

Harnessing *Al-Khumus*: Innovative Strategies for Sustainable Research Funding in Higher Education

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Received: 17 December 2024 | Accepted: 19 January 2025 | Published: 15 February 2025

DOI: <https://doi.org/10.55057/ajress.2025.7.1.4>

Abstract: *Al-khumus* is a religious tax in Islam mandating individuals to allocate one-fifth of their surplus wealth to specified beneficiaries. However, the increasing financial pressures on higher education institutions have required the investigation of various funding sources to support and improve research activities. The objective of this study is to review the potential of *al-khumus* for research funding in higher education. A systematic approach was utilised in this review analysis to achieve a thorough understanding of the existing literature on *al-khumus* and its potential as a funding mechanism. The review analysis revealed innovative strategies in harnessing *al-khumus* for sustainable research funding in higher education, namely: (a) establishing *al-khumus* research grants; (b) creating *al-khumus*-funded research centres; (c) implementing *al-khumus*-based scholarships for research students; (d) organising community-focused research initiatives; and (e) developing *al-khumus*-funded research partnerships. In conclusion, this study underscores the potential of *al-khumus* as an effective funding mechanism for higher education institutions, especially in contexts that align with Islamic values and principles. Future research should concentrate on several critical areas to further investigate the potential of *al-khumus* as a funding mechanism for higher education institutions.

Keywords: *al-khumus*, Islamic finance, higher education funding, sustainable research funding, alternative funding models

1. Introduction

Al-khumus is a religious tax in Islam mandating individuals to allocate one-fifth of their surplus wealth to specified beneficiaries. This surplus wealth generally comprises income, profits, and assets obtained in excess of fundamental requirements. The funds collected through *al-khumus* are allocated to support diverse religious, social, and charitable initiatives, including the construction and maintenance of mosques, the establishment and operation of religious schools, and financial assistance for the poor and needy (Salonen, 2018). The origins of *al-khumus* can be traced to early Islamic history; however, its implementation and guidelines differ among various Islamic schools of thought. Some scholars assert that *al-khumus* is a mandatory obligation for all Muslims, whereas others argue that it is primarily a practice associated with specific schools of thought within Islam. *Al-khumus* is a significant element of

Islamic financial ethics and social justice, highlighting the obligation of affluent individuals to distribute their wealth to the less fortunate (Furqani et al., 2016).

However, the increasing financial pressures on higher education institutions have required the investigation of various funding sources to support and improve research activities. A notable gap exists in comprehending the potential of *al-khumus* as a feasible mechanism for research funding. *Al-khumus* is traditionally viewed as a form of religious tax in Islamic finance. It represents a significant resource that has the potential to serve as a crucial financial asset for the sustainability of academic research, especially within institutions that adhere to Islamic values and principles (Lagoarde-Segot, 2015). Although there is increasing interest in alternative funding models, there is a notable deficiency in comprehensive research regarding the effective utilisation of *al-khumus* to support scholarly activities, promote innovation, and enhance academic excellence. Strategies for integrating *al-khumus* into the funding frameworks of higher education institutions can evaluate the challenges and opportunities related to its implementation, ensuring sustainable research funding that aligns with community values and needs (Schroeder & Ladikas, 2015).

The objective of this study is to review the potential of *al-khumus* for research funding in higher education. This study presents notable advantages that have the potential to reshape academic financing through the utilisation of *al-khumus* as a funding mechanism. This approach offers access to a culturally and religiously important funding source that resonates with the values of numerous Muslim communities (Pratiwi et al., 2023), promoting a sense of ownership and responsibility for educational progress. Integrating *al-khumus* into funding strategies allows institutions to diversify their financial resources, thereby diminishing dependence on traditional funding models that may face increasing limitations (Dresler et al., 2023). Additionally, alternative funding strategies can promote innovative research initiatives that directly respond to community needs, thereby increasing the relevance and impact of academic endeavours (Khan et al., 2022). Furthermore, examining *al-khumus* in relation to sustainable funding fosters discussions on ethical financing in education, enhancing transparency and accountability in resource allocation. This study may facilitate the development of innovative strategies to establish a sustainable and inclusive funding framework that supports research and enhances the educational experience for both students and faculty (Pozhilova, 2020).

