



Measuring service performance of retail banks in Mexico: A Servperf adaptation

*Medir desempeño del servicio de bancos detallistas en México:
una adaptación del Servperf*

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Received 13 May 2016; accepted 27 October 2016

Available online 27 September 2018

Abstract

The purpose of this work is to offer a scale to measure service performance of retail banks in Mexico. It is based on the SERVPERF scale by Cronin and Taylor (1992). The article is framed in the service quality and performance literature. This instrument is initially based on a previous adaptation of the SERVPERF scale in English to retail banks. It is explained how the items were contextually adapted to the Spanish language. For a correct translation-adaptation interviews with specialists and clients were carried over. This procedure helped to ensure that the writing of the items was understandable and to verify that they were measuring what was intended. The result of an n=201 retail bank clients empirical test is presented. Several tests to verify reliability and validity were performed. Using a factorial analysis and a confirmatory structural analysis it is presented how the scale accomplishes convergent and discriminant validity criteria as well. In comparison with previous approaches, the dimensionality of the scale is analyzed. Also, an assessment of the scale's predictive validity was performed.

JEL Classification: M30, M31, M39.

Keywords: Service performance; Service quality; Retail bank service; Retail bank

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Peer Review under the responsibility of Universidad Nacional Autónoma de México.

<http://dx.doi.org/10.22201/fca.24488410e.2018.1106>

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Resumen

El propósito es ofrecer un instrumento para medir desempeño del servicio de bancos detallistas en México. Este instrumento está basado en la escala SERVPERF propuesta por Cronin y Taylor (1992). El artículo se enmarca dentro del área de medición de la calidad y del desempeño del servicio. Se parte de una adaptación previa en inglés del SERVPERF a esta industria. Se narra el proceso de adaptación de los reactivos al idioma español en el contexto mexicano. Para esta adaptación se utilizó tanto consulta con especialistas, como entrevistas a profundidad con clientes de bancos, para verificar que entendieran la redacción de los reactivos. Se presenta una prueba empírica del cuestionario con n=201 clientes de bancos detallistas. Se realizaron diversas pruebas para corroborar confiabilidad y validez del instrumento. Se muestra que la escala cumple con criterios de validez convergente y discriminante mediante análisis factorial exploratorio y análisis estructural confirmatorio. Se analizan y se discuten las dimensiones de la escala donde estas se comparan con planteamientos anteriores. Adicionalmente se lleva a cabo una prueba de validez predictiva mediante análisis de regresión.

Códigos JEL: M30, M31, M39.

Palabras clave: Desempeño del servicio; Calidad del servicio; Servicio bancario detallista; Banco detallista.

Introduction

Service quality, understood as “*an overall judgment or attitude related to the superiority in service*” (Parasuraman *et al.*, 1988, p.16), is a topic of interest to both academics, as it is a multidimensional construct of great value in consumer behavior research (Grönroos, 1984; Parasuraman *et al.*, 1985), and to the decision makers of companies, due to the impact that it has on the retention of clients (Zeitham, 2000).

Service quality has been studied for more than three decades, however, the measurement of the same continues to be a topic that keeps researchers busy (Simmers and Keith, 2015; Rauch *et al.*, 2015; Cater-steele and Lepmets, 2014; Keith and Simmers, 2013; Jain *et al.*, 2013). Towards the end of the 1980s, SERVQUAL was considered a unique instrument to measure the service quality of any type of company and in any country. However, the criticism of the same suggest that it is preferable to have a particular scale for each type of service (Ladhari, 2008), as the characteristics of each are different and these cause items to be added, cut or redesigned for each sector. In recent years, specific scales for restaurants (Andaleeb, and Conway, 2006; Antun, *et al.*, 2010), hospitals (Padma *et al.*, 2015), hotels (Akbaba, 2006), among others, have been designed. Scales for specific cultures, such as the Pakistani (Raajpoot, 2004) and Arab (Jabnoun and Khalifa, 2005) cultures have also been designed. Thus, the need to adapt scales for each industry in a specific context. In this manner, the main purpose of this article is to offer a scale that measures service quality that is specifically designed for the retail banking sector in the Mexican context.

