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Impact of quality management on financial competitiveness in the Peruvian banking sector: an empirical study

Impacto da gestão da qualidade na competitividade financeira no setor bancário peruano: um estudo empírico

Impacto de la gestión de la calidad en la competitividad financiera en la banca peruana: un estudio empírico

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ABSTRACT

This study analyzes the impact of quality management on the financial competitiveness of a banking institution. In a highly competitive financial environment, continuous improvement of service quality has become a key factor for the sustainability of banking institutions. The objective of the study was to determine to what extent quality management impacts financial competitiveness, considering dimensions such as quality criteria, staff training, internal infrastructure and complaint management. A quantitative design was used, applying an ordinal logistic regression analysis on a sample of customers of the bank. The findings indicate that all dimensions of quality management have a significant impact on financial competitiveness, with Wald values and p-values less than 0.05, validating the positive relationship between both concepts. Conclusions: The research reaffirms the need to implement comprehensive strategies to improve quality management to optimize operational efficiency and strengthen the position of banking institutions in the market. Future research is recommended that broadens the geographical scope and analyzes the impact of digitalization on the relationship studied.

Keywords: Quality management, financial competitiveness, infrastructure, banking institutions.

RESUMO

Este estudo analisa o impacto da gestão da qualidade na competitividade financeira de uma instituição bancária. Em um ambiente financeiro altamente competitivo, a melhoria contínua da qualidade do serviço tornou-se um fator fundamental para a sustentabilidade das instituições bancárias. O objetivo do estudo foi determinar até que ponto a gestão da qualidade impacta a competitividade financeira, considerando dimensões como critérios de qualidade, treinamento de pessoal, infraestrutura interna e gestão de reclamações. Utilizou-se um desenho quantitativo, aplicando uma análise de regressão logística ordinal sobre uma amostra de clientes do banco. Os resultados indicam que todas as dimensões da gestão da qualidade têm um impacto significativo na competitividade financeira, com valores de Wald e p-valores inferiores a 0,05, validando a relação positiva entre ambos os conceitos. Conclusões: A pesquisa reafirma a necessidade de implementar estratégias abrangentes para melhorar a gestão da qualidade, a fim de otimizar a eficiência operacional e fortalecer a posição das instituições bancárias no mercado. Recomenda-se futuras pesquisas que ampliem o escopo geográfico e analisem o impacto da digitalização na relação estudada.

Palavras-chave: Gestão da qualidade, competitividade financeira, infraestrutura, instituições bancárias.

RESUMEN

El presente estudio analiza el impacto de la gestión de calidad en la competitividad financiera de una entidad bancaria. En un entorno financiero altamente competitivo, la mejora continua de la calidad del servicio se ha convertido en un factor clave para la sostenibilidad de las instituciones bancarias. El objetivo del estudio fue determinar en qué medida la gestión de calidad impacta en la competitividad financiera, considerando dimensiones como criterios de calidad, capacitación del personal, infraestructura interna y gestión de quejas. Se utilizó un diseño cuantitativo, aplicando un análisis de regresión logística ordinal sobre una muestra de clientes de la entidad bancaria. Los hallazgos indican que todas las dimensiones de la gestión de calidad tienen un impacto significativo en la competitividad financiera, con valores de Wald y p-valores menores a 0.05, validando la relación positiva entre ambos conceptos. Conclusiones: La investigación reafirma la necesidad de implementar estrategias integrales de mejora en la gestión de calidad para optimizar la eficiencia operativa y fortalecer la posición de las entidades bancarias en el mercado. Se recomienda futuras investigaciones que amplíen el alcance geográfico y analicen el impacto de la digitalización en la relación estudiada.

Palabras clave: gestión de calidad, competitividad financiera, infraestructura, entidades bancarias.

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Enhancing quality management—through staff training, infrastructure, and complaint handling—directly improves banks’ financial competitiveness, fostering customer satisfaction and operational excellence in competitive financial environments.
Originality/value:
This article introduces a validated model using ordinal logistic regression to quantify how quality management dimensions affect financial competitiveness, offering novel insights for strategic improvement in banking institutions.

INTRODUCTION

Quality management is a fundamental pillar for the operational efficiency and sustainability of banking institutions, as it allows errors to be minimized, processes to be optimized and productivity to be improved (Cheng-Kun et al., 2023; Dat et al., 2023; Kriemadis et al., 2021; License, 2021; Mora et al., 2021; Nawz et al., 2022; Ramadhanty et al., 2023; Zgirskas et al., 2021). Its implementation strengthens financial competitiveness by reducing costs, increasing efficiency and ensuring the provision of high-quality services (Aichouni et al., 2023; Ibtissam et al., 2023; Maswadeh & Zu'mot, 2021). Strategies such as Six Sigma, Lean Management, and Kaizen have proven to be effective in optimizing internal processes and continuous improvement in the banking sector (Aguado et al., 2022; Rey et al., 2022). For its evaluation, key indicators such as quality criteria, staff training, internal infrastructure and complaint management are considered (Mora et al., 2021).

