

# Journal of Chinese Tax & Policy

中国税收与政策

AN ECONOMIC ANALYSIS OF PILOT PROPERTY TAX  
DAN CHENG

A STUDY ON THE IMPROVEMENT OF SUPPORTIVE TAXATION  
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DONGSHENG JIN, ZEWEN YUAN, PING LING

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THE VAT IN CHINA  
YING WAN AND QI FAN



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Please address all enquiries to:

Eva Huang

Editor, Journal of Chinese Tax and Policy  
The University of Sydney Business School  
The University of Sydney NSW 2006  
Australia

Email [business.jctp@sydney.edu.au](mailto:business.jctp@sydney.edu.au)

Phone +61 2 9114 0951

Fax +61 2 9351 7473

## ABOUT THE JOURNAL

The importance of China on the global economic stage cannot be ignored, and its unique legal and tax systems are of great interest to international scholars and business people alike. China's tax system is acquiring western features while remaining entrenched in its rich cultural and historical roots. This makes for interesting study, analysis and comparison as its laws are becoming more accessible.

The Journal of Chinese Tax & Policy focuses on the policy, administrative and compliance aspects of the Chinese tax system. It also welcomes comparative studies between China and other countries. The Journal is an internationally peer-reviewed scholarly publication.

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## Editorial

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Taxation is one of the most vital tools for governments seeking to build a society that can stand strong in the face of modernity. The articles in this issue survey the effects of tax policy far beyond government coffers and business balance sheets. They demonstrate how structure of both civil society and government can be shaped and reshaped by tax policy, and how it can provide solutions to pressing social issues. After searching global, national and local experiences, from both qualitative and quantitative perspectives, each author's insights show how China can and is wielding this powerful and versatile policy tool.

The first article, 'An Economic Analysis of Pilot Property Tax,' by Dan Cheng is a case study of a tax-based response to the soaring property prices that plague numerous cities around the world. The pilot property tax schemes introduced in Shanghai and Chongqing in 2011 are summarised, compared, and contrasted. Calculated tax payments and revenue are then analysed in combination with data on Chinese housing markets. This analysis is used to draw conclusions about the schemes' success in achieving their multiple policy goals.

'A Study on the Improvement of Supportive Taxation Policy for Social Organisations' by Dongshen Jin, Zewen Yuan and Ping Ling, looks at how taxation can be used to support civil society in responding to social challenges. An overview of the theoretical reasoning behind supportive taxation of the not-for-profit sector is followed by a comprehensive outline of current Chinese law in this area. A representative sample of taxation systems in other countries is then described, and common features identified. These international experiences are used to help identify the way forward for China.

Ying Wan's article, 'An Empirical Study of the Income Redistributive Effect of Personal Income Tax in China' takes a fresh look at the relationship between the Chinese taxation system and income inequality. Statistical tests are discussed and applied to over a decade of data to generate quantitative indicators of the redistributive effects of Chinese income tax, its progressivity, and its average rate. A comparison with results from countries around the world yields some interesting, and sometimes counter-intuitive results.

The final article in this issue, 'Analysis of the Effect of the VAT on the Size in China' is authored by Ying Wang and Qi Fan. Insights from political and economic theory are combined with thirty years of statistics to shed light on the future of this crucial pillar of Chinese tax policy. The article opens with a theoretical and international discussion of the relationships between government size, government spending, and VAT revenue. The two strands of analysis are then brought together to demonstrate the complex relationship between VAT, government, and business. Suggestions are made for taking this into account in the reform process.

Together the articles in this issue show that the Chinese tax system has made phenomenal progress over the past few decades, and compares well with its international counterparts on many indicators. It is also clear that the pace of reform and development shows no sign of slowing, nor should it.

*Eva Huang*

*Sydney, August 2014*

# An Economic Analysis of Pilot Property Tax

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**Dan CHENG<sup>☆</sup>**

Abstract: In 2011, the pilot property tax was introduced in two cities in China, Shanghai and Chongqing. This article focuses on comparing the effects and results of the tax in the two cities after implementing the tax for one year in four aspects: the taxpayers, the real estate market, the local revenue and the purchasers. The conclusion is that the pilot property tax in both Shanghai and Chongqing has not achieved the expected goals. The price of real estate in China currently continues to soar. The income from the pilot property tax is not enough to better the public house policy. The tax is unable to influence the policy of land premium, which contributes to more than half of the income received by the local authority.

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<sup>☆</sup>Associate Professor, Department of Public Finance and Taxation, College of Economics, Jinan University, China, 510632

## 1. Introduction

On 27 January 2011, in order to launch property reform in China, the Municipal People's Governments of Shanghai and Chongqing – the two pilot cities, respectively promulgated the *Provisional Methods Levied on pilot property tax*, which came into force on the following day.

According to the original plan, the property tax would be implemented nationwide from 2012 after the implementation in these two cities. That being said, the tax would complement previous ones levied by other local governments on the premise of their autonomy. For example, the provinces of Hubei, Hunan, and Sichuan have already started drawing up evaluation mechanisms regarding the trading price of real estate.<sup>1</sup>

This article focuses on the main objective of the pilot property tax, i.e. to redistribute income, to adjust individuals' housing consumption, and improve the property taxes. To achieve it, I will consider whether the pilot property tax ensures the proper function of the real estate market. The article also examines the economic impacts of the pilot property tax.

### 1.1 The taxation of pilot property

It is well known that the homologous authority of the municipal where the property is located levies property tax. In some cases, such tax may be paid to the county/region, the national government, or the federated state.

The State Council issued the *Provision Rules on Real Estate Tax (RET) of the People's Republic of China* in September 1986. The RET is levied on urban land and buildings, and the tax must be paid by the owner of the real estate or, where the property has been mortgaged, by the mortgagee. Personal use of all non-operating real estate are exempt from paying RET<sup>2</sup>. Different rates are applied in two different cases: where the tax base is the residual value after the subtracting 10% to 30% of the original value from the original value of the property, the tax rate is 1.2%; where the tax base is the rental income from the property, the tax rate is 12%. The tax is computed on an annual basis and paid in instalments.<sup>3</sup>

There are three areas of distinction between the pilot program of property tax and existing real estate tax. Firstly, the scope of the object of the pilot property tax has expanded to owner-occupied (also called Personal use) houses. Secondly, the

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<sup>1</sup> Property refers to a house or building in China.

<sup>2</sup> Provision Rules on Real Estate Tax of the People's Republic of China. Article 2.

<sup>3</sup> LIU Tiejing, LIU Zuo: *Tax System of the People's Republic of China* 2nd edition. China Taxation Press, 2010



assessment rules regarding the value of the real estate property have been introduced. Thirdly, the tax rate concerned is also clarified on a case-by-case basis.

## ***1.2 The purposes of pilot property tax***

One of the three main purposes of the pilot property tax is to guide citizens who live in the city concerned to a more rational consumption in the real estate market. Consequently, to a large extent land use can be better developed. Secondly, the pilot property tax might ensure a stable contribution to the income of local authorities, and from which the public housing policy can benefit. Thirdly, it would narrow the gap between the rich and the poor through redistributing individuals' incomes.

