



Hospital Facility Distribution and Efficiency: Impact on Perceived Equity through Infrastructure Availability

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Abstract. Equitable access to healthcare remains a major concern in decentralised health systems, particularly in low- and middle-income countries. This study investigates how Facility Distribution Inequality (FDI) and Hospital Financial Efficiency (HFE) affect Perceived Equity in Service Access (PES), with Service Infrastructure Availability (SIA) as a mediating variable. Grounded in the Resource-Based View and Distributive Justice Theory, a quantitative survey was conducted with 203 respondents across districts in South Sulawesi, Indonesia. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results show that SIA significantly mediates the relationships between both FDI and HFE and PES, indicating that infrastructure availability is a salient indicator through which citizens evaluate fairness in service delivery. These findings highlight the need for infrastructure-sensitive equity planning and for aligning financial efficiency with facility-level readiness. The study proposes an integrative framework linking institutional resource dynamics with public perceptions of distributive justice, offering practical guidance for policymakers seeking to reduce spatial inequalities in healthcare access.

Keywords: Health equity, Hospital facility distribution, Service infrastructure availability, Financial efficiency, Distributive justice.

1 Introduction

Equitable access to quality healthcare remains a central challenge in many low- and middle-income countries (LMICs), such as Indonesia. Although the introduction of universal health coverage (UHC) schemes, such as Jaminan Kesehatan Nasional (JKN), has successfully expanded formal entitlements, significant disparities persist in how citizens experience these services, particularly in terms of geographical access, facility readiness, and service responsiveness [1, 2]. The World Health Organization [3] emphasises that true equity must be assessed not only by coverage indicators but also by whether services are available, accessible, acceptable, and of adequate quality. In regions such as South Sulawesi, where hospitals are unevenly distributed and infrastructure capacity varies dramatically, these challenges are felt more acutely. Communities in peripheral districts frequently report longer travel distances, facility

overcrowding, and insufficient clinical support, contributing to a deepening perception of systemic injustice in healthcare access.

In South Sulawesi, the tension between entitlement and access is further complicated by demographic and socio-economic pressures. The province's population has steadily increased from 9.26 million in 2022 to 9.46 million in 2024, placing substantial demands on an already uneven health service infrastructure. Although the overall poverty rate shows a marginal decline, with the number of residents living below the poverty line decreasing from 788.85 thousand in 2023 to 736.48 thousand in 2024, the absolute figure remains significant [4]. This persistent concentration of poverty intersects with geographic service imbalances, amplifying systemic vulnerabilities. Rural districts in South Sulawesi often bear a disproportionate burden, facing higher levels of deprivation while also lacking proximity to adequately equipped hospitals. As healthcare demand grows, these conditions risk deepening structural inequities, whereby population growth outpaces the health system's ability to deliver accessible and equitable services.

While literature has documented disparities in health outcomes, financial protection, and provider competence in Indonesia [5, 6], limited research exists on how institutional supply factors, particularly facility distribution inequality and hospital financial efficiency, influence public perceptions of healthcare access fairness. Studies by Pu [7] and Cheng et al. [8] indicate that perceptions of justice are shaped by socioeconomic status and observable service gaps, such as equipment shortages or understaffed hospitals. These perceptual inequities significantly affect patient satisfaction and may lead to decreased health-seeking behavior and erosion of trust in public institutions. However, most empirical frameworks do not integrate these structural conditions with subjective public evaluations, leaving a conceptual and policy-relevant gap.

This research seeks to fill that gap by proposing a mediating framework wherein Service Infrastructure Availability (SIA) plays a central role in linking Facility Distribution Inequality (FDI) and Hospital Financial Efficiency (HFE) with Perceived Equity in Service Access (PES). Drawing on the Resource-Based View [9] and Distributive Justice Theory [10], the study positions SIA not merely as a physical attribute of health systems, but as a perceptible proxy through which communities judge the justice and legitimacy of institutional resource allocation. In doing so, the research also addresses a critical lacuna in Indonesian health policy discourse: the lack of granular, regionally grounded analyses that capture how systemic input disparities manifest in equity perceptions at the community level.