A scale for this type of banking service is proposed, given the relevance of this type of banking service for the clients (as it works directly with their money). In this manner, the selection and permanence in a bank is largely due to the evaluation that the user carries out regarding the institution where they manage their money. Several studies have shown the relation between service quality and permanence in a bank (Belás and Gabcová, 2016; Mittal *et al.*, 2015; Kaur, and Kiran, 2015). The scale is useful for banking in Mexico given that, according to the National

Banking and Securities Commission (2016), the existence of 12,234 bank branches was reported in December of 2015. Thus, according to the data of the National Survey for Financial Inclusion (INEGI, 2012), 97% of the adult population have access to some bank services, whether through the branches, ATMs, correspondent bank agreements, or points of sale.

The scale presented in this article is based on a scale designed in English to measure the performance of banks (Ladhari *et al.*, 2011), which in itself is an adaptation of the SERVPERF to the banking context. The aim is to adjust said scale so that each item can maintain its original sense, but in a Mexican context. This study contributes to the understanding of the dimensions that comprise service quality in banks, while also providing managers with a tool with which to evaluate specific aspects on which to base their decision-making.

The following sections of this article review the instruments from which this scale is derived. Subsequently, we present the analyses of said scale to prove its validity and reliability; and finally, we discuss the dimensions and items of the same.

Service quality versus service performance

Service quality has been understood as a multidimensional construct. Parasuraman *et al.* (1985) propose SERVQUAL. In this first general service quality scale five tangible dimensions were identified: tangibles, reliability, responsiveness, assurance, and empathy. Tangibles are the physical aspects that the client perceives in the organization. Reliability refers to the ability to perform the promised service exactly as it was agreed and with precision. Responsiveness is the immediate willingness to assist clients and provide a timely service. Assurance refers to the knowledge and courtesy of the employees and their ability to communicate and inspire trust, so that the client will be sure that they will always receive the same in a company. Lastly, empathy refers to the individualized assistance and care provided to the clients.

The design of SERVQUAL was based on the premise that service quality may be viewed as the degree and direction of discrepancy between the expectations and the perception of what the client actually receives. Hence, SERVQUAL is comprised by two parts: one where it asks the expectations—understanding these as the predictions of the client regarding the service—and another where it asks the perception of the obtained result, that is, the performance of the company. However, a decade after the creation of SERVQUAL, Cronin and Taylor (1992 and 1994) carried out several studies to demonstrate that it was not necessary to have items that measured expectations since, naturally, the client always evaluates from a prediction that the client themselves made. Their discoveries showed that service quality can be measured using only the second part proposed by SERVQUAL, that is, measuring the perception that the client has about the performance of the company. This new instrument was called SERVPERF (taking its name from the term *service performance*). Jain and Gupta (2004) indicate that, methodologically, SERVPERF represents an improvement over SERVQUAL, not only because it is a more parsimonious instrument due to the considerable reduction in the number of items, but also because it explains a greater variance in the measurement of the general service quality. Its validity has also been proven by other authors (Brady *et al.*, 2002; Carrillat *et al.*, 2007; Radomir *et al.*, 2012), thus in this study we carry out the measurement following the proposal by Cronin and Taylor (1994). The measurement of service performance, based on the approach of exclusive measurement of the attributes proposed by Cronin and Taylor (1992), has also shown favorable results in reliability and validity tests in the sector of retail banks (Karatepe *et al.*, 2005; Culiberg and Rojsek, 2010). Given that the SERVQUAL/SERVPERF

approach proposed was originally comprised by five dimensions (already mentioned), additional dimensions have been proposed in the development of measurement instruments for different industries, where specific aspects for each type of industry are measured. In this manner, Culiberf and Rojsek (2010) empirically and successfully proved the inclusion of an additional dimension that they called “accessibility to the bank” (how easy it is to reach it by location and operating hours). This dimension was not considered in this study, as the purpose was to adapt the original attributes; however, at the end of this article, recommendations are made in this regard and items are suggested.

Adaptation of the scale to the Spanish language

A previous version in English (an adaptation of SERVPERF to retail banks) was used for the creation of this scale. Thus, a translation and localization process to Spanish was done. This process involved three types of activities: first, a careful initial adaptation to Spanish of the original meaning of the items in English was done; subsequently, Mexican academics knowledgeable in the use of the English language and who could propose revisions were consulted; and finally, the same was done with specialist in marketing, to ensure the validity of the content. These three activities are detailed below.

