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BALANCING RISK AND INCENTIVES: INTEGRATING MRG INTO FIXED PAYMENT MECHANISMS ON HOSPITAL PPP STRUCTURES

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ABSTRAK

Keberhasilan suatu proyek Kerjasama Pemerintah dengan Badan Usaha (KPBU) sangat bergantung pada alokasi risiko yang efektif dan tepat dari pemerintah ke badan usaha. Pemerintah menggunakan beberapa mekanisme seperti Pertanggungan Pendapatan Minimum untuk mendukung skema proyek KPBU. Penelitian tentang Pertanggungan Pendapatan minimim masih sangat minim pada konteks Indonesia. Atas hal tersebut, studi konseptual ini menawarkan adaptasi pertanggungan pendapatan minimum dalam mekanisme pembayaran tetap dalam KPBU serta mengeksplorasi bagaimana mengintegrasikan beberapa prinsip pertanggungan pendapatan minimum ke dalam struktur pembayaran tetap. Kajian konseptual ini menggunakan pendekatan studi litelatur pada beberapa penelitian serta penerapan yang sudah berjalan, kemudian disintesa untuk diadopsi penerapannya pada konteks Indonesia. Kajian konseptual ini menemukan bahwa prinsip pertanggungan pendapatan minimum dapat diadaptasi pada skema pembayaran tetap pada proyek KPBU sektor rumah sakit, dan badan usaha masih dapat mengoptimalkan pendapatannya dari beberapa layanan.

Kata Kunci: KPBU, alokasi risiko, pertanggungan pendapatan minimum, pembayaran tetap, infrastruktur kesehatan

ABSTRACT

The success of a Public-Private Partnership (PPP) project relies on the appropriate risk allocation from the government to the private sector. The government employs mechanisms such as Minimum Revenue Guarantees(MRGs) within PPP project schemes. Research on MRGs, however, remains very limited in the Indonesian context. Therefore, this conceptual study proposes the adoption of minimum revenue guarantees into fixed payment mechanisms in PPP projects within the hospital sector and explores how to integrate several principles of minimum revenue guarantees into a fixed payment structure. This conceptual study employs a literature review approach, examining various studies and existing implementations, and synthesizing them for adoption in the Indonesian context. The conceptual study finds that the principles of minimum revenue guarantees can be adapted to fixed payment schemes in PPP projects for the hospital sector, and private entities can optimize their revenue from certain services.

Keywords: Public-Private Partnerships (PPPs), risk transfer, MRGs, Fixed payment mechanisms, healthcare infrastructure.

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1. Introduction

Governments around the world are increasingly turning to public-private partnerships (PPPs) as a means to finance and develop public infrastructure projects (Yescombe & Farquharson, 2018; Tse et al. 2022). These partnerships leverage the strengths of both the public and private sectors, combining public oversight and private sector efficiency to deliver essential services and public infrastructure (Cui et al., 2018). One critical tool that governments use to support these PPPs is the minimum revenue guarantee (MRG), which helps mitigate operating revenue risks for private investors (Carbonara & Pellegrino, 2018; Zhao & Hu, 2021). As Kokkaew (2015) highlights, MRGs play a crucial role in providing the financial stability needed to attract private investment, ensuring that projects can move forward even in the face of uncertain future revenues.

Limited public funds have driven governments to partner with the private sector through project finance schemes (Jun, 2010; Tse et al. 2022). Many governments face significant fiscal constraints, making it challenging to finance large-scale infrastructure projects solely through public means (Delmon, 2021). In response, they have increasingly turned to the private sector, utilizing project finance schemes characterized by unique features such as uncertainty and managerial flexibility (Jun, 2010).

PPPs represent a fundamental change in how infrastructure assets and services are provided (Yescombe & Farquharson, 2018; Tse et al. 2022). Historically, governments have been the primary providers of infrastructure, managing everything from roads and bridges to hospitals and schools. However, by involving the private sector, governments can ease fiscal constraints and improve the overall efficiency of infrastructure investments (Delmon, 2021). The private sector's involvement often leads to better project management, cost control, and innovation, all of which are critical to the successful delivery of infrastructure projects (Dolla & Laishram, 2020).

For PPPs to be successful, a key requirement is the adequate transfer of risk from the government to the private sector (Vecchi and Cusumano, 2018; Tse et al. 2022). This risk transfer is essential for ensuring that PPPs deliver high-quality and cost-effective services (Delmon, 2021). By transferring risks such as construction delays, cost overruns, and operational inefficiencies to the private sector, governments can ensure that these projects are managed more effectively (Dolla & Laishram, 2020). However, this transfer of risk must be carefully balanced to avoid placing an undue burden on private investors, which could deter participation in PPP projects (Tallaki & Bracci, 2021; Tse et al. 2022).

Despite their potential benefits, the increasing popularity of PPPs raises important challenges related to protecting the public interest and maintaining accountability for public funds. Reeves (2016) notes that the balance between protecting the public interest and creating conditions for competitive procurement is often tipped in favor of the latter. This shift can lead to situations where the public sector takes on excessive financial liabilities to attract private investment, potentially compromising the long-term sustainability of public finances (Ahmad et al., 2018).