## **2. Summary of the contents of provisional methods<sup>4</sup>**

### ***2.1 Personal jurisdictions and territorial jurisdictions***

The provisional methods in both Shanghai and Chongqing have personal jurisdictions over the individual(s) who has/have more than one house (including one house). The territorial jurisdiction of Shanghai covers all districts. However the territorial jurisdiction of Chongqing only covers nine of nineteen districts of the main city.<sup>5</sup>

### ***2.2 Concrete contents of these two provisional methods***

#### **2.2.1 Tax items**

Article 2 of the *Shanghai* provisional methods provides the following scope for tax items:

- a. Second and subsequent houses purchased by the resident of Shanghai (including second-hand housing stock, and newly built commercial houses)

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<sup>4</sup> 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [*Provisional Methods Levied on pilot property tax in Shanghai*] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011.

《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [*Provisional Methods Levied on pilot property tax in Chongqing*] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011.

<sup>5</sup> These nine of districts are Yuzhong district, Jiangbei district, Shabei district, Jiulongpo district, Dadukou district, Nanan district, Beipei district, Yubei district and Banan district.

- b. Newly purchased house(s) for non-resident of Shanghai
- c. The date that the contract of the housing purchase is filed online is regarded as the valid confirmation of time of housing purchase

Article 2 of the *Chongqing* provisional methods provides the following scope for tax items:

- a. Villa(s) owned by individuals, which could be classified as single family home (attached/detached)
- b. Up-scale residential apartments purchased by individuals in these nine districts, whose trading price is more than two times (including two times) of the average trading price in the latest two years (2009, 2010).<sup>6</sup>
- c. Second and subsequent apartments that are newly purchased by an individual who has no citizenship, job or business in Chongqing.<sup>7</sup>

The tax items in Art. 2 refer to newly construct commercial villas and high-scale apartments, the housing stock.

### 2.2.2 Tax payer

According to both provisional methods, the pilot property tax is levied on buildings; the owner of the property concerned and the legal custodian on behalf of the person (minor) who owns property right under his or her guardianship must pay the tax.<sup>8</sup> However the term “legal custodian” in this Art. 2, from my point of view, is the agent of the minor. In the case of a pawn, the tax payer should be the pawnee.<sup>9</sup>

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<sup>6</sup> The latest two year refers to the year of 2009, 2010. Follow peroid is the same.

<sup>7</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People’s Republic of China) Chongqing Municipal People’s Government, Order No 247, 27 January 2011, art 2(1),(2),(3).

<sup>8</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People’s Republic of China) Chongqing Municipal People’s Government, Order No 247, 27 January 2011, art 3. 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People’s Republic of China) Shanghai Municipal People’s Government, Order No 3, 27 January 2011, art 3(1),(2).

<sup>9</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People’s Republic of China) Chongqing Municipal People’s Government, Order No 247, 27 January 2011, art 3(3).



### 2.2.3 Taxable income

For Shanghai, the pilot property tax is chargeable on the assessment value of the real estate market. The assessment value will be updated regularly. During the pilot period, the taxable income is 70 per cent of the market's trading price.<sup>10</sup>

The taxable income in Chongqing is considered in a similar way. The taxable income is the market trading price. The assessment value rules will be introduced when the requirements are met in the future.<sup>11</sup>

In addition, according to Chongqing's Provisional Methods, if the property in concern is leased out, its owner should pay the property tax on the basis of the trading price.<sup>12</sup>

### 2.2.4 Tax rate and calculation

The standard pilot property tax rate is 0.6 per cent in Shanghai.

The 0.4 per cent reduced rate is applicable to the houses at the trading price, which is less than two times (including two times) of the average trading priced last year<sup>13</sup> in Shanghai.<sup>14</sup>

Two different tax rates are applied to Chongqing:

On one hand, the tax is on the basis of per square trading price of the villas or the high-scale apartments newly constructed during the latest two years,

- a) Which is less than three times of average trading price, tax rate is 0.5 per cent.

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<sup>10</sup> 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [*Provisional Methods Levied on pilot property tax in Shanghai*] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 4(1).

<sup>11</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [*Provisional Methods Levied on pilot property tax in Chongqing*] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 4(1).

<sup>12</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [*Provisional Methods Levied on pilot property tax in Chongqing*] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 4(3).

<sup>13</sup> The average trading priced last year will be announced by Shanghai Municipal Bureau of Statistics.

<sup>14</sup> 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [*Provisional Methods Levied on pilot property tax in Shanghai*] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 5(1),(2).

- b) Which is more than three times (including three times), and less than four times, tax rate is 1 per cent.
- c) Which is more than four times (including four times), tax rate is 1.2 per cent<sup>15</sup>.

On the other hand, the tax is levied on the basis of per square trading price of common apartments that belong to owners who have no citizenship, job or business in Chongqing.<sup>16</sup> Tax rate under this context is 0.5 per cent.

Shanghai and Chongqing adopt different formulas for tax payable.

Under the *Provisional Methods Levied on Pilot Property Tax* of the Shanghai Municipal People's Government:

***Tax payable of pilot property tax = (total taxable house construction area<sup>17</sup> – house exemption area) \* market trading price \* 70% \* applicable tax rate<sup>18</sup>***

Under the *Provisional Methods Levied on Pilot Property Tax* of the Chongqing Municipal People's Government:

***Tax payable of pilot property tax = tax payable of house construction area<sup>19</sup> \* per square construction area trading price \* applicable tax rate<sup>20</sup>***

### 2.2.5 Exemption and refund of tax

According to Shanghai's Provisional Methods, the ambits of tax exemption are as follows:

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<sup>15</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 5(1)

<sup>16</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 5(2)

<sup>17</sup> Total taxable house construction area refers to all houses of the tax payer ownes, including the newly purchased house area plus the original-owned house area.

<sup>18</sup> 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 4(2)

<sup>19</sup> Tax payable of house construction area = house construction area of taxpayer – exemption house construction area.

<sup>20</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 6(1)

- a. The per capita house area is equal or less than 60 square meters.
- b. The sole house newly purchased for the first time by the children of the local resident household who have attained adulthood for the purpose of marriage.
- c. the sole house newly purchased by persons:
  - i. who are experts in in the certain industry;
  - ii. who are high-level personnel according to the relevant provisions of the state and the city;
  - iii. Who have been working for three years in the city.<sup>21</sup>

Shanghai's Provisional Methods also provides that the following owners of the property will receive the tax refund:

- a. The property owner, who has held a valid residential permit for three years, lives in the city of Shanghai and purchased a house that is the sole house owned by the household will receive a refund on the property tax of the newly purchased house.
- b. The property owner, who holds a valid residential permit but not for three years, lives in the city of Shanghai and purchased a house that is the sole house owned by the household will be taxed but will get the property tax refund after working in the city for three years.<sup>22</sup>

According to Chongqing's Provisional Methods, the ambits of the tax exemption are following<sup>23</sup>:

- a. the family is a tax-free unit in the scope prescribed in Art.6(2a);
- b. The exempt house area is 180 square meters, which applies to the villa(s) purchased before the Methods came into force (Art.6 (2b));

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<sup>21</sup> 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 6(1),(2),(3),(4)

<sup>22</sup> 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 6(5).

<sup>23</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 6.

- c. The exempt house area is 100 square meters, which applies to the newly purchased villas and high-scale apartments after the Methods came into force (Art. 6(2c));
- d. the exempt area of the previously purchased house should be calculated in chronological order in the case that the taxpayer's family has more than one set of tax items (Art. 6(2d));
- e. The owner occupied housing in the countryside built by the land owner (Art. 7(1)).