From a theoretical perspective, the relationship between quality management and financial competitiveness is based on various economic perspectives. The Theory of Constraints (TOC) postulates that the overall performance of a system can be optimized by eliminating limiting factors in meeting its objectives (Zambrano-Silva et al. 2021). In addition, the Theory of Comparative Advantage emphasizes the importance of strategic preparation and the optimization of resources to strengthen competitiveness (Gracia-Harrison, 2023). In this context, financial competitiveness is defined as the ability of an entity to design and implement strategies that allow it to maintain or increase its market share in a sustainable manner (Abuselidze, 2021; Fernández et al., 2022; González et al., 2023; Jia & Liu, 2024; Jungo et al., 2022). This competitiveness is influenced by internal, systemic and microeconomic factors (González et al., 2023).

At the international level, several studies have explored the relationship between quality management and customer satisfaction in banking. In Ecuador, 63.82% of citizens rated their banking satisfaction from medium to high due to staff efficiency (Tenesaca & Rodríguez, 2022; Méndez et al., 2021). However, 49% of customers reported dissatisfaction with security issues in monetary transactions (Oruna et al., 2023) affecting confidence in the sector (Marchesano & Scavone, 2021). In Venezuela, 36.9% of users expressed dissatisfaction with quality management, while 44.4% felt that banks were not resolving their problems in a timely manner (Gutiérrez & Díaz, 2021). In Colombia, 31% of banks reported high levels of dissatisfaction due to long waits, lack of trained personnel and deficiencies in personalized attention (Carriel & Nieto, 2022; Paredes & Bustamante, 2021).

In Peru, 56.1% of banks regularly meet the expectations of their customers, and 47.4% invest in constant training for staff (Chávez, 2023). However, financial competitiveness in the sector remains moderate (61.2%), evidencing the need to improve quality management (Gerónimo, 2022). Customer satisfaction is directly influenced by staff training and the implementation of continuous improvement strategies (Vilca et al., 2021). However, problems persist such as slowness in services (14% of complaints), deficiencies in communication and complaint management (19%), and critical areas for improvement in reliability and empathy towards the customer (38%) (Güere & Yangali, 2023). In the southern region of the country, competitiveness levels are low due to deficiencies in risk management and loss of customer confidence (Bernabé et al., 2021). A report by the Technical Commission on Administration and Finance revealed that 41% of organizations lack an effective approach to improve the quality of their services (Alejandría-Castro et al., 2023).

This research was conducted in the city of Tarapoto, located in Peru's San Martín region. Known as the "City of Palm Trees," Tarapoto is situated in the northeastern high jungle, 356 meters above sea level. With approximately 150,000 inhabitants, it constitutes a significant economic and commercial hub in the Peruvian Amazon. The local economy primarily revolves around trade, tourism, agribusiness, and financial services—the latter having experienced substantial growth over the past decade. Tarapoto serves as a strategic commercial nexus connecting the coast, highlands, and jungle regions of Peru, making it a key location for banking institutions operating in the Amazon region. This geographical and economic context makes the study of banking service quality in Tarapoto particularly relevant, as it reflects the challenges faced by financial institutions in emerging urban centers in the country's interior.

This study focuses on a state-owned bank in Tarapoto that plays a crucial role in managing government resources and promoting financial inclusion. However, this institution faces considerable service quality challenges that impact its financial competitiveness. Customer-reported deficiencies include discourteous treatment (45% of complaints), staff knowledge gaps (40%), slow procedures (55%), and internal communication problems (35%). Additionally, the lack of personalized service and inefficient conflict resolution have resulted in a 25% decrease in customer retention and a 30% increase in annual complaints (Amasifuen et al., 2022). These factors have significantly eroded customer trust and loyalty to the institution.

Given this context, this study seeks to analyze the impact of quality management on financial competitiveness in Peruvian banking. Their findings will identify areas for improvement in service quality, facilitating the design of strategies to increase customer retention and optimize operational management. Likewise, it is expected that an improvement in quality

management will contribute to the reduction of operational and financial risks, strengthening the soundness and reliability of banking institutions in the country.

The general objective of the research is to determine the impact of quality management on financial competitiveness in Peruvian banking.

METHODS

Design

This study adopts a quantitative approach, based on the collection and analysis of numerical data to establish the impact of quality management on financial competitiveness in Peruvian banking. The research design is non-experimental, since the variables were not deliberately manipulated, but observed in their natural context. In addition, an explanatory-causal design was used, as it sought to identify causal relationships between the variables of the study (Guillén & Sanz, 2021; Nolazco et al., 2021; Torales & Barrios, 2023). Finally, the study is cross-sectional, since the data were collected at a single point in time.

Study Participants

The study population was composed of users of banks in the city of Tarapoto, from which a sample of 325 participants was selected. A non-probabilistic convenience sampling was used (Piña, 2023), in which subjects were selected based on their accessibility and willingness to participate in the research. This method allowed for quick and efficient information to be obtained without the need for random procedures.

Instruments

For data collection, a structured questionnaire composed of closed questions and based on the Likert scale was used. The variable "Quality Management" was measured through 20 items distributed in four dimensions: Quality Criteria, Staff Training, Internal Infrastructure and Complaint Management. The variable "Financial Competitiveness" was evaluated using 18 items organized into three dimensions: Internal Factors, Systemic Factors and Microeconomic Factors. To guarantee the validity and reliability of the instrument, a content validation was carried out through the opinion of three experts in the area. In addition, a pilot test was carried out with 20 participants and Cronbach's alpha coefficient was calculated, obtaining values higher than 0.7, which confirms the reliability of the questionnaire.

