SERVICE QUALITY AND INSTITUTIONAL IMAGE AS PREDICTORS OF CUSTOMER SATISFACTION IN MUNICIPALITIES OF PERU

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ABSTRACT

Objective: This research aimed to analyse the predictability of service quality and institutional image for customer satisfaction in municipalities in Peru.

Theoretical framework: In this sense, one of the most important links between differentiation of services that can only be recognised and appreciated by the customer and competitive advantages or institutional image has become essential parts of organisations; it is the quality of services provided by public organisations such as municipalities that are under scrutiny and subject to evaluation and satisfaction of their users.

Methodology: It was based on a quantitative, prospective correlational approach, with a sample of 352 users of municipalities in Peru.

Results: An R2 of 0.460 was obtained, and the effect size was calculated with a coefficient of 0.851, which is considered a very high parameter above 0.350. The calculation of the significant statistical power resulted in a value of 1, which is considered very high. Furthermore, the standardisation coefficients have shown that service quality and institutional image are relevant, positive and significant predictors of customer satisfaction in Peruvian municipalities. Additionally, service quality was found to be the predominant predictor (beta=0.654).

Conclusion: This study showed that there is a relationship between users' perceptions of service quality and institutional image and its predictive correspondence on their satisfaction. Citizens' satisfaction with the services provided by Peruvian municipalities was influenced to a greater extent by the public image of the entities.

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Originality/value: Service quality and institutional image influence customer satisfaction with Peruvian state organisations.

Keywords: service quality, institutional image, customer satisfaction, municipality.

Received: 22/05/2023  
Accepted: 15/08/2023  
DOI: https://doi.org/10.55908/sdgs.v11i5.885

QUALIDADE DE SERVIÇO E IMAGEM INSTITUCIONAL COMO PREDITORES DA SATISFAÇÃO DO CLIENTE NOS MUNICÍPIOS DO PERU

RESUMO

Objetivo: Esta pesquisa teve como objetivo analisar a previsibilidade da qualidade do serviço e imagem institucional para a satisfação do cliente em municípios do Peru.

Enquadramento teórico: Neste sentido, um dos elos mais importantes entre a diferenciação de serviços que só pode ser reconhecida e apreciada pelo cliente e as vantagens competitivas ou a imagem institucional tornou-se parte essencial das organizações; é a qualidade dos serviços prestados por organizações públicas, como os municípios, que estão sob escrutínio e sujeitos à avaliação e satisfação dos seus usuários.

Metodologia: Baseou-se em uma abordagem correlacional quantitativa e prospetiva, com uma amostra de 352 usuários de municípios do Peru.

Resultados: Obteve-se um R2 de 0,460 e calculou-se o tamanho do efeito com coeficiente de 0,851, que é considerado um parâmetro muito alto acima de 0,350. O cálculo do poder estatístico significativo resultou num valor de 1, que é considerado muito elevado. Além disso, os coeficientes de padronização mostraram que a qualidade do serviço e a imagem institucional são relevantes, positivos e significativos preditores da satisfação do cliente nos municípios peruanos. Além disso, a qualidade do serviço foi considerada o preditor predominante (beta=0,654).

Conclusão: Este estudo mostrou que existe uma relação entre as percepções dos usuários sobre a qualidade do serviço e a imagem institucional e sua correspondência preditiva sobre a satisfação dos mesmos. A satisfação dos cidadãos com os serviços prestados pelos municípios peruanos foi influenciada em maior medida pela imagem pública das entidades. Originalidade/valor: A qualidade do serviço e a imagem institucional influenciam a satisfação do cliente com as organizações estatais peruanas.

Palavras-chave: qualidade do serviço, imagem institucional, satisfação do cliente, município.

