

Research on the Most Favorable Price and Expected Benefits of Government Purchasing Services from Social Organizations

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Abstract: This This article, against the backdrop of the growing demand for social organization services in government procurement, proposes a new model of government procurement service: introducing a service feedback coefficient to adjust the price when procuring social organization services. The service quality will be reflected in the service feedback coefficient through a comprehensive score, thereby affecting the procurement price. An organizational and activity analysis of this model is conducted, concluding that the service feedback coefficient and the optimization of procurement price have a positive effect on the supply and price of services provided by social organizations. The improvement of service quality can enhance the supply enthusiasm, thereby increasing the service price, and further affecting the service quality.

Keywords: Social Organization; Government Procurement Services; Optimization of Expected Returns; Price Optimization.

1. Introduction

"Government procurement of services" originated in Western countries, initially known as procurement service contracts or contracts in the United States, and in Hong Kong, it is similar to social welfare service funding or external judgment implications. In mainland China, it is generally referred to as government procurement of services. The so-called government service (Procurement of Service Contract, abbreviated as POSC), used to refer to "whether the government directly allocates funds to social service organizations to provide social public services to social groups in the budget of social welfare, or openly bids for social services"[1]. With the first shot of reforming the social management system in Shanghai in 2000, and the beginning of support for government procurement of services, the service field of government procurement first entered the practice in our country. Since then, other cities have also begun to explore this practice, and the scope of government procurement of services has expanded to multiple service areas such as medical health, education, community, training, employment, family planning, etc.

Recently, under the guidance of central leadership, various regions have begun to actively explore professional social service hours that conform to local characteristics. The government's construction of purchasing services from social organizations is constantly improving: In 2007, the State Council Office's "Several Opinions on Accelerating the Reform and Development of Industry Chambers of Commerce" first proposed the implementation of the government's purchase of services from social organizations; At the end of September 2013, the State Council Office's "Guiding Opinions on Government's Purchase of Services from Social Organizations" (Guo Fa Ban [2013] No. 96) clearly included enterprises and other institutions registered with the industrial and commercial administration or industry authorities as the main bodies for the government to purchase public services; At the end of 2014, the provincial, civil affairs department, and the State Administration for Industry and

Commerce issued the "Government Service Purchase Management Measures" (Interim) (Cai Zong [2014] No. 96), comprehensively standardizing the government's purchase behavior for public services; In 2016, the "Suggestions on Formulating the Thirteenth Five-Year Plan for National Economic and Social Development" explicitly required "innovative" ways of providing public services, which can be provided by the government's purchase of services, and the government no longer directly undertakes". These policies are constantly increasing the demand for government purchases of services from social organizations domestically.

The growing demand and the central government's precise policy design are active explorations in advancing the reform of our country's administrative management system[2]. It is a rational choice to perfect the "government-enterprise-society" tripartite structure and an inherent requirement to improve the efficiency of social welfare services. On the one hand, the government sets the goal of building a service-oriented government, and providing good social and social services is an important measure. The piston provides single and monopolistic services, unclear public service announcements will be handed over to social implementation organizations, and the government plays a professional regulatory and legislative role, which is a good example of the tripartite structure model. On the other hand, purchasing services from social organizations can also promote a win-win foundation for the government and social organizations. Purchasing services from social organizations can reduce cumbersome specialized work, effectively perform functional roles, and at the same time regard the organization as a new social market, expand the scope of social organization services, professionalize the work of professional teams, create new favorable labor conditions, and also promote a win-win situation.

Even so, there are still many problems with the government's purchase of social services in China. Firstly, the strength of domestic social organizations is still relatively weak, and the professional team and management system of social organizations urgently need to be improved. Social

organizations with a certain foundation find it difficult to complete medium and large projects alone and need to cooperate with other teams. The problems of interest loss and cooperation difficulties also exist. Secondly, the mechanism of social communication is not perfect, there are still barriers in the information channels between the government and the real beneficiaries - the citizens. Even many demands are fed back to the government through social organizations, and the government then purchases services from social organizations to provide services. This is also an area that needs improvement.

Social organizations have played a significant role in the transformation process of our government's functions, and their own cultivation and growth have largely benefited from the nourishment of government procurement services. In the early stages, due to limitations such as the scale of social organizations, there was insufficient competition in the public service market, and government procurement services mainly adopted directional procurement. Nowadays, government procurement services have transitioned from non-competitive procurement in the past to mainly competitive procurement. Such a model also gradually reveals some of its shortcomings: the incentive mechanism is lagging, and there is a lack of autonomy; the participation of residents is not high, and the service quality is discounted. Therefore, it is necessary to explore the pricing strategy adopted by the government in purchasing services from social organizations, and further analyze the impact on the pricing and expected benefits of social organization services.

