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CONCEPTUALISING HEI-BASED ENTREPRENEURSHIP DEVELOPMENT CENTRES AS TOOLS FOR FOSTERING LOCAL ECONOMIES**Germinah Evelyn Chiloane-Tsoka ¹, Ishmael Obaeko Iwara ^{2*}**^{1,2*} *University of South Africa, P/Bag X001, Pretoria, 0002, South Africa**E-mails:* ¹ chiloge@unisa.ac.za; ^{2*} iwarai@unisa.ac.za (Corresponding author)*Received 18 May 2026; accepted 11 September 2026; published 30 September 2026*

Abstract. Several African institutions of higher learning possess extensive research capacity, infrastructure, and human capital; however, these assets are often underutilised in addressing the continent's regional and local economic challenges. Empirical evidence suggests a lack of direction in deploying these vital resources for the economic good. Drawing on best practices from nine leading global universities, this conceptual paper examines critical constructs of entrepreneurship development centres with potential for local economic development, aiming to distil strategies for development actors. Publications (39) retrieved from scientific databases and subjected to qualitative thematic analysis suggest that achieving sustainable impact in local economies requires a systemic and integrated approach that connects venture creation, skills development, and research commercialisation into a cohesive innovation pipeline. It highlights the importance of embedding experiential learning, supporting startup incubation, and translating academic research into market-oriented enterprises, particularly in sectors aligned with national priorities. Strengthening university–industry linkages and equipping graduates with both entrepreneurial competencies and practical experience are identified as critical drivers of job creation, innovation, and talent retention. The paper further emphasises the need to build inclusive entrepreneurial ecosystems underpinned by strong networks, accessible finance, and supportive policy frameworks. While the findings offer a blueprint for development actors to strategise and channel targeted support, the identified factors should be subjected to further empirical validation to support generalisation.

Keywords: entrepreneurship centres; local economic sustainability; regional development; higher education institutions

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1. Introduction

Entrepreneurship development centres within higher learning institutions are increasingly recognised as strategic platforms and mechanisms for promoting innovation, enterprise development, and socio-economic transformation (Ijiola & Nwogwugwu, 2023; Leal, Leal & Silva, 2023; Mohamed et al., 2024). In the global space, especially in developed economies, such as the United Kingdom, Sweden, United States of America, among a myriad of others countries, these centres are uniquely positioned to bridge the gap between academic knowledge and real-world economic needs (Owen, Vedanthachari & Hussain, 2024; Godley et al., 2025; Gonzalez-Urango & Mu, 2025; Rámháp, Kezai & Skala-Gosk, 2026), for instance, venture creation and incubation, impactful skills development and entrepreneurial mindset, research commercialisation, ecosystem building and networking, SME and community support, sector-specific development, policy influence and regional strategy, and access to finance and investment.

In Africa, there is discernible evidence of intentional and strategic investment aimed at advancing this development agenda; however, such efforts remain markedly marginal and inadequate in scale and scope to achieve expected transformative and sustainable outcomes. This undermines the essential role of the entrepreneurial development centres in fostering local economic prosperity. Africa continues to face persistent socio-economic challenges, including surging youth unemployment exceeding 40% in some countries (Baah-Boateng, 2015; Arizie & Abonongo, 2026), high poverty levels (Narayan et al., 2024; Umoh, 2024), limited access to capital for small enterprises (Brixiová, Kangoye & Yogo, 2020; Nyika et al., 2024), and weak integration between higher learning institutions and local economies (Iwara & Kilonzo, 2022; Oukouomi Noutchie, 2025). Arguably, the continent's institutions of higher learning possess extensive research capacity, infrastructure, and human capital that can help address these local economic challenges; these assets are often underutilised. Drawing on best global practices, this study aims to outline how entrepreneurship development centres within higher learning institutions can deploy their institutional, intellectual, and network resources to stimulate local economic development. While the focus is on Africa, the methodology has global imperatives; hence, it can be harnessed within and beyond the continent.

