



A Kano-Based Decision Framework for Evaluating Customer Satisfaction in Face-to-Face Banking Services

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ABSTRACT

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Increased competition among companies in the banking sector is a reality in the current market and is driven mainly by the increase in the number of competitors and significant changes in the services provided. In this context, customer satisfaction is a highly relevant factor. This study aims to evaluate customer satisfaction with face-to-face banking. To this end, the Kano model was used to understand which aspects of in-person banking service impact customer satisfaction, allowing improvements to be prioritized and efforts that are not being effective to identify. The attributes evaluated were aggregated into 10 dimensions – tangibility, fees, accessibility, reliability, empathy, security, frontline personnel, services provided, communication, and responsiveness—defined based on a literature review. Through data collection and analysis, these attributes were classified as one-dimensional, must-be, indifferent, or reverse. Overall, the results showed that 25 attributes were considered one-dimensional, six were classified as indifferent, two were classified as must-be, 2 as reverse, and none of the attributes were classified as attractive. It is expected that this research will contribute to understanding which attributes impact customer satisfaction with in-person banking services and which directions should be taken to improve service quality, thereby increasing user satisfaction.

1. Introduction

This study aims to assess customer satisfaction with in-person banking services to assist in decision making to improve the quality of service and increase customer satisfaction. In Brazil and globally, the banking services sector has undergone significant changes due to the entry of new players and the increasing use of online platforms, as highlighted in reports by Expert XP [1] and KPMG [2], which noted a reduction in entry barriers to the sector and the exponential growth of fintech companies in Latin America, respectively.

New players entering the sector are mostly fintech players. The Central Bank of Brazil [3] defines fintech companies as companies that bring innovation to the financial market through intensive use of technology and, consequently, have the potential to create new business models. According to

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Central Bank of Brazil [3] a study conducted involving 4,000 consumers from Latin American countries, 87% of the respondents expressed a willingness to try banking services offered by fintech companies, while only 21% indicated an intention to continue doing business with their current financial institutions.

Considering the current highly competitive scenario, traditional institutions are undergoing a process of better understanding consumers, their expectations, and their needs. In this context, customer satisfaction is essential to ensure business survival, as new entrants in this industry have already demonstrated their ability to leverage technology to achieve scale and compete with established organizations. Success depends largely on consumer preferences.

The banking and financial sectors are currently experiencing changes driven by technological advancements and the impacts of the COVID-19 pandemic, which have opened opportunities for new players to enter the market, according to a report published by Expert XP [1]. Retail banks, also known as incumbent banks, which previously had an advantage over new entrants, now face a different scenario. New competitors have achieved scale, and consequently, profitability, altering market dynamics. Thus, this study is justified by the risks faced by major banks due to the strengthening of new entrants and the critical role of customer satisfaction as a key indicator for traditional organizations to maintain their market positions. In this context, understanding customer profiles and meeting needs is critical for the survival of organizations. Thus, the present study aims to evaluate the impact of various aspects of banking services on customer satisfaction, providing insights for companies in the sector and assisting them in positioning themselves in alignment with what truly matters to their customers.

This study aims to evaluate consumer satisfaction with in-person banking services by analyzing the various aspects that constitute these services. Based on this analysis, this study seeks to generate insights for companies in this sector regarding the importance of these aspects in ensuring customer satisfaction. This study examines the profile of banking service customers and employs the Kano model to understand the characteristics that influence customer perceptions, enabling companies to define effective customer-focused strategies.

The primary objective of this study is to evaluate consumer satisfaction with in-person banking services through the application of the Kano model, considering the characteristics of this type of service. Accordingly, this study aims to provide insights for companies in the banking and financial sectors, enabling them to guide their strategies toward increasing customer satisfaction.

This study is divided into five sections. Section 2 presents the key concepts used in this study along with a literature review on in-person banking services, which informed the selection of the attributes to be studied. Section 3 details the research execution, including the development of the questionnaire and data collection process. Additionally, it outlines the analyses conducted on the demographic and consumption profiles of respondents as well as the results obtained based on the classification proposed by the Kano Model. Section 4 presents and discusses the results. Finally, Section 5 concludes the paper, highlights its limitations, and offers suggestions for future research.

2. Service quality and Kano model

The definition of a service varies significantly. According to Lovelock and Wright [4], services are activities offered by one party to another for economic purposes, where the beneficiary expects to achieve the desired outcomes in themselves, objects, or other goods. Conversely, Fitzsimmons and Fitzsimmons [5] defined services as perishable and intangible experiences delivered to consumers who actively participate as co-producers.

The proposed definitions share the characteristics of intangibility and simultaneous consumption associated with the concept of services. According to Slack et al. [6], service operations can be organized in three ways based on volume and variety: professional services, service shops, and mass services.

