

When Public Payers Don't Pay Enough: How Market Competition Moderates the Effect of Public Payer Reliance on Hospital Financial Sustainability

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BACKGROUND

- Public Health Insurance, such as Medicare and Medicaid, has historically reimbursed below the full cost of care, reinforcing the assumption that higher public payer reliance weakens financial stability of the hospitals
- However, structural conditions such as hospital market competition, geographic location, and hospital size significantly shape how payer mix translates into financial outcomes (Lee et al., 2023; Sommers et al., 2015)
- This study challenges the assumption that public payer reliance is inherently harmful by examining whether market competition (HHI) moderates the relationship between Medicaid/Medicare payer mix and hospital financial sustainability

RESEARCH QUESTIONS

RQ1: Payer mix (Medicaid/Medicare %) → Hospital Financial Sustainability

Does a higher reliance on Medicaid/Medicare payer mix negatively affect hospital financial sustainability?

RQ2: HHI × Payer mix → Hospital Financial Sustainability

Does market competition (HHI) moderate the relationship between public payer mix and hospital financial sustainability, such that hospitals in less competitive markets are better able to sustain financial health despite high public payer dependency?

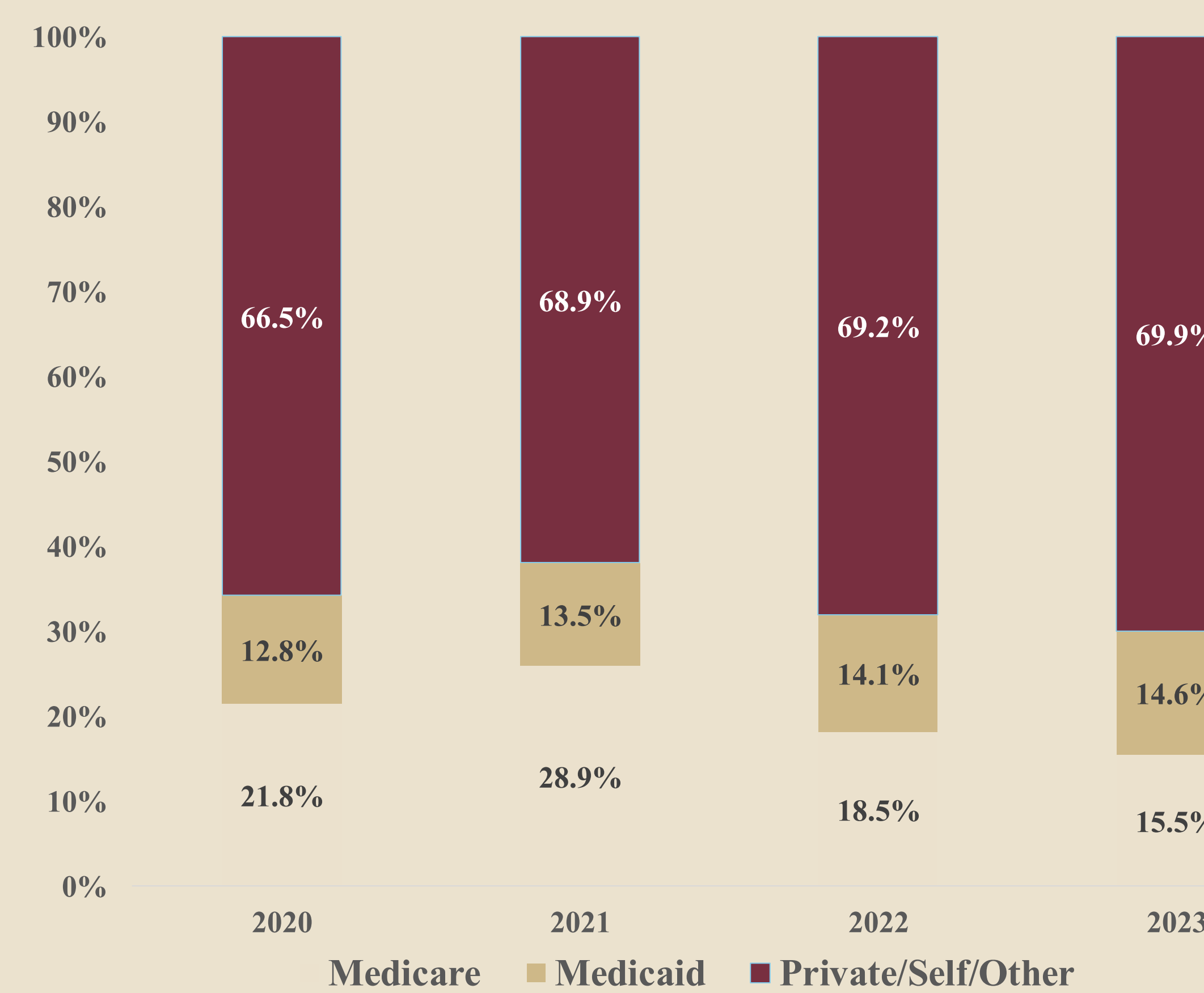
RQ3: Payer mix (Medicaid/Medicare %) → Short-term vs. long-term financial indicators