Nonetheless, the benefits of PPPs are significant. One of the primary advantages is the efficiency gains achieved in both the production and allocation of infrastructure.

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According to Blanc-Brude (2013), the justification for risk transfer to the private sector is strongest when the risk is endogenous to the project. Furthermore, the higher cost of capital associated with PPPs is often offset by the improved operational efficiency that private sector involvement brings (Delmon, 2021). This means that even though PPPs might involve higher upfront costs, the long-term benefits in terms of efficiency and cost savings can make them a worthwhile investment (Verweij & Meerkerk, 2021).

However, PPPs are not without their challenges. One of the most significant issues is the financial viability of projects, particularly when infrastructure projects do not generate enough revenue to cover their costs (Fouad et al., 2021). This is often the case for projects that are socially and economically valuable but may not be financially self-sustaining. González (2020) highlights that many PPP projects, including those under the build-operate-transfer (BOT) scheme, face significant challenges due to uncertainty in future demand (Bae et al., 2019). This uncertainty can discourage private investment, as investors are wary of taking on projects where revenue streams are not guaranteed (Kim et al., 2022).

To address these challenges, governments often provide support through mechanisms such as MRGs (Tsukada, 2012; Pellegrino, 2021). These guarantees help to mitigate the financial risks associated with demand uncertainty, making PPP projects more attractive to private investors (Kim et al., 2022; Zhao & Hu, 2021). By ensuring that private investors will receive a minimum level of revenue, MRGs provide a financial safety net that encourages investment in projects that might otherwise be deemed too risky (Tsukada, 2012; Zhao & Hu, 2021; Li & Wang, 2023).Tsukada, 2012; Zhao & Hu, 2021; Li & Wang, 2023).

Calculating the optimal values for the revenue floor (minimum revenue guarantee) and revenue ceiling (revenue sharing threshold) is critical to creating a "win-win" situation for both the government and private concessionaires. Carbonara & Pellegrino (2018) emphasize that these values must be determined in a way that fairly shares the risk between the parties involved. An appropriately structured MRG can ensure that private investors are protected from significant financial losses, while also ensuring that the public sector does not take on excessive financial liabilities (Matos & Gonçalves, 2020; Zhao & Hu, 2021).

MRGs are a tool in the PPP toolbox, particularly for projects with inherent uncertainties (Tsukada, 2012; Zhao & Hu, 2021), such as those in the healthcare sector. As highlighted by Ali et al. (2012) and Carbonara & Pellegrino (2018), MRGs are a critical risk mitigation strategy for infrastructure projects with uncertain demand (Zhao & Hu, 2021). Kim et al. (2022) emphasize the role of MRGs in attracting private investment while acknowledging the potential financial burden on governments. Therefore, This research contributes to the ongoing dialogue on MRGs by providing a comprehensive analysis of their application in hospital PPPs, highlighting the potential for innovative solutions and best practices.

While there is a substantial body of literature on the use of MRGs in general infrastructure projects, there is a noticeable gap in research specifically focusing on public hospital projects. Public hospital projects have unique characteristics and challenges that differentiate them from other types of infrastructure projects. These

include higher levels of demand uncertainty, significant operational complexities, and critical public health implications (Basabih et al., 2022). Despite these differences, we found that there has been limited exploration of how MRGs and clawback mechanisms can be effectively applied in the context of public hospital PPPs.

The existing literature extensively covers general infrastructure projects but often overlooks the specific dynamics and requirements of the healthcare sector. Public hospitals are essential for delivering healthcare services to the population, and their financial viability is critical to ensuring uninterrupted service delivery (World Health Organization, 2020). The unique challenges of public hospital projects necessitate tailored financial structures and risk mitigation strategies that account for the sector's specificities (Melo et al., 2022).

Furthermore, the relationship between MRGs and clawback mechanisms remains underexplored. Clawback mechanisms are designed to ensure that excess revenues generated by PPP projects are returned to the government, providing a safeguard against excessive profits for private investors (Wibisono, 2020). However, the optimal design and implementation of these mechanisms in public hospital projects have not been adequately addressed in the existing literature. This gap is critical, as the healthcare sector poses distinct demand uncertainties and financial risks that require customized solutions.

To address the identified research gap, this conceptual research aims to explore the following. Firstly, the study investigates the prevailing schemes employed in Hospital PPP projects and the rationale behind the adoption of partial operation strategies. Secondly, it delves into the incorporation of availability payments in Hospital PPP Projects in Indonesia. Thirdly, the research examines the distinctions between Fixed Payment and Availability Payment structures when utilized in Hospital PPP Projects. Lastly, the study explores how the convergence of Fixed Payment mechanisms with demand-based revenue streams contributes to the development of a comprehensive and balanced financial setup for hospital PPP projects.

This research significantly contributes to the field of Public-Private Partnerships (PPPs) in the healthcare sector by providing a comprehensive analysis of payment mechanisms and their implications for project sustainability and success. Moreover, with the specific context of Indonesian hospital PPPs, this study fills a critical knowledge gap and offers practical insights for policymakers, practitioners, and researchers on how to adopt the MRG principles into fixed payment schemes on PPP hospital projects. Furthermore, the comparative analysis of fixed payment and availability payment structures sheds light on the financial strategies that can be employed to optimize project outcomes. The research provides actionable recommendations and best practices that can be applied to enhance the design, implementation, and performance of hospital PPP projects in Indonesia.

