

MOBILE TELEPHONY CUSTOMER LOYALTY STRATEGY OF THE NATIONAL TELECOMMUNICATIONS CORPORATION REGIONAL 3 THROUGH THE APPLICATION OF THE SERVQUAL MODEL

María Gabriela Tobar-Ruiz¹, Marcelo Eduardo Sánchez-Salazar², Edison Marcelo Melendres Medina³, Víctor Gabriel Avalos Peñafiel⁴

¹*Escuela Superior Politécnica de Chimborazo, Riobamba – Chimborazo*
maria.tobar@epoch.edu.ec
<https://orcid.org/0000-0002-3796-0545>

²*Escuela Superior Politécnica de Chimborazo, Riobamba – Chimborazo*
marcelo.sanchez@epoch.edu.ec
<https://orcid.org/0000-0002-9859-098X>

³*Escuela Superior Politécnica de Chimborazo, Riobamba – Chimborazo*
edison.melendres@epoch.edu.ec
<https://orcid.org/0000-0002-0234-9594>

⁴*Escuela Superior Politécnica de Chimborazo, Riobamba – Chimborazo*
Victor.avalos@epoch.edu.ec
<https://orcid.org/0000-0001-8278-7991>

Abstract

The main objective of this research is to design loyalty strategies for mobile telephony customers of the Corporación Nacional de Telecomunicaciones Regional 3 through the application of the Servqual model. Furthermore, within the organizational development, the “Quality of a Service” is a fundamental axis for the companies since it determines the decisions of the consumers, for such reason the service must be monitored and controlled, and the reviews must be focused on the periodic follow-up to the Human Talent since they are the foundation of the business effectiveness and the main strategy to increase the levels of satisfaction. Therefore, CNT E.P. has developed mechanisms to ensure customer satisfaction, expanding the constant monitoring and redesign of strategies in fixed telephony, offering coverage and adequate confidence that the service meets the quality requirements to satisfy customers. Within the services offered by CNT and through this study, it can be seen that mobile telephony needs to design and establish strategies that build customer loyalty; SERVQUAL was applied as a study tool, which ensures that the quality management system is executed to perfection, achieving the ultimate goal of satisfying and building customer loyalty. The surveys were conducted with clients in the four provinces that comprise Regional 3, and the results were measured using a Likert scale. The results and conclusions showed that customers are not sufficiently satisfied with the service received from the public company employees at the time of submitting their requirements. This problem is not necessarily due to the instrument used by CNT E.P., but rather that customers increasingly demand improvement in service and quality standards.

Keywords: servqual model; public company; loyalty

1. Introduction

The main objective of this study is to identify strategies to build customer loyalty among mobile telephony customers in the Chimborazo, Tungurahua, Cotopaxi and Pastaza agencies, which are part of Regional 3 of the National Telecommunications Corporation.

Today's telecommunications sector has an accelerated evolution approach; competition among mobile operators bases its strategy on the relevance and value chain applied in the different market segments.

Vasco Vasco (2016), in his study conducted on quality measurement, states that sellers know the products they offer to consumers but do not necessarily know what consumers are looking for in the products, which determines a fundamental axis at the time of determining strategies in loyalty.

Gadotti dos Anjos (2009) explains that 75% of buyers consume something more than the product itself. He explains that what is purchased contains additional elements, which entrepreneurs must learn to identify to become competitive strategies; among these elements are categories, qualities, service, and aggregates that the customer demands as a plus during their business relationship.

In the quest to provide customer satisfaction, each person's hidden needs have become an interesting factor in determining what customers buy or want and the optimal conditions to offer them what they demand.

The issue of quality in the administration, management and service processes of mobile telephony companies is a necessary foundation in business management, and its application is based on the principles and concepts of top management.

After-sales service and customer satisfaction analysis is vital to the survival of companies; it becomes a dynamic, visible, and rewarding process for those who apply it successfully and frustrating for those who overlook it.

For this reason, it is imperative that all companies, without exception, have the customer as their focal point, and as a philosophy, the administrative

attitude and orientation with emphasis on attracting, winning and satisfying the customer.

