

The Dynamics of Asymmetric Competition in the Healthcare Industry: Analysis of Market Structure and Non-Price Strategies at XYZ Regional General Hospital and Reksa Waluya Hospital

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ABSTRACT

The healthcare industry in Mojokerto City demonstrates competitive dynamics between public and private hospitals influenced by the tariff regulations of the National Health Insurance (Jaminan Kesehatan Nasional [JKN]). RSUD, as a public hospital, has a cost advantage through government subsidies, creating asymmetric competition with private hospitals such as RS Reksa Waluya. This research aims to analyze the dynamics of asymmetric competition between RSUD XYZ and RS Reksa Waluya and to identify competitive strategies that can support the sustainability of private hospitals. This research employs a managerial economics approach using a comparative case study method involving two hospitals in Mojokerto City to analyze market structure and competitive strategies. The results indicate that the hospital market structure is hybrid, combining characteristics of monopolistic competition and oligopoly. RSUD has an absolute cost advantage, making price-based competition ineffective for RS Reksa Waluya. Competition has shifted from monetary pricing strategies toward non-price factors, such as waiting time efficiency, the adoption of Electronic Medical Records (EMRs), value-based branding, and service specialization, including geriatric care. The sustainability of private hospitals depends more on service differentiation and operational efficiency strategies, while public hospitals should focus on improving managerial efficiency to maintain service quality.

INTRODUCTION

The healthcare industry in Indonesia has undergone significant structural transformation over the past decade. The health sector, which has traditionally been regarded as a provider of public goods with strong social characteristics, has increasingly demonstrated characteristics of an economic commodity operating within complex market mechanisms (Donaldson et al., 2017; Krachler et al., 2022; Van Dijck et al., 2018). This paradigm shift has primarily been driven by two major factors: regulatory intervention through the implementation of the National Health Insurance (Jaminan Kesehatan Nasional [JKN]) program and the accelerated adoption of digital technologies within healthcare service systems (Nurmidin, 2025; Susilo et al., 2025).

The development of digital technology has transformed the competitive landscape of the healthcare industry from a primarily physical service-based model into one increasingly reliant on information systems and service delivery speed. Globally, the number of health applications available on the Google Play Store nearly doubled from 23,955 applications in 2015 to 47,140

applications in 2020 (Fransiska & Bernarto, 2021). In Indonesia, digital acceleration has been supported by extensive information technology infrastructure penetration. With a population of approximately 272.1 million people, the number of mobile devices in circulation reached 338.2 million units, equivalent to 124% of the total population, while active internet users reached 175.4 million people (Fransiska & Bernarto, 2021). This condition indicates that Indonesia's healthcare market ecosystem is relatively prepared to transform toward digital-based services (Austiko & Anas, 2026; Futri & Naruetharadhol, 2025; Saputra et al., 2022).

Amid this digitalization process, asymmetric competition dynamics have emerged between government-owned hospitals and private hospitals. Based on the 2023 Indonesian Health Profile, the concentration of healthcare facilities in urban and densely populated areas has created a competitive yet asymmetric market structure due to differences in fiscal capacity and regulatory support (Ministry of Health of the Republic of Indonesia [Kemenkes RI], 2024).

This phenomenon is evident in Mojokerto City. XYZ Hospital, a type B hospital owned by the local government, occupies the position of market leader due to its dominance in patient volume, particularly within the JKN segment. Government subsidies and substantial economies of scale provide this hospital with a structural cost advantage (Angeli & Jaiswal, 2016; Stevens, 2025). In contrast, Reksa Waluya Hospital, a type C hospital managed by the GKJW Health Foundation, operates independently with more limited financial resources while remaining responsible for maintaining service quality and fulfilling the foundation's social mission (Kaimila, 2023; Peter, 2025; Rahmanto et al., 2023).

This condition creates complex managerial dilemmas, particularly for type C private hospitals. In this context, a critical strategic question arises regarding how private hospitals can maximize financial sustainability and preserve their social mission when competing through price-based strategies against government hospitals is not feasible (Hatefi, 2025; Hodgkinson & Hughes, 2019; Luca & Paul, 2019; Pizarro, 2026). Empirical evidence in digital healthcare demonstrates that customer satisfaction and loyalty are increasingly influenced by service quality and accessibility rather than solely by price considerations (Porter & Teisberg, 2006).

