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Contextual interpretation of Sustainable Entrepreneurial HEIs: Perspectives from the University of Calabar

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ABSTRACT

Debates on a university's third mission have increasingly converged on the notion of the entrepreneurial university; however, with various economies pursuing divergent pathways, there is no universally accepted interpretation applicable globally. This lack of consensus is particularly concerning in contexts such as Africa, where the concept is still emerging, and issues surrounding it remain unresolved. This narrative-review study conceptualised the African interpretation of a typical and sustainable entrepreneurial university concept, drawing insights from the University of Calabar. Qualitative analysis of 77 publications using the Atlas-ti software version 26.0.0 highlighted three fundamental strategies underpinning the narrative. The usual institutional entrepreneurial university strategies include human development, specifically capability and talent formation for entrepreneurial success; commercialisation in areas of comparative and competitive advantages to drive internal revenue; and, lastly, social transformation modalities for community-embedded impact. These strategies align with the continent's development priorities and socioeconomic imperatives. Based on this synthesis, the entrepreneurial university concept is defined contextually and informed by regionally specific realities. The University of Calabar framework presents a blueprint for policy, practice and further research.

Keywords: Afrocentrism, entrepreneurial university, HEIs' third mission, regional economic development, sustainability.

INTRODUCTION

Globally**,** discourses around a university's third mission, beyond teaching, research and community engagement, have increasingly coalesced around the notion of an entrepreneurial university. Early debates on the phenomenon framed this mission, primarily in terms of technology transfer, patents, and spin-offs,[1] drawing on models from parts of Europe and the United States, where universities act as engines for cutting-edge innovation within knowledge economies. More recent discourses on

[1] Dylan Jones-Evans, *Universities, Technology Transfer and Spin-off Activities: Academic Entrepreneurship in Different European Regions* (University of Glamorgan Business School Glamorgan, 1998); Henry Etzkowitz, "Research Groups as 'Quasi-Firms': The Invention of the Entrepreneurial University," *Research Policy* 32, no. 1 (January 2003): 109–21, https://doi.org/10.1016/S0048-7333(02)00009-4; Donald S Siegel, David Waldman, and Albert Link, "Assessing the Impact of Organizational Practices on the Relative Productivity of University Technology Transfer Offices: An Exploratory Study," *Research Policy* 32, no. 1 (January 2003): 27–48, https://doi.org/10.1016/S0048-7333(01)00196-2; Wai Fong Boh, Uzi De-Haan, and Robert Strom, "University Technology Transfer through Entrepreneurship: Faculty and Students in Spinoffs," *The Journal of Technology Transfer* 41, no.4 (2016): 661–69.

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entrepreneurial universities, however, interrogate the limits of creativity and a narrow commercialisation focus,[2] raising concerns about academic capitalism, mission drift, and the tension between public good mandates and market-oriented imperatives. Scholars now emphasise broader interpretations of entrepreneurial universities, highlighting innovation, problem-solving capacity, and societal engagement, where entrepreneurship is understood not only as venture creation but as an institutional mindset embedded in governance, curricula, research agendas, and external partnerships.[3] These variations create ambiguity about which third mission approach is most appropriate.

There are two narratives to address. First, the criticism that dominant entrepreneurial university models often privilege high-tech innovation and elite firms, overlooking structural constraints such as weak industrial bases, limited venture capital, and high informality. Consequently, newer perspectives advocate developmental *or* engaged entrepreneurial universities - institutions that link entrepreneurship imperatives to local economic transformation, rather than purely commercial outcomes.[4] Second, a university's third mission should be informed by context-specific needs and regional realities – a major debate across the Global South, especially in developing economies, where socio-economic growth remains a critical challenge. Shifting from the usual status quo, scholars frequently emphasise social impact paradigms while maintaining commercialisation patterns.[5] Universities in this context are increasingly expected to contribute significantly to local and national development through inclusive innovation and support for small enterprises and informal economies.

In Africa, there are critiques that traditional university models have failed to keep pace with the continent's urgent needs and developmental priorities;[6] therefore, strategically highlighting the third

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[2] Derek Bok, *Universities in the Marketplace* (Princeton University Press, 2009), https://doi.org/10.1515/9781400825493; Etzkowitz, "Research Groups as 'Quasi-Firms': The Invention of the Entrepreneurial University"; Ourania Filippakou and Gareth Williams, "Academic Capitalism and Entrepreneurial Universities as a New Paradigm of 'Development,'" *Open Review of Educational Research* 1, no. 1 (January 2, 2014): 70–83, https://doi.org/10.1080/23265507.2014.964645.

[3] Ishmael Obaeko Iwara and Beata Mukina Kilonzo, "Towards a Conceptual Understanding of an Effective Rural-Based Entrepreneurial University in South Africa," *Social Sciences* 11, no. 9 (2022): 388; Cris Shore, "Symbiotic or Parasitic? Universities, Academic Capitalism and the Global Knowledge," *Collaborations: Anthropology in a Neoliberal Age*, 2020, 23; Maribel Guerrero and Matías Lira, "Entrepreneurial University Ecosystem's Engagement with SDGs: Looking into a Latin-American University," *Community Development* 54, no. 3 (May 4, 2023): 337–52, https://doi.org/10.1080/15575330.2022.2163411; Ana Pacheco et al., "University Entrepreneurship: Entrepreneurial Orientation, Networks, Market Orientation, and Sustainable Development," *Management Decision* 62, no. 13 (December 16, 2024): 456–81, https://doi.org/10.1108/MD-09-2023-1611; Muammer Maral, "Entrepreneurial Universities: A Decision-Making Approach," *Management Decision* 64, no. 1 (January 15, 2026): 1–30, https://doi.org/10.1108/MD-02-2024-0321.

[4] Poh-Kam Wong, Yuen-Ping Ho, and Annette Singh, "Towards an 'Entrepreneurial University' Model to Support Knowledge-Based Economic Development: The Case of the National University of Singapore," *World Development* 35, no. 6 (2007): 941–58; Allison Bramwell and David A. Wolfe, "Universities and Regional Economic Development: The Entrepreneurial University of Waterloo," *Research Policy* 37, no. 8 (September 2008): 1175–87, https://doi.org/10.1016/j.respol.2008.04.016; Natalia Budyldina, "Entrepreneurial Universities and Regional Contribution," *International Entrepreneurship and Management Journal* 14, no. 2 (June 29, 2018): 265–77, https://doi.org/10.1007/s11365-018-0500-0; Sara Abdulla Al-Maadeed and Osama Sam Al-Kwifi, "Transformation to an Entrepreneurial University: The Case of Qatar University," *Journal of Asia Business Studies* 20, no. 2 (April 17, 2026): 521–40, https://doi.org/10.1108/JABS-08-2024-0471.

