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The Effect of Agency Service Quality and Business Innovation on Agency Productivity and its Implications on Customer Loyalty in PT. Pertamina Port and Logistics in Sei Pakning, Riau

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Abstract: This study aims to analyze the impact of agency service quality and business innovation on agency productivity and its implications for customer loyalty at PT. Pertamina Port and Logistics (PPL) in Sei Pakning, Riau. The main issue addressed in this study is how service quality and business innovation can enhance agency productivity and how they influence customer loyalty. The population of the study consists of all customers of PT. PPL, with a sample of 109 respondents selected using purposive sampling with the Slovin formula. The research method used was quantitative with a cross-sectional design, and data collection was carried out through Likert scale questionnaires, which were then analyzed using SmartPLS 4 for validity, reliability tests, and path analysis based on Structural Equation Modeling (SEM). The analysis results show that agency service quality and business innovation have a positive and significant impact on agency productivity. Additionally, agency productivity is proven to mediate the relationship between agency service quality, business innovation, and customer loyalty. These findings suggest that improving service quality and implementing business innovations can strengthen customer loyalty through increased agency productivity. Therefore, it is recommended that PT. Pertamina Port and Logistics continues to enhance its service quality and implement business innovations that improve operational efficiency and customer experience, thus maintaining long-term customer loyalty.

Keyword: Agency Service Quality, Business Innovation, Agency Productivity, Customer Loyalty.

INTRODUCTION

PT Pertamina Port and Logistics (PPL) is a company focused on providing world-class port and maritime services, with the primary goal of supporting national and international trade. Located in various strategic locations, including Sei Pakning in Riau, PPL provides services that are crucial in supporting the smooth movement of goods and vessels, including cargo management, docking services, and maritime logistics. As part of its efforts to maintain its

position as a leader in this sector, PPL strives to improve the quality of agency services and business innovations that can boost agency productivity, which in turn has the potential to increase customer loyalty.

In terms of managing agency services at PT Pertamina Port and Logistics (PPL) Sei Pakning, the company's success in maintaining competitiveness and building customer loyalty is not determined by a single aspect, but rather by a combination of various interrelated factors. The quality of agency services is the main foundation because it is directly related to customer satisfaction through service standards, operational reliability, and compliance with port regulations. On the other hand, business innovation plays a role in driving sustainability, particularly through process digitization and the development of services that are more adaptive to user needs. Agency productivity is also equally important because it reflects the efficiency of resource use and speed of service in port activities. All of these factors ultimately lead to the creation of customer loyalty, which is an indicator of long-term success and strengthens the company's position in the increasingly competitive maritime logistics industry. This is reflected in the company's KPI data as follows:

Table 1. KPI of PT Pertamina Port and Logistics Sei Pakning in Riau

No	KPI	Perspektif BSC	Unit	Target 2024	Real 2024	Target 2025	Target KPI 2025 per Trivulan				Polaritas	Bobot (%)		
							TW-I	TW-II	TW-III	TW-IV		Sub	Total	
A. Financial														
1	Net Profit PPL	Financial	US\$ Mio	12,36	14,85	14,12	3,53	7,06	10,59	14,12	Maximize	5	15	
2	Revenue Marine Operation	Financial	US\$ Mio	N/A	N/A	26,99	6,75	13,50	20,24	26,99	Maximize	5		
3	Gross Profit Margin PPL	Financial	%	N/A	N/A	22,52	22,52	22,52	22,52	22,52	Minimize	5		
B. Customer Focus														
4	Customer Satisfaction Index	Customer Focus	Skala Likert	4,1	4,1	4,1	End Year				4,1	Maximize	9	35
5	Revenue Non Captive PPL	Customer Focus	US\$ Mio	2,36	5,57	2,83	0,71	1,42	2,12	2,83	Maximize	8		
6	SLA Marine Operation	Customer Focus	%	N/A	N/A	100	100	100	100	100	Maximize	9		
	a. SLA Kelengkapan Dokumen Pendukung Kegiatan Bunker Handling P	Customer Focus	Days	N/A	N/A	3	3	3	3	3	Minimize			
	b. SLA Kontrak Bundling	Customer Focus	%	N/A	N/A	100	100	100	100	100	Maximize			
7	Port Operation Standardization & Digitalization	Customer Focus	%	N/A	N/A	100	End Year				100	Maximize	9	
C. Internal Process														
8	HSE Excellence	Internal Process	%	100	107	100	100	100	100	100	Maximize	7	40	
9	Pengelolaan Process Safety & Asset Integrity Management	Internal Process	%	N/A	N/A	100	100	100	100	100	Maximize	7		
10	Penggunaan Tingkat Komponen Dalam Negeri (TKDN)	Internal Process	%	30	54,39	30	End Year				30	Maximize		6
11	Safe Berthing Unberthing	Internal Process	%	85	100	97	97	97	97	97	Maximize	7		
12	Utilisasi Aplikasi Bunker Operation System (BOS) Kapal Bundling PTK	Internal Process	%	N/A	N/A	87	87	87	87	87	Maximize	6		
13	Port Regulation Compliance	Internal Process	%	N/A	N/A	100	100	100	100	100	Maximize	7		
D. Learning & Growth														
14	Implementasi ESG & Dekarbonisasi	Learning & Growth	%	100	110	100	100	100	100	100	Maximize	3	10	
15	Implementasi Aplikasi Port Operation	Learning & Growth	%	N/A	N/A	97	97	97	97	97	Maximize	4		
16	Business Process Improvement	Learning & Growth	%	N/A	N/A	100	100	100	100	100	Maximize	3		
Subtotal													100	
E. Boundary KPI														
1	Number of Accident (NoA)	Boundary	Σ Event	0	0	0	0	0	0	0	Minimize			
2	GCG Implementation Compliance	Boundary	%	100	100	94,5	94,5				Maximize			
3	Optimalisasi Pelaksanaan Sinergi Pertamina Group	Boundary	%	100	110	100	100	100	100	100	Maximize			
4	Pengelolaan Risiko	Boundary	%	100	100	100	100	100	100	100	Maximize			
5	Tindaklanjut Rekomendasi Hasil Audit Internal & Eksternal	Boundary	%	100	100	100	100	100	100	100	Maximize			
6	Cost Optimization	Boundary	US\$ Mio	15	62,36	25-36,5	25-36,5				Maximize			

Source: PT Pertamina Port and Logistics Sei Pakning in Riau (2025)

In an era of increasingly fierce competition in the port and logistics industry, a company's success is determined not only by the size of financial revenue, but also by the ability to maintain service quality, innovate continuously, and improve operational productivity to create customer satisfaction and loyalty. Customer loyalty is one of the most important performance indicators because loyal customers not only contribute in the form of recurring revenue but also create a positive effect through recommendations and company image. Therefore, understanding the role of variables such as agency service quality, business innovation, and agency productivity is key to maintaining and increasing customer loyalty in port agency services companies.

Based on the data in Table 1.1, agency productivity is reflected in the Safe Berthing Unberthing indicator, which successfully reached 100% in 2024 from a target of 85%, and is set to remain high at 97% in 2025. This indicates the agency's ability to support the smooth process of berthing and unberthing of ships with a minimum error rate. In addition, productivity is also strengthened by the optimization of Pertamina Group synergy, which was realized at

110% in 2024, indicating that internal coordination is effective in driving the efficiency of the agency process. With this achievement, the PPL agency in Sei Pakning demonstrates a vital role in supporting the smooth operation of the national energy logistics chain.

The data above demonstrates a phenomenon related to customer loyalty and its influencing factors. Customer loyalty is measured through satisfaction, zero accidents, GCG compliance, group synergy, risk management, and audit follow-up. Most KPIs have achieved or exceeded targets, for example, the Customer Satisfaction Index remains stable at 4.1 and Pertamina Group synergy (+10%). However, a noteworthy phenomenon is the lack of realization data for several 2025 KPIs, which has the potential to create uncertainty in monitoring long-term satisfaction and loyalty. This gap indicates the need for a more systematic evaluation mechanism to maintain strong customer relationships, manage risks, and ensure effective audit follow-up.