Does public payer reliance support short-term cash flow stability while simultaneously constraining long-term financial performance and reinvestment capacity?

METHOD

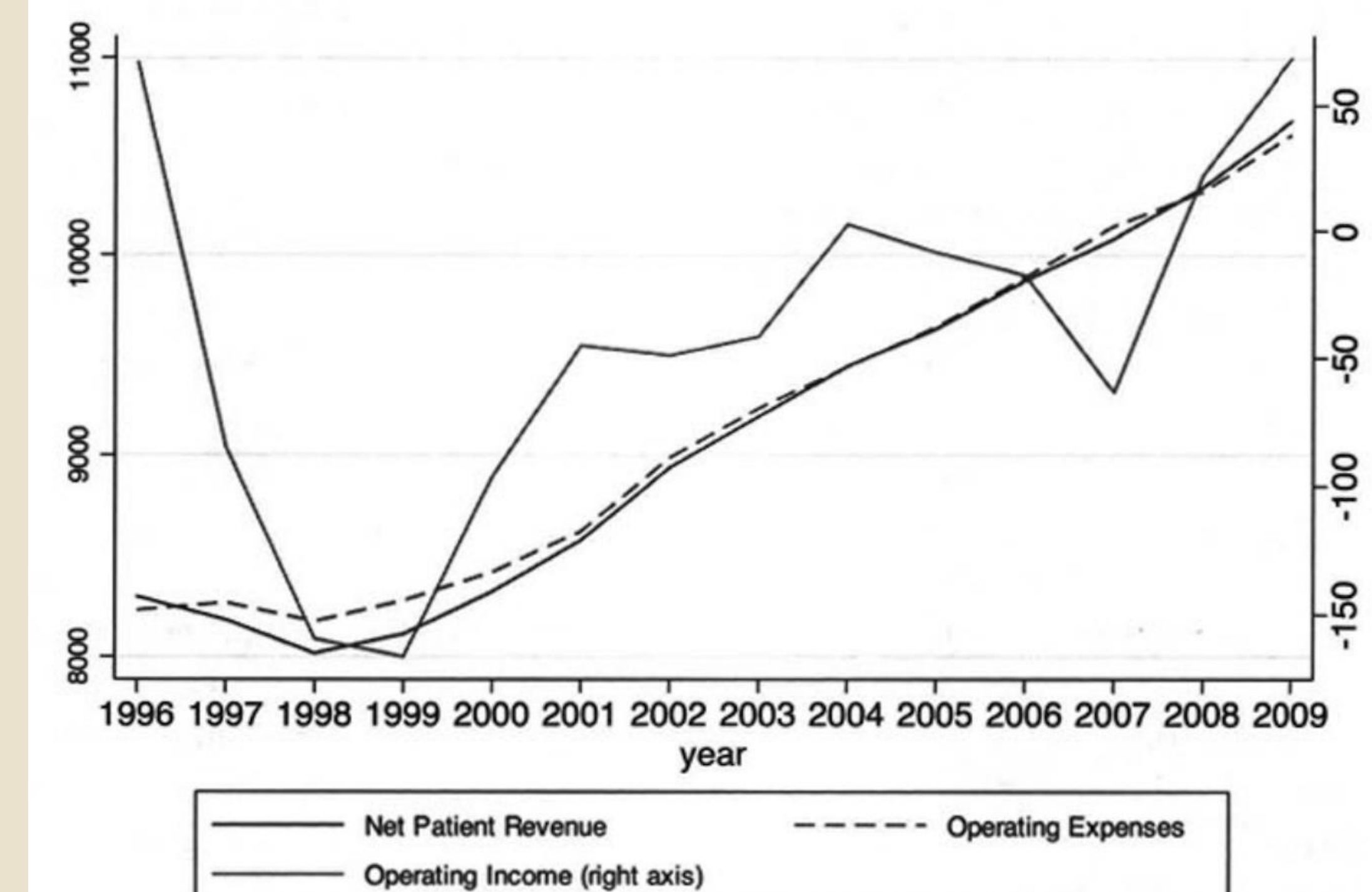
- Model:** OLS Panel Regression with an interaction term
- Data:** American Hospital Association mainly for the hospital characteristics, locations, hospital sizes, and Case Mix Index, as well as Hospital Referral Regions for calculating hospital market competition, and RAND data for Hospital financial performance (Operating costs, operating margins, liquidity, and profitability)
- Period of the data:** 2010-2021
- Dependent variable:** Hospital Financial Sustainability
- Independent variable:** Medicaid/Medicare % of hospital payer mix
- Moderator:** Hospital Market Competition

