

Cash Waqf Financial as a Potential Financial Instrument for Funding Public-Private Partnership (PPP) Infrastructure Projects in Indonesia

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Abstract

Indonesia faces financial challenges in providing public infrastructure through Public-Private Partnership (PPP) schemes, often resulting in project delays. Existing literature on PPP financing highlights the need for sustainable alternative funding sources, but little research has examined Islamic social finance instruments, especially cash waqf, as a viable solution. This study explores the potential of cash waqf as an alternative financing mechanism to support PPP projects in Indonesia. Drawing on a comprehensive literature review, this study adopts a theoretical approach to identify the key barriers in PPP financing and explore how cash waqf may offer viable solutions. Initial findings suggest that cash waqf, with an estimated annual potential of IDR 180 trillion, can offer a stable and ethical financing framework for infrastructure development. This study fills the gap in integrating cash waqf into PPP models and provides a conceptual foundation for future empirical and policy-oriented studies.

1. Introduction

Financing is a major challenge in all countries due to budget constraints, long-term investments, and high risks [1]. Infrastructure development must compete with other spending priorities due to the limited availability of public funds [2]. According to the Asian Development Bank, governments in developing countries face challenges in meeting infrastructure needs essential for economic growth [3]. The involvement of the private sector is very much required due to this funding gap. This can be done through collaborative mechanisms such as Public-Private Partnership (PPP) which facilitates enable risk sharing, innovation, and efficient project delivery.

PPP has been increasingly adopted in Southeast Asia; however, the implementation outcomes vary across countries depending on the regulatory, investment, and institutional factors. Indonesia, an archipelago spanning 1.9 million km² and a population of 270 million, requires infrastructure investment of IDR 6,445 trillion (2020–2024). Only 37% will come from the state budget; the remainder will require private sector participation [4]. Despite policy support, the PPP landscape in Indonesia faces several obstacles, including limited private sector participation, delays in project execution, and a financing gap between government allocations and required capital [5], [6], [7], [8], [9], [10]. Private sector disinterest is primarily due to project risks, an unclear regulatory environment, and profitability issues [11]. High interest rates and liquidity constraints make it even more difficult

to secure commercial loans, even as the central bank maintains an accommodative policy [12]. The impact is that state-owned companies dominate most PPP projects. Another impact is that the government has shifted some PPP projects to state funding. This undermines the core objectives of PPP, such as private capital mobilization, risk-sharing, and efficiency gains, and shifts the financial and operational burden back onto the public sector [13].

Given these challenges, innovative and sustainable financing solutions are needed. One promising alternative is Islamic finance, particularly cash waqf, a form of endowment where funds are donated for public benefit projects while preserving the principal value. Rooted in Sharia principles, Islamic finance prohibits interest (*riba*), uncertainty (*gharar*), and speculation (*maysir*); instead, it promotes ethical investment, risk-sharing, and social justice [14]. Cash waqf is not a loan; it mobilizes non-repayable voluntary contributions, making it suitable for long-term, socially beneficial projects like infrastructure [15], [16].

In Indonesia, the potential of cash waqf is significant. With over 229 million Muslims, the country represents around 13% of the global Muslim population. National estimates suggest that cash waqf contributions could reach up to IDR 180 trillion annually [17]. The government has established regulatory frameworks through Act No. 41/2004 to support this potential and launched initiatives such as the National Waqf Movement to institutionalize its application in economic development [18]. Despite growing attention to Islamic finance in development contexts, the integration of cash waqf within structured PPP models remains mainly absent in academic literature and practical policy discourse [19].

This study discusses critical gaps in the literature by investigating how cash waqf can be integrated into PPP financing schemes to overcome financial constraints and improve project feasibility in Indonesia. This study aims to explore the feasibility and theoretical framework for utilizing cash waqf as an alternative financing mechanism within PPP models. Thus, this study contributes to the discourse on sustainable infrastructure financing and proposes a new hybrid model that aligns Islamic finance principles with national development goals.

Indonesia presents a compelling case for such exploration due to its unique combination of large-scale infrastructure needs, a predominantly Muslim population, and a supportive policy environment for Islamic finance. It offers a theoretical foundation for integrating Islamic social finance, specifically cash waqf, into Indonesia's PPP schemes for infrastructure delivery.

2. Method

This study employs an extensive literature review to examine the implementation of the PPP financial scheme in Indonesia and to identify the research gap in PPP financial instruments. The review is subject to the following inclusion and exclusion criteria: only peer-reviewed articles published in academic journals and conference proceedings in Bahasa Indonesia and English are included; unpublished manuscripts and non-peer-reviewed articles are excluded. Articles are taken from different academic databases and citation sources, which may have resulted in duplication; therefore, duplicated entries were identified and removed prior to analysis. The research articles were collected from journals, conference proceedings, and both national and international publications indexed between 1998 and 2024 in three databases, which are Elsevier, ResearchGate, and SINTA (Science and Technology Index), an online system managed by the Ministry of Education, Culture, Research, and Technology of Indonesia.

The literature review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [20]. The review process comprised two main stages. The first stage involved the selection of relevant articles. Initially, articles were required to include one or both of the following keywords: public-private partnership (PPP) and cash waqf. Subsequently, the content of each article was screened for relevance to the research objectives. The second stage consisted of a systematic review analysis, following the PRISMA framework to guide the identification, screening, and inclusion of eligible studies (refer to Fig. 1). This structured approach ensures transparency and enhances the reproducibility of the review process.

This study applies content analysis. Textual content analysis is a research approach that involves systematically classifying and detecting themes or patterns in textual material to subjectively interpret its content [21]. The first stage of content analysis involved developing initial codes based on prior studies on public-private partnerships (PPP) and cash waqf. Following this, the selected articles were carefully reviewed, and coding was conducted according to the following themes for deeper analysis: the PPP concept; current PPP practices and barriers to public infrastructure; the cash waqf concept; and the implementation of cash waqf and its barriers to public infrastructure.

3. Analysis of Articles Search Results

As shown in Fig. 1, initially, the search results obtained were 250 articles, then an iterative screening process was carried out based on the inclusion and exclusion criteria. After removing duplicates ($N = 2$), 248 articles remained. Applying inclusion and exclusion criteria, 80 articles were excluded, making 168 articles eligible for final assessment. Then, the articles were briefly examined by reading the abstracts and conclusions to filter out relevant articles. 82 articles were selected for further analysis as illustrated in Table 1.

