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Satisfaction analysis of the implementation of public management policies in towns and cities using parametric modeling

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Abstract

In this paper, firstly, based on the parametric model, we extracted the factors affecting the satisfaction of the implementation of public policies in towns and cities, and factor analyzed the variables, and established the correlation structure between the variable factors through the logistic distribution function. Then PLS is used to measure the indicator weights, and the parameters are stabilized and predicted to be estimated through iteration. Finally, the satisfaction parameter indicators are repositioned to establish a satisfaction assessment system for public management policy implementation. The results show that the satisfaction assessment system contains a variety of assessment indicators, and the measurement reliability coefficients are all above 0.75. The satisfaction assessment system constructed in this paper can guide the public to set up rational and practical expectations.

Keywords: *parametric model; public policy; factor analysis; satisfaction assessment; logistic distribution function*

Introduction

Public management policy refers to the measures formulated by the public authority in a certain period of time to accomplish specific tasks. Policy implementation is an important link in the realization of policy goals, and the essence of policy implementation is the process of the interest game between subjects to consider the gain or loss of interests, and the interests drive the actors to implement or violate the policy (McDonald III, Hall, O'Flynn, & van Thiel, 2022; Siddiki & Frantz, 2021). Since public management policies are formulated to accomplish specific tasks, they need to be effective for a certain period of time (Yoshioka, Yaegashi, Yoshioka, & Tsugihashi, 2019).

This also explains that public management policies do not face the past but the future or real needs. However, due to the over-emphasis of policies on the efficiency of the economy, it has led to a number of social contradictions that are becoming more and more prominent (He, 2020). With the reform of China's household registration system, the increase of urban migrant population, coupled with the changes in the world pattern, the world financial crisis has also exposed China to a number of risks and hidden dangers (Okui, 2020; Park, Park, & Choi, 2021). If a property tax is universally imposed, it is bound to increase the burden of farmers and cause dissatisfaction among them. In addition, due to the phenomenon of weak government and strong departments between the Chinese government and departments, coupled with the fact that decision-making, implementation and supervision are integrated, the division of authority of government departments to formulate policies on their own is not clear (Alqahtani, El-Shahed, & Mottram, 2019). Moreover, some governments set prices for monopolized industries or state-owned enterprises on the basis of the standards provided by them, and act as an umbrella for the non-public interests of these monopolized industries or state-owned enterprises in the name of the government's public management policies. Some governments allow their monopoly industries or state-owned enterprises to set prices freely, making their commodity prices extremely high, seriously infringing on the public interest of the general public. Therefore, it is necessary to establish a set of sound public management information feedback

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mechanism, which can truly, timely, comprehensively and accurately reflect the people's voices after the public announcement (Garritzmann, Neimanns, & Busemeyer, 2023; Zhang, Li, & Himed, 2017).

This paper utilizes a parametric model to assess the satisfaction of the implementation of public management policies in towns and cities, and establishes an assessment system. Firstly, based on the parametric model, it measures according to the linear relationship between the characteristics of the influencing factors, and establishes the relationship mechanism by using the logistic distribution function. Then the PLS algorithm is introduced to measure the weights of the indicators, and the parameter structure is stabilized through an iterative way, according to which the parameter indicators are predicted and estimated (Li et al., 2018; Sun & Liu, 2017). Finally, the satisfaction assessment system of the implementation of public management policies is tested, and the effectiveness of this paper's method is verified by assessing the reliability coefficients, the analysis of key factors, and the change of satisfaction. It is illustrated that the assessment system constructed based on the parameter model can make the assessment of satisfaction with the implementation of public management policies in towns and cities more standardized and standardized, and effectively guide the people's rights protection behaviors in a legal and orderly way (Beniskova & Punova, 2020; Schwoerer, Keppeler, Mussagulova, & Puello, 2022).

Literature review

Schwoerer, K et al. introduce the CO-DESIGN framework, a process for advancing public administration research in towns and cities through the co-creation of knowledge by researchers, practitioners and communities. Researchers can collaborate with practitioners to identify public policy implementation programs, eight focus areas where knowledge creation can help to advance, including its impact on the field. This approach can enhance the understanding of complex social issues by all stakeholders as well as address quality issues that affect public policy implementation (Krpálek et al., 2021; Wolniak & Skotnicka-Zasadzień, 2021). Li, L et al. proposed a two-stage service module delineation method based on the fuzzy Karnaugh model, which was developed by introducing the entropy weighting method in order to determine the importance of the public policy service needs, and then determining the service process based on the relevance by using fuzzy clustering method. Secondly, public policy service types are classified through nonlinear programming method to cope with rapidly changing and differentiated demands, which shows that the method has good effectiveness and feasibility (Vogel & Hattke, 2022).

