

The Impact of Different Types of Government Public Service on Economic Development

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Abstract: This paper summarizes the interaction between government and economy and deeply discusses the relationship between government public service and economic development at the quantitative level. In the current economic environment, how to classify public services effectively and put this classification into the process of government policymaking is further discussed. Based on the existing literature, this paper divides the types of public service into three categories: Developmental Public Service, Development-oriented Public Service, and Society-developing Public Service. Based on the discussion of government expenditure and economic development in the existing literature, this paper further extends the significant effect of different types of public services on economic development. In addition, on the basis of data analysis, this paper also explores the regulating role of social variables between government and economic development. All in all, this paper explores the different categories of public services and economic development and finds that the social environment plays an indispensable role in the process of government policymaking.

Keywords: Government, Economic Development, Public service

1. Introduction

The concept of public service was first proposed in the second half of the 19th century. Wagner, a representative scholar of the German School of Social Policy, believed that government finance plays an important role in society. Besides the functions related to national sovereignty such as national defense and diplomacy, government finance should also play a role in social culture and public welfare. And Wagner further emphasized the productive role of government finance. With the Great Depression of the 1930s, the role of the government was amplified under Keynesianism, and the concept of public service was gradually valued during this period.

After World warII, Samuelson proposed the concept of public goods. Due to the existence of market failure, the national economy needs the regulation of the government, and the government regulates economic development by providing public goods. Around the 1980s, due to the emergence of the stagflation crisis, the phenomenon of government failure has been paid attention to. This also leads to the reflection on the function of government in the field of public service research. There is also a tendency towards privatization and commercialization in the field of public service.

In the interactive evolution of public service and economic development, the concept of public service continues to develop. Under the background of rapid economic development, the size of the

government is also expanding. Many scholars have put forward different views on the government and its public service classification under expansion. This paper will further analyze the impact of different types of public services on national economic development according to different classifications of public services. And further, explore the regulating effects of the internal relationship between different types of public services on national economic development. To provide effective support for the government to better formulate economic policies and adjust financial expenditure in the course of economic and social development.

2. Literature Review

2.1. Taxonomy of Public Service

The classification of public service is an important issue in the field of public administration. In the many turns of government participation in public services, the boundaries and internal differences of government provision of public goods are also quite blurred. Under the tide of commercialization of public services, many public services originally provided by the government are now provided by private individuals, showing "limited government". In China, although the government has gradually shifted to a service-oriented government and gradually adopted the form of public service outsourcing, the government is still full of figures in the whole process of public service provision, showing a "promising government".

Li Junpeng classifies government public services according to government public expenditure [1]. Maintenance of public service refers to national defense, public security, and other public services to maintain social stability; Economic public service refers to the public service that directly promotes the development of industry. Social public service refers to public service that is closely related to social development such as science, education, culture, and health. Some scholars classify public services into sovereign services, social and cultural services, and economic services according to the functional system of government [2]. From the point of view of public needs, public service can be divided into political public service, social public service, and business public service.

Wang Hailong integrated the above classification methods and divided public services into ten fields, such as public safety, public education, medical health, and social security, from the perspective of public affairs [3]. And further from the perspective of the basic needs of the public, public service is divided into two categories: security public service and development public service. Security public service aims to protect citizens' basic human rights, while developmental public service focuses on higher level and higher quality social production processes.

Caroline Pawlowski & Hendrik Scholta from eight dimensions to classify proactive public services [4]. From the point of view of the government's discovery of the problem to the entry into the agenda, the discussion, and the final implementation of the plan, the generation of public services is diversified. This paper provides a useful reference for the optimization of classification standards.

To sum up, this paper classifies public services from the needs of ensuring national social development: Developmental Public Service, Development-oriented Public Service, and Society-developing Public Service. Classify direct government expenditure on economic development as Developmental Public Service; The basic public expenditure of the government on various affairs within the social scope is classified as Development-oriented Public Service; Government expenditure to promote technology, culture, and other social environments within the society is classified as Society-developing Public Service.

2.2. Government and Economic Development

Since the rise of Keynesian economic theory after the Great Depression, the relationship between government and economy has been paid more and more attention. In modern economic models,

government expenditure is also one of the most important variables affecting economic development. Focusing on the empirical research of government public service and economic development, different scholars have different focuses. But in general, it is widely recognized that public service has a positive effect on economic development.