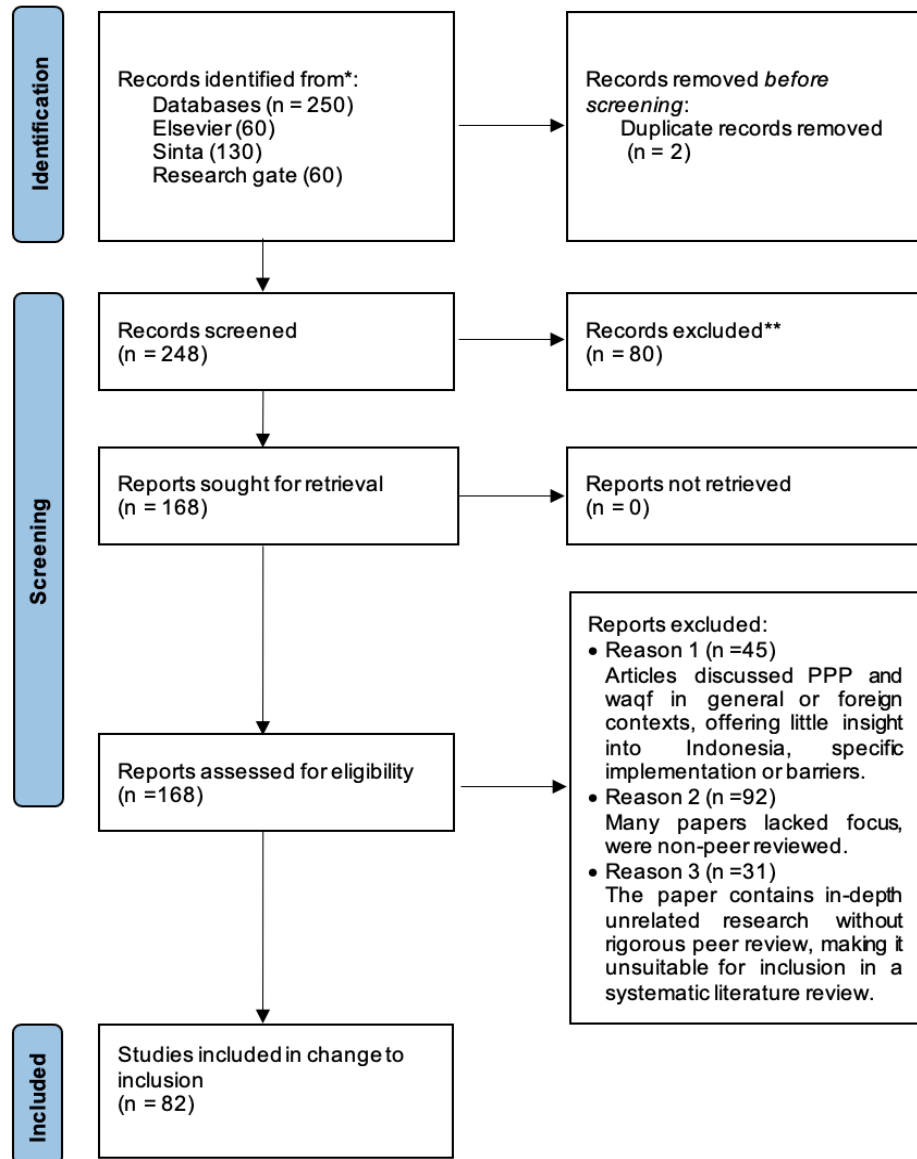


Fig. 1 PRISMA-based systematic review process applied in this study

Table 1 Articles search data

Sources	No. of Articles		
	Retrieved	Irrelevant	Relevant
Elsevier	60	45	15
Sinta	130	92	38
Research gate	60	31	28
Total	250	168	82

3.1 Themes of Relevant Articles

Based on the content analysis, a total of 82 relevant articles were identified and classified under the four predetermined themes, as illustrated in Fig. 2. The number of articles corresponding to each theme is indicated alongside the respective theme.

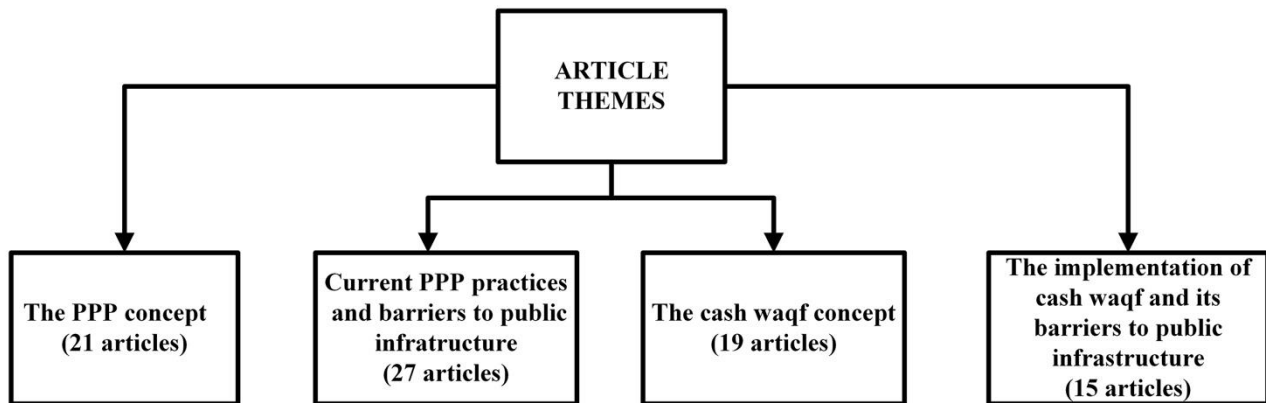


Fig. 2 Themes of relevant articles

3.2 Trends of Research Publications on PPP and Cash Waqf

Fig. 3 displays the trend of article publication by year. The theme PPP current practices in PPP and barriers to implementation in Indonesia accounts for the highest number of articles (27), followed by the PPP concept (21), the cash waqf concept (19), and the implementation of cash waqf and the barriers to infrastructure in public in Indonesia (15). In terms of publication trends, the period 2019-2024 contributed the highest number of articles overall (42), followed by 2012-2018 (33), 2005-2011 (6), and 1998-2004 (1), indicating a growing research interest in both PPP and cash waqf topics, particularly in the last decade.

This analysis reflects an evolving scholarly focus, with recent years showing increased attention toward implementation practices and barriers, especially in the context of Indonesia.

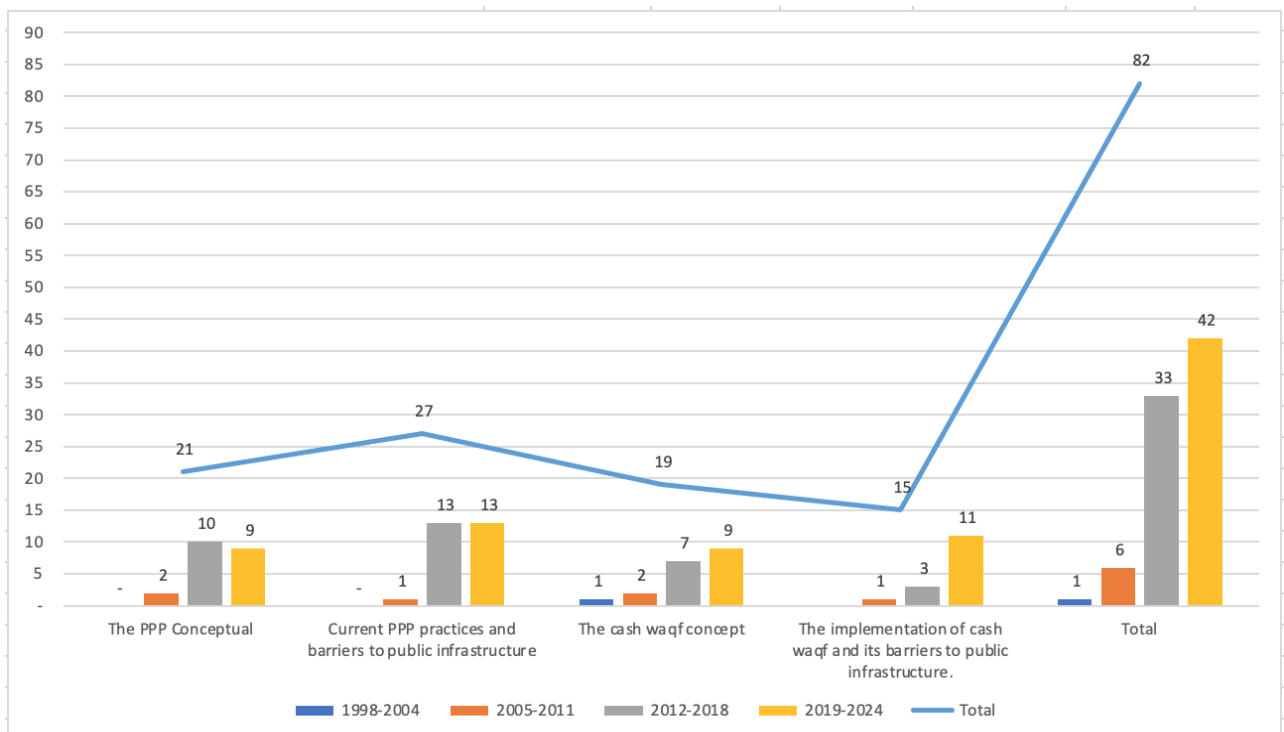


Fig. 3 Articles trend based on year of publication

3.3 Literature Review and Research Gap

3.3.1 The Public-Private Partnership (PPP) Concept

Public-private partnerships (PPP) are frameworks designed to maximize productivity by integrating and mobilizing financial resources, technology, managerial expertise, operational efficiency, and private-sector innovations. In PPP, SPV is created as an independent company, a combination of the private and the public sectors, aiming to realize the objectives of PPP. This SPV provides a structured platform for collaboration, ensuring risk sharing and the contribution and responsibilities of each party are clearly defined [22].