Additionally, as governments strive to meet the rising healthcare needs of their populations, PPPs offer a promising avenue for delivering quality healthcare services efficiently. However, the inherent risks associated with healthcare projects, including uncertain demand and operational challenges, can deter private sector investment. MRGs can play a crucial role in mitigating these risks and attracting private capital to

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critical healthcare infrastructure projects. Therefore, this research addresses this urgency by providing a comprehensive analysis of MRGs in the context of hospital PPPs. Furthermore, this research aims to contribute to the development of sustainable and effective healthcare delivery models.

2. Literature Review

Payment mechanisms in PPPs are designed to ensure that private sector partners are compensated fairly and incentivized to deliver high-quality services (Li et al., 2022). Unlike traditional infrastructure projects, which rely on upfront payments and cost-based contracting, PPPs often employ performance-based payments (Shang & Abdel Aziz, 2020; Soliño & Albornoz, 2021; Peterson & Allport, 2021). These mechanisms focus on outcomes and align the interests of the public and private sectors by linking payments to the achievement of specific performance criteria (Su et al., 2023).

An effective payment mechanism is crucial for PPP success, motivating the private sector to enhance performance while ensuring financial viability (Cao and Wang, 2022). The design of such mechanisms must adhere to principles that attract private investment, ensure mutual benefits, deliver value for money, and allocate risks appropriately (Su et al., 2023). A well-structured payment mechanism not only incentivizes the private sector to participate but also guarantees the project's smooth execution by balancing interests and managing risks effectively (Su et al., 2024).

The availability payment model is one of the most commonly used mechanisms, where payments are tied to meeting specific performance criteria, making it highly suitable for public infrastructure projects (Shang & Abdel Aziz, 2020; Soliño & Albornoz, 2021). Availability payments are performance-based, meaning payments are contingent upon the private sector meeting predefined performance criteria. This model mitigates demand risk by having the government assume this risk, providing more predictable revenue streams for the private sector (Shi, Li, & He, 2020).

Availability payments ensure that maintenance and future capital renewal costs are fully funded, enhancing the project's sustainability. They require stringent performance output specifications and management, which are critical to ensuring that the quality of service meets governmental standards (Akintoye & Beck, 2009). On the academic level, studies have highlighted the importance of clear performance output specifications. Heavisides and Price's comparison of input vs. output specifications in UK National Health Services projects underscores the importance of clear performance metrics to avoid disputes (Heavisides & Price, 2001). Akintoye and Beck suggest that well-defined output specifications can significantly reduce operational conflicts, while Lawther and Martin emphasize the need for alignment among Key Performance Indicators (KPIs) to ensure that projects meet both societal and project-specific goals (Akintoye & Beck, 2009; Lawther & Martin, 2014).

Availability payments focus on the provision of services and the availability of the infrastructure asset. Payments are made as long as the asset is available for use and meets the required performance standards. This can include criteria such as safety, functionality, and maintenance standards. If the asset fails to meet these standards, deductions or abatements are applied to the payments (APMG International, 2016).

Based on APMG International (2016) there are two main types of availability payments:

1. *Availability to Use*: This refers to the actual usability of the asset by the public. For example, a road must be safe and open for traffic.
2. *Deemed Availability*: This is based on the fulfillment of service standards outlined in the contract, such as the condition of the road and the frequency of maintenance activities.

Availability payments are advantageous because they align the interests of the public sector with the private sector by ensuring that private entities are motivated to maintain high service standards (Yescombe & Farquharson, 2018; Higuchi, 2019). This model is particularly effective in projects where user demand is difficult to predict, as it provides a stable revenue stream regardless of actual usage (KPMG, 2009).

Volume payments provide compensation for the number of users or output volume. This mechanism is commonly used in projects where the service demand can be measured directly, such as toll roads or wastewater treatment plants (APMG International, 2016). Volume payments align the private sector's revenue with actual usage, incentivizing them to maintain high service levels to attract more users.

APMG International (2016) explained that volume payments are based on the actual usage of the infrastructure. Payments are made according to the number of users, or the volume of service provided. This model is effective in projects where user demand is predictable and stable. For example, in a toll road project, payments are made based on the number of vehicles using the road. Volume payments are advantageous because they directly link revenue to service usage, providing a clear incentive for private entities to attract and serve more users. However, this model also exposes the private sector to demand risk, which can be mitigated through measures such as shadow tolling, where the government makes payments based on projected rather than actual usage (Shi, Li, & He, 2020).

The Minimum Revenue Guarantee (MRG) is a PPP risk-sharing mechanism (Anderson et al., 2006; Zhao & Hu, 2021). It guarantees that project revenues will not fall below a specified threshold, thus reducing the revenue risk for private investors (Ashuri et al., 2012; Zhao & Hu, 2021). This guarantee can also be extended to share surplus revenue, a mechanism known as Toll Revenue Cap (TRC), which ensures that excess revenue is shared between the concessionaire and the government (Ashuri et al., 2012). This dual mechanism—MRG and TRC—acts similarly to financial options, providing a buffer against revenue volatility (Wang, Li, & Gao, 2015).