[5] Dzidziso Samuel Kamuriwo et al., *Developing University Entrepreneurial Ecosystems in Sub-Saharan Africa* (World Scientific, 2024); Florina-Sanda Tripa et al., "Shaping Higher Education: The Rise Of Entrepreneurial Universities.," *Business Excellence & Management* 15, no. 1 (2025): 15; Yahya Benabdellah And Asmae Diani, "The Entrepreneurial University Wheel: A University Ecosystem Framework For Developing Countries," *Journal of Developmental Entrepreneurship* 30, no. 01 (March 11, 2025), https://doi.org/10.1142/S1084946725500050.

[6] Akilagpa Sawyerr, "African Universities and the Challenge of Research Capacity Development," *Journal of Higher Education in Africa/Revue de l'enseignement Supérieur En Afrique*, 2004, 213–42; Auf Tumwebaze Alicon, "Higher Education Research, Development Agendas in Africa. Where Is the Convergence? A Literature Review," *On the Horizon: The International Journal of Learning Futures* 30, no. 4 (November 16, 2022): 182–89, https://doi.org/10.1108/OTH-04-2022-0021; Alice Sipiyian Lakati and Peninah Kinya Masibo, "A Call for African Universities to Define Their Research Priorities," *The Lancet Global Health* 11, no. 10 (October 2023): e1505–6, https://doi.org/10.1016/S2214-109X(23)00366-2; Jeremiah O Arowosegbe, "African Universities and the Challenge of Postcolonial Development," *Africa* 93, no. 5 (2023): 591–614; Taha Abuali and Abdussalam Ali Ahmed, "Challenges and Opportunities in Implementing E-Learning in Developing Countries," *The Open European Journal of Social Science and Education (OEJSSE)*, 2025, 1–12; Annastasia Moloto, Ntsieni Fitzgerald Ramasimu, and Lerato Linda Motsei, "Graduate Unemployment, Skills Mismatch, and the Dynamics of Labour Mobility in South Africa: A Systematic Literature Review," *International Journal of Applied Research in Business and Management* 6, no. 5 (December 2, 2025), https://doi.org/10.51137/wrp.ijarbm.369; Wondwosen Tamrat, "Shaping Africa's Higher Education: Future Directions for Research," *International Higher Education*, no. 123 (2025): 47–48.

mission offers a beacon of hope.[7] As a result, debates around the entrepreneurial university concept on the continent are currently shaped by pressing continental challenges, specifically unemployment, evolving industry-related skills, inequality, socio-economic divides, and underdeveloped innovation ecosystems.[8] From the foregoing, it can be argued that the African interpretation of the entrepreneurial university concept emphasises inclusive growth, sectoral engagements aligning with national priorities, and developmental partnerships. In this framing, the third mission is not simply about commercialisation for revenue generation or start-ups, but about universities acting as resourceful anchor institutions that cultivate entrepreneurial capabilities, enhance employment, and contribute meaningfully to the continent's socio-economic transformation.

LITERATURE REVIEW

This case study conceptualised the African interpretation of the typical and sustainable entrepreneurial university concept, drawing perspectives from the University of Calabar (UniCal). The conceptual framework is underpinned by three fundamental university third mission strategies within continental development priorities, such as human development, which explains the university's role in fostering capability and talent formation for entrepreneurial success (see Figure 1). The second strategy relates to commercialisation orientation. This strategy focuses on a university's innovative approaches to commodifying resources within its comparative and competitive advantages to generate internal revenue, demonstrate financial resilience and sustainability, amid declining public funding. The last strategy unpacks social transformation modalities, in which a university leverages its resources to strengthen community-embedded impact. Drawing on emerging discourses, these three strategies, woven together, provide explanatory dimensions of the concept.

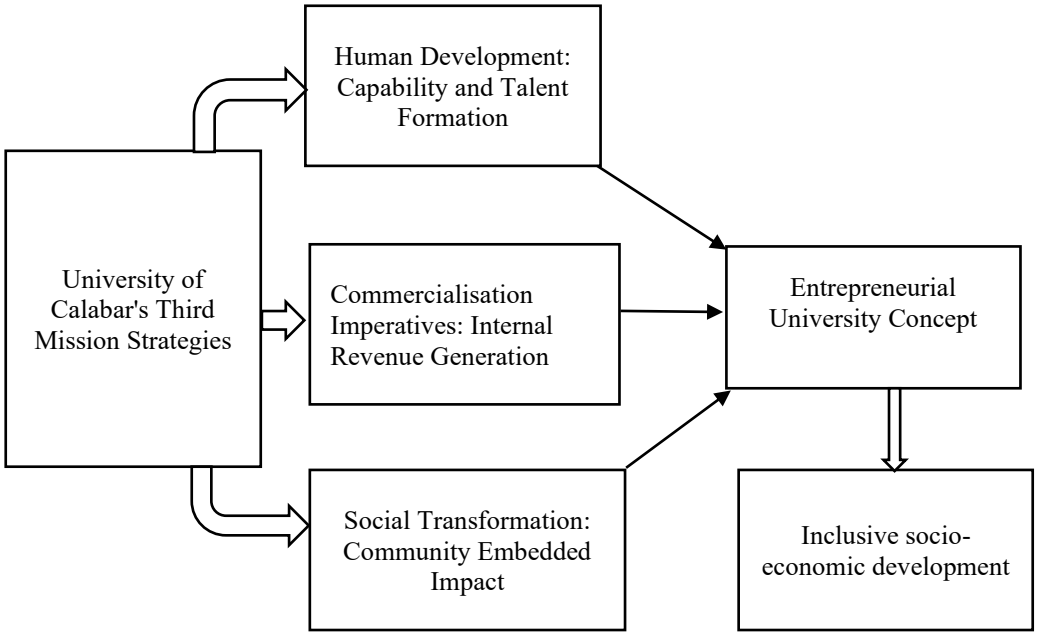


Figure 1: Conceptual Framework of the study (source: Author's illustration)

[7] Ishmael Obaeko Iwara, "Graduate Employability in Africa: Reimagining Rural-Based Entrepreneurial University Paradigm," *Sustainability* 17, no. 10 (May 18, 2025): 4628, https://doi.org/10.3390/su17104628.

