

Original Article

The Influence of Healthcare Structural Quality, Process Quality, and Governance Quality on Healthcare Service Performance among Public Healthcare Personnel

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Abstract: Healthcare service performance has become a critical concern for public healthcare organizations, particularly in geographically dispersed regions where resource constraints and governance challenges may affect service delivery. Drawing upon the Donabedian Structure–Process–Outcome framework, this study examines the effects of Structural Quality, Process Quality, and Governance Quality on Healthcare Service Performance among public healthcare personnel in Central Maluku Regency, Indonesia. A quantitative cross-sectional design was employed, involving 188 civil servant healthcare personnel working in public healthcare facilities. Data were collected using a structured questionnaire and analyzed using multiple linear regression. The findings reveal that Structural Quality, Process Quality, and Governance Quality each exert a positive and significant effect on Healthcare Service Performance. Structural Quality significantly influences Healthcare Service Performance ($\beta = 0.185$, $p = 0.013$), indicating the importance of competent personnel, adequate facilities, medical equipment, and information technology support. Process Quality also demonstrates a significant positive effect ($\beta = 0.199$, $p = 0.013$), highlighting the role of compliance with service standards, timeliness, service accuracy, and patient safety practices. Governance Quality emerges as the strongest predictor of Healthcare Service Performance ($\beta = 0.307$, $p < 0.001$), emphasizing the strategic importance of accountability, transparency, regulatory compliance, quality assurance mechanisms, and managerial commitment. Collectively, the three predictors explain 32.5% of the variance in Healthcare Service Performance ($R^2 = 0.325$). This study contributes to healthcare management literature by extending the Donabedian framework through the incorporation of Governance Quality as a distinct organizational determinant of healthcare service performance. The findings suggest that strengthening governance mechanisms, alongside improvements in organizational resources and service processes, is essential for achieving sustainable healthcare performance in decentralized public healthcare systems.

Keywords: Healthcare Service Performance, Structural Quality, Process Quality, Governance Quality, Donabedian Framework, Public Healthcare Personnel.

I. INTRODUCTION

Healthcare services are a critical issue for governments around the world as they directly affect public health outcomes, social well-being, and sustainable development [1]. In order for the healthcare organizations and their services to be effective, efficient, accessible, safe and respond to community needs, the productivity of healthcare workers would have to be enhanced; in addition, effectiveness (through its determinants: quality of service delivery) also needs to improve. As a result, to perform better in health services has become of strategic importance for developed and developing countries [2]. Many countries continue to experience challenges related to workforce capacity, infrastructure readiness, service standardization and organizational governance [3] notwithstanding substantial public investment in health systems.

Indonesia has made large strides toward expanding health coverage with the expansion of the National Health Insurance Program (Jaminan Kesehatan Nasional/JKN). However, the unevenness of quality and performance in healthcare services continues to be glaringly visible across regions. Ministry of Health has consistently promoted health system transformation, among other things, through accreditation programs, implementation of Minimum Service Standards (SPM), digital health and governance strengthening. However, geography determines healthcare infrastructure and workforce distribution and compliance with what is called organizational enactment of operational standards that continue to shape outcomes across all such patients ranging from rural health service delivery [4]. These challenges show us that improving health service performance is still an ongoing concern for policy-makers and healthcare administrators.



This especially applies to the case of Central Maluku Regency, an archipelagic area with widespread distribution of islands and a wide range of health service access. In these areas, healthcare facilities are often characterised by infrastructural constraints, lack of human resources and difficult access to transportation and oversight. In this context, public health workforce staff have a vital role in ensuring the delivery of health services remains effective and consistent. Identification of organizational factors that affect various aspects of healthcare service performance among public professionals, is hence important in improving the delivery systems and resilience of health systems [5].

Healthcare service performance refers to the extent to which healthcare organizations and healthcare personnel achieve service objectives in terms of effectiveness, efficiency, responsiveness, timeliness, reliability, and patient safety [6]. In public healthcare settings, service performance reflects the ability of healthcare personnel to deliver services in accordance with professional standards, organizational goals, and public expectations [7]. In this study, healthcare service performance is operationalized through healthcare personnel's perceptions regarding service effectiveness, timeliness of service delivery, responsiveness to patient needs, compliance with patient safety procedures, and overall service quality.

Among the various factors influencing healthcare service performance, structural quality has received considerable attention in healthcare management literature. Drawing upon Donabedian's framework, structural quality refers to organizational resources that support healthcare service delivery, including human resources, healthcare facilities, medical equipment, and information technology infrastructure [8], [9]. Adequate organizational resources enable healthcare personnel to perform their duties effectively and contribute to improved healthcare service performance. Previous studies have reported that healthcare organizations with better infrastructure and workforce capacity tend to achieve superior service outcomes and organizational performance.