PPP usually have long-term contracts because of the complexity of managing and ensuring the project's long-term success. As such, various contract organizations or multiple stakeholders are involved with clearly defined roles and responsibilities [23]. Because of this long-term agreement, profit distribution is an essential issue in PPP projects, which influences the balance between the public and the private sectors. Risk sharing, financing, investment factor, management ability, and effort level are five dominant variables, considered by the private sectors, that affect the delivery of benefit distribution in PPP projects. In which risk sharing is the most critical factor in PPP. Success factor contributing to the overall performance and sustainability of PPP projects. This includes increased attractiveness of PPP investments, volume of civil works, net profit, productivity, energy efficiency of PPP projects, reputation of PPP, management efficiency, information technology, management training, control of information flows, the level of innovation in PPP projects, and the level of information analysis and forecasting [24], [25], [26], [27], [28], [29], [30].

The main barriers to implementing PPP projects are high bidding costs and the complexity of financial processes [31], [32]. There are numbers of conventional financial models used in PPP projects reported so far. One of the financial models is that computer-based financial models have proven beneficial in supporting financial planning and analysis of PPP projects. From the lender's perspective, the financial model particularly focuses on project revenues, operational costs, cash available for debt service (CADS), consistency in the agreement, and realistic estimation of future project income. Proper identification and suitable risk mitigation are vital for project success in PPP highway projects. Several financial risks have been identified in PPP highway project, among others are debt servicing (e.g., discount rate), traffic revenue (e.g., traffic growth), economic factors (e.g., inflation rate), and cost overruns. To support investment decision-making, the sensitivity analysis method is one of the appropriate tools to support tariff choices during negotiations and evaluate the impact of various risks. Performance-Based Contract (PBC), also known as an Output and Performance-Based Road Contract (OPBRC), is a tool based on the graphical financial model of the toolkit for PPP in roads and highways. Financial modelling and risk-sharing are crucial to attracting investors to join PPP projects. To determine concession prices, a concession pricing model using the System Dynamics technique, which is steady, appropriate, and accurate for practitioners [33], [34], [35], [36], [37], [38], [39], [40], [41].

Based on the review discussed, PPP aims to fulfill the funding needed by the government and private sector for public infrastructure. PPP is an essential framework to leverage the strengths of both public and private sectors, enhancing productivity, innovation, and infrastructure projects with key elements including risk-sharing, financial modelling, and management efficiency. Despite their benefits, such as knowledge transfer and risk mitigation, using conventional financial models, PPP face challenges like high bidding costs and complex financial processes. Effective financial models and risk-sharing mechanisms are crucial for attracting investors and ensuring project success. Therefore, there is a need to explore alternative financing methods to support the further PPP projects implementation.

3.3.2 Current PPP Practices and Barriers to Public Infrastructure

In Indonesia, Public-Private Partnerships (PPP) are also known as Government Cooperation with Business Entities (KPBU). KPBU was regulated in 2005 through PP 38/2015, to replace Presidential Act No. 67/2005 regarding the Cooperation between Government and Business Entities in the Provision of Infrastructure (PR38/2015). Several Indonesian bodies coordinate the PPP scheme: the National Development Planning Agency (Bappenas), the Minister of Finance, the Ministry of Economic Affairs, and the Committee for the Acceleration of Priority Infrastructure Provision (KPPIP). A Project Company (PC) is an Indonesian company carrying out PPP projects. It can stand either as a private or state-owned business entity or as a collaboration of private and state-owned business entities. To run the projects into a cooperation agreement with the government, the company must receive approval. Local and foreign investors, usually the shareholders of the PC, can become the project sponsors who are responsible for the development of the project through equity investment [42], [43], [44], [45].

In implementing the PPP project, the SPV is responsible for equity financing, construction, and asset operation and maintenance in PPP projects. The FDCB provides debt, while the IIF supports equity financing and long-term debt. IIF is funded by the Government of Indonesia through PT SMI and supported by MDBs, the IFC, and DEG. IIGF provides guarantees to the project sponsors and the FDCB. MDBs, including the World Bank, ADB, and MIGA,

provide partial risk guarantees to the FDCB and loans to IIF [46], [47]. The investors, both local and foreign commercial banks, use conventional financing, and those using endowment funds have never been addressed.

Several PPP scheme contracts in Indonesia, including Build, Operate, Transfer (BOT), Build, Transfer, Operate (BTO), Rehabilitate, Operate, Transfer (ROT), where the private sectors repair, operates the facility, and returns it to the government after the concession/contract period ends, Build, Own, Operate (BOO). According to ADB's data, most PPP schemes are implemented through BOT. BOT in Indonesia is modified to suit the Indonesian government system, and generally, the term contract is a 25–30-year contract [48], [49], [50].

Financial models play a vital role in accurately modelling and suiting the needs of clients (public sector) and the private sector [51], [52], [53], [54], [55], [56], [57], [58], [59], [60]. In Indonesia, the essential parts of a financial model are beneficial for analysis. Those include economic projection, sources and uses of funds, operations and maintenance, project income, loan repayment, and other calculations. The viability of a company can be figured out through financial statements such as the income statement, balance sheet, and cash flow statement. Furthermore, critical ratios are very important. Those include Debt Service Coverage Ratio (DSCR), Loan Life Cover Ratio (LLCR), Net Present Value (NPV), Internal Rate of Return (IRR), and Return on Equity (ROE) which are important. In addition, three types of financial model outputs, revenues, net profit, and IRR, are the most suitable strategies to establish unit prices and adjust them periodically [61], [62]. These studies reveal the calculation of the financial feasibility of projects in Indonesia using conventional funds, highlighting a lack of innovation in other sources of financing.

One of the risks of implementing PPP projects in Indonesia is the high interest burden that affects the project's feasibility. Several studies have shown that high borrowing costs impact the infrastructure of financial projects and high toll costs due to paying interest on debt and other financial costs, such as fees charged by lenders and intermediaries [63]. Similar challenges are seen in water supply projects, where high financing costs have caused delays in projects such as the Umbulan water supply [64]. This financial burden is compounded by the financial execution challenges faced by Indonesia's infrastructure projects.

Based on the reviewed literature, it can be concluded that PPP schemes have been implemented in Indonesia with regulated frameworks designed to enhance infrastructure development through collaboration between the government and the private sector. These schemes adhere to specific principles and are coordinated by various Indonesian governmental bodies, with conventional financing being commonly used. Despite the benefits of PPP, such as risk-sharing and financial viability, challenges like funding constraints and complex financial processes persist. Financial obstacles and project delays highlight the need for alternative financing solutions to ensure the successful execution of PPP projects in Indonesia. This suggests the potential for exploring innovative financing methods, such as waqf funds. Current PPP projects in Indonesia still rely on conventional financing; thus applying waqf requires an analysis of contract structures that comply with Sharia principles.

3.3.3 The Cash Waqf Concept

A waqf is an asset given away for philanthropic purposes, where a continuous return is obtained without reducing the principal, as long as the asset is maintained. The principle of maintenance can apply to land or arrangements determined by the founder of the waqf. The definition also includes waqf made impermanent by conditions and desire [65].

