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THE INTERVENING ROLE OF THE BALANCED SCORECARD IN THE RELATIONSHIP BETWEEN QUALITY & COST CONTROL, VALUE ADDED AND PERFORMANCE OF PUBLIC HOSPITAL IN EAST JAVA

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Abstract

The implementation of the Financial Management Pattern and National Security Network in East Java's public hospitals is complicated by inconsistent service standards, cost control, and performance achievement. These challenges underscore the need for further research into the impact of value-added variables and the Balanced Scorecard on hospital performance and service quality improvement. This study aims to investigate the direct and indirect impact of quality control, cost control, and value-added on the performance of Provincial Public Hospitals in East Java Province through the Balanced Scorecard as an intervening variable. The study uses explanatory research to examine causal relationships between variables via hypothesis testing. The survey involved 144 directors, and QC and finance staff from 48 public hospitals in East Java. Data was analyzed using the SEM technique with Smart PLS V.4.0, focusing on the Balanced Scorecard as a performance indicator. The findings show that quality control and cost control significantly impact the performance of East Java public hospitals, while value-added does not. Additionally, it was found that quality control and value-added have a significant impact on performance through the Balanced Scorecard, while cost control does not. Lastly, the Balanced Scorecard itself significantly influences the performance of regional general hospitals in East Java Province.

Keywords: Quality Control, Cost Control, Value Added, Performance, Balanced Scorecard, Hospital.

INTRODUCTION

The advent of regional autonomy in the age of free trade has led to an increasing emphasis on the need for high-quality public service performance. The success of regional autonomy hinges largely on the performance of public services, making it a key factor in how the general public perceives the efficacy of regional autonomy. To stimulate improvements in public services, the government has introduced policies that allow for greater flexibility in financial management, as stipulated in Articles 68 and 69 of Law Number 1 of 2004 regarding the State Treasury. These articles essentially grant government agencies tasked with providing community services the latitude to implement flexible financial management practices that prioritize productivity, efficiency, and effectiveness. Subsequent detailed regulations were introduced

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through the issuance of Government Regulation Number 23 of 2005, which pertains to the financial management of public service entities, and with regards to regions, the Minister of Home Affairs Regulation Number 61 of 2007 provided technical guidelines on financial management for regional public service entities.

Hospitals play a crucial role in providing health services and promoting public health. They serve as centers for healthcare, education, and research. The quality of healthcare services provided by hospitals is influenced by various factors, including resource management, the conduct of healthcare providers, and patient behavior. The level of service quality is closely related to the cost of healthcare. Health services must adhere to established standards to ensure good clinical governance. It is essential for hospitals to deliver services that are safe, effective, patient-centered, timely, efficient, fair, and integrated, as defined by the World Health Organization. With the implementation of Regional Autonomy, local governments bear the responsibility for the development and enhancement of public health, placing hospitals in a strategically important position in advancing public health. Hospitals are required to provide quality services according to established standards that are accessible to all levels of society. As a result, the Minister of Health issued Decree Number: 129/Menkes/SK/II/2008 regarding Minimum Hospital Service Standards. Regional Public Hospitals in East Java Province, like most hospitals, have established minimum service standards to enhance the quality of patient care. The progress in achieving these standards over a five-year period for regional public hospitals in East Java Province is illustrated in the following table.

Table 1: Average Achievement of Service Quality Standards of East Java Provincial Hospitals in 2019-2023

Year	Target (%)	Actual (%)	Achievement (%)
2019	75	72,8	94,07
2020	77	69,3	90,00
2021	74	64,4	87,03
2022	76	75,8	99,74
2023	80	76,5	95,63

Upon reviewing the Table 1, it is evident that the average realization of SPM in regional public hospitals in East Java Province has shown fluctuations over the last five years. The increase, while not significant, has never exceeded the target or fallen below it. The average realization of SPM has consistently remained below 100 percent, suggesting a need for immediate attention. Failing to address this issue could result in regional public hospitals being unable to compete with private health facilities, leading to a decline in performance and the inability to provide essential health services to the community. To address this, a quality control strategy is necessary to enhance the performance of regional public hospitals. Research indicates that quality control positively influences organizational performance in the healthcare industry. However, there are conflicting findings regarding the relationship between quality and financial performance.