Because Africa is characterised by high unemployment, rising poverty levels, inequality, and spatial economic disparities, it is imperative to interrogate mitigative strategies. This study positions entrepreneurship development centres as strategic development mechanisms, capable of aligning academic innovation with societal needs to drive economic change and sustainability in Africa. Such centres represent untapped engines of local and regional economic development, particularly in developing contexts such as South Africa. By integrating their resources, including human capital, knowledge, infrastructure, and networks, into structured, community-oriented interventions, they can play a transformative role in fostering inclusive growth, reducing unemployment, especially graduate and youth unemployment and strengthening local economies. This study aligns with the African Union Agenda 2063 to foster economic freedom, inclusivity, and sustainable development, and with the United Nations Sustainable Development Goals (SDGs), specifically goals 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), and 10 (Reduced Inequalities). In addition, HEIs' sovereignty and economic stability are critical to enhancing inclusive development. Therefore, this study's findings and recommendations will present a strategic blueprint for intervention.

The subsequent sections illustrate the methodology, explaining the materials, methods and techniques followed to conduct the narrative review. In addition, the sections explain data collection, analysis and charting modalities. The results, along with a discussion of the findings, were presented before the conclusion and key recommendations.

2. Research Methodology

This scoping narrative follows an exploratory systematic mapping research design, aiming to survey the breadth and scope of the existing literature on the entrepreneurship-university concept. It identifies key strategies and theoretical perspectives in the extant literature, particularly within HEI-based entrepreneurship development centres globally, and highlights leading best practices. Because it is a conceptual study, it will rely solely on the literature, including publications such as articles, book chapters, theses, and verifiable reports on the subject matter. The metrics for enrolment were determined by enormous presence, evidence of recognition, and external validation of crucial entrepreneurial university strategies, stemming from curriculum entrepreneurship, commercialisation, and entrepreneurship-related stakeholder engagements (see Table 1).

The selected universities represent the best global practices because each demonstrates a distinct yet complementary strength in leveraging entrepreneurship centres for economic development and integrating these strengths into broader innovation ecosystems. Institutions like MIT and Stanford exemplify large-scale venture creation and ecosystem leadership, while Oxford and Cambridge show how structured incubation and research

commercialisation can drive regional innovation clusters. Universities such as Waterloo and Wageningen illustrate the importance of aligning skills development and sector-specific research with industry needs to ensure direct economic relevance. Meanwhile, Aalto University and land-grant institutions in the United States emphasise the value of ecosystem coordination, policy engagement, and inclusive entrepreneurship. Collectively, these cases show that global best practice arises not from a single model, but from the strategic alignment of entrepreneurship, research, education, and partnerships to generate sustained, inclusive, and locally embedded economic impact.

Table 1. Sampled Institutions of Higher Learning

Institution	Area of Strength	Best Practice Approach	Global Benchmark
Massachusetts Institute of Technology (MIT), USA.	Venture creation & research commercialisation.	Integrated entrepreneurship ecosystem (Martin Trust Centre), strong spin-off culture, deep industry ties.	Demonstrates how universities can systematically produce high-impact startups and global companies on a scale.
Stanford University, USA.	Ecosystem building & entrepreneurial culture.	Close ties with Silicon Valley, strong alumni and venture capital networks, interdisciplinary entrepreneurship.	Represents the gold standard for university-led innovation ecosystems and regional economic transformation.
University of Oxford, UK.	Incubation & venture support.	Oxford Foundry supports early-stage ventures through mentoring, incubation, and networks.	Illustrates how structured support systems within universities can rapidly grow startup ecosystems.
University of Cambridge, UK	Research commercialisation.	Cambridge Enterprise enables spin-offs, IP licensing, and strong academia–industry integration.	A leading model of how research commercialisation drives regional clusters (Silicon Fen).
University of Waterloo, Canada.	Skills development & talent pipeline.	Co-operative education model combining study with industry placements.	Shows how aligning education with industry needs produces highly employable and entrepreneurial graduates.
Wageningen University, Netherlands.	Sector-specific innovation (agriculture).	Focused agri-food ecosystem linking research, farmers, and agribusiness.	A global leader in place-based, sector-driven innovation with strong local and global impact.
Aalto University, Finland.	Ecosystem orchestration & policy influence.	Triple Helix collaboration, startup platforms like Slush, strong government–industry links.	Exemplifies how universities can shape national innovation systems and entrepreneurial ecosystems.
Land-Grant Universities, USA.	Community engagement & SME support.	Extension services delivering practical knowledge to farmers and local businesses.	A benchmark for inclusive innovation and direct community-level economic impact
Fraunhofer-linked Universities, Germany.	Industry collaboration & applied research.	Close collaboration between universities and applied research institutes for industrial innovation.	A leading example of how applied research can strengthen manufacturing and regional competitiveness.