The initial translation of the twenty-two items was done avoiding a literal, word for word translation. As the aim was to emulate the original sense of the meaning of the items, the translations comprised conceptual interpretations of what each item implied to subsequently elaborate, in Spanish, this same conceptual content. This helped avoid ambiguities and imprecisions due to the use of out of context terms. The preliminary version of the items was subject to the scrutiny of two Mexican academics that have a good command of English (with a TOEFL score above 600 points). In this revision, said judges were asked to compare the original version of the scale in English with the initial adaptation to Spanish. They needed to identify possible errors in this adaptation from one language to another. Adjustments were made to the Spanish draft of the items based on their comments. Finally, to support the validity of the content of the items, two academics with postgraduate degrees in marketing—and who are professors in this area and familiarized with both the behavior of the consumer and with the studies on quality service—were requested to review the items, based on the variable that each of them would be measuring. Based on this judgment, they were requested to identify possible points of improvement in the draft of the items. Once again, adjustments were made to the drafts of the items utilizing this information.

Table 1
Statements of the final items obtained from the adaptation process to Spanish

sqb1	Bank XYZ has modern-looking equipment.
sqb2	The facilities of bank XYZ are visually attractive.
sqb3	The employees of bank XYZ are groomed and well-dressed.
sqb4	The brochures and other printed materials of bank XYZ are visually attractive.
sqb5	When bank XYZ promises to do something by a certain time, it does so.
sqb6	When you have a problem, bank XYZ shows a genuine interest in solving it.
sqb7	Bank XYZ provides a good service at the very first time.
sqb8	Bank XYZ complies with its services in the promised time.
sqb9	Bank XYZ always strives to not make mistakes.
sqb10	The employees of bank XYZ let you know exactly when the services will be performed.
sqb11	The employees of bank XYZ provide a prompt service.
sqb12	The employees of bank XYZ are always willing to help you.
sqb13	The employees of bank XYZ always have time to answer your requests.
sqb14	The behavior of the employees of bank XYZ generates trust in the client.
sqb15	The client feels safe when doing transactions in bank XYZ.
sqb16	The employees of bank XYZ are always courteous.
sqb17	The employees of bank XYZ have the necessary knowledge to answer your questions.
sqb18	Bank XYZ provides personal assistance.
sqb19	Bank XYZ has convenient operating hours for its clients.
sqb20	Bank XYZ has employees who provide personal assistance.
sqb21	Bank XYZ really cares about your needs.
sqb22	The employees of bank XYZ understand your specific needs.

Source: Own elaboration.

With this version of the scale, two pilot tests were implemented with clients from retail banks. Each pilot test included ten clients from this type of banks. In these tests, the respondents were asked to respond to the items evaluating the bank that they use primarily. After responding to the items, they were interviewed in-depth concerning the terms or aspects of the wording of the items that they did not understand and were asked for suggestions on how they could be more clearly described. First, a round of interviews was done, which served as basis to, once more, make corrections to the items. Subsequently, a second round of interviews was done, proceeding in the same manner.

The final version of the questionnaire was obtained with this process, and was then subject to an empirical test to determine if this scale complied with the reliability and validity criteria. Table 1 shows the statements of the items obtained from the adaptation process to Spanish. Annex 1 shows the questionnaire in the format with which it was reviewed. In the instrument, these statements are associated to attitude escalations that range from 1 to 7, where 1 is linked to “fully disagree” and 7 to “fully agree”.

Methodology of the empirical test

N=250 clients from retail banks were asked to respond to the scale. These clients were selected through convenience sampling. This selection of respondents was done through the network of acquaintances from the team of interviewers that helped us (see acknowledgements). However, a strict selection process was followed, which would help validate the sample and avoid risks. In this manner, the participants must comply with the following criteria:

Adults with some sort of banking service in Mexico (savings account, checking account and/or credit card). People homogenously distributed between 20 and 60 years of age, avoiding the

over-representation of specific age groups. The distribution by gender was controlled, aiming to have the same number of women and men respondents. Similarly, the aim was to distribute them among these different levels of income, avoiding the concentration of just one or two categories. The income groups were established in the following manner: less than \$10,000 per month, between \$10,000 – \$19,999, between \$20,000 – \$39,999, between \$40,000 – \$59,999, between \$60,000 – \$79,999, between \$80,000 – \$99,999, and over \$100,000. The respondents were also distributed into different levels of education: secondary, preparatory, bachelor and postgraduate. In each case, the interviewee had to evaluate their main bank (the one they more frequently used and/or the one where they made most of their bank transactions).