The Memorandum of Understanding (MoU) signed between the East Java Regional Hospital Association (ARSADA) and the East Java Province Financial and Development Monitoring

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Agency signifies a crucial step in the enhancement of provincial hospital governance. This collaboration aims to address various challenges associated with the implementation of the Regional Public Service Agency Financial Management Pattern (PPK-BLUD). The introduction of the PPK-BLUD concept at Dr. Sayidiman Magetan and the Kanjuruhan Kepanjen Malang Provincial Public Hospital in 2006 led to the formulation of Minister of Home Affairs Regulation Number 61 of 2007, providing technical guidelines for the management of provincial public service agencies. However, challenges such as non-uniformity in the financial accounting system, inaccurate determination of service rates, and inconsistent financial implementation records have been observed in several Regional Public Service Bodies. These issues have led to a lack of transparency and have burdened the public. To address these challenges, a dissemination of the accounting information system (AIS) of the provincial public service agency was conducted on October 2024 at the Integrated Diagnostic Center of Dr. Soetomo Provincial Public Hospital in Surabaya. The dissemination aimed to facilitate the financial reports preparation and improve the overall transparency and efficiency of the Provincial Public Service Agency's accounting information system.

In addition to service quality standards, the public service sector is no exception, including regional public hospitals whose performance is assessed every year. This performance assessment is very important as a means of measuring the extent to which the main tasks and authority carried out are carried out properly and correctly. On the other hand, it can be assessed how much impact and benefits have been provided to the public. The East Java Provincial Public Hospital is a business entity that is an integral part of the regional organization whose performance is of course measured every year. The phenomenon of performance and the extent to which the performance of Dawrah Public Hospitals in East Java Province has been achieved over a period of five years can be seen in the following table.

Table 2: Average Performance Achievement of East Java Provincial Hospitals in 2019-2023

Year	Target (%)	Actual (%)	Achievement (%)
2019	82,2	84,9	103,28
2020	74,6	74,4	93,47
2021	79,9	78,2	97,87
2022	80,2	86,2	107,48
2023	81,9	95,6	116,73

Based on the data presented in Table 2, the performance of provincial public hospitals (RSUD) in East Java Province has shown an increasing trend over the last five years. The average performance realization has fluctuated considerably, with the 2019 performance exceeding the target by reaching 103.28 percent. However, in 2020 and 2021, the performance fell below 100 percent, mainly due to the challenges posed by the Covid-19 pandemic. It's important to note that the performance measurement of RSUD in East Java Province is based on specific targets and indicators outlined in the Republic of Indonesia Ministerial Regulation Number 53 of 2014. Notably, if a balanced scorecard measurement technique were to be employed, the performance scores and achievements may differ from those based on the current measurement method.

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The Public Service Agency Financial Management Pattern represents a performance-based approach to financial management aimed at enhancing the operational efficiency of government agencies. This framework is adopted by all government entities directly involved in public service delivery, acknowledging that such agencies have historically been perceived as underperforming. For instance, government-run hospitals are often associated with substandard service quality, long waiting times, and inadequate sanitation, particularly in comparison to private healthcare facilities.

Despite substantial investment in hospital infrastructure and equipment, the quality of service remains a concern. One key contributing factor to this discrepancy is the limited financial flexibility within public service agencies. Consequently, the government has introduced measures to imbue these agencies with greater financial autonomy. This includes flexibility in revenue and expenditure management, cash flow, procurement, inventory, as well as management of accounts receivable, debts, investments, surplus utilization, and remuneration. Furthermore, public agencies are required to adhere to commercial accounting standards established by the Indonesian Accountants Association to support a robust accounting framework.