Source: Authors' illustration

In total, 72 publications were retrieved for the synthesis, out of which only 39 of the sourced material met the inclusion criteria for analysis. The exclusion of 33 was based on context, geographical scope, unscientific nature, incompleteness, language and relevance to the research focus. Consequently, the qualified publications were consolidated into a file format modelled using Atlas-ti software to facilitate systematic thematic analysis.

3. Results and Discussion

Across these global examples, entrepreneurship development centres are most effective at fostering local economic development when they operate as integrated ecosystem hubs that combine venture support, skills development, research commercialisation, and strategic partnerships. This integrated approach ensures sustained, innovation-led, and inclusive local economic growth, with universities acting as central orchestrators of regional development (see Table 2).

Table 2. Entrepreneurship Centres as Drivers of Local Economic Development (Global Best Practices)

Theme	Explanation	Approach (Global Examples)	Benefits to Local Economy
Venture Creation & Incubation	Centres actively support the formation and scaling of startups	MIT – structured accelerators and venture mentoring through the Martin Trust Center; Oxford University – Oxford Foundry provides incubation and founder support.	High startup formation rates, job creation, development of innovation clusters
Skills Development & Entrepreneurial Mindset	Builds entrepreneurial skills across disciplines and communities	Stanford University – embeds entrepreneurship across faculties; University of Waterloo – co-op education integrates study and work experience.	Graduates become entrepreneurs, improved employability, strong talent retention
Research Commercialisation	Translates academic research into market-ready innovations	University of Cambridge – Cambridge Enterprise supports spin-offs and IP commercialisation; Wageningen University – commercialises agri-food research.	Growth of high-value industries, increased innovation output, attraction of global investment
Ecosystem Building & Networking	Connects startups to investors, industry, and global networks	Stanford University – deep links with Silicon Valley venture capital networks; Aalto University – builds ecosystems through partnerships and initiatives like Slush.	Access to finance, faster innovation cycles, strong regional entrepreneurial ecosystems
SME & Community Support	Extends entrepreneurship support to local businesses and underserved communities	US Land-Grant Universities – extension services support farmers and SMEs.	Inclusive growth, strengthened SMEs, rural and community development
Sector-Specific Development	Focuses on priority industries aligned with regional strengths	Wageningen University – global leader in agri-food innovation; Fraunhofer-linked universities – support advanced manufacturing and Industry 4.0.	Sector productivity growth, enhanced competitiveness, innovation in key industries
Policy Influence & Regional Strategy	Contributes to shaping innovation and economic development policy	MIT & Harvard – influence Boston's innovation policies; Aalto University – contributes to national innovation strategy.	Better policy alignment, coordinated economic development, stronger innovation systems
Access to Finance & Investment	Facilitates startup funding and investor connections	Stanford University – strong alumni-driven venture capital networks; Cambridge University – angel and VC networks linked to the Silicon Fen cluster.	Increased startup survival, scaling of businesses, attraction of global capital

Source: Authors' illustration based on literature review

The results demonstrate that entrepreneurship development centres are critical enablers, ensuring institutions move beyond traditional teaching roles and function as active engines of venture creation and local industrial development. Evidence from global players such as MIT and the University of Oxford illustrates how structured incubation and acceleration programmes can systematically convert ideas into viable enterprises. MIT's Martin Trust Center, for instance, provides mentoring, funding pathways, and entrepreneurial training that have contributed to a high volume of globally competitive startups (Roberts, Murray & Kim, 2019; Degroof, 2021), while Oxford's Foundry focuses on nurturing early-stage ventures through incubation and founder support (Reilly, Sokol & Toniatti, 2023; Chisty, 2025). These approaches show that when institutions of higher learning deliberately build platforms for venture formation, they stimulate firm creation, job generation, and cluster development, effectively anchoring local innovation ecosystems.