1 INTRODUCTION

To ensure that citizens receive services that meet their needs and expectations, the state implements these regulations through a number of different agencies and organizations, as set forth in the applicable regulations (Romero-Carazas et al., 2022). However, local government management varies greatly from country to country, and their
ability to provide quality services is insufficient (Macha-Huamán et al., 2023). By the end of this century, innovation has become a catalyst for change in many public institutions of the most prominent nations of Europe and North America, accelerating the evolution of transformative governments at all levels (from local to central, and national) through the standardization and automation of their procedures through the application of technology in order to achieve customer, user, or citizen satisfaction (Bao-Condor et al., 2020; Castillo et al., 2020; Quiroz Mejía, 2022).

According to the National Institute of Statistics and Informatics of Peru, in 2022 196 interprovincial municipalities, 1678 district municipalities and 2859 center or populated communities have been established. Over time, due to overpopulation, they have suffered a decline in quality, leading to dissatisfaction in terms of public management and user procedures. Therefore, two elemental variables are prioritized in this study to achieve proper customer satisfaction: service quality and institutional image (Chombo-Jaco et al., 2022). Through proper study, it can be established and demonstrated that these are predictors of satisfaction. As a result, it is evident from a predictive point of view that the management or increase of these variables in a positive and significant way leads to increased satisfaction according to these variables (Ramírez-Asís et al., 2020; Silva-Treviño et al., 2021).

Therefore, the quality of an organization's services is a critical success factor for many companies and public organizations such as municipalities today (Romero-Carazas et al., 2023). To offer high-quality service, they are based on five pillars: consideration of the customer's desires and requirements, availability, competence, and satisfaction. Maintaining regular contact with consumers, being well organized internally, providing them with sufficient infrastructure, and speaking to them wisely is vital. Emphasis is placed on customer happiness and perception in these environments because these factors are considered to contribute to the excellence of service (Ganga-Contreras et al., 2019; León, 2018).

According to the 2015 Objective Sectoral Quality Study conducted in Spain, Deutsche Bank holds first place in terms of providing high-quality banking services to its customers (EQUOS) (Arauco et al., 2022). This financial institution is concerned with the clarity with which its goods are described, the friendliness with which it treats its customers, and the success of its commercial operations (Siswadi et al., 2023). Additionally, the methodology used in terms of service quality can be applied to other
organizational environments such as public entities, private companies, and social environments (Mejía & Medina, 2019).

In this sense, one of the most important links between the differentiation of services that can only be recognized and appreciated by the customer and the competitive advantages or institutional image has become essential parts of organizations; it is the quality of services provided by public organizations such as municipalities that are under scrutiny and subject to the evaluation and satisfaction of their users (Kaligis et al., 2023).

2 DATA AND METHODOLOGY

This research was based on a quantitative approach as it offers the possibility of generalizing results more, gives researchers control over the studied phenomena, allows them to detect trends, and, from a statistical point of view, measure their magnitudes, and facilitates the comparison of the results of different studies to demonstrate hypotheses. Additionally, it represented a prospective typology as the results projected future situational conditions arising from investigative exploration, situational analysis, and explanation of environmental phenomena.

The population consisted of 4123 customers who frequented the 196 provincial municipalities that make up the Peruvian legislative territory established in Resolution Jefatural 107-2022 established by the National Institute of Statistics and Informatics (INEI, 2022). For the sample, a simple probability sampling was approached with a 95% confidence level and a margin of error of 0.05, a sample of 352 people was obtained, distributed in 45% women and 55% men with respect to sexual orientation, and the ages of the sample people were within the 34 to 65 years interval.

Consequently, a survey was used to collect information, and its question format was specified as an instrument, in addition, the instruments were validated using the standard of a panel of three expert judges, and finally, to determine the reliability of the survey, a pilot test will be performed with 40 participants, whose responses will be analyzed using Cronbach's alpha statistic. The necessary permission to collect data on the ground has been granted after conversations with the relevant municipality, as evidenced by a letter of request sent to the district councilor in which the importance of the work to be performed and how the necessary instruments should be completed is explained. It should be noted that the reliability of the variables calculated by means of the Cronbach
Alpha statistic produced the following: 1) for the service quality variable 0.987, 2) institutional image 0.980 and 3) customer satisfaction 0.989.

