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Artículos científicos

**Satisfacción ciudadana sobre los servicios municipales del estado
de Zacatecas, México**

*Citizen satisfaction regarding municipal services in the state of Zacatecas,
Mexico*

*Satisfação dos cidadãos com os serviços municipais do estado de Zacatecas,
México*

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Resumen

Desde la figura habitual, gobernar es conducir la sociedad, instaurar objetivos colectivos y edificar políticas públicas por parte de las autoridades que desempeñan actuaciones en la toma de decisiones en el ámbito estatal. A partir de este enfoque, la acción de gobierno descansa en la legitimidad resultantes de procesos democráticos de selección de autoridades políticas y procesos meritocráticos de escogencias de cargos técnicos para el personal encargado de la función pública. Los actores en el estado se relacionan a partir de procedimientos jurídicos, políticos y administrativos. Los actores fuera del estado se perciben como fuente de insumos (apoyos y demandas) para la acción pública. Por tanto, el presente estudio tuvo por objetivo determinar los factores que incidieron en la satisfacción ciudadana de los servicios municipales del estado de Zacatecas, capital del mismo nombre, para lo cual se empleó un enfoque cuantitativo, en el nivel investigativo explicativo, en un contexto observacional y prospectivo, ya que se obtuvieron datos a propósito de la investigación (primarios); asimismo, es un estudio transversal, medido en una sola ocasión durante el mes diciembre de 2019. Para recabar la información se aplicó el instrumento de la encuesta de satisfacción de los servicios municipales, del Instituto Nacional para el Federalismo y el Desarrollo Municipal (INAFED), lo cual sirvió para los estadísticos descriptivos relevantes. En referencia al análisis logístico binario, se procedió a calcular un índice sumativo simple, que agrupó diferentes factores, entre los que se encontró que las variables que explican a la satisfacción ciudadana con los servicios municipales son infraestructura, servicios recibidos por parte de los funcionarios municipales y gestión municipal.

Palabras clave: satisfacción, ciudadanía, municipio.

Abstract

According to the usual view, governing means directing society, setting collective goals, and shaping public policy through authorities that operate within the governmental sphere as part of the decision-making process. Based on this approach, governance relies on legitimacy derived from democratic processes for selecting political authorities and meritocratic processes for selecting technical positions in the civil service. Actors within the state are interconnected through legal, political, and administrative processes. Performers outside the state are perceived as sources of input (support and demands) for public action. The objective of this study was to identify the factors that influence citizen satisfaction with municipal

services in the state of Zacatecas, the capital of the same name. To this end, a quantitative approach was used at the level of an explanatory study in an observational and prospective context. Since the data were collected for the purpose of the study (primary), the cross-section was measured on a single occasion during the month of December 2019. The instrument of the satisfaction with municipal services survey of the National Institute of Federalism and Municipal Development (INAFED) was used, and results were also obtained for the relevant descriptive statistics. Binary logistic analysis was used to calculate a simple summative index that summarized various factors. It was found that the variables that explain citizens' satisfaction with municipal services are the following: infrastructure, municipal officials' services, and municipal administration.

Keywords: satisfaction, citizenship, municipality.

Resumo

Na figura usual, governar é liderar a sociedade, estabelecer objetivos coletivos e construir políticas públicas por parte das autoridades que realizam ações decisórias em nível estadual. Nesta abordagem, a acção governamental assenta na legitimidade resultante de processos democráticos de selecção de autoridades políticas e de processos meritocráticos de selecção de cargos técnicos para os responsáveis do serviço público. Os atores do estado se relacionam através de procedimentos legais, políticos e administrativos. Os actores externos ao Estado são percebidos como uma fonte de contributos (apoio e exigências) para a acção pública. Portanto o objetivo deste estudo foi determinar os fatores que influenciaram a satisfação dos cidadãos com os serviços municipais do estado de Zacatecas capital de mesmo nome para o qual foi utilizada uma abordagem quantitativa no nível investigativo explicativo em um contexto observacional e prospectivo, uma vez que os dados foram obtidos para fins da pesquisa (primário); Da mesma forma, trata-se de um estudo transversal, medido em uma única ocasião durante o mês de dezembro de 2019. Para coletar as informações, foi utilizado o instrumento da Pesquisa de Satisfação dos Serviços Municipais, do Instituto Nacional do Federalismo e Desenvolvimento Municipal (INAFED). aplicado. , que serviu para as estatísticas descritivas relevantes. No que se refere à análise logística binária, foi calculado um índice somativo simples, que agrupou diferentes fatores, entre os quais se constatou que as variáveis que explicam a satisfação dos cidadãos com os serviços municipais são a infraestrutura, os serviços recebidos pelos funcionários municipais e a gestão municipal.

