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ANALYZING THE RELATIONSHIP BETWEEN SERVQUAL MODEL, CUSTOMER SATISFACTION, AND LOYALTY IN ALGERIAN BANKING SECTOR USING PLS-SEM

Abstract: *This study aims to explore the three main dimensions of the SERVQUAL model, namely reliability, assurance, and tangibility, and analyze the casual relationship with customer satisfaction and loyalty in the Algerian banking sector. For this, a sample of 253 clients of three public banking institutions in Algiers was analyzed. The measurement and structural models were evaluated using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique. The results indicate that banking service quality and consumer satisfaction are essential factors in customer loyalty. The values of R^2 (60.2% in the variation of consumer loyalty and 52.7% in the variation of consumer satisfaction) make the confirmatory model relevant. The findings indicate that reliability and tangibility significantly impact customer satisfaction and loyalty in Algerian banks. Therefore, Algerian banks must recognize the significance of customer satisfaction and quality of service in fostering customer loyalty and improving the industry's overall quality of service.*

Keywords: *service, quality, satisfaction, loyalty, PLS-SEM, Algerian banking sector*

1. Introduction

Developing and implementing strategies that significantly impact service quality, resource utilization, and improvement is a significant challenge for public and private institutions in the banking sector. Banking services are increasingly becoming a competitive factor, with efforts underway to improve service quality and meet customer needs.

The consumer's perception is formed by contrasting his expectations with his perception of the service's quality (Parasuraman et al., 1988). Currently, in the financial sector, the quality of service plays a critical role in improving customer satisfaction (Martn-Oliver et al., 2017; El-Adly, 2019). Because providing a high-quality service result in high levels of satisfaction and a long-term relationship with the client, which results in favorable levels of loyalty (Park et al., 2006).

One of the theoretical models most reported in the literature to evaluate the quality of service perceived by the consumers is the SERVQUAL model (Parasuraman et al., 1988). Expectations serve as a basis for implementing service-enhancing strategies (Parasuraman et al., 1991; 1993), and there is something similar for the financial sector, where the banks focus on activities that

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satisfy and meet the expectations of their customers.

Several studies demonstrated a positive relationship between service quality and consumers satisfaction. Furthermore, the rapid growth of banking services has provided clients with various options. As a result, service quality is critical to increasing profits, market share, developing a positive image, and providing a competitive advantage (Nejadjavad and Gilaninia, 2016; Lu and Ling, 2008).

In this context, the growing numbers of financial institutions make up a panorama that creates an opportunity for banks to become fully involved in improving their customer engagement and finding new ways to generate value.

Therefore, Algerian banks should satisfy their consumers by providing good service quality and exceeding their expectations. In addition, they should review other antecedents of satisfaction, such as perceived value, as it is considered a complete factor for evaluating the service.

Few studies have addressed consumers' loyalty in Algeria banks, especially Algiers. Therefore, this study aims to analyze the antecedents of customer satisfaction and loyalty of the Algerian banks' consumers in Algiers, adapting the SERVQUAL model. It sought to determine how banking service quality affects customer satisfaction and loyalty in the three public banks that operate in Algiers to establish and design more competitive strategies.

Structural Equation Modeling (PLS-SEM) is used to verify the different relationships between banking service quality, satisfaction, and loyalty, with the advantage of admitting smaller sample sizes than in covariance-based methods (Hair et al., 2019; Marcoulides et al., 2009; Shackman, 2013). The PLS-SEM technique has become an essential tool for researchers in theoretical models when using a quantitative approach.

This study proposes a PLS model with Structural Equations to measure and explain the factors that affect consumer satisfaction and loyalty and how SERVQUAL dimensions influence Algerian banks' consumers. The model was applied to the services provided by three banks located in Algiers.

The rest of the paper is organized as follows: Section 2 summarizes the literature review. Section 3 presents the conceptual model and the research hypotheses. In section 4, the methodology is detailed. Section 5 discusses the results of the study. Section 6 indicates the conclusions, implications, and limitations of the study.

