

DIVERSIFYING UNIVERSITY INCOME MODELS BEYOND ACADEMIC REVENUE: GOVERNANCE, RISK PERCEPTION AND COMPARATIVE INSIGHTS

Anggi Mayang Sari¹, Dikky Indrawan, Asaduddin Abdullah, Muhammad Alwanrifqi Zuna

School of Business, IPB University
SB IPB Building, Jl. Pajajaran, Bogor 16151, Indonesia

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ABSTRACT

Background: Declining public funding, intensified competition, and changing student demographics have forced universities worldwide to seek alternative income sources beyond tuition fees, research grants, and government support.

Purpose: This study aims to identify and evaluate contemporary non-academic income models in higher education institutions through Resource-Based View (RBV) and the entrepreneurial university framework, with a focus on governance capacity and risk perception in strategic decision-making. The analysis explores strategies, enablers, and constraints shaping the diversification of university income streams across different institutional contexts.

Design/methodology/approach: A descriptive qualitative approach with content analysis was applied, examining secondary data from 50 universities across five continents, selected based on data availability, institutional ranking, and regional representation. Data sources included institutional reports, audited financial statements, global ranking databases, and peer-reviewed literature.

Findings/Result: Institutions with strong governance systems and higher strategic risk tolerance are better positioned to leverage unique assets such as large endowments, intellectual property portfolios, and real estate holdings for substantial revenue generation. Other institutions rely more on faculty expertise, sectoral partnerships, and philanthropic innovations to fund scholarships, research, and infrastructure development.

Conclusion: Key success factors are asset uniqueness, governance capacity, and market alignment, while challenges include regulation, mission drift, and limited resources. The study suggests universities enhance governance autonomy, establish professional asset and IP management, and align diversification with institutional missions. Resource-constrained institutions should prioritize partnerships, community-based revenue, and transparent financial management to build trust. Financially mature institutions should expand sustainable investments and leverage global alumni networks to strengthen resilience.

Originality/value (State of the art): This research contributes to the discourse on financial sustainability in higher education by integrating governance and risk perception into the analysis of non-academic income diversification that address capacity gaps and market opportunities across diverse institutional settings.

Keywords: behavioral finance, business models, entrepreneurial university, financial sustainability, governance, non-academic revenue, risk perception

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¹Corresponding author:

Email: anggimayangsari@apps.ipb.ac.id

INTRODUCTION

Higher education institutions (HEIs) are central to society through transferring knowledge, fostering innovation, and contributing to economic growth. Traditionally, universities have relied on three primary income sources; tuition fees, government funding, and research grants (Cerf, 2023). In many developed countries, public funding has historically been the dominant source, while universities in developing nations have depended more heavily on tuition revenue and inconsistent state support, with limited access to alternative funding channels (Kim et al. 2019; Mpofu, 2023).

Over the past two decades, this funding model has faced significant pressures. Global economic downturns, tighter public budgets, demographic shifts influencing enrollment trends, and increasing expectations for universities to contribute to lifelong learning and regional innovation have strained institutional finances (Brown and Carasso, 2013). In developed economies, stagnating or declining public funding has prompted tuition increases and diversification strategies. Hence, chronic underfunding continues to hinder institutional growth and capacity-building (Mcgettigan, 2014; Mgaiwa, 2018; Mbhalati, 2024).

Dealt with this issue, diversifying income sources has become an urgent necessity. A broader revenue base reduces fiscal vulnerability, enhances institutional autonomy, and supports investments in strategic priorities. The concept of the “entrepreneurial university” (Clark, 1998; Mok, 2013; Gianiodis and Meek, 2019) reflects this paradigm shift, with universities worldwide exploring non-academic income streams such as real estate development, auxiliary enterprises, executive education, intellectual property commercialization, spin-off ventures, and endowment-based investments.

Such strategic transformations are influenced not only by market conditions but also by the decision-making biases of institutional leaders. Prospect Theory (Kahneman & Tversky, 2013) suggests that declining public funding can trigger risk-seeking behavior to avoid perceived losses, leading to bolder entrepreneurial initiatives. Conversely, status quo bias and loss aversion may delay diversification despite mounting financial risks. Herd behavior is also relevant, as universities may replicate peer institutions’ revenue

strategies without adequate assessment of contextual suitability, potentially increasing the risk of mission drift and strategic misalignment.

