

CITIZENS' POSITION IN SERVICE QUALITY PERCEPTION. AN APPROACH ANALYSIS IN THE CASE OF SPANISH LOCAL ADMINISTRATIONS

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Public sector organizations are not immune to pressure in order to improve their services to citizens. At this point, a major problem is that of "citizen-customer" satisfaction surveys being prone to focus on individuals' perceptions on service delivery: what the individual think about the quality of delivered service. Authors have usually considered tools like the SERVQUAL scale (useful at measuring service quality in a diverse number of organizations and situations, both in private and public sector spheres) as a prior reference when researching in the quality field, but as being the "source", then changed (modified) into a more or less "new" proposal.

Following this research guideline, in this paper a new model for measuring perceived quality level in local government activities is presented. Three dimensions are suggested for citizens to evaluate service quality: technical, functional and overall features.

*Transylvanian Review
of Administrative Sciences,
15 E/2005, pp. 97-106*

Key Words:

*Local public services; citizen's satisfaction;
quality perception; SERVQUAL; PLS.*

Public sector organizations –and specifically those ones operating at local government level– are not immune to pressure in order to improve citizen's service on a continuous basis. Whereas some of these pressures arise from own local authorities (from a genuine desire by local public responsables to improve the quality of those services provided to

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citizens), others come “*forced*” either through public initiatives or through an increase in consumer activism.

At this point, a major problem is that of “*citizen-customer*” satisfaction surveys – an increasing and expensive phenomenon in the public sector – being prone to focus on individuals’ perceptions on service delivery: what the individual thinks about the quality of delivered service. A well-known potential tool at this purpose is the SERVQUAL model originally developed by Parasuraman, Zeithaml and Berry and subsequently refined as a general methodology for measuring service quality in a diverse number of organizations and situations, both in private and public sector spheres. The model identifies specific criteria for citizens to value service quality.

The model also invites subjects to allocate weights to each one of five identified dimensions regarding service quality, expected to reflect their relative importance from the individual’s perspective. Adding weights according to size of gaps identified in the other sections of questionnaire allows an assessment on the “*focus*” of the organization. Authors have usually considered this scale as a prior reference when researching in the quality field, but as being the “*source*”, then changed (modified) into a more or less “*new*” proposal.

Following this research guideline, in this paper a new model for measuring perceived quality level in local government activities is presented. Three dimensions are suggested for citizens to value service quality: *technical*, *functional* and *overall* features.

1. Introduction:

Public sector organizations, and so –and perhaps in particular– those operating at local level, are not immune to pressure in order to improve customer service on a continuous rhythm and basis. Whereas some of these pressures arise from own local authorities (that is, from a genuine desire by local public responsables to improve the quality of those services provided to citizens by their institutions), others come “*imposed*” or “*forced*” either by means of public initiatives or through an increase in consumer activism.

In the public sector context, it is recognized that elected authorities must face more troubles and difficulties –thus coming into a need of making a bigger effort– when trying to improve citizens’ service with respect to those other managers working in the private sector. Even when private-service quality initiatives might have a very little deal to public/social services provision, they are mostly intended to enhance the public organization’s bottom line – its long term profitability–; then justifying all required investments (not only money, but also in terms of working hours, changing minds and routines...) and getting funds on the basis of the desired purpose of finally getting a financial pay-back.

However, real trouble comes when forgetting that in case of private sector organizations definition of target customers’ groups is usually to be quite an easy task (at least from a *a priori* theoretical point of view), either real (existing) and/or potential. These expected consumers are those individuals determined to pay the prevailing market price to obtain the property or the right to use the concrete good or service.

Conversely, in a public context, financial costs of such customer-service initiatives often have to be supported through budget reallocation taking funds away from other activities, most public sector organizations having quite a number of diverse potential “*customers*” asking for their services. Only in a few cases –once more in relative terms– the situation is similar to that above of private sector, “*customer-citizens*” paying directly or indirectly for provided and received goods and/or services. In some other cases, individuals are to be strictly public-services recipients or users –sometimes unwillingly–, but make little or not at all financial contribution towards their provision (even consciously, i.e. free-riding). Even more, it could be also possible to find a concrete subject paying for a particular service from public administration, but not experiencing its benefits by direct or indirect use.