2. Literature review

Companies must increase their efficiency and competitiveness rates in today's globalized economic environment to gain customer preference. In this sense, service quality is an option for businesses to gain a distinct and long-term advantage over their competitors, depending on the commercial activity or services they provide (Shah et al., 2018).

The quality of service is understood as the gap that exists between customer expectations (what they want) and their perceptions (what they get) after receiving a service (Jain and Aggarwal, 2017; Lai and Nguyen, 2017).

Consumers' expectations serve as the basis of the quality of the service provided, which has received significant attention from academics and professionals. Likewise, the SERVQUAL model was adopted with great success in the financial sector to evaluate the banking service quality. Furthermore, its definition includes references that apply to the context of this sector.

Quality of service refers to how satisfied customers are with the product or service they receive compared to their expectations and prior experiences. Parasuraman et al. (1988) model stand out in the literature with five service quality dimensions, as illustrated in Table 1.

Table 1. SERVQUAL dimensions

Dimensions	Definition
Reliability	Consistency and dependability in providing service
Responsiveness	Willingness to provide an agile service and help users
Assurance	Employee preparation, courtesy, and ability to convey confidence and security
Empathy	Provide individual and personalized care and attention to consumers
Tangibility	The appearance of communication facilities and resources, including employees, tools, and materials

Source : Based on Parasuraman et al. (1985 ; 1993)

In this context, the SERVQUAL model will serve as a starting point for many other works on quality of service. In addition, a significant relationship of the SERVQUAL model with customer satisfaction and customer loyalty has been shown (Alnaser et al., 2018). According to Alnaser et al. (2018), customers' satisfaction and loyalty are significantly related to the SERVQUAL model. Implementing a comprehensive customer satisfaction process is just as dynamic as the bank's environment.

According to Kotler et al. (2017), customer satisfaction is the customer's response that evaluates their previous expectations and the actual performance of the service. Internationally, customers satisfaction has remained an important factor in whether or not a company can be considered competitive.

The customer's lifetime loyalty depends mainly on satisfaction (Kotler et al., 2017). Likewise, the quality of the service was identified as a critical strategy for a higher level of client satisfaction.

Service quality is an effective tool for keeping customers loyal to an organization; loyalty refers to attitude and specific behavior. According to Parasuraman et al. (1988), customers determine quality relying on the differences among their expectations and what the provider really delivers.

Similarly, customer loyalty has been an essential factor in increasing the company's profitability (Olsen and Johnson, 2013). Loyalty is defined as (Kotler et al., 2017): *"A strong desire to purchase or patronize a preferred product in the future, regardless of external influences or marketing efforts, that could lead to a shift in consumer behavior."*

Regardless of the type of measurement carried out, it has been shown that quality is positively related to customer loyalty. Table 2 summarizes the main literature on the dimensions of quality service.

Table 2. The relationship in the literature

Author(s)	Year	Field	Results
Kumar and Hundal	2019	Solar energy service Companies	The gap between the customer's expectation and perception is minimal
El-Adly	2019	Hotel	A relationship between perceived value, the satisfaction of customers, and loyalty
Boonlertvanich	2019	Banking sector	Indirect and direct effects of perceived service quality on satisfaction, integrity, attitude, and loyalty
Yilmaz et al	2018	Universities	Satisfaction is influenced by perceived quality
Palese and Usai	2018	E-commerce	Quality of service has an impact on the satisfaction and fidelity
Shah et al	2018	Hotel industry	A company's performance is greatly influenced by the quality of its service and satisfaction
Makanyeza and Chikazhe	2017	Banking sector	Customer satisfaction is a critical factor in determining brand loyalty