Existing literature emphasizes the importance of industry partnerships, commercialization of research outputs, and hybrid governance structures that balance academic and commercial imperatives (Rossoni et al. 2023; Berman, 2008; Berggren, 2017). Scholars such as Jongbloed (2015) and Salmi (2009) highlight that financial diversification is crucial for reducing fiscal vulnerability and enhancing institutional independence. Furthermore, effective income diversification requires hybrid governance structures that blend academic and commercial rationalities (Marginson & Considine, 2000; Pekkola & Kivistö, 2016).

However, research gaps remain. Many studies focus on isolated case examples or specific income models without offering a comparative framework to assess feasibility, scalability, and adaptability across contexts. Furthermore, the long-term implications of income diversification for academic integrity, equity, and governance remain underexplored.

Addressing these gaps, this study aims to: (1) Map and categorize global non-academic income models adopted by universities, (2) Integrate strategic management and behavioral finance frameworks to identify enablers and barriers to implementation, (3) Analyze institutional and environmental conditions that influence the success of diversification strategies, (4) Evaluate the implications of income diversification for academic values, governance, and long-term sustainability.

To achieve these objectives, this paper employs a qualitative approach using comparative analysis of secondary data from diverse geographic and institutional contexts. By linking strategic management theories with behavioral finance perspectives, this study offers both theoretical insights and practical guidance for policymakers, university leaders, and scholars navigating the evolving financial landscape of higher education.

METHODS

This study adopts an integrated theoretical and methodological approach, combining the Resource-Based View (RBV) of the firm (Barney 1991) and

the Entrepreneurial University model (Clark, 1998; Etzkowitz, 2000) to examine income diversification strategies in higher education institutions (HEIs). The RBV posits that sustainable competitive advantage derives from the strategic deployment of internal resources that are valuable, rare, inimitable, and embedded within organizational processes. Applied to universities, these resources include physical infrastructure, research outputs, faculty expertise, brand reputation, alumni networks, and intellectual property, which collectively underpin long-term financial sustainability. Complementing this, the Entrepreneurial University framework emphasizes the transformation of universities through the development of third mission activities such as commercial ventures, industry partnerships, and community engagement initiatives. Entrepreneurial universities are characterized by a strengthened steering core, a diversified funding base, an integrated academic culture, and an expanded development periphery. Integrating these perspectives enables a holistic analysis of how universities leverage internal resources to generate non-academic income while maintaining alignment with their academic missions.

The research employs a descriptive qualitative design with a comparative, multi-country scope. The sample comprises 50 universities from North America, Europe, Asia, Oceania, and Africa, selected through purposive sampling based on the availability of at least three consecutive fiscal years of financial data, enrollment exceeding 10,000 students, engagement in non-academic income generation, and geographic diversity to capture both developed and developing country contexts. Data were collected from secondary sources, including institutional annual reports, audited financial statements, strategic plans, and global ranking databases such as Times Higher Education, QS, and U-Multirank. Additional contextual information was obtained from governmental and international agency reports (OECD, UNESCO, World Bank) as well as peer-reviewed literature on higher education finance and management. All financial and contextual data were extracted using a standardized template capturing revenue composition, institutional characteristics, and external environmental conditions.

The analysis followed Mayring's (2000) qualitative content analysis using NVivo software and proceeded in three stages. First, thematic coding categorized income-generating activities into six predefined

groups: real estate, commercial services, research commercialization and intellectual property, continuing and executive education, industry partnerships and consultancy, and investment-based income. Second, these activities were strategically mapped against the RBV and Entrepreneurial University dimensions to assess resource dependency, innovation potential, and sustainability. Third, a cross-case comparison was conducted to identify regional patterns, contextual enablers, and structural barriers. In this stage, particular attention was paid to behavioral finance dimensions influencing institutional decision-making, such as risk perception, status quo bias, and herd behavior, which may affect the adoption and scale of income diversification strategies.

To ensure the robustness of findings, the study employed reliability and validation measures. Triangulation was applied by cross-verifying revenue data with at least two independent sources wherever possible. An audit trail was maintained for all coding decisions, source documents, and analytical memos to support transparency and replicability.

RESULTS

This section presents the results of the qualitative content analysis, mapping university income models based on the RBV and Entrepreneurial University frameworks. The findings are categorized into six primary types of non-academic revenue streams: (1) real estate and asset utilization, (2) commercial services, (3) research commercialization and intellectual property, (4) continuing education and training, (5) partnerships and alliances, and (6) investment-based income.