At this point, the real fact is that the concrete role of possible public stakeholders and/or elected representatives could be clearly ambiguous. Summarily, a new concept on public marketing could and must be attempted to correctly categorize citizens (1).

2. Some brief comments on quality, satisfaction and reputation concepts:

Even when (perceived) *quality* and (perceived) *satisfaction* are both terms widely used in the research literature on services, a clear distinction between the two concepts remains a challenge even nowadays (2). Indeed, most researchers agree that they are two different constructs. Moreover, it uses to be very easy to appreciate differences between these concepts in case of tangible products (goods). Meanwhile if considering services, definition on *quality* uses to be stated *a posteriori* as the perceived difference between expected and obtained service (and thus e.g. a service being perceived as achieving a high quality standard by the only reason of prior expectations on it were exceeded).

On the other hand, customer *satisfaction* or dissatisfaction are both well-known and established concepts not only in marketing literature but also in several other disciplines. When related to consumer research, customer satisfaction has been used in order to describe differences between concrete alternatives and/or brands (3). Authors have also referred to this concept as a common denominator to describe differences between product groups and industries (4).

Clearly, an individual's satisfaction cannot be directly assessed by using an objective measure tool (5). However, and even when being considered as an abstract and theoretical phenomenon, it can be measured as a weighted average of multiple indicators (6). Measurement errors in the corresponding obtained index depend on quality and quantity of used variables (7). Doing things in this way becomes a common denominator when trying to make it possible comparisons between industries, companies and individuals.

Customer satisfaction is also the accumulated experience of an individual's purchase and consumption experiences. It is mainly influenced by two factors: expectations and experienced service performance (5). Perceived performance is influenced by subjects' perception on service quality, marketing-mix, brand name and image of the company/organization. As far as satisfied customers tend to maintain their consumption pattern or increase demand of a same good or service, not only customer *orientation*, but especially customer *satisfaction* has become an important indicator about product quality and future revenue. At this point, Fornell (8) claims that individuals' satisfaction clear and undoubtedly influences purchasing behaviour: satisfied customers tend to be loyal customers, but loyal customers are not necessarily satisfied. According to Yi (3), a customer's satisfaction is conceived as a function on his/her perceived (service) quality and expectations. We propose that not only *satisfaction*, but also a second concept, that of *reputation*, are both influenced by *quality*.

In marketing literature, major attention has been focused in the concept of brand (see e.g. 9, 10, 11). Motivations for studying the importance of brands come from financial and strategic reasons. Inside this context, *brand awareness*, *image* and *reputation* regarding a concrete product or supplier influences buyers' purchasing decision (i.e. a good brand or reputation stimulates purchase by simplifying decision effort and rules). Thus reputation and/or brand become an issue of attitudes and beliefs regarding either to brand awareness and image (12), and so increasing customer satisfaction and loyalty (8).

Keller (13) suggests that *brand awareness* "...relates to the likelihood that a brand name will come to mind and the eases with which it does", whereas *brand image* is considered as "... [those] perceptions about a brand as reflected by the brand associations held in consumer memory". Attitudes and beliefs are influenced by previous experience: individuals with a previous experience background will base their attitudes and beliefs on an experienced good and/or service *quality*; meanwhile, subjects with little or no experience may base their attitudes and beliefs on *reputation*. Moreover, even nations, regions, governments etc. enjoy a *reputation*.

As a direct consequence, *reputation* may be aggregated to a macro level extent by using the concept of *country of origin*. Citizens living in a concrete region (usually) have previous experience on services offered by governments in such a region; thus –and among other factors–they base their valuation of satisfaction concerning government acts on perceived service quality. On the other hand, residents outside the concrete territory may (usually) have no experience with the policy offered by governments in that region; thus, their decision must be at least partly based on the country’s or region’s reputation and advice from people who may have a previous expertise about.

Based on their own and previous research on the country of origin topic, Papadopoulos *et al.* (14) concluded that there is enough evidence to posit that: (i) a “*country of origin*” effect does exist; (ii) both final consumers and industrial buyers’ groups are affected by “*made-in*” images; and (iii) “*made-in*” stereotypes can be changed.