The analysis of the hospital industry requires a strong theoretical framework to understand firm behavior in determining prices and output levels because hospitals are unique entities operating at the intersection of social objectives and economic efficiency. The healthcare industry does not conform to the assumptions of perfect competition due to the complexity, heterogeneity, and differentiation of healthcare services. Patients do not perceive medical services as homogeneous commodities; instead, factors such as institutional reputation, technological capability, healthcare facilities, and patient-provider interactions create substantial service differentiation (Blake, 2015; mohammed Shublaq, 2022). Consequently, each hospital faces a unique and relatively inelastic demand curve. The Indonesian hospital market structure can be understood as a hybrid between monopolistic competition and oligopoly, varying across service segments. Basic healthcare services tend to exhibit characteristics of monopolistic competition, with relatively low entry barriers where innovation drives competition. Meanwhile, advanced healthcare services tend to demonstrate oligopolistic characteristics due to high entry barriers, including capital requirements, strict licensing regulations, and limited availability of specialists. These conditions create strategic interdependence, in which decisions made by one hospital may directly influence competitors

and encourage strategies such as price leadership, non-price differentiation, or implicit coordination (Baker, 2025; Das & Banerjee, 2026; Proper, 2026).

Information asymmetry distinguishes healthcare markets from other markets, as initially explained by Arrow (1963), creating an imbalance in which physicians possess greater technical knowledge while patients experience uncertainty and psychological vulnerability. This condition establishes a principal-agent relationship with potential conflicts of interest when provider incentives are not aligned with patient welfare. Such asymmetry enables supply-induced demand (SID), where healthcare providers may use informational advantages to influence patient demand patterns, potentially resulting in healthcare consumption exceeding optimal levels. Consequently, healthcare demand tends to be relatively price inelastic, allowing hospitals to set prices above marginal costs ($P > MC$) and maximize producer surplus. When price-based mechanisms become ineffective, healthcare organizations shift toward non-price competition strategies, particularly in environments where government regulations, such as INA-CBGs reimbursement tariffs and insurance coverage mechanisms, influence pricing structures and reduce patient sensitivity to price differences. Non-price competition theory suggests that when firms are unable to compete through pricing strategies, they must shift demand through improvements in service quality, healthcare amenities, accessibility, and institutional reputation. Within the digital economy, these strategies focus on reducing transaction and search costs through healthcare applications, online registration systems, and Electronic Medical Records (EMRs). Hospitals that successfully reduce patient search costs may achieve stronger loyalty and more stable demand, while digital differentiation can create switching costs that discourage patients from changing providers and strengthen sustainable competitive advantages within the healthcare industry's limited price competition environment.

Several studies have examined competition within Indonesia's hospital industry. Trisnantoro (2019) discussed hospital economics and management but did not specifically examine asymmetric competition between public and private hospitals. Folland et al. (2017) explored healthcare economics more broadly but did not relate their analysis to JKN regulations and their implications for competitive strategies. Porter and Teisberg (2006) emphasized the importance of value-based competition in healthcare; however, their framework primarily reflects healthcare systems in developed countries. Therefore, research examining asymmetric competition between public and private hospitals in Indonesia remains limited, particularly studies investigating how JKN regulations influence non-price strategies among type C private hospitals.

The novelty of this study lies in its examination of asymmetric competition between public and private hospitals within the context of JKN regulation in Indonesia, with a specific focus on the non-price strategies adopted by type C private hospitals to remain sustainable despite the absolute cost advantages held by public hospitals. This perspective has not been extensively explored in previous literature.

This article aims to analyze the market structure of the hospital industry in Indonesia through a comparative case study of XYZ Hospital and Reksa Waluya Hospital. Using the framework of managerial economics, this article evaluates the implications of market structure, particularly monopolistic competition and oligopoly, for pricing and output decisions. Furthermore, it examines the role of digital transformation-based non-price strategies in

maintaining the sustainability of foundation-based private hospitals. This research is expected to contribute to the development of managerial economics, particularly in understanding competitive strategies within Indonesia's hospital industry, while also providing practical considerations for private hospital management in formulating sustainable strategic approaches.