[8] Pascal Samfoga Doh, Jussi S. Jauhiainen, and Rosemond Boohene, "The Synergistic Role of Academic Entrepreneurship Patterns in Entrepreneurial University Transformation: Analysis across Three African Sub-Regions," *African Journal of Science, Technology, Innovation and Development* 14, no. 5 (July 29, 2022): 1227–39, https://doi.org/10.1080/20421338.2021.1943815; Iwara and Kilonzo, "Towards a Conceptual Understanding of an Effective Rural-Based Entrepreneurial University in South Africa"; Bunmi Isaiah Omodan, Nangamso Manquma, and Andy Mafunda, "Decolonising Minds, Empowering Futures: Rethinking Entrepreneurial Education for University Students in Africa," *Journal of Curriculum Studies Research* 6, no. 2 (August 4, 2024): 1–19, https://doi.org/10.46303/jcsr.2024.8; Iwara, "Graduate Employability in Africa: Reimagining Rural-Based Entrepreneurial University Paradigm."

As the conceptualisation is grounded in a typical African-based entrepreneurial-driven university, the proposed framework will not only enhance understanding of the concept through an African lens but also serve as a blueprint for structuring resourceful African-oriented entrepreneurial higher education institutions that meet continental needs. This study aligns 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).[9] The focus also aligns with Africa's Agenda 2063 development priorities. This agenda is poised to transform the continent into a global powerhouse through inclusive and sustainable development, specifically, social and economic transformation, democracy, human rights, peace and security.[10] Ensuring that universities in Africa keep pace with the continent's development priorities is, therefore, interpreted as a third mission.

The next sections present the study area. Similarly, the methodology used to determine qualified samples and analysis is detailed. This process includes the scoping review, discussion of findings, and the strategic framework for conceiving a viable entrepreneurship development centre.

METHODOLOGY

A qualitative research approach was followed to conduct this integrative narrative review. A narrative review is a qualitative research approach that critiques and synthesises existing literature to strengthen or establish a new perspective on a phenomenon, highlighting thematic connections and contextual insights that may not be possible from other forms of literature review processes. Publications, including journal articles, book chapters, and reports, were sourced from official websites and databases, such as EBSCOhost, Sabinet, ScienceDirect, and PubMed, as well as repositories. Backwards searches were conducted by reviewing the reference list of the collected publications. Similarly, forward searches were conducted on Google Scholar, Google Chrome and institutional repositories to retrieve materials such as bulletins, official reports and relevant media. This ensured a comprehensive search of the study area. The search strategies include Boolean operators, truncations, and subject heading terms. The search strategy for the relevant materials during data collection includes "(((entrepreneurial university) AND (concept, pattern and approach) OR (entrepreneurship university)) AND (University of Calabar) AND (entrepreneurship development) AND (higher education institutions) AND (entrepreneurship initiatives*) OR (third mission"). The inclusion criteria were full-text publications in English within the research scope.

Out of the 116 publications initially collected from the sources mentioned above, 77 met the inclusion criteria after screening. The qualified publications were uploaded into Atlas-ti software version 26.0.0, coded and consciously analysed using a thematic analysis strategy. This method utilises systematic scrutiny and interpretation of textual or visual information to reveal underlying patterns.

CASE ILLUSTRATION: UNIVERSITY OF CALABAR

Brief institutional context

UniCal is a public university situated in Calabar, Cross River State, in Nigeria. It is widely recognised for its mandate to serve urban, rural and historically marginalised communities in the state and beyond. UniCal grew out of the University of Nigeria, Calabar campus, established during the 1973/74 academic session. In April 1975, the Federal Military Government of Nigeria announced that the Calabar campus would become a full-fledged university. Since its establishment in 1975, UniCal has evolved into a comprehensive higher learning institution that prioritises access, transformation, and relevance in a predominantly urban context. The University has built a significant student capacity (currently over 40,000 students, both nationally and internationally), hence enrolling a diverse population, largely drawn from the South-South and neighbouring geopolitical zones in Nigeria, with increasing participation from first-generation university students. Through targeted academic support, expanded infrastructure, and student development programmes, UniCal has strengthened progression and graduation outcomes, positioning itself as a critical gateway to higher education and social mobility in the region.

[9] United Nations, "Global Sustainable Development Report (GSDR)," 2023.
[10] African Union, "Agenda 2063: The Africa We Want. Addis Ababa: African Union," 2015.

Academically, UniCal has progressively strengthened its profile across teaching, research, and community engagement. It offers programmes in fields such as agriculture, health sciences, education, environmental studies, management sciences, and law. Many of these align with local, regional and national development priorities. With over 100 thousand alumni, the university continues to demonstrate excellence in teaching, research, and community service, producing well-rounded graduates equipped with the knowledge and skills to contribute meaningfully to national and global development. UniCal has also made notable strides in research, particularly in medical science, chemistry, rural sociology and environmental sciences. These focus areas reflect a deliberate effort to produce graduates with context-responsive knowledge that addresses socioeconomic challenges prevalent in its surrounding communities.

Justification for selecting the case

In terms of its third mission, UniCal is recognised as one of the few institutions of higher learning in sub-Saharan Africa that has successfully integrated entrepreneurship development education and practice as a compulsory component across various undergraduate courses. It embodies elements of the engaged and entrepreneurial university model, within an African developmental context (see Table 1). Its emphasis on community-based learning, partnerships with local institutions, support for smallholder agriculture, and promotion of entrepreneurship and innovation among students and graduates demonstrates a commitment to societal impact, beyond traditional academic roles. Rather than framing entrepreneurship narrowly as commercialisation alone, UniCal's approach aligns with a developmental perspective in which knowledge production, human capacity development, and community upliftment are deeply interconnected and advocated for. In this way, the University plays a critical role, not only as a centre of learning but as a catalyst for inclusive growth and social transformation in Africa.