Thus, *reputation* becomes an important issue both from a marketing and a strategic point of view. We will propose that *reputation* is an important factor influencing citizens and companies’ satisfaction with local government’s policies.

3. Quality in public services:

Increasing –and expensive– “*citizen-customer*” satisfaction surveys in public sector use to be prone to focus on every individuals’ perceptions on service delivery, i.e. what every individual thinks about the quality of delivered service. At this purpose, a well-known potential tool is the *SERVQUAL*. This model originally developed by Parasuraman, Zeithaml and Berry (15) has been subsequently refined as a general methodology for measuring service quality in a diverse number of organizations and situations, both in private and public sector spheres (e.g. 16 by own authors; 17 and 18 for local governments). This model identifies specific criteria for citizens to value service quality.

The *SERVQUAL* criteria are classified in five major dimensions:

1. *Tangibles*: regarding the appearance of physical facilities, equipment, personnel, and communications materials.
2. *Reliability*: the ability to perform the promised service dependably and accurately.
3. *Responsiveness*: the willingness to help customers and provide them a prompt service.
4. *Assurance*: the competence of the system and its credibility in providing a courteous and secure service.
5. *Empathy*: the approachability, ease of access and effort taken to understand customers’ needs.

As stated above, authors have used to use and/or refine the *SERVQUAL* scale when researching on quality issues, but it is also usual for them to go further, even changing or turning it into mostly really “*new*” ones. In this paper we have developed a new model for valuating quality in local government services, considering three different dimensions for criteria:

1. *Technical features*: objective items for quality valuation.
2. *Functional features*: subjective items for quality valuation.
3. *Overall features*: general items about different features in local governments.

4. Research methodology and results:

Partial Least Squares (PLS), a *Structural Equation Modeling (SEM)* tool, was used to make analyses in this research. SEM enables researchers to simultaneously examine the structural component (path model) and measurement component (factor model) in one same model (19). The use of PLS has advantages over other SEM tools, e.g. *LISREL*, as far as PLS can be applied to explore the underlying theoretical model. Furthermore, PLS can be used when working with relatively smaller sample sizes because it does not require restrictive distributional assumptions about the underlying data (19).

McArdle (20) takes this distinction to make several statements contrasting components analysis and factor analysis. Chin (21) suggests these statements should also be considered for PLS and LISREL:

– *PLS is a tool that tries primarily to estimate the variance of endogenous constructs and in turn their respective manifest variables (if reflective):* the focus should be shifted from only assessing the significance of parameter estimates (i.e. loadings and structural paths) to that of predictive validity.

– *LISREL is superior to PLS on mathematical grounds:* this point refers to the fact that LISREL is a population based model for estimating loadings and structural path estimates. Only under the joint condition of large sample size and large number of indicators per factor will the estimate of the factor loadings and structural path estimates approximate that of the LISREL estimate. Otherwise, the loadings in a PLS analysis tend to be overestimated and the structural paths, conversely, underestimated (22, 23). An examination of the component versus common factor distinctions will also suggest that communality represent yet another factor.

Thus, superiority of LISREL over PLS refers to the ability to estimate the underlying population parameters. As noted in statement one, this becomes less of a concern if the objective is to account for multivariate variance in a predictive sense.

– *LISREL is superior to PLS on statistical grounds:* this statement is relatively contentious and depends on the perspective of the researcher (the reverse statement, suggesting that PLS has better statistical sampling properties than LISREL, could equally be made). Yet, due to the nature of the PLS algorithm, the construct score estimates are biased and only consistent under the condition of high communality, appropriate number of indicators per construct, and increasing sample size. Nonetheless, because PLS is a limited information estimation procedure, an appropriate sample size tends to be much smaller than that needed for a full information procedure such as LISREL.

Even with distributional violation, the Maximum Likelihood estimation procedure for LISREL can be quite robust and may possibly, as mentioned above, produce better estimates of the population parameters.

The generalizability issue for multiple group comparisons needs also be considered. LISREL provides a statistical basis using a chi-square test for multiple group comparison. The generalizability of PLS scores for group comparisons has to be determined yet.

Predictive relevance, on the other hand, is a different issue that should be further explored. For example, the use of a mean loss function on the holdout data in a sample reuse procedure can be a viable means for choice selection of indicators.

