Research Article

Effectiveness of Public Service Policy Implementation: Analysis of Service Quality Influence on Fish Farmers' Satisfaction with Trust Mediation at UPTD BBIAT Pekalongan

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Abstract: This study aims to analyze the effectiveness of public service policy implementation at the Regional Technical Implementation Unit of the Freshwater Fish Cultivation Center (UPTD BBIAT) in Pekalongan Regency, focusing on the influence of service quality on fish farmers' satisfaction mediated by trust. The research employs a mixed-methods approach with a concurrent embedded design, combining a survey of 40 fish farmers and in-depth interviews with 5 key informants from the UPTD and Agency levels, along with observation and document analysis. The theoretical framework is built on New Public Service Theory, Policy Implementation Theory, and the SERVQUAL, trust, and public satisfaction concepts. The research findings indicate that all three variables are in the high category with robust and significant positive correlations: service quality with trust, service quality with satisfaction, and trust with satisfaction. Trust has been shown to play a strong mediating role in the relationship between service quality and fish farmers' satisfaction. The assurance and empathy dimensions are the strengths of UPTD BBIAT, while tangibles and reliability require improvement through infrastructure modernization and enhanced consistency in seed availability. Theoretically, this research confirms the applicability of the SERVQUAL model and trust theory in the context of public services in the fisheries sector. In practice, it provides strategic recommendations to improve policy implementation effectiveness through infrastructure strengthening, human resource development, service digitalization, and enhanced institutional coordination.

Keywords: New Public Service; Policy Implementation Effectiveness; Public Service; Service Quality; Trust.

1. Introduction

Public service is a fundamental indicator in measuring the quality of government and reflects the state's commitment to fulfilling citizens' fundamental rights. In Indonesia, the transformation of the public service paradigm has undergone a significant shift from a government-centric orientation to a citizen-centric one, as mandated by Law Number 25 of 2009 concerning Public Services (Dwiyanto, 2017). In the context of national economic development, the aquaculture fisheries sector plays a strategic role as a pillar of food security and a driver of the people's economy. Data from the Ministry of Marine Affairs and Fisheries (2024) show that national aquaculture production reached 18.4 million tons in 2023, with a contribution of 3.02% to the Gross Domestic Product of the fisheries sector. However, achieving production targets is highly dependent on the availability of quality fish seeds

provided by the Regional Technical Implementation Units of Fish Hatchery Centers (UPTD Balai Benih Ikan) in various regions.

The problem is that the service quality of UPTDs as public service providers in the fisheries sector still faces various challenges, ranging from infrastructure limitations and human resource competency to low levels of satisfaction among fish farmers as service users (Puspitasari & Setiawan, 2022). This condition indicates a gap between national policy expectations and the reality of implementation at the regional level, which in turn can hinder the achievement of national food sovereignty targets.

Pekalongan Regency, as one of the aquaculture fisheries centers in Central Java, has strategic potential in developing the freshwater fisheries sector. Based on data from the Department of Marine Affairs and Fisheries of Pekalongan Regency (2023), there are 2,847 freshwater fish farmers spread across 19 sub-districts with a cultivation area of 347.5 hectares and production of 4,238 tons per year. The Regional Technical Implementation Unit of the Freshwater Fish Cultivation Center (UPTD BBIAT) of Pekalongan Regency plays a vital role in supporting the sustainability of farmers' businesses by providing quality fish seeds, technical assistance, and cultivation business development consultation. However, the performance achievements of UPTD BBIAT in providing public services still face significant challenges. The 2023 Pekalongan Regency Public Service Performance Evaluation Report shows that the Community Satisfaction Index at UPTD BBIAT is in the "Good" category with a score of 76.42 out of 100, still below the set target of 85.00 (Bappeda Pekalongan Regency, 2023).

The gap between fish farmers' expectations and the services they receive at UPTD BBIAT in Pekalongan Regency is identified using several indicators. First, from a tangible perspective, the condition of the hatchery center's infrastructure is not optimal, with only 60% of the spawning ponds operating at full capacity due to damage and lack of maintenance. Second, from the reliability dimension, there are complaints from fish farmers regarding delays in fish seed distribution and inconsistency in seed quality with promised standards, where the mortality rate of seeds in the first 7 days reaches 15-20%, exceeding the tolerance limit of 10%. Third, the responsiveness aspect shows relatively long service waiting times: an average of 7-10 working days for seed procurement, compared with fish farmers' maximum of 3-5 working days. Fourth, the empathy dimension indicates that post-distribution seed assistance remains minimal, with only 35% of fish farmers receiving technical assistance visits from UPTD BBIAT staff. This gap phenomenon not only undermines fish farmers' satisfaction but also erodes their trust in local government institutions.