Sun, M et al. use ordinal regression analysis model to analyze the urban residents' satisfaction with public space, public safety, and life satisfaction, and combine it with correlation research to analyze the influence of the impact of public policy factors. The results show that the higher the quality of public policy implementation, the higher the satisfaction of people's life, and the public space crime worry decreases with the increase of satisfaction (Ferland, 2021). Kuai, T et al. conducted an empirical study on the effect of government service quality and farmers' expected quality on satisfaction through structural equation modeling (Gordon, 2019).

The results showed that the quality of government services had a significant effect of 0.04 on farmers' satisfaction and the quality of farmers' expectations had a significant effect of 0.96 on satisfaction, which shows that improving government services can increase farmers' satisfaction under the existing resources and environmental conditions (Patel & Wolfe, 2023). Garritzmann, J. L et al. provided evidence of causality at the micro level in their investigation of practices in European countries. It is pointed out that future-oriented reforms generate uncertainty, risks and costs, and that trust and public policy satisfaction can mitigate the impact of these issues (Garritzmann et al., 2023; Zhang et al., 2017). And it was found that citizen trust and government satisfaction increase support for reforms and moderate self-interest and ideological positions (Reichborn-Kjennerud & Vabo, 2017).

Parametric modeling of satisfaction

Selection of variables

Parametric model is a model that can be represented by structured expressions and parameter sets, and parametric model is a distribution described by a limited number of parameters. Urban residents' satisfaction with the implementation of public management policies refers to the subjective reflection of the degree of

relative gap between ex ante expectations and ex post perception in the process of policy implementation, which can be used as a metric to judge the process of policy implementation (Didenko, Yeshchuk, & Topolia, 2019; Nikolina, Hulivata, Husak, & Radzihovska, 2020). In this paper, we use the parametric model to re-position the perception of the satisfaction of the masses and establish a brand new assessment index.

Variables in parametric models are categorized into latent and explicit variables according to their different characteristics. There are many factors affecting satisfaction, as there is often an intrinsic connection between the essential characteristics of the influencing factors that somehow approximates a linear relationship (Rucki, 2020). Based on the analysis of the impact of satisfaction with public policy management, this paper selects public expectations, perceived performance, policy implementation maturity, public satisfaction, city image, and public trust as latent variables. When determining the explicit variables, attention should be paid to the fact that the selected explicit variables can explain and measure the corresponding latent variables as much as possible, and also follow the relevant principles for the establishment of the indicator system (Arundel, 2017; Maciel, Bonatto, Arango, & Arango, 2020).

In this paper, we first conduct factor analysis on n exogenous explicit variable, extract m exogenous latent variables, take public satisfaction and policy implementation maturity as explicit variables, and establish the relationship between latent variables and explicit variables through logistic distribution function, then the relationship structure is shown in Fig. 1.

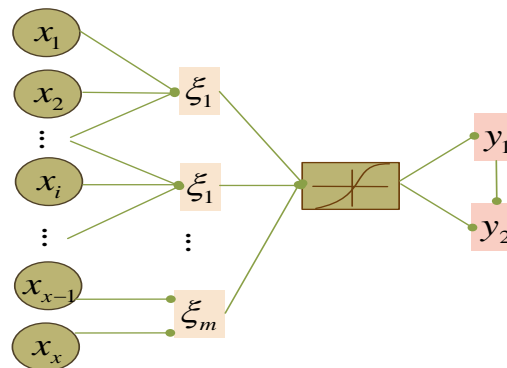


Figure 1 Structural relationship between latent and measurable variables

The relationship between the latent variables identified according to the above theory is the structure of the setting, and the parametric model measures the relationship between the latent variables and their manifest variables. Since many of the variables affecting the quality of public policy implementation are often not directly observable, they need to be reflected indirectly through a series of observational variables. The latent structure between these variables can be derived through factor analysis, and the derivation formula is:

$$y = \Lambda_y \eta + \varepsilon_y \quad (1)$$

$$x = \Lambda_x \xi + \varepsilon_x \quad (2)$$

where $y = (y_1, y_2, \dots, y_p)$ is a vector of endogenous explicit variables and is η an indicator of observation. $x = (x_1, x_2, \dots, x_q)$ is the vector of explicit variables, and ξ is the observables. $\Lambda_y (p \times m)$ and $\Lambda_x (q \times n)$ are the loading matrices, and $\varepsilon_y (p \times 1)$ and $\varepsilon_x (q \times 1)$ are the residual vectors. Then the formula for the observed indicators of the variables is:

$$\eta = \pi_\eta y + \delta_\eta \quad (3)$$

$$\xi = \pi_\xi x + \delta_\xi \quad (4)$$

In the above equation, η, ξ is the vector of endogenous and exogenous variables respectively, y, x denotes the vector of explicit variables for endogenous and exogenous variables respectively, π_η, π_ξ is the coefficient matrix, and δ_η, δ_ξ the vector of residuals. Through factor analysis, it can be obtained Λ_x thus the latent variables are expressed in terms of observed variables.

Assuming that public dissatisfaction with policy implementation takes the value of 1 and satisfaction is 0, there are m factors that influence whether the public is satisfied or not. There are a total of n samples, and

p_i is the probability that the public is dissatisfied with the i th, i.e.:

$$p_i = \frac{1}{1+e^{-(\alpha+\beta_j\xi_{ij})}} = \frac{e^{\alpha+\beta_j\xi_{ij}}}{1+e^{\alpha+\beta_j\xi_{ij}}} \quad (5)$$

In the above equation, $1 \leq j \leq m, 1 \leq i \leq n, \xi_{ij}$ are the i th sample values of the j influences and $1 - p_i = \frac{1}{1+e^{\alpha+\beta_j\xi_{ij}}}$ is the probability of mass satisfaction, the probability of dissatisfaction occurring is $\frac{p_i}{1-p_i} = e^{\alpha+\beta_j\xi_{ij}}$. This ratio is positive and has no upper bound and is a linear function after taking the logarithm, i.e.:

$$\ln \frac{p_i}{(1-p_i)} = \alpha + \beta_j\xi_{ij} \quad (6)$$

In the analysis of data on public satisfaction and loyalty to the implementation of public policy management, the two dichotomous dependent variables of satisfaction and loyalty were chosen and there was a correlation between them.

Taking the mass satisfaction latent variable η as an example, since each latent variable has as many estimates as observations, assuming a total of n observations, there are estimates of $\eta_i, i = 1, \dots, n$. Based on these estimates, the mass satisfaction index is customarily found using the following formula:

$$\hat{\eta} = \frac{\frac{1}{n}\sum_i^n \hat{\eta}_i - \min(\hat{\eta}_i)}{\max(\hat{\eta}_i) - \min(\hat{\eta}_i)} \quad (7)$$

where \sum_i^n is the arithmetic mean of the mass satisfaction latent variable i , $\min(\hat{\eta}_i)$ is the lowest score of the satisfaction latent variable i , and $\max(\hat{\eta}_i)$ is the highest score of the latent variable i .

Parameter estimation

Based on the analysis of the relationship between the explicit and latent variables of the index of satisfaction with the implementation of public policies, as well as the factors influencing the latent variables, and taking into account the characteristics of the implementation of public policies, the satisfaction parameters were estimated using PLS (Mostardeiro, Antonioli, & Xavier, 2020). Figure 2 shows the linear structure of the satisfaction parameters, the method aims at prediction and stabilizes the parameters through iteration. In performing the parameter estimation, the model parameters are divided into branches. The parameters of a particular branch are estimated in conjunction with the multiple linear regression method, assuming that the parameter values of the other branches are given.