The questionnaire was applied through a one on one interview (an interviewee had to read the questions and write down the responses). It had to be verified that the respondent understood the instructions. To help the respondent, the interviewer could indicate the answer options so that they could understand how to choose, however, the questionnaire was never handed to the subject. The interviewers could not know the person or at least not have a direct or close relationship with them. The respondents could not be related among themselves. To motivate people to respond to the interview, it was explained that it is a research being carried out at the Tecnológico de Monterrey. This fieldwork was done during the month of September 2012.

After a careful examination of the completed questionnaires, it was necessary to eliminate some due to errors in the interviews. Thus, the information from $n=201$ clients of retail banks was obtained. In this manner, this was the sample used for the data analyses that are presented in the following sections. To have a certain control on the variability potentially generated by the brand of the bank, the study focused only on the clients of four brands of retail banks. These brands were selected based on those that tend to have more market shares (Mexican Banking Association, 2012). As such, the sample is comprised of 41% clients for Banamex, 28% for Bancomer, 20% for HSBC, and 11% Santander.

Validity and reliability tests

To examine whether the items have both a discriminant and convergent validity, a factor analysis with varimax rotation was done using the data. This type of rotation serves to maximize the separation of the items into different factors, which is appropriate to prove both the extent of convergence of the items in one dimension (they would tend to measure the same), and how much the items from another property are discriminated (Rusell, 2002). Table 2 shows the result of this analysis. It can be observed that three factors were naturally obtained (without forcing the number of factors and with automatic values higher than 1). In this manner, the items converged in dimensions that, when analyzing the content of the items, allow a clear interpretation of the same. All items concerning the personal assistance provided by the bank to the client were gathered into one dimension that was called “assistance” (client assistance). The items related to the compliance of the service expected by the client and for which the client goes to the bank converged into one dimension that was called “reliability” (trust in the execution of the service). Lastly, the items associated to visual aspects such as appearance of the equipment and facilities were gathered into a component called “aspect/tangibles” (visual aspect of the tangibles). To value the statistical validity of this factor analysis, the KMO test was done, as well as the Bartlett sphericity test. The KMO test presented a high value of .96 and the sphericity test was statistically significant. These results tend to show that the resulting factors explain the observed variables and, therefore, that the model is acceptable (Tobias and Carlson, 1969; Dziuban and Shirkey, 1974).

Table 2
 Exploratory factor analysis to examine convergence and discrimination of the items. Rotated Component Matrix. Factor loads.

Item	Component		
	1 Assistance	2 Reliability	3 Aspect/Tangibles
sqb20	.761		
sqb22	.735		
sqb14	.714		
sqb18	.699		
sqb17	.693		
sqb16	.675		
sqb12	.674		
sqb21	.664		
sqb19	.630		
sqb11	.626		
sqb13	.621		
sqb15	.583		
sqb6		.813	
sqb8		.800	
sqb9		.757	
sqb7		.717	
sqb5		.717	
sqb10		.688	
sqb2			.879
sqb1			.865
sqb3			.636
sqb4			.584
Alpha	.96	.94	.88

Method of extraction: main components. The solution explains 72% of the original variability. Rotation method: Varimax with Kaiser normalization. The rotation converged in 6 iterations. Cut-off level .55. Alpha: Cronbach's alpha reliability coefficient.

Source: Own elaboration.

The factor analysis in Table 2 only shows factor loads (correlations of the items with the resulting factors) above .55. In this manner, a very distinct final solution can be seen. However, some of the items show loads of around .4 with another factor (or dimension). This can lead to the assumption that there is no complete statistical independence between the three dimensions. This idea is later picked up in the confirmatory structural analysis. The manner in which the items are associated in a differentiated manner to each factor allows arguing the existence of both convergent and discriminant validity in the measurement of these three dimensions of service validity in retail banks.

Additionally, Table 2 shows the results of Cronbach's alpha for the items within each of the dimensions obtained. This is presented thus due to the fact that there is evidence that demonstrates that Cronbach's alpha tends to be a more adequate test to measure reliability in a group of items that measure a same dimension (Hair *et al.*, 2010, p. 340). The alpha coefficients obtained tend to indicate that there is a high internal consistency of the items for each dimension that would be measured by this scale. Values above 0.8 are usually considered as very good, and superior to .9 as excellent (Gliem and Gliem, 2003).