Table 1: Census of the University of Calabar Third Mission Strategies

	Strategy	**Source**
1	The University's 40+ students across 15 faculties receive compulsory entrepreneurship development education and training at a certain level of their academic pursuit. This course is administered and regulated by the Centre for Entrepreneurship Development.	UniCal,[11]
2	The University of Calabar Press, also known as the University of Calabar Printing Press, is the institution's official printing and publishing unit. It provides printing, publishing, and design services for the university community and the general public. The services include: • Graphic design • Large format printing • High-quality Direct Imaging (DI) printing • Gift and souvenir printing • Banner and flex printing • Book printing and publishing	Converseer,[12]
3	University of Calabar's ultramodern filling station, located opposite the institution, provides efficient, affordable, and reliable fuel to students, staff and the surrounding community, while boosting institutional revenue.	Aniekan,[13]
4	University of Calabar International Demonstration Secondary School (UCIDSS) is among the few in Nigeria, ranked highly for global competitiveness and local relevance. With over 150 qualified staff, the school provides cutting-edge education to approximately a thousand students annually.	UCIDSS,[14]

[11] University of Calabar, "University of Calabar Entrepreneurship Development Centre," 2026.
[12] Converseer, "UniCal Board Reappoints Mathias Sunday as Printing Press MD," 2025, https://www.converseer.com/unical-board-reappoints-mathias-sunday-as-printing-press-md/.
[13] A. Aniekan, "UNICAL VC Commissions Ultramodern UNICAL Fuel Station," 2025.
[14] UCIDSS, " Historical Background of the University of Calabar International Demonstration Secondary School (UCIDSS)," 2022.

5	The University of Calabar Teaching Hospital (UCTH), a leading tertiary healthcare and medical training institution in Nigeria, was established to serve as the principal medical training facility for the University of Calabar's College of Medicine, while also functioning as a referral and specialist healthcare centre. Since its founding, UCTH has grown into a prominent institution known for its contributions to medical education, service delivery, and research in Nigeria. It expanded its facilities and service capacity to meet the healthcare demands of the region while continually adopting advanced medical technologies and practices. UCTH remains focused on excellence in patient care, academic instruction, and health innovation. The key significance includes: Key Features of Its Historical Significance: • Teaching and Training Centre: Core institution for training medical students, nurses, and allied health professionals; • Regional Referral Hospital: Provides advanced diagnostic and specialist care for the South-South and neighbouring regions; • Academic-Clinical Integration: Combines teaching, research, and patient care; • Healthcare Equity and Access: Serves urban and rural populations across Cross River State and beyond, as well as • Innovation and Research Development: Engaged in collaborative medical research and evidence-based practice.	UCTH,[15]
6	Uncial Microfinance Bank Limited, licensed by the Central Bank of Nigeria (CBN), carries on microfinance business. With five branches and three cash centres, it renders the following services to students, staff and the public: • Deposits • Credit to customers • Cheque clearance • Payment services, such as salary and pension • Micro-leasing facilities operations • Treasury bills investments • Mobile banking services	UMFB[16]
7	The UniCal Hotel and Conference is a lodging and hospitality facility located near the University. This facility provides basic accommodation and essential event services to university guests, staff members and the public.	Hotels.ng.[17]

The historical background and notable entrepreneurial trajectories illustrated in Table 1 serve as continental exemplars for policy benchmarking, entrepreneurial-university modelling, and regional economic development.

SYNTHESIS OF FINDINGS AND DISCUSSION

Table 2 below illustrates the University of Calabar's third-mission strategies, their explanation and primary contribution. The discussion is clustered into three dimensions: human development, commercialisation imperatives, and social transformation. As indicated (x), the clustering recognises that some third mission strategies contribute to more than one dimension, although highlighting the dominant functions.

[15] UCTH, *University of Calabar Teaching Hospital*, 2023.
[16] UMFB, "University Of Calabar Microfinance Bank Limited," 2026.
[17] Hotels.ng, "Unical Hotel and Conference," *Cross River*, 2026.

Table 2: Cluster of Third Mission Strategies with Comparative Examples

Third Mission Initiatives	Insights	Comparable African University Examples	Primary Contribution		
			Human Development	Commercialisation Imperatives	Social Transformation
Compulsory Entrepreneurship Curriculum	Embeds entrepreneurial skills, innovative thinking, and venture creation across curricula for all students.	University of Cape Town (South Africa) and Makerere University (Uganda) have institution-wide entrepreneurship education programmes.	x		x
University of Calabar ultramodern filling station	Supplies fuel on a commercial basis while supporting campus operations, placements and employment generation.	The University of Ilorin (Nigeria) and the University of Benin (Nigeria) operate fuel stations as revenue-generating units.		x	
University of Calabar Hotel	Generates income while supporting conferences, tourism, and visiting scholars, and job creation.	University of Ghana Guest Centre, University of Johannesburg Hotel School & Training Hotels, University of Malawi Conference Hotels.		x	
University of Calabar International Demonstration Secondary School (UCIDSS)	Provides secondary education and builds a feeder pipeline into tertiary education, while generating income and employment.	University of Ibadan International School, University of Malawi Demonstration Schools, University of Pretoria Schools Model.	x	x	x
University of Calabar Microfinance Bank	Enhances financial inclusion and supports student, staff, and community enterprises, while generating income and job opportunities.	University of Development Studies (Ghana) savings and credit schemes; Ashesi University student venture funds; University-linked cooperatives in East Africa.		x	x
University of Calabar Press	Produces academic materials and generates revenue through public printing services.	University of Ibadan Press (Nigeria) and University of Nairobi Press (Kenya) equally operate as commercial academic presses.		x	
University Teaching Hospital	Combines healthcare delivery with teaching and research.	University of Ghana Teaching Hospital, University of Ibadan Teaching Hospital.	x		x

Source: *Author's illustration based on literature review*

Human Development

Compulsory entrepreneurship education, public high school and teaching hospital foreground human development as a central pillar of the third mission. These initiatives, while generating meaningful internal revenue for the University, aim to build skills, competencies, and reflective capacities across students' long-term development - from secondary education through professional and entrepreneurial training. The essential imperative in this dimension is capability expansion: equipping learners, students, and professionals with the intellectual, technical, and entrepreneurial skills necessary for productive citizenship and employment creation. This human-centred approach ensures that this entrepreneurial University does not prioritise commercial outcomes at the expense of learning but rather integrates economic relevance with educational depth.