2. Description of the process

The survey was designed based on questions grouped according to the dimensions used by the Servqual Model, which allows for fulfilling the general objective, where the customer evaluated the following questions on a scale of "1 to 5".

The research was conducted from a qualitative perspective to interpret and understand the reality of mobile telephony customers in Region 3 of CNT E.P. through collecting all necessary information, respective analysis and proposal.

Within the context of demonstrating the proposed hypothesis, quantitative research was applied to determine the strength of association or correlation between variables, the generalization and objectification of the results through a sample, to make inferences to a population, in this way to direct strategies in the loyalty of mobile telephony customers of the National Telecommunications Corporation Regional 3.

All the necessary information was obtained through customer surveys, generating distribution by the province that makes up Regional 3 of the CNT E.P. mobile telephony segment. In addition, direct information is obtained from the CNT E.P. and its respective web portal.

3. Methodology

The Likert scale is used to ensure that the surveys have an appropriate measurement since it allows to measure attitudes and to know the degree of conformity of the respondent with any statement proposed, and the response categories serve to capture the intensity of the respondent's needs.

In addition, the instrument is subjected to Cronbach's alpha as a test of the fidelity of the findings and to measure the correlation between the items; the closer the alpha value is to 1, the higher the internal consistency of the items analyzed.

Finally, to test the hypothesis on qualitative information, Chi-Square is applied considering that individuals are classified into mutually exclusive categories and determine if there is an association between the variables.

3.1 Documentary review

3.1.1 Research background

The starting point in technological development goes according to the insights of consumer behavior to satisfy needs according to the characteristics of each era and technological evolution to the internal vision of each individual, discovering consumer needs.

In this sense, the advance of telecommunications by generations has started with the analogs who do not migrate; then there are the digital immigrants who, despite being born in a digital environment, have adapted to new technologies; and finally, the digital natives who have an important academic background.

Making a generational analysis, the Baby Boomers emerge between the years 1945 to 1960 with a traditional model in the use of social networks, especially Facebook, generating an indicator of preferences in the customer or consumer of this service (Gutierrez, n.d.).

Then Generation X was born between 1961 - 1980; this group uses the arrival of the Internet as a factor of evolution to position itself in its levels of predilection, making a difference with the characteristics of the consumer as the adaptation of cultural and technological phenomena of the time, being independent, reflective with a traditionalist touch (Gutierrez, n.d.).

Therefore, generation Y fits between the years 1981 -2000, enjoying the integrated technological advances that came from the Baby Boomers generation with free decision-making in search of professional achievements and adaptations to technological changes with sophisticated and independent tastes in the use of the Internet, social networks, Smartphone, demanding speed in the buying process (Gutierrez, n.d.).

Finally, consumers characterized by a technological environment and flexible to change are called Generation Z, which includes from 2000 onwards, considered digital natives, oriented to diversity, integration and awareness of the environment. Their main information tool is the Internet (texts, subjects, books online) as their main activities and sources of use. In addition, they are considered self-sufficient and dependent on non-traditional social networks, and their resources are limited due to their estimated young age (Redaccion en Tendencias, 2015).

The above shows the daily coexistence that is part of the society between families and organizations that have context in the customs and traditions of each region. In view of this, service companies must focus resources and efforts on the customer as the main axis of the business and whose relationship is closely linked to relationship marketing, thus sharing a passion for understanding and satisfying customer needs in a rapidly evolving market such as telecommunications, maintaining the constant motivation to generate lasting relationships creating value chains with the customer that will allow over time to develop new revenue for the company (Armstrong, 2012), as CNT E.P. does by boosting the customer portfolio of the other services offered through cross-selling. Therefore, it is appropriate to highlight the customer loyalty management related to the business model that is the basis on which it is created to provide and capture value, thus being the shared vision to be understandable and accepted by all members of the organization but especially the managers who must be trained in mindset insight to have a connection, sense, observation and intuition towards consumers (Pigneur, 2011). Therefore, through the dissemination and reinforcement of the organizational culture, CNT developed its different commands according to the structural organization chart.

