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Rethinking Funding Models
for Higher Education: Global
Insights and Future
Directions

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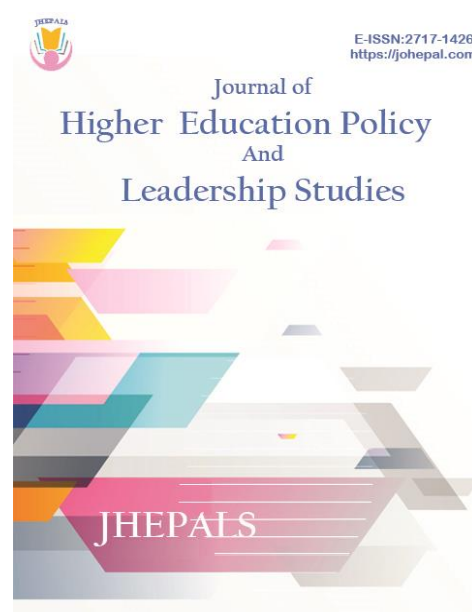
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Rethinking Funding Models for Higher Education: Global Insights and Future Directions

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Abstract

Funding for higher education critically shapes learning access, institutional capacity, and societal outcomes. As global demand rises and economic pressures intensify, traditional state-based funding is increasingly complemented—or replaced—by alternative mechanisms. This review analyzes diverse funding practices in public subsidies, private investment, philanthropic giving, religious endowments, community-based contributions, and hybrid models across varied national contexts. Using a systematic literature review of 48 studies published between 2015 and early 2025, eight thematic areas are identified, highlighting how policy frameworks, economic constraints, and sociocultural factors drive funding outcomes. Diversification strategies—such as capital campaigns, crowdfunding, and community partnerships—are noted for enhancing resilience, though disparities persist between institutions with strong versus limited fundraising capacity. The analysis underscores the complex interplay of governance, equity, and innovation in shaping sustainable financing. These findings inform policymakers, institutional leaders, and researchers aiming to design equitable, adaptable funding systems capable of meeting the challenges of a competitive, resource-constrained global higher education landscape.

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Introduction

Funding for higher education is a critical issue affecting institutions around the globe, shaped by a variety of economic, social, and political factors. As universities work hard to deliver quality education across rising costs, their strategies for securing funding are evolving. It's crucial to understand these funding mechanisms to appreciate the complexities of today's educational landscape, especially as schools attempt to meet the diverse needs of their students while grappling with financial challenges (Teichler, 2018).

Today, many institutions are turning to a mix of funding sources. This includes public money from governments, private donations, and innovative approaches like crowdfunding (Chenghua et al., 2023; Horta et al., 2022; Teichler, 2018). Researchers suggest that adopting a diversified funding model can help universities reduce the risks that come with relying solely on government support (Liu et al., 2020; Mok, 2018; Barringer, 2016). For example, in Russia, universities have funding structures similar to those in wealthier nations, but they receive significantly less overall—about three times lower than the average funding levels in OECD countries (Abankina et al., 2017). This stark disparity underscores the challenges faced by institutions that heavily depend on public funding. This particularly happens during economic downturns when budget cuts can dramatically affect the quality and accessibility of education (Nikou, 2025; Rosinger et al., 2022; Perkins & Neumayer, 2014).

Moreover, relying on a single source of funding can create financial instability, which ultimately impacts the quality of education and student services. A study by Perkins and Neumayer (2014) found that universities with a more diversified funding base are better prepared to handle economic shocks. This need for diversification is reflected in the experiences of institutions around the world, where innovative funding strategies have emerged in response to financial pressures (Kivistö & Uljens, 2024). This is why, in countries like Australia and Canada, universities are increasingly forming partnerships with private sectors and international organizations to boost their funding capabilities (Lang, 2022; Marginson, 2016).

Continuing this trend, innovative funding models like crowdfunding are emerging as solutions to traditional funding challenges. Horta et al. (2022) highlight how UK universities are using crowdfunding to raise additional funds, particularly in financially strained institutions. This shift toward community-driven funding underscores the necessity for universities to adapt to new financial realities. Similarly, Chenghua et al. (2023) examine how leading American universities have revised their funding strategies through capital campaigns, fostering stronger connections with graduates and donors.

On a broader scale, government policies regarding higher education funding vary widely. In Scandinavian countries, for example, the government plays a significant role in funding higher education, resulting in low or no tuition fees for students (OECD, 2019; Toutkoushian & Paulsen, 2016). This model promotes accessibility and equity, allowing students from diverse socio-economic backgrounds to pursue higher education without the burden of overwhelming debt. In contrast, countries like the United States and the United Kingdom have shifted toward market-driven models, where universities must compete for funding and students. Although this often leads to increased tuition costs and financial barriers (Department for Business, Innovation & Skills, 2010).