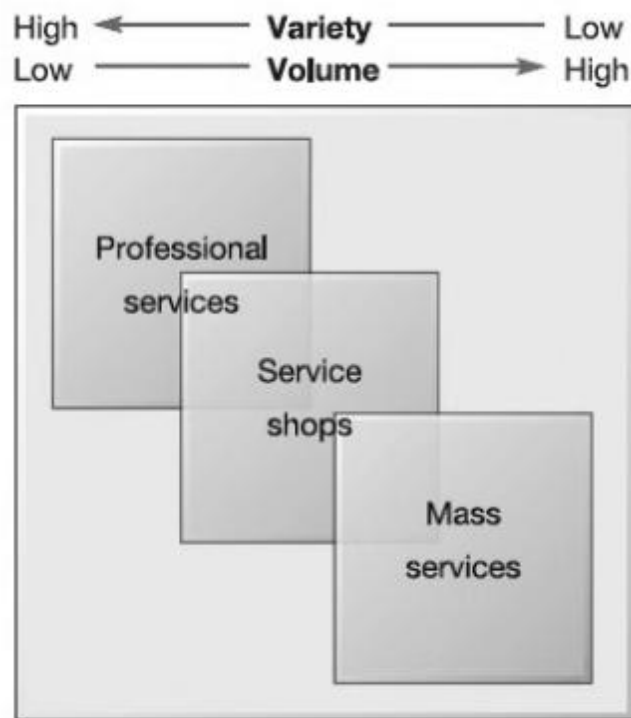


Fig. 1. Types of processes in service operations. Source: Adapted from Slack et al. [6]

The authors define professional services as high-contact organizations where customers spend significant amounts of time involved in the service process. As illustrated in Figure 1, this type of service is characterized by high variety, addressing the customization demands of consumers. Consequently, a considerable amount of time is spent on each customer, which affects service volume.

On the other extreme, mass services tend to have high volume, limited contact, and low customization. In contrast to professional services, they are more "product oriented." Finally, service shops are positioned between professional and mass services, in which services are delivered through a combination of front-line and back-office activities. These services involve a moderate level of customer contact and customization while handling considerable customer volume; banks are included in this category.

Kano [7] proposes a model that is now widely used to understand customers' needs and expectations, enabling companies to develop products and services that more effectively meet market demands. The Kano model is a useful tool for understanding customer needs and their impact on customer satisfaction [8].

The Kano model classifies attributes into five categories: must-be, attractive, one-dimensional, indifferent, and reverse. Must-be attributes are essential and expected of customers; their absence causes dissatisfaction, but their presence merely meets basic expectations. One-dimensional attributes have a direct impact on customer satisfaction, and their presence is positively perceived. The better the performance, the higher the satisfaction is. Attractive attributes positively surprise

customers, generate additional satisfaction, and create a competitive advantage; their absence does not cause dissatisfaction. Indifferent attributes do not significantly affect customer satisfaction, whether present or absent. Finally, reverse attributes are those that, when present, cause dissatisfaction as they contradict customer expectations.

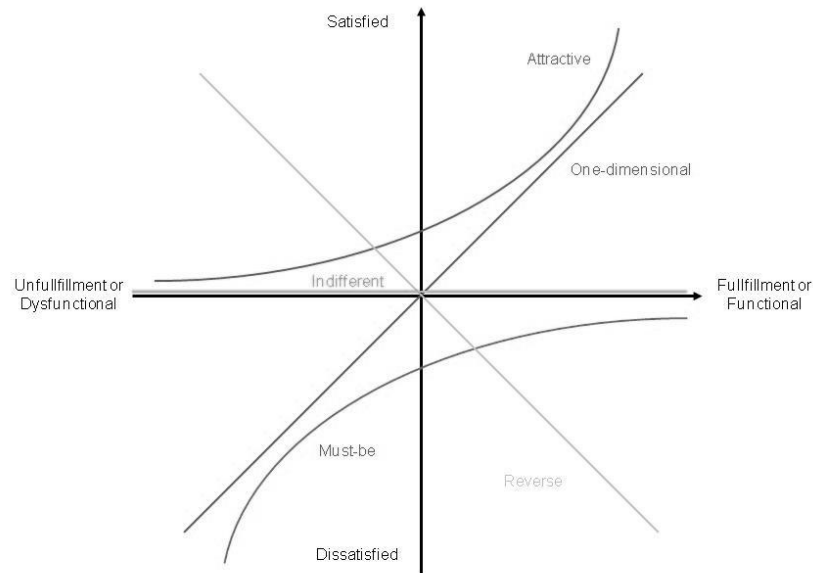


Fig.2. Kano model for identifying attributes. Source: Adapted from Sant'ana and Tontini [9]

2.1. Customer satisfaction

Peng and Li [10] investigate the relationship between the service provided by bank employees and customer satisfaction with banking services. The authors adapted the generic SERVQUAL model to conceptualize service quality delivered by employees and predict its impact on customer satisfaction in the banking context, considering four dimensions: reliability, responsiveness, assurance, and empathy. The study involved 230 participants, and the results confirmed that employee reliability, assurance, and responsiveness contributed to customers' positive perception and satisfactory evaluation of banking services, excluding employee empathy from the modified SERVQUAL model.