The application of MRG is common in Build-Operate-Transfer (BOT) projects, particularly in toll road projects (Ashuri et al., 2010). Furthermore, Ashuri et al (2012) highlighted that the MRG not only reduces the investment risk for the private sector but also mitigates the financial burden on the government by sharing the revenue risk. Furthermore, Ashuri and Kashani (2011) indicated that MRG and TRC are effective in managing risk and benefits, allowing both the government and private sector to make informed entry decisions into BOT projects (Wang, Li, & Gao, 2015; Bae et al., 2019). Chiara et al. (2007) elaborated on the structure of MRG, describing it as a contract

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where the government promises to compensate for revenue shortfalls, thus incentivizing private investment (Ali et al., 2012).

The effectiveness of MRG in managing demand uncertainty is well-documented. By providing a safety net against revenue fluctuations, MRG enhances the financial viability of PPP projects (Zhao & Hu, 2021), making them more attractive to private investors (Ashuri et al., 2010). However, setting appropriate thresholds for MRG and TRC is crucial, since it can lead to imbalanced risk-sharing, adversely affecting the project's credit rating and the government's flexibility to invest in other projects (Ashuri et al., 2012).

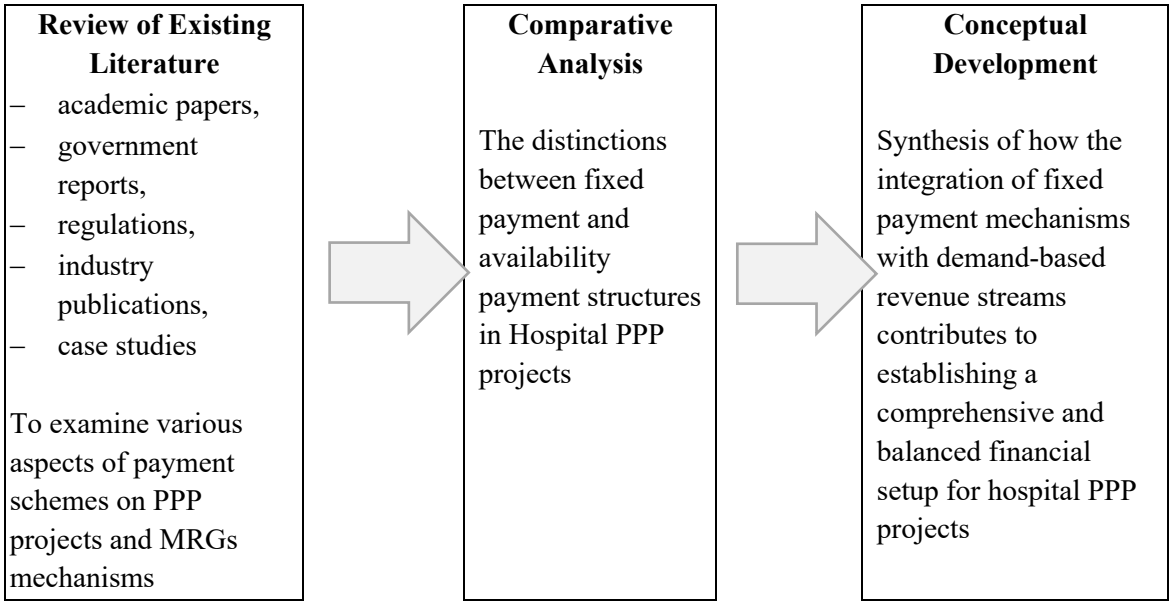
Several models of MRG can be implemented to enhance the bankability of projects and attract competitive bidding from potential investors. MRG schemes increase cash flow expectations and lower the cost of capital, thereby enhancing the financial feasibility of projects (Kokkaew & Chiara, 2013). Theoretically, because it can reduce revenue risks, which are notably one of the most important risks in toll road investments, this scheme increases cash flow expectations and simultaneously reduces the cost of capital, both of which have implications for enhancing the financial feasibility of projects (Wibowo, 2006).

As described in the IIGF Institute White Paper (2022), three main models of Minimum Revenue Guarantees(MRGs) are as follows:

1. The first model provides compensation equal to the difference between actual revenue and the guaranteed minimum revenue.
2. The second model combines MRG with a clawback mechanism, requiring the investor to return all excess revenue to the government when actual revenue exceeds a certain level.
3. The third model applies MRG and clawback with limited payments, such as in Vietnam, where lower and upper bounds are set at 75% and 125% of revenue projections, respectively. For any revenue shortfall or excess, the government provides compensation of 50% of the difference between the lower and upper bounds.

3. Research Method

This conceptual research employs a qualitative approach, integrating literature review and case study analysis to address the identified research gap and explore the research questions. This methodology aims to comprehensively understand the various payment mechanisms utilized in Hospital Public-Private Partnerships (PPP) projects, focusing on the Indonesian context. This conceptual research offers insights into the design and implementation of effective financial structures for hospital PPP projects through a combination of literature review, document analysis, and comparative analysis.