In classical literature, waqf of financial rights (e.g., publication rights) and waqf of results (e.g., a rented asset) are included in the definition of *maal* (assets) according to the majority of Fuqaha (fiqh expert) and are explicitly mentioned in contemporary collective fatwa, particularly by the Organization of Islamic Cooperation (OIC) Fiqh Academy [66]. The Qur'ān says, "By no means shall you attain righteousness unless you give (freely) of that which you love" (3:92). The Prophet said: "When a man dies, all his acts come to an end, except three: recurring charity (*sadaqah jariyah*), knowledge by which people benefit, or a pious offspring who prays for him" (Sahih Muslim, Book of Wills, Hadith No. 4005). Cash waqf is private property donated for charitable purposes and used to finance the development of waqf assets and educational institutions. Donors contribute assets for the benefit of the community [67], [68], [69], [70], [71].

Cash waqfs aim at community welfare and can fund public infrastructure. Other studies have discussed the concurrent implementation of waqf, where assets such as real estate, furniture, and a liquid form of money can be utilized [72], [73], [74]. Productive waqf can refer to two main categories: fixed (immovable) assets such as land, houses, and shops; and non-permanent (movable) assets such as animals, books, and others. The key aspect is how waqf assets can be productive. First, it may be a fixed object, but its use can grow economically. Second, productive waqf reveals that cash waqf is a good choice for donors who have liquid assets. Management of waqf assets can be done through various financing methods in traditional concept such as *istibdal* (exchange of assets), *hukr* (long lease with prepayment), and *ijaratyn* (a dual structured lease).

In modern concepts, cash waqf includes Venture Philanthropy Waqf Model (VPWM), Value-based Capital Model of Waqf (VBCM), and Social Enterprise Waqf Fund Model (SEWF). The Venture Philanthropy Waqf Model VPWM emphasizes shareholder wealth and ethical social impact, while VBCM separates the value of the waqf from

its physical form. The Social Enterprise Waqf Fund (SEWF) model is the most appropriate model because it prioritizes welfare and the sustainable advancement of cash waqf. [75], [76], [77]. Moreover, the optimal cash Waqf models encompass the waqf share, direct waqf, mobile waqf, deposit product waqf model, cooperative Waqf, and mutual fund waqf. Prospective developments in cash waqf models include crowdfunding for cash waqf (encompassing both direct and indirect schemes), equity crowdfunding, and peer-to-peer (P2P) crowdfunding platforms [78]. Cash waqfs offer benefits such as adaptability to the intended purpose of use while adhering to Sharia principles, making them highly suitable for PPP.

Based on the review, from a Sharia perspective, waqf involves holding *maal* (assets) to generate continuous benefits for charitable purposes while preserving the principal. It includes both fixed and movable assets, and can be applied to various forms of property, including financial rights and rented assets. Cash waqf, a form of waqf involving monetary assets, supports community welfare and public infrastructure projects. Modern concepts of cash waqf, such as the VPWM, VBCM, and SEWF, enhance its applicability. These models, along with innovative financing methods like crowdfunding, make cash waqf a versatile and Sharia-compliant tool for funding PPP projects. Therefore, understanding the principles and operational models of cash waqf is crucial in this study, as it provides a theoretical and practical basis for exploring how Islamic social finance can be mobilized to address the overall financing infrastructure in a sustainable and Islamically compliant manner.

3.3.4 The Implementation of Cash Waqf and its Barriers to Public Infrastructure

The Indonesian Ulema Council (MUI) fatwa on May 11, 2022, stated that cash waqf is permissible, provided its sustainability is guaranteed. The fatwa is based on general propositions from the Al-Qur'an, such as Surah Al-Baqarah verses 215, 254, and 267, Al-Imran verse 92, hadith narrated by Ibn Umar (HR. Muslim No. 1632), as well as the results of *ijtihad*. Cash waqf regulations are contained in Law No. 41, concerning Waqf, and its implementing regulations in Government Regulation No. 42-2006. The implementing agency for coordinating cash waqf in Indonesia is the Indonesian Waqf Agency. The Ministry of Religion and the Indonesian Ulama Council also monitor waqf management. Act 41 of 2004 concerning waqf includes establishing cash waqf institutions, collecting funds, managing cash waqf, and distributing cash waqf proceeds. Donors distribute a certain amount of money to LKS-PWU (write in full), which is then handed over to Nazhir (waqf trustee) to be managed or used as productive assets by buying fixed assets that can benefit the recipient waqf or be invested through sharia-compliant businesses with a controllable risk level (deposits) so that the principal remains. The results of cash waqf management are channeled for broad social interests, such as education, health, social services, and economic development, including the empowerment of small and medium enterprises. The lack of public understanding of cash waqf is an obstacle, highlighting the need for the Indonesian Waqf Board (BWI) and related parties to socialise the Cash Waqf Act and its benefits to the community [79], [80], [81], [82], [83]. This study shows the use of cash waqf in Indonesia for social interests.

Sharia-compliant Micro Finance Institutions (SMFIs) connect with waqf funds through microfinance projects using *murabahah*, *mudharabah*, *musyarakah*, *ijarah*, and *qardh* agreements. Cash waqf serves as capital, actual savings, reserve funds, and grant funds. It offers more benefits because the money can be utilised for various purposes beyond endowments. Cash waqf has proven to strengthen SMFI capital due to limited savings and deposits [84]. This study also shows that cash waqf is applied to improve the community's economy through financial institutions.

The Malang Islamic Hospital in East Java uses cash waqf to construct VIP rooms. This hospital is managed by the Malang Islamic University Foundation (UNISMA). During the operational stage, the profit is allocated as follows: 70% for business development (additional VIP rooms, mini market, canteen, homestay), 20% for beneficiaries (education, economic well-being, health, additional income), and 10% for Nazhir [85]. Another study reveals that Airlangga University is the first university to become a Nazhir (manager) of cash Waqf in Indonesia. Airlangga University registered with the Indonesian Waqf Board (BWI) on 27 September 2018. The investment models illustrate the community donating funds to the Social Fund Management Centre (PUSPAS) at Airlangga University, which are divided into non-waqf donations and waqf donations. Non-waqf donations are allocated as follows: 85% for the PUSPAS program of Airlangga University, and the remaining 15% for the operational costs of PUSPAS Airlangga University. Cash Waqf Funds through the Waqf Amerta program will be managed as principal investments in several portfolios [86].

The Cash Waqf Linked Sukuk (CWLS) is the government's innovation in investment instruments. CWLS is an investment derived from waqf funds collected and then invested through sovereign sukuk. CWLS aims to provide attractive waqf investment opportunities in Indonesia, such as the Ahmad Wardi eye hospital in Serang, which used sukuk to build its eye center [87], [88]. This shows that the application of cash waqf in social infrastructure, such as hospitals, has been implemented both through direct cash fund schemes and CWLS, indicating that cash waqf has the potential to be integrated into the PPP scheme by adapting the existing financing models.

Although cash waqf has significant potential to support social and economic development, its implementation still faces several barriers: institutional aspects, regulations, product variety, and information technology support.

Cash waqf empowerment is carried out through transparent institutions, increasing the capacity of Nazhir, marketing innovation, regulatory support, strengthening education, digitalization, and data updating [89], [90]. Therefore, it is crucial to take steps to overcome these obstacles so that cash Waqf integration into the PPP scheme does not encounter hindrances.

A synthesis of the literature clearly shows that in Indonesia, cash waqf is legally recognized as a valid and sustainable Islamic waqf instrument, supported by fatwas and national regulations. Cash waqf has been used to fund various social initiatives, including education, healthcare, and economic development, managed by licensed Nazhir institutions under the Indonesian Waqf Board's (BWI) supervision. Multiple models of cash waqf implementation, such as in Islamic Microfinance Institutions (LKMS), hospitals, and universities, and the innovative Cash Waqf Linked Sukuk (CWLS) product, demonstrate the flexibility of cash waqf to support public welfare infrastructure. However, cash waqf has not been integrated into the PPP scheme for infrastructure development. The main challenges faced require strategies with innovative products, increasing transparency and accountability, improving Nazhir's professionalism, and developing digital waqf management. Addressing these challenges is essential to positioning cash waqf as a viable and Sharia-compliant financial mechanism within the PPP framework.