Hosen et al. [11] present in their article a measurement of customer satisfaction levels by analyzing the gap between customer expectations and perceptions regarding service quality. This study aimed to identify the priority factors in banking services to address the declining satisfaction levels at the bank where the research was conducted. The findings indicate that the primary criteria for customer satisfaction are service accessibility, pricing, service interruptions, technological sophistication, and product variety. Additionally, compliance with Sharia (the Islamic legal system) was identified as a critical factor given that the study was conducted in an Islamic bank.

Fernandes and Pinto [12] focused on analyzing Relationship Quality (RQ) in financial services. Based on data collected from 227 retail banking customers and considering various criteria, this study aims to understand the role of customer experience in RQ in the retail banking sector and its impact on relational outcomes.

Ngo et al. [13] discuss the importance of service innovation for the survival of organizations in a competitive landscape driven by technological advancements. The authors developed a new methodology for evaluating service innovation in banking, focusing on customer perspective. This study aims to address the challenge of assessing service innovation by proposing criteria that specifically emphasize service innovation and highlight factors associated exclusively with this dimension.

Sayil et al. [14] conducted a study in the Turkish retail banking sector to examine the relationships between components of relationship marketing, such as trust, competence, commitment, communication, and conflict management, along with factors like relationship investment, relationship quality, perceived customer value, satisfaction, and loyalty. Using data from 685 retail banking customers, the study concluded that relationship marketing fosters loyalty through relationship quality, customer value, and satisfaction, emphasizing the importance of elements such as trust, communication, and relationship investment. Relationship investment and relationship quality have emerged as the most significant factors in developing customer value, satisfaction, and loyalty, highlighting the prominent influence of the emotional dimension on perceived value and customer fidelity. Šević et al. [15] proposed an evaluation of the impact of service value factors on customer satisfaction and, ultimately, on customer loyalty, focusing specifically on Serbian entrepreneurs. Using a questionnaire consisting of descriptive questions and a five-point Likert scale, the authors collected 281 valid responses obtained. The study found that quality, personal relationships, readiness, leadership, and perceived costs significantly influenced banking users' satisfaction, which in turn translated into lasting loyalty to the dominant bank used in daily routines or personal business operations.

Dinçer et al. [16] emphasizes the importance of measuring service quality for corporate competitiveness and proposes using a SERVQUAL-based Balanced Scorecard to classify competitors in the banking sector. This study considers eight distinct criteria expected by consumers regarding the quality of banking services. The analysis aims to identify the most relevant factor within the SERVQUAL dimensions, offering a clear perspective on the types of actions banks should undertake to align better with customer expectations.

Unes et al. [17] present an analysis of strategies adopted by bank branches in the city of Uberaba, Brazil, focusing on the attributes clients consider most important when choosing banking services. Using semi-structured interviews, the study gathered information about the attributes that banks prioritized to attract and retain customer loyalty. According to the findings, the order of importance of attributes in the decision-making process was as follows: service fees and charges, service quality, ease of access to bank branches and ATMs, range of services offered, waiting time, availability of bank branches, and comfort of the environment.

Jin and Liu [18] analyzed the service quality of a branch of the Industrial and Commercial Bank of China using the SERVQUAL method. This study focused on the five dimensions proposed by the model - tangibility, reliability, responsiveness, assurance, and empathy - through a set of 22 questions answered by participants. In addition to the SERVQUAL method, this study employs process capability analysis and queuing theory to assess the service quality of a branch. The findings were used to propose an improvement plan aimed at enhancing the service quality and customer satisfaction.

Costa Filho et al. [19] conducted a study to evaluate the experiences of high-income individual clients in the financial industry. This research involved developing a model with five hypotheses regarding the relationship between service quality, satisfaction, switching costs, and loyalty. Using data from 216 clients of a major financial institution, this study highlights the importance of these

constructions in shaping customer experience in banking services. These results indicate that loyalty and switching costs are significantly influenced by service quality and customer satisfaction.

Mulla et al. [20] conducted a study focusing on the impact of operational efficiency and customer satisfaction on the performance of Islamic banks in the United Arab Emirates (UAE). They examined seven criteria related to operational efficiency and seven criteria related to customer satisfaction by employing Structural Equation Modeling to identify critical associations and interactions among the tested factors. The proposed model, which demonstrated good data fit, explained 39% of the variation in the performance of Islamic banks. Multivariate analysis revealed that operational efficiency has a more significant impact on the performance of Islamic banks than on customer satisfaction. Vinaya Laxmi et al. [21] conducted a study to investigate the factors impacting customer satisfaction in the Indian banking sector, focusing specifically on the State Bank of India (SBI). A questionnaire distributed to SBI customers yielded 195 responses, of which 150 were deemed valid. From this analysis, six influential factors related to customer satisfaction with the services provided were identified. These findings underscore the importance of improving service quality to enhance customer satisfaction and retention, offering valuable insights into effective banking strategies. Based on this review, Table 1 was developed to relate the evaluated attributes to their respective authors.

Table 1

Attributes evaluated in the literature.