Palavras-chave: satisfação, cidadania, município.



Introduction

Currently, the usefulness of evaluation and citizen collaboration in public management is recognized, which are based on the theory of public management. According to Ruedas and Villavicencio (2018), this idea of organization originated in Latin America in the 20th century as a result of the study of exchange policies, incipient industrial development with political fluctuations, and the consolidation of authoritarian regimes.

However, in later years, democracy—conceived as a means for political power to be exercised by and for the people—was limited by the inability to change government structures in Latin America to promote the common well-being, as well as to reform the way they produced, traded and governed, which was not happening in developed countries, which had effective mechanisms to safeguard the interests of their citizens.

Indeed, most government systems in developing countries still face significant challenges due to the inherent complexity of each nation, the lack of resources, sociocultural challenges, among other factors (Wireko and Skouby , 2016) . which is aggravated by the underutilization of large investments that do not translate into greater organizational productivity.

In the case of Mexico, this is one of the countries of the Organization for Economic Cooperation and Development (OECD) where subnational governments have broad regulatory powers. These governments, at the federal, state and municipal levels, have the ability to design and apply their own regulations. In some cases, these levels of government operate independently, but in many others, the regulatory framework establishes that the three levels must coordinate on certain specific issues.

Consequently, the country needs to improve the quality of its regulation at the subnational level if it seeks to create a business-friendly environment and foster competitiveness. This is essential, since entrepreneurs must carry out procedures at the federal, state and municipal level (OECD, 2012, cited by Díaz and Vargas, 2014).

In this context, advances in tax administration—which imply improvements in policies, administrative changes and supervision (Sondakh , 2017)—have evolved towards electronic government (e- Gov), which represents an opportunity to increase the efficiency of the tax administration. government administration, as it seeks to combat problems such as

mismanagement in government agencies and corruption (Medina *et al.* , 2021). In addition, e- Gov facilitates access to information, reduces costs, increases income and tax collection with the fundamental purpose of restoring citizens' trust in the government.

For this reason, the objective of this study was to analyze the factors that influence citizen satisfaction with respect to municipal services in the state of Zacatecas (Mexico), specifically in its capital of the same name. The purpose of this analysis is to identify the needs that require the attention of the state government to regulate and improve economic and social activity, which, in turn, will help guide the creation of new public policies.

Theoretical framework

In the United Kingdom, in the early 90s, service charters (*citizen*) emerged. charters), an idea presented by (Osborne and Gaebler 1992, cited by Azhar and Steen , 2022), who advocate a customer-centered government approach, that is, one that prioritizes the needs of citizens over those of the bureaucracy. In a similar approach, Chaparro (2021) highlights the importance of starting by understanding how to serve customers, which has led to the implementation of increasingly structured surveys to precisely identify the service dimensions that influence satisfaction and which ones. They are less relevant.

Following these principles, in recent years, governments and administrations of various countries—as pointed out by Del Pino *et al.* (2011) cited by Guillén and Luque (2019)—have carried out surveys to evaluate the opinions of increasingly demanding citizens. This approach reflects the trend of new public management (NPM), which has its roots in the business world (Van Ryzin , 2009, cited by Guillén and Luque, 2019).

In this sense, the study carried out by Núñez *et al.* (2010, cited by Araujo, 2021), in municipalities of a community in the state of Anzoátegui (Venezuela) highlights that the perception of public services by the community plays a crucial role in municipal public policies. This is reflected in clear control of the decisions of administrative authorities, which, together, contributes to the support of government actions (Gil and Acosta, 2021). To achieve this, it is essential to provide the corresponding government entities and institutions with a comprehensive methodology to analyze public policies, establish management control procedures, indicators and carry out evaluations. All of this has the main objective of promoting citizen participation and improving the well-being of local communities.

In this context, progress in management is a topic of global relevance that is gaining more and more importance in different countries (Ospina, 2018), which is evident in the active participation in international organizations and in the practices adopted by highly developed countries. Efficient management, tested and proven in various contexts, is directly related to the competitiveness of a country, the stability of its institutions and its success in a dynamic and complex contemporary world.

Countries such as Australia, Canada, Chile, Korea, Spain, the United States, France, the United Kingdom and Mexico have led administrative innovation efforts based on good governance principles. These efforts focus on promoting social inclusion, transparency and improving public services, which is why various international organizations are promoting administrative reforms in member countries.