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As a response to these challenges, some universities are increasingly turning to community support and philanthropic contributions to fill the gaps left by traditional funding sources. This trend reflects a growing reliance on private funding, raising concerns about equity and access (Goksu & Goksu, 2015). Institutions with stronger fundraising capabilities can secure more resources, while others may struggle to meet their financial needs. Consequently, this disparity can worsen existing inequalities within the education system, as wealthier institutions continue to grow while others face financial difficulties (Aldawod, 2023; Horta et al., 2022; Usman & Ab Rahman, 2021; Chinyoka & Mutambara, 2020).

While there is a wealth of literature on higher education funding, there remains a lack of comprehensive analyses that bring these different perspectives together. Therefore, this study aims to fill this gap by rethinking current funding models through an integrative review of global practices in higher education. By synthesizing findings from various regions and funding structures, this review will identify common themes, challenges, and best practices that can assist policymakers, educational leaders, and stakeholders. The novelty of this study lies in its integrative approach to understanding higher education funding. By combining insights from different regions and funding models, this study will provide a comprehensive overview of current practices and highlight innovative strategies that can enhance the sustainability and accessibility of higher education. Ultimately, the findings will deepen our understanding of the complexities surrounding higher education financing and their implications for future policy development.

Furthermore, this study offers a novel contribution by synthesizing a broad range of funding mechanisms through a multi-level and multi-sectoral lens—including public, private, religious, and community-based models—across diverse national contexts. Unlike prior reviews that focus on single countries or funding types, this study presents an integrative thematic framework capturing both traditional and emerging models, with the aim of informing policy discussions around sustainable and equitable funding strategies."

Research Methodology

In the current study, we conduct a systematic literature review to address the question: "What are the various funding mechanisms employed by institutions of higher education worldwide to sustain their financial operations? We adhere to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure our research is reproducible (Page et al., 2021; Liberati, et al., 2009).

To gather relevant documents, we use the Web of Science and Scopus databases, known for their extensive coverage of articles on this topic (Wicaksono, 2023; Martín et al., 2018). We defined the keywords "funding higher education," considering singular, plural, and synonymous forms to develop our search terms. Our inclusion criteria specified that only complete articles available online, written in English, and pertinent to our study would be included.

We used two primary databases, Web of Science and Scopus, to collect related articles. This approach aligns with Fink's (2009) recommendations for a rigorous selection process, resulting in 2,148 articles from Scopus and 570 from Web of Science (Fink, 2009).

All articles were critically examined according to the PRISMA protocol, as introduced by Moher et al. (2014). Following the application of the PRISMA protocol, similar to previous

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studies (Moher et al. 2014; Shahmoradi & Ellili, 2024), the search was narrowed down to 48 articles. PRISMA protocol consists of four stages: Identification, Screening, Eligibility, and Inclusion which are illustrated below (Figure 1).