Agency service quality is measured through customer satisfaction, service speed (SLA), port operations standardization, and regulatory compliance. Based on the data, most KPIs show achievement on target, especially the Customer Satisfaction Index and Port Regulation Compliance, which reached 100%. This indicates consistent satisfactory service and compliance with regulations, reflecting the stability of operational processes. However, several new KPIs, such as the Marine Operations SLA and the Bundling Contract SLA, do not yet have realized data, making the actual gap difficult to measure. This phenomenon poses a potential risk of irregularity or delays in service, which requires attention to maintain quality standards.

The Business Innovation variable highlights the development of new business models, service digitization, and sustainability initiatives. In 2024, Non-Captive Revenue and ESG implementation exceeded targets, demonstrating the effectiveness of the innovation strategy. However, several 2025 targets, such as the implementation of port operation applications (97%) and the BOS utility for PTK-bundled vessels (87%), have not been realized. This decline or unachieved KPI indicates obstacles in technology adoption and resource optimization, potentially hampering business growth and service innovation. A digitalization improvement strategy and implementation monitoring are crucial to closing this gap.

Agency Productivity relates to operational efficiency, profit, revenue, margin, and HSSE safety. Gap analysis shows that several KPIs have exceeded targets, such as PPL Net Profit (+2.49 million USD) and TKDN (+24.39%), indicating strong operational performance. However, Cost Optimization still shows a significant gap (+47.36 million USD), reflecting expenditures exceeding estimates and potential cost inefficiencies. This gap phenomenon is important because even high productivity, suboptimal costs can reduce profit margins and impact the agency's long-term sustainability.

Based on the research gap phenomenon, there is consistent finding that agency service quality and business innovation have a significant influence on customer satisfaction and loyalty. Several studies (Mustamu & Ngatno, 2024; Jalilah, Kwartama, & Simanjuntak, 2025; Soegihono & Yuniawan, 2023) emphasize the role of product or service innovation in increasing customer satisfaction, which in turn impacts loyalty. Meanwhile, other studies (Akbar & Wadud, 2024; Mantow, Pasyah, & Suhartini, 2022; Adawiyah & Taharuddin, 2024; Supriyanto & Kristiyanti, 2019; Adi et al., 2021; Elvan, Hindiantoro, & Yahya, 2019) highlight agency service quality, speed, and reliability as key factors influencing customer satisfaction. The gap that emerges from these studies is that most of them focus on the direct relationship between service quality or innovation and satisfaction, while mediating effects such as agency productivity and operational efficiency on customer loyalty are less comprehensively researched.

Furthermore, several studies (Kwartama & Karimunanto, 2022; Sitorus et al., 2024; Lesmini et al., 2022; Kwartama & Ringo, 2024; Abdur Rohman & Hidayati, 2021; Mustamu & Ngatno, 2024) emphasize operational constraints and business strategies, including limited human resources, system disruptions, and safety equipment maintenance, which can reduce

service effectiveness. This research gap indicates the need for further studies that combine dimensions of service quality, business innovation, and operational productivity as independent variables, and customer loyalty as the dependent variable, while considering mediating and moderating factors such as operational efficiency and customer satisfaction. Thus, further research can provide a more comprehensive understanding of the relationship between quality, innovation, productivity, and customer loyalty in the context of shipping agencies.

METHOD

This research is quantitative and utilizes a survey method, an objective research approach that collects data in numerical form and analyzes it statistically. The quantitative approach was chosen because it allows for systematic, rational, and empirical measurement of relationships between variables, allowing for verification and generalization of the results. The research instrument, a questionnaire, was distributed to respondents to obtain data relevant to the phenomenon under study.

The population in this study includes users of ship agency services at PT. Pertamina Port and Logistics in Sei Pakning, Riau, from January 2025 to July 2025, totaling 75 ships from various companies. With the units of analysis consisting of the operational department and ship owners, the total population was 150 respondents. The sampling technique used Simple Random Sampling, which is random sampling without considering certain strata in the population (Sugiyono, 2024). Calculations using the Taro Yamane formula resulted in a sample size of 109 respondents, so this number is considered representative to describe the study population.