METHOD

This research employed a qualitative approach with a comparative case study design to analyze the dynamics of asymmetric competition in the healthcare service industry in Mojokerto City. The research focused on a comparison between RSUD XYZ as the market leader and RS Reksa Waluya as the market challenger, particularly within the context of the hospital market structure influenced by National Health Insurance (JKN) regulations.

The analytical framework applied in this study was based on managerial economics, focusing on market structure, cost advantages, and non-price competition strategies. Data were collected through document analysis, literature review, and observation of service characteristics and operational strategies implemented by the two hospitals. Secondary data sources included national health reports, healthcare policy documents, economic literature, and previous studies related to digital transformation in healthcare services.

The collected data were analyzed using descriptive-comparative analysis, which examined differences in market structure characteristics, competitive strategies, and service differentiation approaches between public and private hospitals. The analysis also assessed the influence of factors such as INA-CBGs tariff regulations, operational efficiency, digital transformation through Electronic Medical Records (EMRs), and service specialization on hospital competitiveness and financial sustainability.

Through this approach, the study aimed to understand how hospitals with different institutional support systems and resource capacities developed managerial strategies to respond to increasingly complex competition within the healthcare industry.

RESULT AND DISCUSSION

A case study on the hospital industry in Mojokerto City provides a comprehensive empirical overview of the dynamics of hybrid market structures in the healthcare sector. This analysis specifically compares two hospital entities with fundamentally different ownership characteristics, institutional mandates, and resource structures, namely RSUD XYZ owned by the Government as a market leader, and Reksa Waluya Hospital (Type C Hospital owned by GKJW Health Foundation) as market challengers that operate based on the principles of financial independence and value-based service mission.

These differences in characteristics make the city of Mojokerto a relevant context to test how market structure theory, cost behavior, and non-price strategies in managerial economics work in real conditions, especially when regulatory interventions and resource asymmetry create asymmetrical competition.

Identify Market Structure: The Asymmetry of Government vs Private Hospitals

In general, the hospital industrial landscape in Mojokerto City operates in a monopolistic competitive structure that undergoes significant regulatory distortions. The market is filled with a number of healthcare providers, both government hospitals, private hospitals, and clinics, but

each offers differentiated service products. The differentiation is clear between XYZ Hospital as a provider of referral services complete with government subsidy support, and Reksa Waluya Hospital which emphasizes a personal service approach (*personal touch*) based on foundation values.

Furthermore, the health service market in Mojokerto City is sharply segmented into two different demand curves, namely:

1. JKN Patient Market (Perfect Inelastic)

In this segment, service prices are set exogenous by the government through the INA-CBGs tariff scheme. Both RSUD and Reksa Waluya Hospital play the role of *price takers*, so they do not have the flexibility to determine prices. However, XYZ Hospital has structural advantages in the form of economies *of scale* which come from bed capacity and large patient volume. This advantage allows the hospital to absorb a massive number of JKN patients to achieve average cost efficiency.

2. General/Executive Patient Market (Elastic)

In contrast to the JKN segment, the general patient market operates in a relatively pure monopolistic competition mechanism. Patients pay *out-of-pocket* and show a high sensitivity to the ratio of price and quality of service. In this segment, service differentiation, hospital reputation, and service comfort and speed are the main determining factors in patient decision-making.

This extreme market segmentation reinforces the character of asymmetric competition between government hospitals and private hospitals, while limiting the effectiveness of pricing strategies as a tool of competition.

Implicit Price vs. Cost War Analysis: Validation of the Mojokerto Case

Within the framework of oligopoly theory, competition between market participants is often manifested in the form of price wars. However, empirical findings in Mojokerto City show that price wars are not a rational strategy for private hospitals. On the contrary, the dominant form of competition occurs through the exchange between monetary costs and implicit costs.

The results of field observations confirm the relevance of opportunity cost theory in the context of health services. There was a significant disparity in waiting times between the two hospitals analyzed:

1. XYZ Hospital offers very low monetary costs, even close to zero for JKN patients. However, these advantages are offset by high implicit costs, especially in the form of relatively long waiting times for registration, examination, and medication retrieval. Thus, the total economic costs incurred by patients can be formulated as a combination of low cost of money and high cost of time.
2. RS Reksa Waluya, on the other hand, sets a relatively higher service rate, but is able to significantly reduce implicit costs through a fast and integrated service process. The "come, check, medicate, go home" service pattern is the main value proposition offered to patients.