2. Literature Review

The presented literature review highlights the incorporation of innovative funding mechanisms within higher education, with a specific focus on research. The concept of *al-khumus*, a form of tax or revenue sharing in Islamic finance, can be applied to examine new funding strategies that enhance sustainability and innovation in academic research. Recent research identifies five primary clusters in sustainability funding, which encompass sustainability competencies and campus greening (Montenegro de Lima et al., 2020). The Green Ocean Strategy for Financial Sustainability (GOSFS) outlines an 18-step roadmap aimed at enhancing resource development and governance to optimise investment sources for universities (Al-Filali et al., 2023). The Higher Education Sustainability First System (HESFS) emphasises a three-pillar model that engages stakeholders to develop an innovative financial model and a sustainability-oriented student employment program (Son-Turan, 2021). The studies emphasise the necessity of diversifying funding sources, integrating sustainability into institutional frameworks, and promoting collaborations among higher education institutions, policymakers, and businesses to address challenges in sustainable development and funding.

Recent years have seen substantial changes in research funding, influenced by heightened competition for finite resources and the demand for innovative solutions. The commodification of academic research is a significant issue, as noted by Arboledas-Lérida, who contends that simply augmenting public funding will not adequately address this trend (Arboledas-Lérida, 2024). A nuanced approach that integrates public and private funding sources is essential. Kallio et al. highlight the significance of regulatory knowledge for academic researchers in effectively navigating the complexities of funding opportunities (Kallio et al., 2022). Industry partnerships in academic research are frequently discussed, with evidence suggesting that these collaborations improve funding opportunities and promote innovation (Fu et al., 2016; Roy et al., 2011).

The establishment of technology transfer offices (TTOs) represents an innovative strategy for sustainable research funding, acting as intermediaries between academia and industry. Tatem examines the potential benefits of enhancing connections between health ministries and local universities to promote the adoption of scientific innovations, which may lead to a more favourable environment for research funding (Tatem, 2018). Vac and Fițiu emphasise the importance of TTOs in advancing sustainable development via technology transfer, indicating that these organisations can stimulate economic growth by connecting academic research with market demands (Vac & Fițiu, 2017). The effectiveness of TTOs depends on their capacity to promote collaborative relationships and enable knowledge transfer, essential for obtaining funding and advancing innovation (Beamish et al., 2021).

Furthermore, crowdfunding has developed into a feasible alternative funding mechanism for academic research, especially given the constraints of public funding. Gusti's examination of crowdfunding dynamics demonstrates its capacity to facilitate innovative projects and creative initiatives within academia (Gusti & Hilda, 2023). This funding model democratises access to financial resources and promotes community engagement and public support for research initiatives. The effectiveness of crowdfunding campaigns frequently depends on researchers' capacity to clearly articulate their project objectives and the societal implications of their work, consistent with Rojas et al.'s findings on the significance of stakeholder engagement in obtaining funding (Rojas et al., 2022).

Moreover, the concept of collaborative funding models, including cascade funding, has gained prominence as a strategy to enhance innovation in research. This method facilitates resource pooling among various stakeholders, thereby alleviating the financial strain on individual institutions and fostering collaborative research initiatives (Rojas et al., 2022). The collaboration among academia, industry, and government in funding initiatives can result in more sustainable outcomes, as demonstrated by the experiences of several countries that have effectively adopted such models (Oharenko et al., 2021). The influence of gender on research funding processes has received increasing scrutiny, especially regarding the systemic obstacles encountered by women in academia. Jebsen et al. emphasise the necessity of targeted interventions to mitigate these disparities, asserting that equitable access to funding is essential for cultivating a diverse and innovative research environment (Jebsen et al., 2020). When developing funding strategies, it is essential to consider the intersectionality of gender, race, and socioeconomic status to ensure equitable opportunities for all researchers to contribute to and benefit from academic advancements (Davis et al., 2022; Van der Lee & Ellemers, 2015). The incorporation of health economics into decision-making processes, alongside traditional funding mechanisms, can improve the sustainability of research funding in healthcare innovation. Lu et al. contend that the integration of health economics into the funding framework offers significant insights for academic institutions, facilitating informed decisions