The University, through its Centre for Entrepreneurial Development (EDC), for instance, prides itself on promoting entrepreneurship education, training and leadership among its students across faculties.[18] Its entrepreneurship syllabus and business plans are designed to equip students and self-determined graduates with cutting-edge skills and future-oriented entrepreneurial competence to launch innovative ventures, regardless of their career. It enables young graduates to succeed in their career endeavours, integrating crucial components that reflect contemporary labour-market demands and globally relevant skills. This curriculum grounds students in entrepreneurship and prepares them well for a highly competitive employment landscape, invigorating millions of young Africans who earn higher qualifications from various institutions, yet return without placement prospects.[19] This assumption is legitimised in Iwara, whose empirical summations demonstrate that entrepreneurship training promotes entrepreneurial intention and self-employment, and that higher education systems, through their entrepreneurship development strategies, will cultivate a pipeline of innovators capable of addressing Africa's economic challenges, ranging from surging unemployment and graduate underemployment to income inequality and poverty, thus contributing to the continent's long-term economic transformation.[20]

An ageing African population and [21] the increasing prevalence of chronic and non-communicable diseases on the continent[22] and the continued threat of infectious disease outbreaks[23] are placing unprecedented strain on health services. Advances in medical technology and patient expectations require health-care professionals to possess more specialised skills, adaptability, and ethical judgment.[24] Weak health systems, staffing shortages, and inequitable access to care, starkly by recent public health emergencies,[25] emphasise the need for well-trained professionals supported by

[18] University of Calabar, "University of Calabar Entrepreneurship Development Centre."
[19] Iwara, "Graduate Employability in Africa: Reimagining Rural-Based Entrepreneurial University Paradigm."
[20] Iwara, "Graduate Employability in Africa: Reimagining Rural-Based Entrepreneurial University Paradigm."
[21] Olayinka Akinrolie et al., "Longitudinal Studies of Aging in Sub-Saharan Africa: Review, Limitations, and Recommendations in Preparation of Projected Aging Population," *Innovation in Aging* 8, no. 4 (April 1, 2024), https://doi.org/10.1093/geroni/igae002.
[22] Razak M Gyasi and David R Phillips, "Aging and the Rising Burden of Noncommunicable Diseases in Sub-Saharan Africa and Other Low- and Middle-Income Countries: A Call for Holistic Action," *The Gerontologist* 60, no. 5 (July 15, 2020): 806–11, https://doi.org/10.1093/geront/gnz102; Takhona G. Hlatshwako et al., "The Integration of Communicable and Non-Communicable Disease (CD-NCD) Health Services in Africa: A Scoping Review," *PLOS Global Public Health* 6, no. 3 (March 26, 2026): e0006087, https://doi.org/10.1371/journal.pgph.0006087.
[23] John N. Nkengasong and Sofonias K. Tessema, "Africa Needs a New Public Health Order to Tackle Infectious Disease Threats," *Cell* 183, no. 2 (October 2020): 296–300, https://doi.org/10.1016/j.cell.2020.09.041; Hakeem Kayode Hassan et al., "Mitigating the Escalating Threat of Infectious Diseases Outbreaks in Tropical Africa: A Perspective Examination of Challenges and Strategies for Future Preparedness," *Beni-Suef University Journal of Basic and Applied Sciences* 13, no. 1 (June 8, 2024): 55, https://doi.org/10.1186/s43088-024-00511-y.
[24] Boniface Oyugi et al., "The Regional Training Centre for the Emergency Medical Teams Initiative in the WHO African Region: A Review of the Development and Progress over the Past 4 years," *Frontiers in Public Health* 13 (March 28, 2025), https://doi.org/10.3389/fpubh.2025.1542261; Chakupewa Joseph Mpambije, "Navigating the Trends, Strides and Dilemmas of Ingraining the Fourth Industrial Revolution in Health Care Delivery System in Sub-Saharan Africa," *Discover Global Society* 4, no. 1 (April 8, 2026): 46, https://doi.org/10.1007/s44282-026-00387-6.
[25] Samuel Nkachukwu Uwaezuoke, "Strengthening Health Systems in Africa: The COVID-19 Pandemic Fallout," *Journal of the Pan African Thoracic Society* 1, no. 1 (2020): 15–19; Ayaga Agula Bawah, "Advancing Evidence-Based Innovations for Strengthening Health Systems in Africa: Insights from the 2025 Health Systems Innovation Conference in Ghana," *Journal of Global Health Science* 8, no. Special (2026), https://doi.org/10.35500/jghs.2026.8.e6.

efficient infrastructure, strong governance, and sustainable financing. Health determinants economic productivity and social stability.[26] Hence, investing in competent personnel and robust systems is now widely recognised as a critical development priority, rather than a sector-specific concern. UniCal, through its teaching hospital, contributes to this crucial socioeconomic imperative in Africa; although instituted by the Federal Government of Nigeria, the UCTH serves as the University's College of Medicine's principal medical training facility and functions as a referral and specialist healthcare centre. Since its founding, UCTH has grown into a prominent institution known for its contributions to medical education, service delivery, and research in the country.[27] It delivers world-class tertiary medical care, fosters academic excellence in healthcare training, and supports cutting-edge research for better health outcomes. Its teaching and research initiatives have not only helped aspiring, emerging and advanced medical scientists become better versions of themselves, but have also strengthened the healthcare system by building evidence-based skills, fostering innovation, and ensuring a competent workforce capable of delivering higher-quality patient care.

A similar context was observed within the University's affiliated high school. The University of Calabar International Demonstration Secondary School is uniquely positioned to prepare learners for a smoother and more successful transition from secondary to tertiary education. Its academic culture mirrors university standards through credible staffing, experimental and independent learning, and an emphasis on competence, critical thinking, and academic discipline.[28] Exposure to a university-aligned curriculum, environment, practices, expectations, and support systems equally helps learners become familiar with the rigour, pace, and self-directed nature of tertiary study while still in a structured school environment. Consequently, UCIDSS graduates enter the University of Calabar system and other higher education institutions not only robust and academically prepared, but also confident, adaptable, and better equipped to meet the intellectual and personal demands of advanced study endeavours. The UCIDSS approach is relevant in the higher education landscape, where undergraduate dropout rates remain a significant challenge, driven by a combination of factors, including poor academic foundation, under-preparedness and unequal quality of primary and secondary education.[29] These challenges often leave students unable to cope with evolving university-level demands, leading to dropout, thus reflecting broader structural inequalities that continue to shape access to, and success in, primary and higher education across the continent.

In Africa, where the entrepreneurial university concept is increasingly judged not by the number of spin-offs alone, but by its alignment with continental development priorities and contribution to socio-economic transformation, for instance, human capability formation, the University of Calabar offers a significant blueprint. The compulsory entrepreneurship education curriculum, its affiliated Demonstration Secondary Schools, and Teaching Hospitals illustrate how the University shapes skills across educational levels and professional pathways. In this direction, African institutions of higher learning can keep pace with the continent's imperatives.

Commercialisation Imperatives

Recent studies show that many African HEIs' heavy reliance on public funding has become a significant deterrent to their stability and progress.[30] These institutions have accumulated large debts.