Attributes	Authors
Access	[11]
Competence	[14]
Commitment	[14]
Communication	[14]
Reliability	[10, 11, 18, 19, 21]
Trust	[14]
Market demand for compliance/customized services according to customer needs.	[15, 16]
Cost or Financial	[11,15, 16, 21]
Switching Costs	[19]
Efficiency	[16]
Operational Efficiency	[20]
Empathy	[10, 18, 19, 21]
Assurance	[10, 11, 18, 19, 21]
Conflict Management	[14]
Moments of Truth	[12]
Automated Service Options	[13]
Leadership Role	[15]
Frontline Staff	[12]
Convenience	[15]
Easy-to-Use Products / Services	[16]
Proximity to Customers / Emotional Value	[16]
TI Systems Quality	[16]
Responsiveness	[10, 18, 19, 21]
Physical Security	[16]
Provided Services / Service Portfolio / Creative Service Packages / Product Offerings	[11, 12, 13, 17]
Customer Support	[13, 16]
Tangibility and Environment	[11,12, 17, 19, 21]
Service Fees and Charges	[17]

Waiting Time	[11, 17]
Functional Value	[14]
Social Value	[14]

3. Material and methods

Regarding the data, the research is a survey-type study, as questionnaires were used, with the aim of collecting information from a sample to describe, compare, or analyze the characteristics and behaviors of individuals [22, 23]. The population considered for this research encompasses consumers of in-person banking services to understand their experiences regarding the service provided. Moreover, the sampling plan was considered a non-probability convenience sampling [22, 23].

3.1. Survey instrument

The data collection method employed consisted of a questionnaire developed based on the model proposed by Kano [7], which encompasses two dimensions: performance and satisfaction. Two questions were included to evaluate performance, each representing the functional and dysfunctional perspectives of a specific attribute. This approach assesses consumer satisfaction in the presence and absence of service characteristics. These questions used a Likert scale ranging from 1 to 5, associating the alternatives "Very poor" and "Very good" with the numbers 1 and 5, respectively.

The evaluated attributes were selected from the reference articles presented in Section 2 of this study, which were published in the Web of Science and Scopus databases. However, to reduce the length of the questionnaire for a higher response rate, the characteristics addressed were only those found in the articles from the Web of Science database, totaling a total of 35 attributes, as presented in Table 2.

Additionally, questions regarding the respondents' demographic and consumption profiles were included to understand the characteristics of the analyzed group. Finally, questions on the overall evaluation of consumer satisfaction with the services provided were added. At the end of the first version of the questionnaire, researchers from the Planasp Research Group at UFPE participated in a pilot test round, suggesting modifications to be incorporated into the final version.

Table 2
 Attributes evaluated in this research

Dimension	Question	Factor	Reference
Tangibility	1	Pleasant environment	[12, 21]
	2	Cleanliness of the environment	[11, 18]
	3	Attractiveness of physical facilities	[11, 12]
	4	Modernity and sophistication of equipment	[11, 13, 15, 18]
	5	Accessible location	[12, 17, 21]
Rates	6	Low rates	[11, 16, 17, 20, 21]
	7	Balance between rates and service	[11]
Access	8	Existence of service channels that facilitate contact	[13]
	9	Ease of contact	[11]
	10	Availability of services to all clients	[11]
Reliability	11	Service provided within promised time	[18]
	12	Accuracy of details and documentation	[11, 18]
	13	Time taken to correct errors	[12]
	14	Sense of trust conveyed to the client	[11, 14]
Empathy	15	Regular communication about service aspects (e.g., waiting time, availability, offers)	[18]
	16	Meeting clients' special needs	[13]
	17	Staff who understand client needs	[18]
Security	18	Concern with protecting client data and information	[11]
	19	Secure location	[16]
	20	Trustworthy staff	[18]
	21	Service availability	[11]
Frontline Staff	22	Staff always available and willing to help	[12]
	23	Polite, courteous, and friendly staff	[12, 18]
	24	Well-dressed staff	[18]
	25	Well-trained, competent, and experienced staff	[11]
Services Offered	26	Variety of services offered	[12]
	27	Automated service options	[13]
	28	Products that meet specific needs	[12, 15]
	29	Addition of new products/services to the portfolio	[13]
Communication	30	Communication of new banking products and services	[12, 15]
	31	Communication of products and services aligned with client income and financial situation	[15]
	32	Communication of rate changes for all services	[15]
Responsiveness	33	Accuracy of information provided by staff	[18]
	34	Proactivity of staff	[18]
	35	Waiting time to be attended	[17, 18]

3.2. Data collection

The questionnaire was distributed via the social media platforms Instagram and WhatsApp between December 27, 2023, and January 18, 2024. A total of 133 respondents participated, all of whom consented to participate in the study by selecting the "Agree" option on the first question of

the form. Among the 133 respondents, four individuals reported never having used in-person banking services; therefore, their responses were excluded. The remaining 129 valid respondents were residents of northeast Brazil. The respondents' profiles are listed in Table 3.