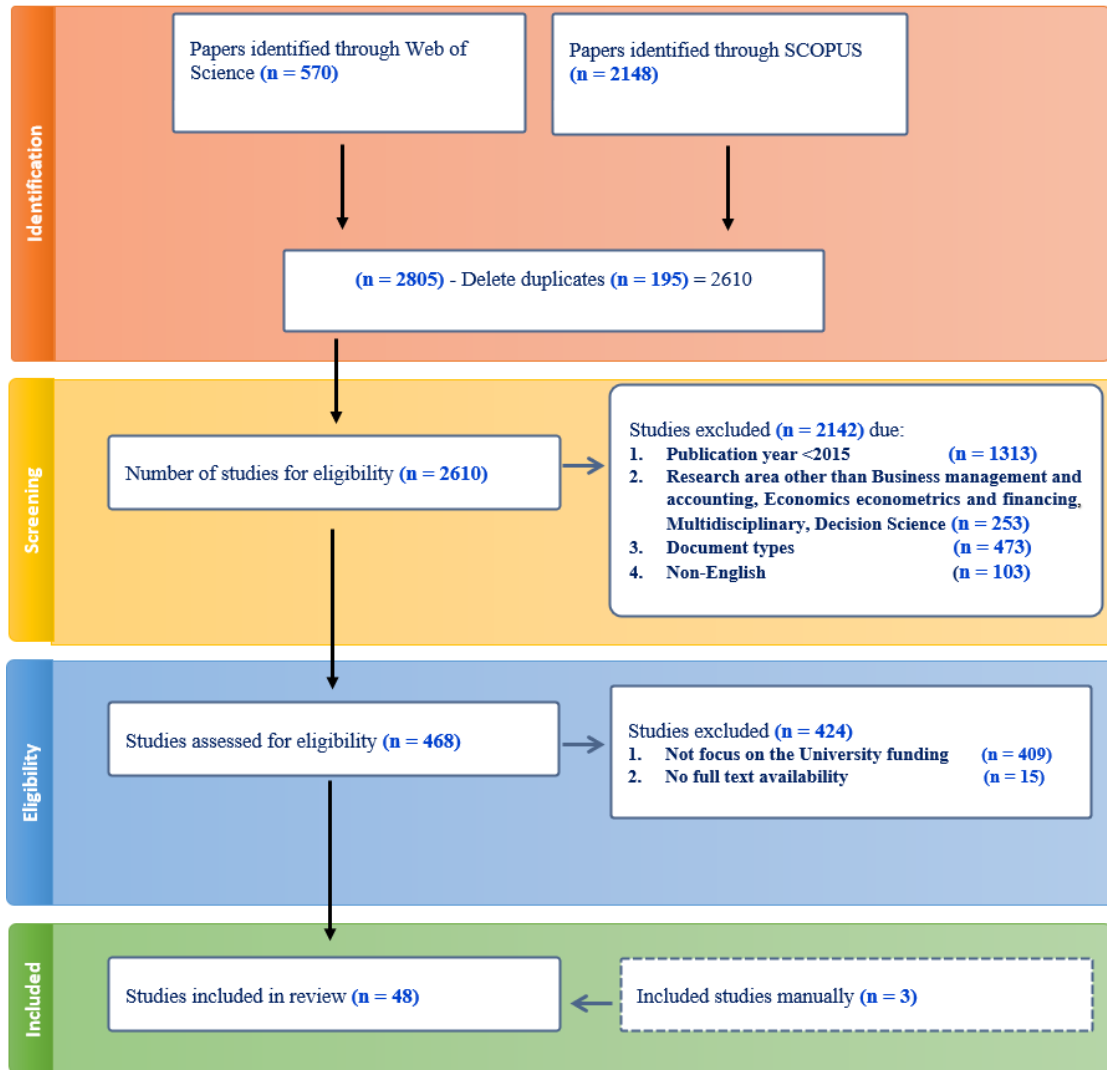


Figure 1. PRISMA diagram (Adapted from Moher et al. 2014)

Two researchers independently conducted the initial screening and eligibility assessment based on the PRISMA guidelines. Any disagreements were resolved through discussion to ensure consistency. The three manually added articles were identified through backward citation analysis of highly cited sources and selected due to their relevance to underrepresented funding models not captured in the keyword search.

In the identification stage, we searched the Scopus and WoS databases using keywords related to funding higher education, yielding a total of 2,805 articles. The screening stage involved a search period from 2015 up to January 2025, focusing on the subject areas of “Business, Management and Accounting,” “Social Sciences,” “Economics, Econometrics, and Finance,” “Multidisciplinary,” and “Decision Sciences”. We limited our

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search to sources classified as “article,” while excluding non-English language publications (Table 1). As a result of this stage, our data set was narrowed down to 468 articles. For eligibility, we excluded articles that did not focus on the topic, or were not available in full text. This process left us with 45 articles. Additionally, we manually included 3 articles, bringing the final total to 48 articles for consideration in the thematic analysis.

Table 1.
Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Publication year	2015-January 2025	Before 2015
Research Categories	All
Document Type	Journal Articles	Review Articles, Book Chapters, Edited Books
Source Title	(“funding higher education” OR “funding university” OR “financing higher education” OR “financing university”) OR ...	All other
Research Area	“Business, Management and Accounting,” “Social Sciences,” “Economics, Econometrics, and Finance,” “Multidisciplinary,” and “Decision Sciences”	All other

This review considers studies that span multiple levels of analysis, including national systems (e.g., national funding policies), sub-national contexts (e.g., state- or province-level funding decisions), and individual higher education institutions. Both public and private institutions are included in this review. This inclusive approach was necessary to capture the full diversity of higher education funding mechanisms and policies as they manifest differently across governance and ownership models. As such, the findings are synthesized across these levels to identify commonalities and divergences in funding practices (see Kivistö and Uljens, 2024; Cooley, 2015).

Data Analysis and Exploration of Themes

The thematic analysis process was used to find the key and sub-themes in the literature about funding higher education. It started with gathering relevant data by carefully reviewing statements that matched the study's goals. Next, the data were organized into specific categories to identify important themes and ideas. The analysis identified eight key themes, which were divided into a total of 26 sub-themes (see Figure 2). Ongoing data analysis was important to ensure that the findings were consistent, as any differences in theme development needed to be addressed. Organizing the themes and sub-themes helped keep the analysis clear and coherent. In addition to confirm the identified themes, feedback was gathered from two experts in the field, using both quantitative and qualitative insights. This step ensured that each theme was relevant and clear. The expert feedback was included at the author's discretion to strengthen the analysis.