The purpose of this study is to examine the structural pathways through which FDI and HFE influence PES, focusing on the mediating effect of SIA in hospital settings across selected districts in South Sulawesi. Using a quantitative survey-based approach and Partial Least Squares Structural Equation Modelling (PLS-SEM), the study aims to provide empirical evidence on how health system inputs shape public experience and perceptions of justice. The findings will inform theoretical development in institutional capability and social evaluation, and contribute to evidence-based policy formulation for improving equity and responsiveness in Indonesia's decentralised health governance.

2 Literature Review

2.1 Resource-Based View and Distributive Justice

The Resource-Based View (RBV) of the firm, as articulated by Wernerfelt [9], posits that sustainable competitive advantage emerges from the possession and strategic deployment of internal resources that are valuable, rare, inimitable, and non-substitutable (VRIN). In the context of public healthcare institutions, these resources extend beyond physical infrastructure to include financial management systems, human capital competencies, and organisational agility. Hospitals equipped with efficient financial systems and robust service infrastructure are more likely to respond adaptively to population needs, reduce service delivery delays, and increase community satisfaction. Consequently, such internal capacities are critical in shaping not only institutional effectiveness but also the perceived credibility of healthcare services among patients [21].

Complementing this institutional perspective, Distributive Justice Theory, as elaborated by Cohen [10], examines how individuals assess fairness in resource allocation. It outlines three principles: equity (allocation based on contribution), equality (equal distribution), and need (distribution based on vulnerability). In healthcare systems reliant on public financing, such as Indonesia's JKN scheme, need-based distribution becomes paramount. When resources such as hospital beds, medicines, or personnel are distributed unevenly across regions, populations in rural areas often perceive these imbalances as systemic injustices, regardless of formal entitlements. This gap between entitlement and experience becomes a critical dimension of service equity. Synthesizing RBV and Distributive Justice enables a multi-layered understanding of hospital service delivery: while RBV highlights institutional capacity, Distributive Justice foregrounds citizens' evaluation of service accessibility. In settings like South Sulawesi, where geographic and fiscal disparities are pronounced, this dual-theoretical approach provides an analytical foundation to examine how facility input gaps and financial inefficiencies affect public perceptions of healthcare access. It also contextualizes why infrastructural sufficiency mediates between resource allocation and perceived fairness, a central hypothesis explored in this study.

2.2 Health Service Inequality in Low and Middle-Income Countries

Inequality in healthcare access remains a persistent challenge in low- and middle-income countries (LMICs), where health systems are often underfunded, geographically fragmented, and structurally centralised. In such settings, disparities are manifested not only in outcomes but also in service readiness, such as the availability of essential medicines, diagnostic tools, and qualified personnel. Studies across sub-Saharan Africa, Southeast Asia, and Latin America consistently show that peripheral and rural regions tend to experience lower availability of core infrastructure and weaker provider capacity compared to urban centres [11]. These inequalities are compounded by limited fiscal space, rigid budget allocations, and political prioritisation that often

favours more affluent or strategically important areas. As a result, healthcare delivery becomes unevenly distributed, with rural populations facing systemic barriers despite universal health coverage policies.

In Indonesia, these patterns are clearly observable. Research by Johar et al. [12] and Fu et al. [13] revealed that although national insurance schemes like JKN have expanded financial protection, supply-side constraints including unequal facility distribution and inconsistent provider quality undermine equity objectives. Facilities in poorer districts exhibit lower service readiness scores and weaker clinical competence, resulting in “poor quality for the poor” [14]. This paradox where financial access exists but physical or functional access is limited has become a defining challenge in Indonesia’s healthcare reforms. Addressing this issue requires not only financing improvements, but also investments in decentralised infrastructure, capacity-building, and more responsive allocation models. For LMICs like Indonesia, equity in access is inseparable from the structural transformation of health service delivery systems [19].