To measure the full reliability of the entire scale (the 22 items) Guttman's lambda was obtained. Guttman's test has been argued as adequate (unlike Cronbach's alpha) to determine

reliability in a multidimensional scale with a large number of items (Hair *et al.*, 2010, p. 340; Benton, 2015). Thus, this test simultaneously carries out several split-half tests where it randomly separates the items into two different groups and measures the consistency between both groups (Benton, 2015). The coefficients obtained were between .93 and .98, the lowest and the highest values, respectively. The coefficients of this test are interpreted in a similar manner as those of Cronbach's alpha (Hair *et al.*, 2010, p. 341; Benton, 2015). Therefore, it can be concluded that this test shows high reliability indicators for this scale.

However, the results of the exploratory factor analysis shown in Table 2 do not exactly coincide with the dimensions proposed by Parasuraman *et al.* (1988), and then picked up by Croning and Taylor (1992, 1994). As previously mentioned, both proposed five dimensions (tangibles, reliability, responsiveness, assurance, and empathy). Apparently, according to the obtained model in Table 2, the dimensions of responsiveness, assurance and empathy would be gathered into one component (assistance from the personnel). The tangible and reliability dimensions were obtained, which is consistent with previous studies. In this manner, another factor analysis was done, but on this occasion five components were forced to explore whether they coincided with the five dimensions presented by Parasuraman *et al.* (1988) and by Cronin and Taylor (1992, 1994). Table 3 presents the results obtained from this second exploratory factor analysis.

Table 3

Exploratory factor analysis forced to five components to examine convergence and discrimination of the items. Rotated components matrix. Factor loads.

	Component				
	1 Reliability	2 Response	3 A/Tangibles	4 Empathy	5 ¿?
sqb6	.780				
sqb5	.752				
sqb8	.744				
sqb9	.711				
sqb7	.627				
sqb11		.786			
sqb12		.674			
sqb16		.645			
sqb10	.568	.604			
sqb13		.604			
sqb14		.596		.527	
sqb2			.869		
sqb1			.863		
sqb3			.649		
sqb4			.584		
sqb22				.724	
sqb21				.710	
sqb18				.588	
sqb20				.555	.534
sqb17					
sqb19					.813
sqb15					.534
Alpha	.94	.94	.88	.90	.79

Method of extraction: main components. The solution explains 79% of the original variability. Rotation method: Varimax with Kaiser normalization. The rotation converged in 7 iterations. Cut-off level at .5. Alpha: Cronbach's alpha reliability coefficient.

Source: Own elaboration.

Although this second exploratory analysis does tend to confirm four of the five dimensions (tangibles, reliability, responsiveness, and empathy), some items lean towards other dimensions to the expected (items: 10, 14, 16, 20, and 19) and the assurance dimension is isolated with very little clarity with only two of the five items that should have converged (which suggests that the three-factor solution is more adequate).

Confirmatory structural model

To reinforce the evidence for discriminant and convergent validity of the items regarding the three dimensions obtained, a confirmatory analysis for structural equations was carried out. The model obtained can be appreciated in Figure 1. In this model all the estimators were statistically significant at 0.001. Concerning the adjustment indicators of the model, a CMIN/DF of 2.68 was obtained; according to Wheaton *et al.* (1977), values inferior to 5 may be considered acceptable. The RMSEA indicator obtained a value of .092, although according to Browne and Cudeck (1993); it would have been preferable to have a value inferior to 0.08 to show an adequate adjustment of the data to the model. Values inferior to 0.1 may be accepted. Regarding the IFI and CFI goodness of fit indices, the model reached values of .92 and .91, respectively, although in the other indices of this type, NFI and TLI, values slightly under 0.9 (.87 and .89) were obtained. According to Bentler and Bonett (1980), values of 0.9 or above must be reached to consider that there is an adequate adjustment of the model to reality. Although in general the estimation and adjustment data of the obtained model are not the best, they allow arguing, with some reservations, that the structural model may be acceptable.

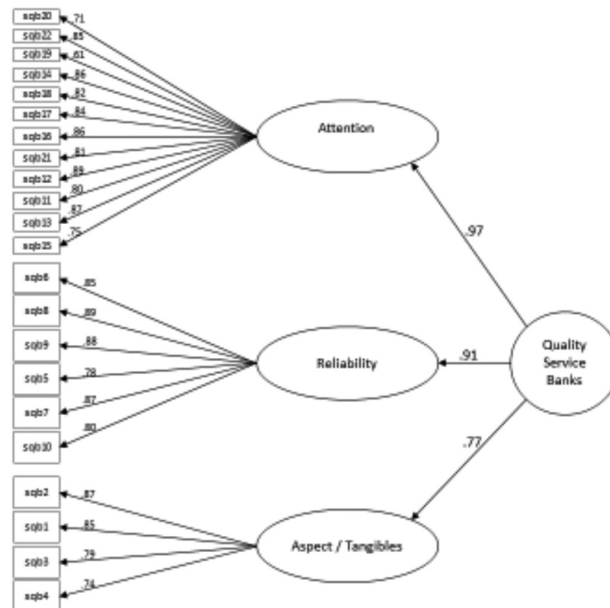


Figure 1. Structural model. Structural weight and measurement weight. Model of twenty-two observed variables, three first order latent variables, and one second order latent variable.