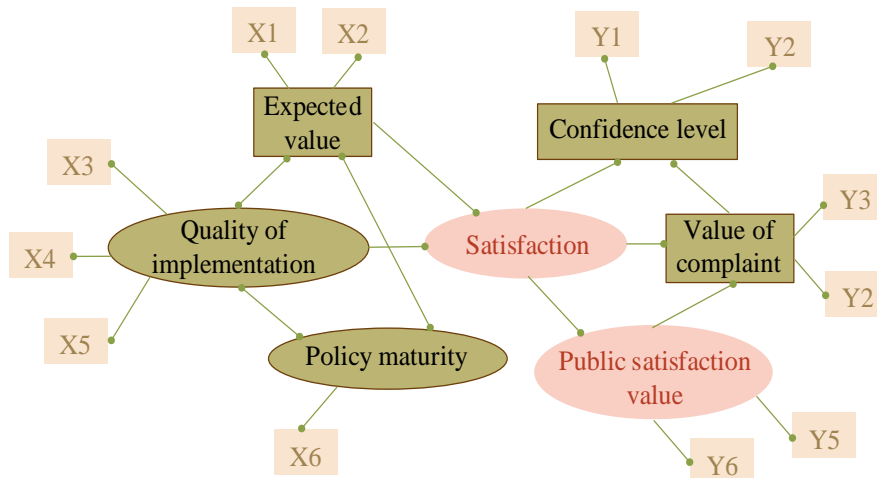


Figure 2 Linear structure of satisfaction parameters

Assuming that for n observed sample point there are j sets of measurable variables $x_j = \{x_{j1}, x_{j2}, \dots, x_{jh}, \dots, x_{jk}\}$ that are standardized, i.e., variables with mean 0 variance 1, the measurement equation for the reflective indicator is:

$$X_{jh} = \lambda_{jh}\xi_j + \varepsilon_{jh} \quad (8)$$

PLS intends to minimize the error terms in the measurement and structural equations, so the number of data points cannot be less than the number of free parameters. If there are fewer data points than free parameters, the model cannot be identified and the parameters will not be estimated. So for the latent variable ξ_j 's are estimated by a linear combination of the j nd set of observable variables X_j , denoted as Y_j is called the external estimate of the latent variable ξ_j , i.e.:

$$Y_j = X_j W_j \quad (9)$$

where, $W_j = \{w_{j1}, w_{j2}, \dots, w_{jh}, \dots, w_{jk}\}$ is the external weight vector. If Y_i is an external estimate of the latent variable ξ_i that is directly associated with ξ_j , Y_i can also be used to estimate the latent variable ξ_j , and this estimate is denoted as Z_j and is called the internal estimate of the latent variable ξ_j , i.e:

$$Z_j = \sum_{i \neq j} e_{ij} Y_i \quad (10)$$

According to the principle of PLS, the distributions of the first principal component parameters that need to be extracted from the exogenous and endogenous variables, respectively, according to the principle of maximizing the contribution, denoted by T_1 and U_1 , are:

$$T_1 = w_{11}X_1 + \dots + w_{16}X_6 = w'_1 X \quad (11)$$

$$U_1 = v_{11}Y_1 + \dots + v_{16}Y_6 = v'_1 Y \quad (12)$$

The idea of PLS estimation is to maximize the correlation between T_1 and U_1 , that is, to maximize $Cov(T_1, U_1) = \sqrt{Var(T_1)Var(U_1)}r(T_1, U_1)$. Through the principle of the Lagrange multiplier method for the conditional extremes, combined with the data of the sample can find the coefficient vector of the above two equations w'_1, v'_1 . According to the form of the measurement equations, each latent variable can be written in the form of a linear combination of the corresponding observed variables respectively, and the parameter set matrix between the latent variables and the apparent variables is found to be:

$$\begin{pmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \end{pmatrix} = \begin{pmatrix} 0 & 0 & 0 \\ \beta_{21} & 0 & 0 \\ \beta_{31} & \beta_{32} & 0 \end{pmatrix} = \begin{pmatrix} \gamma_{11} & \gamma_{12} & \gamma_{13} \\ \gamma_{21} & \gamma_{22} & \gamma_{23} \\ \gamma_{31} & \gamma_{32} & \gamma_{33} \end{pmatrix} \begin{pmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \end{pmatrix} + \begin{pmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \end{pmatrix} \quad (13)$$

Once the distribution of the parameters of the satisfaction model is found, the reasonableness of the model is evaluated. The composite reliability coefficient ρ can be used as the reliability coefficient of the measurement instrument. If the reliability coefficient is high it means that the internal consistency of the indicators is high. A latent variable ρ greater than or equal to 0.7 indicates that the variation in this latent variable explains at least 70% of the variation in the corresponding measurement instrument. This means that the larger ρ is, the more reliable the instrument is. The composite reliability coefficient is calculated by the formula:

$$\rho = (\sum_k \lambda_h)^2 / (\sum_k \lambda_h)^2 + \sum_k (1 - \lambda_h)^2 \quad (14)$$

Where k indicates the number of indicators under the latent variable, and λ_h indicates the factor loading of indicator h under the latent variable. If the square root of the mean extracted variance is much larger than the correlation coefficient, it indicates that the measurement model has good discriminant validity. The formula for calculating the mean extracted variance is as follows:

$$AVE = \sum_k \lambda_h^2 / \sum_k \lambda_h^2 + (1 - \lambda_h^2) \quad (15)$$

where γ denotes the path coefficient if $\gamma = -0.12$ indicates that the implementation of public management policies is expected to have a negative impact on customer satisfaction.