Lai and Nguyen	2017	Telecommunication companies	Empathy, reliability, assurance, and tangible affect satisfaction
Chang and Yeh	2017	Transportation	The characteristics of loyal customers include frequent repurchases, recommending the services to others, and demonstrating resistance to the attraction of similar products from competitors
Jain and Aggarwal	2017	Retail chains	perceived service influence both satisfaction and loyalty
Jahamani	2017	Airlines companies	The different dimensions greatly influence satisfaction
Ratanavaraha et al	2016	Education	Satisfaction and loyalty are correlated
Murali et al	2016	Home appliances business	Satisfaction, retention, and loyalty are all correlated with the quality of the company's after-sales service.
Kaura et al	2015	Banking sector	Service quality indirectly impact loyalty through satisfaction
Zameer et al	2015	Banking sector	Consumers choose services that offer them highly satisfaction and utilization level in terms of quality
Zhang and Pan	2014	Public sector	Public sector process reengineering and customer satisfaction are correlated
Kitapci et al	2014	Public health sector	The different dimensions of quality are related to satisfaction
Boonlertvanich	2013	Banking sector	Customer-perceived value had less impact on satisfaction for main-bank customers

According to the previous studies, client satisfaction and the perception of the service's quality positively influence the customer's buyback intention. Customer satisfaction feedback should be collected regularly, and if used correctly, it can be invaluable in building customer loyalty and relationships (Blut et al., 2015). Behavioral loyalty reflects the positive response of the customer to repeat the purchase of a particular product or service (Mandhachitara and Poolthong, 2011; Martinez and Bosque, 2013).

A bank's customer satisfaction is consolidated when it meets or exceeds customer expectations (Murali et al., 2016). In addition, customers tend to repeat their purchasing habits when they are happy; this creates a cycle of customer loyalty. (Ahrholdt et al., 2017). Focusing on a review of the literature on the various effects, this study will test four hypotheses related to three dimensions. These hypotheses are described in the following section.

3. Research hypotheses and conceptual model

Loyalty and satisfaction of customers maintain a strong relationship. Many studies have shown that customer loyalty in the financial industry is based on customer perceptions of quality. Taking these contributions into account, and regarding the Algerian context, only Reliability, Assurance, and tangibility are considered, and the following hypotheses are proposed:

H1: reliability significantly affects satisfaction

H2: assurance significantly affects satisfaction

H3: tangibility significantly affects satisfaction

H4: Customer satisfaction significantly affects loyalty

These hypotheses focus on the interrelationships among service quality, satisfaction, and customer loyalty. This study

extends the understanding of customer loyalty by developing a model that clarifies the relationship between quality of service (SERVQUAL model dimensions), customer satisfaction, and customer loyalty. The theoretical model shown in Figure 1 is proposed based on the above discussion.

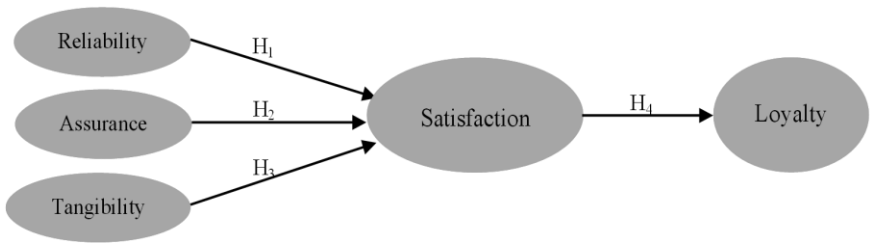

Figure 1. Conceptual model

As shown in Figure 1, a conceptual model was developed based on previous research (Gures et al., 2014). The quality of the service is made up of three dimensions, namely, reliability, assurance, and tangibles.

- The tangible dimension is represented by the elements concerning the employees' appearance and the bank. It evaluates the clients' appreciation, in the first instance, concerning the physical environment of the bank, that is, the equipment used to provide the service and the construction design (Murali et al., 2016).
- The assurance dimension considers the security that employees transmit to customers through the knowledge and skills of the facilities offered and courtesy in care, professional appearance, technical competence, and interpersonal behavior.
- The reliability dimension consists of the bank's capabilities to accurately and reliably comply with the services it offers and the willingness of employees to provide the service (Zhang and Hou, 2013).

Customer satisfaction was operationalized by general consumer satisfaction, attitude, and impression. Four items operationalized customer loyalty: intentions, recommend others, participate positively, and change behavior.