Table 3
 Profile of 129 respondents

Characteristics	Groups	Frequency	Percent (%)
Gender	Female	51	40.0
	Male	78	60.0
Age	From 18 to 27 years	53	41.08
	From 28 to 43 years	22	17.05
	From 44 to 59 years	44	34.10
	From 60 to 65 years	10	7.75
Education	Elementary school	1	0.8
	High school	12	9.3
	Incomplete higher education	31	24.0
	Complete higher education	46	35.7
	Postgraduate education	39	30.2

In addition to questions about respondents' profiles, their consumption habits were also addressed in the survey. Participants were asked about the number of banks they were customers of, and the results showed that 13.2% were customers of only one bank, 34.1% were customers of two banks, 34.1% were customers of three banks, and 18.2% were customers of four or more banks. Participants were asked whether they had accounts in digital banks, with 76% confirming that they were customers of digital banks, and 24% responding negatively. Additionally, respondents were asked which type of service—digital or in-person—they used more frequently. Among the valid responses, 92% indicated that they used digital services more often, 2% stated that they primarily used in-person services, and 6% reported using both types of services with the same frequency.

Regarding consumption habits, participants were asked about the frequency of their visits to banks or bank branches. Among the respondents, 76% reported visiting less than once a month, 15% visited once a month, 2% visited twice a month, 3% visited three times a month, and 4% reported visiting four or more times per month. Concerning the bank or branch visited during the participants' most recent use of in-person banking services, 66% indicated that the service was provided by a private bank, while 34% reported that it was provided by a public bank.

4. Results

4.1. Evaluation of quality considering demographic profile and consumption habits

An analysis was conducted considering respondent characteristics, such as gender and age, to understand whether these factors influence user satisfaction with the services provided by the bank or branch. When responding to the statement, "I am very satisfied with the overall service of this bank," users could indicate that they totally agree, agree, disagree, or totally disagree.

Table 4
 User opinions on overall satisfaction with the service by gender

Options	Percent (%)	
	Female	Male
Strongly Disagree	6	8

Disagree	29	27
Agree	55	46
Strongly Agree	10	19

The results presented above do not indicate gender differences, as similar percentages were found for both male and female respondents. The same question was analyzed for different age groups, revealing some trends. Respondents aged between 60 and 65 years predominantly provided positive responses regarding their overall satisfaction with the bank. Additionally, participants aged between 18 and 27 years mostly provided less extreme answers, indicating less frequent selection of the options "Strongly Agree" and "Strongly Disagree".

Table 5
 User opinions on overall satisfaction with the service by age

Options	Age group percent (%)			
	18 to 27 years	28 to 43 years	44 to 59 years	60 to 65 years
Strongly Disagree	9	0	7	10
Disagree	26	36	32	0
Agree	58	41	41	60
Strongly Agree	7	23	20	30

4.2. Consumption habits and satisfaction

The respondents' consumption habits were also evaluated to understand their potential relationship with satisfaction with the services provided. Respondents could choose one of four options: "Strongly Agree," "Agree," "Disagree," and "Strongly Disagree," in response to the statement "Disagree" or "Strongly Disagree". The relationship between the answer to this question and factors such as the type of bank, frequency of visiting physical bank branches, and the type of service most frequently used were analyzed.

When evaluating whether the results showed a relationship between the type of bank visited during the respondents' last use of in-person banking services and their satisfaction, similar results were observed for both public and private banks. However, a notable difference was found in the percentage of responses corresponding to 'Strongly Agree,' which was 20% for private banks and 11% for public banks. This indicates that respondents tend to express greater satisfaction when using private banks.

Table 6
 User opinions on overall satisfaction with the service by type of bank

Options	Percent (%)	
	Private Bank	Public Bank
Strongly Disagree	7	8
Disagree	27	31
Agree	46	50
Strongly Agree	20	11

Considering the type of service most frequently used, it was observed that users who utilized in-person services more frequently did not indicate either total disagreement or total agreement when asked if they were satisfied with the service provided during their last visit. The majority tended to indicate that they agreed to be generally satisfied with the services provided.

Table 7
 User opinions on overall service satisfaction by most frequently used service

Options	Percent (%)		
	Digital services	In-Person Services	Use both equally
Strongly Disagree	6	0	25
Disagree	28	33	25
Agree	49	67	50
Strongly Agree	17	0	0

Finally, consumption frequency was analyzed. From this, it was noticeable that none of the users who reported visiting banks or bank branches twice a month or more indicated total disagreement regarding the high quality of the service. Additionally, it is worth highlighting that 100% of the participants who stated they use in-person banking services three times a month agreed with the proposed statement, and 75% of the respondents who visit banks more than four times a month indicated agreement or strong agreement with the proposed statement.

Table 8
 User opinions on overall service satisfaction by percentage of consumption frequency (%)

Options	Percent (%)				
	Less than once a month	Once a month	Twice a month	Three times a month	More than four times a month
Strongly Disagree	13	19	0	0	0
Disagree	35	18	50	0	25
Agree	41	38	50	100	25
Strongly Agree	11	25	0	0	50

4.3. Classification of attributes

The data collected through the questionnaire were used for the classification of attributes conducted using the Kano Calculator application [24]. This application requires input in the form of a spreadsheet containing responses to functional and dysfunctional questions scored on a scale from 1 to 5, which were gathered at the conclusion of the questionnaire application. Figure 3 presents the attribute classification criteria.

