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The Impact of Inpatient Room Tariff Structures on Hospital Revenue: Evidence from a Public Hospital in Indonesia

Rahayu Japar[1*], Ambo Uleng[2]
[1] Manajemen, Fakultas Ekonomi dan Bisnis, Universitas Muhammadiyah Makassar
[2] Prodi Manajemen, Universitas Syekh Yusuf Al Makassari Gowa
Email penulis
rahayujapar@unismuh.ac.id[1] , ambouleng@usy.ac.id[2]

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ABSTRACT

Public hospitals in developing countries face increasing pressure to achieve financial sustainability while maintaining equitable access to care. This study aims to analyze the effect of inpatient room tariff calculation on hospital revenue performance at Haji Hospital Makassar, focusing on how pricing structures influence utilization patterns and income generation.

This research employs a descriptive quantitative case study design using retrospective hospital data from 2011 to 2014. Data include inpatient room tariffs, utilization by room class, estimated costs, operational expenditures, and total hospital revenue. The analysis examines the relationship between tariff structures and revenue through aggregation and comparison of inpatient service data.

The results show that inpatient services constitute the dominant source of hospital revenue, with room-based income contributing the majority share of total earnings. Despite a fixed tariff system, revenue trends varied due to changes in room utilization across different classes. Lower-priced rooms, particularly Class III, demonstrated the highest and most consistent growth in demand, ultimately becoming the largest contributor to inpatient revenue. In contrast, higher-priced rooms exhibited more volatile utilization patterns. These findings indicate that hospital revenue is influenced more by occupancy levels and demand distribution than by tariff magnitude alone. The discussion highlights that pricing strategies align with economic demand theory, where affordability drives utilization, and emphasizes the importance of balancing cost recovery with equitable access.

In conclusion, inpatient room tariff structures significantly influence hospital revenue through their impact on utilization patterns. Effective pricing policies should integrate cost-based calculation, capacity management, and equity considerations to ensure sustainable and inclusive hospital financing.

ABSTRAK

Rumah sakit publik di negara berkembang menghadapi tekanan yang semakin besar untuk mencapai keberlanjutan finansial sekaligus mempertahankan akses layanan yang adil. Penelitian ini bertujuan untuk menganalisis pengaruh perhitungan tarif kamar rawat inap terhadap kinerja pendapatan rumah sakit di RS Haji Makassar, dengan fokus pada bagaimana struktur tarif memengaruhi pola pemanfaatan layanan dan pembentukan pendapatan.

Penelitian ini menggunakan desain studi kasus kuantitatif deskriptif dengan memanfaatkan data retrospektif rumah sakit periode 2011–2014. Data yang dianalisis meliputi tarif kamar rawat inap, tingkat pemanfaatan berdasarkan kelas perawatan, estimasi biaya, biaya operasional, serta total pendapatan rumah sakit. Analisis dilakukan melalui pengolahan dan perbandingan data layanan rawat inap untuk mengkaji hubungan antara struktur tarif dan pendapatan.

Hasil penelitian menunjukkan bahwa layanan rawat inap merupakan sumber utama pendapatan rumah sakit, dengan kontribusi terbesar berasal dari pendapatan kamar. Meskipun sistem tarif bersifat tetap, tren pendapatan mengalami fluktuasi akibat perubahan pemanfaatan pada masing-masing

kelas kamar. Kelas dengan tarif lebih rendah, khususnya Kelas III, menunjukkan pertumbuhan permintaan yang paling tinggi dan konsisten, serta menjadi kontributor terbesar terhadap pendapatan rawat inap. Sebaliknya, kelas dengan tarif lebih tinggi menunjukkan pola pemanfaatan yang lebih fluktuatif. Temuan ini mengindikasikan bahwa pendapatan rumah sakit lebih dipengaruhi oleh tingkat hunian dan distribusi permintaan dibandingkan besaran tarif semata. Pembahasan menegaskan bahwa strategi tarif sejalan dengan teori permintaan ekonomi, di mana keterjangkauan mendorong pemanfaatan layanan, serta menekankan pentingnya keseimbangan antara pemulihan biaya dan akses yang adil.
Sebagai kesimpulan, struktur tarif kamar rawat inap memiliki pengaruh signifikan terhadap pendapatan rumah sakit melalui pola pemanfaatan layanan. Kebijakan penetapan tarif yang efektif perlu mengintegrasikan pendekatan berbasis biaya, manajemen kapasitas, serta pertimbangan keadilan untuk mencapai pembiayaan rumah sakit yang berkelanjutan dan inklusif.

1. PENDAHULUAN

Public hospitals in developing countries operate within increasingly complex financial environments characterized by constrained public budgets, rising healthcare demand, and evolving market dynamics. These institutions must balance their dual mandate of providing accessible healthcare services while maintaining financial sustainability. In this context, pricing strategies particularly the determination of service tariffs play a central role in shaping hospital performance. Pricing mechanisms such as tariff setting, price transparency, and negotiated reimbursement contracts directly influence how hospitals allocate resources, attract patients, and maintain operational viability. Existing literature highlights that hospitals often rely on pricing strategies to manage cross-subsidization between profitable and unprofitable services, especially when public funding is insufficient or unstable (Frakt, 2011; Gaynor, 2006).