The implementation of National Health Insurance (JKN) since January 1, 2014 has led to significant implications and consequences. Firstly, it has caused an upsurge in hospital and health facility usage, necessitating adaptations such as increased beds, personnel, and other resources, leading to a substantial rise in operational costs. Secondly, a shift from fee-for-service to bundled services has occurred, altering the payment system for healthcare.

Under this new system, hospitals must first provide treatment, incurring immediate operational costs, before submitting claims to the Health Social Security Administering Agency for payment, which may take up to 14 working days. Additionally, a stricter tiered patient referral system has been implemented, and hospitals are now required to deliver high-quality, cost-effective care, focusing on patient safety, treatment effectiveness, patient needs, and cost efficiency. As a result, hospital management must effectively balance quality and cost control in order to thrive under the National Health Insurance system.

The assessment of hospital efficiency in Indonesia in 2019 indicates that 65.9% of hospitals in the country are not technically efficient compared to their counterparts. The average hospital efficiency score in Indonesia stands at 78.9%, suggesting a significant need for enhancing hospital performance, especially in terms of overall hospital output, which currently stands at 21.1%. Several challenges faced by hospitals, such as delays in claim payments, declining income, perceived irrational tariffs, and an ineffective referral system, have a substantial impact on operational services and overall efficiency levels (Persia, 2019).

The efficiency of the hospital in terms of financial management can be determined by the success of the public regional hospital in achieving the Cost Recovery Rate (CRR) value. The achievement of CRR for public regional hospitals in the past five years in East Java Province is shown in the following table:

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Table 3: Average Level of Cost Efficiency of East Java Provincial Hospitals in 2019-2023

Year	Target (%)	Actual (%)	Achievement (%)
2019	79	65,7	83,16
2020	80	71,8	89,75
2021	76	70,5	92,76
2022	77	72,8	94,55
2023	81	73,9	91,23

According to the data presented in Table 3, the efficiency of regional public hospital spending in East Java Province has consistently fallen short of the target over the past five years, with a spending efficiency of less than 100 percent. This has significant implications for the ability of these hospitals to deliver quality healthcare services. Immediate attention and solutions are necessary to prevent potential liquidity crises and declining performance. Implementing a cost control strategy is essential to improve spending efficiency, as demonstrated by various research studies that highlight the impact of cost control on organizational and hospital performance. Numerous regulations require the implementation of quality control and cost control in health services, such as the Indonesia 1945 Constitution, various laws and regulations concerning social security and health administration, as well as specific ministerial decrees and regulations. These regulations emphasize the importance of nine key perspectives for BPJS Health providers in adapting to the INACBG'S system, including effectiveness, patient safety, timelines, patient focus, care coordination, efficiency, access, document quality, and clinical pathways.

The author identified various unresolved variables related to the problems and phenomena following the implementation of the National Health Insurance (JKN). As a result, further research is necessary, particularly concerning the value-added variable and its influence on Balanced Scorecard and performance in regional public hospitals in East Java Province that have implemented the Agency's Financial Management Pattern (PPK) Regional Public Services (BLUD). It was noted that current performance measurements in these hospitals do not consider the BSC variable. This research in regional public hospitals is the first of its kind and aims to contribute to the professional management of regional public hospitals in the future. This study aims to investigate the impact of quality control, cost control, and value-added on the performance of Provincial Public Hospitals in East Java Province, both directly and through the Balanced Scorecard as an intervening variable.

THEORITICAL REVIEW

Quality Control

In the context of Total Quality Management (TQM), quality is perceived in a holistic manner, encompassing not only end results but also processes, the environment, and human resources. Kotler & Keller (2009) defines quality as all the features of a product (goods and services) that impact its ability to meet consumers' needs. On the other hand, Yamit (2007) defines quality as dynamic conditions related to goods, services, people, processes, and the environment that

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either meet or exceed expectations. Quality is thus quantifiable as a performance condition, comprising interconnected elements such as goods, services, machinery, and personnel, working together to surpass initial expectations.