4. Data and methodology

4.1. Data and sampling

This study tries to provide new knowledge about satisfaction and loyalty towards three Algerian banks (National Bank of Algeria, Popular Credit of Algeria, and Local Development Bank) that operate in the city of Algiers, through their agencies located in the capital of Algeria and measured through the perceptions of the dimensions retained for this study and its causality in the observable variables (loyalty and satisfaction).

Data was collected through a questionnaire made up of three sections and 24 items:

- Section 1 (consists of 4 items): aims to identify the profile of the respondents.
- Section 2 (13 items): This allows us to know customers' experiences concerning the kind of banking service.
- Section 3 (7 items): evaluates satisfaction and loyalty. The previously detailed variables were adapted to the Algerian banking context and were identified based on a 5-point Likert scale that ranged from 1 = strongly disagree to 5 =

strongly agree.

The validity of the measurement scales was tested by experts affiliated with the University of Khemis Miliana, to which the author belongs. Furthermore, the pilot survey was used in the real world, specifically with some members of the service quality department of one of Algiers's banks.

The context in which the study was conducted was Algerian Banking, and the survey was self-administered to collect data from consumers in Algiers. For data collection, the permission of the managers of each bank was obtained, and data were collected using a random sampling method. It guarantees the sample's representativeness because it maintains randomness and is taken somewhat.

Therefore, authors have personally visited the agencies and asked consumers. A total of 350 consumers were contacted from 17 to 31 May 2021 while visiting their banking agencies. 253 (72.3%) consumers have participated in this study. Caracteristics are summarizes in figure 2.

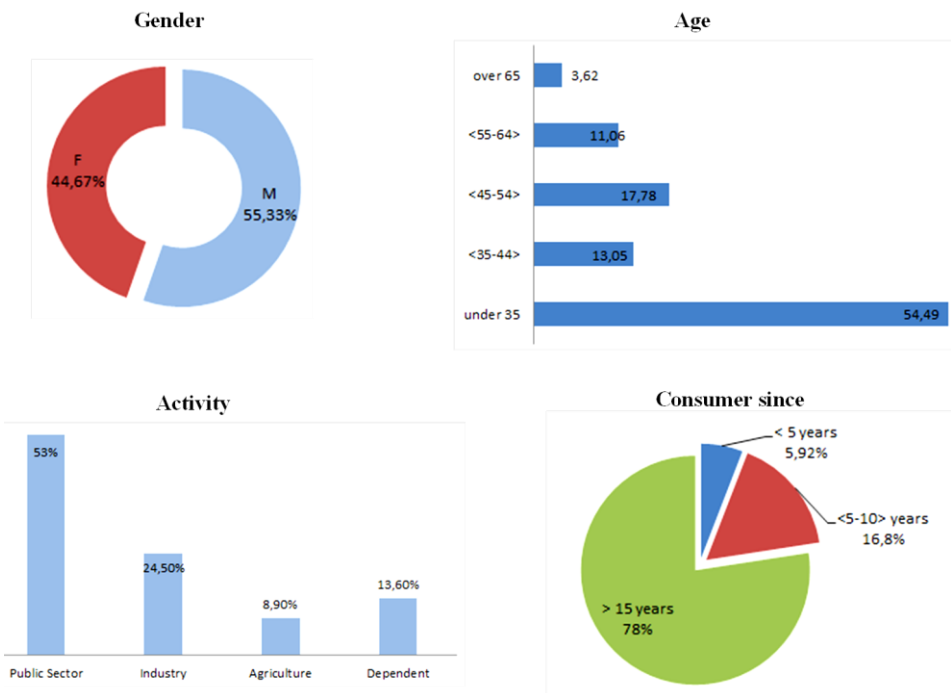

Figure 2. Respondents' characteristics

4.2. Partial least square PLS-SEM

The PLS-SEM was applied to explore and identify the correlation between service quality, consumer satisfaction, and consumer loyalty (Hair et al., 2013; Hair et al., 2011; Reinartz et al., 2009).

