

# Analysis evaluation and quantitative research on economic law behaviour cost and market efficiency

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## Abstract

Fiscal expenditure, as the material support of economic law behaviour, plays a critical function in regulating resource distribution, promoting economic development and guaranteeing social far equity. Analysis evaluation of fiscal expenditure is obtained through connotation of fiscal expenditure and investigation evaluation. This paper thought that, analysis evaluation of economic law behaviour cost referred to make comprehensive evaluation in aspects of economy, efficiency and benefits on fiscal expenditure process and result according to specific principles and using scientific and normative evaluation method and technology, with fiscal expenditure as management objectives. The results it obtained will be mostly reflected on market effect. Through the quantitative research on fiscal expenditure and economic benefits evaluation in our country, this paper made digitalization and objectification analysis on the comparison of economic law behaviour cost and market benefit, studied the relationship between fiscal expenditure scale and market economic, further estimated the optimal fiscal expenditure scale in our county, in order to provide basis and rule for the formulation of economic law behaviour cost based on quantitative analysis.

*Keywords:* economic law behaviour, fiscal expenditure, market benefits, quantitative analysis

## 1 Introduction

For a long time, the function of fiscal policy in economic growth is one of the core topics concerned by theoretical researchers and policy makers. Modern fiscal theory and practice proved that, fiscal expenditure and economic growth is closely related [1,2]. According to Keynesian fiscal theory, positive fiscal policy can promote economic growth by multiplier benefits, but meanwhile, it also can be decreased because of crowding-out effect [3]. At present, estimation of optimal fiscal expenditure scale are mainly based on two methods: one is to use natural efficiency condition – marginal output of public service is 1 under linear model framework to establish production function; the other one is to use the concave function relationship between economic growth and fiscal expenditure scale in the perspective of nonlinear to construct equation for estimation, taking Armeiy curve as example [4]. When Armeiy curve is expressed as small fiscal expenditure scale, the enhancement effect on output takes the leading role. At that moment, increasing fiscal expenditure can promote economic growth, when the scale reaches some critical point A (as shown in Figure 1), then the generated enhancement effect decreases progressively and further expansion of scale will inhibit output increase.

This paper analyzed the status of fiscal expenditure and market benefits in our country, made certain economic evaluation and confirmed the boundary of economic law behaviour based on quantitative analysis, thus to provide

basis and rule for the relative research on economic law behaviour in our country.

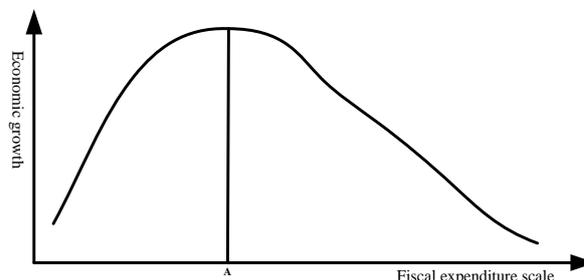


FIGURE 1 Armeiy curve

## 2 Analysis of fiscal expenditure status

### 2.1 FISCAL EXPENDITURE SCALE

Since the reform and opening-up policy, the scale of fiscal expenditure in our country showed change of down first and then rise. This change fully reflects the characteristics of economic transition period. In 1996, fiscal expenditure in our country decreased to the historical low point, accounted for 11.15% in GDP. It demonstrates that, market plays a leading role in resource distribution in the process of turning to market economic system. Year 1992 to 1996 is the stage of tight fiscal expenditure scale; year 1998 to 2002 is the stage of expanded fiscal expenditure scale; year

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2003 to 2007 is the stage of implementation of firm fiscal policy, and the fiscal expenditure scale remains between 17.8% and 18.7%; year 2008-2009 is the stage of expanded expenditure scale. In addition, calculated based on the current year's price, the total amount of Chinese fiscal expenditure from 1978 to 2012 grows as much as 111.03 times over the 34 years with an average annual growth of 3.27 times. We can find that, fiscal expenditure constantly increases with the development of modern society, and the expansion of fiscal expenditure scale is related to the fiscal policy and economic situation in that year [5]. For instance, in the second half of 2008, financial tsunami induced by subprime crisis spread around the world. As a result, the economic growth in our country slowed down and economic pressure became bigger. In order to resist the adverse effect of external environment on economy, our country proposed 4 trillion investment plan and a series of stimulus measures used for expanding domestic demand. The positive fiscal policy helped our country effectively resist financial crisis, made contribution for the early recovery of Chinese Economy but also aggravated fiscal deficit.