The financial sustainability of public hospitals is further challenged by increasing operational costs, including labor, medical equipment, and pharmaceutical expenditures, which frequently outpace reimbursement levels. In many developing countries, weak market structures and limited regulatory capacity exacerbate these challenges, resulting in inefficiencies and under-reimbursement for essential services (Gaynor, 2006; Sirur & Pillai, 2024). Moreover, price transparency and information asymmetry complicate decision-making processes, often limiting the ability of hospitals to optimize pricing strategies effectively (Han et al., 2022). These conditions underscore the importance of understanding how pricing policies, particularly inpatient service tariffs, influence both revenue generation and healthcare delivery outcomes.

Despite the recognized importance of pricing strategies, many public hospitals still face difficulties in aligning tariff structures with actual cost and demand conditions. Inpatient services, which typically represent a major component of hospital revenue, are particularly sensitive to tariff design. Evidence from various healthcare systems indicates that inpatient care is often remunerated through tariff-based or case-based payment mechanisms, linking hospital income directly to service volume and pricing structures (Mason et al., 2009; O'Reilly et al., 2012; Giacomo et al., 2017). However, when tariffs are misaligned with cost structures, hospitals may experience financial inefficiencies, reduced service quality, or inequitable access to care.

The central research problem addressed in this study is the extent to which inpatient room tariff calculations influence hospital revenue performance. Specifically, the study examines whether existing tariff structures are capable of supporting sustainable revenue growth in a public hospital setting. While general solutions proposed in the literature emphasize the need for cost-based pricing, improved transparency, and stronger regulatory frameworks, the practical implementation of these solutions remains uneven across different healthcare systems. Consequently, there is a need for empirical analysis that connects theoretical pricing principles with real-world hospital financial data.

Previous studies have proposed several strategies to address pricing inefficiencies in healthcare systems. One widely discussed approach is the adoption of cost-based or activity-based pricing models, which aim to align tariffs with the actual cost of service delivery. Such models are often implemented through diagnosis-related group (DRG) systems or similar mechanisms that standardize reimbursement based on case complexity and resource utilization (Mason et al., 2009; O'Reilly et al., 2012). These approaches have been shown to improve cost control and efficiency in some contexts, although their effectiveness depends on accurate cost data and strong governance structures.

Another solution highlighted in the literature involves enhancing price transparency and strengthening regulatory oversight. Transparent pricing systems can reduce information asymmetry between providers, payers, and patients, thereby improving market efficiency and accountability (Han et al., 2022). However, empirical evidence suggests that transparency alone is insufficient to ensure financial sustainability, as its impact is highly dependent on market structure and institutional capacity. In addition,

cross-subsidization remains a common strategy in hospital revenue management, allowing institutions to offset losses from essential but unprofitable services by generating higher revenues from other service lines (Douven et al., 2019; Brouns et al., 2021).

A growing body of literature also emphasizes the role of nonprice factors, such as service quality, technological capabilities, and patient perceptions, in influencing hospital competitiveness. Studies indicate that pricing strategies often interact with these nonprice dimensions, shaping both patient demand and market share (Devers et al., 2003; Trinh, 2020). However, the relationship between pricing, quality, and financial performance remains complex and context-dependent, with mixed empirical findings across different healthcare systems (Croes et al., 2017; Roos et al., 2020; Wu et al., 2022). This complexity suggests that pricing policies must be carefully designed to avoid unintended consequences, such as reduced service quality or inequitable access.

Although the existing literature provides valuable insights into hospital pricing and financial management, several gaps remain. In particular, there is limited empirical evidence from developing countries that examines the direct relationship between inpatient tariff structures and hospital revenue outcomes using real-world data. Furthermore, many studies focus on macro-level policy analysis, with less attention given to micro-level institutional practices within individual hospitals. This gap is particularly relevant in contexts where pricing decisions are influenced by local conditions, including patient demographics, service demand, and organizational capacity.

Based on these considerations, this study aims to analyze the impact of inpatient room tariff calculations on revenue growth at Haji General Hospital Makassar. The novelty of this study lies in its empirical focus on hospital-level financial data over a multi-year period, providing a detailed examination of how tariff structures influence revenue dynamics in a real-world setting. The study also seeks to contribute to the broader literature on healthcare financial management by offering insights into pricing strategies in developing country contexts. The scope of the research is limited to inpatient services and their contribution to overall hospital revenue, with particular attention to variations across different room classes and their implications for financial sustainability.

Conceptualizing Hospital Pricing in the Context of Financial Sustainability

The original draft positions room rental charges as one of the key income sources for Haji Hospital Makassar and treats tariff determination as an important managerial decision in sustaining hospital operations and supporting service continuity. It also links pricing to the hospital's broader obligation to serve patients from different socioeconomic groups while maintaining institutional viability. In the original manuscript, this argument is rooted in the idea that room charges are not merely administrative prices but a financial instrument that affects patient access and hospital income. The draft therefore frames pricing as both an economic and managerial issue within hospital administration.