Indeed, various international organizations, such as the OECD, promote administrative modernization initiatives based on the principles of good governance. This covers aspects such as improved regulation, performance management, the fight against corruption, transparency and the implementation of information technologies in the provision of public services. In addition, these organizations strive to promote the creation of equitable employment and social equity, as well as the promotion of a transparent and effective government (Economic Commission for Latin America and the Caribbean [ECLAC], 2014).

In other words, the progress of a nation is sustained by the trust and contribution of citizens in public affairs, even when society expresses a negative opinion about public administration. Furthermore, an honest administration plays a fundamental role in strengthening citizens' trust in government institutions (ECLAC, 2014).

In the case of Mexico, it should be noted that any individual who holds a position or commission in the public administration, whether at the federal level or at any level of government, has the responsibility of complying with the obligations of public servants and following the corresponding code of ethics, which is based on the regulatory framework that includes the Constitution of the United Mexican States, the State Constitution, the Municipal Organic Law, the Police and Good Government Band, as well as the service regulations linked to this law. Additionally, federal public servants mentioned in Article 108 of the Constitution, along with all persons who manage or apply federal public resources, must follow these guidelines. In programmatic terms, the National, State and Municipal Development Plan is included, as well as related programs at the three levels. Finally, in terms of coordination, unique development agreements for the provision of services are



established and the scope of municipal public services is described (National Institute of Public Administration [INAP], 2017).

Based on the fact that individuals are in contact with the activities promoted by the State, either directly or indirectly—as mentioned by Villa *et al.* (2017)—, the municipality, as part of the government, performs various functions, among which are the administration of heritage and human and material resources. These functions are divided into two categories: substantive and management. In addition, municipalities are in charge of addressing issues related to public services, security, well-being and development of their inhabitants, guaranteeing people's rights. In most municipalities, the provision of public services is one of the main responsibilities of their administration, and these services are those that the law assigns to the town councils.

It is true that—as the Ministry of Public Administration (ECLAC, 2014) points out—several international organizations have promoted administrative modernization actions among their member countries. The work program of the OECD Committee on Public Governance has focused on the principles of good governance, which cover topics such as regulatory improvement, performance management, transparency and the fight against corruption, as well as the incorporation of information technologies in the provision of public services. In addition, the Ibero-American Summit of Heads of State has approved an Ibero-American Code of Good Government, which establishes the foundations, values and fundamental principles related to democracy, ethics and public management, oriented towards institutional innovation in governments.

Advancement in management involves developing capabilities to improve the quality and effectiveness in the provision of public services, as well as to efficiently address increasingly complex and essential demands, in addition to providing clear accountability to citizens on the administration of public resources and the guarantee of effective actions. Several countries such as Australia, Canada, Chile, Korea, Spain, France, the United Kingdom and the United States have adopted administrative reform practices based on good governance principles, with a focus on social inclusion, government efficiency, clarity and transparency. improvement of public services (ECLAC, 2014).

Therefore, municipal public administration is the area where the closest relationship between the State and society is established. This instance is fundamental, and from these considerations, two areas of powers and functions of the town council can be determined:

firstly, the administration of the municipality's own resources and, secondly, the management of common interests of the locality (INAP, 2017).

According to the National Institute for Federalism and Municipal Development (INAFED, 2022)—an entity that works in coordination with state municipal development agencies, higher education institutions, agencies and entities of the federal public administration and autonomous organizations—, has recently implemented the Municipal Performance Advisory Guide (GCDM, 2022-2024). This guide is essential in the institutional services that are offered free of charge to state and municipal authorities, providing access to materials that anyone can consult. The guide is made up of several modules that cover key areas of responsibility for municipal governments, such as organization, finance, land management, public services, environment, social development, economic development and open government. Each module includes a series of indicators that play a fundamental role in achieving the 2030 Agenda.

On the other hand, it is important to highlight that a report from the World Economic Forum (2008, cited by the OECD, 2020) evaluated the regulatory quality of Mexico in comparison with other countries. In the “burdens of government regulation” indicator, Mexico obtained a score of 2.4, well below the average of the G-7 countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States), which was 3.1. It is essential to mention that the OECD and the Mexican Ministry of Economy agreed on a work program for 2008-2009 with the objective of improving the country's competitiveness (García, 2010 cited by Ovalle and Ovalle, 2020). The regulatory improvement agenda received strong political support in January 2010, when Mexican President Felipe Calderón announced a general review of existing regulations.