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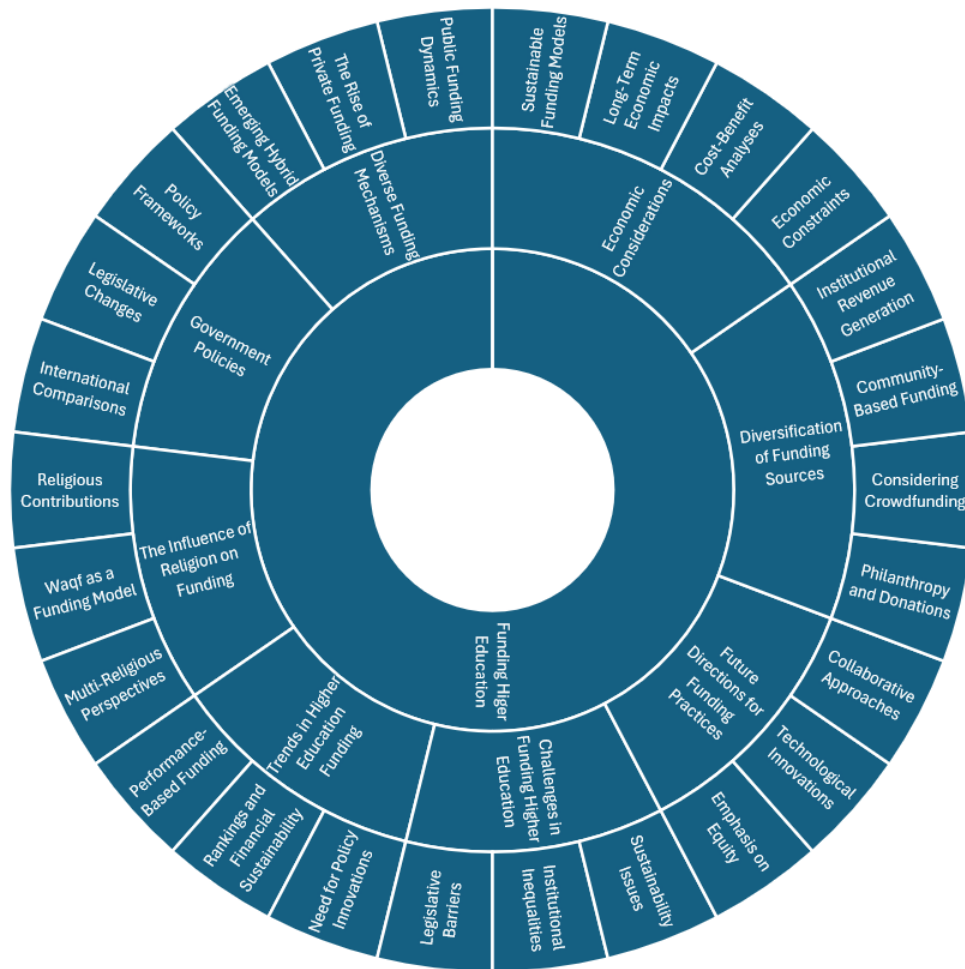


Figure 2. Sunburst of Key & Subthemes of Funding Higher Education

Findings: Key and Sub-Themes

Diverse Funding Mechanisms in Higher Education

Funding mechanisms for higher education are varied and reflect a wide array of economic, political, and social contexts. Understanding these mechanisms is essential for grasping the complexities of funding in today's educational landscape. The first key theme of this study focuses on the diversity of funding mechanisms in higher education, which can be broken down into three subthemes: public funding dynamics, the rise of private funding, and emerging hybrid funding models.

Public Funding Dynamics

Public funding remains a primary source for higher education. Abankina et al. (2017) highlight that while the structure of funding sources in Russia is similar to OECD countries, however, the absolute amounts are significantly lower. Russian universities receive only a fraction of the funding available to their counterparts in wealthier nations (Sudakova et al.,

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2023; Degtyarova et al., 2018). This disparity underscores the challenges faced by institutions that heavily depend on public funding, especially during economic downturns. Delaney and Doyle (2018) further note that fluctuations in state funding disproportionately impact institutions serving marginalized communities, exacerbating existing inequities.

The Rise of Private Funding

Private funding has gained prominence as institutions look for alternatives to public funding. Adair et al. (2020) demonstrate that federal funding in the U.S. tends to be more stable under traditional budget processes compared to reconciliation bills. This suggests that institutions may need to diversify their funding sources to mitigate risks associated with public funding volatility. Chenghua et al. (2023) emphasize that private donations and philanthropic contributions have become increasingly vital for many universities, enabling them to support various programs and initiatives.

Emerging Hybrid Funding Models

Hybrid funding models that combine public and private sources are emerging as a viable solution. Askari and El Refae (2022) argue that higher education should be viewed as a strategic good, necessitating partnerships between governments and private entities to ensure sustainability. This model promotes a more balanced approach to funding, allowing institutions to leverage both public support and private investment. Cooley (2015) highlights various policy innovations that encourage such collaborations, illustrating how public-private partnerships can enhance financial resilience.