This basic argument can be strengthened by contemporary literature on hospital financial sustainability. Public hospitals in developing countries frequently face constrained budgets, rising service demand, under-reimbursement, and increasing operating costs, all of which intensify the importance of rational pricing strategies. Pricing policy affects how hospitals recover costs, cross-subsidize essential but less profitable services, and remain competitive without abandoning social obligations (Frakt, 2011; Gaynor, 2006; Sirur & Pillai, 2024). In this sense, hospital tariffs should not be treated as isolated administrative decisions, but as part of a broader revenue and governance system that links financing, demand, quality, and equity.

Definitions of Rent, Revenue, Tariff, and Price

The original thesis begins its review by defining rent (sewa) as payment for the use of a factor or asset, drawing on Aliminsyah et al. and related accounting terminology. It also distinguishes several forms of rent, including prepaid rent, finance lease, operating lease, and capital lease. Although such distinctions come from accounting language rather than healthcare economics, the central point retained by the draft is that room charges constitute compensation for the use of hospital accommodation and related facilities.

The draft defines revenue (pendapatan) primarily through accounting sources. Zaki Baridwan (1997:30) describes revenue as an inflow of cash or other asset increases arising from the delivery of goods or services, while the Indonesian Financial Accounting Standards define revenue as gross economic benefits generated in the normal course of an entity's activities. The draft also notes that revenue may include operating and non-operating components and that it is reflected in financial reports used for managerial decision-making.

In the original text, tariff is treated as a synonym for price, although the draft relies on a general trade-related definition that is not fully appropriate for hospital services. A more precise academic formulation would define tariff in healthcare as the regulated or institutionally determined charge imposed for a service or bundle of services. Thus, in the present study, room tariff is best understood as the monetary charge assigned to inpatient accommodation by class and service level. The original review also discusses price as an exchange

value and as the only marketing-mix element that directly generates revenue, emphasizing both its allocative and informational role for consumers.

Main Pricing Theories Relevant to Healthcare Services

The original draft introduces two classic pricing approaches: cost plus pricing and pricing based on the balance between demand and supply. It explains cost plus pricing as the simplest method, in which price is set by adding the desired profit margin to the unit cost, and it notes that this approach is limited because costs respond differently to changes in output. It also mentions markup pricing and recognizes that demand conditions matter for determining the "best" price.

These ideas can be reorganized more systematically into three major pricing theories in healthcare. First, cost-based pricing sets tariffs to recover the actual costs of service provision, including direct and indirect costs. This approach is central where policymakers and managers seek to align reimbursement with real resource use and avoid underfunding (Bahuguna et al., 2020; Jones et al., 2015; Oomkens et al., 2013; Goujard, 2018). Second, value-based pricing links payment to outcomes, quality, and health gains rather than volume alone. However, the literature cautions that higher prices do not automatically imply higher quality, and that value-based systems require credible outcome measures and aligned incentives (Garthwaite et al., 2022; Scanlon et al., 2025; Angeli et al., 2018). Third, demand-based pricing recognizes that utilization is shaped by patient price sensitivity, insurance arrangements, and substitute availability; in hospital settings, price responses are often moderated by medical necessity and perceived quality (Bojke et al., 2012; White, 2014; Sakowski & Song, 2022).

Taken together, these perspectives suggest that hospital room tariffs are best interpreted not only as accounting figures but as strategic instruments shaped by cost, perceived value, and demand conditions. This integrated framing is more analytically suitable for the present study than the narrow use of generic pricing terminology in the original thesis.

Cost Structure and Cost Accounting in Hospital Tariff Setting

The draft identifies several relevant cost concepts fixed cost, variable cost, total cost, and marginal cost and uses them as the basis for discussing pricing decisions. This section is important because the calculation of room tariffs requires an understanding of how hospital costs behave when service capacity and utilization change.

Contemporary healthcare finance literature expands this issue by showing that tariff accuracy depends heavily on the costing method employed. Activity-Based Costing (ABC) allocates costs according to the activities and resources consumed by each service, enabling more accurate unit cost estimates. ABC has been shown to reveal discrepancies between actual cost and approved tariffs, especially in specialized hospital departments (Doshmangir et al., 2020; Niasti et al., 2019). Other systems use DRG- or RVU-based costing, where payments are tied to the average resource needs of a diagnosis group or service category (Mason et al., 2009; Llewellyn et al., 2022; Raulinajtys-Grzybek & Świderska, 2015). In lower-data environments, top-down and hybrid costing approaches are often used to balance feasibility and precision (Ellwood, 2009; Prinja et al., 2023).

For the present study, this literature implies that room rental charges should ideally reflect both direct accommodation costs and the broader cost structure of inpatient care, including maintenance, labor, utilities, and overhead allocation. This is especially relevant because the original thesis later estimates salary, maintenance, distribution, and miscellaneous costs in relation to inpatient revenue.

Financial Reporting as a Basis for Revenue Evaluation

A useful element in the original draft is its discussion of financial reports. The manuscript cites Munawir and the Indonesian accounting standards to argue that financial statements are essential instruments for assessing organizational condition, measuring outcomes, and supporting decision-making. This is directly relevant because the effect of room tariffs on hospital income can only be evaluated through reliable financial data.

In a more systematic research framework, financial statements function as the empirical basis for linking tariff policy to organizational performance. They allow the researcher to compare inpatient revenue, operational costs, and overall income over time, and they help distinguish whether revenue increases are associated with pricing, utilization, or both. Thus, the original emphasis on accounting reports remains valid, but it should be integrated more clearly into a hospital revenue analysis framework.