Source: Author, 2024

Figure 1: Methodological Framework

To understand the scheme employed in Hospital PPP projects and the rationale for partial operation strategies, a comprehensive review of existing literature is conducted, including academic papers, government reports, regulations, industry publications, and case studies. The literature review encompasses studies that examine various aspects of payment schemes on PPP projects and MRGs mechanisms. Incorporation of availability payments in Hospital PPP projects in Indonesia is analyzed through document analysis of relevant government regulations, policies, and guidelines.

A comparative analysis is conducted to delineate the distinctions between fixed payment and availability payment structures in Hospital PPP projects. This analysis examines key characteristics, advantages, and challenges associated with each payment mechanism. Drawing insights from the literature review, this conceptual article then provides an understanding of how the integration of fixed payment mechanisms with demand-based revenue streams contributes to establishing a comprehensive and balanced financial setup for hospital PPP projects.

4. Result and Discussion

In this conceptual paper, we adapt the concept of MRGs to the framework of Fixed Payment mechanisms within hospital PPP projects. By doing so, we aim to explore how integrating MRG principles into Fixed Payment structures can bolster financial sustainability and incentivize private sector engagement in healthcare infrastructure endeavors.

Fixed Payment mechanisms in hospital PPPs entail providing predetermined revenue streams to private sector entities, regardless of actual service utilization. This parallels the core tenets of MRGs, which offer investors a minimum revenue guarantee to mitigate revenue uncertainties. By applying MRG concepts to Fixed Payment models, hospital PPPs gain conceptual grounding, emphasizing the role of revenue

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stability and risk management in attracting private investment. It also acknowledges the inherent revenue risks associated with healthcare services and underscores the necessity of providing financial reassurance to private investors. Moreover, leveraging the MRG concept for Fixed Payment mechanisms in hospital PPPs facilitates a more nuanced understanding of revenue risk allocation and contractual frameworks (Peterson & Allport, 2021). It enables the development of robust contractual agreements that delineate the obligations of both public and private sector entities concerning revenue guarantees, payment modalities, and performance incentives (Ibid).

This analysis chapter will be divided into several sections. First, we will present the scheme of the Hospital PPP project, with a particular focus on why the operational aspect is only partially shared with the Implementing Business Entity (IBE). Second, we will provide an overview of the availability payment model commonly used in social infrastructure projects, including hospitals. Third, we will examine the fixed payment mechanism in PPP projects. Finally, we will offer a comparative analysis of fixed payments versus availability payments in Hospital PPP Projects.

The Hospital PPP project aims to enhance the capacity of the existing hospital which includes (re)building the health infrastructure, increasing bed capacity, managing equipment services, managing non-core services, and improving overall service delivery (see Basabih et al., 2022). In hospital PPP projects, a comprehensive scheme is often adopted to ensure effective collaboration between the public and private sectors. This scheme typically includes the Design, Build, Finance, Operate, Maintenance, and Transfer (DBFOMT) framework (Lomprakhon et al., 2013). Under this model, the IBE is responsible for designing, building, financing, operating, maintaining, and eventually transferring the infrastructure back to the government. For the components of Design, Build, Finance, Maintenance, and Transfer (DBFMT), the responsibilities are fully transferred to the IBE (Vecchi and Cusumano, 2018). The IBE undertakes the construction and maintenance of the hospital infrastructure, ensuring that the project meets the required standards and timelines (Ibid). This includes financing the project, managing the construction process, and maintaining the facilities throughout the concession period (Ibid).

However, the operation component is only partially transferred to the IBE. Since the hospital was already operational and run by the government before the PPP project, the IBE's role in operation is limited. In this partial operation model, the IBE has the opportunity to establish various new facilities that are not currently available in the existing hospital. These facilities, referred to as centers of excellence, may include advanced medical services such as nuclear health facilities, state-of-the-art medical equipment, and high-tech medicine. The IBE can generate income from these centers of excellence through user charges, which are distinct from the existing hospital's operational revenue. This arrangement allows the IBE to introduce specialized services that enhance the hospital's capabilities and attract additional revenue streams. Additionally, the IBE is responsible for managing volume-based services of non-core services such as laundry, food and beverage services for patients, and other ancillary services. The IBE can also oversee the management of commercial areas within the hospital, including parking spaces, rental areas for cafes or convenience stores, and

facilities like auditoriums and meeting spaces. These commercial areas provide the IBE with further opportunities to generate income through leasing and service charges.

To understand how the MRG concept can be adapted to fixed payment structures in hospital PPP projects, we first need to grasp the concept of availability payments, a common payment mechanism used in such projects. The availability payment mechanism is one of the payment schemes in PPP projects, designed to ensure continuous service quality and optimize public sector budget utilization. By providing a structured payment framework, it attracts private sector participation by guaranteeing returns on investment, independent of user-generated revenue. This mechanism is particularly beneficial for infrastructure projects with high public utility but uncertain or non-existent direct revenue streams. The regulatory guidelines ensure transparency, accountability, and financial discipline, thereby enhancing the feasibility and sustainability of PPP projects.