Government Policies

Government policies significantly shape the funding landscape for higher education, influencing how resources are allocated and ensuring equitable access to education. Another key theme of this study is the role of government, which consists of three subthemes: policy frameworks, legislative changes, and international comparisons. Together, these subthemes highlight the critical importance of government action in promoting equity and sustainability in higher education financing

Policy Frameworks

Government policies are essential in creating funding frameworks for higher education. Delaney and Doyle (2018) point out that state funding often sees misappropriate cuts during economic downturns, which can worsen inequalities among institutions especially those serving marginalized communities. In this regard, Rubin et al. (2023) stresses the need for equitable funding practices that tackle systemic inequalities, advocating for policies that prioritize support for historically underfunded institutions. Teichler (2018) also calls for a fresh look at funding frameworks to ensure they promote access and quality education for all students, particularly during financial uncertainty.

Legislative Changes

Legislative actions taken by the government have a significant impact on funding for higher education. Adair et al. (2020) discuss how changes in legislation, like budget reconciliation measures, can lead to substantial cuts in funding. This underscores the importance of advocating for stable funding through traditional budget processes. Chinyoka and

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Mutambara (2020) highlight the challenges faced by state universities in Zimbabwe, emphasizing the need for policy reforms to boost revenue generation. Additionally, Ogunniran et al. (2024) argue that the political environment can greatly influence funding decisions, making it essential for stakeholders in the higher education sector to engage in proactive advocacy to secure necessary resources from the government.

International Comparisons

Looking at government policies in different countries can provide valuable insights into various funding models. Ziderman (2017) examines Georgia's voucher system, suggesting that government-backed market-based funding can enhance competition and efficiency within the higher education sector. Huang (2018) discusses the financing challenges in Japan, emphasizing the need for reforms to address disparities in funding allocation. Furthermore, Kim and Park (2018) share lessons learned from financing universal higher education in Korea, showing how different governments can adopt innovative funding strategies to improve access and equity in higher education.

Diversification of Funding Sources

As public funding for higher education continues to decline, diversifying funding sources has become increasingly crucial for institutions. This shift not only helps manage financial risks but also boosts resilience and adaptability in a rapidly changing educational landscape. Another key themes of this study is the diversification of funding sources, which can be broken down into four important areas: philanthropy and donations, crowdfunding, community-based funding, and institutional revenue generation.

Philanthropy and Donations

Philanthropic contributions are vital for funding higher education. Chenghua et al. (2023) point out the success of capital campaigns at leading American universities. This has effectively mobilized private donations to support their development. Houghton et al. (2021) emphasize that strong graduate engagement and targeted fundraising efforts can significantly enhance financial resources for universities. However, relying heavily on donations can create disparities between institutions. Institutions with robust fundraising capabilities often secure substantial resources, while others may struggle to attract donations (Ait Si Mhamed et al., 2021). This highlights the importance of developing comprehensive strategies that not only boost fundraising efforts but also promote equity in resource access.

Considering Crowdfunding

Crowdfunding has emerged as an innovative funding mechanism, especially for institutions with limited resources. Horta et al. (2022) explore how UK universities are using crowdfunding to supplement traditional funding sources, suggesting that this approach could democratize access to educational resources. Liu et al. (2020) note that crowdfunding platforms can reach wider audiences, allowing institutions to gather small contributions from many supporters. However, the success of crowdfunding can vary greatly depending on the institution's reputation and the appeal of the projects being proposed. This raises

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questions about the long-term sustainability of this funding model (Horta et al., 2022; Diris & Ooghe, 2018).

Community-Based Funding

Engaging the community in funding inventions is essential for enhancing educational resources. Afandi (2022) discusses the role of zakat in Indonesia, highlighting how community-based funding can address local educational needs. This approach emphasizes social responsibility and collective investment in education, allowing communities to directly support their institutions. Ahmad et al. (2016) point out that religious organizations can play a significant role in funding educational initiatives, fostering a culture of giving among community members.

Institutional Revenue Generation

In addition to seeking external funding, institutions are increasingly focusing on generating revenue internally. This includes expanding continuing education programs, offering online courses, and developing partnerships with industries for research and training initiatives. By diversifying their educational offerings, institutions can attract non-traditional students and generate additional income. Research by Smith et al. (2021) indicates that institutions actively pursuing revenue-generating activities can improve their financial sustainability.

The Influence of Religion on Funding

Religious institutions and beliefs have a significant impact on funding practices in higher education. This influence is complex, affecting not only where funding comes from but also the motivations behind charitable contributions. A central theme of this study is the role of religion in funding, which can be broken down into three key areas: religious contributions, Waqf as a funding model, and multi-religious perspectives.