Theoretical Framework and Research Hypothesis

The original thesis proposes a simple causal framework: room tariff calculation influences the level of charges imposed on patients, and these charges affect hospital revenue. The corresponding hypothesis states that the tariff established by Haji Hospital influences revenue improvement and contributes to hospital development.

This hypothesis is theoretically supported by prior literature. Cost-based pricing theory suggests that tariffs that better reflect costs can improve financial sustainability. Demand-based theory suggests that prices influence patient behavior and room utilization. Revenue-structure literature shows that inpatient services are central to hospital income generation. Yet the literature also indicates that this relationship is not purely mechanical, because pricing effects depend on market structure, governance, reimbursement design, and quality considerations (Han et al., 2022; Fitzgerald & Yencha, 2018; Wu et al., 2022; Cooper et al., 2011). Accordingly, the present study is positioned within a conceptual model in which room tariff determination affects utilization and revenue, while operating within the institutional realities of a public hospital.

Overall, the literature supports the importance of examining inpatient room tariffs as a financial and managerial variable. The original draft provides a useful starting point through its focus on rent, revenue, price, cost, and financial statements, while contemporary scholarship enables a more rigorous interpretation that situates tariff policy within hospital sustainability, patient demand, and revenue management.

2. METODE

Research Design

Based on the original draft, this study is best reconstructed as an applied quantitative case study that examines the relationship between inpatient room tariff calculation and hospital revenue performance at Haji Hospital Makassar. The draft does not employ an experimental or causal identification strategy; instead, it relies on hospital administrative and financial records to compare room tariffs, inpatient utilization, estimated costs, and hospital revenue across several years. The central logic of the design is descriptive-analytical: room rental charges are treated as the main pricing variable, while inpatient revenue and total hospital revenue are treated as the principal financial outcomes.

Population, Unit of Analysis, and Analytical Scope

The original draft does not explicitly define the population and sample in statistical terms. Nevertheless, from the data tables and explanatory narrative, it is clear that the effective unit of analysis is not the individual patient, but the inpatient room class and annual revenue record. The analysis is organized around four room categories VIP, Class I, Class II, and Class III and traces their utilization and revenue contribution over the 2011–2014 period.

Types and Sources of Data

The draft explicitly divides the data into qualitative and quantitative forms. Qualitative data consist of written and oral information obtained from the institution, while quantitative data consist of numerical records generated by the hospital. The draft also distinguishes between primary and secondary sources: primary data were obtained directly through interviews with hospital leadership, while secondary data were obtained from written reports, documents, and institutional records.

Data Collection Procedures

The original text identifies two collection procedures: library research and field research. Library research was used to gather conceptual materials related to costs, prices, and rent, while field research was conducted directly at the hospital through observation and interviews with employees and related parties.

For scientific article purposes, these procedures can be restated more systematically. First, the researcher conducted a documentary review of accounting and management literature relevant to pricing, cost estimation, revenue, and hospital services. Second, field-based data collection was undertaken at Haji Hospital Makassar to obtain institutional records and clarify operational practices. Third, hospital documents were assembled and organized into annual datasets covering room tariffs, inpatient room use, cost estimates, operational expenditures, and overall hospital income for 2011–2014. The study also incorporated service statistics such as bed capacity, bed occupancy indicators, and inpatient utilization measures, which helped contextualize the financial analysis.

Indicators and Measurement

The empirical sections of the thesis show that the study measured several concrete indicators. These include: room tariffs by class; annual room usage for VIP, Class I, Class II, and Class III; inpatient revenue by class and by year; estimated cost components such as salary, maintenance, distribution, and miscellaneous costs; operating expenses including electricity, cleaning, and water; allocation tariff figures; and annual

hospital income. The study also reports inpatient service indicators such as bed capacity, BOR, TOI, BTO, LOS, GDR, NDR, and patient counts.

Data Analysis Technique

The draft states that the data analysis method used was a tariff or cost estimation method, followed by revenue calculation through profit-and-loss accounting. Although the formulas are imperfectly reproduced in the source document, the analytical process is clear from the results section: the researcher multiplies the tariff of each room class by the annual number of occupied rooms to obtain annual inpatient revenue, compares that revenue with estimated cost and operating expenditure, and then relates inpatient revenue to total hospital revenue.

Rewritten in scholarly form, the analysis proceeded in four steps. First, inpatient tariffs were identified for each room class. Second, annual utilization figures for each class were compiled. Third, annual revenue from inpatient rooms was calculated by combining tariff and utilization data. Fourth, inpatient revenue was compared with total hospital revenue to infer the extent to which room rental income contributed to hospital financial performance. The study also reviewed cost estimation and operating expenditure trends as contextual evidence supporting the pricing analysis.