It is true that in Mexico the Federal Commission for Regulatory Improvement (COFEMER) is the only mechanism capable of applying a cost-benefit analysis to guarantee quality regulation. However, this entity has jurisdiction only over the agencies of the federal executive branch and lacks the authority to supervise the regulations promulgated by the Congress of the Union, the state congresses, the Government of the Federal District and, consequently, the municipalities (Mexican Institute for Competitiveness [IMCO], 2009, cited in Huber and Mungaray , 2017).

According to the National Development Plan (PND) (2019), it was planned to classify corruption as a serious infraction, eliminate the immunity of officials, promote international cooperation to eradicate tax havens, among other measures. In line with this purpose, it was



proposed to the Congress of the Union the creation of the Federal Law to Combat Conflicts of Interest and the strengthening of supervision mechanisms, such as the Secretariat of Public Function (SFP) and the Superior Audit of the Federation (ASF). It is relevant to highlight that, in the vision for the year 2024, the aim is to reduce crime, combat political corruption and impunity, and put institutions at the service of the needs of the people and national interests. Respect for the principle of separation of powers and observance of the laws will be essential to guide the actions of public servants and combat electoral fraud in the electoral processes carried out during the six-year term.

According to the National Institute of Public Administration (INAP) (2017), it is essential to deepen the reforms that allow Mexico to strengthen its institutions, provide quality public services, advance constantly and establish a bond of trust between society and his government. During the period 2001-2006, the National Program to Combat Corruption and the Promotion of Transparency and Administrative Development (PNCCFTDA) focused on some general principles, among which the following stand out: promote the efficient and effective use of public resources, combat corruption and impunity through preventive actions and sanctions for those who violate the law, render accurate and transparent accounts of public management, promote the dignity and professionalization of public servants, promote the competitiveness and integrity of those who carry out their responsibilities and promote the participation of society in the supervision of government work.

Although all of these initiatives represent progress, there is still a long way to go to promote more transparent management of public resources, with a focus on reducing poverty, unemployment and insecurity. Public services, at all levels of government, have a responsibility to meet citizens' expectations and encourage active public participation. However, an important challenge arises in eliminating the digital divide and promoting the extensive use and accessibility of information technologies.

As mentioned above, the foundations have been established to turn public administration into the main actor of democratic governance. To achieve continuous improvement, management must be considered as a multidimensional process that encompasses all government actions. Its success depends on the internalization of its values in each institution, in each administrative unit and in each public servant (INAP, 2017).

In this regard, Ortiz (2021) highlights the efforts made by the Secretariat of Public Administration (SFP) in the institution and regulation of systematic administrative development in the agencies and entities of the Federal Public Administration (APF).



Likewise, the implementation of the Management Improvement Program (PMG) is part of a public sector modernization policy that will guide public institutions towards improving their performance. Therefore, it is essential to remember that the progress of a nation is based on the trust and collaboration of citizens in public affairs.

Materials and methods

Type of study

The research was presented in an observational and prospective context, since data was obtained for the purpose of the research (primary). Furthermore, it was transversal, since it took place in a single moment during the months of November and December 2019, and explanatory, since it sought to determine the reason for the events through the cause-effect relationship (Arias and Covinos , 2021).

Population and sample

The present study was carried out in Zacatecas, capital of the state of the same name, in the Mexican Republic. Its population is 1,579,209 inhabitants, according to data from the National Institute of Geography and Informatics (Inegi) (2017). For this research, the sample calculator provided by the National Institute for Federalism and Municipal Development (INAFED) (2019) was used; As shown in the technical sheet in figure 1, there were 357 people out of a total of 34,027 homes in the municipal seat, and 27 people out of a total of 2,222 in rural localities, that is, a total sample of 380 was achieved . economically active people in the municipality of Zacatecas (table 1). Likewise, 403 surveys were collected using the multistage random-stratified method. (Hernández *et al.* , 2014).

Table 1. Research technical sheet.

Characteristics	Survey
Universe	People over 18 years of age from the municipality of Zacatecas, capital of the state of Zacatecas, Mexico.
Scope of study	Homes randomly selected by the multistage method
Sampling unit	Person over 18 years of age
Information collection method	personal survey
Sampling procedure	Personal interview with selected people
Sample size	380, rising 403
Sampling margin of error	$\pm 5\%$ at a global level for a confidence of 95% $p=q=0.5$
Field work date	December 2019

Note: own elaboration. Based on López *et al.* (2019). Analysis of electronic leadership and digital competence of teachers of educational cooperatives in Andalusia (Spain).