Procedures

The data collection process was carried out in several stages. Initially, informed consent was obtained from the participants. Subsequently, the questionnaires were applied in person and in digital format. Once the data was collected, it was organized and verified to avoid inconsistencies or incomplete data.

Data analysis

Data analysis was carried out using descriptive and inferential statistical methods. First, descriptive analyses were performed using frequency tables to characterize the study variables. Then, the Kolmogorov-Smirnov normality test was applied to determine the distribution of the data (Ocaña & Fuster, 2021). Finally, ordinal logistic regression tests were used to examine the relationship between quality management and financial competitiveness.

Ethical aspects

The research complied with fundamental ethical principles. The principle of autonomy was respected, allowing participants to voluntarily decide their participation. In addition, the principle of beneficence was applied, seeking improvements in the quality of banking service. The confidentiality of the data was ensured, and the disclosure of personal information was prevented. In addition, the study was carried out for academic purposes without commercial interests, ensuring its integrity and transparency.

RESULTS AND DISCUSSION

In terms of age distribution, most respondents were between 26 and 35 years old (40.7%) and 36 and 45 years old (34.2%), representing approximately 75% of the sample. The youngest participants (18-25 years old) accounted for 10.4%, while the older age groups were less represented: 5% of participants aged 46-55 and 9.7% of those over 55. Regarding

marital status, almost half of the participants (49.1%) were single, followed by those married (27.9%) and those living in a common-law relationship (21.4%). Divorced participants represented the smallest proportion, at 1.6% of the sample. The educational level of the participants revealed that the majority (52.2%) had completed higher education, indicating a relatively high level of education. A considerable proportion (38.9%) has secondary education, while only a small percentage (8.9%) has primary education as their highest educational level (Table 1).

Table 1. Description of the study sample

Dimension		f	%
Age	18-25	32	10.4
	26-35	125	40.7
	36-45	123	34.2
	46-55	17	5
	>55	28	9.7
Marital status	Married	88	27.9
	Single	145	49.1
	Common-Law	75	21.4
	Divorced	17	1.6
Education	Elementary	2	8.9
	High School	98	38.9
	College	225	52.2

Source: Author's development based on the research data

As shown in Table 2, quality management has a strong impact on financial competitiveness. It is observed that 70.5% of the participants perceive a high level of quality management, which coincides with 63.4% of the respondents who identify a high level of financial competitiveness. At the medium level, 29.2% of respondents report moderate quality management, which translates into average financial competitiveness in 32.3% of cases. Finally, at the low level, the incidence is minimal, with only 0.3% of cases. These results suggest that an improvement in quality management could have a significant positive effect on financial competitiveness, optimizing the efficiency and sustainability of banks.

The Kolmogorov-Smirnov test (Table 3) showed that the data present a non-normal distribution, since the p-value obtained in all variables is less than 0.05. This indicates that it is necessary to use non-parametric statistical techniques, such as ordinal logistic regression, for the analysis of the relationship between quality management and financial competitiveness.

The results of Table 4 show that the ordinal logistic regression used in the analysis presents an adequate fit to the model, with significance values greater than 0.05 in the Pearson and Deviation tests. This confirms the validity of the methodology used and the relationship between the variables analyzed. Quality criteria and complaint management show greater consistency with financial competitiveness, demonstrating that these dimensions are key to improving the performance of banking institutions.

Table 5 shows that quality management explains 62.4% of the variability in financial competitiveness, according to the Nagelkerke coefficient. In addition, it is highlighted that quality criteria (59%) and complaint management (60%) are the dimensions that contribute the most to this variability, while internal infrastructure (35%) and staff training (7%) have the least impact. This indicates that efforts should focus on strengthening quality criteria and complaint management to achieve greater financial competitiveness.

The results in Table 6 confirm that quality management has a significant impact on financial competitiveness (Wald = 118.708, $p < 0.05$). This supports the hypothesis that efficient quality management improves the competitiveness of banks.

According to the data presented in Table 7, Wald's location value in the second level is 108,163, significantly exceeding the threshold of 4; likewise, the value of $p = .000$, less than 0.05, which leads to the acceptance of the hypothesis proposed by the researcher. Likewise, the value at the Wald Threshold at the first level was 169,729 > 4 and the value of $p = .000$. Based on the above, it is shown that significant improvements in quality management are associated with higher levels of financial competitiveness. This implies that, by implementing and improving quality management practices, the organization could expect an increase in its financial competitiveness, reinforcing the idea that quality not only indicates operational efficiency but also competitive position in the market.

Table 8 shows that the value of Wald's location at level 2 is 121,953, higher than 4 with a significance equal to .000, therefore, the alternative hypothesis is admitted. This decision is endorsed in the Wald Threshold at level 1, showing a value of 110,841 greater than 4 and with a significance of .000; therefore, the alternative hypothesis of the study is admitted. The

data reveal that higher levels of staff training allow for greater financial competitiveness. This indicates that investing in the development of staff skills and knowledge is not only beneficial for operational effectiveness but also plays a crucial role in improving the company's competitive position in the market. Therefore, the strategic importance of staff training as a key factor for the financial success of an organization is highlighted.