3. HASIL DAN PEMBAHASAN

3.1. Overview of the Hospital Inpatient Context

The results indicate that the financial role of inpatient services at Haji Hospital Makassar must be interpreted within the hospital's service capacity and utilization profile. During the study period, the hospital operated 103 inpatient beds distributed across four room classes: 6 VIP beds, 16 Class I beds, 33 Class II beds, and 48 Class III beds. The inpatient service evaluation also shows that bed occupancy remained below the ideal reference level across the observed years, although utilization improved gradually. Bed Occupancy Rate (BOR) increased from 48.29% in 2012 to 50.43% in 2013 and 57.45% in 2014, while Bed Turn Over (BTO) rose from 39 to 43. Length of Stay (LOS) remained within a moderate range of four to five days. The number of admitted inpatients also increased, from 4,022 in 2012 to 4,682 in 2014. These indicators suggest that the hospital experienced strengthening inpatient demand, but that occupancy still remained below the ideal benchmark of 75–85%, indicating unused capacity and room for revenue growth through better utilization.

This pattern is broadly consistent with the literature on inpatient revenue trends, which shows that hospital income does not depend on tariffs alone, but on the interaction between price, capacity, case mix, and utilization. Even where tariffs are fixed, rising occupancy and greater service use can still produce measurable revenue gains, particularly in systems where inpatient care constitutes a central revenue stream (Mason et al., 2009; O'Reilly et al., 2012; Giacomo et al., 2017). In the present case, the hospital's revenue profile therefore reflects not merely the tariff schedule itself, but also the distribution of demand across room classes and the hospital's ability to fill existing capacity.

3.2. Inpatient Room Tariff Structure

A central empirical result of the study is that the inpatient tariff structure remained fixed during 2011–2014. The hospital applied four room tariffs: Class III at Rp. 120,000, Class II at Rp. 200,000, Class I at Rp. 300,000, and VIP at Rp. 450,000. Each tariff was composed of service facility charges and service care charges, but the total room tariff was constant throughout the four-year period.

This finding is important because it indicates that the observed revenue changes cannot be attributed to tariff increases over time. Instead, revenue fluctuations primarily reflect changes in room utilization by class. In conceptual terms, the hospital operated under a fixed-pricing regime rather than a dynamic pricing model. Literature on hospital pricing suggests that fixed tariffs create predictable revenue conditions but often reduce responsiveness to changing costs and demand. Under such systems, hospitals typically rely on changes in occupancy, case mix, or cross-subsidization across services rather than frequent tariff revision to generate additional income (Mason et al., 2009; Ellwood, 2009; Street & Maynard, 2007). The results from Haji Hospital Makassar fit this pattern: tariff stability was accompanied by variation in room use and therefore by variation in revenue composition.

3.3 Trends in Room Class Utilization

The strongest empirical pattern in the data lies in the changing distribution of room utilization across the four room classes. VIP room usage increased from 837 uses in 2011 to 1,028 in 2012 and 1,072 in 2013, but then fell sharply to 805 in 2014. Class I usage rose from 1,625 in 2011 to 1,788 in 2012, then declined to 1,532 in 2013 and 1,393 in 2014. Class II usage increased from 3,047 in 2011 to 3,180 in 2012, fell to 2,788

in 2013, and recovered to 3,196 in 2014. By contrast, Class III usage increased continuously across the entire period, from 4,289 in 2011 to 4,497 in 2012, 4,819 in 2013, and 5,869 in 2014.

These results reveal a clear demand shift toward lower-cost inpatient accommodation, especially Class III. The continuous increase in Class III use suggests that lower-priced rooms absorbed the largest share of growing inpatient demand. At the same time, higher-priced categories particularly VIP and Class I showed weaker and more volatile demand. This pattern supports the original manuscript's argument that room tariffs strongly influence patient use, especially among middle- and lower-income groups.

The literature provided for this section helps interpret this result. Studies on room-class differentiation indicate that higher-tier rooms may yield higher revenue per patient, but their contribution depends on patient affordability, insurance design, and perceived value. Lower-income patients are more likely to choose lower-class rooms, while higher-class rooms are more sensitive to demand conditions and payer mix (Llewellyn et al., 2022; Grašič et al., 2015; Devers et al., 2003). The Haji Hospital data align with this literature: the lower-priced class exhibited the most stable and sustained utilization growth, while premium classes proved more volatile.

3.4 Revenue by Room Class

Because tariffs were fixed, changes in class-specific revenue directly followed changes in room utilization. VIP revenue rose from Rp. 376,650,000 in 2011 to Rp. 462,600,000 in 2012 and Rp. 482,400,000 in 2013, but then fell to Rp. 362,250,000 in 2014. Class I revenue increased from Rp. 487,500,000 in 2011 to Rp. 536,400,000 in 2012, then declined to Rp. 459,600,000 in 2013 and Rp. 417,900,000 in 2014. Class II revenue rose from Rp. 609,400,000 in 2011 to Rp. 636,000,000 in 2012, fell to Rp. 557,600,000 in 2013, and recovered to Rp. 639,200,000 in 2014. Class III revenue increased every year, from Rp. 514,680,000 in 2011 to Rp. 539,640,000 in 2012, Rp. 578,280,000 in 2013, and Rp. 704,280,000 in 2014.

Two patterns are notable. First, Class II and Class III were the dominant revenue contributors by the end of the study period. Second, Class III changed from being the lowest revenue contributor among the three largest categories in 2011 to the single largest contributor in 2014. This occurred despite the fact that Class III had the lowest tariff, indicating that high volume can outweigh low price in determining actual revenue contribution. In practical terms, the results show that revenue performance depended more on occupancy and demand concentration than on the nominal height of the tariff itself.