3.3.5 Research Gap

PPP aim to meet infrastructure funding needs by leveraging the strengths of both the public and private sectors. In Indonesia, implementing PPP still faces persistent challenges, such as the dependence of projects on conventional financing, such as loans with high interest rates, and complicated financial mechanisms. These constraints often cause project delays, so there is an immediate need for innovative and sustainable alternative financing, as shown in Fig. 4.

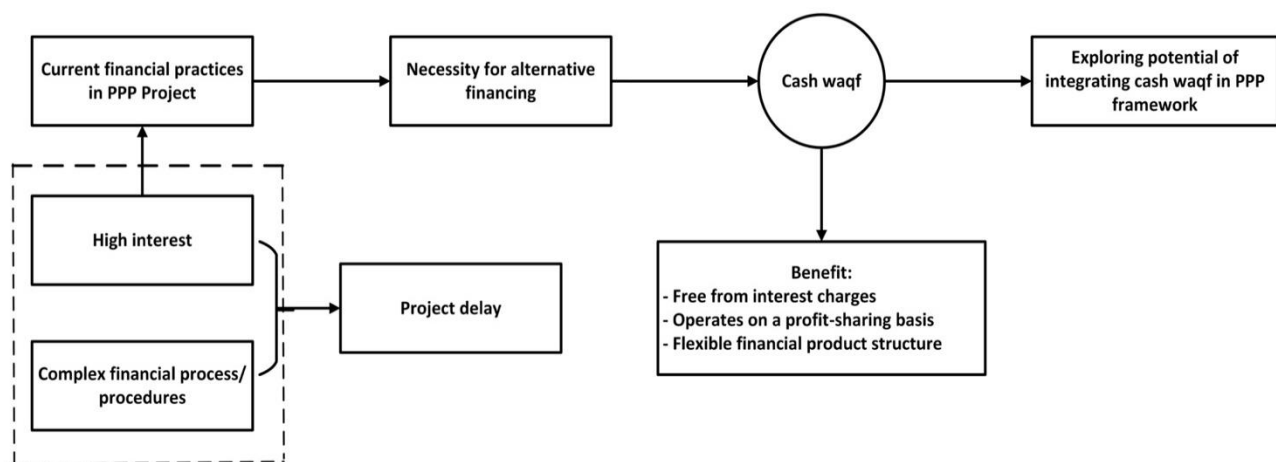


Fig. 4 Research gap

To address these limitations, one alternative is using cash waqf, which holds significant potential, estimated at approximately IDR 180 trillion per year, as an innovative infrastructure financing mechanism because it has advantages such as flexibility, interest-free, offers a profit-sharing model, and aligns with the principles of sustainable and ethical investment. However, a viable solution using cash waqf to tackle the constraints of PPP project financing is still an emerging field with limited research coverage. Based on the above explanation, this study aims to fill this gap by exploring how cash waqf can be integrated into the PPP financing framework.

4. Conclusion

This study investigates the potential of cash waqf integration into Indonesia's Public-Private Partnership (PPP) framework as an innovative solution to bridge financing constraints in PPP projects. Cash waqf presents a sustainable financial instrument compliant with sharia, but its potential is underutilized in public infrastructure. This review identifies that PPP implementation has financial challenges, such as high loan interest rates and complicated financial processes that cause PPP projects to be suboptimal. One form of innovation that has great potential to be developed in the PPP context is cash waqf. Cash waqf offers an alternative source of friendly financing, especially if integrated with PPP schemes for public infrastructure development.

Although cash waqf practices have been implemented in social sectors such as education, healthcare, and microfinance, no previous research has explored their application in PPP schemes. This study fills the gap in the

conceptual relationship between the two systems. This study will develop a new conceptual framework that contributes to the literature on Islamic social finance in infrastructure investment, which can be used as a guide to explore future empirical and policy discussions.

5. Further study

A study entitled 'Cash Waqf as a Potential Financial Instrument for Funding Public-Private Partnership (PPP) Infrastructure Projects in Indonesia' is being proposed. This investigation highlights the financial obstacles to implementing public-private partnerships in Indonesia. Traditional funding schemes for PPP have elevated bidding costs and intricate financial procedures. Alternative funding is crucial for addressing these issues in Indonesia's infrastructure development. Cash waqf is regarded as a promising alternative for PPP schemes. Entities including the government, Nazhir, the Indonesia Waqf Board, and the community can impact the decision to implement cash waqf in PPP projects. Additional investigation is necessary to explore the financing structure of PPP projects utilizing cash waqf funds.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of the paper.

Author Contribution

The authors confirm contributor as follows: **study conception and design:** Azeanita Suratkon; **data collection:** Yunita Dian Suwandari; **analysis and interpretation of results:** Yunita Dian Suwandari; **draft manuscript preparation:** Yunita Dian Suwandari, Azeanita Suratkon. All authors reviewed the results and approved the final version of the manuscript

References

- [1] T. Ehlers, "Understanding the challenges for infrastructure finance," *BIS Working Papers*, no. 454, August 2014, p. 29, 2014.
- [2] M. Darwin, M.-P. Cledan, H. Schuyler, and S. Jordan Z, "An Alternative Approach to Project Selection: The Infrastructure Prioritization Framework," *World Bank*, no. April, p. 40, 2016.
- [3] Asian Development Bank, "Public-Private Partnership: Development Prospects," 2018, <https://doi.org/10.32702/2306-6814.2020.4.109>
- [4] Bappenas, *Indonesia Public Private Partnership Handbook 2020*, no. 1. 2020, pp. 50–66.
- [5] J. B. Maramis, "Faktor Faktor Sukses Penerapan Kpbu Sebagai Sumber Pembiayaan Infrastruktur: Suatu Kajian," *JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis dan Inovasi Universitas Sam Ratulangi)*, vol. 5, no. 1, pp. 49–63, 2018, <https://doi.org/10.35794/jmbi.v5i1.19149>
- [6] W. Pratama, "Implementasi Skema PPP pada Proyek Tanjung Priok Access Toll Road," *Researchgate*, no. December 2017, <https://doi.org/10.13140/RG.2.2.31547.11040>
- [7] B. Rifai, "Hinderence of Electricity Public Private Partnership (PPP) and Need of Policy Improvement," *Journal of Economics and Development*, vol. 24, no. 1, pp. 51–66, 2016.
- [8] A. K. Riyadi and R. Arrahmansyah, "Evaluasi Pembiayaan Pembangunan Jalan Tol Palembang – Indralaya," *Journal Of Indonesian Islam; Vol 4, No 2 (2010)*, no. June 2017, <https://doi.org/10.13140/RG.2.2.18465.40800>
- [9] A. Suryono, I. Noor, and Brawijaya, "Drinking Water for the People: Public-Private Partnerships for Establishing Drinking Water Supply System in Jawa Timur Province," *International Journal of Management and Administrative Science (IJMAS)*, vol. 3, no. 08, pp. 57–65, 2016
- [10] K. H. Sutantiningrum and J. U. D. Hatmoko, "Opsi KPBU Proyek SPAM Regional Keburejo Provinsi Jawa Tengah: Pendekatan Manajemen Risiko," *Media Komunikasi Teknik Sipil*, vol. 25, no. 1, p. 69, 2019, <https://doi.org/10.14710/mkts.v25i1.19450>
- [11] R. Maulana, "ATI: Pelibatan Swasta pada Proyek KPBU Masih Hadapi Kendala - Ekonomi Bisnis.com," 2019. <https://ekonomi.bisnis.com/read/20191108/45/1168282/ati-pelibatan-swasta-pada-proyek-kpbu-masih-hadapi-kendala>