In addition to structural quality, process quality represents another important determinant of healthcare service performance [10]. Process quality concerns the manner of delivering healthcare services in terms of standard operating procedures (SOP), service standards, target time for care, completeness and correctness during service delivery, and adherence to patient safety [11]. Consistent service processes will reduce operational error and improve health care outcomes. As a result, healthcare systems that can effectively manage the service standards and operational procedures are more likely to benefit from better healthcare service performance as well.

Quality of governance has also become an important determinant of organizational effectiveness in public health systems [12]. Governance quality covers regulatory compliance, accountability, transparency, mechanisms of quality assurance, managerial commitment and organization control systems [13]. The quality of governance is critical in decentralized healthcare contexts to ensure the proper use of organizational resources and operational processes required for a service. Following the best governance practice will help to improve the accountability of organization, the decision-making process and continuous service improvement. Thus, governance quality is gradually acknowledged to play an important role in the performance of healthcare services.

Previous studies have found a positive correlation between organizational resources (OR), service processes, governance practices and healthcare outcomes [14]. But there are many important limitations with the adaptation literature. First, previous studies have often analyzed structural quality, process quality and governance quality separately, and therefore we do not know how they contribute relatively to performance in health care service. Second, although a number of healthcare management studies exist, mainly focused on hospitals, health care organizations or patients [15], [16], [17]; very few might have been directed specifically to public healthcare manpower that directly renders the related services. Third, the reality of most empirical evidence stems from urban healthcare settings and metropolitan hospitals, but there may be some distinct organizational challenges related to patient care in rural, remote and archipelagic geographies [18]. Therefore, there is a scarcity of empirical evidence on how structural quality, process quality and governance quality influence the performance of public healthcare personnel working in decentralized local government health care systems.

This included several contributions to the healthcare management literature. First, it empirically investigates the relationships between structural quality, process quality and governance quality on healthcare service performance in one analytical model. Second, it builds on prior healthcare performance research by using public healthcare personnel rather than patients or healthcare organizations as the main unit of analysis. Third, the study represents an empirical contribution toward the understanding of healthcare management in a less studied context, such as Central Maluku Regency, an archipelagic local government setting. This study provides a broader perspective on various organizational factors influencing healthcare service performance in public healthcare institutions through comparison in relative importance between structural quality, process quality and governance quality.

This study used a quantitative cross-sectional survey research design involving knowledge assessment of civil servant healthcare personnel in public health facilities under Government (of Central Maluku Regency). More specifically, this study investigates the impact of Structural Quality, Process Quality and Governance Quality on Healthcare Service Performance in a public healthcare workforce context. The results are likely to add value in the health care management literature and generate practical solutions for policymakers and healthcare administrators who are willing to enhance the performance of healthcare services in decentralized public health systems.

II. LITERATURE REVIEW

A) Healthcare Service Performance

Healthcare service performance represents the extent to which healthcare organizations and healthcare personnel achieve desired service outcomes through effective, efficient, timely, and responsive healthcare delivery. Performance in healthcare settings is commonly associated with service effectiveness, patient safety, responsiveness, reliability, and organizational efficiency. High-performing health care organisations provide services that role effectively within professional frameworks while also pleasing patients or payors.

Growing evidence demonstrates that, above and beyond a healthcare system's financial or capital resources, organizational and managerially relevant factors are the principal drivers of performance [1, 2]. According to what has been developed by Young and Smith [19], quality management in healthcare is key to effectively analysing its performance and the systematic operation of analyses of processes, outcomes, data collection of patient experiences, root causes for failures in service delivery and continuous quality improvement initiatives. Elten and Kolk [20] showed that performance management systems backed by top-notch metrics considerably enhance organizational trust and unit performance in healthcare organizations. These results imply that organizational structures supporting healthcare delivery, rather than individual skills and competencies, ultimately drive healthcare service performance. Thus, healthcare service performance in this study is defined as the roles of the public healthcare workforce to perform effective, responsive, timely, safe and reliable healthcare services with regard to the organization goals and public service demands.

B) Structural Quality and Healthcare Service Performance

Then, the Structural Quality means the settings and resources at organizational level available to provide healthcare services, such as human resource availability, health facilities, medical equipment, Information Technologies (IT), and other physical infrastructures available [25]. It is based on the Structure–Process–Outcome framework developed by Donabedian, which states that organizational resources and clinical services are both necessary for improving healthcare delivery processes and outcomes.

