The Relationship Between Performance Management and The Quality of Animal, Fish, and Plant Quarantine Services

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Abstract

Effective performance management is a key factor in achieving organizational goals, including in the context of animal, fish, and plant quarantine services. This study aims to explore the relationship between performance management and the quality of quarantine services, focusing on relevant challenges and improvement strategies. A qualitative descriptive research method was used to collect data through observations, interviews, and documentation at the Indonesian Quarantine Agency office. The results show that integrated performance management can improve the effectiveness and efficiency of services, although challenges remain, such as limited infrastructure, competency gaps in human resources, and bureaucratic complexity. The implementation of digital technology and human resources training are important strategies to enhance service quality. In addition, collaboration with stakeholders and the adoption of global best practices can strengthen Indonesia's position in international trade. This study provides policy recommendations to improve performance management and quarantine service quality, expected to have significant social and economic impacts on the agriculture, fisheries, and forestry sectors in Indonesia.

Keywords:
Performance Management; Service Quality; Human Resources; Digital Technology; Public Policy.

1. INTRODUCTION

Effective performance management is one of the critical factors in achieving success within an organization. Performance, according to Armstrong and Baron (in Dharma, 2022; Simarmata & Hartini, 2022; Hartini, 2022), refers to the results or products of work related to the organization's strategic goals, customer satisfaction, and its impact on the economy. Performance Management is a process that integrates goal setting, evaluation, and employee performance development into a coordinated system, aimed at ensuring that individual performance supports the achievement of the organization's strategic objectives (Dessler, 2003, in Yuningsih, 2017; Chabiba et al., 2023). As a mechanism used to achieve optimal results, Performance Management ensures the achievement of goals and objectives within the agreed-upon planning (Armstrong & Murlis, in Fauzi & Hidayat, 2020; Hartini et al., 2021). The performance achievement of an organization is not solely dependent on individual or team outcomes but is also influenced by complex factors from both the internal and external environments of the organization (Hartini, 2023; Hartini, 2022).

Performance assessment plays a crucial role in achieving the goals and objectives of an organization, including in government or public sector institutions. The success of an organization cannot be measured solely in financial terms. Performance assessments must also be considered in evaluating the achievement of organizational success. Therefore, to ensure comprehensive accountability, organizations need to present performance reports in addition to financial reports to complement relevant information (Nordiawan and Hertianti, 2014, in Achyarsyah and Artio, 2021; Normiyati & Wardhana, 2022; Lazuardi & Hartini, 2022; Maulana D., 2022).

Performance management in public organizations, particularly in quarantine services for animals, fish, and plants, is essential to ensure the quality of service provided to the public. Quarantine services are a strategic function of the government to safeguard food security, biosecurity, and environmental

sustainability. The role of animal, fish, and plant quarantine is to prevent the entry, exit, and spread of pests or diseases that could harm the agricultural, livestock, and fisheries sectors. Therefore, the quality of quarantine services becomes a primary factor in achieving these goals.

Although performance management has been widely discussed in literature, its application in quarantine services still faces several challenges. One of the main challenges is the complexity of quarantine activities themselves, which involve various stages such as inspection, laboratory testing, supervision, and certification. Each of these stages requires skilled human resources, clear procedures, and adequate technological support. However, there is often a gap between the formulated policies and their implementation in the field. These risks diminishing the quality of service and can harm stakeholders such as farmers, ranchers, fishermen, and exporters and importers.

On the other hand, quarantine service users often complain about complicated bureaucracy, long waiting times, and high costs. These complaints reflect inefficiencies in the performance management system. In today's era of globalization and free trade, such inefficiencies can reduce the competitiveness of national products in international markets. Therefore, it is essential to understand how effective performance management can enhance the quality of quarantine services.

Quality refers to the condition of a product or service that reflects how well it can meet consumer expectations and needs. Based on various perspectives, such as those of Edward Deming, quality relates to consistency and cost efficiency, while Goetsh and Davis describe quality as dynamic, encompassing products, services, and environments. Vincent Gaspersz emphasizes that quality should meet user expectations and needs, including compliance with established standards and being free from defects. In public services, quality is crucial to ensure public satisfaction, which should surpass that of other agencies. In addition to the final product, quality also includes human and environmental aspects that support it. To remain relevant to changing societal needs, quality must continuously be improved and enhanced.

Public service should meet the needs of society, and customer satisfaction is an indicator of the success of the service. According to Afandi (2018), public service is the responsibility of the State Apparatus, which is expected to improve in quality over time. Service is the process that directly fulfills the needs of society, and the application of appropriate technology can improve the efficiency and effectiveness of service times. Society demands services that align with the progress of the times and social changes, requiring bureaucracy to adapt to the continually evolving social needs. Sinambela et al. (2017) define public service as the provision of services to the public based on applicable regulations. Laksana (2017) adds that service is an action that is intangible and does not result in ownership.