- [12] Tempo, "Ini Kendala untuk Libatkan Swasta dalam Proyek Infrastruktur Daerah - Bisnis Tempo.co," 2020. <https://bisnis.tempo.co/read/1382068/ini-kendala-untuk-libatkan-swasta-dalam-proyek-infrastruktur-daerah>
- [13] Asian Development Bank, PPP Monitor. 2017, <https://www.adb.org/sites/default/files/publication/381681/ppp-monitor.pdf?page=382>
- [14] UNDP, "Innovative Islamic Social Finance," 2020.
- [15] S. A. Shaikh, A. G. Ismail, M. H. M. Shafiai, and M. H. M. Shafiai, "Application of waqf for social and development finance," *ISRA International Journal of Islamic Finance*, vol. 9, no. 1, pp. 5–14, 2017, <https://doi.org/10.1108/IJIF-07-2017-002>
- [16] A. Syafiq, "Pemanfaatan Dana Wakaf Tunai Untuk Pembiayaan Pembangunan Inrastruktur," *ZISWAF : Jurnal Zakat dan Wakaf*, vol. 4, no. 1, p. 25, 2018, <https://doi.org/10.21043/ziswaf.v4i1.3029>
- [17] F. N. Uya, "Potensi Wakaf di Indonesia Capai Rp 180 Triliun Per Tahun," 2020. [Online]. Available: <https://money.kompas.com/read/2020/10/30/193149326/potensi-wakaf-di-indonesia-capai-rp-180-triliun-per-tahun>
- [18] A. S. Anuar, Z. Bahari, and C. M. Doktoralina, "The Diversity Of Waqf Implementations," *Ikonomika*, vol. 4, no. 1, pp. 13–34, 2019.
- [19] R. Ismal and F. M. Rizqi, "Bank Indonesia.The Role of Islamic Social Finance In the National Economy," 2019.
- [20] C. Willmington, P. Belardi, A. M. Murante, and M. Vainieri, "The contribution of benchmarking to quality improvement in healthcare. A systematic literature review," *BMC Health Serv Res*, vol. 22, p. 139, 2022, <https://doi.org/10.1186/s12913-022-07467-8>
- [21] N. Humble and P. Mozelius, "Content analysis or thematic analysis-Similarities, differences and applications in qualitative research," in *Proceeding of 21st European Conference on Research Methodology for Business and Management Studies*, 2022, pp. 76–81.
- [22] C. Gomez and M. Gambo, "Evaluation of special purpose vehicle organisation skill sets taxonomy for effective public-private partnership infrastructure project delivery," *Journal of Construction in Developing Countries*, vol. 21, no. 1, pp. 147–165, 2016, <https://doi.org/10.21315/jcdc2016.21.1.8>
- [23] L. A. L. Puteri, B. Susetyo, and A. Suroso, "Peran Pemangku Kepentingan Terhadap Faktor-Faktor Risiko Pada Proyek Kpbu Jalan Tol Unsolicited," *Konstruksia*, vol. 14, no. 1, p. 61, 2022, <https://doi.org/10.24853/jk.14.1.61-70>
- [24] A. E. Boardman, C. Greve, and G. A. Hodge, "Comparative Analyses of Infrastructure Public-Private Partnerships," *Journal of Comparative Policy Analysis: Research and Practice*, vol. 17, no. 5, pp. 441–447, 2015, <https://doi.org/10.1080/13876988.2015.1052611>
- [25] A. Berezin, N. Gorodnova, and D. Skipin, "Evaluation of Project Management Performance of Public-Private Partnership on the Basis of the Balanced Scorecard," *3rd International Multidisciplinary Scientific Conference on Social Sciences and Arts (SGEM 2016)*, no. September 2016, <https://doi.org/10.5593/SGEMSOCIAL2016/B23/S06.029>
- [26] J. Du, H. Wu, and L. Zhu, "Influencing Factors on Profit Distribution of Public-Private Partnership Projects: Private Sector's Perspective," *Hindawi Advances in Civil Engineering*, vol. 2018, no. 1, 2018, <https://doi.org/10.1155/2018/2143173>
- [27] F. A. Jeelani, N. A. Naqvi, U. Ahmed, D. Amin, and A. F. Malik, "Role of Private-Public Partnerships in Creation of Space Awareness and Outreach in Pakistan," *2021 7th International Conference on Aerospace Science and Engineering, ICASE 2021*, pp. 1–6, 2021, <https://doi.org/10.1109/ICASE54940.2021.9904083>
- [28] L. X. Liu, S. Clegg, and J. Pollack, "The Effect of Public-Private Partnerships on Innovation in Infrastructure Delivery," *Project Management Journal*, vol. 55, no. 1, pp. 31–49, Feb. 2024, <https://doi.org/10.1177/87569728231189989>
- [29] V. Agarwal, S. Malhotra, V. Dagar, P. M. R, and P. M. R, "Coping with public-private partnership issues: A path forward to sustainable agriculture," *Socioecon Plann Sci*, vol. 89, no. June 2022, p. 101703, 2023, <https://doi.org/10.1016/j.seps.2023.101703>
- [30] A. Stafford and P. Stapleton, "The impact of hybridity on PPP governance and related accountability mechanisms: the case of UK education PPPs," *Accounting, Auditing and Accountability Journal*, vol. 35, no. 3, pp. 950–980, 2022, <https://doi.org/10.1108/AAAJ-12-2019-4324>