Table 2. Impact of quality management on financial competitiveness

			Financial competitiveness			Total
			Low	Middle	High	
Quality Management	Low	Recount	1	0	0	1
		% of total	0.3%	0.0%	0.0%	0.3%
	Middle	Recount	1	82	12	95
		% of total	0.3%	25.2%	3.7%	29.2%
	High	Recount	0	23	206	229
		% of total	0.0%	7.1%	63.4%	70.5%
	Total	Recount	2	105	218	325
		% of total	0.6%	32.3%	67.1%	100.0%

Source: Author's development based on the research data

Table 3. Normality test

Dimension	Kolmogorov-Smirnova		
	Statistical	GI	Mr.
Quality Management	0.170	325	0.000
Financial Competitiveness	0.159	325	0.000
Quality criteria	0.161	325	0.001
Staff training	0.157	325	0.000
Internal infrastructure	0.166	325	0.008
Complaint Management	0.111	325	0.000

Source: Author's development based on the research data

Table 4. Proof of the goodness of fit to the quality management analysis model and its impact on financial competitiveness

Quality Management		Chi-square	GI	Mr.
Financial competitiveness	Pearson	0.390	2	0.981
	Deviation	0.770	2	0.962
Quality criteria	Pearson	0.510	2	0.775
	Deviation	0.965	2	0.617
Staff training	Pearson	0.440	2	0.978
	Deviation	0.087	2	0.957
Internal infrastructure	Pearson	2.478	2	0.290
	Deviation	2.478	2	0.297
Complaint Management	Pearson	0.365	2	0.833
	Deviation	0.700	2	0.705

Source: Author's development based on the research data

Table 5. Variability test of the impact of quality management on financial competitiveness

Quality management in:	Cox and Snell	Nagelkerke	McFadden
Financial competitiveness	0.459	0.624	0.462
Quality criteria	0.467	0.589	0.400
Staff training	0.509	0.69	0.531
Internal infrastructure	0.269	0.353	0.218
Complaint Management	0.473	0.606	0.423

Source: Author's development based on the research data

Table 6. Ordinal logistic regression test of the impact of quality management on financial competitiveness

		Estimate	Dev. Error	Forest	GI	Mr.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Financial competitiveness = 1]	-8.711	1.060	67.568	1	0.000	-10.789	-6.634
	[Financial competitiveness = 2]	-2.193	0.220	99.451	1	0.000	-2.623	-1.762
	[Quality Management=1]	-27.956	0.000		1		-27.956	-27.956
Location	[Quality Management=2]	-4.130	0.379	118.708	1	0.000	-4.873	-3.387
	[Quality Management=3]	0a			0			

Source: Author's development based on the research data

Table 7. Ordinal logistic regression test of the impact of quality criteria on financial competitiveness

		Estimate	Desv. Error	Forest	GI	Mr.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Quality criteria = 1]	-6.217	0.477	169.729	1	0.000	-7.153	-5.282
	[Quality criteria = 2]	-1.894	0.196	93.425	1	0.000	-2.279	-1.510
	[Quality Management=1]	-24.648	0.000		1		-24.648	-24.648
Location	[Quality Management=2]	-4.340	0.417	108.163	1	0.000	-5.157	-3.522
	[Quality Management=3]	0a			0			

Source: Author's development based on the research data

Table 8. Ordinal logistic regression test of the impact of staff training on financial competitiveness

		Estimate	Desv. Error	Forest	GI	Mr.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Staff training = 1]	-8.585	0.815	110.841	1	0.000	-10.183	-6.987
	[Staff training = 2]	-2.462	0.246	100.489	1	0.000	-2.943	-1.980
	[Quality Management=1]	-27.712	0.000		1		-27.712	-27.712
Location	[Quality Management=2]	-4.724	0.428	121.953	1	0.000	-5.562	-3.885
	[Quality Management=3]	0a			0			

Source: Author's development based on the research data

According to the behavior of the data shown in Table 9, the Wald value (84.954 greater than 4 and the p – value equal to .000 less than 0.05); in this way, the alternative hypothesis is admitted. This decision is confirmed at the first level of the Wald Threshold, with a value of 162.997 above 4 and the p-value of .000 less than 0.05. These findings demonstrate that a more developed and efficient internal infrastructure is associated with greater financial competitiveness. This indicates that investments in improving infrastructure, such as technology, facilities and other internal resources, have a positive and direct impact on the company's ability to compete in the financial market. This shows that internal infrastructure is not only essential for the daily operation of the company, but it is also a strategic investment that can significantly improve the position of the organization in the face of the multiple investments that seek to take possession of the globalized market.

As shown in Table 10, Wald's result (114.362 > 4) and the value of $p = .000 < 0.05$; contributes to the acceptance of H1. This is confirmed at the first level of Wald's Threshold, obtaining a value of 174.741 > 4 and $p = .000 < 0.05$; in this way, the hypothesis formulated by the researcher is accepted. These data reveal that effective complaint management is strongly linked to greater financial competitiveness. Specifically, companies that efficiently handle complaints show higher levels of competitiveness, indicating that the ability to effectively resolve customer problems and concerns is a key indicator of success in the competitive financial environment. This demonstrates the importance of customer service policies not only for customer satisfaction, but also as an essential strategy to improve not only the relationships between the members of the organization but also the quality criteria that are considered as notable instruments to optimize internal processes.