Figure 1. Sample calculator and selection of homes for surveys

Calculadora de muestras y selección de viviendas para levantamiento de encuesta

1.- SELECCIONAR ESTADO: ZACATECAS

2.- SELECCIONAR MUNICIPIO: Zacatecas

Número total de viviendas (INEGI 2010)	36,249
Viviendas en cabecera municipal	34,027
Viviendas en localidades	2,222
Tamaño de la muestra de viviendas	380
Número de encuestas en cabecera municipal	357
Número de encuestas en localidades	23

Nivel de Confianza: 95%

Margen de error (+/-): 5.0%

Note: Own elaboration based on the sample calculator provided by INAFED (2019)

Instrument

For the present study, the instrument annexed to the Municipal Development Agenda was applied, called the Municipal Services Satisfaction Survey of the National Institute for Federalism and Municipal Development (INAFED) (table 2). The purpose was to measure satisfaction around the 11 public services included in the evaluation: 1) paving, 2) street maintenance, 3) drinking water, 4) drainage, 5) sewage, 6) cleaning, 7) solid waste, 8) parks and gardens, 9) public lighting, 10) markets and 11) pedestrians.



The questions had multiple choice, through the options 1 = very acceptable, 2 = acceptable, 3 = unacceptable and 4 = very unacceptable (in addition to 11 dichotomous questions, in which the option of whether the service was received or not was considered); five questions related to the satisfaction of the services received in municipal procedures and eight more related to municipal management with the options 1 = totally agree, 2 = agree, 3 = disagree, 4 = totally disagree, 5 = have not done procedures and 9 = does not know did not answer (the last two were eliminated before addition and recoding). Are which were applied through a face-to-face survey to people over 18 years of age who usually reside in the selected homes .

Table 2. List of items used in the first approach to the model.

Infrastructure: SatisInfra	
p1	1) Is the section of street where this home is located paved or does it have another type of covering (cobblestone, asphalt, stoneware, printed concrete, hydraulic, noxer, cobblestone)?
p2	2) How do you rate the quality of the paving service?
p3	3) In the last year, has the stretch of street where this home is located received any type of maintenance (patching, resurfacing , paint on sidewalks, etc.)?
p4	4) How do you rate the quality of the street maintenance service?
P15	15) During the last year have you used any municipal park or garden?
P16	16) How do you rate the quality of the park or garden facilities?
P17	17) Does the section of street where this home is located have public lighting service?
P18	18) How do you rate the quality of the public lighting service?
p19	19) During the last year have you used the service of any municipal market?
p20	20) How do you rate the quality of service in the municipal market?
p21	21) During the last year have you used the services in the municipal cemeteries?
p22	22) How do you rate the quality of the service of the municipal pantheons?
Water and sewage: SatisAguaAlca	
p5	5) Do you have drinking water service inside the home or outside it, but inside the land?
p6	6) How do you rate the quality of the drinking water service?
p7	7) Is this home connected to the public drainage system?
p8	8) How do you rate the quality of the public drainage service?
p9	9) Does the section of street where this home is located have sewer service?
p10	10) How do you rate the quality of the sewer service?
Clean: SatisLimpia	
p11	11) Do the sections of streets and public spaces near your home receive cleaning services?
p12	12) How do you rate the quality of the cleaning service?

p13	13) Does this home have solid waste (garbage) collection service at least twice a week?
p14	14) How do you rate the quality of the solid waste (garbage) collection service?
Citizen attention: SatisAtencion	
p23_1	1) They demonstrate that they are capable of performing their corresponding functions.
p23_2	2) They respond and clarify the doubts you presented.
p23_3	3) They solve the problem for which he attended the municipal presidency.
p23_4	4) They serve you in an adequate period of time.
p23_5	5) Consider that they have the necessary knowledge and skills in their position.
Management: SatisGestion	
p24_1	1) Administration
p24_2	2) User support
p24_3	3) Municipal regulations
p24_4	4) Human resources
p24_5	5) Information technologies
p24_6	6) Public safety
p24_7	7) General services
p24_8	8) Performance of specific personnel functions.

Note: Own elaboration. Based on the SmartPLS statistical package version 3.2.2 (Ringle et al., 2015).

When obtaining the frequencies to validate each variable, it was found that some of them did not comply with having less than 30% missing data (Table 3), so they had to be discarded from the analysis (Hair *et al .*, 2014).

Table 3. Variables that do not comply with percentage of missing data

Variable	Percentage of data lost	Comment
P4	88.83%	87.4% stated that the street did not receive maintenance.
P12	78.16%	78.2% stated that the sections near the street do not receive any cleaning service.
P16	59.05%	59.1% stated that they did not use parks and gardens in the previous year.
P20	35.48%	35.5% stated that they did not use the municipal market infrastructure in the last year.
P22	69.27%	70% stated that they did not use the service of the municipal cemeteries.