Theoretically, the relationship between service quality, trust, and satisfaction has been a focus of study in public administration and service management literature. Parasuraman, Zeithaml, and Berry (1988) through the SERVQUAL model explain that service quality is a function of the gap between customer expectations and their perceptions of actual service performance. In the context of public services, Denhardt and Denhardt (2015), through the New Public Service theory, emphasize the importance of building public trust as the foundation of the relationship between government and citizens. Mayer, Davis, and Schoorman (1995) define trust as the willingness of a vulnerable party to accept the actions of another party based on the expectation that the party will perform specific important actions. In their model, trust is built through three dimensions: ability, benevolence, and integrity. When applied in the context of public services, high service quality can build positive perceptions of these three dimensions of trust, thereby increasing public satisfaction (Van Ryzin, 2011).

Although the relationship among service quality, trust, and satisfaction has been extensively studied in the private sector, there remains a research gap in public services in the fisheries sector in Indonesia. Research by Setiyawan and Hidayat (2020) analyzing public service quality at the Fisheries Department of Malang Regency found a significant influence of service quality on fishermen's satisfaction. However, it did not include trust as a mediating variable. Meanwhile, the study by Rahmawati, Musadieq, and Nurtjahjono (2017) on the influence of service quality on satisfaction and loyalty at UPTD Fish Hatchery Center Pandaan used a customer relationship management approach more suitable for the private sector. Furthermore, research by Widodo and Fitriati (2021) on the implementation of public service policies in the fisheries sector identified the importance of trust in the success of fish farmer empowerment programs. However, it did not specifically analyze the mediating role of trust in the relationship between service quality and satisfaction.

Pekalongan Regency was chosen as the research site for several strategic reasons. First, Pekalongan Regency is one of the freshwater fish-producing areas in Central Java, with an average annual growth rate of 8.2%, indicating strong potential for the aquaculture fisheries

sector, which requires optimal public service support (BPS Pekalongan Regency, 2024). Second, UPTD BBIAT Pekalongan Regency has been performing its function since 2010 and serves thousands of fish farmers, thus having a sufficient track record to evaluate the effectiveness of its policy implementation. Third, based on preliminary data, there is variation in satisfaction levels among fish farmers using UPTD BBIAT services, indicating an interesting phenomenon to be studied in depth. Fourth, the Pekalongan Regency Government has designated the fisheries sector as a priority in the 2021-2026 Regional Medium-Term Development Plan (RPJMD), making this research directly relevant to the regional development agenda.

Based on the above description, the primary research problem is: How effective is the implementation of public service policy at UPTD BBIAT Pekalongan Regency in building fish farmers' satisfaction, and to what extent does trust play a role as a mediation mechanism in the relationship between service quality and fish farmers' satisfaction?.

2. Literature Review

The New Public Service theory, developed by Denhardt and Denhardt (2003), emerged as a critique of the New Public Management paradigm, which overly emphasizes efficiency and a market orientation in public services. This theory positions public administrators as servants of the community by emphasizing that the public interest arises from dialogue about shared values (Denhardt & Denhardt, 2007). The seven principles of New Public Service include: serving citizens, not customers; prioritizing the public interest; valuing citizenship over entrepreneurship; thinking strategically and acting democratically; recognizing the complexity of accountability; serving rather than controlling; and valuing people, not just productivity. In the context of this research, the New Public Service theory is relevant to understanding how UPTD BBIAT should build relationships with fish farmers not as commercial transactions but as democratic partnerships based on trust and dialogue to serve the public interest.

The Policy Implementation Theory by Van Meter and Van Horn (1975) provides an analytical framework for understanding how policies move from formulation to concrete action in the field. This model identifies six variables that influence policy implementation performance: policy standards and objectives, available resources, inter-organizational communication, implementing agency characteristics, socio-economic and political conditions, and implementer disposition. Edwards III (1980) subsequently strengthened this model by emphasizing four critical factors: communication, resources, disposition, and bureaucratic structure. In the context of this research, the implementation of public service policy at UPTD BBIAT can be understood through how service standards are translated into daily operations, resource availability, and staff disposition in providing services, all of which influence the service quality received by fish farmers, which in turn shapes their trust and satisfaction.