Quality control (QC) is indispensable for businesses involved in the production of goods or provision of services. It is crucial in product design, software development, mass-produced item sales, and other processes. Failure to undergo QC may result in detrimental errors. As Juran (1988) states, quality control involves the review of all production-related factors to ensure that the resulting products or services meet established quality standards. In healthcare, quality control encompasses various processes to ensure that medical services adhere to professional standards and fulfill patient expectations.

Cost Control

Every company requires resources to carry out its operational activities, resulting in the need for effective cost control. Cost control is essential for managing company expenses and funds, ensuring that company goals are achieved. It encompasses efforts to oversee all costs, including operational costs, planning, and implementation.

Cost control is vital for companies to maintain financial stability and ensure efficient cost management. Employees responsible for cost control play a crucial role by carrying out various duties and responsibilities. This includes managing monthly inventory, overseeing the implementation of cost control policies across all departments, verifying inventory calculations, ensuring accuracy in transactions, comparing data, and conducting regular inspections. Additionally, cost control responsibilities involve supervising the flow of goods, collaborating with the purchasing department, monitoring purchase orders, generating daily cost reports, and preparing monthly reports and inventory records.

Value Added

In the field of business, creating added value to products is crucial for achieving profitability and standing out in a competitive market. Value added, as defined by Investopedia, refers to the economic value gained through the production process and the additional features or benefits offered to consumers. This added value can take the form of new product features or enhancements, giving a product a competitive edge.

In the context of production and services, added value refers to elements that meet or exceed customer expectations. Businesses must consider how to differentiate their products within an increasingly competitive landscape. One approach involves enhancing products with additional features to attract a larger market share. Such added value becomes a strategic advantage, positioning products as superior choices that go beyond meeting basic needs.

Michael Porter, a renowned figure in business strategy, defines added value as the difference between input costs and the value of outputs. In the healthcare industry, added value is often gauged by improvements in clinical outcomes, patient satisfaction, and operational efficiency (Porter, 1985). These measures reflect the positive impact of services and processes in delivering value to patients and stakeholders.

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Performance

Performance refers to an organization's achievement of its objectives and goals within a specific period. Performance measurement is a crucial aspect of management accounting, involving the recording and assessment of activities to achieve the organization's mission. It reflects the organization's culture and philosophy and determines how effectively and efficiently work has been completed in terms of cost, time, and quality.

Various performance assessment methods are used, with financial measures being the predominant approach due to the focus on shareholder satisfaction. However, an effective performance measurement system should consider all organizational activities from the customer's perspective and provide comprehensive feedback to identify areas for improvement.

This underscores the importance, complexity, and potential misunderstandings associated with performance measurement in management accounting (Atkinson et al., 2003).

Balanced Scorecard

The Balanced Scorecard is a strategic management system that aligns an organization's mission and strategy with operational goals and performance measures. It consists of four perspectives: financial, customer, internal business processes, and learning and growth. These perspectives are interdependent and essential for long-term success (Kaplan & Norton, 1996).

The Balanced Scorecard is not limited to measuring financial performance but can also be applied to public organizations, considering both financial and non-financial aspects. The application of the Balanced Scorecard starts with learning and growth, which feeds into internal business processes and ultimately leads to customer satisfaction and financial performance (Sasongko, 2007). In public organizations, the Balanced Scorecard provides relevant measurement aspects and supports continuous performance evaluation.

The concept of the Balanced Scorecard aims to translate organizational strategy into measurable activities across the four perspectives. It emphasizes the interconnectedness of the perspectives and the contribution of each to the organization's overall performance (Monica, 2007).

The Balanced Scorecard is an extensive method that offers an alternative to evaluating company performance beyond just financial metrics. It has been observed to bring numerous benefits to companies that have implemented it (Srimindarti, 2006). This approach aims to facilitate strategic thinking required for planning and managing the public sector. In the government domain, program and budget planning should be aligned with the organization's mission to advance community welfare.

The method calls for the comprehensive identification and development of organizational performance across four perspectives: financial, customer, internal business processes, and learning and growth. Equally crucial is the establishment of an accountability reporting mechanism essential for fostering good governance (Nurkholis, 2001).