In the framework of observation of the research and advice in the area of Telecommunications, Gartner states that the business model canvas is an accurate tool that provides a quick and effective understanding of operational details in business processes (Pigneur, 2011).

In addition, according to the business model, canvas guides to manage customer expectations, it is essential to know what value gives a service that exceeds these expectations, defining quality standards through interviews, and focus groups, among others, to consider which are the most valuable or most recognized attributes and identify possible failures or opportunities for improvement in the procedures implemented in the organization (Paredes, 2014), as one of the continuous improvement models implemented in CNT, the ISO 9001-2000 Standard in services only of fixed telephony and subscription television to date.

Implementing a management model that visualizes profitability, both in time and money, through research, development, concept testing and business analysis is important for CNT E.P., ensuring the application of margins in the organization with an objective point of view (Kotler, 2012).

Kotler (2012) cites the ten deadly sins of Marketing and analysis of the importance and limitation in correctly managing relations with stakeholders. Thus the state-owned company does not have an identification of market segments according to the products or services offered.

It should be added that the lack of identification of market segments, customer loyalty and retention programs has resulted in the migration and flight of customers from the country's mobile operators, whose decision-making process can be considered in the customer's aspirations to have something new or different.

Thus, the real purpose that should be focused on to create loyalty is to create value for the customer, delivering superior value over what is expected in monetary costs, time, and even in the relationship delivered effectively and perceived as a unique and personalized delivery capturing the customer's requirements.

According to Juan Carlos Alcaide, 2010, "the development of a policy and strategy of the organization that turns the company-customer relationship into another product and that, as such, is planned, structured, implemented, followed and cared for" (p. 32).

It is evident then that a clear vision of where you want to go through the delivery of services offered with an analysis of the consumer in the quality of service in measuring trust, empathy, and security in the services offered, evaluated through an instrument of improvement and comparative with other organizations.

3.2 Bibliometric review

A quantitative analysis of the information selected in Scopus is carried out under a bibliometric approach of the scientific production corresponding to the study of loyalty strategies and Servqual model, limited to the scientific production registered in the said platform during the period between the years 2017 and 2022 as shown in the following path:

```
TITLE-ABS-KEY ( loyalty, AND servqual AND model ) AND ( LIMIT-TO ( PUBYEAR , 2022 ) OR LIMIT-TO ( PUBYEAR , 2021 ) OR LIMIT-TO ( PUBYEAR , 2020 ) OR LIMIT-TO ( PUBYEAR , 2019 ) OR LIMIT-TO ( PUBYEAR , 2018 ) OR LIMIT-TO ( PUBYEAR , 2017 ) )
```

3.2.1 Keyword Co-occurrence

Figure 1 shows the Co-occurrence of keywords found in the publications identified in the Scopus database.