The availability payments mechanism involves periodic payments made by a government entity to a private IBE, contingent upon the provision and maintenance of infrastructure services that meet the quality standards specified in the PPP agreement (Peterson & Allport, 2021). When the IBE's return on investment relies on these periodic payments, the Contracting Agency (PJPK) must budget for the necessary funds. These funds cover capital costs, operational expenses, and profit margins for the IBE throughout the project's operational period.

The regulatory framework for Availability Payments is outlined in the Ministry of Finance Regulation No. 260/PMK of 2016. This regulation details the procedures for budgeting and disbursing Availability Payments in government-business cooperation projects aimed at infrastructure provision. According to PMK No. 260/2016, the PJPK allocates funds for Availability Payments through specific mechanisms applicable within each agency for PPP projects, using either the state budget (APBN) or regional budgets (APBD).

The regulation underscores two primary objectives of Availability Payments: ensuring the continuous availability of high-quality infrastructure services to the public and optimizing the value for money from the PJPK's budget. This mechanism guarantees that the infrastructure services provided by the IBE consistently meet required quality standards, benefiting the public reliant on these services. Simultaneously, it aims to achieve optimal financial efficiency and effectiveness in budgetary allocations.

Availability Payments apply to PPPs that meet certain criteria. These include projects involving economic or social infrastructure that deliver substantial public benefits and projects where the return on investment is not derived from direct user payments. Additionally, when revenue from user payments cannot be included in the Availability Payment to the IBE, and in PPP projects where the business entity selection process is fair, open, transparent, and competitive, this mechanism upholds principles of healthy competition.

Financial management of Availability Payments is detailed in PMK No. 260/2016. The PJPK is required to budget for these payments annually throughout the infrastructure's operational period, with periodic adjustments allowed each fiscal year as

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long as the Availability Payment obligation is active under the PPP agreement. Payments are made only after the infrastructure is completed, operational, and meets the specified output and performance indicators. This ensures the effective use of public funds, and that the IBE fulfills its contractual obligations before receiving payments.

Hospitals are particularly suitable for the Availability Payment model due to their critical role in providing essential healthcare services, which inherently carry high public utility but often face revenue generation challenges. Unlike other infrastructure projects, hospitals cannot rely solely on user fees to cover operational costs and generate sufficient returns on investment due to the necessity of providing care regardless of a patient's ability to pay. Availability Payments ensure that hospitals maintain high standards of service quality without financial strain, facilitating consistent and reliable healthcare delivery. This approach also aligns with public health goals, ensuring that essential medical services are accessible to the community while attracting private investment by mitigating financial risks associated with unpredictable revenue streams.

Table 1: The Summary of Key Differences between Availability Payment & Fixed Payment

Key Differences	Availability Payment	Fixed Payment
Funding Source	Government budgets	Generated revenues and potential budget top-ups
Risk Allocation	Exposes the public sector to demand risks	Partially shifts revenue risks to the private sector.
Viability Gap Fund (VGF)	Not applicable	Available under specific conditions
Financial Management	Government budget	Robust; including reserve fund, to address revenue shortfalls
Hospital PPP Framework	Payments are based on meeting performance and availability criteria.	Guaranteed revenues to IBE, independent of service utilization.

Source: Author, 2024

This conceptual paper outlines two payment mechanisms that can be chosen for hospital PPP projects: the Fixed Payment model and the Availability Payment model. While both aim to ensure revenue stability and quality service provision, they differ significantly in their structures, implementation, and outcomes. This section provides a comparative analysis of Fixed Payment and Availability Payment models in hospital PPP projects, emphasizing their similarities, significant differences, advantages of Fixed Payment, and the role of the Reserve Fund Account in Fixed Payment models.

According to our literature review, both fixed payment and availability payment models in PPP projects share the following similarities:

1. Both Fixed Payment and Availability Payment mechanisms aim to provide revenue stability to private investors by guaranteeing predictable income streams over the project's operational period.

2. In both models, the public sector (represented by the Contracting Agency) commits to making payments to the private sector (IBE the Implementing Business Entity) for the provision of healthcare services.
3. Both mechanisms involve risk allocation between the public and private sectors to mitigate financial risks and ensure project viability.

According to our literature review, the following are the key differences between fixed payment and availability payment models in PPP projects:

1. Availability Payment models are funded directly from government budgets, whereas Fixed Payment models draw funds from both the revenue generated by healthcare services and government budgets in case of targeted revenue shortfalls.
2. Fixed Payment models rely on revenue generated directly from healthcare services provided to patients, whereas Availability Payment models derive funds from government budgets or user charges.
3. Availability Payments are disbursed directly by the Contracting Agency from public funds, while Fixed Payments are funded through project accounts containing revenue from healthcare services and patient charges.
4. Availability Payment models subject the public sector to demand risks since payments are reliant on service availability. In contrast, Fixed Payment models partially shift revenue demand risks to the private sector, particularly regarding revenue directly managed and operated by the IBE, as well as service volume and management of commercial areas.
5. Availability Payment models expose the public sector to demand and revenue risks, as payments are contingent on service availability. Fixed Payment models partially transfer revenue risks to the private sector, as payments are linked to service volume and quality.
6. Fixed Payment models require robust financial management strategies, including reserve funds, to address revenue shortfalls. Availability Payment models rely on government budgets and may necessitate budgetary adjustments to meet payment obligations.
7. Viability Gap Funding: According to Indonesia's current regulations, Availability Payment models do not qualify for viability gap funding. However, under certain conditions, Fixed Payment models may be eligible for this support facility.
8. Viability Gap Funding (VGF): Availability Payment models did not qualify for VGF, while Fixed Payment models, due to certain conditions and arrangements, might qualify for this facility.