Satisfaction with the implementation of public management policies in towns and cities needs to be measured from a quantitative point of view, through parametric modeling and directly observable variables in addition. It also includes many potential variables to establish parametric indicators, from which to find the heavy pressure factors affecting the satisfaction of policy implementation. And the method requires that the observations are independent of each other and obey the multivariate normal distribution, which is conducive to the comparison between different aggregates and ensures that the data will not produce large deviations in the process of satisfaction assessment.

Building a system for evaluating satisfaction with the implementation of public management policies

Urban public management policy in the real society under the political, economic and cultural conditions, the government and public organizations and individuals of public management activities and behavior, not only is political behavior also reflects the social dominant political parties and class ideological requirements. And it is a legal act, on behalf of the government and public organizations in accordance with the law to manage the public affairs of society. And the public's satisfaction with the implementation of policies is an important manifestation of revealing the moral value of its existence as well as its scientific nature, so this paper is based on the parametric model, the satisfaction variable of the implementation of the urban public GPA is relocated, and the PLS algorithm is added to the correlation coefficient of the estimated value of the latent variable and the parameter estimation, which improves the processing speed of the model for the analysis of the town's satisfaction with the public policy.

Figure 3 shows the basic structure of the public policy implementation evaluation system, urban residents' expectations are the expectations placed on the services provided by the public policy management before its implementation, and the perceived quality refers to the overall evaluation after the experience, which contains the four aspects of infrastructure, service content, service access, and mass participation. Maturity focuses on the scope of policy implementation and the degree of perfection. Satisfaction refers to the degree of psychological satisfaction of the public, image refers to the public's perception and evaluation of the public management policy after its implementation, and trust refers to the degree of support and trust in the implementation of the policy.

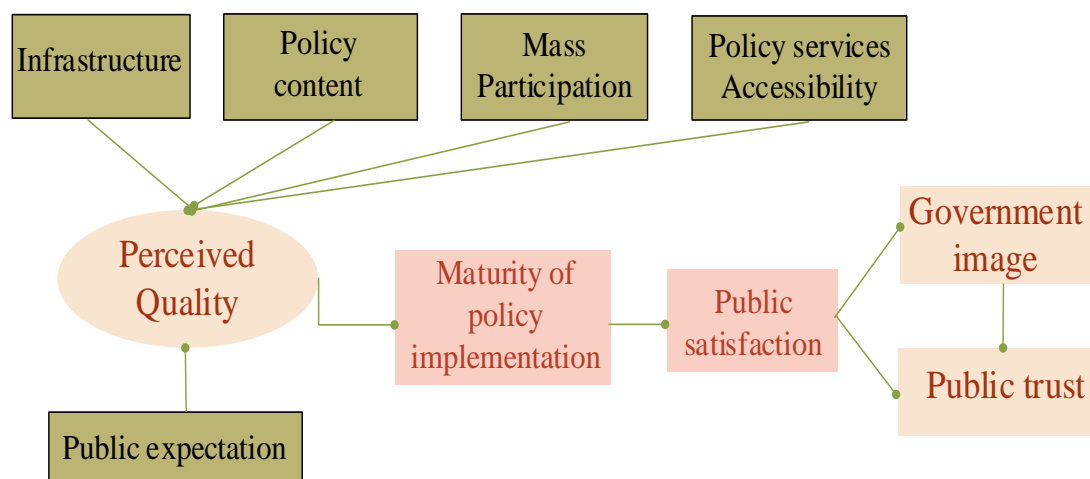


Figure 3 System for evaluating the implementation of public policies

This paper uses a parametric model to estimate the satisfaction of public policy implementation in towns and cities, firstly indicating the intention or purpose of public policy implementation, then specifying the policy behaviors to achieve the goal by each stage, and analyzing the results appearing at the final stage in comparison with the original intention, and considering clear policy instructions and defined administrative responsibilities as the main determinants of effective public policy implementation.