The following three kinds of taxpayers are equally eligible to enjoy the tax refund:

- a. Taxpayers who are residents,
- b. Taxpayers who runs a business,
- c. Taxpayers who are employed in the city (Art. 7(2)).

Taxpayers who have genuine difficulties which could be attributed to the force majeure, e.g. natural disaster, etc. may have access to tax exemption, tax reduction or tax deference for a certain period of time.<sup>24</sup>

### 2.2.6 Payment of duty

The taxpayers should fulfil the payment of the tax concerned during the second month after acquiring the ownership. The pilot property tax shall be levied on an annual basis. If the duration of the ownership is less than one year, the pilot property tax will be computed on a monthly basis.

The local tax authorities collect the property tax.<sup>25</sup>

Taxpayers should claim the tax payable, as well as provide relevant information accurately and honestly.<sup>26</sup>

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<sup>24</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 7(3).

<sup>25</sup> 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 8(2). 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 8(1).

<sup>26</sup> 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No

The collection of the pilot property tax shall be administered in accordance with the provisions of the "*Provisional Regulations of the People's Republic of China on Tax Administration*".<sup>27</sup>

### **2.2.7 The use of pilot property tax revenue**

The revenue derived from pilot property tax will be spent on the construction and maintenance of public housing to benefit the public housing policy.<sup>28</sup>

## ***2.3 The differences in the pilot property tax between Shanghai and Chongqing***

According *Provisional Methods Levied on Pilot Property Tax* of Chongqing Municipal People's Government, persons who have ownership of the villas or the high-scale apartments are liable to pay property tax. The main tax bases of the property are both flow and stock villas, and high-scale apartments; the tax rate is progressive and ranges from 0.5 per cent to 1.2 per cent. The exemption area of the villas, which were purchased before January 28 2011, is 180 square meters. After the date of the provisional methods Promulgated, the exemption area of the villas and the high-scale apartments, which are newly purchased, are 100 square meters.

Comparing the tax bases, which composed of the flow and stock of the villas, and the high-scale apartments in Chongqing, the main tax bases of pilot property tax in Shanghai are only for the newly purchased houses. Tax threshold is 60 square meters per capita house area and the tax rate is flat and low. Overall, the tax base in Shanghai

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247, 27 January 2011, art 8(3). 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 8(3),(4).

27 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 8(5). 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 8(4).

28 《上海市开展对部分个人住房征收房产税试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Shanghai] (People's Republic of China) Shanghai Municipal People's Government, Order No 3, 27 January 2011, art 7. 《重庆市关于开展对部分个人住房征收房产税改革试点的暂行办法》 [Provisional Methods Levied on pilot property tax in Chongqing] (People's Republic of China) Chongqing Municipal People's Government, Order No 247, 27 January 2011, art 9.

is much larger than that in Chongqing. The larger the house area, and the more valuable the house, the more tax will be collected in Shanghai.

### 3. The economic impacts of pilot property tax

Shanghai and Chongqing have carried out the reforms of pilot property tax in January 2011. Throughout 2011, Shanghai's property tax revenue totalled 2.21 billion Yuan and Chongqing earned 100 million Yuan from the tax.<sup>29</sup>

#### 3.1 How much pilot property tax are the taxpayers paying?

Pursuant to *Provisional Methods Levied on Pilot Property Tax* of Shanghai Municipal People's Government, the pilot property tax rate is 0.4 per cent or 0.6 per cent, the threshold is 60 square meters per capita house area, the taxable price is calculated based on 70 per cent in accordance with the house market trading price. Therefore, the amount of pilot property tax levied on owner occupied houses is not that high.

Assuming a family of three who owns a set of 100 square meters housing in Shanghai and has just purchased a 200 square meters house at the market trading price of 20,000 Yuan per square meter. Based on pilot property tax, the average trading price of newly built commercial house in the city in Shanghai in 2010 was 14,213 Yuan per square meter.

Now we calculate the amount of pilot property tax the family would have to pay:

$$\begin{aligned}\text{Tax payable} &= 20\,000 * [100 + 200 - (60 * 3)] * 70\% * 0.4\% \\ &= 6720 \text{ Yuan per year}\end{aligned}$$

The total pilot property tax of this family in 2011 is 6720 Yuan, which is nothing compared to 4 million purchasing price.

An example to illustrate the cost of the pilot property tax in Chongqing is as follows. Assuming a family purchased a high-scale apartment, which is 180 square meters and is trading at a market price of 10000 Yuan per square meter on 28 January 2011.

$$\begin{aligned}\text{Tax payable} &= 10000 * (180 - 100) * 0.5\% \\ &= 4000 \text{ Yuan per year}\end{aligned}$$

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<sup>29</sup> Dujuan Chen, 'CASS eyes more property tax', *Global Times* (online), 28 November 2012 <<http://www.globaltimes.cn/content/747107.shtml>>.



We can find the same result regarding the impact of the pilot property tax in Chongqing.

### ***3.2 The pilot property tax and the real estate market***

The tax payers of the pilot property tax in both cities are local residents, whose houses' area is more than the minimum limitation of per capita area and with the houses' market trading price is higher than the certain standard. With these conditions, what are the effects on the real estate market across the country?

In the first half of 2012, the turnover amount of commercial houses was 3.85 million square meters in Shanghai, which is only 9.8 thousand square meters less than that in the same period last year. The average transaction price was 22,563 Yuan in the first half of 2012, 2 per cent up based on month-on-month, and 3 per cent rises year-on-year.<sup>30</sup> However the turnover amount of commercial houses (including the villa, high-scale apartments, and common apartments) was 1.79 million square meters in Chongqing in April 2012, 27% increases based on year-on-year.<sup>31</sup> The data shows that the pilot property tax has less influence on the real estate market both in Shanghai and Chongqing.

Now we pay attention to the data of the whole state in the year of 2012. The turnover data from 20 major cities of the whole country indicates that the trading volume in the first half of 2012 increased by 17 per cent and 12 per cent, compared with the same period in 2011 and 2010 respectively. Especially, the turnover amount in June 2012 was at the peak in the year of 2010. The price index of one hundred cities stopped the declining trend for the first time in June 2012, and the month-on-month price of commercial house has gradually risen in many cities.<sup>32</sup> The pilot property taxes do not contribute much to the price of commercial housing around the whole country.

### ***3.3 The impact on local revenue***

In year of 2011, the total revenue of Shanghai was 959 billion Yuan,<sup>33</sup> while revenue from the pilot property tax was 2.21 billion Yuan. The income from the pilot property

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<sup>30</sup> Shanghai Tosper: Shanghai market half yearly 2012.

<sup>31</sup> Shanghai Tosper: Chongqing market monthly April, 2012.

<sup>32</sup> China Index Academic: Research Reports of China real estate market half yearly 2012.

<sup>33</sup> 2011 年税收收入统计情况 [The Tax Report of the Year 2011] 上海市国家税务局 上海市地方税务局 Shanghai Provincial Office Shanghai Local Taxation Bureau (online), <[http://www.tax.sh.gov.cn/pub/xxgk/sstj/201110/t20111012\\_341228.html](http://www.tax.sh.gov.cn/pub/xxgk/sstj/201110/t20111012_341228.html)>.

tax only occupied 0.23% of total revenue. Meanwhile, Chongqing tax administrative collected 881 billion Yuan,<sup>34</sup> and 100 million Yuan of it was from the pilot property tax. The income from the pilot property tax only contributed to 0.011 per cent of the total year revenue.