Table 9. Ordinal logistic regression test of the impact of internal infrastructure on financial competitiveness

		Estimate	Desv. Error	Forest	GI	Mr.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Internal infrastructure = 1]	-5.041	0.395	162.997	1	0.000	-5.815	-4.267
	[Internal infrastructure = 2]	-1.810	0.190	90.733	1	0.000	-2.182	-1.437
	[Quality Management=1]	-3.425	2.097	2.667	1	0.102	-7.536	0.686
Location	[Quality Management=2]	-2.685	0.291	84.954	1	0.000	-3.256	-2.114
	[Quality Management=3]	0a			0			

Source: Author's development based on the research data

Table 10. Ordinal logistic regression test of the impact of complaint management on financial competitiveness

		Estimate	Desv. Error	Forest	GI	Mr.	95% confidence interval	
							Lower limit	Upper limit
Threshold	[Complaint Management = 1]	-6.526	0.494	174.741	1	0.000	-7.494	-5.558
	[Complaint handling = 2]	-2.057	0.208	97.392	1	0.000	-2.465	-1.648
	[Quality Management=1]	-25.904	0.000		1		-25.904	-25.904
Location	[Quality Management=2]	-4.352	0.407	114.362	1	0.000	-5.149	-3.554
	[Quality Management=3]	0a			0			

Source: Author's development based on the research data

Discussion

This study has shown that quality management significantly influences the financial competitiveness of Peruvian banks. These findings are consistent with the conclusions of Chávez (2023), who identified a positive trade-off between improved quality and increased competitiveness in the banking sector. However, they contrast with the results of Gerónimo (2022), who reported a more moderate relationship, suggesting that the impact of quality management on competitiveness may vary depending on the institutional context and the strategies implemented.

Similar results were obtained in the Chinese banking sector, where a comparative analysis of commercial banks with different ownership types revealed that operational efficiency significantly influenced financial performance (Zhu y Wang, 2025). This study found capital flow efficiency to be superior to return on capital efficiency, which is consistent with our findings that different dimensions of quality management contribute unequally to financial competitiveness. Furthermore, it highlights how ownership structure affects performance, complementing our understanding of how institutional factors influence the effectiveness of quality management in the banking sector.

From a theoretical perspective, these findings support the principles of total quality theory and Goldratt's Theory of Constraints, which emphasize the elimination of limiting factors and the continuous improvement of organizational processes. This is consistent with emerging research on financial technology and environmental, social, and governance (ESG) principles, which suggests that technological innovation can drive better governance and sustainability in financial institutions (Roy y Vasa, 2025). Integrating quality management with digital innovations could improve service quality and competitive positioning.

Empirical evidence suggests that adequate quality management not only optimizes operational efficiency but also strengthens profitability and market position. This is supported by research on digital financial inclusion in China by (Becha et al., 2025), which demonstrated that digital financial services can boost regional economic growth through distinct threshold effects. Similarly, the study found significant threshold values in the relationship between the dimensions of quality management and financial competitiveness.

The results indicate that quality criteria significantly influence financial competitiveness, with a Wald value of 108.163 ($p < 0.05$). This finding is consistent with the study by Vilca et al. (2021), who determined that customer satisfaction is closely linked to the perception of service quality. Recent research on Islamic banks in Indonesia also revealed that service quality has a positive and significant impact on customer satisfaction, which in turn influences customer engagement and loyalty (Abror et al., 2020). This cross-cultural consistency in the findings suggests that quality criteria are universally important for banking competitiveness, regardless of the cultural or regional context.

In this sense, the results suggest that proper implementation of quality criteria can significantly improve banking efficiency. Furthermore, the application of strategies such as Six Sigma and Benchmarking, mentioned by Maswadeh and Zumot (2021) and Aichouni et al. (2023), reinforces the importance of continuous optimization methodologies for improving banking service quality. Staff training was also shown to have a significant impact on financial competitiveness, with a Wald value of 121.953 ($p < 0.05$). These results are consistent with the findings of Méndez et al. (2021), who emphasized that continuous training is key to the sustainability of the banking sector. This is in line with Ukrainian research examining the resilience of the digital economy conducted by Pereguda et al., (2024), which concluded that technological innovation and human capital development significantly improved sustainability, even under adverse conditions. The Ukrainian study's emphasis on adaptive regulations and continuous innovation is consistent with our findings on the importance of staff training for maintaining competitiveness.

However, our results contrast with the findings of Gutiérrez and Díaz (2021), who identified deficiencies in staff training with negative repercussions on service quality. This study reaffirms the need for ongoing training programs to strengthen competitiveness. Furthermore, the theory of ongoing training and the Lean Management approach, according to Aguado et al. (2022), suggest that constant investment in human capital allows for greater organizational efficiency and a better customer experience.

The results obtained indicate that internal infrastructure has a significant relationship with financial competitiveness, with a Wald value of 84.954 ($p < 0.05$). However, they contrast with Güere and Yangali (2023), who identified infrastructure deficiencies as a limiting factor for banking competitiveness. The theory of technological management and comparative advantage, developed by González et al. (2023) and Abuselidze (2021), reinforces the idea that investments in technology and facility modernization can generate sustainable competitive advantages. This is supported by bibliometric research on fintech and ESG in sustainable finance by Kumar Roy and Vasa (2025), which demonstrated that emerging technologies such as AI and blockchain can have a substantial impact on the reporting and operational efficiency of financial institutions.