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In essence, the Balanced Scorecard offers a comprehensive approach to evaluating company performance, moving beyond a sole focus on financial metrics. It provides valuable insights into company performance across multiple perspectives and is proven to be beneficial in both the corporate and public spheres.

Research Hypothesis

In the study of the performance of East Java Provincial Public Hospital, the following hypotheses were proposed:

H1: Quality control significantly affects the performance of East Java Provincial Public Hospital.

H2: Cost control significantly affects the performance of East Java Provincial Public Hospital.

H3: Value Added significantly affects the performance of East Java Provincial Public Hospital.

H4: The Balanced Scorecard significantly affects the performance of East Java Provincial Public Hospital.

H5: Quality control significantly affects the performance of East Java Provincial Public Hospital through the Balanced Scorecard.

H6: Cost control significantly affects the performance of East Java Provincial Public Hospital through the Balanced Scorecard.

H7: Value Added significantly affects the performance of East Java Provincial Public Hospital through the Balance Scorecard.

METHODS

The research methodology employed in this study is explanatory research, which aims to investigate the causal relationships between variables by testing the formulated hypotheses. Explanatory research seeks to delve into the underlying reasons for a phenomenon and understand how and why it occurs. The primary objective of explanatory research is to identify the causes and factors that contribute to an event through hypothesis testing. Survey research is the primary method employed in this study, involving the collection of data from a sample of the population using questionnaires as the main data collection instrument.

Participants

The study includes all 48 public hospitals in East Java, comprising 4 provincial public hospitals and 44 city public hospitals, that have adopted the Regional Public Service Agency Financial Management Pattern. The sample for this study will consist of 3 representatives from each public hospital, including directors and QC and finance staff. Therefore, the total number of respondents will be 144.

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Procedure

The research utilized the PLS technique in two stages: the measurement model test and the structural model test. The Smart PLS V.4.0 program was employed for the analysis. Convergent validity was assessed by correlating item scores with construct scores to obtain loading factor values, with a threshold of 0.7. However, for early-stage research, a loading factor of 0.5 to 0.6 was considered acceptable (Ghozali, 2006). Reliability of research variables was measured using alpha coefficient or Cronbach's alpha and composite reliability. A reliable measurement item was indicated by an alpha coefficient value greater than 0.6. The R-squared value of the model was used to assess the influence between variables in the structural model. Path coefficients were estimated using a bootstrapping procedure, and significance was determined by the statistical t value exceeding 1.96 (5% significance level) or 1.65 (10% significance level) for each path relationship.

The research does not seek to investigate the influence of external variables on the Balanced Scorecard (BSC) as the BSC is considered a performance indicator. However, the BSC variable is still included in the framework model to ascertain its role in performance assessment. As a result, the decision-making process for hypothesis testing is not solely based on the outcomes of direct and indirect effect tests, but instead relies on the results of the total effect test. This comprehensive test demonstrates the overall influence of one variable on another, encompassing both direct and mediated influences.

RESULTS

Outer Model

All indicators have loadings above 0.50 and are significant, indicating that they are valid. Additionally, the variables used in this research have good convergent validity, which allows us to proceed to the next stage of validity checking.

The Cronbach alpha value of each research variable is greater than 0.6, meeting the requirements for internal consistency reliability. Additionally, each variable meets composite reliability, indicating a high level of internal consistency reliability for all variables.

Inner Model

Table 4: R-squared Results

	R-square	R-square adjusted
Balanced Scorecard	0,791	0,786
Performance	0,581	0,569

Table 4 indicated that the R-Square value for the Balanced Scorecard is 0.791. This means that 79.1 percent of the Balanced Scorecard can be explained by other independent variables. Additionally, the R-Square value for Regional Hospital Performance is 0.581, indicating that 58.1 percent of the RSUD performance can be explained by other independent variables.