– Finally, *PLS is superior LISREL on practical grounds:* PLS is computationally more efficient than LISREL in the same way that a components analysis is faster than a Maximum Likelihood factor analysis.

In summary, an understanding of the issues related to choice of component *versus* common factor analysis can provide a basis for choosing PLS or LISREL as an analysis technique. We think clearly articulated that the aim of LISREL is to estimate causal model parameters whereas PLS is to maximize variance explained. For further understood on this issue, one only needs to have a look on the component/factor analytic distinctions.

In our research the questionnaires for the survey were designed to measure five distinct latent constructs (see Table 1): *objective features* (ξ_1), *subjective features* (ξ_2), *overall features* (ξ_3), *perceived quality* (ξ_4) and *reputation* (ξ_5). At designing the model, there was another element –or explicit variable– that was to be related with these latent variables: *citizen satisfaction* (ξ_6).

Table 1: Measurement instruments of the quality of services provided by municipalities.

Latent variables:	Explicit variables:
<i>Objective (technical) features</i> (ξ_1)	a) Office setting in council. b) The forms of the Town Hall are foolproof. c) Telephone (fax, internet) is a good communication with the Town Hall. d) Notifications are interesting for someone. e) Notifications use an easy language with citizen. f) Employees are always prepared for helping citizens. g) Locals are in a good condition.
<i>Subjective (functional) features</i> (ξ_2)	a) If they promise something, they will carry out it in time. b) I can understand how things are running at my Town Hall. c) I know who received my complaints. d) Employees are trained to do their job perfectly. e) Employees inform about services. f) Employees are kind and polite. g) Employees take into account my personal situation.
<i>Overall features</i> (ξ_3)	a) Services have changed because our ideas/suggestions. b) Our complaints are effectively processed. c) We trust in our Town Hall employees. d) Town Hall employees have resources enough for developing services.
<i>Perceived quality</i> (ξ_4)	a) Global quality is good. b) Quality in this Town Hall is better than in any other one.
<i>Reputation</i> (ξ_5)	a) Public services must be developed for municipalities. b) Our Town Hall reputation is very good.

The *Local Government Citizen Reputation Index (LGCRI)* is an economic indicator developed in order to measure *customer satisfaction* with local public services and *reputation* of local administration. In our model, six interrelated variables –five latent and one explicit variable– were introduced. This was done based on well-established theories and approaches in customer behaviour, the result being applicable at a number of different public governments.

The intended LGCRI model is depicted in Figure 1. It can be seen that a set of explicit variables is associated to each one of the latent variables. The model as a whole is important at determining the main goal variable.

The *structural model* contains what follows:

- A number i of exogenous latent constructs, represented as ξ_i (or directly as x_i , depending on used dictionary).
- A number j of endogenous latent constructs, represented as η_j (*eta*).
- Paths connecting ξ_i to η_j , statistically represented as γ_{ji} (*gamma*) coefficients.
- Paths connecting one concrete η_m to another η_n , represented as β_{nm} (*beta*).
- Shared correlation matrix between one concrete ξ_h and other ξ_k , represented as ϕ_{kh} (*phi*)
- A shared correlation matrix among the error terms of the η_j , called ψ (*psi*).
- The error terms themselves, represented as ζ_j (*zeta*).

On the other hand, in Figure 1 there is also a *measurement model*, composed of:

- A number z of X_z variables and a number c of Y_c variables, which represent observations or the actual data collected. X_z and Y_c are the measures of the exogenous and endogenous constructs, respectively. Each X_z should load into one ξ_i , meanwhile each Y_c should load into one η_j .