The structural model obtained tends to confirm the existence of the three dimensions obtained from the exploratory factor analysis (empathy, assurance and aspect). Additionally, the existence of a second order where the aforementioned three dimensions converge is usually confirmed. In this model (Figure 1), it is possible to observe that the measurement estimators (correlations between the variables observed and the first-order latent variables) obtained are generally high values above 0.7 and in many cases above 0.8, which would tend to confirm the convergent validity of the items in their corresponding dimensions. In this manner, the second-order latent variable (service quality) adequately estimates each of the first-order latent variables (empathy, assurance and aspect) and the latter in turn adequately estimate the observed variables (quality items in the service in banks). With this, there is evidence that the items tend to adequately converge in one of the three dimensions and discriminate in the other two, and in turn the three dimensions converge in one superior dimension, indicating that there is a quality multifactor construct in the service in banks.

A second structural model was suggested. One that would be consistent with the five dimensions presented by Parasuraman et al. (1988) and by Cronin and Taylos (1992 y 1994), exactly as they grouped the items. The diagram of this model along with its estimators can be seen in Figure 2. The expectations for this model were not good given the results of the second exploratory factor analysis, where it was attempted to confirm these five dimensions (see Table 3). Nevertheless, the data were adjusted to the model in an admissible manner. The CMIN/DF and RMSEA indicators provided acceptable values of 2.35 and .082, respectively. All of the goodness of fit indicators, with the exception one, also provided acceptable values (NFI=.89, RFI=.86, IFI=.93, TLI=.92 and CFI=.93). This five-dimension model (first-order latent variables) tend to show high (significant) structural and measurement weights, once again implying validity by convergence and by discrimination of the items.

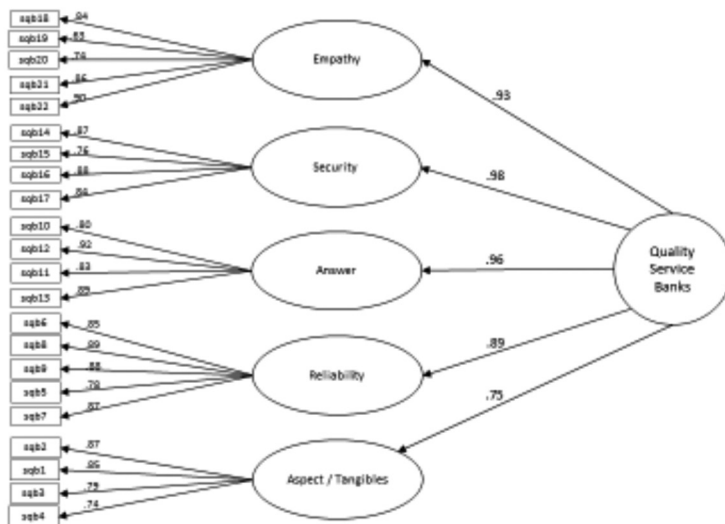


Figure 2. Structural model. Structural and measurement weights. Model with twenty-two observed variables, five first-order latent variables and one second-order latent variable.

Predictive validity

In order to offer evidence of the predictive validity capability of the instrument, the questionnaire used for the collection of data included an item that indicated the general degree of satisfaction of the client regarding the bank. This item states: “In general, I feel satisfied with the services provided by the bank”. In the questionnaire, this item was associated to an attitude scale of seven positions that range from “fully disagree” to “fully agree”. Similar items to this one, used to measure satisfaction, have been widely used such as in the cases of Zeithaml *et al.* (1996), Jamal and Naser (2002), Bauman *et al.* (2007), and Ryu *et al.* (2012).

Table 4
Regression analysis. Dependent variable (Y): *I feel generally satisfied with the services provided by the bank.*

R (multiple regression coefficient)	.75
R2 (coefficient of determination)	.55
F (Fisher coefficient for the validation of the model)	80.9**
X1 Assistance (standardized beta coefficient)	.42**
X2 Reliability (standardized beta coefficient)	.58**
X3 Aspect/Tangibles (standardized beta coefficient)	.21**

** Significance at 0.01 in test t for the coefficients of the independent variables

Source: Own elaboration.