regarding resource allocation and project feasibility (Lu et al., 2012). This approach corresponds with the wider trend of employing data-driven methods to improve funding strategies and advance research outcomes. The creation of incubators and innovation hubs in higher education institutions represents a viable approach to enhancing sustainable research funding. Patil et al. highlight the significance of establishing enduring collaborations between academia and industry, which can enhance access to funding and resources for innovative initiatives (Patil et al., 2023). Incubators function as collaborative platforms, allowing researchers to utilise industry expertise and funding opportunities while addressing practical challenges.

Furthermore, the application of agile principles in academia-industry collaborations can improve the efficiency and effectiveness of research funding initiatives. Hansen et al. examine the application of agile methodologies in research projects, facilitating rapid adaptation to evolving circumstances and stakeholder requirements (Hansen et al., 2022). This flexibility is especially important in rapidly changing research environments, where conventional funding models may fail to meet the demands of innovation. The integration of digital tools and platforms for knowledge sharing and collaboration is essential for improving the sustainability of research funding. Collaborative online tools enhance communication and idea generation among researchers, industry partners, and funding agencies, promoting a more dynamic and responsive funding ecosystem (Hesmer et al., 2011). This approach corresponds with the increasing focus on open innovation and the necessity for academia to interact with external stakeholders effectively (Holopainen et al., 2018).

In summary, harnessing *al-khumus* for innovative strategies in sustainable research funding necessitates a comprehensive approach that integrates various funding sources, collaborative partnerships, and a dedication to equity and inclusivity. Higher education institutions can enhance the sustainability and innovation of research funding by utilising technology transfer, crowdfunding, and agile methodologies. The combination of health economics and digital collaboration tools enhances the potential for significant research outcomes, contributing to the advancement of knowledge and societal well-being. This comprehensive approach promotes a culture of innovation in academic institutions and aligns research initiatives with societal needs. Prioritising sustainability and inclusivity empowers researchers to tackle complex challenges and effect meaningful change across diverse sectors.

3. Methodology

A systematic approach was utilised in this review analysis to achieve a thorough understanding of the existing literature on *al-khumus* and its potential as a funding mechanism. The search employed terms including “*al-khumus*,” “Islamic finance,” “higher education funding,” “sustainable research funding,” and “alternative funding models.” Databases such as Google Scholar, JSTOR, ScienceDirect, and Wiley Online Library were utilised to collect a diverse array of academic articles, reports, and case studies. The inclusion criteria emphasised peer-reviewed articles published in the past ten years that addressed *al-khumus*, Islamic finance, or innovative funding strategies in higher education. The exclusion criteria removed literature that did not specifically address the relevant themes or was not available in English, along with studies that lacked empirical data or theoretical frameworks pertinent to the research objectives. The review analysis process comprised multiple stages. A comprehensive search was conducted using the identified keywords across selected databases, followed by screening of titles and abstracts to assess relevance. Selected articles were subjected to a comprehensive full-text review to evaluate their relevance to the research focus. Data extraction was conducted

to summarise key findings, methodologies, and implications concerning *al-khumus* and its application in higher education funding. The analysis integrated the collected information, revealing patterns, gaps, and potential avenues for future research. This systematic review established a comprehensive understanding of *al-khumus* as a funding mechanism and identified innovative strategies to improve sustainable research funding in higher education institutions. The study utilised a rigorous methodology to provide insights into the integration of *al-khumus* within academic financing frameworks.

4. Results and Discussion

The review analysis revealed innovative strategies in harnessing *al-khumus* for sustainable research funding in higher education, namely: (a) establishing *al-khumus* research grants; (b) creating *al-khumus*-funded research centres; (c) implementing *al-khumus*-based scholarships for research students; (d) organising community-focused research initiatives; and (e) developing *al-khumus*-funded research partnerships.