This finding is consistent with broader hospital finance literature. Research on inpatient revenue trends shows that increases in hospital income may occur through volume growth even when per-unit prices remain unchanged, especially where lower-cost service lines attract a larger patient base (Verzulli et al., 2016; Proshin et al., 2023). The present case demonstrates precisely such a pattern: the largest revenue gains were generated not by the most expensive room class, but by the most frequently used one.

3.5 Total Inpatient Revenue Trends

The aggregate inpatient revenue trend reinforces the importance of utilization. Total inpatient revenue amounted to Rp. 1,988,230,000 in 2011, increased to Rp. 2,174,640,000 in 2012, declined to Rp. 2,077,880,000 in 2013, and rose again to Rp. 2,123,630,000 in 2014.

Thus, inpatient revenue followed a fluctuating pattern rather than a linear increase. The largest increase occurred between 2011 and 2012, followed by a contraction in 2013 and a partial recovery in 2014. Because tariffs remained unchanged, these movements must be explained by changing utilization across room classes. The decline in 2013 appears associated with falling Class I and Class II usage, while the recovery in 2014 was supported primarily by strong Class II and especially Class III performance.

This trajectory resembles the heterogeneous patterns documented in the literature. Empirical studies of hospital revenue under fixed or semi-regulated tariffs often show that revenue responds unevenly over time because volume changes differ by service category, patient segment, and operational context (Verzulli et al., 2016; Street & Maynard, 2007). The Haji Hospital case shows exactly this type of differentiated response: revenue did not change uniformly, but shifted according to class-specific demand.

3.6. Cost Estimates, Operating Expenditure, and Allocation Tariff

The results section of the original thesis also reports estimated costs and operating expenditures associated with inpatient services. Estimated costs rose from Rp. 232,352,500 in 2011 to Rp. 254,886,667 in 2012, slightly declined to Rp. 253,823,333 in 2013, and increased again to Rp. 259,969,167 in 2014. Operating costs increased steadily over the same period, from Rp. 450,000,000 in 2011 to Rp. 475,000,000 in 2012, Rp. 493,000,000 in 2013, and Rp. 519,000,000 in 2014. The operating-cost increase was driven by electricity, cleaning, and water costs, each of which rose across the four years. The calculated tariff allocation values were 45,955.88 in 2011, 45,289.85 in 2012, 48,276.54 in 2013, and 46,059.64 in 2014.

These data show that the hospital faced steadily rising operational costs despite holding inpatient tariffs constant. From an analytical perspective, this means that the hospital's revenue improvement was achieved under cost pressure. In fixed-pricing systems, such circumstances may gradually compress margins unless higher occupancy or better service mix compensates for rising expenditure. Literature on tariff design similarly warns that fixed prices may stabilize revenue while weakening responsiveness to rising costs, thereby increasing reliance on volume growth or cross-subsidy strategies (O'Reilly et al., 2012; Giacomo et al., 2017; Ellwood, 2009).

3.7. Relationship Between Inpatient Revenue and Total Hospital Income

The most important result reported in the thesis is the relationship between inpatient revenue and total hospital income. Total hospital income was recorded at Rp. 2,337,678,529 in 2011, Rp. 2,583,096,522 in 2012, Rp. 2,552,300,682 in 2013, and Rp. 2,600,077,284 in 2014. The corresponding inpatient revenue figures were Rp. 1,988,230,000, Rp. 2,174,640,000, Rp. 2,077,880,000, and Rp. 2,123,630,000.

These numbers show that inpatient services contributed the majority share of total hospital income throughout the entire period. The ratio is consistently high, indicating that inpatient room-related revenue was not a marginal income source but a dominant component of hospital earnings. Even where total hospital income increased only slightly, the inpatient component remained structurally central. This finding strongly supports the study hypothesis that room rental calculation affects hospital revenue improvement.

From a broader analytical standpoint, the result is compatible with the international literature on hospital revenue structure, which repeatedly identifies inpatient services as a major revenue base under tariff-oriented hospital financing systems (Mason et al., 2009; O'Reilly et al., 2012; Douven et al., 2019). The Haji Hospital evidence confirms this pattern in a local Indonesian public hospital context.

3.8. Summary of Empirical Findings

Overall, the results support four main conclusions. First, the hospital used a fixed tariff system, with no room-price changes between 2011 and 2014. Second, inpatient demand was not evenly distributed across room classes; Class III showed the strongest and most sustained growth, while VIP and Class I were more volatile. Third, revenue contribution depended more on utilization volume than on tariff size alone, allowing the lowest-priced class to become the largest contributor by 2014. Fourth, inpatient revenue remained the principal driver of total hospital income, despite rising operational costs and fluctuating class-level demand.

In this sense, the results illustrate a pattern commonly identified in the literature: under fixed-pricing conditions, hospital income is shaped by the interaction between room-class utilization, service mix, and cost structure rather than by tariff changes alone.