For the working and middle-class patient segment in Mojokerto City, time is a high-value resource. Therefore, Waluya Mutual Hospital does not need to lower the price to compete with the hospital. A more rational strategy is to capitalize on time inefficiencies in government hospitals by offering speed and convenience of services. If Reksa Waluya Hospital is caught

up in a price reduction strategy, the hospital will operate below average cost ($P < ATC$) without government subsidy support, which in the long run has the potential to threaten operational sustainability.

Non-Price Strategy and Digital Efficiency: The Real Battlefield

Given the limited funding of Reksa Waluya Hospital which is not supported by the APBD, the managerial implications shift to technological efficiency and strengthening the foundation's social brand.

a) Electronic Medical Records (RME) as a Cost Curve Slider

The transformation to RME is not just compliance with SatuSehat regulations, but an economic instrument to increase profit margins without increasing selling prices.

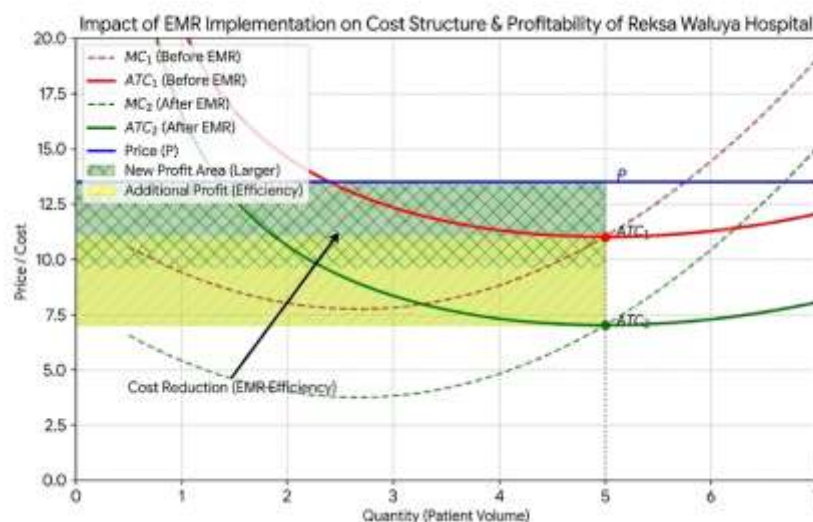


Figure 1. The Impact of Electronic Medical Records (EMR) Implementation on Cost Structure and Profitability of Reksa Waluya Hospital

Source: Author's own elaboration based on the theory of cost curves in managerial economics

As illustrated in Figure 1, the implementation of RME and administrative digitization at Reksa Waluya Hospital effectively eliminates the cost of physical variables such as X-ray films, medical record papers, and archive warehouses. This causes the Marginal Cost curve to shift downwards from MC_1 to MC_2 , and the Average Cost curve to drop from ATC_1 to ATC_2 .

Under conditions of a fixed market price (P), this decrease in costs automatically widens the company's profitability area (the rental area). This efficiency is crucial for type C Private Hospitals to survive in the midst of increasing operational costs.

b) "Profit to Serve": Foundation's Branding Narrative as Differentiation

The strongest strategic advantage that Reksa Waluya Hospital has comes from its ownership status as a foundation hospital. This character creates brand equity that is unique and difficult to replicate by private hospitals with corporate entities and government hospitals.

The management of Reksa Waluya Hospital needs to consistently communicate the narrative that the hospital's profitability is not intended for dividend distribution, but for the reinvestment of medical equipment and the implementation of cross-subsidies for underprivileged patients. In the perspective of consumer behavior theory, the narrative builds

trust and moral legitimacy. Patients tend to accept higher prices when they believe that the funds paid back to the community are in the form of meaningful services. This strategy makes the demand curve more inelastic, because patient loyalty is formed based on a social mission, not solely price considerations. Thus, this approach can be understood as a form of strategic corporate social responsibility that is directly integrated into the hospital's core business model.

c) Centers of Excellence (Niche Monopoly)

As a complementary strategy, Reksa Waluya Hospital can focus on developing centers of excellence in services that require a high level of personal touch, such as geriatric services and palliative care. Patient volume-oriented government hospitals often face limitations in providing optimal individualized care for elderly patients.