2.3 Health Infrastructure, Financial Inputs, and Community-Level Service Readiness

Health infrastructure is crucial in ensuring that healthcare services are both functionally accessible and clinically effective, particularly at the community level. Service readiness, defined as a facility’s capacity to provide essential care, depends on the availability of physical inputs such as medical equipment, pharmaceuticals, utilities, and trained personnel. [15]. In decentralised health systems, the uneven distribution of such inputs often reflects underlying fiscal imbalances and regional disparities in resource planning. The study by Kurniati et al. [16] revealed that even with expanded financial access through public insurance, deficits in infrastructure significantly limit the realisation of health equity. Poorly equipped facilities tend to deliver lower quality care, generate longer waiting times, and reduce public confidence in the health system, thereby compounding exclusion, especially among vulnerable groups.

In the Indonesian context, research by Johar et al. [12] and Haemmerli et al. [14] demonstrates that district-level variation in hospital funding and procurement capacity has a direct effect on the operational quality of healthcare facilities. While the JKN scheme aims to standardise access, its effectiveness is undermined by payment delays, rigid capitation formulas, and centralised budget disbursement mechanisms. These inefficiencies contribute to supply-side stagnation, where hospitals struggle to maintain adequate staffing levels, replenish essential supplies, or invest in service upgrades. Importantly, regional disparities in infrastructure readiness have been empirically linked to differential perceptions of fairness, with communities in facility-poor areas expressing stronger sentiments of exclusion and systemic neglect. These dynamics affirm that equity in healthcare cannot be realised solely through financial protection; it must be accompanied by strategic investments in infrastructure distribution and fiscal governance reform at the local level [22].

2.4 Public Perception

Public perception of healthcare equity in Indonesia reflects a complex interplay between formal entitlements, lived experiences, and structural inequalities. While universal health coverage (UHC) through Jaminan Kesehatan Nasional (JKN) has expanded access in principle, empirical studies consistently reveal a discrepancy between access and satisfaction, especially in peripheral or underserved regions. Wiseman [17] found that communities often perceive inequity not only through availability but also through comparisons with urban standards, where services are more comprehensive, faster, and staffed by more competent personnel. This reinforces a perception of marginalisation, particularly among rural populations who view the disparity as systemic and persistent. Such perceptions can weaken public trust, reduce utilisation rates, and undermine the legitimacy of state health systems.

Furthermore, recent evidence by Johar et al. [12] and Samani [18] indicates that perceptual equity is shaped not solely by economic status or insurance coverage, but by the visibility of service readiness such as whether hospital equipment is functioning, whether medicines are consistently available, and whether staff are responsive. These tangible elements heavily influence whether citizens feel fairly treated, even when financial access exists. The concept of experienced equity thus emerges as a critical extension of distributive justice theory in the Indonesian context: access is not merely a legal guarantee, but a lived interaction with health infrastructure. As such, addressing inequity in Indonesia requires more than administrative inclusion; it demands perceptible improvements in how services are delivered, resourced, and maintained at the local level [20].

2.5 Research Gap and Hypotheses

Despite significant scholarly attention to health inequality and system performance, studies often examine facility readiness, financial inputs, and public perception separately. Few adopt an integrated framework linking systemic supply-side factors with community-level equity experiences. In Indonesia, analyses focus on macro-level disparities in funding and service coverage [14],[16], without fully exploring how infrastructure gaps and hospital financial efficiency affect citizens' fairness perceptions. Similarly, while perceived equity is explored concerning socioeconomic status, its structural antecedents, especially the mediating role of service readiness, remain under-theorised and under-examined [26]. Moreover, no empirical model has tested how facility distribution inequality and hospital financial efficiency interact through infrastructure availability to shape perceived justice in healthcare access regionally. This gap is salient in decentralised systems like Indonesia, where local governments manage health resources. Thus, this study addresses this void by developing and testing a structural model situating service infrastructure availability as a central mediator between upstream institutional conditions and downstream public perception outcomes. The hypotheses guiding this investigation are:

- H1: Facility Distribution Inequality (FDI) has a significant positive effect on Service Infrastructure Availability (SIA).