A linear regression analysis was carried out to present the predictive validity test. In this analysis, the general satisfaction item mentioned in the abovementioned paragraph was utilized as dependent variable (variable to predict). As independent variables, the factor scores of the three service quality components obtained from the factor analysis shown in Table 2 were used. If the scale has predictive validity, then the three service quality components must be capable of explaining the general satisfaction of the client. Service quality as a background construct of client satisfaction in the banking sector has been previously widely verified, as can be seen in: Levesque and McDougall (1996), Holmlund and Kock (1996), Jamal and Naser (2002), Lewis and Soureli (2006), Kumar *et al.* (2010), Manimaran (2010), Culiberg and Rojsek (2010), and Ehsan *et al.* (2011).

Table 4 shows the results of the regression analysis. Here, it can be confirmed how the three service quality components of retail banks have a positive significant effect on the general satisfaction of the client, explaining a total of 55% of the variability. More specifically, it was found that the reliability factor (dimension) of the service, due to its standardized coefficient, is the independent variable with the greatest effect, followed by personal assistance.

Conclusions

As can be seen in the section regarding the structural analyses, the existence of both a three-dimensional model and one with five dimensions in this adaptation of the SERVPERF instrument can be argued. Although the model in Figure 2 shows that the items converge in five dimensions, as originally proposed by Parasuraman *et al.* (1988) (empathy, assurance, responsiveness, reliability, and tangible elements), the model presented in Figure 1 shows in turn that empathy, assurance, and responsiveness, as they are aspects related to what the personnel of the bank provides to the clients, tend to have a closer relation among themselves than with the other two dimensions (reliability and tangibles/aspect). It would be reasonable to think that the empathy that a client feels coming from the personnel of the bank may be

strongly influenced by the responsiveness and transparency that the personnel conveys. On the other hand, the items that comprise the dimensions of reliability and tangibles/aspect refer to the aspect of the bank as an organization more than to the personnel that works there. In this sector of retail banking, the solution of the three-dimension model of service performance as described in this document is also confirmed by previous studies where similar results have been obtained (Karatepe *et al.*, 2005; Culiberg and Rojsek, 2010). Thus, it has been previously discovered that the dimensions of the scales based on SERVQUAL can vary by type of service, as well as by country, and the original five will not necessarily be confirmed (Babakus and Boller, 1992; Jabnoun and Khalifa, 2005; Akbaba, 2006).

SERVPERF, being a generalist instrument with the purpose of being applied to a great number of industries, considers variables that in general terms become relevant to several sectors. However, the limitations of this type of approach have been broadly discussed in the past. These limitations essentially refer to the fact that very particular aspects that could be very important only for one of the sectors are not considered and, therefore, it is often necessary to add new variables to scales based on SERVQUAL and on SERVPERF (Van Dyke *et al.*, 1997; Jabnoun and Khalifa, 2005). In this manner, if this scale is to be used to measure service performance in retail banks, it is recommended, in addition to the twenty-two items presented in this document, to complement the scale with items that are specific to this type of business. In this manner, Culiberg and Rojsek (2010), in addition to utilizing the performance items of SERVQUAL, detected a sixth dimension of the banking service, which they called “accessibility” where they create items to measure the performance of four new attributes: business hours convenience, parking convenience, convenient location of the branch, and scope of the services (products) that the bank offers. This is done with the following items:

1. *“The operating hours of the bank suit my needs”*
2. *“The bank is easily accessible (parking)”*
3. *“The bank is favorably located for me”*
4. *“The diversity of financial products offered by the bank conforms to my needs”*

In this same order of ideas, Merino (2001) additionally proposes measuring the elements already considered in the dimensions of SERVPERF/SERVQUAL, that is, specific factors of the banking sector like: image of the products and services; functioning of ATMs and equipment; and flexibility. Hence, items may be elaborated from the aspects suggested by this author, such as:

1. *“Good reputation of the entity”*
2. *“Credibility”*
3. *“Financial strength and reliability”*
4. *“Advantageous financial conditions: types of interest, repayment terms, commissions”*
5. *“Adaptation of the financial products and services to the needs of the client”*
6. *“Broad range of products and services to cover the needs of the client”*
7. *“Correct functioning of the installed technical equipment”*
8. *“Correct functioning and availability of funds in ATMs”*
9. *“Sufficiently flexible operating hours”*
10. *“The entity avoids, when possible, excessive warranties, guarantees and paperwork”*

In this manner, if a study is going to utilize the twenty-two items presented in this document, then we suggest including these fourteen additional items to consider those specific attributes. Thus, for future studies it is suggested to detect the desirable attributes in the Mexican context that are not currently considered and to develop the corresponding items (validity and reliability) to enrich this scale.