2. Review of Related Research Literature

In the United States, "about 50% of all social services are provided by non-profit organizations." The provision of services by social organizations is a demand of citizens and also a demand for government transformation under the trend of social development. It can not only bring satisfactory services to the public, but also allow social organizations and the government to achieve a win-win situation. Xu Yun pointed out in her research: "From the current situation, there are mainly two types of non-governmental organizations providing social welfare services in China. One is non-governmental organizations (i.e., NGOs), also known as grassroots NGOs, which provide specific services in some specific social fields; the other is non-governmental organizations with non-governmental nature cultivated by the government (i.e., GONGOs, also known as official NGOs). These institutions are established with the support of the government, then recruit social workers and undertake social service projects." [3] Comparatively speaking, grassroots non-governmental organizations are more flexible in their development, while official NGOs receive more support from the government in their operations, but of course, they also face more interventions and restrictions.

For government procurement of services from social organizations, there is generally a unified interpretation concept in China. Generally speaking, the government is the commissioner of purchasing social services, often adopting three major methods: open bidding, non-public bidding, and targeted commissioning to entrust social organizations to provide services. There is a lot of domestic research on this issue: Wang Puqu was one of the early researchers on this issue. He believes that the government's purchase of services

from social forces refers to "the government's specific basic public services, according to the mechanism of market operation, choosing qualified social forces (social organizations, corporate organizations, other institutions, etc.) to produce and undertake, the government pays them according to the quantity and quality of services, ensuring citizens receive high-quality basic public services. [4]" Xu Jialiang and others believe that government procurement of public services refers to "the government transferring public services originally undertaken by itself to social organizations and enterprises through forms such as open bidding, targeted commissioning, and invitation to bid, in order to improve the quality of public service supply and the efficiency of fiscal funds use, improve the social governance structure, and meet the public's diversified and personalized needs. [5]"

As domestic research on government procurement of services from social organizations gradually gets on track, research on the pricing mechanism for purchasing services from social organizations is also gradually emerging. The government has gradually transformed from a direct provider of services to a setter, purchaser, and supervisor of services, and the pricing mechanism and pricing strategy of the purchaser have become important research topics. Some scholars have conducted research from the perspective of how to choose the method of purchase and how to choose the object of purchase. For example, Zhou Jun pointed out through case analysis and other methods: "In addition to considering competitiveness, the government will also consider the registration place of social organizations and whether social organizations have official backgrounds when choosing the method of purchase, but these considerations are all constrained by the purchasing system. [6]" It can be seen that the influencing factors for some local governments to choose social organization services are still whether the social organizations providing services are "reliable", and the reason is that there is no reliable way to evaluate social organization services. Xu Yuan proposed through the induction and analysis of pricing methods in various places: "Establish a service pricing participation mechanism, strengthen the rationality of project establishment; give social organizations development space, reasonably calculate service costs; purchase public services according to the type of social organizations[7]", but there is still no countermeasure for how to define the results of social organization services. Some scholars have also begun to study the evaluation indicators of service effects, considering incorporating satisfaction into the evaluation system.

Existing studies focus on the relationship between social organization services and the market, as well as how the government should strategize to respond to and regulate the purchase of social organization services. Currently, there is little research on the pricing strategy that should be adopted for purchasing social organization services, or it is limited to macro strategies. The reasons can be summarized as follows: Firstly, although the development time is not short, due to the uneven and insufficient development of various regions in the country, the exploration level of government purchasing social organization services varies greatly. Many regions are still in the initial stage and need to learn from advanced public service reform achievements, while combining the actual political and economic conditions of our country, to explore a service system for the socialist government to purchase social organization services with Chinese characteristics; Secondly, existing research is relatively focused on macro strategies,

lacking empirical case analysis and data support, and cannot scientifically explore the difficulties and bottlenecks of government purchasing services; Thirdly, through literature review, it is found that many social organization services have a certain degree of privacy due to their strong association with the government. The government and social organizations that have long-term cooperation are reluctant to change the established cooperation model, but in the long run, it should appropriately introduce market economy theory and reasonable competition. Based on the above reasons, this article explores the situation of public bidding, and the government establishes a model that fits the current situation based on the optimal goals of public satisfaction and service level, providing theoretical support for government decision-making and the development of social organizations.