The study also confirmed that complaint management has a significant impact on financial competitiveness, with a Wald value of 114.362 ($p < 0.05$). These results are consistent with those of Díaz and Gutiérrez (2021), who found that

efficient complaint management improves customer satisfaction and, consequently, competitiveness. Research on Islamic banks by Abror et al. (2020) also found that customer satisfaction is a significant antecedent of customer loyalty and engagement, highlighting the importance of effective complaint resolution as a component of overall service quality.

However, our findings differ from those of Gutiérrez and Díaz (2021), who reported poor complaint management with high levels of dissatisfaction. From a theoretical perspective, complaint management theory and the theory of comparative advantage, proposed by González et al. (2023) and Gracia-Harrison (2023), highlight that an organization's ability to effectively manage customer complaints is a determining factor for long-term loyalty and profitability.

Indeed, there is empirical evidence supporting the positive relationship between quality management and financial competitiveness. The implementation of continuous improvement strategies and the strengthening of factors such as quality criteria, staff training, internal infrastructure, and complaint management are crucial to the success of banking institutions in a competitive and constantly changing environment.

FINAL REMARKS

This study confirms that efficient quality management significantly influences the financial competitiveness of a bank in Tarapoto. Quality criteria, staff training, internal infrastructure and complaint management were validated as determining factors in strengthening the competitive position in the banking sector. From a theoretical approach, the findings support the premises of total quality theory and constraints theory, which emphasize continuous improvement and the removal of operational barriers to optimize organizational performance. These results reinforce the importance of implementing continuous improvement strategies aligned with international standards to guarantee the sustainability of banking entities in highly competitive markets.

Practical Implications and Future Research

The findings of this study have important implications for bank management. The adoption of strategies focused on service quality will allow financial institutions to improve their competitiveness and optimize operational efficiency. Banks are recommended to develop continuous training programs for their staff, strengthen their technological and physical infrastructure, as well as establish effective mechanisms for the management of complaints and customer satisfaction. In addition, institutions must implement control and monitoring tools to ensure the constant improvement of their processes, which will contribute to greater customer loyalty and greater profitability in the long term.

Despite its contributions, the study has limitations such as its focus on a single bank and a cross-sectional design that does not allow changes to be evaluated over time. Therefore, future research could expand the analysis at the national level and include longitudinal studies examining the evolution of the relationship between quality management and financial competitiveness. It would also be relevant to analyse the impact of digitalisation and artificial intelligence on quality management in the banking sector, as well as the influence of regulatory policies on financial competitiveness. Additionally, comparisons between public and private financial institutions could be explored to determine if there are differences in the relationship between quality management and competitiveness in different business models.

REFERENCES

- Abror, A., Patrisia, D., Engriani, Y., Evanita, S., Yasri, Y., & Dastgir, S. (2020). Service quality, religiosity, customer satisfaction, customer engagement and Islamic bank's customer loyalty. *Journal of Islamic Marketing*, 11(6), 1691–1705. <https://doi.org/10.1108/JIMA-03-2019-0044/FULL/XML>
- Abuselidze, G. (2021). The Impact of Banking Competition on Economic Growth and Financial Stability: An Empirical Investigation. *European Journal of Sustainable Development*, 10(1), 1–18. <https://doi.org/10.14207/ejsd.2021.v10n1p203>
- Aguado, A. M., García, B., Malpartida, J. N., & Garivay, F. D. M. (2022). Gestión de calidad en pequeñas y medianas empresas de Pasco, Perú. *Revista Venezolana de Gerencia*, 27(7), 709–726. <https://doi.org/10.52080/rvgluz.27.7.46>
- Aichouni, M., Touahmia, M., Alshammari, S., Ahmed, M., Baha, A., Almudayries, M., & Aljohani, H. (2023). An Empirical Study of the Contribution of Total Quality Management to Occupational Safety and Health Performance in Saudi Organizations. *Int J Environ Res Public Health*, 20(2), 1–22. [10.3390/ijerph20021495](https://doi.org/10.3390/ijerph20021495)
- Alejandría-Castro, C. A., Fasanando-Puyo, T., Rojas-Vela, J., & Fasanando-García, S. W. (2023). Enfoques de la gestión organizacional en el sector público. *Revista Amazónica de Ciencias Económicas*, 2(1), e456. <https://doi.org/10.51252/race.v2i1.456>
- Amasifuen, L., Cárdenas, J., & Troya, D. (2022). Clima y satisfacción laboral en una organización del Estado. *Gestionar: Revista de Empresa y Gobierno*, 3(50), 89–102. <https://doi.org/10.35622/j.rg.2023.01.007>
- Becha, H., Kalai, M., Houidi, S., & Helali, K. (2025). Digital financial inclusion, environmental sustainability and regional economic growth in China: insights from a panel threshold model. *Economic Structures*, 14(4). <https://doi.org/10.1186/s40008-025-00347-4>