## 2.2 FISCAL EXPENDITURE RELATED TO ECONOMIC LAW BEHAVIOUR

### 2.2.1 Fiscal expenditure related to economic law behaviour in macroscopic view

Fiscal expenditure and fiscal revenue together constitute all steps of financial distribution, which detailed reflects on government's arrangement, supplement and utilization and management on the financial fund, indicating the scale, structure, flow direction and use of financial fund [6,7]. Fiscal expenditure can provide the financial resources needed by government, thus to ensure the normal operation of state machinery and realize function of the state; secondly, it can provide public goods and service for society; thirdly, fiscal expenditure can regulate the scale and structure of financial operation and make macro-adjustment on national economic policy, thus realize social equity and promote the healthy development of macro economy.

Public expenditure and government expenditure is also similar to the concept of fiscal expenditure. Fiscal expenditure contains all non-public expenditure used for investment on competitive field such as economic construction as well as the public expenditure such as providing public products for non-competitive field; government expenditure is government-dominated and government duties-based financial expenditure activity. Public expenditure refers to in particular to the expenditure needed for providing public goods and service by public organization under market economy. It not only contains the main provider with government as core, but also contains lots of non-government public organization. The relationship between these three is as shown in Figure 2.

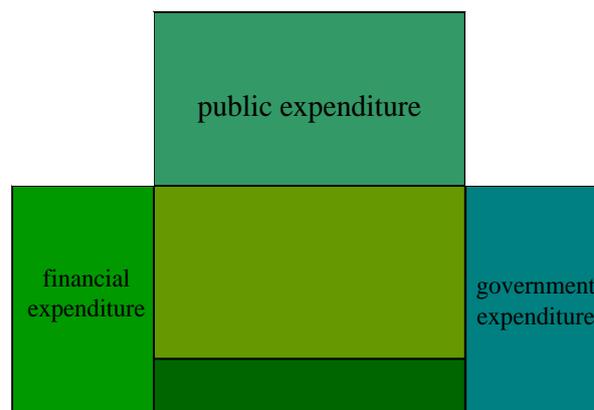


FIGURE 2 The relationship between financial expenditure, public expenditure and government expenditure

Fiscal expenditure project involves fields such as national defence, economy, education, social insurance. In recent years, the proportion of education expenditure in fiscal expenditure becomes higher and higher, increasing from 6.69% in 1978 to 15.10%. General public service and social insurance and employment take the second and third place, respectively. The development tendency of financial policy of our government is to carry out the people's livelihood finance and give way to the market. Therefore, the investment on people's livelihood projects such as education, social insurance and employment, medical care become more and more, while the expenditure proportion on grain and oil material management affairs and business service industry constantly decreases.

### 2.2.2 Fiscal expenditure related to economic law behaviour in microcosmic view

Analyzed from microcosmic view, the intervention of economic law behavior on economic life in aspect of fiscal expenditure roughly reflects on market control and economic services. Market control, in fact, is that, state use public power to correct and standardize deviation state in economic life from external market. Financial regulation accounts the most in market regulation. However, the foods and drugs regulatory affairs that affect the health of consumer has not greatly supported by finance. The regulatory efforts are not conforming to the impact strength needed for major food safety accidents such as swill-cooked dirty oil and red yolk eggs. In addition, the market regulatory strength on the retail price of goods cannot suppress the rapid growth of price. In the short term, the investment on market regulatory field is not perfect; meanwhile, missing merchant mortality and disordered economic operation also exist.

Economic service is the basis of normal economy operation, among which, the stand or fall of public transportation construction is related to the circulation and trans- action of products in market. The normal supply of water and electricity is the security of normal operation of social

economy. For the past two years, our country mainly invested in transportation and infrastructure construction of small towns with large fund. For instance, in 2011, the expenditure on transportation is 749.78 billion, infrastructure of small towns 36.78 billion, total 786.56 billion, accounting for 7.2% in national fiscal expenditure.

### 3 Evaluations on the financial expenditure effect

#### 3.1 FISCAL EXPENDITURE AND ECONOMIC GROWTH

Fiscal expenditure has multiplier effect and acceleration effect [8]. Fiscal expenditure is related to the national income to some extent. National income is increasing with the growth of fiscal expenditure. Then it feeds back to

fiscal expenditure. As a result, fiscal expenditure increase promotes the increasing of national income, and then the income increasing stimulates the expenditure increasing.

Fiscal expenditure and GDP growth rate are all positive number (except 1980 and 1981), indicating GDP increases with the increase of fiscal expenditure. However, the fiscal expenditure growth rate does not have necessary correlation with GDP growth rate. Figure 3 shows the relationship between fiscal expenditure and GDP growth rate. It can be seen that, in 1979~1996, fiscal expenditure is basically consistent with the GDP growth rate curve, showing positive correlation. However, in 1996~2003, the curve moves towards the opposite direction, showing negative correlation. In 2003 to 2012, they become consistent again.