(a) Establishing Al-Khumus Research Grants

A viable approach for utilising *al-khumus* in research funding involves the creation of specialised research grants financed by *al-khumus* contributions. Higher education institutions may establish grant programs that encourage researchers to submit proposals for projects that align with community needs or Islamic values. Allocating a portion of the *al-khumus* funds to these grants enables institutions to support innovative research initiatives that tackle critical social issues, including healthcare, education, and environmental sustainability. This approach offers financial support to researchers while ensuring that the research conducted is relevant and beneficial to the community, thereby fostering a shared purpose and responsibility.

The establishment of *al-khumus* research grants represents an innovative approach to sustainable funding in higher education, utilising community resources and promoting collaborative partnerships. This approach is consistent with the Sustainable Development Goals (SDGs), specifically SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth), highlighting the necessity for effective funding models that improve educational access and quality (Abelha et al., 2020; Aung & Hallinger, 2023). Utilising *al-khumus* enables institutions to establish a dedicated funding stream that supports research initiatives, enhancing educational outcomes and promoting sustainability (Chang & Chang, 2024; Saleh & Adly, 2024). The implementation of *al-khumus* research grants can promote community engagement and investment in educational projects, thereby fostering a sense of ownership and responsibility among local stakeholders. This collaborative model enhances research funding effectiveness and fosters a supportive ecosystem that promotes innovation and addresses the community's diverse needs.

Moreover, the integration of *al-khumus* funding facilitates partnerships between higher education institutions and local communities, thereby enhancing the relevance of academic research to societal needs (Son-Turan, 2021; Al-Nuaimi & Al-Ghamdi, 2022). This collaborative model addresses financial constraints while fostering a culture of shared responsibility and accountability in educational funding (Radić & Paleka, 2020; Montenegro de Lima et al., 2020). The strategic implementation of *al-khumus* grants can enhance the resilience and equity of the higher education landscape, promoting innovation and sustainability in research efforts (Pandowo et al., 2021; Machado & Davim, 2022). Aligning *al-khumus* funding with community priorities enables higher education institutions to ensure that research initiatives maintain academic rigour while achieving social impact. This

alignment promotes a dynamic environment in which knowledge creation is directly associated with real-world applications, thereby improving the overall quality of education and supporting sustainable development goals.

(b) Creating Al-Khumus-Funded Research Centres

Institutions may establish research centres that receive dedicated funding from *al-khumus* contributions. These centres may concentrate on fields of study that are especially pertinent to Muslim communities, including Islamic finance, social justice, and community development. Securing *al-khumus* funding enables these centres to conduct comprehensive research, offer training and resources for students and faculty, and engage with the community through outreach programmes. This method enhances the institution's research capabilities and solidifies its leadership role in addressing community issues, thereby increasing visibility and impact.

The establishment of research centres funded by *al-khumus* represents an effective approach to improving sustainable funding for research in higher education. Integrating sustainability principles into research practices enables these centres to cultivate innovation and collaboration among scholars, effectively addressing urgent societal challenges (Plieninger et al., 2020; Monna et al., 2022). Sustainability frameworks can inform the operational and strategic decisions of these centres, ensuring alignment of research outputs with broader sustainability objectives (Compton et al., 2023; Koshy et al., 2011). The establishment of these centres can facilitate interdisciplinary collaboration, uniting experts from diverse fields to address complex issues more effectively. Utilising diverse perspectives and expertise, *al-khumus*-funded research centres can produce significant solutions that enhance academic knowledge and benefit communities and the environment.

Furthermore, utilising *al-khumus* as a funding mechanism can improve financial stability and resource distribution for research initiatives, especially in areas where conventional funding sources are scarce (Saleh et al., 2023; Ciuciuc, 2021). This approach promotes academic inquiry while encouraging community engagement and social responsibility, in alignment with sustainable development principles (Mashaah et al., 2014; Cheng et al., 2022). *Al-khumus*-funded research centres can act as catalysts for transformative change in higher education, promoting academic excellence and societal impact (Fardet et al., 2020; Dmochowski et al., 2016). The implementation of *al-khumus* funding can enable researchers to undertake innovative projects that directly tackle local challenges, promoting a sense of ownership and accountability within communities. Establishing a sustainable funding model that emphasises collaboration and social impact can substantially improve the effectiveness and relevance of academic research in facilitating positive change.