Human capital development through entrepreneurship education is central to this discourse as it equips individuals with the skills to drive economic activity. Stanford and the University of Waterloo present an essential model in this context, demonstrating how embedding entrepreneurship across disciplines and integrating experiential learning into curricula produces graduates who are not only employable but also capable of launching and sustaining businesses (Valentine, 2000; Lynas, 2013). While Stanford's ecosystem encourages interdisciplinary innovation (Engel, 2015; Etzkowitz, 2022), Waterloo's co-operative education model ensures

students gain real industry experience during their studies (Bramwell & Wolfe, 2008; Truax, Orchard & Love, 2021). This alignment between education and practice enhances talent retention, strengthens the local skills base, and increases the likelihood that graduates will contribute to regional economic growth either by starting businesses or by driving innovation within existing firms.

The findings further highlight the critical role of research commercialisation and ecosystem connectivity in translating university knowledge into economic value. University of Cambridge and Wageningen University exemplify this imperative, substantiating how entrepreneurship development centres, working alongside technology transfer structures, can turn research outputs into high-impact ventures. Cambridge Enterprise supports spin-offs and intellectual property commercialisation, contributing to the success of the “Silicon Fen” cluster (Viitanen, 2016; Rezaei & Kamali, 2022). In parallel, Wageningen has built a globally recognised agri-food innovation ecosystem by linking research directly to industry and market applications (Annosi & Gilissen, 2020; Van Thinh, 2026). These examples demonstrate that the value of university research is maximised when it is embedded within strong networks that include industry partners, investors, and policymakers, enabling faster innovation cycles and greater economic impact.

Further, empirical evidence demonstrates that entrepreneurship development centres are most impactful when they adopt a broad, inclusive, and ecosystem-oriented approach that extends beyond startups to incorporate SMEs, communities, and policy influence. Aalto University in Finland, for instance, plays a central role in national innovation strategy and ecosystem development, linking startups, government, and global investors through platforms like Slush (Raevaara, Laukkanen, Markkula & Ahonen, 2016; Saini, 2020). Similarly, land-grant universities in the United States provide extension services that support small businesses and rural entrepreneurs, ensuring that the benefits of innovation are widely distributed (Etzkowitz, 2001; Mars, 2014; Lyons, Miller & Mann, 2018). These approaches demonstrate that entrepreneurship centres can drive not only high-growth innovation but also broad-based economic development, positioning universities as key orchestrators of resilient, inclusive, and regionally embedded economic systems.

The experience, informed by leading global practices, suggests that establishing an entrepreneurship development centre with a local economic multiplier requires a systemic, integrated approach rather than isolated interventions. A central imperative is the deliberate coupling of venture creation, skills development, and research commercialisation into a cohesive pipeline (Huang-Saad, Fay & Sheridan, 2017; Yang, Kher & Lyons, 2018). This means the centre's innovation hubs must not only teach entrepreneurship but also actively incubate ventures, embed experiential learning, and translate research into viable enterprises, particularly in priority sectors such as agribusiness and sustainable development. The success of institutions like MIT, Stanford, and Wageningen demonstrates that entrepreneurship flourishes where there is a continuous flow from knowledge creation to market application, supported by mentoring, structured accelerators, and intellectual property frameworks. For economies such as South Africa that are striving to position entrepreneurship at the centre of education and development, this implies investing in university-based incubation centres, strengthening industry–academic linkages, and ensuring that graduates leave with both entrepreneurial competencies and market-relevant experience, thereby enhancing job creation, innovation output, and retention of local talent.

Equally critical is the need to build inclusive entrepreneurial ecosystems supported by finance, partnerships, and enabling policy frameworks. Evidence from global players also shows that high-impact entrepreneurship does not emerge in isolation but rather through dense networks that connect startups to investors, government, industry, and communities (Ford, O'Neal & Sullivan, 2010; Malecki, 2018). Institutions such as Stanford and Aalto highlight the importance of strong ecosystem orchestration. At the same time, examples from land-grant models demonstrate the value of extending support to SMEs and rural communities to ensure broad-based, inclusive growth. For South Africa and other African economies, this translates into fostering regional innovation clusters aligned with local strengths, for instance, agriculture, manufacturing, digital services, improving access to early-

stage finance (angel, venture capital, blended finance), and positioning universities as active contributors to policy design and regional development strategies. Ultimately, the multiplier effect will depend on how well entrepreneurship initiatives are embedded within local economic structures, enabling not only startup formation but also value chain development, productivity gains, and sustained community transformation. Figure 1 further illustrates these imperatives.