3. Research Concept

Public Service Quality

Zeithaml, Parasuraman, and Berry (1990) define service quality as a global judgment or attitude regarding the superiority of a service, formed by comparing customer expectations with their perceptions of actual service performance. This concept is operationalized through the SERVQUAL model which identifies five dimensions: tangibles (physical evidence such as facilities, equipment, and personnel appearance), reliability (ability to deliver promised services accurately and consistently), responsiveness (willingness to help customers and provide prompt service), assurance (knowledge and courtesy of employees and their ability to inspire trust), and empathy (individual attention given to customers) (Parasuraman, Zeithaml, & Berry, 1988).

In the context of public services, Zeithaml and Bitner (2003) emphasize that service quality has unique characteristics due to its intangible nature, heterogeneity, inseparability between production and consumption, and inability to be stored. Public service quality is closely related to trust, as positive experiences with the five SERVQUAL dimensions can shape fish farmers' perceptions of UPTD BBIAT's ability, benevolence, and integrity (Zeithaml, Berry, & Parasuraman, 1996). Furthermore, high service quality contributes directly to citizen satisfaction through an expectation-confirmation mechanism: when perceived service performance exceeds or meets expectations, satisfaction is formed (Oliver, 1980).

Trust/Public Trust

Mayer, Davis, and Schoorman (1995) developed an integrative model of organizational trust that defines trust as the willingness of one party to be vulnerable to the actions of another party based on the expectation that the other party will perform specific actions important to the trustor, regardless of the ability to monitor or control that party. This model identifies three dimensions of trust formation: ability (competence and characteristics that enable a party to influence a specific domain), benevolence (the extent to which a trustee is believed to have good intentions toward the trustor beyond egocentric profit motives), and integrity (the perception that the trustee adheres to a set of principles acceptable to the trustor) (Mayer et al., 1995).

In the context of public services, Vigoda-Gadot and Yuval (2003) explain that public trust in government institutions is the foundation of legitimacy and effectiveness of democratic governance. Trust serves as a mediating variable that connects service quality with satisfaction because when fish farmers experience high-quality service (especially the assurance and reliability dimensions), they will form positive perceptions about the ability and integrity of UPTD BBIAT, which subsequently increases their willingness to continue using the service and feel satisfied (Morgan & Hunt, 1994). Van de Walle and Bouckaert (2003) found that trust is influenced not only by the quality of service output but also by service processes that are transparent, fair, and responsive, which reflect the benevolence and integrity dimensions in the Mayer et al. (1995) model.

Citizen Satisfaction

Van Ryzin (2004) defines citizen satisfaction as citizens' subjective evaluation of the quality and performance of the public services they receive, based on direct experience and general perceptions of government institutions. This concept adopts and adapts Oliver's (1980) expectancy-disconfirmation theory, which explains that satisfaction arises when positive confirmation occurs (performance exceeds expectations) or simple confirmation (performance meets expectations). In contrast, negative disconfirmation (performance below expectations) results in dissatisfaction (Van Ryzin, 2006).

In the context of public services, Van Ryzin (2013) identifies three dimensions of satisfaction: satisfaction with outcomes (service results received), satisfaction with process (how services are delivered), and overall satisfaction. Citizen satisfaction has a reciprocal relationship with trust, where satisfaction can strengthen trust, and conversely, high trust can increase tolerance for service deficiencies and maintain satisfaction (Van Ryzin, 2011). Furthermore, citizen satisfaction becomes an important indicator of public organization effectiveness because it reflects the extent to which the organization successfully meets the needs and expectations of its strategic stakeholders, namely, citizens who are service recipients (James, 2009). Kelly and Swindell (2002) add that citizen satisfaction is also influenced by contextual factors such as perceptions of distributive and procedural justice in service delivery.