Efforts to improve public service quality include simplifying procedures, increasing speed, and shifting from a power-based approach to a service-based approach. Afandi (2018) mentions several important elements in improving service quality, including service procedures, completion times, costs, service products, facilities, and staff competence. The quality of public service is understood as the overall ability of the provider to meet the needs of society. In addition, service performance is measured based on work outcomes and service speed. Service performance includes various aspects of human resource management, such as planning, mobilization, control, and development. Therefore, performance reflects the achievements of individuals or groups within an organization, used to assess the extent of success in implementing work programs.

Most previous studies have focused more on the technical aspects of quarantine services, such as disease detection techniques, technological innovations, or regulatory policy analysis. However, research specifically examining the relationship between performance management and the quality of quarantine services is still scarce. Existing studies tend to observe performance management in public service sectors in general without considering the uniqueness of quarantine services themselves.

Moreover, some studies emphasize the importance of human factors, such as employee competence and motivation, in determining service quality. However, the relationship between performance management, including planning, monitoring, evaluation, and employee development, and the quality of quarantine services remains underexplored. This indicates a gap in the literature regarding how performance management approaches can be effectively applied to address the specific challenges faced by quarantine services.

This article aims to fill this research gap by exploring the relationship between performance management and the quality of animal, fish, and plant quarantine services. The uniqueness of this research lies in emphasizing the integration of performance management approaches with service quality analysis in a very specific context. This research also proposes a new analytical model that combines dimensions of performance management, such as strategic planning, human resource training, and technology utilization, with relevant service quality indicators, such as speed, accuracy, and user satisfaction.

With this approach, more effective strategies to improve quarantine service quality are expected to be discovered, while strengthening the competitiveness of Indonesia's agricultural, fisheries, and forestry sectors. This research also provides practical contributions in the form of policy recommendations that can be implemented by relevant agencies to improve organizational performance.

Therefore, this article not only contributes to the development of theory in the fields of performance management and service quality but also provides practical solutions to address the challenges faced by animal, fish, and plant quarantine services in Indonesia.

2. RESEARCH METHOD

The method used in this study is a qualitative descriptive approach. Qualitative research, according to Sugiyono (2019), is a type of research conducted on objects in their natural conditions, where the researcher acts as the main instrument. Data collection techniques are carried out using triangulation (a combination of several methods), data analysis is conducted inductively, and the research findings are focused more on understanding meanings than generalization. This qualitative approach is chosen to obtain in-depth data that contains true meaning (actual data) and the value behind the apparent data. In this study, the researcher uses instruments to collect data and measure the status of the variables being studied, so as to find relatively occurring events, distributions, and relationships between the existing variables, to address the issues being researched through the collected data (Sugiyono, 2019).

This study was conducted at the Indonesian Quarantine Agency's Office, located at Soedjono Djoened Poesponegoro Building/BPPT I Building, Jl. M.H. Thamrin No. 8, 9th, 10th, and 11th Floors, Kebon Sirih, Menteng District, Central Jakarta, Special Capital Region of Jakarta. The selection of this research location is based on the fact that the Indonesian Quarantine Agency's Technical and Methodological Testing Center for Animal, Fish, and Plant Quarantine is where the researcher works.

For data collection, this study uses methods such as observation, interviews, and documentation. The interviews are unstructured and involve individuals involved in the performance management at the Technical and Methodological Testing Center for Animal, Fish, and Plant Quarantine. Observations are conducted to obtain a direct view of the activities taking place at the center related to performance management by employees and the performance management unit. The documentation technique is used to collect data from all documents related to performance management at the center.

3. RESULTS AND DISCUSSION

3.1. Performance Management in Quarantine Services

Performance management in quarantine services aims to ensure effectiveness, efficiency, and compliance with quality standards in food safety oversight, animal health, and plant protection. The implementation of performance management involves a series of activities, including measuring the performance of individuals and organizations, applying Key Performance Indicators (KPIs), and evaluating work results through regular audits and inspections. Efforts to improve human resource capacity are also a key focus, with technical training and competency development to support a more optimal quarantine process. In practice, quarantine services have adopted technology-based systems, such as the use of e-certificates and digital applications, to facilitate monitoring and reporting processes.

However, performance management in quarantine services faces several challenges. One of the main challenges is the limited infrastructure in remote areas, which hinders the widespread implementation of digital systems. In addition, disparities in human resource competencies also pose a challenge, as some regions still lack experts who have a deep understanding of regulations and international standards. The rapid changes in global regulations, particularly related to export-import requirements, require consistent adaptation to remain relevant. Another challenge is resistance to change in the adoption of new technologies, both from within the organization and from external partners.