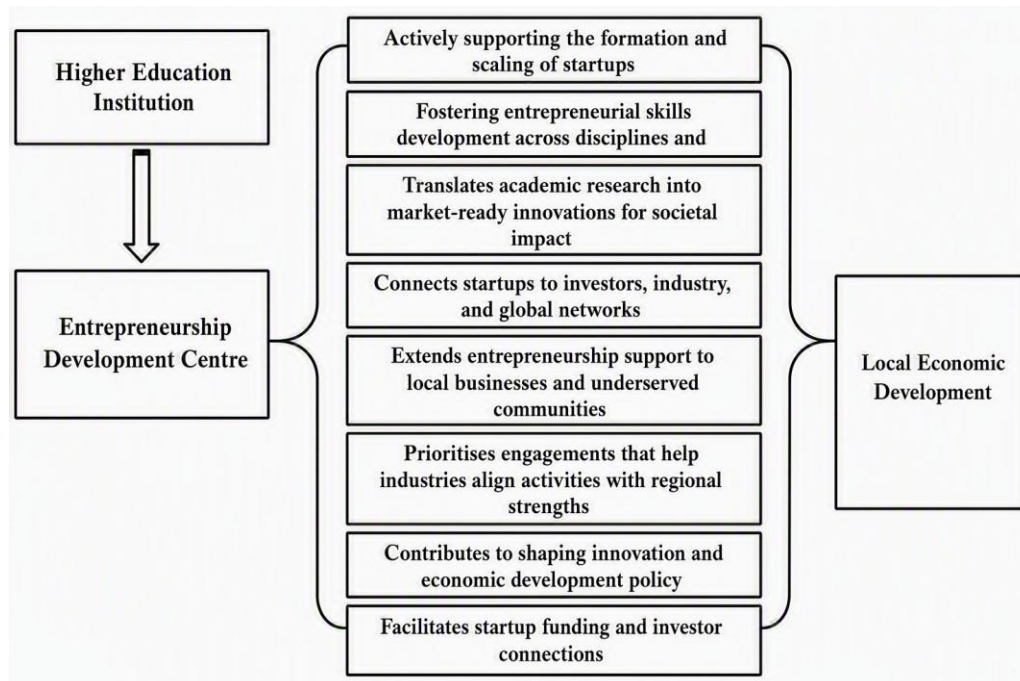


Figure 1. A Blueprint Fostering Local Economies through HEI Entrepreneurship Development Systems

In a nutshell, educational institutions, through their entrepreneurship development systems, can play a significant role in fostering local economic development. This can be achieved through diverse and intentional strategies, including entrepreneurial skills development among students and community members; venture formation and scaling support; connections with startups, investors, industry, and global networks; extending entrepreneurship support to local businesses and underserved communities; and contributing to the shaping of innovation and economic development policy, among other imperatives. Consequently, South African and African HEIs aiming to foster holistic entrepreneurship development trajectories may draw on and adapt these strategies to their institutional contexts to achieve comparable outcomes.

4. Conclusion

Drawing on perspectives from nine higher learning institutions and 39 publications, and focusing specifically on entrepreneurial university imperatives and local economic development, entrepreneurship development centres are critical resources for fostering local economic multipliers. The evidence demonstrates that universities can become highly effective agents of local economic development when their entrepreneurship development centres are strategically positioned as integrative hubs of innovation, talent, and collaboration. The most successful global examples show that impact is maximised when venture creation, skills development, research commercialisation, and ecosystem partnerships are not treated as isolated functions, but as interconnected components of a broader development system. Importantly, these institutions also illustrate that relevance to local context, whether through sector focus, community engagement, or policy alignment, is critical for sustained impact. Moving forward, higher education systems seeking to replicate these successes should adopt a deliberate, long-term, and place-

based approach, investing in both high-growth entrepreneurship and inclusive development initiatives. In this direction, they can play a transformative role in building resilient, innovation-driven economies that generate opportunities not only for firms and graduates, but for society at large.

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