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Hypothesis testing of the direct influence of each research variable can be explained as follows:

Table 5: Direct and Indirect Effect Hypothesis Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decisions
QC -> BSC	0.195	0.201	0.058	3.338	0.001	
QC -> PERFORMANCE	0.525	0.51	0.097	5.387	0.000	
CC -> BSC	0.07	0.064	0.066	1.066	0.287	
CC -> PERFORMANCE	-0.548	-0.564	0.103	5.301	0.000	
VALUE ADDED -> BSC	0.701	0.701	0.069	10.086	0.000	
VALUE ADDED -> PERFORMANCE	-0.278	-0.263	0.188	1.476	0.140	
BSC -> PERFORMANCE	0.714	0.718	0.158	4.526	0.000	
QC -> BSC -> PERFORMANCE	0.139	0.146	0.06	2.308	0.021	H5: ACCEPTED
CC -> BSC -> PERFORMANCE	0.05	0.048	0.049	1.012	0.312	H6: REJECTED
VALUE ADDED -> BSC -> PERFORMANCE	0.5	0.501	0.112	4.466	0.000	H7: ACCEPTED

Table 5: Direct and Indirect Effect Hypothesis Test Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decisions
QC -> BSC	0.195	0.201	0.058	3.338	0.001	-
QC-> PERFORMANCE	0.664	0.656	0.081	8.194	0.000	H1: ACCEPTED
CC -> BSC	0.07	0.064	0.066	1.066	0.287	-
CC -> PERFORMANCE	-0.498	-0.516	0.132	3.76	0.000	H2: ACCEPTED
VALUE ADDED -> BSC	0.701	0.701	0.069	10.086	0.000	-
VALUE ADDED -> PERFORMANCE	0.222	0.238	0.146	1.523	0.128	H3: REJECTED
BSC -> PERFORMANCE	0.714	0.718	0.158	4.526	0.000	H4: ACCEPTED

Hypothesis 1 suggests that quality control significantly impacts the performance of public hospitals in East Java Province. The null hypothesis (H0) is rejected when the t-statistic is 8.194 (> 1.96), while the alternative hypothesis (Ha) is accepted because the p-value is 0.000 (< 0.05). This leads to the acceptance of hypothesis 1. Gustika & Sulistiadi (2023) discovered a lack of budget efficiency in existing public hospitals, non-realization of planned budgets, failure to achieve hospital indicators, and low productivity among RSUD employees. In a separate study, Kusumah & Fabianto (2018) also found no influence between quality and financial performance. Baidoun (2018) stated that business excellence models such as the Malcolm Baldrige National Quality Awards (MBNQA) Criteria can be used to assess the level of implementation of quality practices and identify strengths and weaknesses to enhance service

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delivery, processes, and hospital performance. Essel (2020) emphasized the importance for hospital administrators/managers and policymakers when making decisions that influence Total Quality Management (TQM) assessments by exploring the potential practicality of the nine TQM critical success factors used in this study as a relevant starting tool.

Hypothesis 2 suggests that cost control significantly impacts the performance of Regional General Hospitals in East Java Province. We rejected the null hypothesis (H0) because the t-statistic value is 3.76 (> 1.96), and accepted the alternative hypothesis (Ha) as the p-value is 0.000 (< 0.05), resulting in the acceptance of hypothesis 2. This finding aligns with Ogega & Pedo's (2023) research, which indicates that planning and cost control positively influence construction project performance. In contrary, Kurnianingsih et al. (2021) discovered that Performance Based Budgeting had no discernible impact on Bangkalan district government entities' performance. Additionally, Kurisu et al. (2022) noted that insufficient introduction of cost management in hospital management, widespread use of performance indicators, and ineffective use of accounting information in cost management and hospital management may contribute to these results. Considering the increasing uncontrollable rise in health service costs and the community's inability to access health services, Setyawan (2018) suggests that health insurance is the right choice for health financing to handle the escalating disease development. Furthermore, Yan et al. (2019) explained that cost control measures implemented in hospitals in response to government policies to reduce the national health budget affected doctors and patient care. Akinleye et al. (2019) emphasizes the link between hospital financial performance and the provision of quality care, which includes quality and safety processes, patient outcomes, and patient-centered care. Dos Santos (2020) recommends that healthcare managers recognize budget evaluation as a key feature that interferes with their sector's budget execution due to liability for the results of such implementation and the possibility of using this metric in performance evaluation. Bazzoli et al. (2019) also highlights the unique role of hospitals in expediting and coordinating patient care, which can aid hospitals in succeeding under risk-based payment arrangements. Finally, Wang et al. (2018) provides evidence that the cost of Health Information Technology (HIT) positively impacts hospital financial performance.