		Dysfunctional				
		1. Like	2. Must-be	3. Neutral	4. Live-with	5. Dislike
Functional	1. Like	Q	A	A	A	O
	2. Must-be	R	I	I	I	M
	3. Neutral	R	I	I	I	M
	4. Live-with	R	I	I	I	M
	5. Dislike	R	R	R	R	Q

A = Attractive; O = One-dimensional; M = Must-be; I = Indifferent; Q = Questionable; R = Reverse.

Fig. 3 Attribute classification criteria. Source: Adapted from Becerra et al. [25]

Based on this input, the application analyzed each response and classified the factor into one of the Kano categories. These include basic, performance, and excitement attributes, as illustrated in the figure below. The classification also considers the "questionable" category, which highlights inconsistencies in responses and provides a more nuanced understanding of the attributes under study. Table 9 presents the classification of attributes in the Kano model.

In the "Tangibility" dimension, it was observed that three of the attributes that make it up were relevant for evaluating the quality from the participants of the research: the factor "Pleasant environment" was classified as mandatory, the factors "Clean environment" and "Accessible location" were classified as one-dimensional, and finally, the criteria "attractive physical facilities" and "modernity and sophistication of the equipment" were categorized as indifferent. The results presented are like those found in the literature by Fernandes and Pinto [12] and Hosen et al. [11], who evaluated the "Environment" and "Tangibility" dimensions, respectively, considering criteria like those assessed in the present research and demonstrated a correlation between the dimension and the service quality evaluation.

Table 9
 Classification of attributes in the Kano model

Dimensions	Attributes	M	O	A	I	R	Q	Category
Tangibility	Pleasant environment	42	35	16	26	3	7	Must-be
	Clean environment	48	53	8	17	2	1	One-dimensional
	Attractive physical facilities	35	25	19	46	3	1	Indifferent
	Modern and sophisticated equipment	36	30	20	38	2	3	Indifferent
	Accessible location	42	44	12	27	3	1	One-dimensional
Tariffs	Low tariff	46	58	4	10	2	9	One-dimensional
	Balance between tariffs and service	53	41	8	21	0	6	Must-be
Access	Presence of service channels that facilitate contact	32	70	5	18	0	4	One-dimensional
	Ease of contact	35	70	4	17	1	2	One-dimensional
	Availability of services to all clients	36	46	22	22	0	3	One-dimensional
Reliability	Service delivered within the promised time	28	76	8	12	1	4	One-dimensional
	Accuracy of details and documentation	32	63	9	22	1	2	One-dimensional
	Time taken to correct errors	13	8	2	32	50	24	Reverse
	Trust conveyed to the customer	32	65	10	12	3	7	One-dimensional
Empathy	Regular communication of service aspects (e.g., waiting time, availability, offers)	29	50	17	28	0	5	One-dimensional
	Addressing special customer needs	30	59	11	26	1	2	One-dimensional
	Staff understanding customer needs	27	64	15	21	0	2	One-dimensional
Security	Concern for the protection of customer data	29	77	9	13	0	1	One-dimensional
	Secure location	26	62	13	27	0	1	One-dimensional
	Reliable staff	36	75	6	12	0	0	One-dimensional
	Service availability	24	61	18	24	0	2	One-dimensional
Frontline Staff	Staff always available and willing to help	36	71	7	14	0	1	One-dimensional
	Polite, courteous, and friendly staff	36	78	2	12	0	1	One-dimensional
	Well-dressed staff	26	32	15	55	0	1	Indifferent
	Well-trained, competent, and experienced staff	32	73	9	15	0	0	One-dimensional
Services Offered	Variety of services offered	25	40	26	36	0	2	One-dimensional
	Options for automated service	26	61	19	20	1	2	One-dimensional
	Products meeting specific needs	22	59	24	22	0	2	One-dimensional
	Addition of new products/services to the portfolio	22	38	13	54	1	1	Indifferent
Communication	Communicates new banking products and services	36	25	11	55	1	1	Indifferent
	Communicates products aligned with customer profile	28	26	19	50	3	3	Indifferent
	Communication of tariff changes for all services	36	60	10	18	2	3	One-dimensional
Responsiveness	Accuracy of information provided by staff	24	68	11	20	4	2	One-dimensional
	Proactiveness of staff	28	61	13	23	2	2	One-dimensional
	Waiting time to be attended	19	15	3	23	45	24	Reverse

Note: M: Must-be; O: One-dimensional; A: Attractive; I: Indifferent; R: Reverse; Q: Questionable.

The factors "Low tariff" and "Balance between tariffs and service," which make up the Tariffs' dimensions, were classified as one-dimensional and mandatory, respectively. These results demonstrate a high importance of the criterion for the quality evaluation, like what has already been shown by Hosen et al. [11] and Šević et al. [15], who concluded in their studies that this attribute is considered important by customers and significantly impacts their satisfaction with the service.