Religious Contributions

Ahmad et al. (2016) delves into how Hinduism and Buddhism in Malaysia influence charitable giving, particularly through the concept of *dana* (charity), which plays a crucial role in supporting educational initiatives. This shows how religious teachings can inspire people to contribute to education. Additionally, Usman and Ab Rahman (2023) explore the perspectives of various religious scholars in Malaysia regarding charitable contributions, highlighting how different religious communities can come together to support educational funding. This multi-religious approach emphasizes the importance of collaboration among diverse faith groups in advancing education.

Waqf as a Funding Model

Usman and Ab Rahman (2021) provide valuable insights into how *waqf* can finance higher education in Pakistan. They argue that while it has the potential to be a sustainable funding source, challenges like inadequate legal frameworks can hinder its effectiveness. Ahmad et al. (2016) also discusses the historical significance of *waqf* in Islamic education, pointing out its role in providing long-term financial support for educational institutions. Furthermore, Nik Ahmad et al. (2019) stress the need for robust legal and regulatory frameworks to maximize the potential of *waqf* as a viable funding source for higher education, ensuring that these resources are well-managed and utilized effectively.

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Multi-Religious Perspectives

Usman and Ab Rahman (2023) examine the perspectives of various religious scholars in Malaysia on charitable contributions to higher education, indicating that different religious communities can work together to enhance educational funding. This multi-religious approach emphasizes the importance of collaboration among diverse faith groups in supporting education. Ranga et al. (2016) illustrate how religious organizations can mobilize community resources to improve educational opportunities for underprivileged populations.

Economic Considerations in Funding

Economic factors play a significant role in shaping funding practices for higher education. The current study found out that economic considerations in funding as another theme explores four key themes: economic constraints, cost-benefit analyses, long-term economic impacts, and sustainable funding models.

Economic Constraints

Barringer (2016) highlights a significant shift in the financial landscape of higher education in the U.S., where institutions increasingly rely on tuition revenue instead of state funding. This change reflects the economic pressures that affect the availability of funding. Oketch (2016) points out that many colleges and universities are finding it tough to maintain the quality of education as costs rise and government support dwindles, often resulting in higher tuition fees for students. Moreover, Diris and Ooghe (2018) argue that economic theory should play a central role in shaping funding policies. They stress the importance of evaluating both fairness and efficiency when it comes to financing higher education.

Cost-Benefit Analyses

Diris and Ooghe (2018) also advocate for using cost-benefit analyses to inform funding policies. They emphasize that it's crucial to assess how different funding models impact student outcomes, the sustainability of institutions, and the broader societal benefits. This evidence-based approach enables policymakers to identify funding strategies that yield the best results for both students and educational institutions. Liu and Gao (2021) further stress the need for thorough economic evaluations of funding policies to ensure resources are allocated effectively and equitably.

Long-Term Economic Impacts

Oketch (2016) underscores the importance of sustainable funding models, especially in sub-Saharan Africa, where financing higher education is vital for economic development and job creation. Investing in education can lead to significant long-term economic gains by equipping individuals with skills and knowledge that benefit the workforce. However, without sufficient funding, many institutions struggle to deliver quality education, which limits their ability to produce graduates who can contribute to economic growth. Kim and Park (2018) argue that sustainable funding is essential for fostering economic development and addressing the challenges faced by emerging economies, ensuring that higher education institutions meet the needs of their communities effectively.

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Sustainable Funding Models

Developing sustainable funding models is crucial for the long-term health of higher education institutions. These models need to strike a balance between financial stability and the commitment to providing accessible and equitable education. By exploring innovative funding solutions—such as public-private partnerships and alternative revenue streams— institutions can bolster their financial resilience (Ait Si Mhamed et al., 2021; Chapman & Doris, 2019).

Trends in Higher Education Funding

The landscape of higher education funding is rapidly evolving, driven by economic pressures, societal needs, and emerging challenges. Below are the three subthemes that further explore the main theme of trends in higher education funding.

Performance-Based Funding

Aldawod (2023) delves into the entrepreneurial challenges that universities in developing countries face. He suggests that performance-based funding models could be a way to encourage innovation and efficiency. By tying funding to specific performance metrics—like graduation rates and job placement outcomes—universities are motivated to focus on student success and overall effectiveness. However, this approach isn't without its drawbacks. Concerns about equity arise because institutions that serve disadvantaged populations might struggle to meet these performance targets (Rubin et al., 2023; Bachan, & Reilly, 2015).

Rankings and Financial Sustainability

Baltaru et al. (2022) look at how university rankings can deepen funding inequalities. Often, elite institutions attract more resources than their less prestigious counterparts. This situation raises questions about the fairness of how funding is distributed, as well-known universities tend to draw more donating support and government funding. Teichler (2018) points out that the pressure to climb the rankings can shift the focus toward prestige instead of educational quality, which could undermine the core mission of higher education.