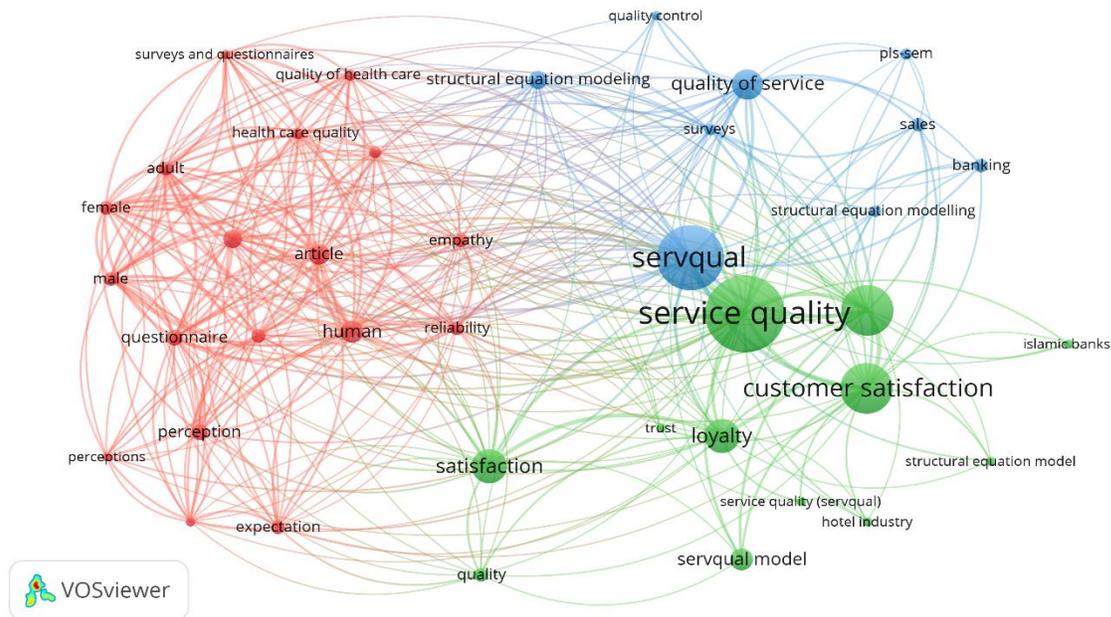


Figure 1. Co-occurrence of words

Source: Own elaboration (2023); based on data exported from Scopus.

Quality Service was the most frequently used variable in the research identified through the search performed in Scopus, directly associated with studies related to Customer Satisfaction, Loyalty, and the Structural Equation Model, which allows inferring that the expert authors in the topic proposed in this document, try to generate new knowledge about the strategies aimed at providing, by the companies, a quality service to improve the experience of their customers. On the other hand, the studies identified in Scopus include a high percentage of research projects designed to apply theories and models such as Servqual, which is also related to Service Quality and Quality Control. Furthermore, the studies

within their methodologies focused on the human component of customers through the application of questionnaires as evidenced in the keywords identified with the color red, where variables such as Empathy, Reliability, Perception, and Expectation, among others, which are usually aspects to be considered within the generation of loyalty strategies in marketing campaigns in companies.

3.2.2 Distribution of scientific production by year of publication

Figure 2 shows the distribution of scientific production according to the year of publication.

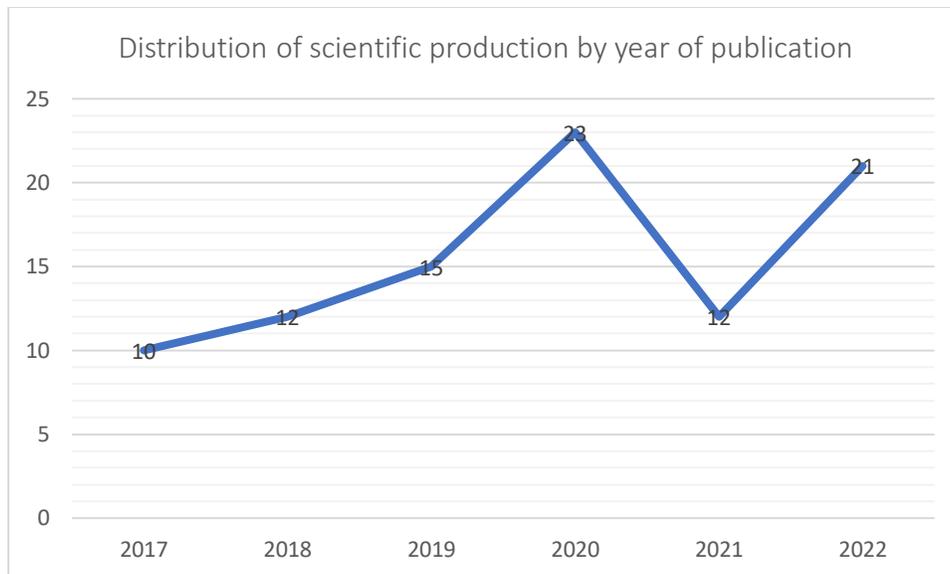


Figure 2. Distribution of scientific production by year of publication.

Source: Own elaboration (2023); based on data exported from Scopus.

Among the main characteristics of the analysis of scientific production is its distribution according to its year of publication. For the study of the variables Loyalty and Servqual Model, growth in the number of records in Scopus is identified between 2017 and 2020, going from 10 to 23 documents published in high-impact journals indexed in the Scopus database. However, there is a significant drop in the volume of publications, which for 2021 was 12. From the above, it is possible to determine that it is necessary to generate growth in the creation of new knowledge

related to loyalty processes and strategies in mobile telephony companies to design the management, new and better ways to increase the satisfaction of their users, and of course, achieve the objectives proposed by the strategic area.