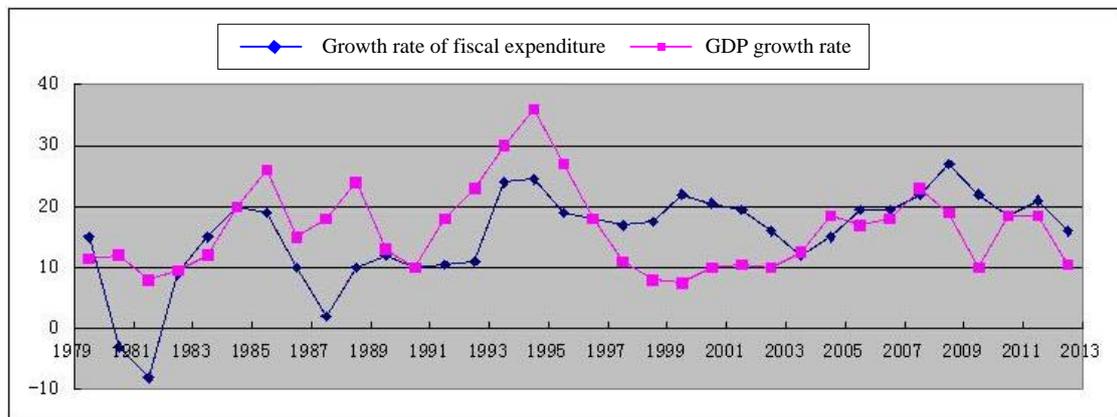


FIGURE 3 Growth rate of fiscal expenditure and GDP in 1979~ 2012(%)

Ratio of growth rate of fiscal expenditure and GDP fluctuates greatly over the 33 years. The ratio of growth rate of fiscal expenditure and GDP contains two information: the contribution rate of fiscal expenditure on GDP growth and the elastic coefficient of fiscal expenditure growth. As shown in Figure 3, 1996 is the turning point of the relationship between fiscal expenditure and GDP. 1996 can be regarded as the watershed of planned administrative intervention and market rules regulating. Negative financial policy and tight monetary policy is adopted to reply the increasingly serious inflation from 1993 to 1996; As the financial crisis broke out in 1997, our country began to carry out the positive financial policy that takes expanding domestic demand as basic approach, and enhance infrastructure construction and public investment. Before 1996, the promotion function of GDP comes from fiscal expenditure with pertinence and political orientation. After 1996, the state of GDP

mainly relies on the development of market rule, and its relationship with fiscal expenditure decreases.

#### 3.2 ECONOMIC CONSTRUCTION EXPENDITURE AND ECONOMIC GROWTH

Figure 4 shows the curve relationship between economic construction cost and GDP growth rate. It can be seen that, from 1978 to 1997, the curve trend of economic construction expenditure and GDP growth rate is basically consistent. These two show obvious positive correlation while negative from 1997 to 2009. It demonstrates that, in the initial stage of market, the economic construction expenditure can significantly stimulate GDP. But with the economic development, economic construction cost is negatively correlated to economic growth. Therefore, in the meanwhile of economic development, economic construction expenditure should make structural adjustment.

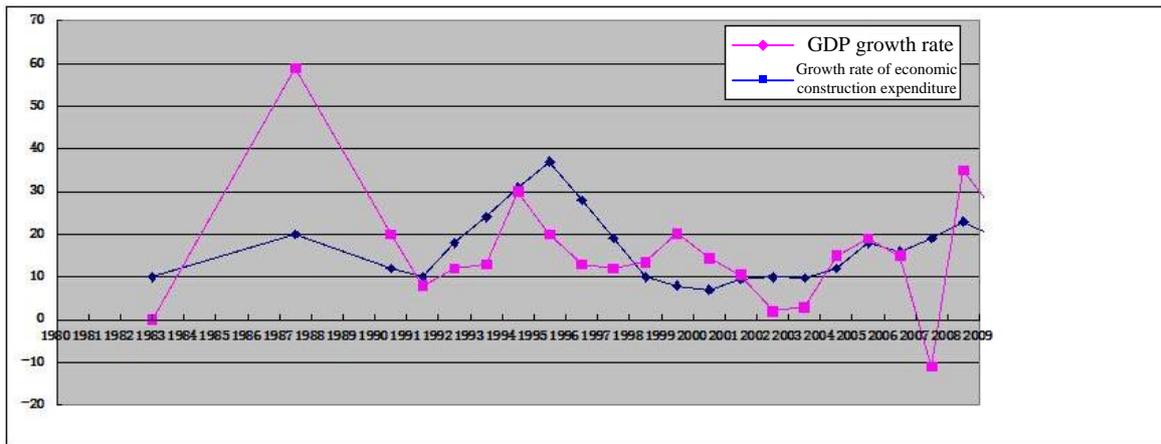


FIGURE 4 Growth rate of economic construction expenditure and GDP in our country from 1980 to 2009 (%)