Real Estate and Asset Utilization

Many universities have optimized the use of their physical assets by leasing, renting, or developing commercial properties. Examples include retail spaces on campus, business parks, and hotel and conference centers. The University of British Columbia (UBC) generates income through property development in the University Endowment Lands, contributing over 25% of its annual revenue outside of tuition and grants. The University of British Columbia (Canada) leveraged its endowment lands through long-term lease agreements with residential and commercial developers, generating substantial annual income beyond academic

operations. Likewise, the University of Manchester (UK) transformed redundant industrial spaces into a science park hub. In the UK, the University of Cambridge leases land and facilities for science parks and office complexes. Summarizes key dimensions of real estate utilization strategies across universities from five continents in Table 1.

This comparison demonstrates that successful real estate strategies align with institutional capacity, urban context, and policy frameworks. Prior studies suggest that universities leveraging real estate through professional asset management can enhance institutional resilience and fulfill their missions (Bilodeau et al. 2014; Hebb et al. 2010). According to Resource-Based View (RBV) theory, land is a rare and institution-specific asset that can confer strategic advantage when effectively deployed. Entrepreneurial universities that integrate real estate into long-term financial planning tend to achieve higher financial returns and stronger stakeholder engagement (Zahra, 2021; Lubis, 2022).

Mapped through an RBV perspective this income model demonstrates universities' capacity to transform underutilized tangible assets into transformative resources, reinforcing their steering core as described in the Entrepreneurial University framework. However, some research warns that excessive commercialization such as aggressive real estate development can lead to mission drift, where financial goals undermine

academic identity and integrity (Wang et al. 2021; Chubb and Watermeyer, 2016). Additionally, some scholars argue that such strategies may exacerbate inequalities between well-endowed and resource-constrained institutions, undermining equity and public mission (Kelchen et al. 2024; Hagood, 2019).

Commercial Services and Auxiliary Enterprises

Campus-based commercial services ranging from cafeterias, bookstores, and printing shops to fitness centers and event hosting formed a steady income stream. American public universities, such as the University of Florida and Ohio State University, earn 10–20% of their revenue through auxiliary services. In Singapore, NUS collaborates with private vendors for food courts and branded outlets within its innovation district. The National University of Singapore (NUS) operates food courts and retail chains on campus through public-private partnerships.

Revenue from auxiliary enterprises is typically reinvested to support student services or infrastructure. These operations require entrepreneurial governance, professional service delivery standards, and responsiveness to campus community needs. Their success is enhanced when aligned with institutional branding and student experience goals. Many U.S. public universities earn up to 15% of revenue from auxiliary services, according to NACUBO. Commercial services and auxiliary enterprises in Table 2.

Table 1. Real estate and asset utilization

Continent	Real Estate Strategy Description	Key Partners	Strategic Objective
North America	Long-term land leases, mixed-use developments in urban areas, innovation hubs linked to health and tech sectors.	Private developers, city governments, corporate partners, investors.	Sustainable funding, urban revitalization, innovation and tech transfer, health service expansion.
Europe	Redevelopment of industrial zones into science parks, smart city-campus integration, property funds to support university IP.	Local governments, regional clusters, private equity, EU funds.	Regional economic growth, innovation enhancement, sustainable urban-university models.
Asia	Development of innovation districts integrating academic, commercial, and residential spaces; creation of major science parks.	Government agencies, private sector, tech firms, Ministry of Education.	Land optimization, investment attraction, national innovation leadership, academia-industry linkage.
Africa	Heritage site commercialization, privatization of student housing, development of commercial hubs and event spaces.	Tourism operators, real estate investors, banks, event operators.	Cultural preservation, financial independence, community engagement, fundraising.
Oceania	Commercial partnerships for property and tech precincts, privatization of student accommodations, strategic leasing in CBDs.	Developers, city councils, infrastructure partners, investors.	Innovation corridor anchoring, service expansion, revenue generation through commercial leasing.