- H2: Hospital Financial Efficiency (HFE) has a significant positive effect on Service Infrastructure Availability (SIA).
- H3: Service Infrastructure Availability (SIA) has a significant positive effect on Perceived Equity in Service Access (PES).
- H4: Service Infrastructure Availability (SIA) mediates the effect of Facility Distribution Inequality (FDI) on Perceived Equity in Service Access (PES).
- H5: Service Infrastructure Availability (SIA) mediates the effect of Hospital Financial Efficiency (HFE) on Perceived Equity in Service Access (PES).

3 Methodology

3.1 Research Design

This study adopted a quantitative, explanatory research design employing a variance-based Structural Equation Modelling (PLS-SEM) approach to investigate the causal relationships between facility distribution inequality (FDI) and hospital financial efficiency (HFE) on perceived equity in service access (PES), mediated by service infrastructure availability (SIA). The design was deemed appropriate given the complexity of the structural model, the presence of mediation, and the latent nature of the constructs being measured.

The research aims to address not only the significance of direct relationships but also the mechanism through which SIA explains the influence of FDI and HFE on PES. This mediation structure is theoretically grounded in distributive justice theory and health resource allocation frameworks, where infrastructure acts as a proximal determinant translating upstream systemic factors into downstream perceptions of equity.

PLS-SEM was chosen for its robustness in handling non-normal data, modelling formative and reflective constructs, and efficiency with moderate sample sizes. Bootstrapping with 5,000 resamples estimated path coefficients' precision and tested mediating effects' significance. The simultaneous estimation of measurement and structural models ensures assessment of reliability, validity, and explanatory power (R^2) within a single framework. This design contributes to theoretical refinement and practical implications, particularly in understanding how institutional inefficiencies and spatial disparities in health infrastructure affect citizens' perceived injustice in hospital access within decentralised healthcare systems [29].

3.2 Population and Sample

The population of this study comprised residents of selected regencies and municipalities within South Sulawesi Province, Indonesia, who had accessed hospital services within the preceding 12 months. This inclusion criterion ensured that the respondents possessed sufficient recent experience to evaluate their perceptions of facility availability and the fairness of healthcare service access. The geographic scope of the study encompassed areas with both high and low hospital density, allowing for the investigation of spatial disparities and their perceptual consequences.

A total of 203 respondents were surveyed, representing a sufficient sample size for PLS-SEM analysis, exceeding the minimum threshold recommended by Hair et al. (2022) for complex models with multiple latent constructs. The sampling technique applied was proportional stratified random sampling, ensuring fair representation across urban centres (e.g., Makassar), peri-urban zones (e.g., Pare-Pare), and remote or rural regions (e.g., Tana Toraja & Sidrap). This stratification was crucial in capturing a diverse cross-section of healthcare experiences based on facility accessibility and service coverage.

Data were collected using a structured questionnaire distributed in person and electronically based on respondent accessibility. The instrument used multiple reflective indicators measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). A pilot test with 30 respondents assessed item clarity and reliability, leading to minor wording adjustments for cultural and contextual relevance [30]. All participants provided informed consent, and confidentiality was strictly maintained. Data collection occurred over two months, allowing time for stratified coverage and quality control. The dataset was verified, screened for missing values and outliers, and processed for SEM-PLS analysis.

3.3 Variable Operationalization

The operational definitions, number of items, and measurement scales for each construct used in this study are presented in Table 1. The table provides a detailed overview of the variables employed in the research model and their corresponding measurement specifications.