It also attaches great importance to the quality of policy information in the dissemination process, strives to be objective and comprehensive, and strengthens the publicity and popularization of policies to broaden their impact. Policy evaluation as an important part of public policy analysis, the model constructed in this paper for the purpose of public service, the comprehensive use of field surveys, public opinion polls, theoretical analysis, modeling, and other scientific assessment methods to objectively present the policy effect, to provide a reliable reference for government decision-making. Public policy evaluation has the functions of prediction, diagnosis, feedback and correction, and the subject of evaluation measures the degree of realization of policy objectives by testing policy effects, effectiveness and efficiency, and provides decision-making references and bases for the next step of deciding whether to continue, adjust or terminate the policy, so as to promote the scientific and democratic decision-making by the government, construct good public relations, and realize the optimal allocation of policy resources.

Practical analysis of models for evaluating the implementation of public policies

Establishment of an assessment system

Preparation phase

Incorporating public satisfaction into the government performance appraisal index system is a soft index system for public policy implementation. In the pre-preparation stage, this paper selects a certain number of towns in the region in 2020 and combines the characteristics of the public sector to organize and improve the information on the factors influencing the satisfaction with the implementation of public policies in towns.

(1) On the basis of analyzing the functions, work objectives, work processes, and service characteristics of the public sector, through internal research and interviews with relevant leaders and personnel, we understand the understanding of public satisfaction by internal personnel, and combine it with the assessment model to categorize and organize the preliminary information.

(2) Citizen review of government content activities is the focus of satisfaction measurement content, this paper through the secondary data query and retrieval, easy to measure to avoid problems such as unclear logical relationships.

(3) The public's needs and expectations are investigated and scrutinized through the communication network between the government and the society, submissions, complaint lists, etc., to investigate and scrutinize the types of services desired by the public, the quality of services, and the public's understanding of satisfaction with the services, and to solicit the public's opinions on the preliminary measurement indicators .

Satisfaction indicators

By organizing, categorizing and analyzing various information, this paper further modifies and improves the indicators. Among the latent variables identified in the assessment model, due to the fact that perceived quality and perceived value are involved in more measurements, this paper utilizes the parametric model to establish the indicator system according to the hierarchy of the influencing factors of satisfaction, which is enough to express the connotations of the indicators of public satisfaction measurement in an in-depth and clear manner. Table 1 shows the public satisfaction assessment index system, which is based on the parametric model to assess the satisfaction of public policies. The assessment system contains one kind of first-level assessment index with wide applicability, seven kinds of second-level assessment indexes and several third-level indexes formed after optimization and screening, which basically reflect the main contents involved in government services and have a certain degree of representativeness. The weight of public satisfaction is 0.33, and the weight of public expectation is 0.18. The assessment system of satisfaction with the implementation of public policies constructed based on parametric modeling makes the measurement process more standardized and standardized, and it can effectively avoid unfair phenomena such as backdoor operation.

Table 1 Public Satisfaction Measurement Indicator System

Level 1 indicators	Level 2 indicators	Level 3 indicators	Weights
Satisfaction	Public information	N+	0.13
	Public expectation		0.18
	Perceived Quality		0.05
	Perceived value		0.08
	Public life satisfaction		0.33
	Public complaint		0.11
	Public trust		0.12

Analysis of the utility of the assessment system

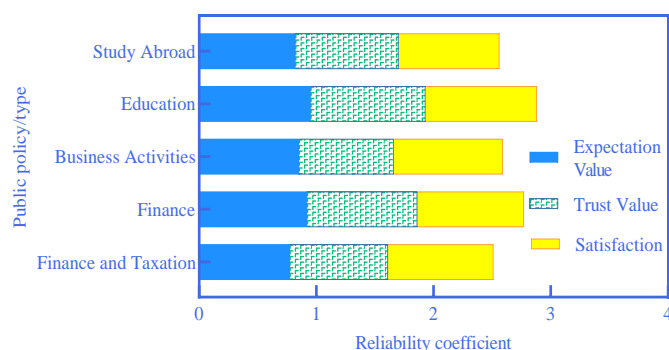
Satisfaction reliability coefficient

Public satisfaction is a level of perceived status, which is generated by comparing the public's actual perception of the implementation of public policies with their previous related expectations. In order to