Public Organizational Effectiveness

Robbins and Coulter (2018) define organizational effectiveness as the extent to which established organizational goals are achieved, in the context of public organizations, measured not only by operational efficiency but also by the organization's ability to meet stakeholder expectations and achieve desired social impact. The public organizational effectiveness model integrates four approaches: (1) goal attainment approach which measures the achievement of the organization's formal goals; (2) system resource approach which assesses the organization's ability to obtain needed resources; (3) internal process approach which focuses on operational smoothness and internal organizational health; and (4) strategic constituencies approach which measures the satisfaction of strategic groups with interests in the organization (Robbins & Judge, 2017).

In the context of UPTD BBIAT, effectiveness can be measured from the achievement of seed production and distribution targets, budget utilization efficiency, internal process smoothness, and, most importantly, fish farmer satisfaction as the primary stakeholder. Cameron (1986) emphasizes that there is no single criterion that can capture the complexity of public organizational effectiveness, thus requiring a multi-dimensional approach. The quality of services provided influences public organizational effectiveness in policy implementation; high-quality service reflects good internal processes and an orientation toward stakeholder satisfaction (Boyne, 2003). Furthermore, effectiveness is also mediated by public trust, because high trust can increase organizational legitimacy, facilitate coordination, and reduce transaction costs in government-society relations (Fukuyama, 1995).

4. Research Method

This research uses a mixed-methods approach with a concurrent embedded design, in which quantitative and qualitative data are collected simultaneously, with one method supporting the other (Creswell & Plano Clark, 2011). The quantitative approach is used as the primary method to test the causal relationships among service quality, trust, and fish farmer satisfaction. In contrast, the qualitative approach is used to deepen contextual understanding of public service policy implementation. The integration of both approaches aims to produce more comprehensive, holistic findings in understanding the effectiveness of public service policy implementation (Johnson & Onwuegbuzie, 2004).

The research was conducted at the Regional Technical Implementation Unit of the Freshwater Fish Cultivation Center (UPTD BBIAT) in Pekalongan Regency, Central Java, from February to July 2025. The selection of this location was based on the consideration that UPTD BBIAT is a strategic public service institution in supporting the aquaculture fisheries sector with a significant number of service users and diverse characteristics. The research population consists of all freshwater fish farmers who used UPTD BBIAT services in the last year, totaling 187 active fish farmers. The sampling technique used was purposive sampling, with the following criteria: fish farmers who have used the service at least three times in the last year, who have at least two years of cultivation experience, and who are willing to be respondents. The sample size used is 40 respondents, following the principle of minimum sample size for correlational research (Roscoe, 1975).

The quantitative data collection instrument uses a structured questionnaire consisting of four parts: respondent identity, public service quality with 25 items adapting SERVQUAL dimensions (Parasuraman et al., 1988), trust with 15 items adapting the Mayer et al. (1995) model, and citizen satisfaction with 10 items adapting the Van Ryzin (2004) instrument. Each item uses a 5-point Likert scale. The instrument's validity was assessed through content validity (expert judgment) and construct validity (Confirmatory Factor Analysis), and its reliability through Cronbach's Alpha, with a minimum standard of 0.70 (Nunnally & Bernstein, 1994).

Quantitative data analysis was conducted in two stages using SPSS version 26. First, descriptive statistics to describe respondent characteristics and response distribution (Field, 2013). Second, Pearson Product Moment correlation analysis to measure the strength and direction of relationships between variables (Pallant, 2016). Classical assumption tests were performed, including tests of normality, linearity, and multicollinearity (Hair et al., 2014). The selection of qualitative informants used purposive sampling based on criteria of strategic positions and in-depth knowledge (Patton, 2015). Informants included the Head of UPTD BBIAT, the Head of the Administration Sub-Division, the Head of the Department of Marine Affairs and Fisheries, the Department Secretary, and the Head of the Planning and Finance Sub-Division. Qualitative data collection used three methods to ensure data source triangulation (Denzin, 1978): semi-structured in-depth interviews with a duration of 60-90 minutes per informant (Kvale & Brinkmann, 2009), non-participant observation for 10 working days (Creswell, 2014), and document analysis of policies, service SOPs, performance reports, and production data (Bowen, 2009).

Qualitative data analysis used the thematic analysis approach developed by Braun and Clarke (2006) with six stages: data familiarization, initial coding, theme searching, theme review, theme definition, and final report production. The coding process used NVivo version 12 software (Bazeley & Jackson, 2013). Trustworthiness was ensured by four criteria proposed by Lincoln and Guba (1985): credibility, transferability, dependability, and confirmability.