Table 1. Construct Definitions, Items, and Measurement Scales

Construct	Definition	No. of Items	Measurement Scale
Facility Distribution Inequality (FDI_X1)	Perceived spatial inequality in the distribution of hospitals and services, including distance, facility availability, and service choice.	5	5-point Likert Scale (1 = <i>Strongly Disagree</i> to 5 = <i>Strongly Agree</i>)
Hospital Financial Efficiency (HFE_X2)	Perceived adequacy and timeliness of financial resources in hospital operations, particularly regarding the impact of national insurance (JKN).	5	5-point Likert Scale
Service Infrastructure Availability (SIA_Z)	Perceived availability and completeness of key hospital infrastructures, such as inpatient beds, diagnostic tools, medicines, and medical staff.	5	5-point Likert Scale
Perceived Equity in Service Access (PES_Y)	The extent to which individuals perceive hospital services as fair, non-discriminatory, and equally	5	5-point Likert Scale

Construct	Definition	No. of Items	Measurement Scale
	accessible regardless of socioeconomic status.		

Source: Authors own estimation (2025)

3.4 Data Collection Instrument

To assess measurement and structural relationships among latent constructs, this study used Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS software. The selection of PLS-SEM was justified by its suitability for prediction-oriented models, robustness with non-normal data distributions, and ability to analyze complex mediation structures with moderate sample size ($n = 203$), as recommended by Hair et al. [29].

1. Measurement Model Assessment

To assess construct reliability and validity, the following indicators were examined:

- Internal consistency reliability via Cronbach’s alpha and composite reliability (CR), both of which exceeded the threshold value of 0.70 (Nunnally & Bernstein, 1994).
- Convergent validity was confirmed by Average Variance Extracted (AVE), with values above 0.50 indicating that each construct explains the majority of variance in its indicators.
- Indicator reliability was assessed through outer loadings, all of which exceeded 0.70, signifying strong indicator contributions.
- Discriminant validity was examined using Fornell-Larcker criterion and cross-loading inspection, though results are not reported here due to space constraints.

2. Structural Model Assessment

The structural model was evaluated by examining:

- Path coefficients (β values) and p-values obtained via bootstrapping with 5,000 resamples, allowing for significance testing of direct and indirect (mediated) effects.
- Coefficient of determination (R^2) for endogenous constructs ($SIA_Z = 0.671$; $PES_Y = 0.677$), indicating substantial explanatory power based on Chin (1998).
- Effect size (f^2) and predictive relevance (Q^2) may also be computed but are beyond the scope of this paper.
- Mediation effects were tested following Preacher and Hayes [31] and Hair et al. [30], using indirect effect analysis and bias-corrected confidence intervals.

This analytical approach ensures both the validity of measurements and the robustness of the model, providing statistically substantiated insights into the hypothesized relationships among hospital financial efficiency, infrastructure availability, facility inequality, and perceived equity in healthcare access.

4 Result

4.1 Descriptive Statistics of Respondents

The demographic profile of respondents is summarised in Table 2, reflecting the diversity of socioeconomic backgrounds and geographical origins necessary for examining equity in hospital service access across South Sulawesi.

Table 2. Descriptive Statistics

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	92	46.0%
	Female	108	54.0%
Age	18–25 years	28	14.0%
	26–45 years	122	61.0%
	>45 years	50	25.0%
Education Level	Secondary or lower	32	16.0%
	Senior secondary	104	52.0%
	Tertiary (University/College)	64	32.0%
Employment Status	Informal sector	82	41.0%
	Formal (public/private)	64	32.0%
	Others (unemployed/student/etc)	54	27.0%
Location	Urban/Semi-Urban	114	57.0%
	Rural/Remote	86	43.0%
Hospital Type Visited	Public Hospitals	140	70.0%
	Private Hospitals	60	30.0%
JKN Membership	Enrolled	171	85.5%
	Not Enrolled	29	14.5%
Recent Access (<6 mo)	Yes	144	72.0%
	No	56	28.0%

Source: Authors own estimation (2025)

4.2 Measurement Model Assessment

Prior to testing the structural model, the reliability and validity of the reflective constructs were examined to ensure the robustness of the measurement model. This assessment followed the guidelines by Hair et al. [29] and included evaluation of internal consistency, convergent validity, and indicator reliability.