The data for the development of the results study were primary, as they were provided by the collaborators, the processing was carried out using the statistical software SPSS V.26, from which the respective frequencies were obtained, as well as the analysis of the arithmetic means of the dimensions and variables subject to study. Additionally, the approach of multiple regression assumptions was used to reconcile the relationship between the variables analyzed from a multiple perspective and at different intervals, also, the assumptions of linearity of the variables were approached to establish the significant relationships with respect to a positive slope line and support for the normality of the data through residual histograms and normal p-p graphs, consequently, the Durbin-Watson test was applied for the diagnosis of collinearity of the variables, and finally, a standard regression model was set up to corroborate the study hypotheses. In this sense, this regression model was expressed as follows:

\[ Y = \theta_0 + \theta_1 \cdot X_1 + \theta_2 \cdot X_2 + \theta_3 \]

In this sense, replacing the analysis variables gives:

\[ STC = \theta_0 + \theta_1 \cdot CALS + \theta_2 \cdot IMI \] (1)

Where:

Y: Customer Satisfaction of Peruvian Municipalities (STC)
X1: Service Quality (CALS)
X2: Institutional Image (IMI)

3 RESULTS

Initially, the calculation of the arithmetic means of the variables that represent the following study and its standard deviation is carried out for each one within the response analysis of the sample object of the study represented by 352 people who have frequented in the current year in the aforementioned state facilities, observing within the analysis that the outstanding variable within the evaluation corresponds to the institutional image (IMI).
Moreover, for a more exhaustive analysis of the study variables, an analysis of the arithmetic means of the representative dimensions of each of the variables is performed as the study sample is covered under the practical analytical approach of the tasks established within the object municipalities of the study.

![Table 1. Descriptive analysis of the study variables](image)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (m)</th>
<th>Standard deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer satisfaction</td>
<td>5.13</td>
<td>0.338</td>
</tr>
<tr>
<td>Service quality</td>
<td>5.09</td>
<td>0.431</td>
</tr>
<tr>
<td>Institutional image</td>
<td>5.90</td>
<td>0.0329</td>
</tr>
</tbody>
</table>

Source: Author's elaboration, 2023.

Table 2 shows that for the "customer satisfaction" variable, the lowest perception was formed by citizen well-being (4.19) and the highest was human resource management (4.49). On the other hand, for the "service quality" variable, the lowest sample mean (perception) was security (4.43) and the highest was response capacity (4.65); and finally, for the institutional image variable, the lowest sample perception was institutional reality (4.37) and the highest corresponds to institutional communication (4.54).

3.1 MULTIPLE LINEAR REGRESSION ANALYSIS

This linear regression analysis tries to establish relationships between many categorical or nominal (independent) variables (dependent). Linear regression, according to Espinoza-Casco et al. (2023), has four important features that must be considered to develop a reliable investigation. (a) normality, which refers to a normal distribution of points; and (b) linear relationship, which means that there must be some type of correlation between the variables. (c) additivity and multicollinearity, which indicate that
the independent variable, taken alone, explains the dependent variable or that both independent variables are related.

In this sense, for this approach, partial scatter diagrams are considered for the service quality and institutional image variables; taking the "citizen or customer satisfaction" as the main correlation dependent variable. In this sense, Figure 1 shows that the service quality (CALS) variable approaches a linear distribution character; on the other hand, the institutional image variable does not present a normal distribution within its parameters.