The collected data was processed using SmartPLS 3 software, which facilitated faster and more accurate analysis. The data processing stage included editing to check the consistency of answers, coding to group data, and tabulation to systematically present the results in tabular form. Data analysis was conducted using a path analysis approach and hypothesis testing to determine the magnitude of the influence between variables according to the research objectives. With these steps, the research results are expected to provide an accurate and measurable picture of the relationship between human resource quality, ship maintenance management, shipyard staff performance, and ship safety management systems.

RESULTS AND DISCUSSION

This study was conducted through a survey with a questionnaire instrument distributed via Google Form and resulted in 109 respondents eligible as research samples. Based on characteristics, the majority of respondents were male (78.9%) who tended to focus on technical aspects, service speed, and productivity, while female respondents (21.1%) placed more emphasis on service quality, communication, and overall experience. In terms of age, the 21–30 year old group dominated (49.5%) with a preference for efficiency and innovation, followed by 31–40 year olds (37.6%) who valued reliability and professionalism, those aged 41 and over (8.3%) who emphasized long-term stability and security, and the youngest group of 19 years old (4.6%) who prioritized ease of access and speed. In terms of education, most respondents had a Diploma 3 education (50.5%) who understood logistics procedures but still appreciated innovation, followed by High School (17.4%) who needed clearer guidance, as well as Bachelor's (22.9%) and Master's (9.2%) who were critical of quality, efficiency, and supporting data in decision making, so that professional service became a key factor in increasing their satisfaction and loyalty.

Measurement Model Testing (Outer Model)

The measurement model, or outer model, in this study was used to assess the construct validity and reliability underlying the relationship between latent variables and their reflective indicators. The evaluation was conducted through three main tests: convergent validity,

discriminant validity, and reliability. The model visualization shows that the yellow boxes represent the indicators, the blue circles represent the latent variables, and the values on the arrows indicate the factor weights. An indicator is declared valid if its loading factor value is greater than 0.60, with the ideal standard being >0.70 for confirmatory research, while in exploratory research, a range of 0.60–0.70 is still acceptable.

Convergent Validity Test

Convergent validity tests the extent to which indicators are able to accurately represent the construct being studied. The analysis results show that all indicators have loading factor values above 0.6, thus they can be declared valid. The dimension with the highest contribution to the Agency Service Quality variable is Responsiveness (0.930), while the lowest contribution is Empathy (0.727). In the Business Innovation variable, the highest dimension is Consumer Relations (0.959), and the lowest is Process & Structure (0.884). Agency Productivity has the highest Work Quantity & Quality dimension (0.928), while Commitment is the lowest (0.817). For Customer Loyalty, the highest contribution is given by the Recommend Friend dimension (0.927), while the lowest is Continue Purchasing (0.907). These findings confirm that the dimensions with the lowest values need to be improved to strengthen the construct.

Discriminant Validity Test

Discriminant validity was used to ensure that each latent variable was truly different from one another. This test was conducted using the Average Variance Extracted (AVE) value. The test results showed that all variables had AVE values above 0.5, namely Agency Service Quality (0.652), Business Innovation (0.534), Agency Productivity (0.581), and Customer Loyalty (0.649). Thus, all constructs in this study were declared discriminant valid.

Reliability Test

The construct reliability was tested using Cronbach's Alpha and Composite Reliability (CR) values. The test results showed that all variables had values above 0.70, namely Agency Service Quality (CA=0.961; CR=0.965), Business Innovation (CA=0.895; CR=0.916), Agency Productivity (CA=0.896; CR=0.925), and Customer Loyalty (CA=0.932; CR=0.943). This proves that the instrument used in this study is reliable, so it is able to measure the construct consistently and accurately.