Scholars such as Grier & Tullock, Barro, and Devarajan analyzed the relationship between government investment and economics in different countries and regions, and all came to the conclusion that productive public investment has a positive effect on economic development [5-7]. Yang Ying and Mu Rongping discussed the relationship between fundamental public services and economic growth and affirmed that basic public services can ultimately promote economic growth through investment, consumption, human capital, and social environment [8]. Wang Junxia made an in-depth analysis of the interaction between the level of basic public service and the level of economic development in China and believes that in the process of national development, the level of basic public service needs to adapt to the level of economic development [9]. With the improvement of the economy and society, the type of public service supply should also change from basic public service to higher quality public service. Through the panel data analysis of 30 provinces in China, Liu Dingjie found that in the analysis framework of social capital, government scale, and economic development, social capital and economic development showed a significant positive relationship, while government scale had a significant negative moderating effect on the positive relationship [10].

To sum up, there is a positive correlation between government public service supply and economic development both theoretically and empirically. From the perspective of different types of public services, this paper will analyze the effects of the tendency of government's public services on different types of public services and the internal relations of various tendencies on economic development.

3. Data sources and Model Building

3.1. Variable Selection and Data Sources

3.1.1. Public Service Expenditure

The data on China's public service expenditure and government fiscal expenditure from 2014 to 2022 selected in this paper are all from the Annual Fiscal Revenue and Expenditure released by the Ministry of Finance of China. In order to avoid the impact of the natural correlation between government public service input and GDP on the regression results, this paper selects the proportion of each input in the total expenditure rather than the absolute value when selecting variables, so as to measure the government's input tendency to different types of public services.

3.1.2. Situation of Economic Development

This paper selects China's GDP from 2014 to 2022 as an important indicator to measure China's economic development. In order to avoid the problem of unclear coefficient meaning caused by too large a data dimension, this paper takes the logarithm of GDP of each year in regression processing. It is easy to interpret the effect of changes in the propensity to spend on various public services on economic growth.

3.2. Variable Introduction

In terms of independent variables, This paper selects 17 government public services, including diplomacy, national defense, education, sports and media, social security and employment, health, energy conservation and environmental protection, urban and rural community affairs, transportation,

resource exploration, commercial service affairs and so on. The proportion of total government financial expenditure for the period from 2014 to 2022 is calculated item by item, indicating the government's propensity to invest in various fields. Considering the collinearity problem caused by too many variables, the principal component analysis of 17 public service expenditures was carried out before regression.

After principal component analysis, 17 original variables were divided into three principal component factors. The first factor mainly includes the original variables related to social development such as social security and employment, culture, education, sports, and media, so it is named as Society-Developing Public Service. The second factor mainly includes the original variables related to sustainable development, such as diplomacy, public security, urban and rural community affairs, energy conservation, and environmental protection, so it is called Development-Oriented Public Service. The third factor mainly includes the original variables related to economic development, such as business service affairs, resource exploration, and financial regulation, so it is named Developmental Public Service.

In terms of dependent variables, China's Gross Domestic Development (GDP) from 2014 to 2022 is adopted as a variable to measure economic development status, and it is logarithmic. In addition to GDP, this paper also selects the Human Development Index (HFI) and GDP per capita as the important criteria to measure the extent of economic and social development and analyzes the robustness of the model.

3.3. Model and Assumption

Based on the introduction of variables, the following three assumptions are proposed:

H1: Developmental public services play a positive role in promoting economic development.

H2: Development-oriented public services have a positive role in promoting economic development.

H3: Society-developing public services have a positive role in promoting economic development.

According to the above introduction, the OLS regression model is constructed with three types of public services as independent variables and economic development as dependent variables. As follows:

$$Y_i = \beta_0 + \beta_1 SDPS + \beta_2 DOPS + \beta_3 DPS + \varepsilon \quad (1)$$

$$Y_1 = \lg(GDP), Y_2 = \lg(GDP \text{ per capita}), Y_3 = HFI$$

In the above model, $\lg GDP$ means the logarithmic GDP. And $\lg(GDP \text{ per capita})$ means the logarithmic GDP per capita. HFI means the Human Development Index. SDPS means Society-developing public service. DOPS means Development-oriented public service. DPS means Developmental public service.