The normality test checks if the variables follow a typical distribution. Using graphical methods, we have been able to confirm this hypothesis. As can be seen in the histogram, the data indicate a symmetrical bell-shaped distribution with respect to the mean, with the vast majority of the data located no more than two standard deviations from the mean. For a normal distribution with customer satisfaction as the dependent variable, our data approximate quite well in a P-P plot (Q-Q). The K-S test (Kolmogorov-Smirnov) is another method to determine if the data follows a normal distribution; if the bilateral significance level of the test is 0.20 or greater than 0.05, it is assumed that the data is normally distributed.
The third criterion checks for error independence, which tries to determine if the errors of the explanatory variables are interdependent or not. The system may show some inertia in response to repeated observations of the same variable over time, causing subsequent values to converge towards some intermediate point. The Durbin-Watson test resulted in $DW = 1.685$, which suggests that the errors are independent if the statistical significance level is between 1.5 and 2.5. (See Table 3). Multicollinearity occurs when there is more than one type of linear dependence between the variables, so a collinearity diagnosis (Table 4) was performed to evaluate the degree to which the independent variables are correlated with each other. The service quality and institutional image variables satisfy the non-correlation criteria, with a tolerance value close to one and a variance inflation factor lower than 10.0, which indicates that there is no multicollinearity.

<p>| Table 3. Errors and independence through the Durbin-Watson test |
|-------------------|-------------------|-------------------|-------------------|-------------------|</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R squared</th>
<th>Improved squared</th>
<th>R Typical estimation error</th>
<th>Durbin-Watson Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>0.599</td>
<td>0.475</td>
<td>0.460</td>
<td>0.19293</td>
<td>1.685</td>
</tr>
</tbody>
</table>

Source: Author's elaboration, 2023.

<table>
<thead>
<tr>
<th>Table 4. Collinearity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>Service Quality</td>
</tr>
<tr>
<td>Institutional Image</td>
</tr>
</tbody>
</table>

Source: Author's elaboration, 2023.

3.2 HYPOTHESIS VALIDATION

H0: Service quality and institutional image are not predictors of customer satisfaction in municipalities in Peru.
Ha: Service quality and institutional image are predictors of customer satisfaction in municipalities in Peru.

The analysis of this hypothesis required the use of the backward multiple stepwise regression statistical technique. The perception of the institution's image and service quality were considered independent variables, while customer satisfaction was considered a dependent variable. The model can be stated as established in equation (1).

In this sense, after the analysis, it is concluded that the corrected R2 is 0.395, this indicates that between both study variables independently they clarify 39.5% of the variance of dependence with the customer satisfaction variable.

Table 5. Model analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R squared</th>
<th>Improved R squared</th>
<th>Typical estimation error</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.475</td>
<td>0.460</td>
<td>0.19293</td>
</tr>
</tbody>
</table>

Source: Author's elaboration, 2023.

Furthermore, the table 6 evidences the standardization coefficients, thus establishing that quality of service and institutional image are relevant, positive, and significant predictors for customer satisfaction or users or citizens who frequent the municipalities of Peru. Additionally, it is evident that the predominant predictor is quality of service (beta=0.654), which is why the null hypothesis is rejected in favor of the alternative hypothesis of the study.

Table 6. Correlation Analysis of Variables

<table>
<thead>
<tr>
<th>Predictive Model</th>
<th>Variables</th>
<th>NON-standardized coefficients</th>
<th>StandardizedCoefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>Error</td>
</tr>
<tr>
<td>a</td>
<td>Service quality</td>
<td>0.779</td>
<td>0.431</td>
</tr>
<tr>
<td></td>
<td>Institutional image</td>
<td>0.654</td>
<td>0.065</td>
</tr>
<tr>
<td>Constant</td>
<td>0.900</td>
<td>0.080</td>
<td>4.21</td>
</tr>
</tbody>
</table>

Source: Author's elaboration, 2023.

Finally, the effect of regression is weighed using the statistical software SPSS V.26 with a row of power and effect size estimation analysis, through a POST HOC approach since the statistical analysis was done after the information was collected through the survey. For this purpose, the following formula was used:
Considering a $R^2$ of 0.460 was reconciled, when calculating the effect size, a coefficient of 0.851 was approached, in this sense, this value is considered as a very high parameter above 0.350, then when calculating the statistically significant power, a value equal to 1 is reconciled, which is considered very high.