Quantitative and qualitative analysis results were integrated at the interpretation stage using a convergent design strategy (Fetters et al., 2013). Integration results are presented in the form of a joint display matrix that visualizes how quantitative and qualitative findings complement each other in answering research questions (Guetterman et al., 2015).

5. Research Findings

Quantitative Data Analysis Results

Quantitative data analysis was conducted for 40 freshwater fish farmers who used the services of UPTD BBIAT in Pekalongan Regency. Research respondents were predominantly male (97.5%), with an average age of 42 years and an average cultivation experience of 8.4 years, indicating adequate experience in assessing the service quality of UPTD BBIAT. Descriptive analysis shows that the public service quality of UPTD BBIAT is in the good

category, with an average score of 4.011 (SD=0.550) on a 1-5 scale. The trust variable among fish farmers toward UPTD BBIAT also shows a high level, with an average score of 3.998 (SD=0.599), indicating strong trust in the institution. Meanwhile, fish farmer satisfaction with UPTD BBIAT services reached an average score of 4.045 (SD=0.705), showing a high level of satisfaction. Analysis by service quality dimension showed that assurance had the highest score (4.125), followed by responsiveness (4.045), reliability (3.975), empathy (3.970), and tangibles (3.940). The trust dimensions analyzed show that benevolence has the highest score (4.015), followed by integrity (4.010) and ability (3.970).

Table 1. Descriptive Statistical Analysis.

Variable	Mean	Std. Dev	Min	Max
Service Quality	4,011	0,550	1,320	4,920
Trust	3,998	0,599	1,000	4,933
Fish Farmer Satisfaction	4,045	0,705	1,000	5,000

Pearson product-moment correlation analysis revealed significant relationships among variables. The analysis results show a robust and significant positive correlation between service quality and trust (r=0.896; p<0.001), indicating that improving service quality significantly increases fish farmers' trust. The relationship between service quality and satisfaction also shows a strong and significant positive correlation (r=0.874; p<0.001), proving that good service quality directly increases fish farmer satisfaction. The most interesting finding is the correlation between trust and satisfaction, which shows the highest value (r=0.902; p<0.001), confirming the crucial role of trust as a mediator in the service quality-satisfaction relationship. All three correlations are significant at the α=0.05 level, indicating that these findings are not coincidental but rather consistent relationship patterns. The strength of correlations in the "strong" category (>0.80) indicates that the theoretical model linking service quality, trust, and satisfaction has high empirical validity in the context of UPTD BBIAT public services in Pekalongan Regency.

Table 2. Correlation Matrix.

Variable	Service Quality	Trust	Satisfaction
Service Quality	1,000	0,896***	0,874***
Trust	0,896***	1,000	0,902***
Satisfaction	0,874***	0,902***	1,000

Note: *** p < 0.001 (significant at 0.1% level)

The quantitative findings of this research provide strong empirical support for the SERVQUAL theoretical model (Parasuraman et al., 1988) and the Mayer et al. (1995) trust model in the context of public services in the fisheries sector. The average service quality score of 4.011 indicates that UPTD BBIAT has successfully implemented the five dimensions of service quality at a reasonable level, consistent with Van Ryzin's (2004) findings that high public service quality contributes significantly to citizen satisfaction. The assurance dimension received the highest score (4.125), confirming Zeithaml et al.'s (1996) proposition that staff competence and credibility are crucial factors in building service user confidence, especially in the context of technical services such as fish hatcheries, which require specific expertise. The lowest score on the tangibles dimension (3.940) is consistent with the general condition of public organizations in Indonesia, which face infrastructure budget constraints, as suggested by Dwiyanto (2017), who notes that the physical quality of facilities often becomes a challenge in improving public services in regions.

Correlation analysis revealed the most significant finding: a robust correlation between trust and satisfaction (r=0.902; p<0.001), higher than the direct correlation between service quality and satisfaction (r=0.874). This finding confirms the theory proposed by Kim et al. (2009) and Tschannen-Moran & Hoy (2000) that trust plays a central role in translating service quality into user satisfaction. The strong correlation between service quality and trust (r=0.896) supports the Public Service Motivation Theory proposition (Perry & Wise, 1990) that consistent service quality builds institutional trust. The strength of correlations above 0.80 for all variable pairs indicates that the service quality-trust-satisfaction relationship model has high predictive validity in the context of UPTD BBIAT, consistent with Van de Walle & Bouckaert's (2003) meta-analysis on determinants of public service satisfaction.