Based on our literature review, the following are several advantages of the Fixed Payment model in PPP projects:

1. Fixed Payment models do not directly burden government budgets, reducing strain on public finances.

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2. Fixed Payment models offer greater revenue predictability for private investors, reducing revenue volatility and enhancing financial certainty.
3. By linking payments to service delivery and quality, Fixed Payment models incentivize operational efficiency and resource optimization.
4. Fixed Payment mechanisms promote financial sustainability by ensuring revenue streams are directly tied to service provision, reducing the risk of payment defaults.
5. Fixed Payment models provide flexibility for private investors to innovate and implement cost-effective healthcare solutions.
6. Fixed Payment models do not directly burden government budgets, reducing strain on public finances and enabling efficient resource allocation.

Having explored the similarities, differences, and advantages of fixed payment models, we will now examine the role of the Reserve Fund Account within this framework. In Fixed Payment PPP projects, incorporating a Reserve Fund Account becomes even more critical due to its role in managing revenue streams and mitigating risks associated with the clawback mechanism for the following reasons. (1) *Managing Revenue Fluctuations*. Revenue streams in PPP projects, particularly in healthcare, can be subject to fluctuations influenced by factors like patient volumes, billing cycles, and economic conditions. The Reserve Fund Account acts as a financial guard, allowing the Contracting Agency to smooth out revenue variations by bridging temporary shortfalls. This ensures that fixed payments to the IBE remain consistent, maintaining financial stability and contractual integrity. (2) *Supporting Clawback Mechanism*. The clawback mechanism, designed to protect public interests and financial sustainability, may necessitate reimbursements or adjustments in payments under specific circumstances, such as underperformance or non-compliance by the IBE. The Reserve Fund Account serves as a ready source of funds to fulfill clawback obligations, allowing the Contracting Agency to enforce accountability without disrupting service delivery. By having reserves readily available, the Contracting Agency can swiftly address any breaches or deviations from agreed-upon performance standards, safeguarding the project's long-term viability. (3) *Ensuring Continuity of Service*. In healthcare PPP projects, uninterrupted service provision is significantly paramount to patient care and satisfaction.

The Reserve Fund Account ensures the continuity of essential healthcare services by providing a financial buffer during periods of revenue shortfall or clawback enforcement. This mitigates the risk of service disruptions, maintains public trust, and upholds the project's reputation for reliability and quality care delivery. (4) *Enhancing Financial Stability and Investor Confidence.* A well-funded Reserve Fund Account signals financial stability and resilience, instilling confidence in investors and stakeholders. Potential investors are more likely to participate in Fixed Payment PPP projects knowing that there are adequate provisions in place to address financial challenges and mitigate risks.

While both Fixed Payment and Availability Payment models have their merits, Fixed Payment mechanisms offer distinct advantages in terms of revenue predictability,

financial sustainability, risk allocation, and innovation. The inclusion of a Reserve Fund Account further strengthens the resilience of Fixed Payment models, making them preferable for hospital PPP projects where revenue stability and long-term viability are dominant. Therefore, in healthcare PPP projects, Fixed Payment mechanisms may be considered superior to Availability Payment models, offering a more sustainable and efficient approach to financing and managing healthcare infrastructure.

Having explored the similarities, differences, and advantages of fixed payment models, as well as the role of the Reserve Fund Account, we will now undertake a comprehensive examination of the Fixed Payment Mechanism as applied to Hospital PPP projects. Presidential Regulation No. 38/2015 allows for flexibility in investment return mechanisms within PPP projects, provided they adhere to prevailing laws and regulations. One such alternative is the Fixed Payment, a unique investment return form tailored for specific projects. Conceptually akin to the Availability Payment scheme, Fixed Payment entails the Contracting Agency (PJPK) making predetermined financial disbursements to the IBE at regular intervals. However, unlike the Availability Payment scheme, funds for Fixed Payment derive not from the PJPK's budget or directly from regional or state budgets (APBD/APBN), but from a project account funded by direct revenue from healthcare services to patients.

Under this payment scheme, there exists the possibility of a shortfall in the project account's receipts compared to the baseline fee owed to the IBE. In such cases, the PJPK must supplement the project account to fulfill its baseline fee obligations to the IBE, thereby ensuring project payments and averting defaults due to insufficient funds. To safeguard project payments and preempt default risks, the PJPK must establish a mandatory reserve account. This reserve ensures timely payments to the IBE, mitigating financial uncertainties and enhancing project stability.