Table 2. Commercial services and auxiliary enterprises

Continent	Commercial Services Description	Key Features	Strategic Objective
North America	Management of dining, parking, housing, bookstores, sports facilities, and retail spaces.	Integrated enterprise units, athletics-linked revenues, long-term leases.	Fund student services, boost campus engagement, ensure stable operational revenues.
Europe	Operation of hotels, gift shops, cafés, guesthouses, and commercialization of academic works.	Commercial branding, research cross-subsidies, service diversification.	Support institutional branding, promote outreach, modernize services.
Asia	Management of bookstores, clinics, food courts, student housing, and campus retail services.	Third-party management, hybrid management models, revenue-sharing partnerships.	Balance quality and scale, serve campus community, fund modernization.
Africa	Operation of conference venues, campus retail, accommodation, and public facilities.	Contractual management, low-capital revenue streams, community-oriented operations.	Expand partnerships, sustain core services, ensure affordability.
Oceania	Retail and catering services, student housing, event management, and property rentals.	Corporatized units, direct and franchised services, university subsidiaries.	Maximize non-tuition revenue, enhance service excellence, achieve financial autonomy.

This comparative analysis reveals that auxiliary enterprises serve both financial and community-building functions. Institutions with corporatized or semi-autonomous units tend to achieve greater efficiency, while universities in resource-constrained settings rely on multifunctional, low-capital services. Alignment with strategic planning and institutional branding plays a key role in maximizing returns and sustaining relevance (Syed et al. 2022; Quimbo and Sulabo, 2013; Barringer and Riffe, 2018; Wang, 2020).

Research Commercialization and Intellectual Property (IP)

Universities that actively support research commercialization reap substantial benefits through licensing, patent royalties, and university spin-offs. U.S. institutions dominate this category. Stanford University, for instance, generated over USD 100 million in 2022 from patent royalties and equity in start-ups like Google and Genentech. This includes licensing of patents, royalties from commercialized innovations, and the creation of university spin-offs. The analysis indicates that robust internal structures such as dedicated tech transfer offices (TTOs), seed funding arms, and legal support teams correlate with higher IP income. The University of Tokyo's CASTI exemplifies an Asian model combining research development, IP management, and commercialization pathways. Universities that strategically invest in research capacity and innovation ecosystems yield higher long-term returns. Stanford University earned more than USD 100 million from IP in 2022, largely from biotech and engineering patents. The University

of Tokyo has an integrated tech transfer office (TLO) that manages more than 50 spin-offs annually. The compares research commercialization and IP practices across universities from five continents in Table 3.

This global comparison reveals how university IP strategies are shaped by national ecosystems, available funding, and institutional culture. While mature institutions benefit from historic networks and large research budgets, emerging universities in developing contexts increasingly leverage IP for social innovation and public policy reform (Yonezawa, 2023; Vimalnath et al. 2022). Under RBV, intellectual property is an intangible resource with high value, uniqueness, and replicability challenges. Institutions with formal IP offices and innovation hubs tend to perform better in this domain (Shishakly et al. 2024).

Continuing Education and Executive Training

Universities have capitalized on demand for lifelong learning, offering short courses, online certifications, and executive education. Non-degree training, certification courses, and customized executive programs have emerged as profitable and mission-aligned revenue models. Institutions like INSEAD, Harvard Business School, and the University of Cape Town Graduate School of Business report multi-million-dollar surpluses from executive education. Harvard Business School Online generated USD 12 million in its first year alone. Table 4 provides a global comparison of executive education and continuing learning models across universities from five continents.

Table 3. Research commercialization and intellectual property (IP)

Continent	Commercialization Focus	Infrastructure & Support	Outcome Highlights
North America	Focus on biotech, computing, engineering, advanced materials, AI, and energy sectors.	Strong technology licensing offices, startup accelerators, and research infrastructure.	High IP income, creation of multiple unicorns, extensive global patent portfolios.
Europe	Emphasis on pharmaceuticals, IT, medical devices, biotech, agriculture, and microelectronics.	Specialized commercialization offices and strong EU-industry collaborations.	Numerous spin-offs, strong licensing activities, significant patent output.
Asia	Concentration on engineering, biomedical sciences, renewable energy, electronics, and AI.	Innovation platforms, technology licensing offices, university-based science parks.	High volume of spin-offs, notable patent portfolios, leadership in national innovation.
Africa	Focus on health sciences, agriculture, social innovation, and public health.	Innovation hubs and research commercialization offices targeting local development.	Regional leadership in IP filings, strong social and policy-driven innovations.
Oceania	Specialization in biotech, agriculture, clean tech, education tech, renewable energy, and cybersecurity.	Innovation districts, commercial arms, and knowledge exchange programs.	Major global contributions like Gardasil vaccine, strategic VC funding, expanding IP pipelines.