Furthermore, Hypothesis 3 which suggests that Value Added has a significant impact on the performance of Regional General Hospitals in East Java Province is rejected based on the statistical analysis, the null hypothesis (H0) is accepted because the t-statistic value is 1.523 (< 1.96) and the alternative hypothesis (Ha) is rejected because the p-value is 0.128 (> 0.05). This result indicates that Value Added does not affect the performance of Regional General Hospitals in East Java Province. This result aligns with the findings of Li et al. (2022), who explained that administrative forces, market-driving forces, and mission-driving forces collectively contribute to changes in the performance assessment system of public hospitals. Limited research addresses the relationship between quality, innovation, and performance, as noted by Kafetzopoulos et al. (2019). Furthermore, some studies, including Mahmud et al. (2019), did not find any association between quality, innovation, added value creation, and organizational performance. Omneya et al. (2021) emphasized that Economic Value Added Momentum (EVA Momentum) is a crucial tool for measuring a company's financial performance. Additionally, the research of Supriani & Pernamasari (2021) indicates that

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economic added value (EVA) and market added value (MVA) do not influence company performance (share price), while ROE and EPS do affect company performance (share price). Refmasari (2019) suggested that companies should focus on increasing customer satisfaction and fostering employee-based growth and strategic alignment to enhance company performance. Finally, Alolayyan (2020) concluded that Health Information Technology (HIT) has a direct positive impact on hospital performance and the quality of health information.

Hypothesis 4 suggests that the Balanced Scorecard has a significant impact on the performance of Regional General Hospitals in East Java Province. The null hypothesis (H0) is rejected because the t-statistic value is 4.526, which is greater than 1.96, leading to the acceptance of the alternative hypothesis (Ha). Furthermore, with a p-value of 0.000, which is less than 0.05, hypothesis 4 is accepted. According to Biswan & Andika (2020), the Balanced Scorecard is an effective method for both public and private health sectors. The Balanced Scorecard provides a comprehensive assessment of performance, considering not only financial aspects but also detailed non-financial aspects. This approach was applied to Patut Patuh Patju Hospital in West Lombok, resulting in a "good" rating for each aspect (Azizah et al., 2023). Betto et al. (2022) explain that the implementation of the Balanced Scorecard is facilitated by leadership, culture, and communication. Da Costa et al. (2022) also support the effectiveness of the Balanced Scorecard in both public and private health sectors.

Hypothesis 5 suggests that quality control significantly affects the performance of Regional General Hospitals in East Java Province through the Balanced Scorecard. Ha is accepted because the p-value is 0.021 (< 0.05), and H0 is rejected when the t-statistic is 2.308 (> 1.96), thus indicating that hypothesis 5 is valid. Wibowo et al. (2023) found that delays in payment of hospital claims by the Health Social Security Supervisory Agency (BPJS Health) and the large INA-CBGs rates present obstacles to controlling the quality of JKN health services. Albuhisi & Abdallah (2018) demonstrate that soft TQM positively impacts all balanced scorecard perspectives. Kafetzopoulos et al. (2019) note limited research on quality, innovation, and performance. Quality should be ingrained in all health systems rather than being a privilege for a select few or a distant aspiration (Kruk, 2018). Additionally, the human right to health is meaningless without good quality care because health systems cannot improve health without it. Mahadevan (2020) shows that TQM and 5S significantly affect customer satisfaction and the performance of private hospitals. Chakraborty (2020) highlights the need to adopt a systemic perspective to measure the quality of US health services and closely track it to hospital financial performance. According to Shafqat et al. (2021), TQM practices have a significant impact on financial and non-financial performance. According to Ayeni-Agbaje (2021), management needs to regularly initiate total quality management initiatives that network the entire organization to achieve and maintain high-quality standards and meet customer needs and expectations.