Hospital revenue composition in the U.S. from 5,800 hospitals



Yang, J. (2025). *Composition of hospital revenue in the U.S. by payer 2020*. [online] Statista. Available at: <https://www.statista.com/statistics/1029719/composition-of-hospital-revenue-by-payer-contribution-in-the-us/> [Accessed 6 Mar. 2026].

Figure 1: Trends in Revenues, Operating Expenses, and Profits. (Source: Author's analysis)



White, C., & Wu, V. Y. (2014). How do hospitals cope with sustained slow growth in Medicare prices?. *Health services research, 49*(1), 11–31. <https://doi.org/10.1111/1475-6773.12101>

FINDINGS

- Hospitals with a higher Medicaid/Medicare payer mix demonstrate short-term financial sustainability, as public payer reimbursements provide a faster and more predictable revenue stream compared to uncompensated care
- However, while public reimbursements support short-term cash flow stability, they consistently fall below the full cost of care — limiting hospitals' ability to generate substantial profit or reinvest in long-term capital improvements
- Market competition (HHI) moderate this relationship, with hospitals in less competitive and rural markets better positioned to sustain financial health under high public payer dependency despite the inherent reimbursement gap

CONCLUSION / IMPLICATIONS

- Although public health insurers such as Medicare and Medicaid often reimburse hospitals below the full cost of care, their payments provide a **relatively stable and predictable revenue stream** that can support short-term financial sustainability
- However, reliance on public payers alone does not guarantee long-term financial strength, as lower reimbursement **limits hospitals' ability to generate surplus revenue**
- While public health insurers are generally linked to lower hospital financial sustainability, their impact appears to **diminish** under certain market competition conditions
- Therefore, hospital financial outcomes should be evaluated not only through payer mix but also through **the internal and external hospital characteristics** to determine how reimbursement patterns translate into financial performance

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You can find a full list of references here.