Qualitative Analysis

Qualitative analysis reveals that the implementation of public service policy at UPTD BBIAT reflects the principles of the New Public Service (Denhardt & Denhardt, 2007), which emphasizes service to citizens rather than customers. The Head of Department's statement that "the aquaculture fisheries sector is a leading regional sector because it supports food

security" demonstrates a public service orientation that extends beyond mere economic transactions, consistent with the concept of public value creation (Moore, 1995). Service standards referring to "fair, proportional principles, and compliance with regulations" confirm the implementation of Law 25/2009 on Public Services, which emphasizes legal certainty and fairness in service delivery. The strategy of building trust through "consistent, transparent, responsive service" aligns with the dimensions of organizational trust proposed by Mayer et al. (1995): ability (competence), benevolence (care), and integrity (value consistency). The finding that UPTD BBIAT applies transparency principles in "budget management, pricing, and production processes" reflects sound governance principles (UNDP, 1997) that are essential in building the legitimacy of public institutions.

The constraints identified by informants—limited human resources, budget, and infrastructure—are consistent with Implementation Gap Theory (Van Meter & Van Horn, 1975), which explains that resource limitations often cause gaps between policy and implementation. The Planning Sub-Division Head's statement that "budget from the Ministry of Marine Affairs and Fisheries in the form of Special Allocation Funds is also no longer available" indicates fiscal decentralization challenges in supporting regional public services, consistent with Smoke's (2015) findings on fiscal gap in regional autonomy implementation. The recommended improvement strategies—service digitalization, strengthening human resources, and continuous evaluation—reflect the continuous improvement approach proposed in Total Quality Management (Deming, 1986) and have been adapted in the modern public service context (Osborne & Gaebler, 1992). The Head of UPTD's statement about plans to make UPTD a "fisheries education facility for children" shows expansive public service innovation, transcending traditional technical functions toward broader community engagement.

Integration of Qualitative and Quantitative Data

The integration of quantitative and qualitative data produces a comprehensive understanding of the effectiveness of public service policy implementation at UPTD BBIAT. Quantitative data show strong correlations among service quality, trust, and satisfaction ($r > 0.87$), while qualitative data reveal the mechanisms by which these relationships manifest in practice. First, the high score on the assurance dimension (4.125) is supported by qualitative findings that staff have good technical competence and adequate experience, as stated by the Head of UPTD: "The competence of human resources at UPTD BBIAT technically can be said to be appropriate competence to support services to fish farmers." Second, the strong correlation between trust and satisfaction ($r=0.902$) is supported by the Administration Sub-Division Head's statement: "Quality service builds fish farmer trust. High trust makes them loyal and satisfied. Satisfaction encourages them to recommend UPTD to other fish farmers," which illustrates a straightforward causal process.

Third, the lowest score on the tangibles dimension (3.940) is explained by qualitative findings about infrastructure limitations. The Head of UPTD revealed: "For some parts of the building, there are leaks, cracks, or seepage, supporting equipment such as printers, water quality measuring instruments at UPTD BBIAT Karanganyar have experienced damage." Fourth, the high responsiveness score (4.045) is confirmed by systematic service procedures and fast service time (1-3 working days) as explained by informants. This integration shows data convergence: quantitative data identify relationship patterns, while qualitative data explain the context, mechanisms, and factors influencing these patterns, producing a holistic understanding of the public service effectiveness of UPTD BBIAT.

Table 3. Integration of Quantitative and Qualitative Findings.

Dimension	Quantitative Findings	Qualitative Confirmation
Assurance	Highest score: 4.125 Staff competence is rated as good	Staff have technical competence and adequate experience in a fish hatchery.
Trust → Satisfaction	Highest correlation: r=0.902 Powerful relationship	Trust builds loyalty and encourages recommendations to other fish farmers
Tangibles	Lowest score: 3.940 Facilities need improvement	Some buildings have leaks/cracks, and equipment has experienced damage
Responsiveness	High score: 4.045 Good responsiveness	Service time 1-3 days, explicit and systematic procedures

Discussion

Technical Competence as the Foundation of Trust and Satisfaction

Data triangulation reveals that staff technical competence is the most crucial factor in building trust and satisfaction among fish farmers. Quantitative data show that the assurance dimension received the highest score (4.125), particularly on the indicator "staff have good knowledge of hatchery techniques" (mean=4.15). This finding is confirmed by the Head of UPTD's statement that "the competence of human resources at UPTD BBIAT technically can be said to be appropriate competence to support services to fish farmers, both in the form of consultation and education."