The income from pilot property tax in both cities plays a small role in the local revenue. The limitations of the tax base and low tax rate will together contribute to the outcome in two cities.

### ***3.4 Impact on purchase side***

The tax base in Shanghai only covers flow houses with the low tax rate. This will cover more tax payers who purchase the new houses after the date issued *Provisional Methods Levied on pilot property tax*. It will lead to a reduction in the tax base because of the time limitation. The pilot property tax will solely influence new buyers in the real estate market in Shanghai. The society and public opinion survey center of Shanghai Municipal Statistics Bureau recently launched a network thematic survey on the pilot property tax<sup>35</sup>. The survey indicated that 78 per cent respondents said the pilot property tax would not affect their plans to purchase new property.

While the tax bases in Chongqing covers both the flow and the stock houses of villas and high-scale apartments, the tax rate is progressive. The taxpayers will be limited to those who purchase the villas and the high-scale apartments after the day the provisional methods are implemented in Chongqing. However, the pilot property tax will have a smaller impact on the rich who have the capability to purchase the high-scale apartments and the villas.

The adjustment of consumer behaviour will not be achieved through the implementation of the pilot property tax in Shanghai and Chongqing.

## **4. Conclusion**

We can find that the pilot property tax both in Shanghai and Chongqing have not achieved the goals as expected. The price of the real estate in China continues to soar. The income from pilot property tax is not enough to better the public house policy.

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<sup>34</sup> 关于重庆市 2011 年财政预算执行情况和 2012 年财政预算草案的报告 [Chongqing City on the implementation of the 2011 budget and the 2012 budget draft report] 重庆市财政局 Chongqing Finance Bureau (online), <<http://cqcz.cq.gov.cn/Html/1/zwgk/czyszwgk/czys/ysxx/2012-01-29/36468.html>>.

<sup>35</sup> The survey questionnaire published in the Shanghai government portal and the Shanghai Statistics. The online survey was conducted July 6, 2011 to September 4, 2011, received a total of 315 valid respondents.

The tax is ineffective, as it will not influence the policy of land premium that contributes more than one half of income of the local authority.

Looking back at the purpose of the pilot property tax, the redistributing function of property tax is disappearing, and this trend is spreading out all over the world. However, we are more concerned about the tax rate of the income tax around the world as it has been following a reduction trend, the new conflicts will more concentrate on the distribution of the share of income from value-added tax.

# A study on the improvement of supportive taxation policy for social organisations<sup>☆</sup>

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Dongsheng JIN, Zewen YUAN, Ping LING<sup>☆☆</sup>

## Abstract

China is undergoing a transition from a planned economy to a socialist market economy. During the transformation, not only has the economic system undergone significant reengineering, various public aspects of the society have also been profoundly influenced. The article studies the current state of development of China's social organisations in the economic transformation and gives an overview of the birth, development and the current state of China's taxation policy for social organisations; it then proceeds to an analysis of the effectiveness of the implementation of such policies, related problems, and a comparison between the taxation policies across different countries. Lastly, the article proposes strategies to further improve China's taxation policies for social organisation.

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<sup>☆☆</sup> Dr Dongsheng JIN is the Vice Principal and a researcher of the Institute of Taxation Science Research of the State Administration of Taxation and the Chief Economist at the School of Economics of Shandong University. Zewen YUAN and Ping LING are both postgraduate students of the School of Taxation of the Central University of Finance and Economics.

## Introduction

Social organisations are distinct from governmental organisations and business organisations in terms of their functions and roles. The existence of social organisations is supported on theoretical grounds and by practical needs. Therefore, it is imperative that all levels of the government support the healthy development of social organisations including in the form of taxation policy.

### 1. Tax policy theories for social organisations

In providing public services, governments around the world are increasingly inclined to collaborate with social organisations and to provide them with tax concessions.

#### *1.1 The necessity of taxation policies for social organisations*

##### **1.1.1 Theoretical support**

###### *Public goods theory*

In a market economy, the core responsibilities of the government are the supply of public goods and the provision of regulatory protection and necessary materials to maintain order in the market. Since social organisations can also contribute to public welfare by providing voluntary services, which alleviates the burden of the government, it is justifiable for the government to give them some financial subsidies and tax concessions. Moreover, since social organisations do not distribute dividends, their tax concessions ultimately benefit the service recipients.

###### *Base-defining theory*

Base-defining theory or income-defining theory<sup>1</sup>, proposed by Bittker & Rahdert in 1976, refuses to equate the income of a social organisation with its tax base. In terms of income, certain income forms, such as membership fees or donations, should be seen as ‘gifts’ and should not be counted towards an organisation’s gross income; in terms of cost, expenditures on non-profit activities should be counted as expenses or as equivalents of charitable donations of for-profit entities, which, in any case, are tax-deductible. Hence, from either perspective, social organisations should have zero liability in income tax. This theory explains the rationale of tax concessions for public

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<sup>1</sup> Boris I. Bittker and George K. Rahdert, ‘The Exemption of Nonprofit Organizations from the Federal Income Taxation’ (1976) 3 *Yale Law Journal*.

service organisations and provides theoretical backing for tax concessions for mutual benefit organisations.

### *Capital structure theory*

Based on the principle that social organisations cannot distribute profits or assets, Professor Hansman proposed the capital structure theory that this incapacity is the precise remedy of ‘contract failures’. In some industries<sup>2</sup>, it is often the case that the service purchasers are not the service recipients, or that the service beneficiaries are not parties to the purchase contract. It therefore follows that those who make the contract often lack the information about service quality. In these industries, social organisations tend to enjoy a higher level of trust as people would expect better services from non-profit organisations than from those motivated by profit<sup>3</sup>. Hansman further argues that income tax concessions would be able to make up for social organisations’ significant deficiencies in capital investments, and to alleviate their difficulties in raising finance due to the restrictions on financing options<sup>4</sup>.

### *Altruism theory*

Professor Rob Atkinson considers social organisations as capable of serving the public welfare at a higher level beyond the provision of public goods. Firstly, social organisations can remedy market failures and government failures more efficiently and effectively than for-profit entities and government agencies. Secondly, the existence of social organisations itself demonstrates the diversity of social values which reinforce society’s democratic freedoms. Thirdly, social organisations promote the volunteering culture and social diversity which are conducive to social innovation and improvement. Therefore, social organisations should rightly enjoy tax concessions.

Overall, various theories have attempted to rationalise tax concessions for social organisations, and have achieved this goal to a certain extent. Amongst the theories, the public goods theory and the base-defining theory are the most accepted in China.

## **1.1.2 Practical needs of economic development**

China has achieved astounding economic development since the introduction of the reform and opening up policy some 30 years ago; her GDP grew from 364 billion yuan to 51.93 trillion yuan between 1978 and 2012. While this is a significant

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2. Examples include nurseries and aged care.

3. First appeared in *The Role of Nonprofit Enterprise* by Professor Henry Hansman (1980). The ‘Contract Failure’ theory was reiterated in his 2000 article, *A Reform Agenda for the Law of Nonprofit Organizations* in Klaus Hopt & Dieter Reuter, eds., *Stiftungsrecht in Europa* 241-72 (Carl Heymanns Verlag, 2001).

4. For example, the prohibition of using their immovable assets as collaterals for their debts.



achievement, there are still difficulties ahead. To effectively tackle these difficulties, a variety of approaches may be required and social organisations are expected to be one of them. Therefore, it is increasingly important to formulate supportive policies for social organisations in light of their growing social functions.