3.9. Discussion

The findings of this study support the original hypothesis that inpatient room tariff calculation is closely related to revenue performance at Haji Hospital Makassar. The source document itself concludes that the hypothesis is accepted and explicitly states that room tariff determination affects the number of inpatients, especially among lower- and middle-income groups, while hospital income is influenced by inpatient revenue. It further argues that the observed pattern is consistent with the law of demand: lower prices tend to increase the quantity demanded, whereas higher prices tend to reduce it.

This interpretation is broadly consistent with economic theory. In healthcare, price functions as a signal that coordinates supply and demand, even though the market is more regulated and ethically constrained than ordinary consumer markets. The results from Haji Hospital Makassar show that tariff differences across room classes were associated with differentiated utilization patterns. Class III, which had the lowest tariff, recorded the most consistent increase in use from 2011 to 2014, while VIP and Class I showed weaker and more unstable demand. Meanwhile, inpatient tariffs remained fixed over the period at Rp. 120,000 for Class III, Rp. 200,000 for Class II, Rp. 300,000 for Class I, and Rp. 450,000 for VIP. Because prices did not change over time, the observed revenue variation must be understood primarily through demand distribution across room classes rather than tariff adjustments themselves. This pattern aligns with the broader literature showing that tariff structures influence hospital revenue through volume, case mix, and service mix, but not always in a uniform way across service categories (Verzulli et al., 2016; Proshin et al., 2023; Street & Maynard, 2007).

The study also confirms that inpatient care constituted the dominant revenue base of the hospital during the observation period. Inpatient revenue amounted to Rp. 1,988,230,000 in 2011, Rp. 2,174,640,000 in 2012, Rp. 2,077,880,000 in 2013, and Rp. 2,123,630,000 in 2014, while total hospital income reached Rp. 2,337,678,529, Rp. 2,583,096,522, Rp. 2,552,300,682, and Rp. 2,600,077,284 respectively. These values indicate that inpatient revenue represented a very large share of total hospital income in all four years. This finding is in line with international evidence that inpatient services are often the central source of hospital revenue in tariff-based systems, especially where hospitalization episodes are a major unit of payment

(Mason et al., 2009; O'Reilly et al., 2012; Giacomo et al., 2017). In this respect, the case of Haji Hospital Makassar confirms that room pricing policy is not a peripheral issue, but a central component of hospital financial management.

A more nuanced reading of the results, however, suggests that the economic relationship is driven less by tariff level alone than by the interaction between tariff level, affordability, and utilization. Although VIP rooms generated the highest revenue per use, they did not provide the most stable revenue contribution. By 2014, Class III became the strongest revenue contributor because its lower price supported a larger and growing patient volume. This finding reflects the logic of demand-based pricing in healthcare: lower-priced services often capture higher utilization, especially when patient choice is constrained by income and insurance coverage. The literature on room-class differentiation similarly shows that higher room classes may increase per-patient revenue, but lower classes often provide the most stable demand base, particularly in public or mixed-financing environments where affordability remains decisive (Llewellyn et al., 2022; Grašič et al., 2015; Devers et al., 2003).

At the same time, the evidence suggests that Haji Hospital Makassar effectively operated under a fixed-pricing model rather than a dynamic pricing system. The tariff schedule did not change across the study period, despite increases in estimated costs and operating expenditure. Estimated cost rose from Rp. 232,352,500 in 2011 to Rp. 259,969,167 in 2014, while operating costs increased from Rp. 450,000,000 to Rp. 519,000,000. This creates an important managerial implication: fixed tariffs may offer predictability, but they can reduce responsiveness to rising costs, changing patient preferences, and differences in room demand. Literature on hospital tariff systems has repeatedly noted that fixed price regimes can stabilize revenue while simultaneously generating inefficiencies if prices no longer reflect real costs or evolving service demand (Ellwood, 2009; Mason et al., 2009; O'Reilly et al., 2012). In the present study, the hospital appears to have sustained revenue growth primarily through volume and class-mix changes rather than through periodic tariff recalibration.

This also raises the issue of cross-subsidization. Although the original thesis does not explicitly theorize the matter in these terms, the room-class structure implies a form of internal revenue balancing. Higher-priced classes such as VIP and Class I may help generate surplus per case, whereas lower-priced rooms such as Class III ensure broader access and stronger occupancy. The broader literature indicates that such differentiation is common in hospital markets and may support financial viability, but it also requires transparent governance to avoid inequities or hidden distortions (Douven et al., 2019; Brouns et al., 2021; Roos et al., 2019; Han et al., 2022). In Haji Hospital Makassar, the data suggest that lower-tier rooms were especially important for sustaining demand, which reinforces the original conclusion that room tariff policy strongly affects lower- and middle-income patients.

The managerial implications of these results are therefore substantial. First, tariff setting should be based on more explicit cost accounting. The source document already recognizes the importance of cost estimation and allocation tariff calculation, but its framework remains relatively simple. Contemporary literature suggests that hospitals should strengthen this process using more transparent and evidence-based costing approaches, such as activity-based costing or hybrid cost methods, so that room tariffs more accurately reflect direct and indirect service costs (Doshmangir et al., 2020; Niasti et al., 2019; Chapman et al., 2021). Second, pricing policy should be integrated with capacity planning. The hospital had 103 beds, but BOR remained below the ideal standard, increasing only from 48.29% in 2012 to 57.45% in 2014. This suggests unused capacity, meaning that revenue improvement depends not only on tariff design but also on managerial efforts to improve occupancy and service attractiveness. Third, quality and infrastructure matter. The source document itself recommends more complete facilities, better supporting infrastructure, and public promotion in order to attract more patients and increase inpatient revenue. This recommendation is consistent with the literature on nonprice competition, which argues that hospitals compete not only on tariffs but also on amenities, service quality, and perceived value (Cooper et al., 2011; Croes et al., 2017; Gaynor, 2005).