The general model of structural equations combines observable and latent variables, while its structure considers the measurement and structural models. The structural model describes or explains the relation among latent variables or constructs. The measurement model defines the relationships between observable and constructs.

The PLS-SEM second approach is more advantageous in exploratory studies and

valuable for predicting the latent variables dependent on the model, maximizing the explained variance (R^2), which has the advantage of allowing the exploration of some constructs and relationships (Hair et al., 2013; Henseler et al., 2016).

The PLS-SEM method is pertinent to design and test a model for measuring consumer satisfaction with the services provided by public banks. This is since it allows identifying a significant relationship towards the construct to be measured. Furthermore, it enables a recognition of the relations between the various factors involved and the direct and indirect effects on satisfaction and loyalty.

4.3. Sample characteristics

The demographics of the studied sample revealed that 55.33% are men and 44.67% are women, as illustrated in figure 2. The respondents' ages are as follows: 54.49% are under 35 years old, 41.89% are between 35 and 55 years, and 3.62% are over 65 years old.

Data analysis indicates that 53% of the respondents work in the public sector (administration and service), 24.5% in industry, 13.6% are dependent workers, and 8.9% in agriculture. Data also shows that 78% were banking consumers more than 15 years ago.

5. Results and discussions

5.1. Validation and assessment

The proposed model is evaluated using PLS in a two-step process that includes evaluating the measurement and structural models (Hair et al., 2011, Sedkaoui, 2018). PLS-SEM analysis technique was applied using SPSS software.

For the reliability analysis, Cronbach alpha was used. Table 3 displays the results, which show that all variables are above the level required.

The results indicate that the highest value corresponds to the customer loyalty variable, 0.812. The highest scores were obtained when individually evaluating the items of the dimensions that make up the quality of the service, with values ranging between 0.782 and 0.791. The values presented for Cronbach's alpha show internal consistency in all variables and the different dimensions.

In addition, it was noticed that the questionnaire scale has important reliability because Cronbach's alpha values are higher than 0.700 (Hair et al., 2014).

Table 3. Internal consistency and validity analysis

Variables		Items	Cronbach	CR	AVE
Quality of service	Reliability	5	0.791	0.845	0.682
	Assurance	4	0.786	0.809	0.670
	Tangibility	4	0.782	0.804	0.667
Satisfaction		3	0.801	0.857	0.717
Loyalty		4	0.812	0.868	0.734
Total		20	-	-	-

In addition, Composite Reliability (CR) values are all greater than 0.6, indicating that the questionnaire is valid and that the internal reliability is justified (Hair et al., 2014). The CR presents the variance extracted between the group of observed variables and the fundamental construct (Fornell and Larcker, 1981), with a CR greater than 0.60 considered acceptable.

The AVE value (average variance extracted) must be considered to evaluate the validity, which should be a value higher than 0.5 (Becker et al., 2018). The average extracted variance (AVE) was calculated, ranging from 0.667 to 0.734. These values are

greater than 0.5, as recommended by Fornell and Larcker (1981) and Hair et al. (1998).

Discriminant validity presents the degree to which the elements differentiate between constructs; in other words, it indicates to what extent a particular construct is different from another (Hair et al., 2011; Hair et al., 2010; Chin, 2010). To test discriminant validity, each construct's AVE must ideally exceed its highest squared correlation with any other latent variable in the model. Since the AVE values are more than 0.5, the model gained an acceptable convergent validity. Table 4 indicates the soot square of the AVE value. The values are more significant than the values of each row and each corresponding column.

Table 4. Discriminant validity of the model

Variables	Reliability	Assurance	Tangibility	Satisfaction	Loyalty
Reliability	0.776				
Assurance	0.697	0.788			
Tangibility	0.681	0.659	0.764		
Satisfaction	0.720	0.696	0.712	0.789	
Loyalty	0.691	0.687	0.658	0.697	0.778

The results indicate that all the indicators are adjusted in an acceptable way guaranteeing the discriminant validity of the constructs. Discriminant validity can be measured by examining the cross-factorial loads of the observed variables-indicators (Fornell and Larcker, 1981; Sedkaoui, 2018; Hair et al., 2011). An indicator's loading with its associated variable ought to be higher than its loading with other variables (see table 5).