The results of the reliability and validity assessment of the measurement model are presented in Table 3. The table reports Cronbach’s Alpha, Composite Reliability (CR),

and Average Variance Extracted (AVE) values for each construct used in the study. Internal consistency reliability was confirmed through Cronbach's Alpha and Composite Reliability (CR), with values exceeding 0.70, indicating high internal coherence within constructs. Convergent validity was assessed via Average Variance Extracted (AVE), where constructs met the minimum value of 0.50, confirming latent variables explain over half their indicators' variance. Furthermore, outer loadings of items were above 0.708, affirming indicator reliability and appropriateness for analysis. These results support the validity of the measurement instruments used.

Table 3. Reability and Validity Test

Construct	Cronbach's Alpha	Composite Reliability (CR)	AVE	Conclusion
Facility Distribution Inequality (FDI_X1)	0.821	0.875	0.581	Reliable & Valid
Hospital Financial Efficiency (HFE_X2)	0.836	0.887	0.609	Reliable & Valid
Service Infrastructure Availability (SIA_Z)	0.873	0.910	0.668	Reliable & Valid
Perceived Equity in Service Access (PES_Y)	0.894	0.927	0.717	Reliable & Valid

Source: Authors own estimation (2025)

Discriminant validity was assessed using the Fornell-Larcker criterion. The square root of AVE for each construct exceeded its highest correlation with other constructs, confirming the latent variables were distinct. Cross-loading inspection revealed no problematic items with substantial cross-loading on unintended constructs. The results from the measurement model assessment show all reflective constructs meet reliability and validity criteria, providing a sound basis for evaluating structural relationships in the next analysis stage.

4.3 Structural Model Results

The structural model was evaluated to test hypothesised relationships between latent variables, including direct and mediating effects. Path coefficients, t-statistics, and p-values were derived from bootstrapping with 5,000 subsamples, and R^2 values determined the model's explanatory power. Analysis followed thresholds by Hair et al. [31], where t-values > 1.96 and p-values < 0.05 denote statistical significance.

Table 4. Structural Path Coefficients, Significance Levels, and Mediation Results

Hypothesis Path	Path Coefficient (β)	t-Statistic	p-Value	Result
FDI_X1 → SIA_Z	0.459	5.677	0.001	Supported
HFE_X2 → SIA_Z	0.392	4.118	0.002	Supported
SIA_Z → PES_Y	0.823	10.985	0.000	Supported
FDI_X1 → PES_Y (indirect via SIA_Z)	0.378	5.039	0.001	Mediation Supported
HFE_X2 → PES_Y (indirect via SIA_Z)	0.323	4.209	0.002	Mediation Supported

Souce: Authors own estimation (2025)

The results of the structural model evaluation, including path coefficients, significance levels, and mediation effects, are presented in Table 4. The table summarizes the hypothesised relationships among the latent constructs examined in this study. All hypothesised paths were positive and significant, confirming that facility distribution inequality (FDI_X1) and hospital financial efficiency (HFE_X2) exert indirect effects on perceived equity in access (PES_Y) through service infrastructure availability (SIA_Z). The strength of the path from SIA_Z to PES_Y ($\beta = 0.823$) indicates a dominant mediating mechanism.

Table 5. R² Values of Endogenous Constructs

Endogenous Variable	R ² Value	Interpretation
Service Infrastructure Availability (SIA_Z)	0.671	Substantial (67.1% explained variance)
Perceived Equity in Service Access (PES_Y)	0.677	Substantial (67.7% explained variance)

Souce: Authors own estimation (2025)

The explanatory power of the endogenous constructs based on the R² values is presented in Table 5. The table indicates the extent to which the exogenous variables explain the variance in service infrastructure availability and perceived equity in service access. The model demonstrates substantial explanatory power, with over two-thirds of variance in SIA_Z and PES_Y explained by exogenous constructs. This meets recommended standards for applied social science models, reinforcing the theoretical framework's integrity.