Structural quality SSS has been called for years an important topic in healthcare research. As noted by Mohanty [21], the study found that hospitals equipped with proper infrastructure, advanced medical machinery and other ancillary facilities are perceived to provide better quality services than those which have limited resources. The study found that physical resources have a large impact on the observed quality of care and the effectiveness of healthcare. The reasons behind negative perception on quality of healthcare services were reported to be a lack of hospital facilities, medical equipment and physical infrastructure as indicated by Rahman and Islam [22]. The findings imply that healthcare organizations with an inadequate structural resource can be severely hampered in the pursuit of adequate service performance. In terms of organization, structural quality creates the infrastructure allowing health care personnel to conduct their tasks. This means that adequate numbers of staff, institutional readiness, equipment availability and other technological supports improve their capacity to deliver a desired standard of care. Thus, higher levels of structural quality are expected to be associated with better characteristics of healthcare service delivery.

H1: Structural Quality has a positive and significant effect on Healthcare Service Performance

C) Process Quality and Healthcare Service Performance

Process Quality refers to the manner in which healthcare services are delivered. It encompasses compliance with standard operating procedures, implementation of service standards, timeliness of care, responsiveness, accuracy of service delivery, and patient safety practices. According to Donabedian's framework, process quality represents the direct interaction between healthcare personnel and service recipients and therefore constitutes a critical determinant of healthcare outcomes.

Several studies have demonstrated the importance of process quality in healthcare performance. Young and Smith [19] emphasized that healthcare quality improvement depends on the ability of healthcare organizations to analyze service processes, monitor quality indicators, and continuously improve operational procedures. Effective process management leads to reducing errors, improving coordination, and ensuring consistent service delivery, resulting in altogether better healthcare outcomes. In addition, Rahman and Islam [22] discovered significant gaps in responsiveness, reliability or consistency of

healthcare services regarding service quality. They concluded that quality of service in health care is a multifaceted intervention requiring emphasis on operational processes, emergency response systems and patient-provider interaction. Galal et al. provided additional support when training on data until October 2023 [23], who claimed that all dimensions of healthcare quality, such as competence, proper communication with patients, responsiveness and continuity of care, lead toward better healthcare outcomes and satisfaction level in patients. These results suggest that healthcare organisations have a higher chance of achieving better healthcare service performance with effective and well-designed service processes. As such, process quality is believed to positively impact the performance of healthcare service delivery for public health personnel.

H2: Process Quality has a positive and significant effect on Healthcare Service Performance

D) Governance Quality and Healthcare Service Performance

The governance quality is a design of organization which cover mechanisms to ensure accountability, transparency, compliance with the regulations, and effective managerial and quality assurance in healthcare organizations. Governance has an important role in directing how things are done within an organization, using resources to monitor performance and maintain standards of the services.

Mourajid et al. The study by [24] demonstrated that the governance structure plays a key role in enhancing healthcare quality and improving organizational performance. Their research showed that better functioning, more effective hospital boards (demonstrated through strong competencies, effective oversight and active involvement in quality improvement initiatives) were correlated with signs of higher quality healthcare performance. These results may indicate that governance quality is a valuable organizational determinant of effective healthcare. According to Elten & Kolk [20], organizational control systems and performance management mechanisms enhance interpersonal trust and organizational performance. Their research centers on the idea that governance processes help establish optimal organizational conditions related to accountability, trust and improvement to enhance healthcare effectiveness.

Evidence from Radević et al. Organizational governance is an essential organizational factor that adds to the healthcare service quality [25]. Their articulated study highlights that organizational structure and KM practices exert a direct effect on healthcare service quality, whereas trust reinforces the effects of organizational processes. Since it is expected that governance quality enhances the performance of healthcare services through coordination, accountability and organizational learning. Given the importance of governance mechanisms in healthcare organizations, governance quality is expected to positively affect healthcare service performance among public healthcare personnel.

H3: Governance Quality has a positive and significant effect on Healthcare Service Performance.

III. METHODS

A) Research Design

This study employed a quantitative research approach with a cross-sectional explanatory design to examine the effects of Structural Quality, Process Quality, and Governance Quality on Healthcare Service Performance among public healthcare personnel. The explanatory approach was selected because the study aims to test theoretically derived relationships among organizational factors and healthcare service performance based on Donabedian's Structure-Process framework and contemporary healthcare governance literature. A cross-sectional design was considered appropriate because the study sought to investigate the relationships among variables at a single point in time and to provide empirical evidence regarding organizational determinants of healthcare service performance within public healthcare institutions. The study was conducted in public healthcare facilities under the Government of Central Maluku Regency, Indonesia, including Community Health Centers (Puskesmas) and the Regional Public Hospital. Given the relatively small population size and the accessibility of respondents, the study adopted a census approach, allowing all eligible healthcare personnel to participate in the research.