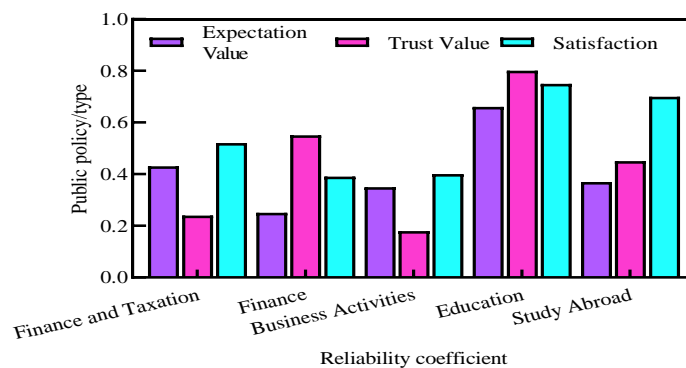
verify the assessment system constructed in this paper more effectively, the satisfaction levels of fiscal policy, financial policy, business activity policy, education policy and talent studying abroad policy in two towns, A and B, are assessed respectively by comparing with the traditional assessment model, with the intrinsic reliability coefficient as the satisfaction assessment criterion, and the results of the assessment of reliability coefficient of the implementation of public policies are shown in Fig. 4.

Figure 4(a) shows the results of the reliability coefficient assessment of town A. The public's policy satisfaction assessment reliability coefficients of this town are all above 0.75, indicating that the assessment system constructed based on the parametric model has high reliability. The confidence coefficients of public expectation, satisfaction and trust in policy implementation of education policy and financial policy are all over 0.9, while the confidence coefficient of public expectation of fiscal policy is 0.77, which is due to the uncertainty of the fiscal policy and the different public expectations, so the assessment reliability coefficient is lower, but the assessment results are still acceptable. It shows that the use of parametric modeling to assess the satisfaction of public policy implementation is relatively reliable and can succinctly yet accurately describe the attributes and characteristics of the data as well as the complex relationship between them.

Figure 4(b) shows the results of the confidence coefficient assessment of town B. The assessment of public policy satisfaction in this town is measured by using the traditional assessment model, which has a lower confidence coefficient, in which the assessment of education policy has a higher confidence coefficient of more than 0.6, and the values of the public's satisfaction and trust in the implementation of the policy are 0.8 and 0.75, respectively, which indicates that the model has a higher credibility in the assessment of the satisfaction with education policy, but the value of the public's satisfaction and trust in the implementation of the policy is 0.8 and 0.75. Assessment is higher, but the confidence coefficient of the public expectation value of financial policies is only 0.25, and the confidence coefficient of the public satisfaction assessment of business activities is 0.18, neither of which reaches 0.5. The authenticity of the satisfaction assessment of the implementation of the other public policies is lower, and it is not possible to accurately judge the quality of the implementation of the policies (Jordan & Smith, 2019).



(a) Results of the assessment of the reliability factor in town A



(b) Results of the assessment of the reliability factor for town B

Figure 4 Satisfaction confidence coefficient assessment results

Analysis of Factors Influencing Satisfaction

In order to study the key factors affecting the satisfaction of the implementation of public policies, this paper examines the degree of influence of each indicator on the evaluation results of the satisfaction of the implementation of public policies according to the common degree of the measurement indicators, the greater the common degree, the greater the degree of co-dependence of the measurement indicators on the public factors.

Therefore, this paper verifies and analyzes the correlation between the measurement indicators and satisfaction of each dimension in town A through the evaluation system constructed by parametric model, and derives the factors that affect the satisfaction of public policy implementation in this town as long as they influence the public factors. The correlation coefficients of each indicator are shown in Table 2, and the correlation of individual indicators is analyzed through the parametric model so that the standard deviation is kept around 1.65, while the direct correlation coefficients of each influencing factor are analyzed and concluded as follows:

(1) The biggest influence factor of urban public policy implementation satisfaction index is public life satisfaction, the direct correlation coefficient reaches 0.86, followed by perceived quality of 0.85, and the last is public information of 0.71. However, the degree of their respective influences is different, so the influence of public life satisfaction and perceived quality is a little bit bigger.

(2) There is a certain correlation between perceived value and satisfaction with policy implementation, with a direct correlation coefficient of 0.62, which indirectly affects satisfaction through public expectations and perceived quality, so this variable is added to the evaluation system.