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[26] Serhiy Lyeonov et al., "How Vulnerable Employment and Public Health Quality Shape Labour Productivity: A Comparative Study of European Economies.," *Journal of International Studies (2071-8330)* 18, no. 1 (2025): 232; Cem Yildirim, Murat Demir, and Ahmet Kaya, "A Comparative Analysis of Fiscal Investments in Preventive Healthcare Measures and Their Effects on National Economic Productivity," *Advanced Studies in Human Knowledge, Innovation, and Societal Development* 15, no. 8 (2025).

[27] UCTH, *University of Calabar Teaching Hospital*.

[28] UCIDSS, " Historical Background of the University of Calabar International Demonstration Secondary School (UCIDSS)."

[29] Chinaza Uleanya, "Rural University Education for Sustainable Development in South Africa: A Review," *Africa Education Review* 19, no. 1 (January 2, 2022): 160–76, https://doi.org/10.1080/18146627.2023.2180398; Siyanda Mluleki Kenneth Cele, Doniwen Pietersen, and Claire Gaillard, "Black African Students' Social and Academic Identities in South African Universities Vis-à-Vis Student Drop Out: A Social Justice and Philosophical Perspective.," *Journal of Culture & Values in Education (JCVE)* 8, no. 1 (2025): 240.

[30] Alexis Zickafoose et al., "Barriers and Challenges Affecting Quality Education (Sustainable Development Goal# 4) in Sub-Saharan Africa by 2030," *Sustainability* 16, no. 7 (2024): 2657; Edna Addo, Moses Segbenya, and Samuel Yaw Ampofo, "Industrial Strikes

This backlog resulted from shrinking government support, delayed remittances, and reduced capitation, thus weakening their ability to invest in quality teaching, community engagement, research, and infrastructure.[31] Their overreliance also restricts institutional autonomy, as HEIs lack diversified revenue streams needed to innovate and expand income-generating activities essential for institutional sustainability.[32] In addition, this condition further constrains HEIs' strategic agility, limiting their capacity to respond to market demands, attract and retain talent, and compete globally.[33] These worrying outcomes in Africa require pragmatic and proactive intervention.

According to Syihab, a sustainable, strategic and diversified revenue structure is crucial for higher education institutions to maintain financial stability and resilience amid changing funding environments.[34] UniCal's internal-revenue-oriented initiatives, such as the printing press, gas station, commercial hotel, high school, and microfinance banks, reflect a deliberate strategy to reduce overreliance on public funding and tuition fees. These ventures have institutionalised entrepreneurship at the organisational level by converting university assets and capabilities into sustainable income streams. These flagship ventures have enabled the University to partially fund academic programmes, research initiatives, infrastructure maintenance, and scholarships while retaining autonomy in strategic decision-making. Drawing insights from global discourses, such advancements systematically cushion universities against fluctuations in state funding and enrolment cycles, thereby strengthening long-term institutional resilience,[35] suggesting a gradual shift toward a more diversified revenue structure in higher education. Against this backdrop, UniCal's diversification orientation offers a realistic internal revenue mobilisation framework for emerging African HEIs, especially those trapped in a cycle of austerity.

The narrative above reflects empirical assumptions that commercialisation-oriented institutions are not only independent but consistently leading in global competitiveness. They leverage innovation and knowledge creation to drive inclusive economic growth. Perspectives from global institutions, such as *Eidgenössische Technische Hochschule (ETH)* (Federal Institute of Technology), Zürich (ETH Zürich, 2025), Massachusetts Institute of Technology (MIT),[36] and Stanford University,[37] project diversified revenue structures, driven by robust entrepreneurial capabilities and a commercialisation culture as key determinants of financial resilience, stability and sustainability. In addition, commercialisation enables universities to contribute directly to national development priorities.[38]

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in Higher Education: Ascertaining Causes and the Levels of Effect From Developing Economy Perspectives," *European Journal of Education* 60, no. 1 (2025): e70026; Gift Masaiti and Damtew Teferra, "Funding Research in African Higher Education," in *Research and Innovation in African Higher Education: Trends, Challenges and Prospects* (Springer, 2025), 27–57.

[31] Jerita J. Mwambi et al., "Analysis of Funding for Education and School Outcomes in Africa," *African Social and Financial Research Journal, E12448* 2 (2025); Ngenge Ransom Tanyu, "International Research Funding in African Higher Education: Risks and Benefits," *Int High Educ* 122 (2025): 9–10.

[32] United Nations Economic Commission for Africa, *Advancing Entrepreneurial Universities in Africa* (UNECA, 2023); Sixbert SANGWA and Placide Mutabazi, "Entrepreneurial University Finance: Evaluating ALU's Hybrid Funding Model for Fiscal Resilience in African Higher Education," *International Journal of Human Research and Social Science Studies* 02, no. 06 (June 30, 2025), https://doi.org/10.55677/ijhrsss/09-2025-Vol02I6.

[33] Tanyu, "International Research Funding in African Higher Education: Risks and Benefits."

[34] Naya Arifah Syihab, "Revenue Diversification and Financial Independence in Higher Education through an Analysis of the Australian National University's Funding Structure," *Journal of Advanced Research and Studies in Educational Management (JARSEM)* 2, no. 1 (2026): 59–70.

[35] Johanna Abdullah Jaafar et al., "Does Revenue Diversification Strategy Affect the Financial Sustainability of Malaysian Public Universities? A Panel Data Analysis," *Higher Education Policy* 36, no. 1 (March 19, 2023): 116–43, https://doi.org/10.1057/s41307-021-00247-9; Betty Kathure Kimathi and Anthony Mugetha Irungu, "Revenue Diversification on Financial Sustainability of Public Universities in Kenya," *Journal of Finance and Accounting* 4, no. 3 (2024): 31–41; Hasan Mukhibad et al., "Revenue Diversification and Financial Sustainability – Focus on Higher Education in Indonesia," *Journal of Applied Research in Higher Education*, November 20, 2025, 1–12, https://doi.org/10.1108/JARHE-11-2024-0678; Syihab, "Revenue Diversification and Financial Independence in Higher Education through an Analysis of the Australian National University's Funding Structure."

[36] Edward B Roberts and Charles E Eesley, "Entrepreneurial Impact: The Role of MIT," *Foundations and Trends in Entrepreneurship* 7, no. 1–2 (2011): 1–149.

[37] Weixin Liang et al., "Systematic Analysis of 50 Years of Stanford University Technology Transfer and Commercialization," *Patterns* 3, no. 9 (September 2022): 100584, https://doi.org/10.1016/j.patter.2022.100584.