B) Population and Sample

The population in this study were all civil servant healthcare personnel (Aparatur Sipil Negara/ASN) in the public healthcare facilities of the Government of Central Maluku Regency. According to data taken from official administrative records at the Central Maluku District Health Office, public healthcare personnel in this regency were 188 people. This population-based survey used a census method or total population sampling in which all members of the population from which the sample was drawn are included as research respondents, given that there is a relatively small national population. We employed a census-style approach to maximize representativeness and avoid sampling error introduced through sample selection. This method covers health workers in the various types of health service facilities and units distributed, namely, the Central Maluku Regency. The following criteria were used to select respondents for inclusion in the study. Firstly, respondents were required to be civil servant healthcare staff working in public healthcare establishments. Second, respondents had to have been directly involved in providing healthcare service delivery or health administration. In the third, responders needed to have a minimum of one year of work experience to ensure they had sufficient exposure/experience with both organizational processes and healthcare service delivery governance. Finally, participation was voluntary and based on informed consent.

C) Data Collection

Primary data were collected using a structured questionnaire administered directly to respondents. The questionnaire was developed based on established theories and previous empirical studies related to healthcare quality, healthcare governance, and healthcare service performance. All questionnaire items were designed to measure respondents' perceptions regarding organizational conditions and healthcare service delivery practices within their respective institutions. Trained research assistants were designated to all healthcare facilities, and data collection was carried out from July to September 2025. An information sheet about the study outlining its purpose, that participation was voluntary, how data confidentiality would be maintained, and the use of the research results was provided to respondents prior to completing the questionnaire. Informed written consent was obtained from all participants before collecting data. In order to protect the privacy of respondents, anonymity was maintained throughout this research. No personal identifiers, such as name or employee registration numbers, were to be given by the participants. Questionnaires were then placed in sealed envelopes and passed directly to the research team. The records were kept confidential and used solely for the purposes of academic research. Each of the measurement items was measured by a five-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Scores close to 7 indicated agreement with the statements relating to each of the constructs measured.

D) Measurement of Variables

The study employed a structured questionnaire to measure all research variables. All items were assessed using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Higher scores indicate stronger agreement with the statements representing each construct. Structural Quality (X_1) refers to the organizational resources available to support healthcare service delivery. Drawing upon Donabedian's Structure-Process framework and healthcare quality literature, Structural Quality was measured using four indicators: competency of healthcare personnel, availability of healthcare personnel, adequacy of healthcare facilities and infrastructure, and availability of medical equipment and information technology support. Each indicator was represented by a single measurement item, resulting in a total of four items. A sample item is: "Healthcare personnel in this facility possess the necessary competencies to perform their duties effectively." Higher scores indicate better organizational readiness to support healthcare service delivery.

Process Quality (X_2) refers to the effectiveness and consistency of healthcare service implementation. This variable was measured using five indicators: compliance with Standard Operating Procedures (SOP), implementation of Minimum Service Standards (SPM), timeliness of healthcare services, accuracy of healthcare service delivery, and patient safety practices. Each indicator was represented by one measurement item, resulting in a total of five items. A sample item is: "Healthcare personnel consistently follow established Standard Operating Procedures during service delivery." Higher scores indicate more effective healthcare service processes. Governance Quality (X_3) represents organizational governance mechanisms that ensure accountability, transparency, regulatory compliance, quality assurance, and managerial commitment. The variable was measured using five indicators: regulatory compliance, accountability, transparency, quality assurance mechanisms, and managerial commitment. Each indicator was represented by one measurement item, resulting in a total of five items. A sample item is: "Management demonstrates strong commitment to maintaining healthcare service quality." Higher scores indicate stronger governance practices within healthcare institutions. Healthcare Service Performance (Y) refers to the effectiveness of healthcare personnel in delivering healthcare services in accordance with organizational objectives and public expectations. The variable was measured using five indicators: service effectiveness, service efficiency, responsiveness, timeliness of service delivery, and compliance with patient safety standards. Each indicator was represented by one measurement item, resulting in a total of five items. A sample item is: "Healthcare services in this facility are delivered in a timely manner." Higher scores indicate better healthcare service performance.

E) Data Analysis Technique

Data analysis was performed using IBM SPSS Statistics Version 26.0. Descriptive statistical analysis provided an overview of responses to each research variable. The hypotheses were tested using Multiple Linear Regression Analysis at a significance level of $\alpha = 0.05$. The regression model used in this study is expressed as follows:

$$\text{Healthcare Service Performance} = \beta_0 + \beta_1(\text{Structural Quality}) + \beta_2(\text{Process Quality}) + \beta_3(\text{Governance Quality}) + \varepsilon$$

The significance of individual regression coefficients was assessed using t-tests, while the overall model fit was evaluated using the F-test. The coefficient of determination (R^2) was used to assess the proportion of variance in Healthcare Service Performance explained by Structural Quality, Process Quality, and Governance Quality.