Despite these obstacles, quarantine services have shown significant achievements, such as increased customer satisfaction and reduced processing time for quarantine documentation. Collaboration with international agencies and domestic stakeholders has also helped enhance the credibility and trust in quarantine services. Future strategies include enhancing the integration of digital systems, strengthening inter-agency coordination, and improving digital literacy for relevant human resources. With a sustainable and adaptive approach, performance management in quarantine services is expected to continue contributing to food security and the sustainability of national agribusiness.

One important finding is that performance monitoring and evaluation are still conducted sporadically. Evaluation often focuses only on end results, such as the number of certifications issued, without considering the underlying processes. This leads to a lack of constructive feedback for service improvement. Furthermore, unsystematic evaluations can affect employee motivation, especially if performance outcomes are not linked to fair incentives.

3.2. Factors Affecting Performance

The results of the study show that several main factors affect performance management in this sector. First, the competence of human resources (HR) is a key factor. Low technical and managerial competence in

some quarantine officers hampers the effectiveness of services. Second, technology support is still limited, especially in terms of automation and data integration. Third, external environmental factors, such as pressure from stakeholders and international regulations, also affect the quality of services.

3.3. Quality of Quarantine Services

The quality of animal, fish, and plant quarantine services is assessed through several key indicators, namely service speed, inspection accuracy, and user satisfaction. However, the results of the study show that there are still some problems. Service users often complain about long waiting times due to complicated bureaucracy. In addition, inspection accuracy still needs to be improved, especially in detecting disruptive organisms quickly and precisely.

The quality of quarantine services reflects the ability of quarantine institutions to ensure the safety, health, and quality standards of agricultural commodities entering and exiting an area. In its implementation, quarantine services have included physical examinations, laboratory tests, and supervision of relevant document administration. This aims to prevent the entry of pests and diseases that have the potential to be detrimental. Innovations such as digitalization service systems have been implemented to increase efficiency and minimize administrative constraints. For example, electronic-based systems such as e-Certification and online services for permit application have succeeded in significantly reducing service time.

However, challenges remain in the implementation of quarantine services. Key challenges include limited infrastructure in some locations, a lack of experts in certain fields, and technical barriers in integrating technology into service systems. In addition, awareness and compliance from business actors related to quarantine procedures still need to be improved. This can result in potential risks such as smuggling or undetected threats to the health of commodities. Cross-agency cooperation, both domestically and internationally, also needs to be strengthened to support more holistic quarantine efforts.

Steps that have been taken to overcome these challenges include increasing the capacity of human resources through training and certification, improving service infrastructure, and strengthening socialization to the community. In addition, collaborative strategies with international and private institutions have made a positive contribution in accelerating the handling of quarantine. Continuous evaluation is also carried out to ensure that each improvement step can be adjusted to the dynamics of needs in the field. With strong commitment from various parties, the quality of quarantine services is expected to continue to develop to support competitive and sustainable agriculture.

3.4. Problem Faced

The main problems faced in managing the performance and quality of quarantine services can be summarized as follows:

a. HR Competency Gap: Many quarantine officers do not have adequate competency certification. This affects their ability to carry out their duties professionally.
b. Technology Limitations: Inadequate technological infrastructure, such as the lack of automation devices and limitations of data management systems, hinders service efficiency.
c. Bureaucratic Complexity: Complicated bureaucratic processes lead to long wait times, thereby decreasing user satisfaction.
d. Lack of Systematic Monitoring and Evaluation: An unintegrated monitoring system results in difficulty in identifying problems early.
e. External Pressure: Changes in international regulations and global competition demand rapid improvement in service quality.

3.5. Improvement Strategy

Based on the results of the study, several strategies are recommended to improve the management of the performance and quality of quarantine services:

a. HR Competency Improvement: Conducting regular training and certification for quarantine officers to improve their technical and managerial competencies.
b. Strengthening of Technology Infrastructure: Adopting the latest technology for the automation of the inspection process and the integration of data systems. For example, the use of Internet of Things (IoT)-based devices to monitor the condition of animals or plants during the quarantine process.
c. Simplification of Bureaucratic Procedures: Reduce unnecessary bureaucratic stages through the digitization of services. A one-stop service system can be a solution to speed up the process.
d. Data-Based Monitoring and Evaluation: Develop a real-time data-driven performance evaluation system to provide more accurate and fast feedback.
e. Collaboration with Stakeholders: Establish cooperation with relevant parties, such as exporters, importers, and research institutions, to ensure quarantine services are in line with market needs.

3.6. Discussion

The findings of this study underscore the importance of integrated performance management to improve the quality of quarantine services. In the context of globalization and free trade, efficient and high-quality

quarantine services can be a competitive advantage for Indonesia's agriculture, fisheries, and forestry sectors. Therefore, a holistic approach that includes improving human resources, technology, and bureaucratic processes is very relevant.