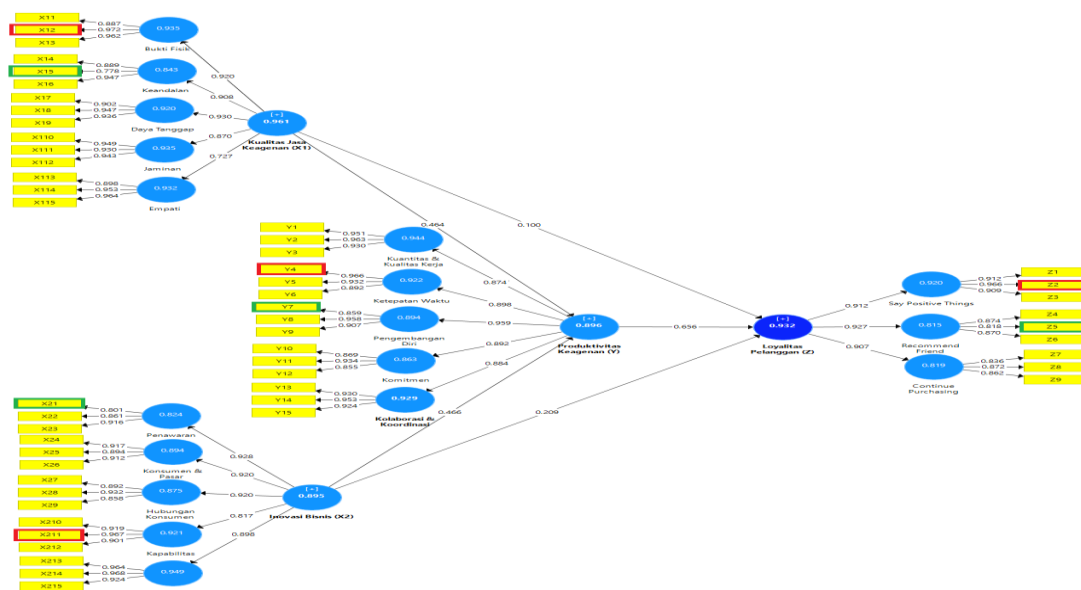


Figure 1 Outer Model (PLS Algorithm)

Inner Model Analysis (Bootstrapping)

An inner model or structural model is used to describe causal relationships between variables based on existing theory. In this study, evaluation was conducted using Partial Least Squares (PLS) Bootstrapping calculations to determine the strength of the relationship between latent variables. Several tests were performed, including Predictive Relevance (Q^2), R-Square (R^2), and hypothesis testing using path coefficient values. The results of this analysis help determine the extent to which exogenous variables explain endogenous variables and test the significance of direct and indirect influences.