Need for Policy Innovations

Cooley (2015) reviews various policy innovations in U.S. higher education funding and highlights the necessity for adaptive policies that can respond to shifting economic conditions and societal needs. New funding models, such as income-share agreements and loan forgiveness programs, have emerged as promising solutions to the challenges of financing higher education (Jacob & Gokbel, 2018). In this regard, Liu et al. (2020) emphasize that these models aim to lessen the financial burden on students while ensuring institutions receive adequate funding. However, implementing these innovations requires careful thought about their long-term effects on students, institutions, and the broader higher education landscape (Kasa et al., 2020).

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Challenges in Funding Higher Education

Despite the diversification of funding sources, higher education institutions face numerous challenges that hinder their financial sustainability and operational effectiveness. Current study found out that the main theme of challenges in funding higher education consists three subthemes namely: legislative barriers, institutional inequalities, and sustainability issue.

Legislative Barriers

Chinyoka and Mutambara (2020) highlight the legislative and economic hurdles that state universities in Zimbabwe face, stressing the urgent need for policy reforms to boost revenue generation. Current laws often limit universities' ability to set their own tuition rates or seek alternative funding sources, which restricts their financial flexibility. Additionally, Delaney and Doyle (2018) point out that economic instability makes funding even more challenging, as universities struggle to keep their operations running amid rising costs and shrinking government support.

Institutional Inequalities

Rubin et al. (2023) examines how funding cuts during economic downturns disproportionately affect historically underfunded institutions. They emphasize the need for equitable funding practices to address these systemic inequalities. Many schools that serve low-income and marginalized populations face significant difficulties in securing adequate funding, which perpetuates cycles of disadvantage. Teichler (2018) argues that to promote fairness in higher education funding, we must implement policies that prioritize support for institutions serving underrepresented communities.

Sustainability Issues

Di Carlo et al. (2019) argue that financial sustainability is a major challenge for public universities, highlighting the need for innovative funding strategies to maintain their operations amid economic pressures. As state funding continues to decline, many institutions find themselves increasingly reliant on tuition and fees, which can create financial burdens for students and their families. Oketch (2016) stresses that developing sustainable funding models that prioritize investment in higher education is crucial for fostering economic development and addressing the challenges faced by emerging economies.

Future Directions in Higher Education Funding

The future of higher education funding is poised for evolution, driven by the need for equity, technological advancements, and collaborative approaches. Below are the three subthemes that explore the future directions in higher education funding.

Emphasis on Equity

Future funding models must prioritize equity, ensuring quality education access regardless of socio-economic status (Teichler, 2018). Persistent disparities require policies promoting fair resource allocation, including targeted scholarships and financial aid for disadvantaged

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students (Rubin et al., 2023). Prioritizing equity in funding helps build a more inclusive and accessible higher education system (Oketch, 2016).

Technological Innovations

Technology significantly enhances fundraising and financial management in higher education (Liu et al., 2020). Digital platforms and analytics expand donor outreach, increasing funding opportunities. Improved technology-driven financial processes also enhance efficiency, transparency, and resource allocation (Kasa et al., 2020). Embracing these innovations supports institutional sustainability and long-term success (Leitner et al., 2021).

Collaborative Approaches

Collaborative funding involving governments, private sectors, and communities is essential for sustainable financial ecosystems (Kasa et al., 2020). Such partnerships leverage diverse resources and expertise, boosting institutional capabilities. Shared responsibility in funding encourages collective investment, leading to innovative solutions and greater resilience in higher education finance (Askari & El Refae, 2022).

Discussion and Future Recommendation

The findings of this study highlight the complex and multifaceted nature of funding mechanisms in higher education, shaped by public and private sources, government policies, economic pressures, and religious influences.

Although this study is primarily thematic, several theoretical lenses help interpret the results. Neoliberal and public choice theories explain the rise of performance-based and market-driven funding, emphasizing competition and privatization. Human capital theory underlies the argument for public investment in education to drive long-term economic growth. These frameworks add depth to the understanding of funding patterns and inform policies aimed at achieving equity, efficiency, and sustainability.

Public funding remains vital, but disparities—especially in countries like Russia—highlight vulnerabilities for institutions that heavily rely on it. Although Russia's funding structure is similar to OECD models, the actual amounts are much lower (Abankina et al., 2017), intensifying risks during economic downturns (Sudakova et al., 2023; Degtyarova et al., 2018).

Private funding has gained momentum as institutions seek financial independence. However, it also raises equity concerns, as well-resourced universities benefit disproportionately (Horta et al., 2022). While philanthropic support and capital campaigns (Chenghua et al., 2023) are increasingly important, a balanced funding model is needed to prevent deepening inequalities (Adair et al., 2020).

Hybrid funding models offer a potential solution. Askari and El Refae (2022) argue that higher education should be considered a strategic good requiring public-private partnership. These models combine the strengths of both sectors, increasing financial stability and promoting equitable access (Cooley, 2015).