Table 4. Continuing education and executive training

Continent	Program Focus	Delivery Model	Revenue and Impact
North America	Focus on business leadership, finance, strategy, innovation, tech entrepreneurship, and public sector development.	Online, hybrid, certificate programs, intensive modules, customized corporate formats.	High revenue generation, global enrollment, career transitions, corporate partnerships.
Europe	International business, digital transformation, strategic leadership, governance, entrepreneurship.	Executive campuses, online units, blended formats, scalable online models.	Surplus reinvestment into research, enhanced brand recognition, expanded global reach.
Asia	Agri-business, fintech, smart manufacturing, executive development, business strategy, public administration.	On-campus, modular, live sessions, digital programs, government partnerships.	Capacity building for public sectors, leadership training prominence, partnerships with corporations and ministries.
Africa	Emerging market leadership, governance, entrepreneurship, agricultural development, youth innovation.	Blended programs, short certifications, weekend schools, government-sponsored sessions.	Surplus generation, community outreach, working professional support, rural development.
Oceania	Executive education in governance, healthcare, business analytics, agri-leadership, Maori leadership.	Professional learning centers, business schools, industry engagement, certificate-based pathways.	Diversified funding sources, increased access to professional learning, alignment with national goals.

University initiatives that address broader needs, such as civil service capacity or rural leadership, demonstrate relevance beyond revenue. Partnerships with government and industry enhance scalability and financial sustainability. IPB University in Indonesia operates a postgraduate executive education center targeting government and private sector professionals. These programs utilize existing faculty expertise (a core resource) and align with the university's mission while generating significant revenue (Malhotra et al. 2023; Asif et al. 2021).

Industry Partnerships and Strategic Alliances

Joint ventures with the private sector and government agencies play a pivotal role in diversifying income. Universities collaborate with businesses for research, workforce development, joint labs, and infrastructure funding. ETH Zurich partners with companies like Siemens and Roche for research and facility development. Universitas Gadjah Mada (UGM) in Indonesia works with banks and agriculture firms to fund and co-manage field-based learning centers. Such partnerships illustrate the Entrepreneurial University's

periphery expansion, increasing innovation diffusion and external funding. These relationships reduce dependency on volatile state budgets and enhance student employability through aligned curricula. The Table 5 compares how universities across five continents engage in industry partnerships and alliances.

These comparisons illustrate that institutional partnerships can drive revenue and relevance when embedded within regional and national innovation systems. Universities leveraging these alliances often report increased graduate employability, enhanced research competitiveness, and new funding streams through innovation consortia or service contracts (Groulx et al. 2020; Corsino and Torrisi, 2023; Villiers et al. 2025).

Investment-Based Income

Some universities manage endowments, equity investments, and venture funds to support their operations. Harvard University's endowment reached over USD 50 billion in 2023, with annual income contributing nearly 35% of its budget. The University of Melbourne has invested in venture capital to support spin-offs and tech accelerators. Although limited to financially mature institutions, this model highlights the potential of financial asset management as a strategic capability. Table 6 compares how universities across five continents manage investment-based income models.

These investment-based models reflect the maturation of university financial governance. Institutions with robust financial oversight, professional fund management, and diversified asset strategies can significantly reduce dependence on volatile tuition and public funding while enabling innovation, inclusion, and long-term mission sustainability. Universities worldwide are progressively moving towards investment-based models that foster financial independence while enabling mission sustainability. This shift involves a delicate balance between revenue diversification, sustainability initiatives, and strategic positioning within global and national contexts (Parker, 2012; Sen et al. 2021).

Regional and Institutional Trends

Analysis revealed that income diversification varies significantly by geography; North America has strong focus on IP commercialization and investment income, supported by robust legal and funding infrastructure. Europe emphasis on public-private partnerships and property ventures, especially in urban campuses. Asia has rapid growth in executive education and real estate utilization, especially in Singapore, China, and Indonesia. Africa has limited non-academic income streams due to infrastructure gaps, though some institutions use consultancy and short courses. These variations reflect institutional maturity, autonomy levels, and national policy environments. The comparison below outlines diverse institutional responses (Table 7).