Table 5. Cross factorial loading

Items	Reliability	Assurance	Tangibility	Satisfaction	Loyalty
Rel_1	0.779				
Rel_2	0.773				
Rel_3	0.775				
Rel_4	0.778				
Rel_5	0.776				
Ass_1		0.761			
Ass_2		0.768			
Ass_3		0.765			
Ass_4		0.763			
Tan_1			0.781		
Tan_2			0.796		
Tan_3			0.782		
Tan_4			0.794		
Sat_1				0.787	
Sat_2				0.793	
Sat_3				0.788	
Loy_1					0.776
Loy_2					0.781
Loy_3					0.779
Loy_4					0.777

Table 5 indicates that items that measure a specific construct have higher loads in their respective latent variables and lower loads in the other latent variables. As a result, they confirm the constructs' discriminant validity. To avoid multicollinearity problems, the variance inflation factor (VIF) statistical test was performed. The empirical criterion is met (VIF <5) (Belsley, 1990).

5.2. Structural model analysis

The quality assessment of the model is based on its capabilities to estimate endogenous constructs (Hair et al., 2019; Hair et al., 2014). The goodness of fit of the model is verified through the analysis of the student's t statistic, the significance level of the path parameters (β), and the R^2 value, and the Stone-Geisser test (Q^2), which consists of cross-validation of the model analyzing to what extent the estimated parameters are useful to predict the observed variables corresponding to these constructs.

Figure 3 shows the factorial loads results according to the recommended threshold level of 0.6 (Henseler et al., 2009). All values are above 0.6, indicating the convergence of the model.

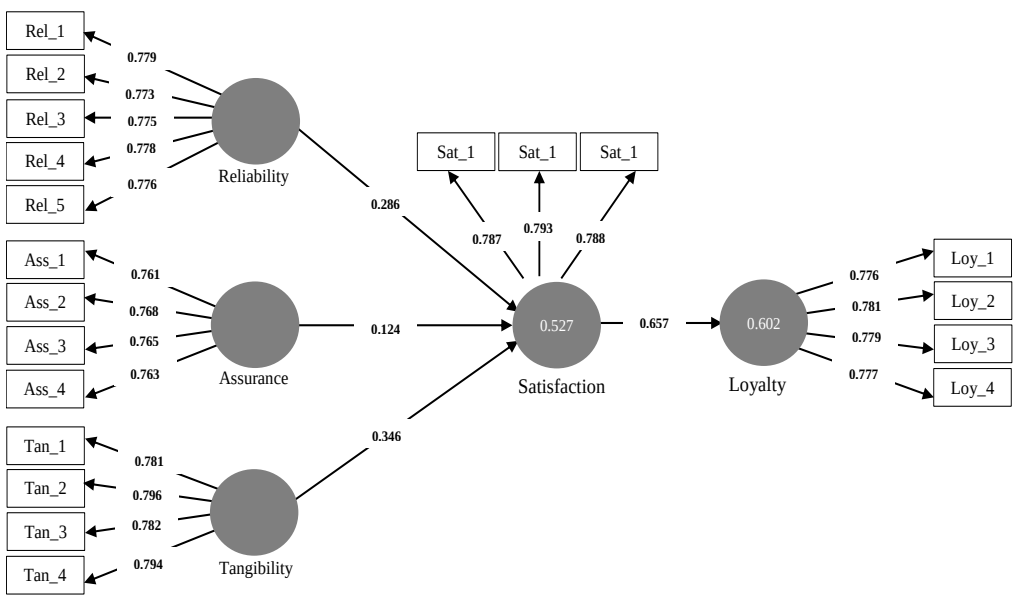

Figure 3. Statistically significant trajectories of the structural model

After achieving this step, the hypotheses have been tested by executing a resampling or bootstrapping process using several subsamples of 1000, as suggested by Hair et al. (2017). This allowed evaluating the path coefficients' statistical significance and support or not the hypotheses.