By controlling this service segment, Reksa Waluya Hospital has the potential to create a local monopoly (niche monopoly), where the hospital becomes the most rational choice for families who want holistic and quality-of-life care for patients. This specialization strategy not only strengthens differentiation, but also improves the economic sustainability of hospitals in the long term.

CONCLUSION

An in-depth analysis of the healthcare industry in Indonesia, particularly through a comparative case study in Mojokerto City, shows that the structure of the hospital market has evolved into a complex hybrid form combining characteristics of monopolistic competition and oligopoly. This structure no longer operates solely based on a pure free-market mechanism but has experienced significant distortions due to interventions from National Health Insurance (Jaminan Kesehatan Nasional [JKN]) regulations. These findings confirm that hospital managerial behavior cannot be adequately explained using a single classical economic model. On the one hand, the basic healthcare service segment dominated by BPJS (Badan Penyelenggara Jaminan Sosial) patients exhibits characteristics of a monopsony market, in which the government acts as the dominant purchaser and influences pricing mechanisms. On the other hand, general and executive service segments continue to operate within a relatively competitive market but remain highly sensitive to service quality and value differentiation.

The main conclusion of this study is that pricing strategies have become less effective as the primary instrument for gaining competitive advantage in the hospital industry. For type C private hospitals such as Reksa Waluya Hospital, engaging in a price war with the government-owned market leader, XYZ Hospital, represents an irrational strategic approach that may threaten organizational sustainability. The significant asymmetry in cost structures, where public hospitals operate with subsidized cost advantages, enables them to offer services at lower prices without facing the same financial pressures as private hospitals. In contrast, private hospitals that adopt excessively low pricing strategies risk operating below their break-even point and approaching financially unsustainable conditions. Therefore, competition has fundamentally shifted from direct price competition toward non-price competition, particularly through reductions in waiting times, improved service convenience, and value differentiation perceived by patients.

Furthermore, this study emphasizes that sustainable profitability in the digital era is highly dependent on the successful implementation of non-price competition strategies. For foundation-based private hospitals, profitability is not primarily achieved through increasing

patient volume but through creating more stable and less price-sensitive demand. This strategy is realized through two complementary approaches. First, digital transformation through the adoption of technologies such as Electronic Medical Records (EMRs) functions as an operational efficiency instrument by reducing administrative burdens and improving resource utilization, thereby enhancing profitability without requiring significant increases in service prices. Second, strengthening social brand equity through the communication of the hospital's humanitarian mission enables the development of stronger patient loyalty and creates differentiation from purely commercial healthcare providers.

Finally, this study concludes that the strategic distinction between public and private hospitals in the healthcare industry has become increasingly evident. For government hospitals operating under the BLUD (Badan Layanan Umum Daerah) framework, managerial success is determined by the ability to implement cost leadership strategies and efficient capacity management to serve large patient volumes while maintaining service quality. In contrast, private hospitals achieve competitiveness through the development of differentiated service niches, including specialization, faster access, and personalized value-added services. In this context, managers in both sectors must recognize that patients in an era of transparent information are no longer passive recipients of medical services but rational consumers who consider total economic costs, including both monetary expenses and time costs, when making healthcare decisions. Therefore, transparency, digital accessibility, and human-centered healthcare services have become critical factors determining hospital competitiveness and sustainability amid the ongoing transformation of the modern healthcare industry.

REFERENCES

- Angeli, F., & Jaiswal, A. K. (2016). Business model innovation for inclusive health care delivery at the bottom of the pyramid. *Organization & Environment*, 29(4), 486–507.
- Austiko, M. U., & Anas, E. P. (2026). The effect of strategic agility and digital transformation on strategic renewal: An empirical study of private primary health care services in Indonesia. *Amkop Management Accounting Review (AMAR)*, 6(1), 1003–1015.
- Baker, J. B. (2025). *Conduct that increases market power without lessening competition: A challenge for antitrust law* (SSRN Working Paper No. 5113399). SSRN.
- Blake, R. S. (2015). *Health care public reporting and consumer hospital choice: Effects of comparative performance data displayed by CMS upon discrete hospital choices of Texas residents, 2008–2012* (Doctoral dissertation). The University of Texas at Dallas.
- Das, I., & Banerjee, T. (2026). A theoretical model on medical tourism destination and quality provision. *Studies in Microeconomics*. Advance online publication. <https://doi.org/10.1177/23210222261424096>
- Donaldson, C., Gerard, K., Jan, S., Mitton, C., & Wiseman, V. (2017). *Economics of health care financing: The visible hand*. Bloomsbury Publishing.
- Folland, S., Goodman, A. C., & Stano, M. (2017). *The economics of health and health care* (8th ed.). Routledge.
- Fransiska, C., & Bernarto, I. (2021). The effect of service quality on customer satisfaction and sustainability of use in health application users. *Journal of Business Administration*, 11(2), 132–142. <https://doi.org/10.35797/jab.v11.i2.132-142>
- Futri, I., & Naruetharadhol, P. (2025). Open innovation's effects on Indonesia's digital health