3.2.3 Distribution of scientific production by country of origin.

Figure 3 shows the distribution of scientific production according to the nationality of the authors.

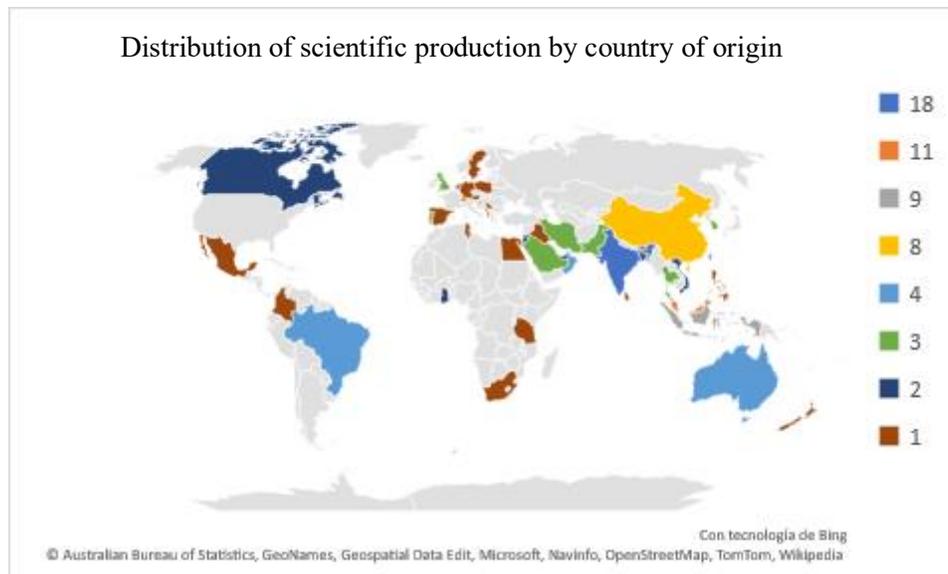


Figure 3. Distribution of scientific production by country of origin.

Source: Own elaboration (2023); based on data provided by Scopus.

India was the country with the highest number of publications indexed in Scopus, with 18 documents related to the study of loyalty strategies and the Servqual model, followed by Malaysia with 11 and Indonesia and China with 9 and 8, respectively. Therefore, it is possible to affirm that the Asian community has led the research related to the design of loyalty campaigns in mobile telephone companies, characterized by the large number of inhabitants in each of them, the needs tend to be greater. Therefore business management faces significant challenges when trying to maintain the current clientele and get new consumers of their products and services. Brazil was the Latin American country with the highest number of publications indexed in Scopus, with a total of 4 documents, so it is possible to affirm that there is still a need to encourage scientific research in this area of knowledge to improve the quality of service perceived by customers.

4. Development

The Quality Service Model

Parasuraman et al. (1985) state that perceived service quality is the customer's overall judgment of service excellence or superiority, which results

from comparing customers' expectations and perceptions.

They consider that when evaluating the quality of service and in the absence of objective criteria, it is necessary to diagnose the service provided by analyzing the client's perceptions about the service received. Therefore, the quality of service was defined as the extent of the differences or gaps between customers' expectations and their perceptions of the service provided.

The gap model defines service as a function of the disconformities between the customer's expectations of service and their perceptions of an organization's service.

The modeling process and the measurement of perceived quality are developed mainly from the research conducted by Parasuraman et al. (1985).

Servqual Model

It evaluates five aspects: reliability, responsiveness, security, empathy, and tangible elements, whose measurement can be visualized using a multiple-response scale to understand customer expectations.

It was developed in 1988 due to the absence of objective measures to determine the quality of service in companies. Zeithaml, Parasuraman and Berry, who were the creators of the technique, analyzed how to separate the service quality performance of an organization versus the service quality needs of the customer.