The path coefficients must be significant, and Chin (1998) suggested at least 0.2; if β <0.2, there is no causality, and the hypothesis is rejected. A hypothesis test is shown in Table 6, and we can notice that all hypotheses significantly affect their respective latent variables.

Table 6. Hypothesis testing in direct relationship

Hypotheses	Relationship	Path (β)	t-value	p-value	Decision
H1	Rel → Sat	0.286	5.576	0.000***	Supported
H2	Ass → Sat	0.124	3.316	0.001**	Not supported
H3	Tan → Sat	0.346	5.969	0.000***	Supported
H4	Sat → Loy	0.657	15.148	0.000***	Supported
Significance level: * p <0.05, ** p <0.01, *** p <0.001.					

Statistical tests found a positive and significant effect on consumers loyalty in the studied banks, through banking service quality perceived through:

- Tangibility significantly affects satisfaction (Hypothesis 3) :(β = 0.346; t = 5.969; p <0.001);
- Similarly, Hypothesis 1, reliability significantly influences satisfaction is supported by :(β = 0.286; t = 5.576; p <0.001);
- Also, customer satisfaction significantly influences consumer loyalty (Hypothesis 4) due to the values: (β = 0.657; t = 15.148; p <0.001).

Therefore, all causal relationships are supported, and hypotheses are accepted except hypothesis 3, where the path coefficient is not significant. In addition, R^2 was adopted to measure effect size. To establish the level of predictive precision of the model, the percentage of the explained variance of the dependent or endogenous variables within the model is analyzed, commonly known as R^2. As indicated in figure 3, the model explains a large variance percentage of the variables.

According to Hair et al. (2011), the R^2 values of the endogenous latent variables of the structural model are described as substantial when it is equal to 0.70 or more, moderate when it ranges between 0.50 to 0.70, and weak when it ranges between 0.25 to 0.50. In addition, the Q^2 values are also examined, which is an indicator of the predictive relevance of the model. Structural equation models with Q^2 values greater than zero for a specific endogenous latent variable indicate predictive relevance of the model trajectory. Q^2 values of zero or below zero indicate a lack of predictive relevance. The R^2 value for customer satisfaction was 0.527 and 0.602 for customer loyalty, which is acceptable according to the limit suggested by Cohen (1988). All endogenous reflective constructs can be predicted by the model since values of Q^2, for consumer satisfaction and consumer loyalty, were, respectively, 0.365 and 0.273. The details of all these results are presented in Figure 3.

6. Conclusion

This study explored the relations between service quality, client satisfaction, and loyalty. Many studies have investigated these relationships in a single framework, but this study analyzed the relationship in the Algerian banking sector by evaluating the effect of satisfaction and banking service quality on loyalty. This study has analyzed this relationship to identify potentially powerful variables and predict customers that will help Algerian banks increase customer loyalty.

Thus, the study's goal was to look into the SERVQUAL dimensions, mainly Reliability, Assurance, and Tangibility, into the SERVQUAL model. The analysis extends the understanding of customer loyalty by developing a model that identifies and clarifies the relationship between quality of service, customer satisfaction, and loyalty. Despite the SERVQUAL model's acceptance for measuring service quality, this study has also served as a foundation for some modifications or adaptations to generate new ways of measuring service quality in specific

environments.

Many previous studies have investigated service quality problems in different contexts (Palese and Usai, 2018; Yalley and Agyapong, 2017; Shah et al., 2018; Lai and Nguyen, 2017). As a result, current research makes two major contributions:

- This study also expanded the SERVQUAL model dimensions with the Algerian context to measure the banking service quality;
- The results demonstrated that the SERVQUAL model dimensions, such as reliability and tangibility, are relevant for measuring Algerian banks' service quality.