Table 5. Industry partnerships and strategic alliances

Continent	Partnership Focus	Key Industry/Government Partners	Strategic Impact
North America	Partnerships in biotech innovation, auto-industry R&D, sustainable development, AI, and urban planning.	Major tech firms, automotive companies, state agencies, municipal governments.	Start-up ecosystem growth, R&D funding, experiential learning, public-private integrated solutions.
Europe	Focus on life sciences, smart cities, health data analytics, climate science, and infrastructure innovation.	Global corporations, EU agencies, national ministries, healthcare systems.	Creation of research hubs, innovation showcases, public health advancements, policy influence.
Asia	Partnerships in agriculture, fintech, Industry 4.0, biomedical innovation, engineering, AI, green technology.	Leading banks, industrial firms, tech giants, government research agencies.	Field application schools, executive immersion, national competitiveness, strategic innovation leadership.
Africa	Innovation in mining, agriculture, health systems, public health, and entrepreneurship.	Multinational companies, WHO, local governments, tech firms.	Community-based research, rural tech solutions, vaccine and health interventions, early career pipelines.
Oceania	Focus on agri-tech, clean energy, ed-tech, health tech, urban sustainability, mining R&D, marine sciences.	Cross-sector industry leaders, governmental agencies, city administrations.	National R&D strategy support, curriculum alignment, smart city initiatives, value chain innovation.

Table 6. Investment-based income

Continent	Investment Focus	Financial Instruments	Strategic Objective
North America	Focus on endowment growth, venture funds in tech and life sciences, and diversified asset management.	Equities, bonds, private equity, venture capital, real assets.	Sustain long-term operations, fund scholarships and research, accelerate commercialization.
Europe	Emphasis on endowment management, tech transfer investments, venture capital for academic spin-offs.	Global equities, hedge funds, public-private innovation funds, institutional VC.	Generate unrestricted income, foster research commercialization, monetize intellectual property.
Asia	Investments in technology transfer, start-up ecosystem building, and deep-tech innovation hubs.	Venture capital platforms, seed funding, government co-investments.	Expand national IP portfolios, support start-up ecosystems, advance frontier research.
Africa	Focus on endowments, entrepreneurship funding, social innovation investment.	Regional partnerships, development banks, real estate, mission-driven funds.	Support student and community entrepreneurship, reduce tuition reliance, promote social tech solutions.
Oceania	Venture support for accelerators, green bonds for sustainability, biotech fund partnerships.	University-managed VC, ESG funds, royalty-based investment vehicles, early-stage syndicates.	Diversify income sources, fund sustainability projects, boost inclusive economic development.

Table 7. Regional and institutional trends

Continent	Notable Diversification Model	Policy/Environment Drivers	Institutional Maturity Level
North America	Focus on endowment growth, IP commercialization, real estate, venture funding, urban redevelopment, auxiliary services.	Strong philanthropic traditions, semi-public governance, urban expansion policies, flexible industry linkages.	Very high to high institutional maturity.
Europe	Emphasis on science park ventures, PPPs for circular economy and smart cities, campus commercialization.	Academic capitalism, EU innovation funding, urban planning integration, regional cluster policies.	Very high to medium-high maturity levels.
Asia	Focus on spin-offs, real estate development, executive education, professional training, IP management.	State-driven innovation ecosystems, centralized national strategies, sectoral ministries, education reforms.	Very high to medium maturity.
Africa	Short courses, endowment growth, heritage rentals, local entrepreneurship, consultancies.	Legacy infrastructures, innovation gaps, limited autonomy, informal sector collaborations.	Medium to low-medium institutional maturity.

This comparative insight reinforces the critical role of local context in shaping income diversification strategy. While globally leading institutions often combine several models, emerging universities can selectively build capacity in alignment with national development agendas and regional demand. The findings related to Notable Diversification Models illustrate a strategic variety of approaches across continents. North American institutions such as Harvard and MIT leverage long-standing endowments, IP portfolios, and entrepreneurial ecosystems to drive substantial revenue outside of tuition. European universities often emphasize science park development, public-private partnerships, and EU-aligned commercialization of research. In Asia, executive education and real estate development dominate diversification strategies due to market demand and state-supported innovation. African

institutions focus on short-term consulting, social innovation, and local enterprise, often constrained by infrastructure and capital access. In Oceania, a blend of government-linked innovation hubs and sustainability-driven investments supports a balanced approach.