In addition, Servqual takes customer opinions to define the relative importance, prioritize resources and improve the criteria on the qualities of the good offered so that reliability is the most

important factor that contributes to the quality of service.

Thus, the application of the model can be performed in service industries to understand the goals according to customer needs and provide a measurement of the organization's service, in addition to its internal application, to obtain the opinion of internal customers on the quality of service.

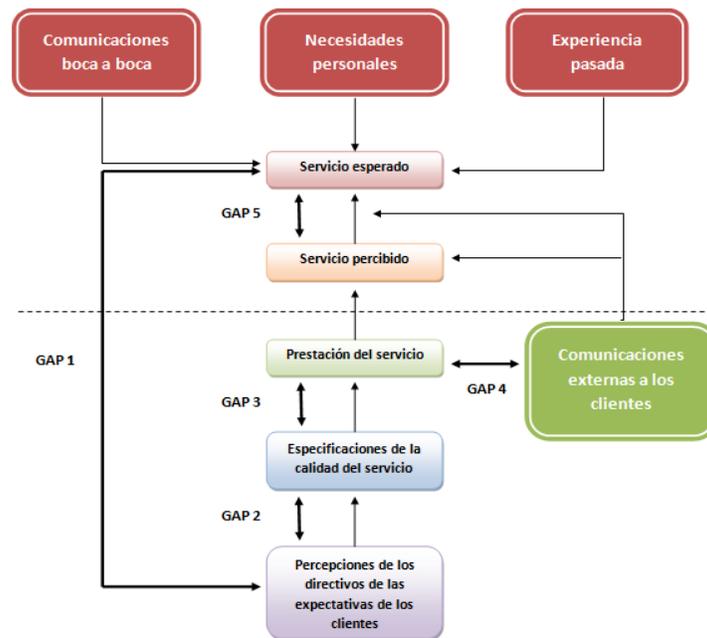


Figure 1: Service Quality Model

Source: Conceptual Model of Service Quality. Parasuraman et al. (1985).

These gaps in the model can be defined as follows Parasuraman et al. (1985):

- Discrepancy 1: Gap between user expectations and management perceptions.
- Discrepancy 2: Gap between management perceptions and quality specifications or standards.
- Discrepancy 3: Gap between service quality specifications and service delivery.
- Discrepancy 4: Gap between service delivery and external communication.

- Discrepancy 5: Gap between consumer expectations of service quality and consumer perceptions of service.

The model suggests that the latter mismatch occurs due to the above discrepancies; from this, it is possible to estimate five dimensions to improve quality: tangibility, reliability, responsiveness, assurance and empathy.

Dimensions	Representation
Tangibility	Appearance of facilities, infrastructure, equipment and materials, staff, the appearance of collaborators
Reliability	Ability to provide the service adequately and allows confidence in customers
Responsiveness	Good predisposition and willingness to help customers by providing them with quality service
Security	Courtesy of employees, ability to transmit security and confidence, security in the facilities
Empathy	Individualized attention provided by the company to its customers

Table 1. Dimensions of the Servqual Model.

Source: (SCHIFFMAN & LAZAR, 2001)

Parasuraman et al. (1985) reveal findings in their investigations of service quality dimensions: perhaps, the most revealing and most insightful that we obtained from the group sessions related to the criteria used by customers in judging service quality. They provided a wealth of information on client expectations, as reflected in the specific questions clients asked and answered in relation to their assessment of service quality. After carefully examining these questions several times, it became clear that the same general criteria underlay the groups of service-specific questions covering the four sectors. The study identified ten general criteria or dimensions: tangibles, reliability, responsiveness, professionalism, courtesy, credibility, security, accessibility, communication and customer understanding. The ten dimensions defined are not necessarily independent of each other. For example, the credibility and security facets must indeed overlap somewhat.

The placement of the ten general service quality criteria is comprehensive and appropriate for assessing quality in a wide variety of services, and

they can be heterogeneous. Therefore, although the specific evaluative criteria may vary from service to service, the general dimensions underlying these criteria are included in the ten we propose.