## ***1.2 The probability of tax policies for social organisations***

Taxation has many advantages in meeting governments' needs; it is an important means employed by governments to manage social organisations; it is also a possible means for the promotion of social organisations.

### **1.2.1 Fiscal management**

Fiscal management complements market economy primarily through fulfilling public needs and remedying market failures. Fiscal policy is able to influence social organisations, which also supply public goods, and is hence a viable way to promote their development.

### **1.2.2 Functions of taxation**

Taxation has three basic functions which are fiscal, economic and supervisory in nature.<sup>5</sup> The supervisory function refers to how taxation can be a powerful tool for a nation to monitor its economic activity by restricting the economic actions of the taxpayers. While social organisations are non-profit, their operations still involve a variety of economic transactions and they are required to pay tax in many countries. However, this sometimes occurs under a different taxation scheme than that for profit-making organisations. Therefore, taxation would inevitably influence social organisations in fulfilling its functions.

### **1.2.3 Tax policy and macroeconomic regulation and control**

Taxation is inherently and closely related to a society's macroeconomic operations and is an important means for a government to conduct macroeconomic regulation and control. Social organisations run many service providing projects, which entitle them to benefit under the national policy incentives designed to promote the growth of tertiary industries.

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<sup>5</sup>汤贡亮 [Tang Gongliang], 《税收理论与政策》 [Taxation Theory and Policy] (经济科学出版社[Economic Science Publishing], 2012) 60-64.

### ***1.3 The implications of tax policy for social organisations***

Other than the provision of public goods, social organisations can also relieve the burden on or even remedy the deficiencies of governments, and limit speculations on service type products. Concessional tax policy can achieve better regulation and rationalisation of social organisations and hence greater benefits for social welfare. More specifically, tax policy for social organisations benefits society through: 1) wealth redistribution; 2) increasing supply of public goods and supplementing governmental inputs; 3) promoting good citizenship and a harmonious society; 4) creating jobs and attracting skilled labour; 5) strengthening the transparency and effectiveness of the use of public resources; 6) raising social awareness of disadvantaged groups.

## **2 An overview of China's current tax policy for social organisations**

Tax policy is an important means to guiding and regulating the development of social organisations and tax incentives are an important means to safeguard their fast growth.

### ***2.1 The history of tax policy for social organisations***

Social organisations have been evolving continuously; hence China progressively formulated a series of concessional tax policies in accordance with the circumstances in each of the developmental stages of the organisations. The key stages are as follows:

#### *(1) Initiation stage*

In the late 1980s, certain forms of social organisations, such as foundations and social groups, were recognized legally. However, there was no corresponding tax concession policy.<sup>6</sup>

#### *(2) Development stage*

In the 1990s, social organisations started to enjoy income tax concessions. The tax policy at this stage had two features: firstly, it allowed donations by individual or corporate to charities to be income tax-deductible (for the donors); secondly, it for the first time allowed income tax exemptions on certain eligible forms of income.

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<sup>6</sup> 金锦萍 [Jin Jinping], 《社会组织财税制度》[*Taxation System of Social Organisations*] (中国社会出版社 [Chinese Society Publishing], 2011) 14-19.

### *(3) Perfecting stage*

Since the 21<sup>st</sup> Century, the concessional tax policy has undergone a new round of review, taking account of the current circumstances of China's social organisations and international experiences. Firstly, the income tax concessions were reiterated for social organisations in areas such as scientific research and medical services. Secondly, the new corporate income tax law implemented in 2008 introduced major changes with respect to social organisations. This included the express provision for tax exemptions for the income of certain eligible non-profit organisations as well as tax concessions for corporations donating to non-profit organisations.

Another recent development in the legal scheme is the *Opinions on deepening the reform of income distribution* released by the National Development and Reform Commission, the Ministry of Finance and the Ministry of Human Resources and Social Security. Clause 21 provides aims to expand and develop social charity, actively foster charitable organisations, simplify the approval procedures for charitable organisations, encourage businesses, individuals and social organisations with means to contribute to public welfare by building hospitals, schools, age care and so forth, implement and improve the concessional tax policies on charitable donations, allow the amount of corporate donations exceeding 12% of the business's annual profit to be carried-over and deducted, and to strengthen the supervision and regulation of charitable organisations.<sup>7</sup> It is foreseeable that the introduction of this new policy is a significant thrust for the future development of social organisations and a step closer to a more mature legal framework for the industry and a more equitable society.

## ***2. Current tax policy and regulations for social organisations***

China's current tax concession policy for social organisations is rather complex; this article splits its analysis according to the different targets of the policy: social organisations, businesses and individuals.<sup>7</sup>

### **2.2.1 The legal framework for tax concessions directly applicable to social organisations**

For social organisations, China's tax laws provide for a variety of concessional measures, covering almost all types of tax applicable to non-profit organisations. The main form of concession is the reduction or exemption of tax on the income and other

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<sup>7</sup> 靳东升, 卡拉·西蒙 [Jin Dongsheng and Karla W. Simon], 《社会组织适用税法研究》 [Research on applicable taxation on Social Organisation] (世界银行委托课题[World Bank commissioned research topic] 2004).

assets or activities of social organisations. The relevant legal frameworks currently in force include:

*(1) Tax concessions regarding corporate income tax*

First, according to section 26(4) of the *Corporate Income Taxation Act of People's Republic of China*, incomes of eligible non-profit organisations are tax exempt and do not give rise to any corporate tax liability. Secondly, in regards to non-profit scientific research bodies, *An Announcement on the tax policy for non-profit scientific research institutions* released by the Ministry of Finance and the State Administration of Taxation on 9 February 2001 states that incomes derived from developing and selling technology as well as related technological consulting and other services are exempt from corporate income tax under relevant regulations. Thirdly, in regards to social security foundations (managed by a Board or investment managers), the interest income from bank savings and any income derived from the equity market (including capital gains from trading investment funds, shares and bonds; dividends and bonuses from investment funds and shares; interests from bonds and so on) are currently tax exempt.

*(2) Tax concessions regarding turnover tax*

There are four main types of turnover tax: value added tax (VAT), sales tax, consumption tax and custom. The relevant legal frameworks for turnover taxes include the following:

First, relevant VAT exemptions include those for: imported equipment to be used directly for scientific research, experiment and education; specialised items for disabled individuals such as prosthetics, wheel chairs and orthotic devices directly imported by disability organisations; medical agents produced and used by non-profit medical organisations; and blood supplied to medical organisations for clinical use by blood stations and so on. In addition, equipment and other supplies donated by foreign governments and international organisations are also exempt from VAT.

Secondly, the relevant tax exemption of sales tax include those for: services provided by nurseries, child care centers, aged care centers and disability care facilities; medical services provided by hospitals and other medical organisations; education services provided by schools and other educational institutions and the services provided by students on work-study programs; training services in relation to mechanised agricultural practices, pest control and agricultural insurance as well as services related to agricultural breeding and disease control; cultural services provided by memorials, museums, cultural centres, galleries, libraries, and other protected historical and cultural sites as well as religious bodies; technology research and development and related consulting and other services conducted by non-profit scientific organisations; and the interest income from bank savings and any income derived from the equity market by social security funds.