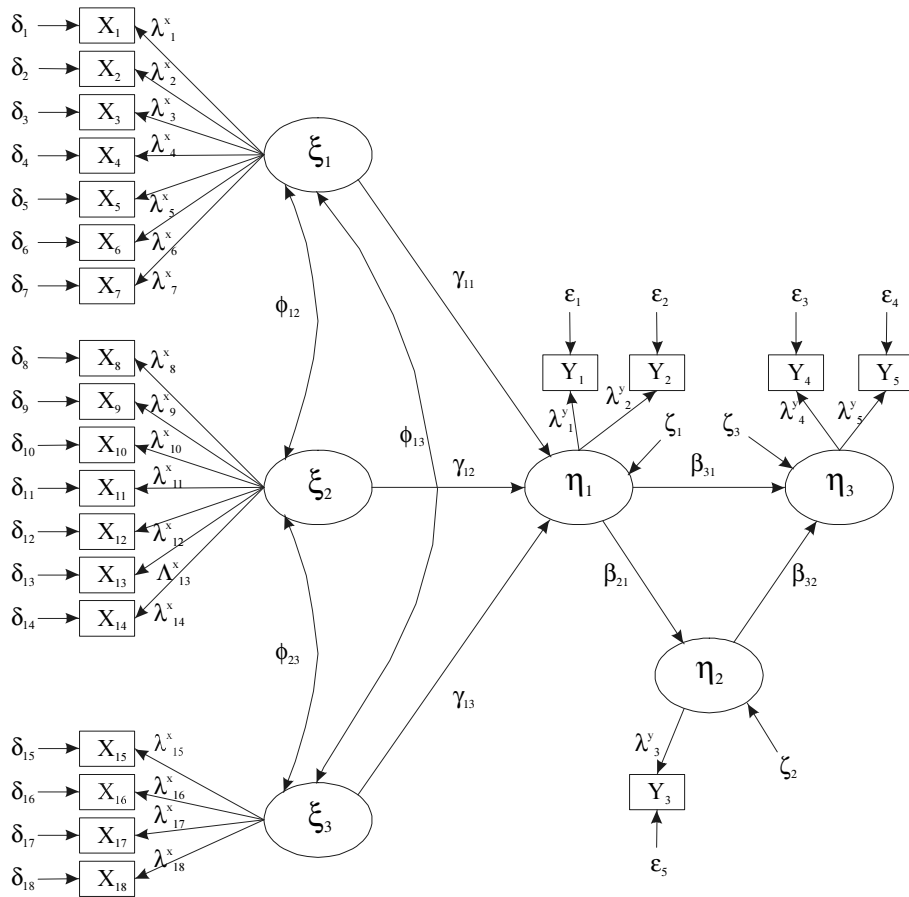


Figure 1: Network including constructs and measures for LGCRI model.

- Paths connecting any observed variable X_z and its correspondent ξ_i (i.e. the item loading on its latent variable), represented as λ^x_z (*lambda-x*).
- Θ_δ (*theta-delta*) coefficients, representing the error variance associated with every X_z variable (i.e. the variance not reflecting its latent variable ξ_i), showed as δ_z .
- Paths connecting any observed variable Y_c and its correspondent η_j (i.e. the item loading on its latent variable), represented as λ^y_c (*lambda-y*).
- Θ_ϵ (*theta-epsilon*) coefficients, representing the error variance associated with every Y_c variable (i.e. the variance not reflecting its latent variable η_j), showed as ϵ_c .

Both these two models (structural and measurement) can be summarized in a new more simplified figure, showing those relationships found to be most important in the model (Figure 2).

The field research providing data for this study was done in 2004 and early 2005, finally obtaining up to 400 required questionnaires for the sample to be representative (at 95.5 % level, $e = \pm 5.0$ %) according to the size of total population (number of town council demarcations). These questionnaires were directly fulfilled at 76 different town councils in Castilla y León, a region in the North of Spain. The 76 different locations were randomly selected in every one of nine provinces (Spanish official intermediate geographical demarcation between those of municipality and region), with the only restriction of taking into consideration the weight of each province in the region, according to its population level (citizens older than 16), as it can be seen in Table 2.

The causality model of figure 3 summarizes the various structural regressions of our model. The path coefficients are the standardized regressions coefficients. The R^2 's are also shown. The