Performance management in quarantine services is a vital element to ensure effectiveness, efficiency, and compliance with quality standards, especially in food safety supervision, animal health, and crop protection. By using a performance management approach based on Key Performance Indicators (KPIs), quarantine services not only assess work results quantitatively but also qualitatively through periodic audits and inspections. This effort is strengthened by increasing the capacity of human resources (HR) through technical training and competency development to support better management. In addition, the adoption of technology such as e-Certification and digital applications simplifies the process of monitoring, reporting, and service, thereby increasing operational efficiency.

However, this performance management is not separated from challenges. Limited infrastructure in remote areas is the main obstacle in the overall implementation of technology. The inequality of human resource competencies also affects the quality of services, especially in areas where there is a shortage of experts. In addition, rapid changes in international regulations require continuous adaptation, while resistance to the adoption of new technologies, both internal and external to the organization, adds to the complexity of management.

Nonetheless, quarantine services have achieved several significant achievements, such as improved customer satisfaction and reduced document processing times. Collaboration with international institutions and domestic stakeholders also enhances the credibility of the service. The future strategy is focused on integrating digital systems, strengthening coordination between agencies, and increasing digital literacy for human resources. This approach is expected to be able to answer challenges and continue to improve service quality.

In service quality, several key indicators, such as service speed, inspection accuracy, and user satisfaction, become benchmarks. However, research shows that users often face long waiting times due to complex bureaucracy. Inspection accuracy also requires improvement to detect disruptive organisms more precisely. Meanwhile, innovations such as the digitization of services, including online permit applications, have shown a positive impact by significantly shortening service times. However, the limitations of technological infrastructure and the awareness of business actors about quarantine procedures are still a big challenge.

Other problems include gaps in human resource competence, technological limitations, bureaucratic complexity, lack of systematic monitoring, and pressure from changes in international regulations. As a solution, the recommended strategies include improving human resource competencies through training and certification, adopting the latest technology such as IoT-based devices, simplifying bureaucratic procedures through digitalization, developing a real-time data-based performance evaluation system, and collaborating with stakeholders.

With a comprehensive and adaptive approach, the management of the performance and quality of quarantine services is expected to be able to make a significant contribution to maintaining food security, increasing the competitiveness of national agribusiness, and supporting the sustainability of the agricultural sector. The combination of technological innovation, human resource capacity building, and strategic collaboration is the key to success in facing future challenges.

3.6.1. Future Opportunities and Challenges

In the future, performance management in quarantine services may face more complex challenges, especially with the emergence of new threats such as climate change, increased international trade, and the spread of new diseases. Therefore, adapting to these changes is the key to success. For example, quarantine services need to prepare for the possible entry of new disruptive organisms due to changes in migration or climate patterns.

In addition, opportunities to improve service quality are also wide open with the development of digital technology. The use of artificial intelligence (AI) in the analysis of quarantine data can improve the accuracy and speed of disease detection. Current technology can also be used to create transparency in the quarantine process, which will increase the trust of service users.

International collaboration is also an important opportunity. By collaborating with other countries in the research and development of quarantine technologies, Indonesia can adopt global best practices that are appropriate to the local context. This will not only improve the quality of quarantine services but also strengthen Indonesia's position in international trade.

3.6.2. Social and Economic Impact

Effective performance management not only has an impact on improving the quality of quarantine services but also provides significant social and economic benefits. From the social side, high-quality quarantine services can increase public trust in the government. People who feel well served tend to have higher levels of satisfaction, which can ultimately increase their participation in economic and social activities.

Economically, efficient quarantine services can reduce operational costs for exporters and importers. This will increase the competitiveness of national products in the international market. In addition, high service quality can also prevent economic losses due to the entry of disruptive organisms that can damage the agriculture, fisheries, and forestry sectors.

4. CONCLUSION

Performance management in quarantine services plays a crucial role in ensuring effectiveness, efficiency, and compliance with quality standards in the sectors of food security, animal health, and plant protection. Through the implementation of management based on Key Performance Indicators (KPIs), the enhancement of human resource competencies, and the digitalization of service systems such as e-Certification, quarantine services have made progress, including the reduction of document processing time and increased customer satisfaction. However, challenges such as limited infrastructure in remote areas, disparities in human resource competencies, bureaucratic complexity, and changing international regulations still require serious attention.

To address these issues, improvement strategies are focused on strengthening technological infrastructure, providing human resource training, streamlining bureaucratic procedures, and fostering inter-agency collaboration. In the future, quarantine services can leverage opportunities from technological innovations such as AI to enhance efficiency and transparency. With a holistic and adaptive approach, quarantine services are expected to have a significant social and economic impact, including improving the competitiveness of national agribusiness and preventing losses due to the entry of threats to the agriculture, fisheries, and forestry sectors.

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