Government policies play a pivotal role in shaping funding environments. Delaney and Doyle (2018) note that budget cuts during economic downturns often hit the most vulnerable institutions hardest. Equitable funding strategies are therefore crucial, especially

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for historically underfunded institutions (Rubin et al., 2023). International case studies—such as voucher systems in Georgia (Ziderman, 2017) or reforms in Japan (Huang, 2018)—illustrate diverse policy approaches and offer lessons for context-sensitive implementation.

As traditional public funding declines, the importance of diversification grows. Institutions are increasingly turning to alternative sources such as philanthropy, crowdfunding, community support, and internally generated income (Afandi, 2022). However, over-reliance on these can exacerbate existing disparities. Religious contributions, while valuable (Ahmad et al., 2016), also introduce complexity in terms of equity and inclusion.

Economic considerations are central to all funding models. Cost-benefit analyses and sustainable planning are critical for long-term financial health (Diris & Ooghe, 2018; Liu & Gao, 2021). Oketch (2016) stresses that sustainable models are essential for educational quality and economic development, particularly in developing countries.

Finally, broader trends such as performance-based funding and ranking systems pose both opportunities and challenges. While they may incentivize efficiency and innovation (Aldawod, 2023), they risk penalizing institutions serving disadvantaged populations unless fairness is built into their design (Baltaru et al., 2022). Persistent challenges—such as legal barriers, inequality, and funding volatility—underscore the need for systemic reforms that support all institutions in delivering accessible, high-quality education.

Future Studies Recommendation

To support a more equitable and sustainable funding landscape, this study identifies four key areas for future research:

Longitudinal Impact of Funding Mechanisms

Future studies should track long-term effects of funding models on higher education outcomes such as graduation rates, student satisfaction, and employment. By including a range of institutions, especially in underfunded areas, researchers can assess how funding variability affects institutional sustainability and educational equity.

Comparative Study of Hybrid Models

Analyzing hybrid funding models—combining public and private sources—across countries like the U.S., Germany, Brazil, India, and South Africa will help identify context-specific best practices. Case studies of successful public-private partnerships can reveal strategies that strengthen institutional resilience and educational quality.

Assessment of Equity-Focused Policies

Research should evaluate the effectiveness of targeted scholarships and grant programs aimed at underserved student populations. By measuring their impact on access, retention, and graduation, such studies can guide policy decisions to ensure more inclusive and equitable funding.

Role of Technology in Funding Innovation

Technology-driven models such as crowdfunding and digital fundraising deserve closer examination. Studies should assess how these tools improve donor outreach, resource

allocation, and transparency. Institutions that have successfully adopted such platforms can offer models for broader implementation.

Concluding Remarks

This study aimed to rethink prevailing funding models by integrating diverse insights from around the world, offering a fresh lens on policy development and strategic planning. Using systematic review of 48 articles, identifies eight major themes and 26 subthemes in higher education funding. Key findings highlight the necessity of diverse funding sources, the critical role of government policies, the influence of religious institutions, and challenges to financial sustainability.

Reliance on a single funding stream poses significant risks, emphasizing the importance of revenue diversification. Government policies notably shape funding availability and institutional strategies. Religious contributions, particularly in faith-based contexts, also significantly impact funding practices. Persistent financial pressures—rising costs, enrollment fluctuations, and economic uncertainty—necessitate adaptive and resilient funding solutions.

These findings offer a comprehensive perspective on financial challenges in higher education, guiding future policy and research toward stronger funding frameworks.

Several policy recommendations emerge from this review. Governments should ensure equitable resource distribution, prioritizing institutions serving disadvantaged groups through targeted scholarships and financial aid. Hybrid funding models that combine public and private resources are essential, with public-private partnerships effectively enhancing institutional resilience (Tang, 2022). Legislative reforms granting institutions more autonomy to set tuition and explore alternative funding mechanisms are also crucial.

Institutions should embrace technology, utilizing digital platforms and analytics to optimize fundraising effectiveness and financial transparency. Studies at multiple levels—including national systems (e.g., Korea, Germany) and state-level strategies (e.g., U.S. states, Zimbabwe)—demonstrate varied funding approaches and challenges across different contexts.

Finally, collaborative initiatives involving governments, private entities, and communities can improve funding capacity and access to education. Regular cost-benefit evaluations of funding models are recommended to ensure long-term effectiveness, equity, and sustainability.

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We confirm that the manuscript is our original works, and if others' works are used, they are properly cited/ quoted.

Use of Generative AI/ AI-assisted Technologies Statement

The authors claimed that ChatGPT is used in this research just for the purpose of improving the language of the manuscript. **No further use** of these technologies are also confirmed by the author(s) to write different parts of the research. One native speaker of English is also invited to proof-read the text prior to its online publication.

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