In summary, the following results can be obtained: to define service quality as the difference or discrepancy that exists between users' expectations and perceptions; to suggest the existence of some key factors that condition consumer expectations: word-of-mouth communication, personal needs, experiences and external communications; and to identify ten general dimensions or those required by the company under study that represent the evaluation criteria used by consumers to assess the quality of service.

Servqual is an instrument for measuring users' perceptions of the quality of services.

5. Results

First, the average of each of the 22 questions is obtained with a maximum score of 5 points and a minimum of 1 point based on the Likert scale, then the satisfaction per question is deduced, which corresponds to the ratio of the points obtained with the maximum or ideal points per question, then the satisfaction per dimension is calculated, this is the sum of the satisfactions per question divided by the number of questions that each dimension has.

The dimensions of the SERVQUAL model are classified into five:

Tangible elements: 4 questions, minimum score 4 and ideal or maximum score 20

Reliability: 5 questions, minimum score 5 and ideal or maximum score 25

Ability to answer: 4 questions, minimum score 4 and ideal or maximum score 20

Safety: 4 questions, minimum score 4 and ideal or maximum score 20

Empathy: 5 questions, minimum score 5 and ideal or maximum score 25.

The ideal scores per item are calculated to compare them with the real scores of the surveys. In this way, it will be possible to know what is the gap between the ideal and the real obtained by each dimension, in such a way that it can be estimated how much is missing to satisfy its customers completely, this through the difference obtained between the maximum points per item and the real points given by the respondents.

Loyalty Strategies

Dimension	Number of questions	Average questions	Actual points earned per dimension	Gap
TANGIBLE ELEMENTS	1	3,52	14,71	-5,29
	2	3,72		
	3	3,75		
	4	3,72		
RELIABILITY	1	3,31	17,85	-7,15
	2	3,76		
	3	3,87		
	4	3,59		
	5	3,33		
RESPONSIVENESS	1	3,87	14,84	-5,16
	2	3,60		
	3	3,73		
	4	3,64		
SECURITY	1	3,75	15,29	-4,71

	2	3,67		
	3	4,20		
	4	3,68		
EMPATHY	1	3,73	18,56	-6,44
	2	3,52		
	3	4,05		
	4	3,76		
	5	3,51		

Table 2: Analysis according to SERVQUAL Model

Source: Gabriela Tobar.

6. Conclusions

The results of applying the SERVQUAL model should lead CNT E.P. to obtain direct information on the perception of its customers and expectations during their relationship with the company.

In the search to satisfy customers' needs, in compliance with closing the gaps according to the dimensions consulted, CNT E.P. will define strategies within the different areas consulted to achieve customer loyalty.

Within the analysis of the results measured according to the dimensions of the SERVQUAL Model, strategies have been determined that will allow the public company CNT:

- Properly advertise using the components of brand equity correctly: distribution channels, end customers, employees, and media.
- The customer has a good perception of the attention of CNT's personnel in the different offices of Regional 3, providing solutions to the requirements in the response time with the correct execution of the processes defined by the company. In addition, customers will receive a quick and timely response.
- CNT will define innovative and regularly updated metrics to measure customer service efficiency and loyalty.

- It allows knowing potential clients' profiles and strategies to capture new markets and execute correct segmentations.
- CNT will diversify its equipment with high-end technology to meet customer needs.
- Customers' perception that CNT belongs to the state is positive since CNT will be able to count on the government's support. Thus, the company will have economic sustainability.
- The brand has its value, independent of the value of the product: the brand and the product form two distinct components in corporate supply strategies.

The application of continuous improvement strategies, and above all, the design of tactics that allow the company to comply with the strategies, will become a challenge for CNT to satisfy customer needs, but always from an objective point of view, considering that the company's employees are also its customers and that much of the satisfaction they feel is manifested in their eagerness to satisfy the needs of the service customers, which will always be rewarded with more loyal customers and higher profits.

CNT E.P. has tools designed to help professionally manage the planned activities and always looking for results that generate solutions to the requirements and customer satisfaction.