- Bernabé, P., Porras, D., Bravo, Y., & Camacho, M. (2021). Concentración bancaria, medida por distintos indicadores. El caso peruano. *The Journal of Globalization, Competitiveness, and Governability*, 16(1), 98–114. <https://doi.org/10.3232/GCG.2022.V16.N1.05>
- Carriel, R., & Nieto, A. (2022). La evolución de la calidad hacia la calidad total. *Alfa Publicaciones*, 4(1.1), 1–11. <https://doi.org/10.33262/ap.v4i1.1.166>
- Chávez, F. (2023). *Gestión de la calidad y su relación con la competitividad en mypes del sector agroindustrial de la provincia de Lambayeque, 2021* [Universidad Nacional Pedro Ruiz Gallo]. https://repositorio.unprg.edu.pe/bitstream/handle/20.500.12893/5092/BC-3893_BANCES_PISCOYA-ROJAS_PUICON.pdf?sequence=3&isAllowed=y
- Cheng-Kun, W., Masukujjaman, M., Shah, S., Ahmad, I., Chieh-Yu, L., & Yi-Hui, H. (2023). The Effects of Service Quality Performance on Customer Satisfaction for Non-Banking Financial Institutions in an Emerging Economy. *Internacional Journal of Financial Studies*, 11(1), 1–19. <https://doi.org/10.3390/ijfs11010033>
- Dat, Q., Haddad, C., & Salameh, E. (2023). Financial institutional blockholders and earnings quality: Do blockholders contestability and countries' institutions matter? *International Review of Financial Analysis*, 87(1), 1–13. <https://doi.org/10.1016/j.irfa.2023.102612>
- Fernández, M., Isabel, F., Isabel, P., & Aitken, H. (2022). Total Quality Management (Tqm), Competitiveness and Operational Performance Of Micro And Small Enterprises In Peru: A Literature Review. *International Journal of Operations and Quantitative Management*, 28(3), 77–93. <https://doi.org/10.46970/2022.28.3.8>
- Gerónimo, E. (2022). Gestión de calidad y su importancia en la competitividad en las empresas comercializadoras de frutas, Hualar 2021. *Ciencia Latina Revista Científica Multidisciplinar*, 6(4), 5371–5393. https://doi.org/10.37811/cl_rcm.v6i4.3021
- González, L. M., Zallas, L. A., & Espinoza, F. (2023). *Gestión administrativa y competitividad en las empresas públicas y privadas* (Editorial Fontamara (ed.)). <https://ebookunisonpublicala publica.la/library/publication/gestion-administrativa-y-competitividad-en-las-empresas-publicas-y-privadas>
- Gracia - Harrison, R. (2023). Análisis del Índice de ventaja relativa de exportación del aceite de palma. *Revista Científica Orbis Cognitiona*, 7(1), 1–15. https://revistas.up.ac.pa/index.php/orbis_cognita/article/view/3609
- Güere, C., & Yangali, J. (2023). Calidad de servicio percibido y satisfacción del cliente en Caja Municipal de Sullana. *INNOVA Research Journal*, 8(1), 132–152. <https://doi.org/10.33890/innova.v8.n1.2023.2215>
- Guillén, C., & Sanz, F. (2021). El rigor científico en investigación. Consideraciones desde el área de Didáctica de la Lengua y la Literatura. *El Guiniguada*, 30(1), 40–51. <https://ojsupdc.ulpgc.es/ojs/index.php/ElGuiniguada/article/view/1317>
- Gutiérrez, S., & Díaz, C. (2021). Calidad del servicio desde la escala servqual en la banca pública, Municipio Cárdenas, Estado Táchira. *Gestión y Desarrollo Libre*, 6(12), 1–25. <https://doi.org/10.18041/2539-3669/gestionlibre.12.2021.8717>
- Ibtissam, M., Hadini, M., Chebir, A., & Mohamed, B. (2023). Proposal of a causal model measuring the impact of an ISO 9001 certified Quality Management System on financial performance of Moroccan service-based companies. *Statistics in Transition*, 24(2), 159–184. <https://doi.org/10.59170/stattrans-2023-026>
- Jia, K., & Liu, X. (2024). Bank digital transformation, bank competitiveness and systemic risk. *Frontiers*, 11(1), 1–10. <https://doi.org/10.3389/fpsy.2023.1297912>
- Jungo, J., Madaleno, M., & Botelho, A. (2022). The Effect of Financial Inclusion and Competitiveness on Financial Stability: Why Financial Regulation Matters in Developing Countries? *Risk and Financial Management*, 15(3), 1–20. <https://doi.org/10.3390/jrfm15030122>
- Kriemadis, A., Sainis, G., & Haritos, G. (2021). The impact of quality management systems on financial performance under crisis conditions: evidence from SMEs. *Jornal of Business and Entrepreneurial*, 33(33), 1–10. <http://dx.doi.org/10.1080/14783363.2021.2022883>
- License, P. (2021). Effects Of Total Quality Management (Tqm) On Financial And Non-Financial Performance: Evidence From Higher Educational Sector Of Pakistan. *Humanities & Social Sciences Reviews*, 9(3), 1–11. <https://doi.org/10.18510/hssr.2021.93101>
- Marchesano, G., & Scavone, M. (2021). La información financiera de calidad como facilitadora de gestión de riesgos y toma de decisiones. *Journal of Management & Business Studies*, 2(1), 1–2. <https://doi.org/10.32457/jmabs.v2i1.527>
- Maswadeh, S., & Zu'mot, R. (2021). The effect of total quality management on the financial performance by moderating organizational culture. *Accounting Review*, 7(1), 441–450. [10.5267/j.ac.2020.11.007](https://doi.org/10.5267/j.ac.2020.11.007)
- Méndez, L., Venegas, F., & Linthon, D. (2021). Competencia en el mercado de crédito entre los bancos dominantes en México. *Revista Mexicana de Economía y Finanzas*, 16(1), 2–25. <https://doi.org/10.21919/remef.v16i0.699>
- Mora, A. C., García- Legaz, F. C., & Periañez, R. P. (2021). *Gestión de la calidad*. <https://www.edicionespiramide.es/libro/economia-y-empresa/gestion-de-la-calidad-arturo-calvo-de-mora-schmidt-9788436845464/>
- Nawz, A., Saad, M., Irshad, S., & Ahmed, M. (2022). Impact of Total Quality Management (TQM) practices on Sustainability and Organisational Performance. *Journal of Applied Research in Technology & Engineering*, 3(2), 1–10. <https://doi.org/10.4995/jarte.2022.17408>
- Nolazco, F., Menacho, J., & Bardales, A. (2021). Metodología de la investigación científica (MIC) en la educación básica regular. El caso peruano. *Espí-ritu Emprendedor TES*, 5(3), 62–82. <https://doi.org/10.33970/eetes.v5.n3.2021.277>
- Ocaña, Y., & Fuster, Y. (2021). The bibliographical review as a research methodology. *Revista Tempos e Espaços Em Educação*, 14(33), 12–31. <https://doi.org/10.20952/revtee.v14i33.15614>
- Orozco, H., & Lamberto, J. (2022). La ética en la investigación científica: consideraciones desde el área educativa. *Revista de Historia, Geografía, Arte y Cultura*, 19(1), 1–11. https://gc.scalahed.com/recursos/files/r161r/w26118w/La Etica en la investigaci_%B3n cientifica.pdf
- Oruna, A., Oruna, M., Aranguren, P., & Sánchez, J. (2023). Calidad de servicio de la banca móvil y lealtad del consumidor. *Revista Venezolana De Gerencia*, 28(102), 855–871. <https://doi.org/10.52080/rvgluz.28.102.25>
- Paredes, P., & Bustamante, J. (2021). Gestión de talento humano y satisfacción laboral en bancos de Guayaquil. *Journal of the Academy*, 1(5), 44–61. <https://doi.org/10.47058/JOA5.4>
- Pereguda, Y., Stender, S., Rusnak, A., Khilukha, O., & Bielousov, Y. (2024). Ukraine's Digital Economy Under Martial Law: Innovative Approaches and Legal Context. *International Journal of Economics and Financial Issues*, 15(1), 431–440. <https://doi.org/10.32479/ijefi.17585>
- Piña, L. (2023). El enfoque cualitativo: Una alternativa compleja dentro del mundo de la investigación. *Revista Arbitrada Interdisciplinaria Koinonía*, 8(15), 1–3. <https://doi.org/10.35381/r.k.v8i15.2440>
- Ramadhanty, D., Utami, M., & Asbari, M. (2023). The Influence of Total Quality Management on Organizational Performance on Bank Services. *Journal of Information Systems and Management (JISMA)*, 2(1), 1–6. <https://doi.org/10.4444/jisma.v2i1.237>