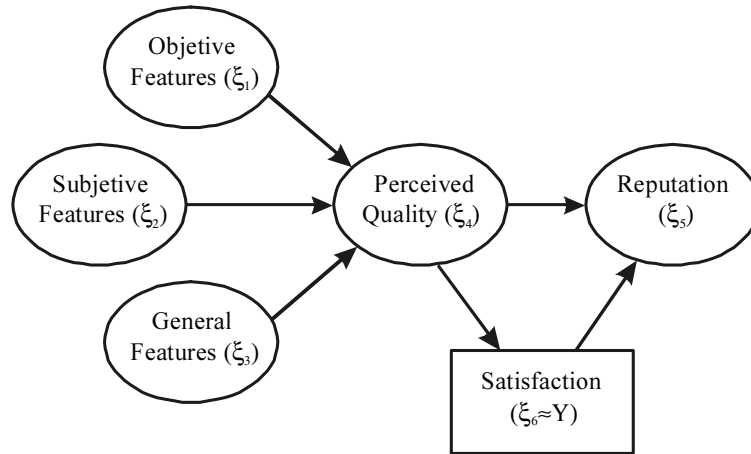


Figure 2: Causality model describing causes and consequences.

significance levels shown next to the path coefficients in parentheses are coming from PLS-VB. All relations are significant values.

Table 2: Universe and sample distributions (%) by province in the Castilla y León region.

Province:	Citizens older than 16:	Universe (%):	Sample (%):
Avila	84,249	9.83 %	10.00 %
Burgos	101,344	11.83 %	11.50 %
León	183,622	21.43 %	24.00 %
Palencia	66,613	7.78 %	7.75 %
Salamanca	121,676	14.20 %	14.00 %
Segovia	64,649	7.55 %	7.25 %
Soria	40,868	4.77 %	4.50 %
Valladolid	95,747	11.18 %	11.25 %
Zamora	97,916	11.43 %	9.75 %
Total:	856,684	100.00 %	100.00 %

Once data were analyzed, it was obtained that those variables in the intended model identified as *objective features*, *subjective features* and *overall features* were to have a significant impact on citizen's *perceived quality* of local public services (0.369, 0.373 and 0.346, respectively, as shown in Figure 3). *Perceived quality* direct impact on *reputation* was not so important (0.232), meanwhile being a very important factor at influencing (explaining) *citizen satisfaction* (0.789).

Finally, quite a good relationship was found between *citizen satisfaction* and *reputation* (0.476). Thus, it can be understood that *perceived quality* acts as an important indirect effect (through *satisfaction*) on *reputation*.

Obtained R^2 values were 0.417 for *reputation*, and 0.570 for *satisfaction*, respectively. These values can be considered to be very satisfactory, taken into account the complexity of the model.

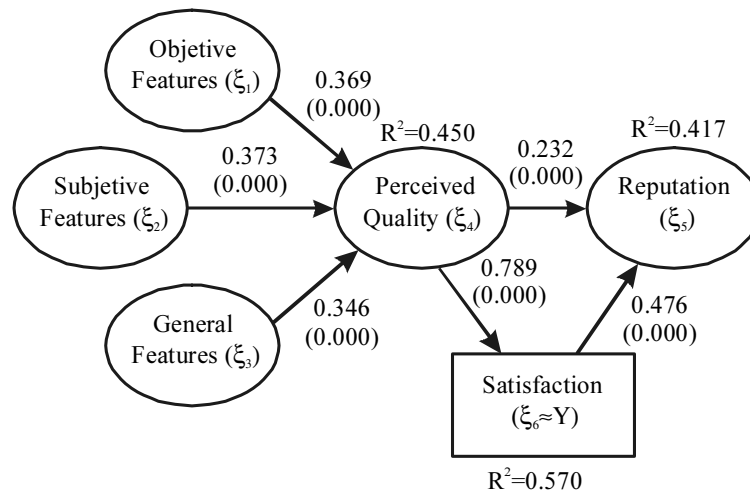


Figure 3: Final causality model.

5. Conclusion:

Main intended objective was to ascertain whether or not we can suggest a model wherein *perceived quality*, *satisfaction* and *reputation* of local public services (at the level of municipalities) would be interacting and could be considered together by public authorities.

Obtained results points clearly at this possibility. What's more, it has been found a strong and significant relationship between these three constructs.

Thus, if those elements and factors determining *perceived quality* are managed in the right way, either direct and indirect results could be obtained on *reputation*. A first finding at this point is the fact that direct relationship between *perceived quality* and *reputation* is far not so powerful as the indirect influence on it through *satisfaction*. However, we mustn't forget that *perceived quality* is understood as determined by three constructs including 23 items/variables acting as "basic" instruments at the end when trying to get or explain effects on *satisfaction* and *reputation*.

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