(c) Implementing Al-Khumus-Based Scholarships for Research Students

A further approach involves establishing scholarships for students undertaking research degrees, financed by *al-khumus*. These scholarships may be directed towards students from disadvantaged backgrounds or those who exhibit a dedication to conducting research that serves their communities. Financial support through *al-khumus* enables institutions to attract talented individuals who might otherwise lack the means to pursue higher education. This promotes diversity in research fields and encourages the development of research that is aligned with community realities and needs, resulting in more impactful outcomes.

The implementation of *al-khumus*-based scholarships for research students offers a viable approach to sustainable research funding within higher education. *Al-khumus*, a type of Islamic

charitable giving, can be utilised to support educational initiatives, following the Sustainable Development Goals (SDGs) that prioritise quality education and economic growth (Abelha et al., 2020; Aung & Hallinger, 2023). Funding models can improve the ability of higher education institutions (HEIs) to promote research excellence, as research demonstrates a direct relationship between funding levels and the quality of research output (Wen et al., 2011; Tabatadze, 2023). The implementation of *al-khumus* funding can enable researchers to undertake innovative projects that directly tackle local challenges, promoting a sense of ownership and accountability within communities. Establishing a sustainable funding model that emphasises collaboration and social impact can markedly improve the effectiveness and relevance of academic research in facilitating positive change.

Moreover, the incorporation of *al-khumus* into funding strategies enhances inclusivity and accessibility in higher education, especially for under-represented groups (Nuwagaba, 2013; Al-Nuaimi & Al-Ghamdi, 2022). Establishing partnerships with community organisations and leveraging local resources enables higher education institutions to create a sustainable funding ecosystem that supports research and contributes to broader societal goals (Son-Turan, 2021; Reza, 2016). This approach has the potential to significantly alter higher education funding, promoting the impact and sustainability of research initiatives. The implementation of *al-khumus* funding can enable researchers to undertake innovative projects that directly tackle local challenges, thereby promoting a sense of ownership and accountability within communities. Establishing a sustainable funding model that emphasises collaboration and social impact can markedly improve the effectiveness and relevance of academic research in facilitating positive change.

(d) Organising Community-Focused Research Initiatives

Institutions can organise research initiatives that actively engage community members and are financed by *al-khumus*. These initiatives may involve collaborative projects in which researchers partner with community stakeholders to identify challenges and formulate solutions. Utilising *al-khumus* to finance these initiatives enables institutions to guarantee that the research is both academically rigorous and practically applicable, thereby benefiting the community. This method promotes collaboration and enhances the relationship between the institution and the community, as both entities engage in joint efforts towards shared objectives. Community-focused research initiatives can enhance the sustainability of funding in higher education through the strategic application of *al-khumus*. This approach aligns with the necessity for research funding to be customised to local priorities, as emphasised by Singh et al. (2021) who assert that funding must address the specific needs of low-resource settings to achieve effectiveness. Fehlner (2019) emphasises the importance of the tertiary sector in advancing sustainability, advocating for educational institutions to form community partnerships to tackle local issues. The implementation of *al-khumus*-based scholarships can enhance educational access for under-represented groups, promoting equity in higher education. These scholarships offer financial support specifically designed for research students, enabling a diverse array of scholars to engage in innovative research that tackles significant societal challenges.

Additionally, community engagement promotes stakeholder participation, which is critical for the sustainability of projects, as indicated by Uwamariya et al. (2021). Integrating local insights and resources enables educational institutions to develop a more resilient funding model that utilises community support and amplifies the effectiveness of research initiatives (Morgan et al., 2016). This collaborative framework addresses immediate funding needs and contributes to long-term sustainability by enhancing local capacity and promoting a culture of shared

responsibility (Estabrooks et al., 2011). Engaging stakeholders in the research process fosters innovative solutions that align more closely with community needs, thereby enhancing the relevance and effectiveness of research outcomes. Educational institutions can foster a sense of ownership among community members to ensure that research initiatives receive ongoing support and sustainability, thereby generating a lasting positive impact on both the community and the academic environment.