Although the investment return scheme used in Fixed Payment projects conceptually mirrors Availability Payment, the source of funds from patient charges categorizes it under the user charge scheme. This categorization holds significance, particularly concerning the viability gap fund support from the Ministry of Finance of the Republic of Indonesia. Fixed Payment, as stipulated in Presidential Regulation No. 38/2015, incorporates capital costs, operational costs, and/or IBE profits, considering inflation adjustments. This ensures that payment amounts gradually increase over the PPP period, reflecting inflationary impacts. Competitiveness in Fixed Payment can be achieved by employing it as a bidding parameter during project tendering. The final fixed payment value, binding upon the winning bidder, is stipulated in the PPP agreement based on their proposal.

The payment scheme to the Implementing Business Entity (IBE) is illustrated in the following figure that describes the structure of the revenue stream on Hospital PPP with a fixed payment mechanism.

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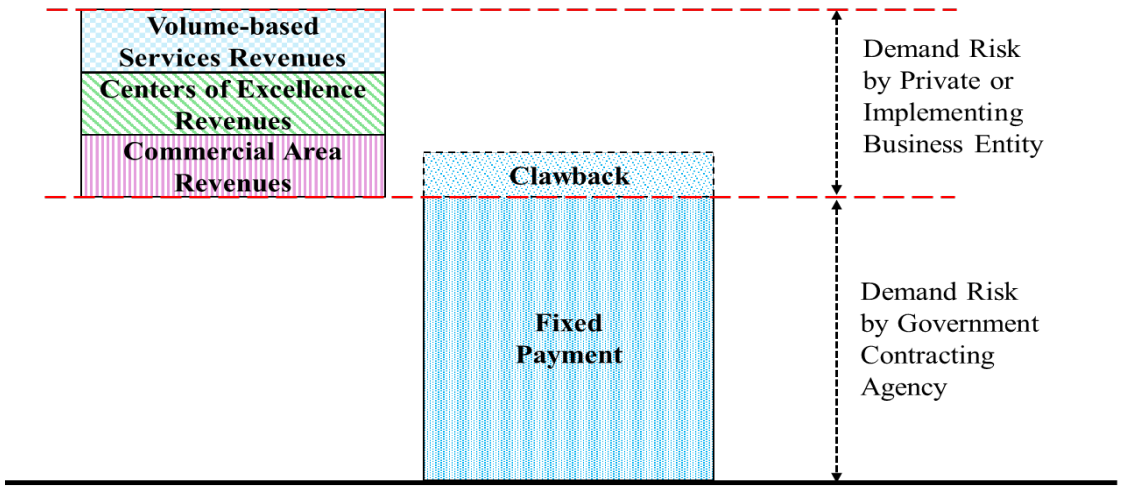

Source: Author, 2024

Figure 2: Structure of Revenue Stream on Hospital PPP with a Fixed Payment Mechanism

The financial structure of the PPP project is designed to ensure a balanced revenue model. The fixed payment covers the costs associated with design, build, and financing components, ensuring that the IBE recoups its initial investment and capital expenditure. This fixed payment provides financial stability and predictability, enabling the IBE to manage its cash flows effectively. For the operational components, particularly those involving volume-based services, user charges from centers of excellence, and revenues from commercial areas, the revenue model follows a demand-based scheme. This means that the IBE's income from these services is directly related to the volume of services provided and the usage of commercial facilities. This demand-based revenue model incentivizes the IBE to maintain its service quality and efficiency, as their income is contingent on user satisfaction and service utilization. Overall, the Fixed Payment scheme ensures that the IBE is adequately compensated for its investment and operational efforts while also aligning its incentives to provide high-quality healthcare services. This approach leverages the strengths of both the public and private sectors, fostering innovation and efficiency in the delivery of healthcare infrastructure.

5. Conclusions, Implications, and Limitations

This conceptual research highlights the potential for enhancing the design and implementation of PPPs in Indonesia's public hospital projects through the integration of MRGs principles into Fixed Payment mechanisms. The study demonstrates how they can improve financial sustainability and incentivize private sector participation in healthcare infrastructure. The conceptual analysis of Fixed Payment and Availability Payment models reveals that Fixed Payment mechanisms, particularly when augmented by a Reserve Fund Account, provide distinct advantages in risk allocation, revenue stability, and operational efficiency, making them suitable for hospital PPP projects.

The findings from this conceptual research have implications for policymakers, healthcare administrators, and private investors involved in public hospital projects. The

adaptation of Fixed Payment mechanisms that incorporate MRG principles will enable a more collaborative environment that promotes innovation and improves the quality of healthcare services. The insights gained from the analysis can inform the strategic design of hospital PPP frameworks, guiding the establishment of centers of excellence that generate additional revenue streams. Additionally, the emphasis on risk allocation through mechanisms such as the Reserve Fund Account can enhance the resilience of healthcare infrastructure projects, ensuring their long-term viability and financial sustainability.

Despite the insights provided, this conceptual study has certain limitations. First, the analysis primarily focuses on the Indonesian context, which may not fully capture the complexities and dynamics of PPPs in other countries. Future research could expand the scope to include comparative studies across different healthcare systems globally. Additionally, while the study emphasizes the advantages of Fixed Payment models, it does not exhaustively explore potential challenges or drawbacks associated with their implementation. Further investigation into the operational implications and stakeholder perceptions of these financing mechanisms would contribute to a more comprehensive understanding of their effectiveness in public hospital projects.

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