The results also have implications for equity and access. Because lower-class rooms were used increasingly and contributed substantially to revenue, the hospital's financial performance was closely tied to patients with lower purchasing power. This implies that tariff policy must balance affordability and sustainability. If lower-class tariffs are set too high, patient demand may weaken; if set too low without support from other service lines, financial pressure may intensify. The literature therefore recommends transparent cross-subsidy rules, protective mechanisms for vulnerable patients, and tariff systems grounded in cost evidence rather than administrative convention alone (Llewellyn et al., 2022; Ng et al., 2021; Cavalieri et al., 2016). In the case of Haji Hospital Makassar, this balance is especially important because the hospital's mission includes serving patients across different economic strata while simultaneously increasing institutional income.

Finally, the discussion must acknowledge the analytical limits of the original study. The document relies on descriptive comparison rather than inferential statistical testing, and its own discussion of the results

is brief. Descriptive analysis is useful for identifying patterns in utilization, revenue, and cost, but it cannot establish causal relationships with strong certainty. Inferential approaches such as difference-in-differences, interrupted time series, or fixed-effects models would allow stronger claims about the effect of tariff structures on demand and revenue (Ng et al., 2021; Verzulli et al., 2016; Street & Maynard, 2007). Even so, the descriptive evidence remains informative: it clearly shows that inpatient room pricing at Haji Hospital Makassar was associated with differentiated room utilization and that inpatient revenue was a major determinant of overall hospital income.

In sum, the study demonstrates that room tariff policy matters because it influences patient choice, room utilization, and revenue composition. The main lesson is not simply that higher prices produce higher income, but that sustainable hospital revenue depends on aligning tariff levels with patient affordability, occupancy patterns, cost realities, and service quality. The findings therefore support a more strategic approach to hospital pricing one that is transparent, cost-based, socially responsive, and integrated with broader operational planning.

4. KESIMPULAN

This study concludes that inpatient room tariff calculation plays a significant role in shaping revenue performance at Haji Hospital Makassar. The main empirical finding is that inpatient revenue remained a major component of total hospital income throughout the 2011–2014 period, indicating that room-based inpatient services were financially central to the hospital's operational sustainability. The study also shows that tariff differentiation across room classes was associated with different patterns of utilization, with lower-priced rooms especially Class III showing the strongest and most consistent growth in patient use, while higher-priced rooms such as VIP and Class I displayed more fluctuating demand.

The findings further suggest that hospital income was influenced less by changes in tariff levels because the tariff schedule remained fixed during the study period and more by the interaction between tariff structure, patient affordability, and room utilization. In other words, the revenue effect of pricing emerged through occupancy and class-specific demand rather than through periodic price revision. This result strengthens the argument that pricing policy in hospitals must be assessed not only in nominal terms, but also in relation to patient behavior, service mix, and the socioeconomic composition of demand.

From the discussion, the study highlights that the relationship between pricing and hospital revenue follows a basic demand logic: lower room charges are more accessible to a broader patient base and may therefore generate stronger aggregate revenue through higher utilization. At the same time, the study indicates that inpatient pricing in a public hospital context must balance financial objectives with social obligations. Because lower- and middle-income patients were particularly sensitive to room tariffs, the issue of affordability remains central to hospital revenue strategy.

The principal implication of the study is managerial. Hospital administrators should treat room tariff setting as a strategic financial tool rather than as a routine administrative schedule. A more effective pricing system should be supported by transparent cost calculation, periodic tariff evaluation, improved facilities, and service quality enhancement so that revenue growth is accompanied by better patient satisfaction and stronger utilization. The original study also implies that promotional efforts and improvements in infrastructure could increase inpatient demand and strengthen the hospital's revenue base.

In terms of contribution, this study adds to the existing body of knowledge by providing an empirical case from an Indonesian public hospital on how inpatient room tariffs relate to hospital income. Its contribution lies in showing that even within a fixed-pricing structure, room-class differentiation and utilization patterns can significantly shape financial outcomes. This offers a practical perspective for hospital financial management, especially in developing-country settings where inpatient care remains a major revenue source and tariff policy must simultaneously serve efficiency, sustainability, and equity objectives.

However, the study also has clear limitations. Its conclusions are based on descriptive analysis of a single hospital and do not employ inferential statistical techniques to establish causality more rigorously. Future research should therefore extend this topic by using panel data, comparative multi-hospital samples, or quasi-experimental methods to test the relationship between tariff changes, occupancy, and revenue more robustly. Further studies could also incorporate quality-of-care indicators, payer mix, and patient socioeconomic data in order to better explain how hospital pricing systems affect both financial performance and equitable access to care. In this sense, the present study serves as a useful foundation for more analytically rigorous research on healthcare pricing and hospital revenue management.

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