3. Model Construction for Pricing Services of Social Organizations

3.1. Basic Assumption

In this article, the government encourages society by setting service price subsidies when social organizations provide services. The situation of organizational service quality, considering the formulation of dynamic pricing to adjust the balance of supply and demand, further analyzing the impact of subsidy strategies on the pricing and actual benefits of social organization services, with the ultimate goal of satisfying the optimal provision of services by social organizations, and proposing the following assumptions:

1. Assume that each time you only face services provided by a single social organization, without considering the participation of multiple social organizations in competition and bidding.

2. Assume that the remuneration received by a social organization from the government consists of two parts. The first part corresponds to the basic income price in the original market, where the basic income price part is $p_1 = \lambda * p_m$ ($0 < \lambda < 1$), λ represents the basic income rate of the services provided by the social organization. The second part is the subsidy remuneration after the government's comprehensive scoring of the services provided by the social organization, that is, the feedback situation coefficient ε is derived from the comprehensive scoring of the social organization's service results provided in the previous period, and the subsidy remuneration part is $p_2 = \varepsilon * p_1$ ($0 < \varepsilon < 1$). In this way, the remuneration is divided into two parts, one of which introduces the comprehensive scoring of past service results, which may to some extent motivate the quality of services provided by social organizations, and also determine the transaction rate of the organization providing services to the government based on past scores.

3. Assume that the social organization provides a supply function $Q_d = a * p_m - b + \varepsilon * l$. Where $b > 0$, $l > 0$, respectively represent the service situation of other methods when there is no social organization providing services and the service situation of the social organization after joining the feedback coefficient; $a > 0$, represents the sensitivity coefficient of the social organization service provided at the price of p_m , reflecting the market's recognition of the social organization service when there is no feedback coefficient.

4. Assume that the cost generated by a social organization each time it provides a service consists of two parts: one is the basic cost that should be generated when providing the service $\gamma * l^2$, and the other part is composed of the basic

income minus the subsidy return. As the service rating increases, the cost consumed by each service will be lower, that is, $p_1 - p_2$, without considering the cost changes caused by other social factors or the addition of other social organizations providing services. All costs are $C = p_1 - p_2 - \gamma * l^2$.

3.2. Model Building

Based on the above assumptions, the expected profit function of the social organization providing services can be derived as:

$$\pi(p_m) = Q_d * (p_m - C) = (ap_m + \varepsilon l - b) * (-\varepsilon l^2 + \varepsilon \lambda p_m - \lambda p_m + p_m) \quad (1)$$

The above formula reflects the expected benefits of social organization services. Although the government is currently purchasing services provided by social organizations.

The service situation already has several mature purchasing methods, but there are still inconsistencies in service levels, and there is a gap between service quality and expected evaluation. The method proposed in this article to score the results of the service provided to subsidize the income of the next service can become a new idea. Suppose $\varepsilon < 1 + 1/\lambda$, at this time, formula (1) is a quadratic convex function about p_m , and there is a maximum extremum.

The first-order partial derivative of formula (1) with respect to p_m is 0, which implies that the optimal expected return of social organizations is the service price at:

$$p^*_{m} = \frac{-1\lambda\varepsilon^2 + ((b+1)\lambda + a1^2 - 1)\varepsilon - b(\lambda - 1)}{2a(\varepsilon\lambda - \lambda + 1)} \quad (2)$$

Putting equation (2) into equation (1) and the social organization supply function, it can be concluded that the optimal expected return of the social organization and the supply situation of the social organization at the optimal return are respectively:

$$\pi^* = -\frac{(1\lambda\varepsilon^2 + ((-b-1)\lambda + a1^2 + 1)\varepsilon + b(\lambda - 1))^2}{4a(\varepsilon\lambda - \lambda + 1)} \quad (3)$$

$$Q^*_d = \frac{1\lambda\varepsilon^2 + ((-b-1)\lambda + a1^2 + 1)\varepsilon + b(\lambda - 1)}{2\varepsilon\lambda - 2\lambda + 2} \quad (4)$$

Judging from formula (2), adding the feedback coefficient ε is relevant to the optimal service price under optimal expected revenue. Judging from formula (4), increasing the feedback coefficient ε has a positive impact on the supply provided by social organizations. The larger the feedback coefficient, the more active social organizations provide supply. It can be seen that improving the service quality of social organizations, thereby affecting the comprehensive evaluation of services, can positively affect the response to supply. The reason for such a result is that providing better quality services can increase everyone's overall impression of the service, thereby improving the overall score of the organization, which can further affect its supply and achieve a positive cycle to increase expected returns.