The results indicated that reliability and tangibility significantly influence customer satisfaction. In addition, the Algerian context is different from the reality of the United States or Europe. Therefore, it is confirmed that these two dimensions played a moderate role ($\beta = 0.286$, $\beta = 0.346$, respectively) in the service satisfaction in Algiers banks. The influence of satisfaction on loyalty is essential and robust ($\beta = 0.657$). Several researchers have supported these results (Boonlertvanich, 2019; Rahi et al., 2017; Makanyeza and Chikazhe, 2017; Kaura et al., 2015; Boonlertvanich, 2013).

The model proposed to show a significant influence on customer satisfaction, accounting for 52.7% of the variation, and customer satisfaction accounts for 60.2% of the variation in customer loyalty of the selected banks of Algiers. Thus, the study's findings confirm a new model that expresses Algerian culture with the addition of reliability and tangibility as components of the service provided.

Based on the results, the customer may have some expectations before receiving a service from the Algerian banks, and suppose that if a customer receives these expectations, the value will be created based on his satisfaction, and then the consumer will be loyal. However, if there is a gap between the services provided, they may not meet customer expectations. Also, it is concluded that the relationship in the case of banks in Algiers is not fulfilled, as in other contexts (Bolton and Drew, 1991; Arslan et al., 2014), since it must be mediated by the same evaluation of the quality of the service, and how the customer values the service.

The results indicated that the quality of the service plays an important role in the perception of service, which influences consumer satisfaction and loyalty. Therefore, contact points are critical, and Algerian banks must be well prepared, as this influence can improve customer relationships. It is not just about providing information; it is also about strengthening customer relationships and guiding Algerian banks toward a customer-focused model.

On the other hand, the satisfaction of banking consumers has a positive influence on loyalty. The Algerian banks could use the different dimensions that were evaluated associated with various banking strategies to establish a strategic frame of reference to maintain and, where appropriate, increase the added value.

Given the Algerian customer's satisfaction and expectations, it is suggested that Algerian banks implement a consumer protection system, improve access to information about their products and services, and boost customer perception. To that end, the financial system's primary conditions must be created for it to persevere for the benefit of financial inclusion (Sedkaoui, 2019). Loyalty in Algerian banks is influenced by consumer satisfaction and other latent variables such as reliability and tangibility to help consumers provide fast and reliable service. However, some other variables or factors influence loyalty, but the study context did not consider, and future research lines could be assumed.

Although the model obtains an important proportion of variance, it is challenging for further study to incorporate other determinants of consumer satisfaction and

loyalty not included in this analysis. Exploring factors that include online services could help further analysis since the public banks in Algeria have gradually begun to integrate this type of e-services. However, future research should be conducted to expand the study to other financial institutions, or the sample could represent a wide range of countries to investigate possible differences in customer behavior.

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Appendix 1: Items codes

Items		Code
Reliability	1. Waiting times are met when requesting a service	Rel_1
	2. Employees show genuine interest in solving the problem	Rel_2
	3. First-time customers are treated to excellent service	Rel_3
	4. Customer service is done in a reasonable time	Rel_4
	5. Employees strive not to make mistakes in service	Rel_5
Assurance	6. Employees empower confidence in customers	Ass_1
	7. You feel safe and calm when interacting with employees	Ass_2
	8. Employees are polite and courteous	Ass_3
	9. Banking employees are trained	Ass_4
Tangibility	10. The equipment used inside the bank is modern	Tan_1
	11. Bank facilities are visually appealing	Tan_2
	12. Bank employees have a good presentation	Tan_3
	13. The bank is neat and clean	Tan_4
Satisfaction	14. The bank's service meets my expectations, and I am grateful for it	Sat_1
	15. The attention delivered by the bank exceeds my expectations	Sat_2
	16. The service in the bank exceeds my expectations	Sat_3
Loyalty	17. I intend to continue as a client of this bank in the future	Loy_1
	18. I will recommend the bank to those who ask my opinion	Loy_2
	19. I will say positive things about the bank	Loy_3
	20. I prefer to go to this bank even if another bank offers the same service	Loy_4