4 DISCUSSIONS

Taking into account the multiple analyses that have been carried out both formally and informally, this study aimed to answer the question: "What is the level of contribution of institutional image and service quality in municipalities in Peru with respect to customer satisfaction?" Based on the research question, the results propose and make it clear that the three main elements of this research - the reputation of the institution, customer happiness, and service quality - are interconnected. This opens the way for suggesting that the institution can position itself in competitiveness among state agencies through proper brand cultivation and citizen satisfaction.

The results are in line with those of previous studies whose main objective was to determine the importance of customer satisfaction and the best methods for achieving it. Thus, it is worth noting that (Sotelo & Figueroa, 2017) carried out a study in Peru, taking into account two variables: organizational climate and service quality, finding a positive correlation between these two factors. We can then conclude that, given the strong causal relationship between the two, more emphasis must be placed on this when directing a company or, in this case, Peruvian municipalities.

The results of these specific hypotheses are closely related to those elucidated in the studies approached by (Pérez et al., 2022), who addressed administrative management and service quality according to legal norms, and whose findings clarify the connection between administrative activities and service quality. Likewise, (Cosñasilla, 2022) clarified a strong correlation in the hypotheses with the application of his questionnaire to 138 participants, suggesting to the scientific community more extensive and broader studies with regard to the variables "service quality" and "internal control." (Izquierdo-Espinoza, 2021) also presents a series of methods for measuring service quality; however, he also establishes that, within an exhaustive search for data, a correlation can be observed between reliability, responsiveness, security, empathy, and tangibility of a company, and
the repercussions this has on public administration and the perception the public has of the company (Chavez-Díaz et al., 2023).

To delve deeper into what was mentioned in the previous paragraph, research conducted by (Monzón, 2018) shows that the correlation between satisfaction levels and customer service quality has increased. In his study, Monzón (2018) explains that ongoing service evaluations are being performed for people to record their satisfaction level, and using those results as a basis to address any issues that may arise. In today's highly competitive market, we must strive to offer outstanding service. On a theoretical and epistemological level, (Romero et al., 2021) clarify the close relationship between service quality and customer satisfaction, stating that "there is an undeniable relationship between service quality and the relevant user satisfaction in the company in question," and concluding that "a quality service must match the demands and realities of the users."

From a critical point of view, we hope to have shed some more light on the field of research on the correlation studies of variables such as "service quality" and "institutional image," with the hope of continuing on the path of research and making useful contributions to public institutions and promoting empirical and scientific advancement of knowledge. Additionally, it has been demonstrated that a predictive model of these two variables can be established with the aim of having a direct, positive, and significant impact on customer, user, or citizen satisfaction.

5 CONCLUSION

This study showed that there is a relationship between users' perceptions of service quality and institutional image and their predictive correspondence on their satisfaction. Citizens' satisfaction with the services provided by the municipalities of Peru was influenced to a greater extent by the public image of the entities. This finding is important because it can help administrators to continue investing in promoting and evaluating the image of the institution, which in turn guarantees customer satisfaction and competitiveness within the state service sector, highlighting the quality of service that it provides.

Based on the results, an R2 of 0.460 was reconciled when calculating the effect dimension, a coefficient of 0.851 was addressed, in this sense, this value is considered a very high parameter above 0.350, then when calculating the statistically significant power, a value equal to 1 is reconciled, which is considered very high. Additionally, the
standardization coefficients have shown that service quality and institutional image are positioned as relevant, positive, and significant predictors for customer, user, or citizen satisfaction who frequent the municipalities of Peru. Moreover, the predominant predictor was found to be service quality (beta=0.654).

In this sense, the authorities of the Municipalities of Peru should improve the reference level regarding the institutional image they provide to their citizens by demonstrating a greater interest in their document management processes and providing citizens with adequate, relevant, and socially oriented guidance. This would result in a higher level of perceived satisfaction with the services provided by the municipality.
REFERENCES


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