Thirdly, there are also exemptions from custom according to *Customs for Exports and Imports Regulation of People's Republic of China* with respect to: supplies donated by foreign governments and international organisations; imported equipment to be used directly for scientific research, experiment and education; and specialised items for disabled individuals directly imported by disability organisations. In addition, according to the *Charitable Donations Act of People's Republic of China*, overseas goods and funds donated to charitable organisations or non-profit social organisations to be used for charitable purposes are subject to tax concession or exemption in terms of import customs and the VAT at the importing phase.

### *(3) Tax concessions under the property and behavioral tax laws*

Tax concessions under the tax law related to properties and conducts mainly come in the form of lists of the specific eligible properties and conducts.

First, China has relatively favourable concessional real property tax policy for social organisations. According to *Provisional Regulation on Real Property Taxation of People's Republic of China*, the following properties are tax exempt: 1) real properties of government agencies, people's groups and the military for their own use; 2) real properties of entities funded by the national Ministry of Finance for their own use; 3) real properties of religious temples, parks and famous historical and cultural sites for their own use; 4) real properties of individuals for non-commercial use and 5) other real properties as approved by the Ministry of Finance.

Secondly, with respect to land use tax in cities and towns, the *Provisional Regulations of the People's Republic of China Governing Land Use Tax in Cities and Towns* provides for tax exemption for the following lands: 1) land of government agencies, people's groups and the military for their own use; 2) land of entities funded by the national Ministry of Finance for their own use; 3) land of religious temples, parks and famous historical and cultural sites for their own use; 4) public areas such as public streets, public concourses and city green belts; 5) productive land directly used for agriculture, forestry, farming and aquaculture; 6) land to be renovated under the 'mountain-opening and sea-filling' project and renovated former waste land are exempt from the land use tax for 5 to 10 years starting from the first month of use; 7) land used for energy, transportation and water infrastructures and other land as approved by the Ministry of Finance.

Thirdly, there are also many other tax concessions in relation to real property tax and land use tax specifically targeting certain social organisations. For example, real properties and land of charitable and non-profit aged care facilities established by the government or governmental businesses, social groups, individuals and other social forces for their own use are exempt from both taxes. Similarly exempt under both taxes include the real properties and land of schools, nurseries and child care centres sponsored by the government or private businesses; of non-profit scientific research

bodies; of non-profit medical organisations and of disease control, women's and children's health care and other health facilities. For profit-making medical organisations, the incomes used directly to improve the hygienic and medical conditions, and their real properties and land for their own use are exempt from both taxes for a period of 3 years starting from the date of registration for practice.

Fourthly, the following organisations are exempt from vehicle and vessel tax with respect to vehicles and vessels for their own use: charitable and non-profit aged care facilities established by the government or governmental businesses, social groups, individuals and other social forces. Non-profit medical institutions; profit-making medical organisations whose incomes are used directly to improve hygienic and medical conditions, are also exempt for a period of 3 years starting from the date of registration for practice.

Fifthly, in terms of cultivated land occupation tax, the *Provisional Regulations of the People's Republic of China on Cultivated Land Occupation Tax* provides that cultivated land occupied by schools, child care, aged care and hospitals are tax exempt. The *Notice of the Ministry of Finance and the State Administration of Taxation on Education Tax Policies* also provides for tax exemption for schools and nurseries' cultivated land. The scope of eligible land includes education buildings, laboratories, sports fields, libraries, offices and cafeterias of full time primary, secondary and tertiary educational institutions (including those established by government departments and businesses). Cultivated land occupied for purposes other than agricultural production is not tax exempt. Vocational night schools, training centres and correspondence schools are also not tax exempt. In addition, if a previously eligible land is used for non-eligible purposes, it ceases to be tax exempt from the date of the change of use.

Sixthly, in terms of contract tax, the *Regulations of The People's Republic Of China On Deed Tax* provides that buildings and land under the title of government agencies, government-controlled institutions, social groups and military institutions, used for work, educational, medical, scientific research and military facilities, are tax exempt. Also, if the purpose of the building or land is changed and becomes non-eligible for tax exemption, the relevant taxpayer is liable to pay the previously exempted tax. In addition, the *Notice of the Ministry of Finance and the State Administration of Taxation on Education Tax Policies* provides for tax exemption with respect to the buildings and land used for educational purposes under the title of educational institutions that are approved and certified by education administration departments or labour administration departments at the county level and above; these can be run by private or public institutions, social groups, individuals or other social forces using non-government funds and are open to the public.



## 2.2.2 Tax concessions for corporate donations to social organisations

According to the *Enterprise Income Tax Law of the People's Republic of China*, the amount of charitable expenditures of a business within 12% of its annual profit is tax deductible in the calculation of income tax.

## 2.2.3 Tax concessions for individual's donations to social organisations

According to Section 6 of *Individual Income Tax Law of the People's Republic of China*, the amount donated by an individual from his/her income to educational and other charitable causes can be deducted from his/her tax liabilities; the current provisions also allow that 30% of the donated amount be deducted in the calculation of individual income tax.

## 2.2.4 Other tax concessions

### (1) Stamp duty

The *Provisional Rules of the People's Republic of China on Stamp Duty* provides that, documents related to assets donated to the government, social security institutions and schools are exempt from stamp duty. Additional tax exemptions are created to encourage donations to support the disaster relief and rebuild work in Wenchuan, Yushu and Zhouqu, which apply to the documents related to assets or goods directly donated or donated through charitable social organisations or the governments at county level and above.

### (2) Land appreciation tax

In the relevant provisions on land appreciation tax, the acquisition of income from the transfer of title of state-owned land, its above-ground buildings and attached objects only refers to the sale or other means of dealing the title in exchange for a consideration. In other words, gratuitous transfers of land title such inheritance and bestowal are not included. Therefore, the donation of ownership of property or right of usage of land is tax exempt. The scope of 'bestowal' was clarified by item 2 in the *Notice of the Ministry of Finance and the State Administration of Taxation on Some Specific Issues on Land Capital Gain Tax* released in 1995, which includes the giving of property land use rights by the right holder to education, civil and other social causes via non-profit social organisations or governmental bodies in China. Eligible non-profit social organisations include the China Youth Development Foundation, the Hope Project Fund, the Song Qingling Foundation, the Disaster Reduction Commission, the Red Cross Society of China, the China Disabled Persons' Federation, the China Ageing Development Foundation, the Council for the Promotion of Construction of in the Old Revolutionary Areas and other non-profit charitable organisations approved by civil administration departments.

### *2.3 Summary of the tax policy for social organisations*

Overall, China's tax concession policy covers a wide range of tax categories and includes a rich pool of provisions. The tax concession policy applies substantially all of the types related to social organisations, such as income tax, turnover tax and property tax. In terms of the subject of tax concession, the policy covers the social organisations directly as well as the benefactors. These tax concessions render tremendous support for the development of social organisations. Social organisations have experienced rapid proliferation since the 1970s, numbering few thousand before the economic reform and growing to nearly a million currently. They have also experienced ascendance in power and influence, making significant contributions to the sustained development of China's society. Accordingly, supportive tax concession policy for the social organisations is also becoming increasingly important.

On the other hand, despite the multitude of tax concessions for social organisations, the policies and provisions are scattered and there lacks a unified regulatory framework for the taxation policies and concessions for social organisations. As China's economy and society develops, social organisations become increasingly important and the society's needs for social organisations are expected to diversify beyond the traditional areas such as medical care, education, poverty relief, social security and welfare to aged care, traditional cultural promotions, mental health services and so on. Therefore, the development of social organisations would require the support of a more comprehensive taxation system. This then requires a deeper and wider understanding of social organisations and active initiatives to the provision of concessional tax policies.