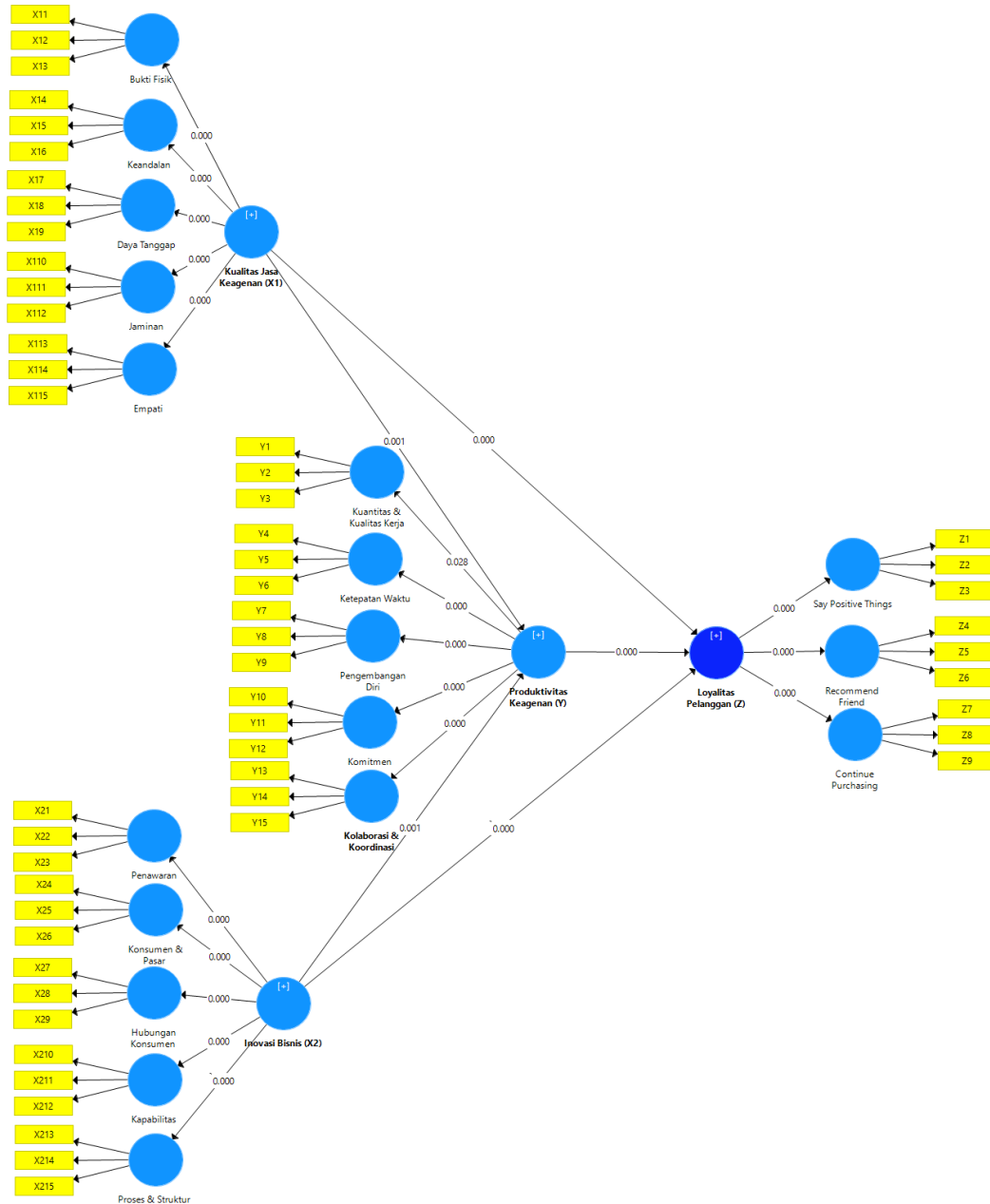


Figure 2 Inner Model (Bootstrapping)

Predictive Relevance Test (Q^2)

The results of the predictive relevance test show that the Customer Loyalty (Z) variable obtained a Q^2 value of 0.565, which is in the moderate predictive relevance category. This means that the model has a fairly good predictive ability in explaining variations in customer loyalty. Meanwhile, the Agency Productivity (Y) variable has a Q^2 value of 0.467, which is also

included in the moderate category. Thus, these two variables have a significant contribution in explaining variations in the dependent variable, although there is still room for improvement in predictive ability.

R-Square Test and Hypothesis (Path Coefficient)

The R-Square test shows that the Agency Productivity (Y) variable has a value of 0.827, which means that 82.7% of its variation can be explained by the exogenous variables of Agency Service Quality and Business Innovation. This value is included in the strong category. Furthermore, the Customer Loyalty (Z) variable obtained an R² value of 0.882, indicating that 88.2% of its variation can be explained by the combination of Agency Productivity, Agency Service Quality, and Business Innovation. These results show that the research model is able to explain the relationship between variables very well.

Hypothesis testing using bootstrapping takes into account the T-statistics and P-values, with the hypothesis accepted if the T-statistics are > 1.64 and P-values < 0.05. The results of this analysis are then used to confirm the validity of the direct influence between variables in the model.

Table 1. Direct Influence and Indirect Influence

Hypothesis	Influence	Original Sample (O)	T Statistics (O/STDEV)	P Values	Information
H1	Agency Service Quality (X1) -> Agency Productivity (Y)	0.464	3,203	0.001	Significant
H2	Business Innovation (X2) -> Agency Productivity (Y)	0.466	3,260	0.001	Significant
H3	Agency Service Quality (X1) -> Customer Loyalty (Z)	0.100	1,854	0,000	Significant
H4	Business Innovation (X2) -> Customer Loyalty (Z)	0.209	2,879	0,000	Significant
H5	Agency Productivity (Y) -> Customer Loyalty (Z)	0.656	5,648	0,000	Significant
H6	Agency Service Quality (X1) -> Agency Productivity (Y) -> Customer Loyalty (Z)	0.304	3,022	0.003	Significant
H7	Business Innovation (X2) -> Agency Productivity (Y) -> Customer Loyalty (Z)	0.306	2,564	0.011	Significant

Source: SEMPLS Processing (2025)

H1 – Direct Effect of Agency Service Quality on Agency Productivity

The results of the study indicate that Agency Service Quality directly influences Agency Productivity with a coefficient of 0.464, a T-statistic of 3.203, and a p-value of 0.001, indicating that the better the service quality, the higher the productivity achieved. This confirms the findings of Supriyanto & Kristiyanti (2019) that service quality influences operational performance, and is supported by Abdur Rohman & Hidayati (2021) who emphasized that service quality impacts organizational performance improvement. Therefore, improving employee skills, facilities, and process efficiency is a priority so that service quality can drive productivity sustainably.