3.3. Model Decomposition

The comprehensive rating feedback coefficient of the social organization's service situation has a significant impact on the optimal expected revenue service price and the optimal

The impact of the supply of social organizations on optimal expected returns. When p_m is the optimal situation, the first derivative of the feedback coefficient ε with respect to p_m^* is:

$\frac{1((\varepsilon - 1)^2 \lambda^2 + (a1 + 2\varepsilon - 2)\lambda - a1 + 1)}{2(1 + (\varepsilon - 1)\lambda)^2 a}$, When it is greater than zero, the

second derivative $\frac{1^2 \lambda (\lambda - 1)}{(1 + (\varepsilon - 1)\lambda)^3}$ is also greater than zero. It can

be seen that the optimal service price increases with the increase of the feedback coefficient, and the marginal optimal

price increases with the increase of ε . From the perspective of social organizations that provide services, when other conditions are fixed, improving service quality can increase the comprehensive rating impact feedback coefficient, which will increase the optimal price level, and the increase rate shows an increasing trend. When the first derivative function of the feedback coefficient ε with respect to Q_d appears $-\frac{(-(\varepsilon-1)^2\lambda^2+(a1-2\varepsilon+2)\lambda-al-1)1}{2(1+(\varepsilon-1)\lambda)^2} < 0$. The second derivative of ε with respect to Q_d $\frac{1^2\lambda a(\lambda-1)}{(1+(\varepsilon-1)\lambda)^3} < 0$, the amount of services Q_d provided by social organizations increases with the increase of the subsidy coefficient, The marginal supply increases with the growth of the feedback coefficient. Since the increase of the service quality feedback coefficient

will cause the optimal service price to increase, the supply will have a positive impact as the price increases.

4. Model Simulation Analysis of Social Organization Service Pricing: Considering the Introduction of Comprehensive Score Feedback Coefficient Factors for Service Conditions

The relevant parameters are set as follows: $a=100, b=9, l=0.8, \lambda=0.6$. You can get it using maple drawing.

The relationship between service supply and feedback coefficient is shown in the figure below.

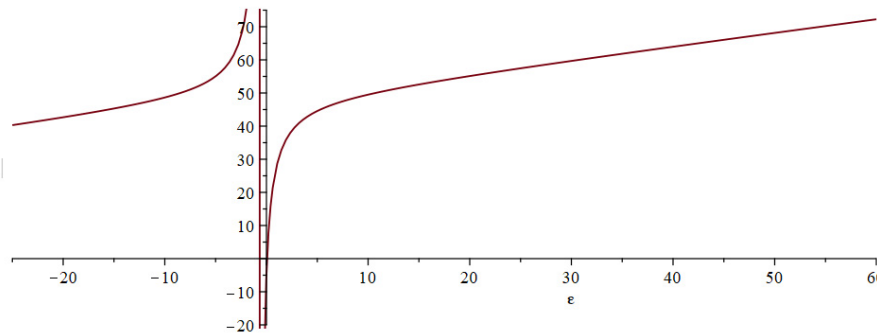


Fig 1. Service supply and feedback coefficient curve chart

It can be seen from the above figure that the amount of services Q_d provided by social organizations increases as the subsidy coefficient increases. Because providing better quality services can increase everyone's overall impression of the service, thereby improving the overall rating of the organization, thereby increasing the amount of services provided by social organizations.

5. Conclusion and Suggestions

This article proposes a new government procurement method in the context of the increasingly mature situation of government purchasing social organizations.

The method of purchasing services from social organizations involves adding a comprehensive service feedback coefficient when paying remuneration to social organizations, thereby subsidizing the prices of social organizations. Such a basic model has been constructed, and research and calculations show that the feedback coefficient has a positive effect on the supply provided by social organizations. Social organizations can strive for higher prices by improving service quality, and higher prices will also stimulate social organizations to provide more supply, ultimately benefiting the government's procurement of high-quality social services and the positive development of social organizations. To a certain extent, it can solve the problem of social organizations lacking autonomy and lagging incentive mechanisms, and can strengthen the capacity building of social organizations. On the other hand, the government establishes a comprehensive service scoring mechanism, which also plays a role in participation, supervision, and guidance to a certain extent, and can propose directions and requirements for social organizations from the perspective of

the public, and can meet the needs of the public. It reduces the problem of "relationship dependence" and "capability dependence" in the government's supervision process.

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