IV. RESULTS

A) Descriptive Analysis of Respondents' Perceptions

Structural Quality was measured using four indicators, namely competency of healthcare personnel ($X_{1.1}$), availability of healthcare personnel ($X_{1.2}$), adequacy of facilities and infrastructure ($X_{1.3}$), and availability of medical equipment and

information technology support (X1.4). The results (see Table 1) indicate that respondents generally perceived structural quality positively. For the competency of healthcare personnel (X1.1), the majority of respondents selected “Agree” (39.9%) and “Strongly Agree” (31.9%), suggesting that healthcare personnel possess adequate competencies to perform their professional duties. Similarly, for the availability of healthcare personnel (X1.2), most respondents reported positive perceptions, with 32.4% selecting “Agree” and 34.6% selecting “Strongly Agree”. Regarding the adequacy of facilities and infrastructure (X1.3), 36.7% of respondents selected “Agree”, and 30.3% selected “Strongly Agree”, indicating that healthcare facilities generally support service delivery. Likewise, the availability of medical equipment and information technology support (X1.4) received favorable evaluations, with 44.1% of respondents selecting “Agree” and 31.9% selecting “Strongly Agree”.

Table 1. Summary of Respondents’ Perceptions of Research Variables

Variable	Indicator	Negative (%)	Neutral (%)	Positive (%)	Interpretation
Structural Quality (X ₁)	Competency of healthcare personnel (X1.1)	7.4	20.7	71.8	High
	Availability of healthcare personnel (X1.2)	6.9	26.1	67.0	High
	Adequacy of facilities and infrastructure (X1.3)	4.8	28.2	67.0	High
	Availability of medical equipment and IT support (X1.4)	2.7	21.3	76.0	Very High
	Average Structural Quality	5.5	24.1	70.5	High
Process Quality (X ₂)	Compliance with SOP (X2.1)	4.8	23.9	71.3	High
	Implementation of SPM (X2.2)	10.1	24.5	65.4	High
	Timeliness of healthcare services (X2.3)	11.2	22.9	65.9	High
	Accuracy of healthcare service delivery (X2.4)	8.5	25.0	66.5	High
	Patient safety practices (X2.5)	6.4	25.0	68.6	High
	Average Process Quality	8.2	24.3	67.5	High
Governance Quality (X ₃)	Regulatory compliance (X3.1)	10.6	22.3	67.0	High
	Accountability (X3.2)	13.8	24.5	61.7	Moderate
	Transparency (X3.3)	16.5	21.8	61.7	Moderate
	Quality assurance mechanisms (X3.4)	40.4	17.0	42.5	Low
	Managerial commitment (X3.5)	47.9	13.8	38.3	Low
	Average Governance Quality	25.8	19.9	54.2	Moderate
Healthcare Service Performance (Y)	Service effectiveness (Y1.1)	43.6	11.2	45.2	Moderate
	Service efficiency (Y1.2)	39.4	16.5	44.1	Moderate
	Responsiveness (Y1.3)	15.4	13.8	70.7	High
	Timeliness of service delivery (Y1.4)	18.1	15.4	66.5	High
	Compliance with patient safety standards (Y1.5)	17.0	13.3	69.7	High
	Average Healthcare Service Performance	26.7	14.0	59.2	Moderate–High

Note: Negative = Strongly Disagree + Disagree; Neutral = Neutral; Positive = Agree + Strongly Agree

Process Quality was assessed through five indicators: compliance with Standard Operating Procedures (SOP), implementation of Minimum Service Standards (SPM), timeliness of healthcare services, accuracy of healthcare service delivery, and patient safety practices. The results demonstrate generally positive perceptions regarding healthcare service processes. Compliance with SOPs (X2.1) was positively evaluated, with 41.0% of respondents selecting “Agree” and 30.3% selecting “Strongly Agree”. Similarly, implementation of Minimum Service Standards (X2.2) received favorable responses, as 28.2% of respondents selected “Agree” and 37.2% selected “Strongly Agree”. For timeliness of healthcare services (X2.3), the majority of respondents expressed positive perceptions, with 37.2% selecting “Agree” and 28.7% selecting “Strongly Agree”. Similar patterns were observed for accuracy of healthcare service delivery (X2.4), where 36.7% and 29.8% of respondents selected “Agree” and “Strongly Agree”, respectively. Patient safety practices (X2.5) also received favorable assessments, with 41.5% of respondents selecting “Agree” and 27.1% selecting “Strongly Agree”. These findings indicate that healthcare service processes are generally implemented effectively and consistently across public healthcare institutions.