H2 – Direct Effect of Business Innovation on Agency Productivity

Business innovation has been shown to significantly influence agency productivity with a coefficient of 0.466, a t-statistic of 3.260, and a p-value of 0.001, indicating that innovation, both in products and processes, can improve operational efficiency and effectiveness. This finding aligns with Kwartama & Ringo (2024) and Mustamu & Ngatno (2024) who emphasized

the role of innovation in driving efficiency, loyalty, and performance. Research by Elvan et al. (2019) and Kwartama & Karimunanto (2022) also shows that service innovation strengthens satisfaction and productivity, thus agency companies must prioritize innovation as a primary strategy for increasing competitiveness and productivity.

H3 – Direct Influence of Agency Service Quality on Customer Loyalty

Agency Service Quality directly influences Customer Loyalty with a coefficient of 0.100, a T-statistic of 1.854, and a p-value of 0.000, indicating that the higher the service quality, the stronger the customer loyalty. This is in line with research by Adi et al. (2021) which found a relationship between service quality and satisfaction and loyalty, and is reinforced by Supriyanto & Kristiyanti (2019) and Lesmini et al. (2022) which emphasize the importance of reliability and responsiveness in maintaining customer loyalty. Thus, maintaining timeliness, communication effectiveness, and speed of response are vital aspects in building long-term relationships with customers.

H4 – Direct Effect of Business Innovation on Customer Loyalty

Business innovation has a significant influence on customer loyalty with a coefficient of 0.209, a t-statistic of 2.879, and a p-value of 0.000, indicating that companies capable of innovating in services are more likely to retain customers. Mustamu & Ngatno (2024) prove that product innovation increases loyalty through satisfaction, while Akbar & Wadud (2024) and Kwartama & Ringo (2024) emphasize the importance of innovation in strengthening long-term relationships. Therefore, implementing innovation in aspects of service, ordering systems, and agency technology is crucial to creating a superior customer experience.

H5 – Direct Effect of Agency Productivity on Customer Loyalty

Agency Productivity has been shown to have a significant effect on Customer Loyalty with a coefficient of 0.656, a T-statistic of 5.648, and a p-value of 0.000, indicating that operational efficiency and high service quality strengthen customer loyalty. Research by Adawiyah & Taharuddin (2024) shows that efficiency and productivity have a direct effect on loyalty, while Mustamu & Ngatno (2024) emphasizes innovation and efficiency as key factors for long-term loyalty. Therefore, optimizing human resources through training, improving staff skills, and managing efficient work processes will contribute to higher productivity and stronger customer loyalty.

H6 – Indirect Effect of Agency Service Quality on Customer Loyalty through Agency Productivity

Agency Service Quality has an indirect effect on Customer Loyalty through Agency Productivity with a coefficient of 0.304, a T-statistic of 3.022, and a p-value of 0.003, indicating that productivity is an important mediator between service quality and loyalty. This finding is supported by Elvan et al. (2019) who showed the relationship between service quality, efficiency, and loyalty, and is reinforced by Kwartama & Karimunanto (2022) and Mustamu & Ngatno (2024) who emphasized that high quality can increase productivity and customer satisfaction. Therefore, companies must emphasize the synergy between service quality and productivity to create sustainable customer loyalty.

H7 – Indirect Effect of Business Innovation on Customer Loyalty through Agency Productivity

Business Innovation has an indirect effect on Customer Loyalty through Agency Productivity with a coefficient of 0.306, a T-statistic of 2.564, and a p-value of 0.011, indicating that innovation increases productivity and thus strengthens loyalty. Mustamu & Ngatno (2024) demonstrated that product innovation increases loyalty through satisfaction, while Akbar &

Wadud (2024) emphasized innovation and efficiency as drivers of satisfaction and loyalty. This research also aligns with the findings of Elvan et al. (2019) who highlighted the role of innovation in improving service and performance. Therefore, innovation should be viewed as a key pillar in increasing productivity while maintaining long-term customer loyalty.