Policy and environmental drivers play a significant role in shaping institutional strategies. Universities in countries with strong legal frameworks for IP protection, mature capital markets, and institutional autonomy such as the United States, Switzerland, and Australia tend to develop more diverse and capital-intensive models (Lowe et al. 2019; Khan et al. 2025). In contrast, institutions in regions with centralized education policies or weaker legal environments often rely on government-led projects or donor-supported initiatives. Asian countries, particularly China and

Singapore, benefit from targeted national strategies that promote university-industry integration. African universities often depend on international development aid and local government collaborations, reflecting their more constrained policy ecosystems (Ren and Liu 2021).

When examining Institutional Maturity Levels, a clear pattern emerges. Very mature institutions typically top-tier research universities demonstrate complex, multi-stream income portfolios rooted in decades of governance, philanthropy, and strategic planning. Mid-level institutions often pursue niche strategies aligned with regional strengths or societal needs, such as agriculture in Indonesia or public health in Ghana. Emerging institutions may start with service-based models or donor-funded partnerships as steppingstones toward more autonomous, diversified financial structures. This maturity spectrum highlights that while best practices can be adapted, successful models must align with the institution's developmental stage, legal context, and strategic goals.

Mapping Against Theoretical Frameworks

Using the RBV approach, the most successful models (e.g., IP, property) hinge on the institution's ability to leverage rare and valuable assets. Entrepreneurial University elements are strongest where governance structures support income generation through integrated strategies, stakeholder engagement, and mission coherence. Institutions that failed to develop diversified income models often lacked enabling conditions such as institutional autonomy, strategic planning, or resource management capacity. Conversely, successful cases demonstrated synergy between mission, market demand, and institutional capabilities. The results affirm that income diversification is viable and beneficial but depends significantly on strategic alignment, leadership, and institutional readiness. Table 8, comparative analysis illustrates how universities previously discussed reflect these theoretical principles across five continents.

This comparative framework highlights that while RBV identifies key institutional assets, the Entrepreneurial University model helps explain how governance structures and leadership translate those assets into income. Institutions that demonstrate both dimensions valuable assets and enabling governance are more likely to achieve sustainable and diversified income strategies.

This study also identified the multidimensionality of income diversification in higher education institutions and explores how internal and external enablers shape non-academic revenue generation. The comparative review highlights that institutional strategies are deeply influenced by the maturity of the organization, national regulatory frameworks, and proximity to economic clusters or innovation ecosystems. For instance, institutions such as Harvard, MIT, and Oxford are able to leverage their brand, research intensity, and existing infrastructure to diversify into high-yield financial instruments and intellectual property markets. In contrast, universities in emerging economies, like IPB University and Makerere University, focus on training services, consultancy, and community-aligned development programs, illustrating an adaptive use of local relevance as a core strategic advantage (Hoskisson et al. 2000; Mogaji and Jain, 2020).

The RBV framework was instrumental in understanding how rare, valuable, and inimitable assets such as land, endowments, intellectual capital, and stakeholder networks are leveraged for financial resilience. Entrepreneurial University theory provided a complementary lens to interpret how institutional leadership, strategic orientation, and policy alignment interact to expand university functions beyond academia. The synergy between these theories underscores that asset possession alone is not sufficient; governance structures, incentive mechanisms, and stakeholder integration are essential to effectively operationalize these resources.

Managerial Implications

This study provides several managerial implications for university leaders in managing and optimizing income sources. First, universities must balance revenue orientation with their social mission and institutional capacity. This requires a clear differentiation strategy across academic programs, research, and external services, ensuring that financial goals are aligned with broader reputational and societal relevance. University management also should establish transparent and accountable governance frameworks, particularly in the use of public funds and the commercialization of services. Such transparency not only strengthens stakeholder trust but also reinforces long-term sustainability through social legitimacy. Another managerial implication that income diversification is a strategic necessity. Universities cannot rely on a single

source of revenue but must expand their business models through industry partnerships, applied research collaboration, and intellectual property utilization. Diversification should also be complemented by risk management mechanisms to safeguard financial stability.