4. Result Analysis

First, the logarithmic GDP is taken as the dependent variable and the three types of public services are taken as the independent variable for regression. The Developmental public service, Development-oriented public service, and Society-developing public service will be included in the return in turn. The results are shown in Table 1.

Table 1: lgGDP Model

lgGDP	Model 1		Model 2		Model 3	
Independent Variable	Coefficient	Std.Err.	Coefficient	Std.Err.	Coefficient	Std.Err.
DPS	0.024	0.035	0.024	0.033	0.024**	0.009
DOPS	—		0.048	0.033	0.048***	0.009
SDPS	—		—		0.078***	0.009
Constant	4.95***	0.033	4.95***	0.031	4.95***	0.008
R Square	0.064		0.310		0.961	
Adjusted R Square	-0.070		0.080		0.937	
Number of Obs	8		8		8	
Prob > F	0.512		0.329		0.001	

Note: $p < 0.01$:***, $p < 0.05$:**, $p < 0.1$:*.)

It can be found that model 1 and model 2 are not significant. When the model only includes Developmental public service and Development-oriented public service, the model as a whole is not significant. When the Society-developing public service is included in the model, the model is significant overall, and the coefficients of Developmental public service and Development-oriented public service change from insignificant to significant. It can be inferred that social development variables play an important role in this model.

The coefficient in Model 3 shows that when Developmental public service increases by one unit, GDP increases by 2.4%. When Development-oriented public service increases by one unit, the GDP increases by 4.8%. When Society-developing public service increased by one unit, the GDP increased by 7.8%. The three types of public services can all verify the above-mentioned assumptions. All three assumptions are not rejected.

The robustness of the model was further tested, and the logarithmic GDP per capita and human development index were used to replace the logarithmic GDP and then the regression was performed again. As shown in Table 2.

Table 2: Robustness Test

	lgGDP		lg(GDP per capita)		HFI	
Independent Variable	Coefficient	Std.Err.	Coefficient	Std.Err.	Coefficient	Std.Err.
SDPS	0.078***	0.009	0.075***	0.008	0.012***	0.001
DOPS	0.048***	0.009	0.045***	0.008	0.01***	0.001
DPS	0.024**	0.009	0.024**	0.008	0.003**	0.001
Constant	4.95***	0.008	4.803***	0.008	0.751***	0.001
R Square	0.961		0.959		0.980	
Adjusted R Square	0.937		0.934		0.969	
Number of Obs	8		8		8	
Prob > F	0.001		0.001		0.000	

(Note: $p < 0.01$:***, $p < 0.05$:**, $p < 0.1$:*.)

It can be found that the direction and significance of each coefficient have not changed. Therefore, the model passes the robustness test.

5. Conclusion

In the model provided in this paper, the positive promoting effect of three types of public services on economic development has been verified. However, it is worth noting that the significance of the model changes significantly when the three independent variables are gradually input into the model. When Society-developing public service is included in the model, the whole model and the other two independent variables change from non-significant to significant. In the final model, Society-developing public service has the most powerful role in promoting economic development. It can be inferred that in the interaction process between the government and the economy, the role of the government's direct economic input and basic security expenditure on economic development requires the government's further investment in social development. In the process of formulating policies to promote economic development, the government should always pay attention to the expenditure on social development such as science, education, culture, and health. On the basis of building a higher quality social environment and providing higher quality social services, the government's direct promotion of economic development can play a better role.

However, there are still many deficiencies in this paper, and some parts worth further exploration. This paper only observed the significant change of Society-developing public service to the overall model but failed to further analyze and discuss the reasons for such change, let alone further empirical analysis of the mechanism of such change. In the context of today's economic development, the concept of society should be paid more attention. The further exploration of economic development should not be limited to the dual concepts of government and economy. Social forces, including the sense of autonomy of citizens, the level of education, and the opinions of various guilds, are all important units related to economic development. Society is gradually transforming from a logical transition between government and economy to a subject that can play an important role in the interaction process of the two. The relationship between government, society, and economy, which is not discussed in depth in this paper, will be of great significance for further exploration of economic development.

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