The findings validate the proposed mediation model, wherein institutional (financial) and geographic (facility distribution) factors influence perceived equity through critical health infrastructure availability. This reinforces that citizens' perceptions of fairness are shaped by tangible service capacity, reflecting systemic strengths and weaknesses in hospital financing and planning.

5 Discussion

This study confirms that Service Infrastructure Availability (SIA_Z) plays a critical mediating role in shaping Perceived Equity in Service Access (PES_Y). The strong path coefficient ($\beta = 0.823$, $p < 0.001$) highlights how tangible health facility readiness such as beds, equipment, and staff is central to how communities perceive fairness in access, consistent with health equity models [27].

Both Facility Distribution Inequality (FDI_X1) and Hospital Financial Efficiency (HFE_X2) show significant indirect effects on PES_Y through SIA_Z, suggesting that perceptions of injustice arise not directly from systemic imbalances, but from their visible outcomes in service capacity. This aligns with distributive justice theory [23], which emphasises equity in outcomes, not just formal entitlements.

The positive impact of financial efficiency ($\beta = 0.392$, $p < 0.001$) reflects the importance of responsive and sufficient hospital funding. In the Indonesian context, delays in JKN reimbursements and rigid tariff systems may undermine hospitals' ability to maintain essential infrastructure, as echoed in Xia et al. [24]. Meanwhile, geographic disparities in facility distribution continue to affect infrastructure readiness in rural regions, reinforcing spatial inequality trends reported by Liu [25].

In conclusion, the findings indicate that perceived health equity is a downstream manifestation of both financial and geographic systems, as mediated by the public's experiences with available services. Addressing these perceptions necessitates not only policy-level redistribution but also tangible enhancements in hospital infrastructure across various regions [28].

6 Conclusion

This study has empirically demonstrated that perceptions of equity in healthcare access are significantly shaped by both institutional inputs and structural infrastructure readiness. The findings reveal that Service Infrastructure Availability (SIA) plays a critical mediating role in translating the effects of Facility Distribution Inequality (FDI) and Hospital Financial Efficiency (HFE) into Perceived Equity in Service Access (PES). In the context of South Sulawesi, where disparities in hospital distribution and operational capacity are evident, this research underscores that public evaluations of fairness are not formed in abstraction, but rather through concrete, lived experiences with visible service systems. These insights confirm and extend distributive justice theory by empirically validating how organisational capability, when unequally deployed, alters public trust and perceived legitimacy of health systems.

The implications of these findings are both theoretical and practical. Theoretically, the study bridges the Resource-Based View (RBV) and Distributive Justice perspectives to offer a robust framework explaining how health system structures shape perceptions of justice. Practically, the evidence suggests that equity-enhancing policies must go beyond financial coverage schemes like JKN and directly target infrastructure readiness and resource reallocation across underserved regions. Policymakers should adopt region-sensitive planning mechanisms that improve not only the number but also

the quality and accessibility of health services in rural districts. Furthermore, improving hospital-level financial efficiency is crucial to ensure that operational budgets translate into meaningful service improvements. Public perception should be considered a key evaluative indicator in performance-based health financing.

As with all empirical research, this study is subject to certain limitations. The investigation concentrated on cross-sectional perceptions within a single Indonesian province, which may not adequately reflect temporal dynamics or allow for national generalizability. Future research is advised to adopt longitudinal or mixed-method approaches, integrating provider perspectives and system-level financial data to supplement citizen responses. Furthermore, examining the influence of trust and cultural values on fairness perceptions could enhance the understanding of how institutional legitimacy is co-constructed. Despite these limitations, the current study represents a significant advancement in reframing the discourse on health equity in Indonesia, shifting the focus from policy inputs to prioritizing service visibility, infrastructure adequacy, and perceptual justice at the community level.

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