#### 4 Economic law behaviour based on quantitative analysis

It is of great significance of economic law behavioural norms to economic development. The boundary content of economic law behaviour contains intervention range, intervention object and intervention degree [9]. Accurate positioning of economic law behavioural norms can ensure market rule to have sufficient regulation space as well as providing probability for the defect intervention that is hard for market itself to overcome. In reality, macroscopic and idealized planning boundary has limited guidance on market intervention behaviour, and the objective and quantized reality boundary has stronger operability and adapts to market demand. According to quantitative information, government is regarded as rational economic man, and then the cost and benefits of governmental intervention behaviour is calculated, thus to be used to judge if the governmental intervention is necessary, feasible as well as how the effect is. To be specific, the confirmation of economic law behaviour norms can accord the following three points.

##### 4.1 TIME AND SPACE DIMENSIONS

In practice of Chinese socio-economic transformation, concept of state intervention and market regulation both play functions, that is, market needs the economic intervention of state. Meanwhile, the concept and value orientation of state on economic intervention changes. That is, the state established intervention on the basis of respecting market rule. For instance, the state transforms the control method dominated in direct executive orders into the current control method dominated in market-oriented means; in different development stages, public power exertion will differ in range and strength as well as its functions and role positioning.

First, the national intervention boundary and economic development stage is closely related. In the initial stage of economy, government greatly increases the investment on environment and infrastructure in order to stimulate the

rapid growth of economy. The total amount of governmental expenditure increases greatly, and the economic construction investment is dominated structurally; in medium term of economic development, the role of government slowly transforms to the extender of investment, the investment ratio may decrease and the direction transforms from economic construction to national education and health care. With the constant development of economy, the predominating direction of country will constantly improve to the development of market economy.

Secondly, the regional difference is also the content that should be considered by economic law behavioural norms. Regional difference not only reflects the disunion of economic development level and the different intervention function of government, but also requires economic law to adjust intervention range and degree according to different development.

##### 4.2 TRANSFORMING FROM QUANTITATIVE CHANGE TO QUALITATIVE CHANGE

Market economy in our country from formation to maturity experiences the process from administration dominating economy to full playing of market mechanism, meanwhile, reflects the transforming from quantity to quality of the intervention of economic law on economy. In the initial stage of market economy, government action shoulders productivity function, especially the fiscal expenditure even dominates the development of national economy; in economic mature stage, the dominant position of government should give way to market rule and retire after economic life, since too many government intervention will inhibit economic development rather than generate great function and significance on the regulation and development of market economy. In the real world, government should concern the transformation of the effect of fiscal expenditure on economic growth from quantity to quality, and then regulate economic law boundary norms relatively in order to make it adapt to the development of market economy.

#### 4.3 OBSERVATION DATA AND FORECASTING DEVELOPMENT

Observation of cost of economic law behaviour is a key problem of economic law behaviour boundary. Economic law behaviour boundary, as one mean of state interfering market economy, affects the future economy, people's life and development and trend of social life. Its objective analysis and argument on economic performance is essential. Data can verify the stage that the economic development locates, market demand, situation of government demand and whether the intervention behaviour is conforming to expectation. Only by analyzing whether the norms of economic law behaviour is conforming to the development of market economy based on quantitative analysis can it be close to reality in accuracy.

Economy has certain predictability. In March, 2012, Prime Minister Wen announced that the economic growth objective in 2012 was 7.5%. Most analysts thought that, this conclusion was too cautious. However, it was proved when the growth of Chinese economy in the second quarter decreased from 8.1% in the first quarter to 7.6%. Economic prediction is made based on the full master of Chinese economic situation, economic rule and the current economic data. Through analyzing data and grasping rule, we

predict the trend of economic development more accurately.

#### 5 Conclusions

The research on the cost of economic law behavior is aimed at dynamics, those us, to look for the set factors of economic law behaviour norms in an absolute no balanced state. With the development of market economy, economical law behaviour norms with analysis of objective data constantly changes errors in it, which makes the market benefit and financial expenditure proceed in economic law behaviour that is conforming to market.

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