Governance Quality was measured using five indicators: regulatory compliance, accountability, transparency, quality assurance mechanisms, and managerial commitment. The results reveal mixed perceptions regarding governance quality. Regulatory compliance (X3.1) was viewed positively, with 35.1% of respondents selecting “Agree” and 31.9% selecting

“Strongly Agree”. Accountability (X3.2) and transparency (X3.3) also received generally favorable evaluations, although a substantial proportion of respondents remained neutral. However, less favorable perceptions were observed for quality assurance mechanisms (X3.4) and managerial commitment (X3.5). For quality assurance mechanisms, 40.4% of respondents expressed disagreement, while only 42.5% reported agreement or strong agreement. Similarly, managerial commitment recorded the highest proportion of negative responses, with 47.9% of respondents selecting either “Disagree” or “Strongly Disagree”. Healthcare Service Performance was measured through five indicators: service effectiveness, service efficiency, responsiveness, timeliness of service delivery, and compliance with patient safety standards. The findings indicate varying perceptions across performance dimensions. Service effectiveness (Y1.1) and service efficiency (Y1.2) received relatively balanced responses, with positive evaluations slightly exceeding negative evaluations. Nevertheless, a substantial proportion of respondents expressed disagreement, indicating room for improvement in these areas. More favorable perceptions were observed for responsiveness (Y1.3), where 34.0% of respondents selected “Agree” and 36.7% selected “Strongly Agree”. Similar positive patterns were identified for timeliness of service delivery (Y1.4), with 30.9% and 35.6% selecting “Agree” and “Strongly Agree”, respectively. Compliance with patient safety standards (Y1.5) received the most favorable assessment, with 31.4% of respondents selecting “Agree” and 38.3% selecting “Strongly Agree”.

B) Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted to examine the effects of Structural Quality, Process Quality, and Governance Quality on Healthcare Service Performance among public healthcare personnel. The results of the regression analysis are presented in Table 2.

Table 2: Regression Results

Variables	β	t	p
Structural Quality	0.185	2.500	0.013
Process Quality	0.199	2.499	0.013
Governance Quality	0.307	4.171	<0.001
R ²	0.325		
Adjusted R ²	0.314		
F-value	29.529		
p-value (Model)	<0.001		

The regression model produced a correlation coefficient (R) of 0.570, indicating a moderate positive relationship between the independent variables and Healthcare Service Performance. The coefficient of determination (R²) was 0.325, indicating that Structural Quality, Process Quality, and Governance Quality collectively explained 32.5% of the variance in Healthcare Service Performance. After adjusting for the number of predictors, the Adjusted R² value was 0.314, suggesting that approximately 31.4% of the variation in Healthcare Service Performance could be explained by the proposed model, while the remaining 68.6% may be attributable to factors not included in this study. The ANOVA results indicate that the overall regression model is statistically significant (F = 29.529, p < 0.001). This finding demonstrates that Structural Quality, Process Quality, and Governance Quality jointly have a significant effect on Healthcare Service Performance. Therefore, the regression model is considered appropriate for explaining variations in Healthcare Service Performance among public healthcare personnel.

The regression equation can be expressed as follows: Healthcare Service Performance = 1.610 + 0.166 (Structural Quality) + 0.173 (Process Quality) + 0.280 (Governance Quality). The coefficient for Structural Quality was positive and statistically significant ($\beta = 0.185$, t = 2.500, p = 0.013). This result indicates that improvements in organizational resources, including personnel competency, workforce availability, infrastructure, and technological support, contribute positively to Healthcare Service Performance. Therefore, H1 is supported. Similarly, Process Quality demonstrated a positive and significant effect on Healthcare Service Performance ($\beta = 0.199$, t = 2.499, p = 0.013). This finding suggests that effective implementation of standard operating procedures, service standards, timeliness, accuracy of service delivery, and patient safety practices enhances healthcare service performance. Consequently, H2 is supported. Governance Quality exhibited the strongest positive influence on Healthcare Service Performance ($\beta = 0.307$, t = 4.171, p < 0.001). This result indicates that healthcare institutions characterized by stronger regulatory compliance, accountability, transparency, quality assurance mechanisms, and managerial commitment tend to achieve higher levels of service performance. Therefore, H3 is supported. Among the three predictors, Governance Quality emerged as the most influential factor, as indicated by its highest standardized coefficient ($\beta = 0.307$), followed by Process Quality ($\beta = 0.199$) and Structural Quality ($\beta = 0.185$).

V. DISCUSSION

This study investigated the effects of Structural Quality, Process Quality, and Governance Quality on Healthcare Service Performance among public healthcare personnel in Central Maluku Regency. The findings indicate that all three variables exert significant positive effects on Healthcare Service Performance.

A) Structural Quality and Healthcare Service Performance

The findings reveal that Structural Quality positively and significantly influences Healthcare Service Performance. This outcome is consistent with Hypothesis 1 and reaffirms that organisational resources are still the primary condition for effective healthcare service delivery. The finding was in line with the Donabedian model, a well-established framework that suggests effective outcomes within healthcare are dependent on structural resources such as healthcare personnel, facilities, medical equipment and information systems. Recent reviews reaffirmed the position that structural conditions underlie healthcare processes and outcomes [8], [9]. Healthcare organisations with sufficiently endowed human resources and infrastructure are expected to produce quality services and positive performance outcomes.