The criteria considered within the "Access" dimensions were classified as one-dimensional, indicating that the more accessible the bank, the greater the customer satisfaction. Among the factors that make up the "Reliability" dimension, "Service delivered within the promised time," "Accuracy of details and documentation," and "Trust conveyed to the customer" were classified as one-dimensional, also demonstrating a proportional relationship between their presence and customer satisfaction. However, the factor "Time taken to correct errors" was classified as reverse, indicating that the longer the time for error correction, the greater the dissatisfaction. The findings by Jin and Liu [18] regarding this dimension show a gap between customer expectations and perceptions, which, considering the category of these factors, the study highlights an opportunity for improvement for companies providing banking services. All factors categorized under the dimensions "Empathy" and "Security" were classified as one-dimensional, also indicating opportunities to increase satisfaction by improving these criteria.

The "Frontline Staff" and "Services Provided" were also evaluated by Fernandes and Pinto [12]. Their conclusions demonstrated that these aspects showed a weaker correlation among the dimensions evaluated; however, they were still significant in assessing quality. Among the factors considered, only "Well-dressed staff" and "Addition of new products/services to the portfolio" were classified as indifferent, while the remaining factors were deemed one-dimensional. Among the factors considered under the "Communication" dimension, only the criterion "Communication of tariff changes for all services" was classified as one-dimensional, while the others were considered indifferent.

Finally, within the "Responsiveness" dimension, the factors "Accuracy of information provided by staff" and "Proactiveness of staff" were classified as one-dimensional, while the criterion "Waiting time for service" was classified as reverse. This dimension, also evaluated by Jin and Liu [18], revealed a gap between customer expectations and perceptions, indicating a potential impact through improvements in these factors. It is noteworthy that none of the attributes analyzed were classified as attractive, meaning that, among the factors explored, none were perceived by the survey participants as a service element capable of exceeding user expectations.

4.4. Satisfaction and dissatisfaction index

Considering the respondents' answers and the classification of attributes, it was possible to calculate and analyze the Satisfaction Index (SI) and Dissatisfaction Index (DI). As the results included reverse attributes, the calculation of these indices was performed using the methodology proposed by Albuquerque, Melo, and Medeiros [26], with the equations for the satisfaction and dissatisfaction indices presented below, respectively.

$$SI = \frac{A + O}{A + O + M + I + R} \quad (1)$$

$$DI = \frac{M + O + R}{A + O + M + I + R} \quad (2)$$

Table 10
 Satisfaction and dissatisfaction indices of attributes

Dimensions	Attributes	SI	DI
Tangibility	Pleasant environment	0,41803	0,65574
	Clean environment	0,47656	0,80469
	Attractive physical facilities	0,34375	0,49219
	Modern and sophisticated equipment	0,39683	0,53968
	Accessible location	0,43750	0,69531
Tariffs	Low tariff	0,51667	0,88333
	Balance between tariffs and service	0,39837	0,76423
Access	Presence of service channels that facilitate contact	0,60000	0,81600
	Ease of contact	0,58268	0,83465
	Availability of services to all clients	0,53968	0,65079
Reliability	Service delivered within the promised time	0,67200	0,84000
	Accuracy of details and documentation	0,56693	0,75591
	Time taken to correct errors	0,09524	0,67619
	Trust conveyed to the customer	0,61475	0,81967
Empathy	Regular communication of service aspects (e.g., waiting time, availability, offers)	0,54032	0,63710
	Addressing special customer needs	0,55118	0,70866
	Staff understanding customer needs	0,62205	0,71654
Security	Concern for the protection of customer data	0,67188	0,82813
	Secure location	0,58594	0,68750
	Reliable staff	0,62791	0,86047
	Service availability	0,62205	0,66929
Frontline Staff	Staff always available and willing to help	0,60938	0,83594
	Polite, courteous, and friendly staff	0,62500	0,89063
	Well-dressed staff	0,36719	0,45313
	Well-trained, competent, and experienced staff	0,63566	0,81395
Services Offered	Variety of services offered	0,51969	0,51181
	Options for automated service	0,62992	0,69291
	Products meeting specific needs	0,65354	0,63780
	Addition of new products/services to the portfolio	0,39844	0,47656
Communication	Communicates new banking products and services	0,28125	0,48438
	Communicates products aligned with customer profile	0,35714	0,45238
	Communication of tariff changes for all services	0,55556	0,77778
Responsiveness	Accuracy of information provided by staff	0,62205	0,75591
	Proactiveness of staff	0,58268	0,71654
	Waiting time to be attended	0,17143	0,75238

Based on the indices presented above, it is possible to notice that attributes classified as must-be, such as "Pleasant environment" and "Balance in relation to the service," have moderate satisfaction indices but elevated dissatisfaction indices. This indicates that these attributes are perceived as prerequisites by customers, meaning that their absence leads to dissatisfaction, whereas their presence does not significantly increase satisfaction.