Note: Own elaboration. Based on the SmartPLS statistical package version 3.2.2 (Ringle et al., 2015).

Results

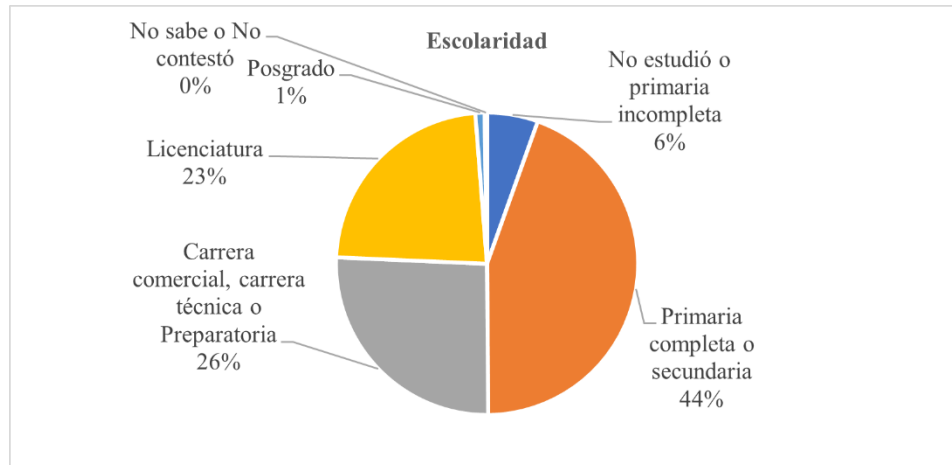
By applying the instrument called the INAFED Municipal Services Satisfaction Survey, it was possible to evaluate the perception of the inhabitants of the studied context in relation to eleven services offered, some of which had to be excluded from the analysis because they did not meet the requirements. established criteria, such as having more than 30% missing data or, in some cases, not having used the service in the previous year. Among the excluded services were the maintenance and cleaning of streets, parks and gardens, markets and the municipal pantheon. This exclusion could be interpreted as a lack of attention on the part of the municipality, as well as a lack of interest on the part of the population in using the corresponding municipal infrastructure.

Regarding the variables that did meet the criteria, descriptive statistical analyzes were carried out and binary logistic regression was subsequently applied. This statistical technique was selected because it allows us to explain the occurrence or not of a variable, in this case, citizen satisfaction with municipal services.

The results of the descriptive statistics revealed the following: of the total sample, 61.3% are women and 38.7% are men. The average age is 39 years, within a range that goes from 18 to 65 years. Regarding education, the majority of respondents completed primary or

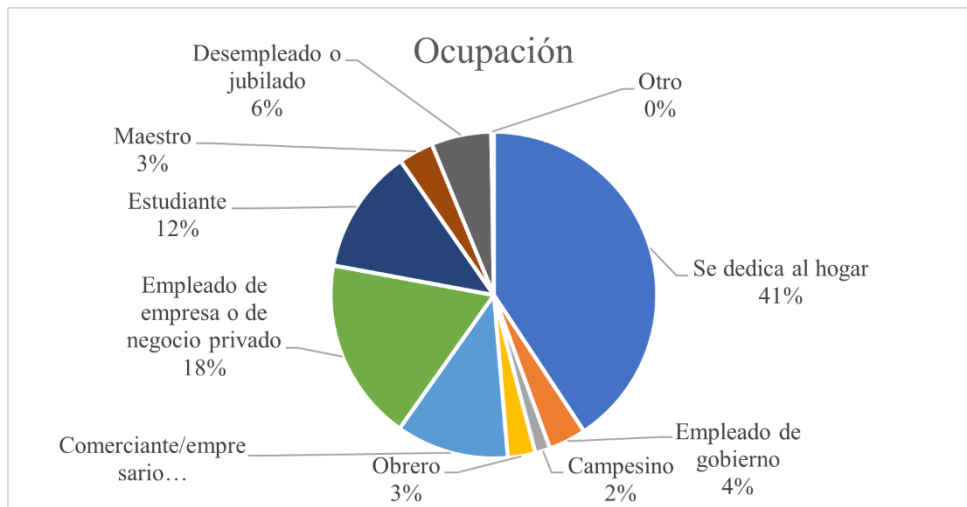
secondary school, followed by those with technical or preparatory education and , finally, those with a university education. In terms of occupation, the most prominent categories are household, employee in a private company or business, student and trader/businessman. Regarding social level, 71% of those surveyed consider themselves to belong to the middle stratum, while 28.3% are located in the low stratum.