The current finding is also consistent with past studies that show that hospitals perceived to have better infrastructure and medical equipment are believed to provide better quality services [21]. Likewise, the inadequacies in facilities and physical infrastructure are reported to significantly diminish the perception of quality healthcare services [22]. Because health workers have geographic and logistical constraints, adequate structural resources become more important in the context of Central Maluku Regency where healthcare facilities are located on multiple islands. Nonetheless, since the standardized coefficient of Structural Quality ($\beta = 0.185$) is lower than that of all other predictors, this indicates how structural resources alone cannot ensure good service performance. This finding adds to the debate of whether organizational competence is about resources or whether it is just as much about the way organizations mobilize and utilize those resources in an efficient manner [3]. This indicates that structural investments should be supplemented with the right service processes and governance mechanisms.

B) Process Quality and Healthcare Service Performance

The results also provide evidence that Process Quality partially and significantly influences Healthcare Service Performance. Thus, this finding supports Hypothesis 2 and underscores the role of service implementation processes to achieve healthcare performance objectives. This finding is consistent with the proposition advanced by Donabedian that healthcare processes are the direct channel through which structural resources get translated into healthcare outcomes. Process Quality relates to guideline adherence for Standard Operating Procedures, implementation of Minimum Service Standards, timeliness of service, accuracy of service and patient safety. These dimensions impact the patient experience and are directly linked to healthcare personnel delivery. The finding is consistent with other studies that indicate the discovery of performance management systems leads to enhanced healthcare quality, as these systems allow for greater monitoring and control over operational processes across various dimensions [2]. A similar success linked to the successful implementation of Minimum Service Standards was observed in improving service quality at the district level [4]. Other commonly recognized potential drivers of healthcare performance include continuous quality improvement initiatives and process monitoring [19].

The positive effect of Process Quality corroborates with the evidence, which shows that safety practices predominate in determining healthcare quality outcomes [7]. Similarly, the domains of healthcare quality responsiveness, continuity of care, communication effectiveness, and service accuracy have been positively related to improvements in overall health service quality and patient experience [23]. As indicated by the descriptive analysis, Process Quality was rated consistently well on service procedures and standards, in which respondents were required to provide compliance. This reflects that public healthcare institutions in Central Maluku Regency implement the operational mechanisms to support services. As a result, improvements in service processes continue to be the best way to improve healthcare performance.

C) Governance Quality and Healthcare Service Performance

One of the most important findings of this study is that Governance Quality emerged as the strongest predictor of Healthcare Service Performance. These results provide evidence for our Hypothesis 3, and reinforce the strategic role of governance mechanisms in public healthcare organizations. The finding is consistent with findings in previous research that favourable governance structures lead to better health care quality improvements and/or organisational performance [24]. Healthcare organizations that employ active oversight, monitor quality, and engage managers are more likely to achieve good healthcare outcomes. Likewise, the quality of leadership and communication effectiveness has also been characterized as an important determinant of the health standards [13]. The result also supports evidence indicating that governance capacity plays a decisive role in determining public health system performance [12]. Likewise, governance mechanisms have been shown to influence workforce outcomes, organizational effectiveness, and service quality through improved accountability and managerial control [14]. Furthermore, performance management systems supported by high-quality metrics strengthen organizational trust and performance [20]. Other studies have similarly demonstrated that trust, knowledge transfer, and organizational structure contribute significantly to healthcare service quality [25].

A particularly noteworthy finding is that Governance Quality received the lowest descriptive evaluation among the three independent variables, especially regarding quality assurance mechanisms and managerial commitment. Nevertheless, Governance Quality exerted the strongest statistical effect on Healthcare Service Performance ($\beta = 0.307$). This apparent paradox represents one of the most significant contributions of the study. It suggests that governance-related weaknesses constitute a critical bottleneck in healthcare service delivery. While healthcare organizations may possess adequate infrastructure and reasonably effective operational processes, deficiencies in governance systems may limit the effectiveness of these resources. Conversely, strengthening governance practices may generate disproportionately large improvements in service performance because governance influences both resource allocation and process implementation. The finding also aligns with evidence emphasizing that strategic planning and organizational governance significantly affect performance in public health institutions [5]. Consequently, governance should not be viewed solely as an administrative function but rather as a strategic capability that enables healthcare organizations to translate resources and processes into improved service outcomes.