- market and related societal issues. *Cogent Arts & Humanities*, 12(1), 2457819.
- Hatefi, A. (2025). *A utility-based approach to healthcare: Balancing market efficiency with public service obligations*.
- Hodgkinson, I. R., & Hughes, P. (2019). Public service performance: Exploring the effects of strategy configurations among ownership types. *International Public Management Journal*, 22(5), 775–796.
- Kaimila, E. (2023). *The impact of governance on performance of non-profit hospitals in Malawi* (Doctoral dissertation). Unicaf University.
- Krachler, N., Greer, I., & Umney, C. (2022). Can public healthcare afford marketization? Market principles, mechanisms, and effects in five health systems. *Public Administration Review*, 82(5), 876–886.
- Luca, L., & Paul, O. (2019). *Price setting and price regulation in health care: Lessons for advancing universal health coverage*. OECD Publishing.
- Ministry of Health of the Republic of Indonesia. (2023). *Blueprint for health digital transformation strategy 2024*. Ministry of Health of the Republic of Indonesia.
- Ministry of Health of the Republic of Indonesia. (2024). *Indonesia's health profile 2023*. Ministry of Health of the Republic of Indonesia.
- Mohammed Shublaq, H. S. (2022). *Quality of services provided in dental clinics at University of Palestine: Patients' perception and expectation*. Al-Quds University.
- Nurmidin, M. F. (2025). Transformation of Indonesia's national health system: A literature review on policy development and implementation. *Jurnal Riset dan Pengabdian Interdisipliner*, 2(2), 426–433.
- Peter, P. (2025). *Effect of corporate social responsibility on public hospital performance: A case of Mount Meru Hospital, Arusha* (Master's thesis). The Open University of Tanzania.
- Pizarro, J. A. H. (2026). *Designing healthcare systems to balance equity and efficiency: Managed competition and health plan payment* (Doctoral dissertation). The University of Newcastle.
- Porter, M. E., & Teisberg, E. O. (2006). *Redefining health care: Creating value-based competition on results*. Harvard Business School Press.
- Propper, C. (2026). Do markets deliver? Competition and choice in European healthcare markets. *The Economic Journal*. Advance online publication. <https://doi.org/10.1093/ej/ueag033>
- Rahmanto, M., Ab Rahman, A., & Daud, Z. M. (2023). Healthcare waqf and socio-economic development in Indonesia: Case study of Hospital Roemani Muhammadiyah. *Jurnal Syariah*, 31(3), 308–349.
- Saputra, Y. E., Worsito, S. B., & Firdaus, D. S. (2022). Bridging a resilient post-pandemic recovery through digital health transformation. In *Indonesia post-pandemic outlook: Rethinking health and economics post-COVID-19* (pp. 13–43). BRIN Publishing.
- Stevens, R. (2025). *In sickness and in wealth: American hospitals in the twentieth century*. Plunkett Lake Press.
- Susilo, D., Lila, W. L. P., Sukmayeti, E., Asante, A., Jan, S., Thabrany, H., Tangcharoensathien, V., Wiseman, V., & Liverani, M. (2025). Can Indonesia achieve universal health coverage? Organisational and financing challenges in implementing

- the national health insurance system. *SSM–Health Systems*, 100138.
- Trisnantoro, L. (2019). *Understand the use of economics in hospital management*. Gadjah Mada University Press.
- Van Dijck, J., Poell, T., & De Waal, M. (2018). *The platform society: Public values in a connective world*. Oxford University Press.