Deeper analysis shows that this competence is not only technical knowledge, but also experiential wisdom—the Head of UPTD explains that "every employee has direct experience and is proven competent in their field," reflecting tacit knowledge (Nonaka & Takeuchi, 1995), which is challenging to transfer but very valuable in technical services. The high correlation between the ability dimension of trust (3.970) and satisfaction (r=0.89) confirms the expertise-based trust proposition (Shapiro et al., 1992), which posits that staff expertise is the primary source of trust in service contexts requiring specific competence. Practical implications: Investment in human resource competence development through continuous training and knowledge sharing is an effective strategy to simultaneously increase trust and satisfaction (Senge, 1990; Lipsky, 2010).

Transparency and Consistency as Mechanisms for Building Institutional Integrity

Triangulation identifies transparency and consistency as key mechanisms for building institutional integrity. Quantitative data show that the integrity dimension of trust has a high score (4.010), with the indicator "UPTD BBIAT is consistent in implementing service policies and procedures" scoring 4.05. Qualitative findings reveal that this consistency is manifested through concrete practices: the Head of UPTD states, "UPTD BBIAT Karanganyar adheres to transparency principles in its management by providing clear and open information about budget management, pricing, and production processes."

The Administration Sub-Division Head adds that accountability mechanisms are implemented by "responsibly reporting both verbally and in writing regarding task and activity implementation to superiors." Deeper analysis shows that this transparency creates procedural justice (Thibaut & Walker, 1975)—fish farmers feel treated fairly because procedures are clear and consistently applied. The strong correlation between the integrity dimension and satisfaction (r=0.88) supports organizational justice theory (Colquitt et al., 2001), which posits that procedural justice contributes significantly to public service user satisfaction. Theoretical implications: transparency is not merely information disclosure, but a mechanism for building legitimacy through demonstrating consistency between espoused values and operational practices (Suchman, 1995), which in turn increases institutional trust in the long term (Grimmelikhuijsen, 2012).

Responsiveness as a Bridge between Service Quality and Satisfaction

Data triangulation identifies responsiveness as a dimension linking technical service quality to fish farmers' emotional satisfaction. Quantitative data show that the responsiveness dimension received a high score (4.045), with the indicator "staff are quick to respond in serving seed requests" reaching 4.12. Qualitative findings reveal that an efficient system supports this speed: the Head of UPTD explains, "the time needed to fulfill seed requests from fish farmers averages 1-3 working days." At the same time, the Administration Sub-Division Head details the procedure: "Fish farmers come, fill out forms, document verification, technical consultation, then receive seeds." Interestingly, responsiveness is measured not only by speed but also by willingness to help—informants report, "Staff are willing to help when I experience difficulties" (score 4.08). In-depth analysis shows that responsiveness creates perceived care (Parasuraman et al., 1988)—fish farmers feel that the institution cares about their needs.

The strong correlations between responsiveness and satisfaction (r=0.87) and trust (r=0.85) confirm the dual role of responsiveness: as an indicator of service quality and as a signal of institutional benevolence. Practical implications: improving responsiveness requires not only procedure simplification (technical efficiency), but also a shift in staff mindset from "serving according to SOP" to "understanding and anticipating fish farmer needs" (service recovery paradox, Smith et al., 1999), which reflects the transition from Old Public Administration to New Public Service (Denhardt & Denhardt, 2015).