Based on the results of statistical tests showing a p-value of 0.312 (> 0.05) and a t-statistic value of 1.012 (< 1.96), Hypothesis 6, which suggests that cost control significantly affects the performance of Regional General Hospitals in East Java Province through the Balanced Scorecard, is rejected. This implies that cost control does not have an impact on the

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performance of Regional General Hospitals in East Java Province through the Balanced Scorecard. Siam & Hussein (2022) found that private hospital administration's focus on applying the non-financial dimensions of the balanced scorecard positively influences its financial performance. Meanwhile, Berger (2020) demonstrated that sudden exogenous shocks to public finances can increase budget pressures on publicly financed institutions, possibly counteracting pre-existing SBCs. Temitayo (2020) discovered insignificant effects of cost management, which could be attributed to inconsistent dividend payments, inadequate cost information, and inefficient cost control and assignment.

Hypothesis 7 suggests that Value Added significantly impacts the performance of Regional General Hospitals in East Java Province through the Balance Scorecard. The null hypothesis (H0) is rejected because the t-statistic value is 4.466 (< 1.96), and the alternative hypothesis (Ha) is accepted based on the p-value of 0.000 (< 0.05). Therefore, hypothesis 7 is accepted. Naciti et al. (2022) explain that gender diversity and financial performance in the hospital environment are related at every level of the organization. Payment system aligned with hospital goals is required to continually enhance services. Additionally, Improta et al. (2018) emphasizes the need to improve processes that facilitate the flow of patients through the various stages of medical care and eliminate bottlenecks (queues).

Significance of the Study

This study contributes to a practical and academic understanding of managing regional public hospitals. Implementing quality control, cost control, and value-added theories can assist hospitals in developing effective strategies to improve patient health management, financial sustainability, and patient service. The use of the Balanced Scorecard can also enhance strategic management. The findings of this research offer valuable insights to health policymakers for developing policies that support improving the performance of regional public hospitals and the entire health system.

Practical implications

This research yields several important practical implications for hospitals, including the development of training programs for staff in quality control, cost control, and improved patient care, which can improve their skills and knowledge. Hospitals can also adopt more effective quality control systems and more efficient budget planning, as well as create innovations in patient care through new technology and personalized service programs. In addition, the use of the Balanced Scorecard as a routine performance measurement tool and collaboration with other hospitals for knowledge exchange can help hospitals respond to changes and plan more effective strategies, as well as provide valuable input for regional health policy evaluation.

Limitations of the Study

This study has certain limitations that should be acknowledged. Firstly, the research is restricted to general hospitals in the East Java region, so the findings and implications may not be applicable to hospitals in other areas or of other types. Secondly, the study utilizes the Balanced Scorecard as the primary performance measurement tool, which, while

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comprehensive, does not encompass all aspects that may be relevant for evaluating hospital performance. Other performance measurement indicators, such as Key Performance Indicators (KPIs) and other measurement methods, could be employed in future research to obtain a more comprehensive perspective on hospital performance.

CONCLUSIONS

The findings of this research demonstrate the significant impact of quality control, cost control, and value-added on the performance of Regional General Hospitals (RSUD) in East Java Province, both independently and through the application of the Balanced Scorecard (BSC) as a performance management instrument. The results indicate that effective quality control directly contributes to enhanced hospital performance, and when mediated by BSC, it has an even greater positive impact. Similarly, effective cost control demonstrates a direct positive effect on hospital performance, while the use of BSC does not yield additional significant effects. Furthermore, the research reveals that value-added has a substantial influence on hospital performance when measured through BSC, but not when considered directly. These findings underscore the significance of a holistic management approach that integrates quality control, cost control, and value-added through comprehensive tools such as the BSC to improve hospital performance.

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