[38] Ronald Jjagwe et al., "The Drivers and Barriers Influencing the Commercialization of Innovations at Research and Innovation

These entrepreneurial initiatives generate spillover effects that strengthen entire ecosystems. Strengthening commercialisation pathways enhances innovation capacity and creativity, reinforcing the university's role as a catalyst for entrepreneurship and problem-solving.[39] This process aligns with the entrepreneurship-university model, which emphasises knowledge mobilisation, technology transfer, and venture creation as crucial elements of its core institutional functions.

Social Transformation

Sustainable economic development in Africa will require significant social transformation in many sectors. In this study, social transformation is understood as a sustained process of structural change toward improving social relations, institutions, and power dynamics in ways that enhance equity, inclusion, and overall human well-being within a society.[40] Social transformation is fundamentally achieved through sustainable, market-linked ventures that empower communities while reinforcing societal legitimacy. UniCal's initiatives, such as the teaching hospital, microfinance bank, filling station, and secondary school, play a transformative role in society; they extend institutional resources beyond campus boundaries into surrounding communities. These investments address both socio-economic and structural challenges; for instance, cutting-edge foundational education, quality healthcare access, financial inclusion, and essential service delivery, specifically a functional filling station serving the University community and the public. Through these ventures, the University functions as an anchor institution that redistributes knowledge, services, and capital to society.

Another critical role centres around socio-economic development. With a substantial number of qualified staff employed at the Secondary School, University Teaching Hospital, and Microfinance Bank, among other establishments, UniCal's diversified revenue sources have contributed significantly to local job creation. This effort is targeted at addressing Africa's most distressing socio-economic challenges - rising unemployment and persistent poverty. The 2026 International Labour Organisation (ILO) report reveals that the majority of Africa's workforce, despite being classified as "employed", is engaged in informal, low-productivity activities.[41] As of 2024, the average unemployment rate in Africa stands at 7-9%, with an estimated 85% of employment on the continent being informal.[42] This unfortunate pattern illustrates that the African unemployment situation remains a major development challenge, further explaining why about 43% of the Sub-Saharan African population lives in extreme poverty.[43] The continent has the world's youngest population, with millions of young people entering the labour market each year, yet economies are often unable to absorb them into formal employment. Limited industrialisation, skills mismatches between education systems and labour market needs, and weak private-sector growth further intensify the problem.

According to Nnyanzi, Kilimani and Oryema, Bouraima et al. and Iwara, addressing the continent's compounding unemployment problems requires comprehensive strategies that combine education and skills development, economic diversification, industrial growth, and policies that support decent, sustainable employment, rather than short-term or survival-based work.[44] Higher

Institutions in Uganda: A Systemic, Infrastructural, and Financial Approach," *Journal of Innovation and Entrepreneurship* 13, no. 1 (October 22, 2024): 78, https://doi.org/10.1186/s13731-024-00435-y; Hamid R Jamali and Delneshin Danaei, "University-Industry Collaboration and Research Commercialization in Australia: A Review Article," *International Journal of Information Science and Management (IJISM)* 23, no. 3 (2025): 51–75.

[39] I. O. Abereijo and J. F. Obisanya, "A Pathway to Successful Commercialisation of Academic Research in Nigeria," in *Proceedings of the OAU Faculty of Technology International Conference*, 2019.

[40] Winnifred R. Louis and Cristina Jayme Montiel, "Social Movements and Social Transformation: Steps towards Understanding the Challenges and Breakthroughs of Social Change.," *Peace and Conflict: Journal of Peace Psychology* 24, no. 1 (February 2018): 3–9, https://doi.org/10.1037/pac0000309; H. D. Haas et al., "Social Transformation," 2020.

[41] ILO, *World Employment and Social Outlook* (International Labour Organization, 2015).

[42] International Labour Organization, " ILOSTAT Database: Unemployment Rate – Africa," 2026; World Bank, " March 2026 Global Poverty Update from the World Bank: New Data and Updated Poverty Numbers," World Bank Blogs, 2026, https://blogs.worldbank.org/en/opendata/march-2026-global-poverty-update-from-the-world-bank--new-data-a.

[43] World Bank, "Unemployment, Total (% of Total Labor Force) (Modeled ILO Estimate" (World Bank Open Data, 2026).

[44] John Bosco Nnyanzi, Nicholas Kilimani, and John Bosco Oryema, "Hysteresis in Youth Unemployment in Sub-Saharan Africa: Focus on Gender, Income, and Region," *The Journal of Developing Areas* 58, no. 2 (2024): 91–126; Mouhamed Bayane Bouraima et al., "A Multi-Criteria Decision-Making Framework for Addressing Youth Unemployment in Developing Countries: Pathways to

learning institutions on the continent are consistently called upon to play a critical role in achieving the goal. UniCal's social transformation model exemplifies how higher education institutions in Africa should extend their impact beyond campus boundaries, respond to the continent's call for inclusive development, and combat its unemployment challenges. Conceptualising universities in this direction, for instance, as anchor institutions that respond to gaps, extend their impact to surrounding communities, and channel their third mission efforts into long-term investment that aligns with the continent's socio-economic needs, will shape regional development.

Proposed African Entrepreneurial University Framework

Drawing on UniCal's entrepreneurial university strategies, which are closely aligned with Africa's socio-economic challenges and development priorities, it is imperative that other higher education institutions within the continent, adopting the three fundamental pillars (see Figure 2), similarly orient their strategic objectives toward addressing the same developmental imperatives.