Figure 2. Descriptive statistics (schooling)



Source: Own elaboration . **Based on the SmartPLS** statistical package version 3.2.2 (Ringle et al., 2015).

Figure 3. Descriptive statistics (occupation)



Source: Own elaboration . **Based on the SmartPLS** statistical package version 3.2.2 (Ringle et al., 2015).

Binary logistic regression

To be precise, binary logistic analysis is a multivariate technique used to predict and explain a categorical variable based on others that can be dichotomous, multiple or even scalar (Hair *et al.* , 2014). Its main objective is to identify the variables that influence the dependent, which determines whether an event occurs or not, based on whether the probability exceeds the threshold of 0.50 (Balluerka *et al.* , 2010). For this technique, Hosmer and Lemeshow (1998, cited by Jabur Allela , 2022), recommend an optimal sample size of 400, a criterion that is met in this research.

To carry out this analysis, a simple summative index was calculated from the Likert-type scale variables, which group together various factors. They were subsequently recoded into a different variable using a dichotomy, where zero represented “Not Satisfied” and one equaled “Satisfied.”

Table 4. Factors in the binary logistic regression

Factor	Grouped variables	Related to
SatisInfra	P2, P18	Satisfaction with municipal infrastructure
SatisWaterAlca	P6, P8, P10	Satisfaction with water and sewer service
SatisCleaning	P14	Satisfaction with the cleaning service
SatisfactionAttention	P23.1, P23.2, P23.3, P23.4, P23.5	Satisfaction with the attention received in any procedure carried out by the municipal presidency
satisManagement	P24.1, P24.2, P24.3, P24.4, P24.5, P24.6, P24.7, P24.8	Satisfaction with the management of municipal public servants

Source: Own elaboration . **Based on the** SmartPLS statistical package version 3.2.2

(Ringle et al., 2015).

The factors presented in Table 4 were recoded dichotomously, assigning a value of zero to represent dissatisfaction and a value of one to indicate satisfaction with municipal services.

After carrying out the binary logistic analysis using SPSS (version 24), the variables that influence citizen satisfaction with municipal services were identified. These variables are infrastructure, services provided by municipal officials, and municipal management. On the other hand, the variables related to water and sewage, as well as the cleaning service did not show a significant contribution to the model. In terms of standard units (z), the probability of citizen satisfaction with municipal services is presented as follows:

$z = -3,813 + 1,545 \text{ infraestructura} + 1,073 \text{ servicios received by officials} + 3,733 \text{ management.}$

From the previous equation, we can interpret that, taking into account an initial negative perception represented by the constant of -3.813, this perception will increase by 1.454 times for each increase of one point in satisfaction with the infrastructure. Likewise, it will increase 1,073 times for each additional unit of satisfaction in the services received and 3,733 times for each unit that increases satisfaction in the management of municipal officials.

If the equation is to be used for prediction, in terms of probability, it looks like this:

$$p(\text{satisfacción}) = \frac{1}{1 + e^{-(-3.813 + 1.545 \text{ infraestructura} + 1.073 \text{ servicios} + 3.733 \text{ gestión municipal})}}$$

Discussion

There are successful experiences of citizen participation in municipal planning and management, as Castillo (2017) points out. This shows that some people believe that participation is meaningful and are actively involved in public institutions to make decisions. Therefore, this research contributes to identifying the places where this participation occurs, how it is encouraged or inhibited, what its benefits are and, most importantly, how it contributes to reducing corruption (Contreras, 2020).

For example, in this study it has been observed that the factors that influence people's satisfaction are related to the unfavorable opinion they have about public administration today. Therefore, the search for alternatives that help change this perception will always be an important support in improving relations between the State and society. Güemes (2014) points out that people consider it unlikely to assume the costs and risks involved in collective and cooperative participation when they perceive others as opportunistic and dishonest. On the contrary, when they trust in the honesty of others, participation and joint action become more feasible.

Numerous national and international studies show a positive correlation between citizen participation and public governance. Suárez and González (2022) cite research carried out in Spanish town councils that highlights the importance of public administrations promoting and facilitating participation, since this is directly related to citizens' positive perception of their local administrations.

In this research, it was essential to determine what factors influence citizen satisfaction to guide public institutions towards improving their performance. From a different perspective, the recent report by the citizen network *How are we doing on citizen perceptions* (2015) mentions, among other things, that perceptions about good government and loyal citizens contribute to engaged citizens with appropriate behavior.