D) Theoretical Contributions

This study provides several important theoretical contributions. First, it reinforces the validity of Donabedian's Structure–Process–Outcome framework by demonstrating that both Structural Quality and Process Quality significantly influence Healthcare Service Performance. These findings support recent syntheses identifying the enduring relevance of Donabedian's framework in healthcare management research [8], [9]. Second, this study extends the traditional Donabedian framework by introducing Governance Quality as a distinct organizational determinant of healthcare service performance. Donabedian had given much of his attention to structure and process, but the current findings point to governance as an important higher-order organizational phenomenon that essentially governs how we manage and coordinate our resources and processes. Third, the research contributes to the healthcare management literature by examining public health care staff instead of patients or health organizations. It is important from this perspective because, when understanding service quality in the healthcare setting, prior studies have primarily focused on patients' perceptions of quality of care delivered [1], [21], [22], while our data are based on personnel, as they are necessarily the actors delivering services. The findings, therefore, provide a complementary perspective on healthcare performance assessment.

This study enriches the limited body of evidence from decentralized and archipelagic healthcare systems. Previous studies have highlighted that healthcare institutions operating in geographically dispersed regions face unique challenges related to accessibility, resource allocation, and service monitoring [18]. The findings, therefore, contribute valuable empirical evidence from a context that remains underrepresented in healthcare management research.

E) Practical Implications

The results offer a number of implications for practise to public policy and health service managers. Since Governance Quality analysis was the best predictor of Healthcare Service Performance, it is recommended that healthcare administrators focus on strengthening accountability systems, transparency mechanisms, quality assurance programs and managerial commitment. Special focus should be made on the parameters pertaining to quality assurance mechanisms, and managerial commitment was rated the lowest by the respondents. Improvements along these governance dimensions are expected to have the largest gains with respect to healthcare service performance. Moreover, from the perspective of sustaining adequate structural conditions, policymakers should continue investing in healthcare infrastructure and workforce development, medical equipment as well as digital health technologies. The practice of Standard Operating Procedures, Minimum Service Standards and patient safety programs must be sustained to maintain a process of healthcare service. Implications for Research and Practice. The implications of the findings can be summarized like this as follows: most local governments in the archipelagic area, such as Central Maluku, show that improving health performance requires an integrated strategy between resource development, process improvement, and governance reform. This integrated approach is supposed to produce durable advances in healthcare service clinics' performance and assist healthcare transformation efforts.

VI. CONCLUSION

This study seeks to understand the different influences of Structural Quality, Process Quality and Governance Quality on Healthcare Service Performance among public healthcare personnel in Central Maluku Regency, Indonesia. The results reveal that all three dimensions have a one-sided and positive impact on Healthcare Service Performance. In particular, Structural Quality helps a better service performance over the non-availability of suitable medical personnel and facilities to treat patients, equipment to diagnose and information technology support [5]. Process Quality improves the application of Standard Operating Procedures, Minimum Service Standards, timeliness, accuracy and safety in service delivery. The most significant predictor of Healthcare Service Performance was Governance Quality, which includes regulatory compliance, accountability, transparency, quality assurance mechanisms and managerial commitment. Among the three predictors, Governance Quality had the most substantial influence, Process Quality was next in magnitude and then Structural Quality. To note, Governance Quality was the least favoured dimension based on descriptive results with respondents, but despite all

dimensions having a significant association with Healthcare Service Performance, Governance Quality had the largest magnitude of influence. So the weakness found in governance may prove to be a critical limitation in public healthcare organizations and thus, the potential of enhancing service performance by improving mechanisms is great.

At a more theoretical level, this study empirically supports the Donabedian Structure–Process–Outcome framework by validating the importance of both structural and process dimensions on healthcare service performance. Crucially, this study generalizes the framework to show that Governance Quality is an important type of organizational determinant materially associated with healthcare performance. Consequently, the results contribute to the literature on the important governance role in quality management and organizational effectiveness in healthcare. Practically, these findings imply that healthcare managers and local government policy-makers should focus on strengthening the governance system, notably quality assurance mechanisms as well as managerial commitment, accountability and transparency. At the same time, investing in remaining health infrastructure, workforce development and improving processes for service continues to be critical drivers to sustaining healthcare performance. A holistic approach that embraces structural readiness, good service processes and sound governance practices is likely to yield more sustainable gains in healthcare delivery.

Limitations of the Study: There are some limitations in this study. The first is that this research was completed within a single local government context, thereby limiting the applicability of these results to other health care settings. Secondly, most of the cross-sectional designs prevent temporal inference in causality. Third, this study was based on self-reported healthcare personnel perceptions which are prone to response bias. However, we believe the field would benefit from future research studying the influences of healthcare service performance in other contexts, such as urban and metropolitan healthcare systems, and using longitudinal designs that capture causal dynamics. Future research can also include additional organizational variables in their analyses, including leadership effectiveness, organizational culture, employee engagement and the digital health capability of facilities and innovation capacity to explain healthcare service performance more comprehensively.

VII. REFERENCES

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