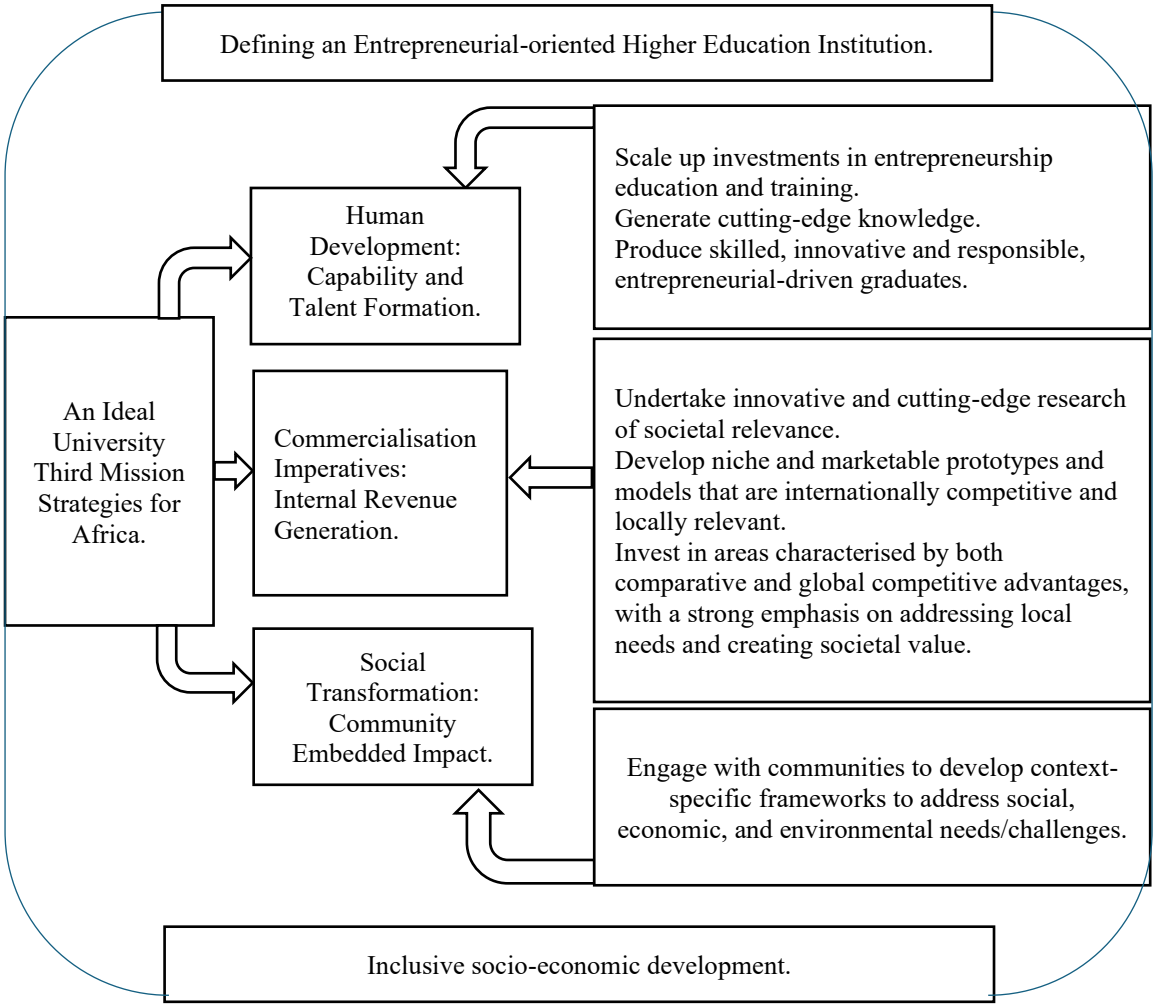


Figure 2: Proposed African entrepreneurial university framework drawn from UniCal

It is believed that such an approach would enhance the contribution of universities to socioeconomic transformation, human capital development, and sustainable continental growth. This shift, however, should be implemented with careful consideration to ensure that institutions of higher learning do not become excessively commercialised or operate primarily as business enterprises

Sustainable Solutions," *Journal of Intelligent Decision Making and Information Science*, 2025, 186–96; Iwara, "Graduate Employability in Africa: Reimagining Rural-Based Entrepreneurial University Paradigm."

competing within the formal and informal economic sectors. Rather, universities should remain committed to their fundamental mandate of advancing knowledge, fostering critical inquiry, promoting social responsibility, and serving the broader interests of society, while strategically advancing third mission imperatives.

Theoretical and policy implications

The study has significant policy implications for higher education institutions and policymakers in Africa and developing economies globally. Contributing to inclusive socioeconomic development, African universities, through their third mission framework, should emphasise human development, strategic investments in entrepreneurship education and training, cutting-edge knowledge generation, and the production of skilled, innovative, responsible, entrepreneurship-driven graduates. Commercialisation is equally imperative, specifically for internal revenue generation. This strategy will enable universities to efficiently advance and execute crucial developmental projects, regardless of external constraints. Commercialisation requires robust investments in cutting-edge research of societal relevance, the development of marketable prototypes and models that are internationally competitive and locally relevant, as well as investments in areas characterised by both comparative and global competitive advantages, with a strong emphasis on addressing local needs and creating societal value. Overall, the development process should be underpinned by social transformation, where universities engage with communities to develop context-specific frameworks to address social, economic, and environmental needs/challenges.

CONCLUSION

This narrative review, drawing on 77 publications, identifies three fundamental strategies underpinning the University of Calabar entrepreneurial HEIs concept: human development, commercialisation imperatives and social transformation. These strategies align with Africa's development priorities and directly address the continent's socio-economic challenges, therefore presenting a viable model for interpreting the concept in the African context.

UniCal's human development strategy fosters capabilities and talent formation in diverse ways. Delivered particularly through a compulsory entrepreneurship curriculum, a university-standard secondary school - uniquely positioned to prepare learners for a smoother post-secondary education- and a teaching hospital that provides cutting-edge research and training, the strategy remains a vital resource for a continent like Africa, where the majority of the youth, including university graduates, struggle with unemployment realities, characterised by limited industrialisation, skills mismatches, poor labour market readiness, and weak private-sector growth. This strategy demonstrates the competence and innovative capacity Africa needs to create jobs and drive inclusive economic growth amidst persistent socioeconomic challenges.

Strategic investments in areas of comparative and competitive advantages offer breadth. It leverages existing resources and capabilities to generate internal revenue and achieve sustainable growth, stability and efficiency, rather than wasting scarce resources entirely on non-conforming Western-driven commercialisation patterns or approaches. The University's diversified investments, for instance, petrol-filling stations, micro-finance banks, hotels, printing presses, and internationally standard high schools, reflect a deliberate strategy to reduce overreliance on public funding and achieve financial resilience.

In pursuit of human development and commercialisation mandates, these strategies collectively contribute to social transformation. When viewed alongside global and African examples, UniCal's third mission framework represents a holistic entrepreneurial university model. It integrates human development, revenue sustainability, and social responsibility in a manner consistent with leading international practices, while remaining grounded in the continent's local developmental imperatives. This balance demonstrates a key lesson from the University: a typical African entrepreneurial university aligns commercial viability with societal relevance and educational depth, rather than pursuing entrepreneurship as an isolated or purely market-driven objective.

Limitations and Directions for Future Research

As a conceptual study, the analysis synthesised published literature. As a result, it is imperative to undertake further empirical studies at the institutional level. This will validate and enrich the conclusions drawn. It is also recommended that the identified strategies be empirically examined across diverse African university contexts to establish their generalisability, effectiveness, and potential contribution to higher education development on the continent. This effort could conceive a robust, comprehensive and continental entrepreneurial university model.

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