As China's taxation system is still developing and is currently under reform, the majority of tax concession policies are either being applied too narrowly or have burdensome thresholds, which prevent many eligible organisations and donations from the benefits of the concession. There are further practical difficulties such as those related to: 1) the strength of tax concession policy; 2) the consistency of the different tax concessions; 3) the ratio of tax reduction; 4) the scope of donations; 5) the shortfalls of sales tax system; 6) the approval process for the eligibility for tax concessions; 7) the supervision of the execution of tax concessions and 8) the system of documentation management.

## **3. International experiences and insight on taxation policy on social organisations**

Social organisations in Western developed countries have been long established. Most developed countries have more mature market economic and legal systems as well as a better social trust system and a more comprehensive taxation policy on social

organisation. Even in developing countries, certain taxation discounts are given to social organisation in order to encourage the development of social organisations.

### ***3.1 Current taxation policy on social organisations in various countries***

Comparisons to the discount policy on taxation of social organisations are in the USA, Australia (federal states), the United Kingdom (unitary state), Germany, Japan (states in mixed system) and the developing country India will now be surveyed.

#### **3.1.1 The USA**

##### *Taxation policy on social organisations*

American social organisations are set up in accordance to state laws, but the registration of the social organisation has to be made to the taxation office at the federal level. Government certified social organisations can usually be regarded as companies that are exempted from tax, where federal income tax can be exempted.

##### *Taxation policy on donors*

There are limitations on the percentage of exemption on taxable income in a taxation year. Often, the exemption of an individual's charity donation cannot exceed 50% of its overall net income in a taxation year, while a company cannot exceed 10%.

#### **3.1.2 The UK**

##### *Taxation policy on social organisations*

Taxation of social organisations depends on whether such organisation can be classified as a charity or not<sup>8</sup>. Companies or individuals that serve as a charity can be entitled to special discount on tax. If the social organisation is not a charity, taxation policies of normal companies would apply.

##### *Taxation policy on donors*

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<sup>8</sup> In *Inland Revenue v Pemsel* [1891] 3 Tax Cas 53, the House of Lords considered that "'Charitable purpose' must have a wide definition, including the four areas affirmed by the common law: poverty reduction, education improvement, religious development and other charitable purpose beneficial to the society.

Only donation to a charitable social organisation can receive taxation discount, see Table 1:

Type of donor Donation method	Company	Individual
Monetary donation	Full amount can be deducted from taxable income	The amount of donation will be accessed by a lower income tax scale, and charity organisations can obtain this tax return from the national taxation office <sup>9</sup>
Goods donation <sup>10</sup>	Full amount can be deducted from taxable income	Full amount can be deducted from taxable income

<sup>9</sup> For example, if an individual donated 780 pounds to a charity, their donation will be accessed on the amount of 1000 pounds on the income tax scale. Using the present basic tax rate of 22%, such a donor would only need to pay 220 pounds of tax. If the donors are on the basic taxation scale, then there would not be any further taxation discount. If the donor is on a higher tax scale (40%), then with 1000 pounds of taxable income, he needs to pay 40% of 1000 pounds, thus 400 pounds. However, if the 1000 pounds is treated as a donation, then the payable tax would only be 220 pounds. Hence, the tax has been reduced by 180 pounds. Originally, donations are required to be taxed on the basic tax scale. However, now it is required to return the excess of income and capital gain tax payable of the donor over the amount of donation as part of taxation received charity. To a certain extent, the donor has received a taxation discount of 10%, while those exempted from paying tax would not receive any taxation discount. However, the HM Revenue and Custom pointed out those tax payers that are exempted from tax can require charities to return those tax returns of donors that are obtained by the charity.

In 2000, the Financial Act ruled that before applying for tax return, charities must provide signed declarations of the goods sponsored by individual donors. Clear requirements on the details of the content of the declaration are set in the guideline of receiving donations from the HM Revenue and Custom. Each section of the declaration would be accessed in order to obtain tax return. In an attachment of the guideline from the HM Revenue and Custom, a template of the declaration form with basic content is provided. Charities can design their own declaration forms, and approval is not needed from the HM Revenue and Custom. Yet in order to fulfill the requirement, the form has to be approved by the Financial Intermediaries and Claims Office.

<sup>10</sup> In 2000, the *Financial Act* has integrated different acts concerning the donation of goods in the past, and has also set the limit on the benefit received by the donors. If such a limit is exceeded, the donation cannot be considered as a form of goods donation to charity.

Stocks and bonds donation <sup>11</sup>	Full amount can be deducted from taxable income	Full amount can be deducted from taxable income
Commercial sponsorship <sup>12</sup>	Full amount can be deducted from taxable income	Full amount can be deducted from taxable income
Payroll donation <sup>13</sup>		Reasonable deduction of the employee's taxation income

Table 1: Taxation policy on donation to social organisations in the United Kingdom

(Source: 靳东升，卡拉·西蒙 [Jin Dongsheng and Karla W. Simon], 《社会组织适用税法研究》 [Research on applicable taxation on Social Organisation] (世界银行委托课题[World Bank commissioned research topic] 2004) summarised by 王名，李勇，黄浩明 [Wang Ming, Li Yong and Huang Haoming], 《英国非营利组织》 [NPOs in the UK] (社会科学文献出版社 [Social Science Document Publishing], 2009))

With respect to inheritance tax on personal donation, if the donor does not benefit from the charity donation, then the normal inheritance tax applies (*Inheritance Tax Act sec. 23*). Furthermore, donations to public services of the country or to land, buildings, arts, and other properties that contribute to the benefit of the public will be exempted from inheritance tax.

<sup>11</sup> Donations of stocks or bonds from Individuals or companies are regulated by *Financial Act (2000)* Section 43

<sup>12</sup> If the sponsorship is of a commercial purpose, that is to advertise the companies' products or names, and the amount of sponsorship is of a commercial price, then such sponsorship can be considered a reasonable expenditure. No matter the sponsorship is for a charity event or not, the sponsorship can be deducted from the cost. If the sponsorship exceeded the amount of the commercial price of the advertisement, then the exceeded amount can be considered as donation to charity.

<sup>13</sup> Payroll donation initiated in 1986 as a method of encouraging employees in charities through a plan set up by the employer. Payroll donation does not enjoy taxation discount. Under payroll donation, employer will deduct the payroll of the employees as donation, and donate the money to charity selected by the employees through agents provided by the HM Revenue and Custom.

### 3.1.3 Germany

#### *Taxation policy on social organisations*

According to taxation legislation in Germany, only companies within Germany and under the regulation of the German *Company Tax Act* can be eligible to request tax discounts. Depending on the different type of tax and the different subject of the tax, the tax discount is illustrated in Table 2.

<b>Association/Fund/Cooperative/Private limited company/Public limited company (Engaged in commercial sales and activities and not involving in any productive activities)</b>			
Non-company <sup>14</sup>		Companies	
Non-productive: monetary donation, donation of goods, subsidy	Property management <sup>15</sup> : interest, rental income, royalty payment	Profiting activities:	
		Purpose related operational income <sup>16</sup>	Purpose unrelated operational income <sup>17</sup>
Eligible of tax discount		Illegible of tax discount <sup>18</sup>	

14 An entity that enjoys tax discount cannot charge any services provided. Donation and subsidy received by the entity from its cooperative member are only used to cover production cost of the contract.