References

- [1] Alzamora Román, H. E. (16 de 07 de 2015). *Biblioteca virtual de Derecho, Economía y Ciencias Sociales*. Obtenido de <http://www.eumed.net/libros-gratis/2009b/534/PLAN%20DE%20MARKETING%20DEFINICION%20DE%20TERMINOS%20BASICOS.htm>
- [2] Armstrong, P. K. (2012). *Marketing*. Mexico: Pearson Education, Inc.
- [3] Blak Leland, T., & Tarquin, A. (2013). *Ingeniería Económica* (Cuarta ed.). Bogotá: Antony Bosch.
- [4] Gadotti dos Anjos, S. J. (2009). La medición de la calidad de servicio. *Revista Europea de Dirección y Economía de la Empresa*, 11.
- [5] GRONROOS, C. (1983). *Dirección Estratégica y Marketing en el Sector Servicios*. Cambridge: Marketing Science Institute.
- [6] Gutierrez, A. (s.f). http://www.cincodias.com/articulo/opinion/crisis-generacion/20080819cdscdiopi_6/.
- [7] Instituto Nacional de Estadísticas y Censos. (01 de 04 de 2016). Obtenido de <http://www.ecuadorencifras.gob.ec/indices-de-la-actividad-economica/>
- [8] Juran, J. (1964). *Managerial Breakthrough*.
- [9] Kotler, P. (2012). *Los 10 pecados capitales del Marketing*. España: Grupo Planeta.
- [10] Lopez, C. (2001). *Gestiopolis*. Obtenido de www.gestiopolis.com
- [11] Madruga Torres, A. G., Torres Pérez, M., Carballosa Torres, R., & Pérez Romero, A. (23 de 04 de 2011). *eumed.net*. Obtenido de <http://www.eumed.net/libros-gratis/2007a/250/14.htm>
- [12] MembranoMartínez, J. (2002). *Innovación y Mejora Continua según el Modelo EFQM de Excelencia*. Madrid: Díaz de Santos.
- [13] Merino, M. J. (2015). *La investigación de Mercados*. Madrid: ESIC.
- [14] Ministerio de Educación y Ciencia. (2010). *Gestión de Calidad en la Organización y Dirección de Centros Escolares*. Madrid: ESTILO ESTUGRAF IMPRESORES.
- [15] Miranda, F., & et al. (2007). *Introducción a la Gestión de la Calidad*. Las Rozas: Delta.
- [16] PARASURAMAN, A., ZEITHAML, V., & BERRY, L. (1985). *Un modelo conceptual de la calidad de servicio y sus implicaciones para la investigación futura*, 44-60.
- [17] Paredes, R. F. (01 de marzo de 2014). <http://www.gestion.com.do/>. Recuperado el 07 de 2016, de <http://www.gestion.com.do/>: <http://www.gestion.com.do/>
- [18] Pigneur, A. O. (2011). *Generación de modelos de negocio*. Barcelona: Grupo Planeta.
- [19] Quiñones, C. (2014). *Desnudando la mente del Consumidor*. Peru: Gestion 2000.
- [20] Rebecajui. (30 de agosto de 2008). <http://rebecajui.wordpress.com>.
- [21] Redaccion en Tendencias. (2015). *PuroMarketing*. Obtenido de www.puromarketing.com.
- [22] Sais, F. G. (2012). www.wikipedia.org.
- [23] SCHIFFMAN, L., & LAZAR, L. (2001). *Comportamiento del Consumidor*. México: Prentice Hall.
- [24] Stoner, F. &. (1996).
- [25] Superintendencia de Bancos. (01 de 07 de 2016). Obtenido de http://www.sbs.gob.ec:7778/practg/p_index?vp_art_id=&vp_tip=6&vp_buscr=/practg/pk_catst.p_catst?vp_tip_admn=1
- [26] Torres, A. (2013). *Academia*. Obtenido de www.academia.edu
- [27] Vasco Vasco, J. A. (2016). Calidad en el servicio en la empresas hoteleras. *Revista Científica UNEMI*, 20.
- [28] Wordpress. (2011). www.tecnocole.wordpress.com.
- [29] www.arcotel.gob.ec. (01 de 05 de 2016).
- [30] www.desarrollohumano.org.mx. (2010). www.desarrollohumano.org.mx.