(e) Developing Al-Khumus-Funded Research Partnerships

Higher education institutions may consider forming partnerships with organisations and businesses that are prepared to provide *al-khumus* for research initiatives. Forming alliances with these entities enables institutions to establish a supportive network that strengthens their research capabilities. Partnerships may result in collaborative research initiatives, resource sharing, and enhanced visibility for both the institution and its partner organisations. Moreover, promoting the ethical use of *al-khumus* within these partnerships enables institutions to establish a standard for responsible funding practices consistent with Islamic principles, thereby attracting additional contributors interested in supporting research that positively impacts society.

The establishment of research partnerships funded by *al-khumus* signifies a strategic advancement in obtaining sustainable financial support for higher education. Partnerships can improve educational accessibility and quality by utilising community resources and promoting collaboration among stakeholders, highlighting the necessity for innovative funding strategies in educational institutions (Darmawan & Rugaiyah, 2024; Mazorodze & Mkhize, 2024; Mezieobi et al., 2024). Integrating *al-khumus* funding into research initiatives can enhance creativity and innovation, which are crucial for tackling current educational challenges (Aichouni et al., 2015; Gupta, 2011; Guerra & Costa, 2021). Moreover, these partnerships establish a framework for knowledge exchange between academia and the community, thereby enhancing the educational experience for both students and researchers. Aligning research objectives with community needs enables *al-khumus*-funded initiatives to generate valuable insights and empower local populations, thereby contributing to a more equitable and sustainable educational landscape.

Moreover, the establishment of these partnerships facilitates the sharing of best practices and resources, promoting accountability and transparency in fund management (Yudhianto et al., 2024). This collaborative approach addresses funding shortages and aligns with global educational objectives, including the Sustainable Development Goals (SDGs), which emphasise equity and inclusion in education (Bello & Sammy, 2024; Atuhaire et al., 2022). *Al-khumus*-funded research partnerships can exemplify sustainable financing in higher education, promoting innovation and community engagement (Sowe, 2024). Furthermore, fostering a culture of collaboration enables these partnerships to empower local communities to engage actively in the educational process, thereby prioritising their needs and perspectives. Enhanced engagement can result in more pertinent research outputs that directly benefit the community, thereby strengthening the connection between higher education institutions and their societal responsibilities.

5. Conclusion

In conclusion, this study underscores the potential of *al-khumus* as an effective funding mechanism for higher education institutions, especially in contexts that align with Islamic values and principles. Utilising this culturally and religiously significant resource allows institutions to diversify their financial portfolios, thereby decreasing reliance on increasingly constrained traditional funding sources. The incorporation of *al-khumus* into academic funding promotes community ownership and responsibility for educational progress while encouraging innovative research initiatives that meet the specific needs of Muslim communities. This approach fosters a wider discussion on ethical financing practices in education, enhancing transparency and accountability in resource distribution. The findings of this study support a revised funding framework that is both sustainable and inclusive, enhancing research initiatives and improving the educational experiences of students and faculty, thereby creating a more dynamic and responsive academic environment.

Future research should concentrate on several critical areas to further investigate the potential of *al-khumus* as a funding mechanism for higher education institutions. Empirical research is crucial for evaluating the effectiveness of *al-khumus*-funded projects, focussing on their impact on academic outcomes and community engagement through case studies from institutions that have successfully integrated *al-khumus* into their funding strategies. Future research should examine the perceptions and attitudes of stakeholders, such as students, faculty, and community members, regarding *al-khumus* funding to identify barriers and facilitators to its implementation. Comparative studies of *al-khumus* and other alternative funding models may yield insights into its distinct advantages and challenges in financing higher education. Interdisciplinary research that integrates perspectives from Islamic finance, educational policy, and community development would enhance the discourse surrounding *al-khumus* and aid in the formulation of comprehensive frameworks for its effective use in promoting sustainable academic research and improving the overall educational experience in higher education institutions.

Acknowledgements

The authors thank the Academy of Contemporary Islamic Studies, Universiti Teknologi MARA, and the Academy of Islamic Studies, University of Malaya, for technical supports.

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