative market activity has surpassed R2 million, with the programme still ongoing and scheduled to conclude in July 2026. The products and installations adhered to industry standards, and contracts were completed without significant issues, demonstrating successful and competitive market entry. The programme enabled entrepreneurs to generate income before graduation, rather than merely aspire to do so.

Reach and Significance of the Impact

The eighteen (18) young entrepreneurs who transitioned from NEET status to South Africa's industrial economy benefit primarily, while also exerting a positive influence on their households, customers, suppliers, local contractors, and the broader Bushbuckridge economy by enhancing local enterprise and productive capacity. The significance of the intervention lies not merely in establishing new businesses but also in cultivating industrial entrepreneurs capable of engaging in value chains across South Africa's manufacturing and construction sectors. It demonstrates that rural youth, often perceived as disconnected from industrial opportunities, can succeed within formal value chains when given access to skills, education, coaching, and markets. The project demonstrates that entrepreneurship models derived from township economies can be adapted for implementation in rural areas, thereby facilitating replication across underserved communities in South Africa. It exemplifies how universities can contribute to inclusive industrialisation, rural development, and youth employment by providing technical skills, entrepreneurship education, and improved market access.

Sources to Corroborate the Impact

This case study's significance is supported by long-term data derived from programme monitoring, assessments, entrepreneurial evidence, and evaluations conducted during the project. It includes baseline assessments from July 2025, six-month follow-up evaluations in February 2026, as well as business records, banking data, quotations, invoices, sales figures, marketing initiatives, branding activities, customer projects, and entrepreneur portfolios. These records substantiate the successful transition of eighteen rural NEET youth from economic exclusion to active participation in South Africa's aluminium sector through entrepreneurship and industrial enterprise development.

References

Ebewo, P. (2014). *Establishing community-based enterprises for sustainable development of impoverished communities: A theoretical perspective*. SSRN Electronic Journal. Available at SSRN: <https://doi.org/10.2139/ssrn.24190444>

Ebewo, P.E. (2022). Entrepreneurial environment as an antecedent of university students' entrepreneurship intentions. *Journal of Entrepreneurship Education*, 25(3): 1-18. <https://www.abacademies.org/articles/entrepreneurial-environment-as-an-antecedent-of-university-students-entrepreneurship-intentions-14740.html>

Matlala, N., Shumba, K., Shambare, R., & Ebewo, P. (2026). Rural Women Entrepreneurship Impact, Challenges, Success Factors and Emerging Trends in the Global South: A Bibliometric Review. In: Bridget Nneke Irene, Joan Lockyer, Palesa Charlotte Felix-Faure, Chioma Masi Onoshakpor, Dina Modestus Nziku, James Okrah (eds). *Sustainable and Inclusive Economic Growth for Women Entrepreneurs in the Global South*, Doi: <https://doi.org/10.1108/978-1-83708-190-520261015>

Ndlovu, E. N., Ebewo, P. E., Mlotshwa, S. H., & Shumba, K. (2025). Entrepreneurial coaching and self-efficacy: A systematic review of its pedagogical integration into entrepreneurship education. *Education Sciences*, 15 (2), 237. <https://doi.org/10.3390/educsci15020237>

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