- [31] R. A. Ojelabi, O. O. Oyeyipo, A. O. Afolabi, and I. O. Omuh, "Evaluating barriers inhibiting investors participation in Public-Private Partnership project bidding process using structural equation model," *International Journal of Construction Management*, vol. 22, no. 16, pp. 3055–3064, 2022, <https://doi.org/10.1080/15623599.2020.1840010>
- [32] S. De Schepper, E. Haezendonck, and M. Doms, "Understanding pre-contractual transaction costs for Public-Private Partnership infrastructure projects," *International Journal of Project Management*, vol. 33, no. 4, pp. 932–946, 2015, <https://doi.org/10.1016/j.ijproman.2014.10.015>
- [33] I. Demirag, I. Khadaroo, P. Stapleton, and C. Stevenson, "Risks and the financing of PPP: Perspectives from the financiers," *British Accounting Review*, vol. 43, no. 4, pp. 294–310, 2011, <https://doi.org/10.1016/j.bar.2011.08.006>
- [34] A. Kaka and F. Alsharif, "Financial Modelling of PPP Projects," *Policy, Finance & Management for Public-Private Partnerships*, no. March, pp. 212–228, 2009, <https://doi.org/10.1002/9781444301427.ch12>
- [35] L. Kumar, A. Jindal, and N. R. Velaga, "Financial risk assessment and modelling of PPP based Indian highway infrastructure projects," *Transp Policy (Oxf)*, vol. 62, no. February, pp. 2–11, 2018, <https://doi.org/10.1016/j.tranpol.2017.03.010>
- [36] N. Carbonara, N. Costantino, and R. Pellegrino, "Concession period for PPPs: A win-win model for a fair risk sharing," *International Journal of Project Management*, vol. 32, no. 7, pp. 1223–1232, 2014, <https://doi.org/10.1016/j.ijproman.2014.01.007>
- [37] G. Mladenovic and C. Queiroz, "A Financial Model to Estimate Annual Payments Required under Output- and Performance-Based Road Contracts," *International Conference on Transportation and Development 2018*, no. Fhwa 2017, pp. 309–318, 2018.
- [38] Y. Xu, C. Sun, M. J. Skibniewski, A. P. C. Chan, J. F. Y. Yeung, and H. Cheng, "System Dynamics (SD) -based concession pricing model for PPP highway projects," *International Journal of Project Management*, vol. 30, no. 2, pp. 240–251, 2012, <https://doi.org/10.1016/j.ijproman.2011.06.001>
- [39] . M. I. Amedanou, "Financing the economy in debt times: The crucial role of public-private partnerships," *Research in Economics*, vol. 77, no. 3, pp. 295–309, 2023, <https://doi.org/10.1016/j.rie.2023.05.003>
- [40] M. González-Medrano, T. G. Martín, and J. M. Rotellar-García, "Success Factors in Public-Private Partnership of High-Speed Railway Infrastructures: Elements for Improvement," *Springer Proceedings in Business and Economics*, vol. 72, no. 2022, pp. 195–203, 2023, https://doi.org/10.1007/978-3-031-22749-3_12
- [41] M. Mahboubi, R. Sedaesoula, S. Lari, and P. Moussavi, "An integrated risk and productivity assessment model for public – private partnership projects using fuzzy inference system," *Decision Analytics Journal*, vol. 10, no. November 2023, p. 100376, 2024, <https://doi.org/10.1016/j.dajour.2023.100376>
- [42] S. Hamzah, S. A. Adisasmita, T. Harianto, and M. S. Pallu, "Private Involvement in Sustainable Management of Indonesian Port: Need and Strategy with PPP Scheme," *Procedia Environ Sci*, vol. 20, pp. 187–196, 2014, <https://doi.org/10.1016/j.proenv.2014.03.025>
- [43] J. B. Maramis, "Faktor Faktor Sukses Penerapan Kpbu Sebagai Sumber Pembiayaan Infrastruktur: Suatu Kajian," *Jurnal Manajemen Bisnis dan Inovasi*, vol. 5, no. 1, pp. 49–63, 2018.
- [44] D. Utama, "Prinsip Dan Strategi Penerapan 'Public Private Partnership' Dalam Penyediaan Infrastruktur Transportasi," *Jurnal Sains dan Teknologi Indonesia*, vol. 12, no. 3, pp. 145–151, 2013, <https://doi.org/10.29122/jsti.v12i3.857>
- [45] G. Widjaja, "Implementation of public-private partnership in Indonesia," *Int J Econ Res*, vol. 14, no. 15, pp. 235–245, 2017.
- [46] N. H. Dary, I. D. A. Nurhaeni, D. G. Suharto, N. H. Dary, I. D. A. Nurhaeni, and D. G. Suharto, "Public-Private Partnership In Indonesian Urban Water Sanitation And Hygiene Program: Human Resource Capacity's Innovation," *Iapa Proceedings Conference*, p. 448, 2019, <https://doi.org/10.30589/proceedings.2019.247>
- [47] R. C. Eventia, "Legal Principles in Function and Performance of Bot Contract," *Yuridika*, vol. 32, no. 3, p. 521, 2017, <https://doi.org/10.20473/ydk.v32i3.4798>
- [48] B. Naipospos and A. Paramita, "Communication to find water intake location within public private partnership between tangerang government authority and PT aetra air tangerang," *Journal of Regional and City Planning*, vol. 30, no. 2, pp. 157–172, 2019, <https://doi.org/10.5614/jpwk.2019.30.2.5>
- [49] Asian Development Bank, "Public Private Monitor Public Private Monitor Indonesia," 2020.

- [50] P. N. Afiqah, S. Sabrina, S. Nurhidayah, N. Fazira, N. Farhana, and M. Najwa, "Management in Construction Researchers' Association (Micra) Annual Conference 2016," *5th Management in Construction Researchers' Association (Micra) Annual Conference 2016*, pp. 1–12, 2016.
- [51] W. Utama, A. Wibowo, D. Y. Jumas, E. Rita, M. Peli, and Yulcherlina, "Risk allocation of PPP waste to energy projects in Indonesia: A research framework," *IOP Conf Ser Mater Sci Eng*, vol. 930, no. 1, 2020, <https://doi.org/10.1088/1757-899X/930/1/012023>
- [52] S. E. Nur, D. Handayani, M. Suhenadra, and S. Prabowo, "Critical Success Factors on PPP Water Project in a Developing Country: Evidence from Indonesia," *The Journal of Asian Finance, Economics and Business*, vol. 7, no. 10, pp. 1071–1080, 2020, <https://doi.org/10.13106/jafeb.2020.vol7.no10.1071>
- [53] K. H. Sutantiningrum and J. U. D. Hatmoko, "Opsi KPBU Proyek SPAM Regional Keburejo Provinsi Jawa Tengah: Pendekatan Manajemen Risiko," *Media Komunikasi Teknik Sipil*, vol. 25, no. 1, p. 69, 2019, <https://doi.org/10.14710/mkts.v25i1.19450>
- [54] A. Wibowo and S. Mohamed, "Perceived Risk Allocation in Public-Private-Partnered (PPP) Water Supply Projects in Indonesia," *First International Conference on Construction In Developing Countries (ICCIDC-I)*, no. 2000, pp. 349–356, 2008
- [55] E. N. Surachman, S. W. Perwitasari, and M. Suhendra, "Stakeholder management mapping to improve public-private partnership success in emerging country water projects: Indonesia's experience," *Util Policy*, vol. 78, no. August, p. 101411, 2022, <https://doi.org/10.1016/j.jup.2022.101411>
- [56] E. Bhakti Amelia, D. Air Minum, D. Jenderal Cipta Karya, K. Pekerjaan Umum dan Perumahan Rakyat Jalan Pattimura No, K. Baru, and J. Selatan, "Faktor-Faktor Kritis Penentu Kesuksesan Kerja Sama Pemerintah dengan Badan Usaha (KPBU) Sektor Air Minum Critical Success Factors for Public Private Partnerships on Water Supply Sector," *Jurnal Litbang*, vol. 19, no. Juni, pp. 57–72, 2023.
- [57] G. E. Kandiyoh, S. L. Sengkey, S. Runtunuwu, and J. Tenda, "Analisis Faktor Konfirmatori untuk Menentukan Faktor- Faktor Penentu Keberhasilan Kerjasama Pemerintah Badan Usaha Jalan Tol Manado-Bitung," *Jurnal Teknik Sipil Terapan*, vol. 4, no. 1, pp. 29–35, 2022.
- [58] I. N. Utomo and L. S. Uguy, "Res Publica: Journal Of Social Policy Issues Public Private Partnership Dalam Pembangunan Infrastruktur Di Indonesia," *Res PublicA*, vol. 1, no. 1, 2022.
- [59] F. R. Putri, B. Susanti, and M. Foralisa Toyfur, "Jurnal Teknik Sipil Identifikasi Risiko Kritis Yang Memengaruhi Aspek Finansial Proyek Kpbu Jalan Tol," vol. 12, no. 1, 2023.
- [60] S. Ery and M. Isrochmani, "The Viability Gap Funding (VGF) Scheme in Construction Assignment LRT Jabodetabek Phase 2 Project Economic and Financial Analysis," *European Journal of Business and Management Research*, vol. 7, no. 4, pp. 139–142, 2022, <https://doi.org/10.24018/ejbmr.2022.7.4.1526>
- [61] F. Kurniawan, S. W. Mudjanarko, and S. Ogunlana, "Best practice for financial models of PPP projects," *Procedia Eng*, vol. 125, pp. 124–132, 2015, <https://doi.org/10.1016/j.proeng.2015.11.019>
- [62] P. I. Wahyuni, S. Hardjomuljadi, and H. Sulistio, "Identifikasi Variabel Sistem Insentif Dalam Proyek Kerjasama Pemerintah Swasta (Kps) Jalan Tol," *Paduraksa*, vol. 7, no. 2, pp. 239–256, 2018.
- [63] H. Daliman and O. Purwanti, "Analisis Penilaian Risiko Program Kerjasama Pemerintah Badan Usaha (KPBU) pada Infrastruktur Jalan Tol," *Jurnal Teknik Sipil*, vol. 7, no. Hal, pp. 22–31, 2021, <https://doi.org/10.26760/rekaracana>
- [64] N. Wijanarko and Z. Ye, "Transaction Cost Economics Perspectives on Indonesian Public-Private Partnership (PPP): Case Study on Umbulan Water Supply System PPP (Working Paper)," 2023. <https://doi.org/10.2139/ssrn.4391643>
- [65] M. Kahf, "Awqaf Property," pp. 1–45, 1998.
- [66] K. N. Aldeen, I. S. Ratih, and S. Herianingrum, "Contemporary Issues on Cash Waqf: A Thematic Literature Review," *International Journal of Islamic Economics and Finance (IJIEF)*, vol. 3, no. 3, pp. 119–144, 2020, <https://doi.org/10.18196/ijief.3236>
- [67] M. I. A. Mohsin, M. I. A. Mohsin, and M. I. A. Mohsin, "Financing through cash-waqf: a revitalization to finance different needs," *International Journal of Islamic and Middle Eastern Finance and Management*, vol. 6, no. 4, pp. 304–321, 2013, <https://doi.org/10.1108/IMEFM-08-2013-0094>
- [68] A. Ab. M. Ridhwan, J. Fuadah, and Y. A. Mohd, "Cah waqf models for financing in education," *Paper Proceeding of the 5th Islamic Economics System Conference (iECONS 2013)*, 2013.