CONCLUSION

Agency Service Quality Has a Direct, Positive and Significant Influence on Agency Productivity (H1). With a path coefficient of 0.464, T-statistics of 3.203 (>1.64), and p-value of 0.001 (<0.05), Hypothesis 1 is accepted. This indicates that better service quality, such as timeliness, reliability, and clear communication, have a direct positive effect on the productivity of the shipping agency using the service. The most dominant indicator of this variable is the available facilities that support the comfort and smoothness of the service (X12) with a loading factor of 0.972, which confirms that adequate and comfortable facilities greatly influence the quality of service provided by the agent, which in turn increases operational productivity.

Business Innovation Has a Direct, Positive and Significant Influence on Agency Productivity (H2). With a path coefficient of 0.466, a T-statistic of 3.260 (>1.64), and a p-value of 0.001 (<0.05), Hypothesis 2 is accepted. This indicates that business innovation implemented within the company has a direct positive effect on agency productivity. The implementation of innovations that improve operational efficiency, such as new technology or better systems, can speed up processes and reduce waste. The most dominant indicator of this variable is the company's organizational structure optimized to support services (X2.15) with a factor loading of 0.967, indicating that an efficient organization is crucial in supporting innovations that improve agency productivity.

Agency Service Quality Has a Direct Positive Influence on Customer Loyalty (H3). With a path coefficient of 0.100, T-statistics of 1.854 (>1.64), and p-value of 0.000 (<0.05), Hypothesis 3 is accepted. This indicates that good service quality, which includes timeliness, reliability, and speed of response, has a direct positive influence on customer loyalty. The most dominant indicator supporting this is Problems that occur are handled quickly and appropriately (X19) with a factor loading of 0.936, which confirms that fast problem resolution can build trust and increase customer loyalty to the company.

Business Innovation Has a Direct Positive Influence on Customer Loyalty (H4). With a path coefficient of 0.209, T-statistics of 2.879 (>1.64), and p-value of 0.000 (<0.05), Hypothesis 4 is accepted. This finding indicates that innovation in products and services offered by the company can strengthen customer loyalty. The most dominant indicator in this variable is the level of customer satisfaction with the company's services is always high (X2.8) with a factor loading of 0.932, which reflects that innovation that increases customer satisfaction contributes greatly to their loyalty.

Agency Productivity Has a Direct Positive Effect on Customer Loyalty (H5). With a path coefficient of 0.656, T-statistics of 5.648 (>1.64), and p-value of 0.000 (<0.05), Hypothesis 5 is accepted. This indicates that the higher the agency productivity, the higher the customer loyalty. The most dominant indicator is the company's agent service is effective and satisfactory (Y1) with a factor loading of 0.951, which indicates that the effectiveness of the service provided by the agent is very influential in increasing customer loyalty.

Agency Service Quality Has an Indirect Influence on Customer Loyalty Through Agency Productivity (H6). With a coefficient of 0.304, T-statistics of 3.022 (>1.64), and p-value of 0.003 (<0.05), Hypothesis 6 is accepted. This indicates that Agency Productivity plays a significant mediator in the relationship between Agency Service Quality and Customer Loyalty. The dominant indicator in this variable is the results of the work provided are always accurate and according to requests (X16) with a loading factor of 0.947, which indicates that increasing productivity through improving service quality contributes significantly to increasing customer loyalty.

Business Innovation Has an Indirect Effect on Customer Loyalty Through Agency Productivity (H7). With a coefficient of 0.306, T-statistics of 2.564 (>1.64), and p-value of 0.011 (<0.05), Hypothesis 7 is accepted. This indicates that Business Innovation has an indirect effect on Customer Loyalty through increased Agency Productivity. The dominant indicator for this variable is the company's internal processes are efficient and structured (X2.12) with a factor loading of 0.964, indicating that innovation-driven process efficiency contributes positively to customer loyalty through increased productivity.

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