(3) There is a negative correlation between public complaints and satisfaction with policy implementation, indicating that a high level of satisfaction leads to fewer complaints. Public trust and satisfaction are positively correlated, indicating that the higher the satisfaction, the higher the public trust and support for the government.

Table 2 Correlation coefficients of indicators

Measurement indicators	Average value	Standard deviation	Direct correlation coefficient
Public information	7.69	1.65	0.71
Public expectation	8.32	1.66	0.42
Perceived Quality	7.14	1.44	0.85
Perceived value	7.33	1.67	0.62
Public satisfaction	7.62	1.5	0.86
Public complaint	3.62	2.54	-0.53
Public trust	8.73	2.03	0.59

Utility feedback

In 2020, after analyzing the indicators related to satisfaction with the implementation of public policies in the towns of this region, the towns reformed the implementation of the relevant policies have met the expectations of the public. And by comparing the changes in public satisfaction with the implementation of policies before and after the reform, to verify the rationality of the methodology of this paper. Figure 5 shows the changes in satisfaction before and after the policy reform, before 2020 the town's public satisfaction with the implementation of various public policies is low, only the housing security, a related policy satisfaction exceeds 50%, but there is a downward trend. And during 2017-2019, the highest satisfaction level for the policy on price stability is only 35%.

And the satisfaction of anti-corruption initiatives is only 15%. After the reform of the relevant policies in 2020, the people's policy satisfaction has improved, on average, by about 20%, in which the satisfaction of the relevant policies about old-age security has increased by 65%, and the satisfaction of the policies about medical care has increased by 40%. This shows that the evaluation and analysis of urban-related public policies through parametric models can eliminate the influence of the public's distrust of the government and effectively guide the people's rights defense behavior in a legal and orderly manner .

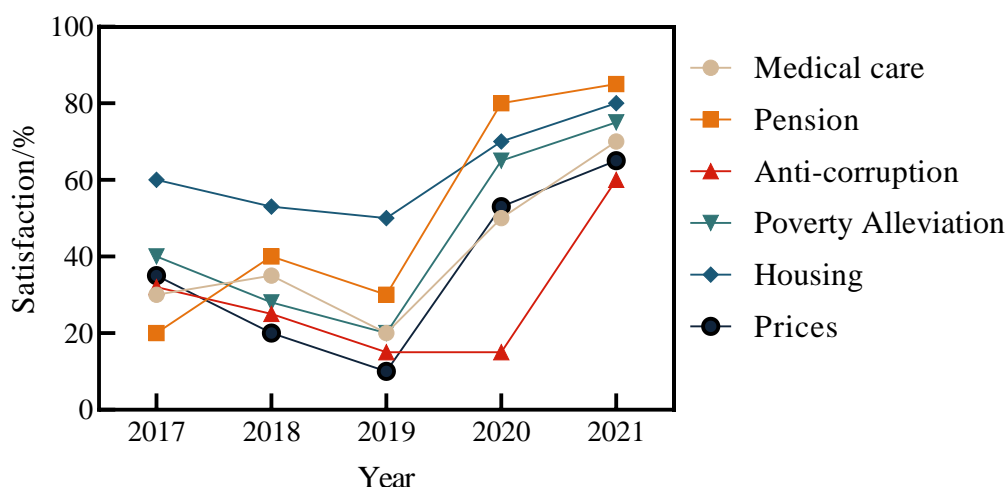


Figure 5 Changes in satisfaction before and after policy reforms

Conclusion

This paper takes the parametric model as the theoretical basis to analyze the satisfaction of the implementation of public management policies in towns and cities, and reposition the parameter indexes to establish a brand-new satisfaction assessment system. And to verify the effectiveness of the system in the practical analysis, then the conclusions are as follows:

- (1) The system contains a total of one kind of primary assessment indicators, seven kinds of secondary assessment indicators and a number of tertiary indicators, and the measurement reliability coefficient is above 0.75. Among them, the most influential factor on the index of satisfaction with the implementation of public policies in towns and cities is public satisfaction, and the direct correlation coefficient reaches 0.86.
- (2) After reforming the public policies in the town, the satisfaction of each policy has been increased by about 20% on average, the satisfaction of the policies related to pension security has been increased by 65%, and the satisfaction of the policies of seeking medical treatment has been increased by 40%. It shows that using the results of parametric model evaluation and analysis as reform indicators can improve the living environment of urban residents and increase the level of life satisfaction. It can eliminate the influence of the masses' distrust of the government.

About the Author

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