One-dimensional attributes showed high satisfaction and dissatisfaction. For example, "Service delivered on time" has an SI of 0.67 and a DI of 0.84, indicating that these attributes directly impact both satisfaction and dissatisfaction. This confirms that customer perceptions regarding these attributes vary linearly: the better the performance, the higher the satisfaction; and the worse the performance, the higher the dissatisfaction. Indifferent attributes, such as "Well-dressed employees" and "Addition of new products/services to the portfolio," showed low value for both indices. This indicates that these factors do not significantly impact the customer experience, either positively or negatively.

Finally, reverse attributes, such as "Time for error correction" and "Waiting time to be attended," show extremely low satisfaction indices and high dissatisfaction indices, demonstrating that these attributes strongly contribute to dissatisfaction when present or when they do not meet minimum expectations. This analysis confirms the proposed Kano model. Mandatory attributes play a role in preventing dissatisfaction, but do not generate customer delight. One-dimensional attributes directly impact on customer perception; thus, improving them increases satisfaction, and their absence intensifies dissatisfaction. Indifferent attributes, on the other hand, do not have a significant impact, either positive or negative on customer experience. Conversely, reverse attributes strongly contribute to dissatisfaction when present, or when they fail to meet minimum expectations, underscoring the need to avoid them.

From the data collection and analysis conducted in this study, it was possible to classify the 35 evaluated attributes. Using the Kano Calculator application, 25 attributes were categorized as one-dimensional, six as indifferent, two as must-be, and two as reverse, with a notable absence of attractive attributes. One hypothesis regarding the absence of these attributes in the research is the familiarity of users with the type of service being evaluated. Therefore, it is difficult for these characteristics to surprise consumers.

5. Conclusions

This study aimed to evaluate consumer satisfaction with in-person banking services through the application of the Kano model. This goal was achieved by collecting data through a questionnaire that addressed a comprehensive set of 35 attributes previously referenced in the literature. The use of the Kano Calculator tool facilitated the classification of the factors into the categories proposed by the model. The results obtained from the Kano model revealed that among the 35 attributes evaluated, 25 were classified as one-dimensional, with attributes from this category observed across all dimensions assessed. Organizations should prioritize these attributes, as their presence is directly proportional to user satisfaction. Conversely, no attributes were classified as attractive, indicating that according to the users, the analyzed factors would not exceed their expectations.

Among the remaining attributes, six were classified as indifferent and distributed across the dimensions of Tangibility, Communication, Frontline Staff, and Services Provided. According to the participants, these attributes do not significantly impact user satisfaction, regardless of their presence or absence, and therefore do not justify investment. Additionally, two attributes were classified in reverse: waiting time for service and time to correct errors, categorized under the dimensions of Reliability and Responsiveness, respectively. These factors demand attention because they cause dissatisfaction when present and satisfaction when absent. Furthermore, the attributes

of a pleasant environment and balance between fees and service were classified as mandatory, requiring careful attention because they represent minimum requirements for user satisfaction and generate dissatisfaction when absent.

In addition to the classification of factors, this study also examined the relationship between respondents' demographic characteristics, consumption habits, and satisfaction levels. Therefore, this research provides valuable insights into the strategies that should be adopted concerning the evaluated factors, considering their respective classifications. It also highlights the relationship between consumer profile and satisfaction. These findings have the potential to guide strategies and policies in the banking sector with the aim of enhancing consumer experience and increasing satisfaction with the services offered.

The analysis conducted in this study had limitations owing to the sample size and non-probabilistic convenience sampling design. Most respondents reported living in a city within the Recife Metropolitan Region or in the interior of Pernambuco. As a suggestion for future research, it is recommended to explore other methodologies that assess the impact of different service aspects on consumer satisfaction to obtain a deeper understanding of how these factors interrelate. Moreover, it is equally important for banking sector organizations to understand and compare the evaluation of in-person and digital services, given that most incumbent banks offer both physical branches and online service options.

Author Contributions

Conceptualization, C.M.S., A.A.L.B and D.M.M. methodology, C.M.S., A.A.L.B. and D.M.M. software, C.M.S., A.A.L.B. and D.M.M. validation, A.A.L.B., R.S.M.C.C., F.J.C.M. and D.M.M. formal analysis, C.M.S., A.A.L.B, R.S.M.C.C., F.J.C.M. and D.M.M. investigation, C.M.S., A.A.L.B. and D.M.M. resources, C.M.S., A.A.L.B. and D.M.M. data curation, C.M.S., A.A.L.B. R.S.M.C.C., F.J.C.M. and D.M.M. writing—original draft preparation, C.M.S., A.A.L.B., R.S.M.C.C., F.J.C.M. and D.M.M. writing—review and editing, C.M.S., A.A.L.B., R.S.M.C.C., F.J.C.M. and D.M.M. visualization, A.A.L.B., R.S.M.C.C., F.J.C.M. and D.M.M. supervision, A.A.L.B. and D.M.M. project administration, A.A.L.B. and D.M.M. funding acquisition, A.A.L.B. and D.M.M. All authors have read and agreed to the published version of the manuscript.” Authorship must be limited to those who have contributed substantially to the work reported.

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Data Availability Statement

All the data used is included in the paper.

Conflicts of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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