- Rey, S., Garivay, F., Jacha, J., & Malpartida, J. (2022). Industry 4.0 and business quality management [Industria 4.0 y gestión de calidad empresarial]. *Revista Venezolana de Gerencia*, 27(97), 289–298. <https://doi.org/10.52080/rvgluz.27.97.20>
- Roy, J., & Vasa, L. (2025). Financial technology and environmental, social and governance in sustainable finance: a bibliometric and thematic content analysis. *Discov Sustain*, 6(148). <https://doi.org/10.1007/s43621-025-00934-2>
- Tenesaca, B., & Rodríguez, R. (2022). Calidad de servicio y satisfacción del usuario en instituciones financieras. *CIENCIAMATRIA*, 8(2), 116–135. <https://doi.org/10.35381/cm.v8i2.701>
- Torales, J., & Barios, I. (2023). Diseño de investigaciones: algoritmo de clasificación y características esenciales. *Medicina Clínica y Social*, 7(3), 210–235. <https://doi.org/10.52379/mcs.v7i3.349>
- Vilca, C., Vilca, M., & Armas, M. (2021). Relación entre calidad de servicio y satisfacción de los clientes del Banco de la Nación, Perú. *Sciêdo*, 24(2), 103–108. <https://doi.org/10.17268/sciendo.2021.011>
- Zambrano- Silva, D., Soto-Chávez, L. E., & Ugalde- Vicuña, J. W. (2021). Teoría de las restricciones y su impacto en las mejoras de la productividad. *Polo Conocimiento*, 6(11), 1–14. <https://www.polodelconocimiento.com/ojs/index.php/es/article/view/3277>
- Zgirska, A., Ruzevicius, J., & Ruzelė, D. (2021). Benefits of Quality Management Standards in Organizations. *Standards*, 1(2), 154–166. <https://doi.org/10.3390/standards1020013>
- Zhu, C., & Wang, R. (2025). Commercial banks performance, ownership types and operations efficiency decomposition in China: a comparative analysis. *Humanit Soc Sci Commun*, 12(291). <https://doi.org/10.1057/s41599-025-04373-2>

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A. theoretical and conceptual foundations and problematization:	30%	25%	25%	20%
B. data research and statistical analysis:	20%	30%	30%	20%
C. elaboration of figures and tables:	30%	25%	25%	20%
D. drafting, reviewing and writing of the text:	30%	25%	25%	20%
E. selection of bibliographical references	20%	25%	25%	30%
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