Although the items herein may be used for academic studies, they may also be utilized to carry out managerial studies, for example, when a bank in Mexico wishes to measure the service quality that it is providing in its different branches. Similarly, it may also be used in the event that comparisons are to be done of the service performance among different brands of banks, this in order to detect the manner in which different competitors are perceived by their clients regarding the service they provide. Thus, this instrument may be used in a wide variety of studies.

As has already been established, this scale only serves to measure the service quality in the direct assistance to clients in a banking institution. Given the importance gained by retail banking on the internet, the opportunity arises for a future study where a scale is developed to measure the quality of the banking service through this medium in Mexico. This scale must be comprised by a group of items and dimensions different to the scale presented in this document. These attributes must be related to the components of customer service through the internet banking portals of the different banks. In this manner, as background for a new study, and as possible sources of items for the measurement of internet banking service quality, we have the following: Han and Baek (2004); Rod *et al.* (2009); Ho and Lin (2010).

Acknowledgements

We would like to thank Dr. Frank Pons from Laval University in Quebec (Canada) for facilitating the English version of the SERVPERF adaptation to retail banking, on which we based this work. We would also like to thank the team of scholarship holders of marketing from the Business School of the Tecnológico de Monterrey, Mexico City campus, for their valuable contribution in the collection of data that supports this study.

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Appendix 1 Questionnaire

En este cuestionario XYZ representa su principal banco proveedor de servicios bancarios (por favor anotar nombre del banco: _____).

Parte 1: calidad en el servicio

Las declaraciones que se presentan a continuación se relacionan con la posible opinión que usted pueda tener del servicio que le provee el banco XYZ. Para cada declaración, por favor indique en qué grado usted considera que el banco XYZ cumple con la característica descrita en cada declaración. Los números 1 al 7 representan un continuo donde 1 significa que estaría totalmente en desacuerdo y 7 que estaría totalmente de acuerdo. En cada caso circule el número que mejor refleje su opinión acerca del cumplimiento del banco acerca de cada declaración. No existen respuestas correctas o incorrectas, lo único que nos interesa es contar con algunos datos sobre la percepción general hacia la calidad en el servicio ofrecida por su banco principal.

	Totalmente en desacuerdo				Totalmente de acuerdo		
	1	2	3	4	5	6	7
1- El banco XYZ tiene un equipamiento que se ve moderno.							
2- Las instalaciones del banco XYZ son visualmente atractivas.							
3- Los empleados del banco XYZ presentan una apariencia muy bien cuidada.							
4- La folletería y otros materiales impresos del banco XYZ son visualmente atractivos.							
5- Cuando el banco XYZ promete hacer algo en cierto tiempo, lo cumple.							
6- Cuando usted tiene un problema, el banco XYZ muestra un interés sincero en resolverlo.							
7- El banco XYZ realiza bien el servicio a la primera vez.							
8- El banco XYZ cumple con sus servicios en el tiempo prometido.							
9- El banco XYZ busca siempre en no cometer errores.							
10- Los empleados del banco XYZ le dicen exactamente en qué tiempo se cumplirá el servicio.							
11- Los empleados del banco XYZ le brindan un servicio rápido.							
12- Los empleados del banco XYZ siempre están dispuestos a ayudarlo.							
13- Los empleados del banco XYZ siempre tienen tiempo de responder a sus solicitudes.							
14- El comportamiento de los empleados del banco XYZ genera confianza en los clientes.							
15- Se siente seguro al realizar transacciones en el banco XYZ.							
16- Los empleados del banco XYZ son siempre corteses con usted.							
17- Los empleados del banco XYZ tienen el conocimiento necesario para responder a sus preguntas.							
18- El banco XYZ le brinda atención personalizada.							
19- El banco XYZ tiene horarios de atención convenientes para sus clientes.							
20- El banco XYZ tiene empleados que lo atienden personalmente.							
21- Al banco XYZ realmente le importan sus necesidades.							
22- Los empleados del banco XYZ entienden sus necesidades específicas.							