- [69] Najim Nur Fauziah and Salina Kassim, "Cash Waqf Model for Social Enterprise to Achieve Sustainable Development Goals in Indonesia," *AL-MUZARA'AH*, pp. 95–105, Mar. 2022, <https://doi.org/10.29244/jam.specialissue2022.95-105>
- [70] M. K. Hassan, N. M. Irsyan, and A. Muneeza, "The Potential of Waqf-Blended Finance Using Crowdfunding in Indonesia," *International Journal of Islamic Thought*, vol. 24, no. 1, pp. 72–99, Dec. 2023, <https://doi.org/10.24035/ijit.24.2023.271>
- [71] K. N. Aldeen, I. S. Ratih, and R. S. Pertiwi, "Cash waqf from the millennials' perspective: a case of Indonesia," *ISRA International Journal of Islamic Finance*, vol. 14, no. 1, pp. 20–37, 2022, <https://doi.org/10.1108/IJIF-10-2020-0223>
- [72] R. Felix and L. Abubakar, "Application of Al-Ijarah Al-Maushufah Fi Al-Dzimmah for Infrastructure Project Financing in Indonesia," *Yuridika*, vol. 35, no. 1, p. 129, 2019, <https://doi.org/10.20473/ydk.v35i1.9021>
- [73] A. D. Rarasati, "Islamic project financing in Indonesian infrastructure development," *International Academic Journal of Human Resource and Business Administration*, vol. 2, no. 9, pp. 23–41, 2014.
- [74] A. D. Rarasati and F. F. Bahwal, "Sharia-compliant Financing of Infrastructure Development in Rural Area," *IOP Conf Ser Earth Environ Sci*, vol. 258, no. 1, 2019, <https://doi.org/10.1088/1755-1315/258/1/012014>
- [75] H. Jaiyeoba *et al.*, "Financing and Developing the Agricultural Sector Through Cash Waqf : An Analysis of Cash Waqf Using the Mudarabah Approach," *South East Asia Journal of Contemporary Business, Economics and Law*, vol. 6, no. 1, pp. 65–81, 2015.
- [76] M. Scarlata and L. Alemany, "Deal Structuring in Philanthropic Venture Capital Investments: Financing Instrument, Valuation and Covenants," *Journal of Business Ethics*, vol. 95, no. SUPPL. 2, pp. 121–145, 2010, <https://doi.org/10.1007/s10551-011-0851-8>
- [77] M. Shulthoni and N. M. Saad, "Waqf fundraising management: A conceptual comparison between traditional and modern methods in the waqf institutions," *Indonesian Journal of Islam and Muslim Societies*, vol. 8, no. 1, pp. 57–86, 2018, <https://doi.org/10.18326/ijims.v8i1.57-86>
- [78] N. Ruslan, J. Rashed, S. Buerhan, N. Ruslan, Jahangir Rashed, and Saiti Buerhan, "Contemporary Cash Waqf Models," *7th International Conference of Entrepreneurial Finance Islamic Social Finance & Innovation*, pp. 1–30, 2019.
- [79] S. Hasan, "Wakaf Uang Dan Implementasinya Di Indonesia," *Journal de Jure*, vol. 2, no. 2, pp. 162–177, 2010, <https://doi.org/10.18860/j-fsh.v2i2.2976>
- [80] D. Sulistyani, N. Asikin, S. Soegianto, and B. Sadono, "Pelaksanaan Dan Pengembangan Wakaf Uang Di Indonesia," *Jurnal Usm Law Review*, vol. 3, no. 2, p. 328, 2020, <https://doi.org/10.26623/julr.v3i2.2874>
- [81] A. Ascarya, S. Rahmawati, and R. Sukmana, "Cash Waqf Models of Baitul Maal wat Tamwil in Indonesia," *Al-Awqaf: Jurnal Wakaf dan Ekonomi Islam*, vol. 10, no. Special, pp. 115–126, 2017
- [82] E. N. Wati, M. B. Sholeh, and M. H. Akhmadi, "Pemanfaatan Imbal Hasil Cash Waqf Linked Sukuk," *El Dinar*, vol. 10, no. 1, pp. 69–84, 2022, <https://doi.org/10.18860/ed.v10i1.13380>
- [83] K. Musari, "Integrating Green Sukuk and Cash Waqf Linked Sukuk, the Blended Islamic Finance of Fiscal Instrument in Indonesia: A Proposed Model for Fighting Climate Change," *International Journal of Islamic Khazanah*, vol. 12, no. 2, pp. 133–144, Jul. 2022, <https://doi.org/10.15575/ijik.v12i2.17750>
- [84] Gustani and D. A. Ernawan, "Cash Waqf as an Alternative Source of Islamic Microfinance Institution' s Capital in Indonesia," *Journal of Islamic Economics Lariba*, vol. 2, no. 2, pp. 15–24, 2016.
- [85] V. A. Qurrata, B. S. Narmaditya, L. Seprillina, and N. E. B. Hussain, "The implementation and development of productive waqf in Indonesia: Case at malang islamic hospital," *Humanities and Social Sciences Reviews*, vol. 7, no. 4, pp. 533–537, 2019, <https://doi.org/10.18510/hssr.2019.7471>
- [86] M. Syadid and M. A. Muammar, "Model Pengembangan dan Pemanfaatan Wakaf Tunai Untuk Pendidikan Tinggi," *Jurnal Justisia Ekonomika: Magister Hukum*, vol. 4, no. 1, pp. 1–16, 2020.
- [87] Ubaidillah, Masyhuri, and W. Nanik, "Cash Waqf Linked Sukuk (CWLS): An Alternative Instrument FOR INFRASTRUCTURE FINANCING," *Indonesian Interdisciplinary Journal Of Sharia Economics (IJJSE)*, Vol. 4, No. 1, Pp. 35–49, 2021.
- [88] M. A. Agustianto and R. D. Rahayu, "Analisis Implementasi Cash Waqf Linked Sukuk (CWLS) Perspektif Prinsip Ekonomi Syariah," *Management of Zakah and Waqf Jorنال (MAZAWA)*, vol. 1, no. 2, pp. 145–161, 2020.

- [89] A. S. Rusydiana, "Aplikasi Interpretive Structural Modeling Untuk Strategi Pengembangan Wakaf Tunai Di Indonesia," *Jurnal Ekonomi dan Bisnis Islam (Journal of Islamic Economics and Business)*, vol. 4, no. 1, p. 1, 2018, <https://doi.org/10.20473/jebis.v4i1.9771>
- [90] A. S. Rusydiana, Y. Hidayat, T. Widiastuti, and S. S. Rahayu, "Developing Islamic Economy Through Cash Waqf Instrument: Case Study in Indonesia," *al-Uqud: Journal of Islamic ...*, vol. 5, no. 28, pp. 43–59, 2020, <https://doi.org/10.26740/al-uqud.v5n1.p43-59>