However, this research shows that some municipal services, such as street maintenance and cleaning, are not carried out adequately. Furthermore, services such as the use of parks and gardens, markets and municipal cemeteries were not requested by citizens in the period studied.

In this regard, it must be taken into account that in Mexico the distribution of the budget between the federation, the states and the municipalities is poor (Zavala *et al.*, 2021), hence the objective of any public management is to continually reduce the cost of Production of goods and services. Otherwise, a significant limitation is generated to improve the infrastructure and, therefore, the provision of services to citizens.

Specifically, and according to the results collected, it is observed that citizen satisfaction with municipal services (probability of satisfaction) can be interpreted as follows: $z = -3.813 + 1.545$ for infrastructure + 1.073 for the services received by the officials + $3,733$ for management. This suggests that the planning processes do not function properly, the objectives set are not met and the development of the plan becomes a simple requirement to be met. As Ovalle and Ovalle (2020) point out, the political foundation, from the highest levels of administration, is essential for the creation of effective regulatory policies, since, despite changes in practices to establish responsible institutions, it is still necessary improve some regulatory laws.

For all of the above, it is of great relevance to promote accountability, transparency and fair governance (OECD, 2022) to provide services that improve the quality of life of citizens and comply with solid commitments to promote innovative initiatives. These initiatives, in turn, should offer tools that transform the design and management of regulatory policies, as this approach is generating opportunities to share high-quality experiences and

knowledge at the subnational level and to support member countries in the implementation of successful practices.

Conclusions

According to the purpose of this study, which consisted of determining the factors that influence citizens' satisfaction with municipal services in the state of Zacatecas, it was found that the variables that explain this satisfaction are infrastructure, services provided by officials municipal and municipal management. On the other hand, water and sewage, as well as cleaning service, do not have a significant impact on the model.

In this context, one of the most notable benefits of decentralization is the improvement in public administration. By bringing government closer to citizens, public officials must be able to accurately identify, interpret, and satisfy citizens' needs and demands for goods and services. Proximity also allows citizens to more effectively assess whether local authorities are meeting their expectations.

Nowadays, it is essential to evaluate the quality of public services from an open and proactive perspective, which implies not limiting oneself to opinion surveys about services, nor considering citizens simply as customers of public services. It is crucial to compare the results of opinion surveys at different times, places and between different service providers to perform comparative analyzes and draw conclusions about public opinion. Furthermore, it is necessary to use additional indicators, and not limit ourselves only to issues related to satisfaction with the service.

Regarding citizen collaboration in political matters, in many modern democratic states, this participation tends to be limited mainly to electoral processes. However, in countries such as Norway, the Netherlands, Sweden, Switzerland, Denmark and Germany, among others, citizen participation is considered appropriate to address issues beyond elections and people's everyday socio-political context. Therefore, it is essential to continue studying the various psychosocial and sociopolitical factors that can influence the political participation of citizens and understand their impact on society.

Finally, it is essential to highlight that special attention must be paid to citizens dissatisfied with public services to design actions to improve public policies and services. Diversity of approaches should also be considered due to differences between respondents and their environment, as people who are more satisfied with their lives tend to participate

more actively and peacefully in politics, leading to higher levels self-efficacy and well-being. Likewise, there are significant challenges that must be addressed, such as the inclusion of citizen attitudes in the instruments along with other objective indicators on public policies and services, which can provide relevant information on how the management of policies and services influences citizen satisfaction. So far, empirical evidence in this regard is limited and often confusing.

Future lines of research

It is essential to effectively manage the needs of municipalities and take into account their priorities, since the persistent confrontation of the population's usual demands in terms of public services and procedures can undermine the necessary progress in municipalities. To prevent this from happening, it is crucial to establish clear objectives and priorities, as well as consider the criteria that will guide the formulation of public policies.

The perception of public services, as an integral part of citizen participation in municipal policies, represents a significant intervention in the decisions of administrative authorities. In addition, it jointly contributes to supporting government management actions. Therefore, the main contribution of this research lies in providing government entities and local communities with a methodology to study public policies based on citizen satisfaction with municipal services. The objective is to encourage citizen participation and improve the well-being of the inhabitants in the investigated context.

Finally, for future research, the binary logistic regression technique used in this study could be replicated in other contexts. This would allow comparisons of the model based on different regions and, in this way, obtain evidence on how the community evaluates the quality of services and which ones it considers most relevant depending on the place of study.

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