The results also highlight implications of the importance of building internal capacity, especially by enhancing faculty and staff competencies and strengthening administrative systems. Investments in human resources and infrastructure will determine the effectiveness of the university in delivering both financial and social value. Finally, universities should foster an entrepreneurial orientation that is consistent with their educational core values. Innovation in learning models, applied research, and public services can create new revenue streams without undermining academic integrity. Entrepreneurial orientation, therefore, should not be reduced to mere commercialization, but reframed as value creation that benefits society, industry, and the nation.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study examined the growing necessity for universities to diversify their income beyond traditional academic sources such as tuition fees and government funding. Through a theoretical lens combining the Resource-Based View (RBV) and the Entrepreneurial University framework, we explored how institutions strategically utilize tangible and intangible assets to generate non-academic revenue. A systematic review of secondary data revealed six major income streams: real estate development, commercial services, research commercialization and IP, continuing education, strategic partnerships, and investment-based income. These models demonstrate varied levels of maturity, scalability, and regional adaptation across global higher education institutions.

The findings suggest that while income diversification is increasingly critical for long-term financial sustainability, it must be pursued in alignment with institutional missions and academic values. Universities with adaptive governance structures, entrepreneurial leadership, and robust stakeholder networks are better equipped to navigate and benefit from diversified

financial strategies. Real estate ventures and executive education are particularly prominent among institutions with advanced infrastructure and market access. However, challenges remain, especially in developing contexts where regulatory and institutional constraints limit innovation. Furthermore, the study identifies tensions that arise when commercial imperatives intersect with academic missions. These include ethical considerations, risks of mission drift, and the marginalization of less market-oriented disciplines. Therefore, income diversification strategies must be supported by clear ethical guidelines, stakeholder consultation, and continuous impact assessment. In conclusion, while there is no universal model for successful income diversification, universities can learn from global best practices and adapt them to their specific contexts. With careful planning, transparent governance, and a commitment to academic integrity, non-academic income can significantly enhance the financial resilience and societal contributions of higher education institutions.

Recommendations

Our findings suggest that policymakers and university leaders must develop tailored strategies based on institutional strengths and environmental opportunities. There is no one-size-fits-all model for income diversification. Effective strategies require alignment with institutional mission, stakeholder engagement, and ongoing evaluation mechanisms. Governments can support diversification by creating enabling regulatory frameworks, offering seed funding for university ventures, and encouraging public-private partnerships. Institutions, on the other hand, must build internal capacities such as professional management teams, legal expertise for IP, and alumni networks to pursue these opportunities effectively.

Future studies should explore the long-term impacts of income diversification on academic quality, institutional autonomy, and equity. Longitudinal research could track how new revenue models evolve over time and what trade-offs universities make in the process. Comparative studies between institutions in high-income and low-income countries could also reveal systemic enablers and inhibitors. There is also a need for more granular analysis of specific income models, such as the performance metrics of university spin-offs or the return on investment from executive training programs. Mixed-methods approaches that integrate

quantitative financial data with qualitative insights from stakeholders would offer a holistic understanding.

This study relies on qualitative assessments and secondary data analysis, which introduces inherent limitations. First, the accuracy and comparability of institutional data vary significantly across geographic and regulatory contexts. Some universities disclose detailed breakdowns of their income sources, while others offer only aggregated financial data. This discrepancy may affect the precision of comparative insights. Moreover, financial terminology and categorization differ between institutions, making standardization a challenge.

Second, the study does not include interviews or surveys with university administrators, which could have enriched the findings with firsthand perspectives. While secondary sources offer breadth, they lack depth in explaining the rationale behind institutional choices or the internal challenges faced during implementation. Future research should incorporate primary data collection to explore the lived experiences of academic and administrative leaders engaged in income diversification.

The findings align with prior research emphasizing the entrepreneurial turn in higher education (Clark 1998; Etzkowitz 2000). Most studies underscore the role of leadership, institutional autonomy, and external engagement in fostering income-generating innovations. Our results corroborate this by showing that universities with greater governance flexibility and robust external networks are better positioned to diversify income. Moreover, the dominance of property development, executive education, and industry partnerships as viable revenue streams is well supported in the literature. For instance, Shattock (2005) and Jongbloed (2015) emphasized that non-tuition revenue is increasingly crucial for sustainability and innovation.

Despite these consistencies, our study also identifies several contradictions. Not all income diversification strategies yield uniformly positive outcomes. For example, while executive education is profitable, it can create tensions over faculty workload and equity of access. Similarly, real estate ventures may be lucrative but raise ethical concerns about commercialization and mission drift. Additionally, some institutions in developing contexts face structural constraints such

as limited institutional autonomy or underdeveloped capital markets that inhibit their ability to replicate Western models. Thus, while global trends exist, their local application is shaped by national policy, infrastructure, and institutional capacity.

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