Resource Limitations as a Moderator of Service Effectiveness

Triangulation identifies resource limitations as a moderating factor that limits the maximum potential of service effectiveness. Quantitative data show the tangibles dimension

received the lowest score (3.940), with the indicator "modern and adequate hatchery equipment and technology" reaching only 3.85. Qualitative findings reveal concrete constraints: the Head of UPTD explains, "Some parts of the building have leaks, cracks, or seepage... supporting equipment such as printers, water quality measuring instruments have experienced damage, and some are no longer fit for use." The Planning Sub-Division Head adds a fiscal dimension: "The budget is relatively limited considering operational needs, facility maintenance, and service development that continue to increase... the budget from the Ministry of Marine Affairs and Fisheries in the form of Special Allocation Funds is also no longer available." Interestingly, despite low tangibles, satisfaction remains high (4.045), indicating that fish farmers prioritize seed quality and staff competence over facility aesthetics.

However, these limitations pose long-term risks: the Head of UPTD reveals "when seed demand is quite high while production capacity is limited, this usually occurs during the dry season when water flow is turned off," showing that infrastructure limitations can disrupt service reliability in the future. Deeper analysis reveals a paradox: UPTD has succeeded in maintaining high service quality despite limited resources through resource optimization and service prioritization (doing more with less), but this approach is not sustainable in the long term without infrastructure investment (Osborne & Plastrik, 1997). Policy implications: advocacy to central and provincial governments for the allocation of special fisheries infrastructure is needed, given the strategic role of this sector in food security and the local economy (fiscal federalism approach, Oates, 1999).

6. Conclusion

This research draws several important conclusions about the effectiveness of public service policy implementation at UPTD BBIAT, Pekalongan Regency. Quantitative findings show that the public service quality of UPTD BBIAT is in the good category, that fish farmers trust the institution, and that fish farmer satisfaction is high. There are very strong and significant positive correlations between service quality and trust, and between service quality and satisfaction; especially between trust and satisfaction, confirming the crucial role of trust as a mediator in the service quality-satisfaction relationship. The assurance dimension has the highest contribution to service quality, while the tangibles dimension requires improvement.

Qualitative findings reveal that UPTD BBIAT has implemented clear, transparent public service standards oriented toward the interests of fish farmers, consistent with the principles of Law Number 25 of 2009 concerning Public Services. Fish farmer trust is built through consistent service, transparent information, staff technical competence, and concern for the cultivation business's success. The main constraints include limited human resources, a limited budget, especially after the termination of Special Allocation Funds from the central government, and infrastructure that requires maintenance and modernization. Coordination between UPTD and the Department of Marine Affairs and Fisheries is supported by coaching, monitoring, and periodic evaluation mechanisms.

The integration of quantitative and qualitative data identifies four key themes: technical competence as the foundation of trust and satisfaction; transparency and consistency as mechanisms for building institutional integrity; responsiveness as a bridge between service quality and satisfaction; and resource limitations as a moderator of service effectiveness. These findings confirm the theoretical model that service quality influences satisfaction both directly and indirectly through trust mediation, with implications that investing in improving service quality will produce a multiplier effect by increasing institutional trust.

The theoretical implications of this research are the empirical validation of the SERVQUAL model and trust theory in the context of public services in the Indonesian fisheries sector. The finding that trust has a more substantial mediating effect than the direct effect of service quality strengthens the argument that public services are not merely technical transactions but relational ones that require long-term trust-building. Practical implications include prioritizing human resource competence development, strengthening transparency through digitalization of information systems, improving responsiveness through simplification of procedures, and advocating for increased allocation of the fisheries infrastructure budget. This research has limitations, including a small sample size, a cross-sectional design, a focus on a single location, and a limited number of variables. Future research is recommended to use larger samples, longitudinal design, multi-site comparative studies, and more sophisticated analysis methods, such as structural equation modeling, to test mediation effects simultaneously.

Based on research findings, several practical recommendations are proposed. For UPTD BBIAT: implement continuous human resource capacity development programs; develop digital-based service information systems; prepare infrastructure maintenance roadmaps; implement systematic feedback mechanisms; and develop service innovations. For the Department of Marine Affairs and Fisheries: increase operational budget allocation, facilitate access to alternative funding sources, strengthen coaching mechanisms, and advocate for special infrastructure allocation. For the Regency Government: integrate UPTD performance targets into the Regional Medium-Term Development Plan (RPJMD), facilitate cross-agency collaboration, and develop incentives for high-performing UPTDs. Implementation of these recommendations is expected to sustainably improve the effectiveness of UPTD BBIAT public services, which in turn contributes to increased fish farmer productivity, local food security, and community welfare in Pekalongan Regency.

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