15 Interest, rent received leasing of property and income from royalty payment received by the entity would enjoy tax discount. In terms of value added tax, operations of properties of entity that enjoys tax discount are regarded as corporate activities. Thus, the value added tax rate on property income on entity that enjoys tax discount has decreased to 7%.

16 Section 65 of the *Accounting Acts* provides the definition of purposed related operation. Profiting activities of the entity enjoying tax discount must fulfill the following criteria in order to be regarded as purpose related operation: 1. Such operations have to support and aid the listed goals of the company's article; 2 Such operations have to be necessary for achieving the goal in the company's article; 3. Only under unavailable circumstances, competition with other entities that are not having tax discount would be allowed in order to achieve the company's non-profiting goal. In the purpose related operations, companies eligible for tax discount are exempted from company tax and commercial trade income tax, and the value added tax rate has been lowered .Some purpose related operations are exempted from value added tax (including education, social welfare united organisations or other member organisations, given that its service charges are lower than entities that are not enjoying tax discount).

17 Have the same taxation requirement as an entity not enjoying tax discount

Table 2 Taxation discount of social organisation in Germany

(Source: 靳东升，卡拉·西蒙 [Jin Dongsheng and Karla W. Simon], 《社会组织适用税法研究》 [*Research on applicable taxation on Social Organisation*] (世界银行委托课题[World Bank commissioned research topic] 2004) )

After a social organisation is registered, local courts will announce a list of the social organisations eligible to receive tax discounts; the income from their operation will also be exempted from tax. If a social organization violates the related regulations by engaging in activities forbidden by the regulations, its registration will be cancelled along with its eligibility to be exempted from tax.

*Taxation policy on donors*

In the German income tax system, the deduction of taxable income from donation is limited: see Table 3.

<b>Type of donor</b>  <b>Purpose of donation</b>	<b>Company</b>	<b>Individual</b>
Donation with church related, religious, scientific, charitable purposes and donations that are beneficial to and supported by the society	Can deduct a maximum of 5% from the total tax payable, or a maximum deduction of 2% from the overall revenue <sup>19</sup>	Can be fully deducted

<sup>18</sup> Two points to note: first, if taxable income from profiting activities is lower than 30678 Euro, then company tax and commercial trade income tax are exempted; second, German law allows associations, cooperatives and funds to deduct 3835 Euro from the tax payable from company tax and commercial trade income tax.

<sup>19</sup> For donations with specially supported purpose to charities, science, culture and arts, a maximum of 5% of the total tax payable can be deducted.



Donation to funds that enjoy tax discount	Can deduct a maximum of 20450 Euro from the total tax payable	Can deduct a maximum of 20450 Euro from the total tax payable <sup>20</sup>
Donation as capital to set up a fund	Can be spread out for 7 years for part that is not exceeding 307000 Euro	Can be spread out for 7 years for part that is not exceeding 307000 Euro

Table 3: Tax deductible from donation in Germany

(Source: 靳东升，卡拉·西蒙 [Jin Dongsheng and Karla W. Simon], 《社会组织适用税法研究》 [Research on applicable taxation on Social Organisation] (世界银行委托课题[World Bank commissioned research topic] 2004) )

### 3.1.4 Australia

The purpose of the taxation policy in Australia is to focus on the quality of the tax system rather than its format. Tax discounts are aimed at helping the establishment and development of non-profit organisations. This achieves a better result in its taxation policy.

#### *Discount on company tax*

Charities that are on the government record do not need to pay federal company income tax. These discounts also include non-profit organisations such as sports clubs and social service organisations.

#### *Discount Individual income tax*

Under normal circumstances, volunteers do not have to be taxed on the salaries and benefits received as working volunteers, and organisations are not required to pay taxes on the expenditure spent on volunteers' salaries. Moreover, volunteers usually cannot apply for tax deductions.

#### *Deduction from donation*

In Australia, donations by taxpayers to charities can be fully deducted. However, only companies that are deductible gift recipients (DGRs) can receive donations and only

<sup>20</sup> For individual donations that exceed 25565 Euro, such donation can be spread out to 7 years for tax calculation.

donations to DGRs allow taxpayers to deduct their donations from taxable income. DGR status must be applied for; they are issued by the Australian Taxation Office and allow its recipients to enjoy tax discounts.

#### *Discount on goods and services tax*

Registered charities can receive discount on goods and services tax. Most goods and services suppliers for Australian consumption have a 10% tax discount. In addition, if a charity has registered for goods and services tax, it can resell second hand goods donated by other parties and be exempted from the goods and services tax.

#### *Other tax discounts*

Another tax discount is applicable on the fringe benefit tax. Fringe benefit tax charges companies that give non-salary benefits to its employees. Public charities and health-promoting charities are exempted from paying the fringe benefit tax. Yet there is a limit to how much fringe benefit tax can be exempted. Charity groups can have a fringe benefit tax return, which helps reduce the tax of charities. The amount of fringe benefit tax return is 48% of the total amount of fringe benefit tax, and there is also a maximum limit as to how much can be returned. Charity funds cannot apply for the fringe benefit tax return.

### **3.1.5 Japan**

#### *Taxation policy on social organisations*

There are ten different forms of legal status when social organisations register as a legal entity<sup>21</sup>. According to the Japanese *Legal Entity Tax Act*, the income of organisations registered as a legal entity must be subjected to legal entity tax. Yet on a practical level, there are different taxation policies on different types of registered legal entity. See Table 4.

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<sup>21</sup>刘植才 [Liu Zhicai], 《我国社会组织税务筹划研究》 [Research on the planning of taxation on social organization] (天津财经大学 [Tianjin University of Finance and Economics], 2007). Japanese social organisations are divided into 8 categories: Charity entity, Social welfare entity, School entity, Medical entity, Special legal personnel, Charity trust fund, combined entity, and citizen social group.

Types of legal entity	Direct tax	Indirect tax
Charity entity <sup>22</sup>	National tax: Exemption from legal entity tax (except from income earned by profiting activities <sup>23</sup> ): inheritance tax, gift tax. Income from saving interest, dividend, donations, accounts payable, subsidy and etc. are exempted from tax.  Local tax: Exemption from utility tax, fixed property tax <sup>24</sup>	National tax: non-chargeable consumption tax is exempted. Exemption in paying registration tax and land tax.  Local tax: local non chargeable consumption tax, city planning tax, profit tax, property purchase tax and special land tax are exempted.
Non Civil Act organisations <sup>25</sup>	Have similar benefit as public welfare entities, but with different regulations <sup>26</sup>	No exemption
Social organization entity <sup>27</sup>	No exemption	No exemption

22 Legal entity established in accordance to the *Civil Act (1896)*, including association and funds.

23 According to Section 4 and 7 of Japanese *Company Income Tax Act*, public welfare entity is exempted from company income tax. Yet, 33 listed profiting activities would be taxed on 27% (In comparison, profiting company is taxed on 37.5%). Moreover, charity entities can also special tax reduction. When money is used as expanding the core activities of charity, it is allowed to have 20% of tax reduction when conducting profiting activities.

24 王名, 陈雷 [Wang Ming and Chen Lei], 新企业所得税法与我国社会组织发展 [Income tax of new companies and the development of social organisation in China] (2007) 7 《中国行政管理》 [Chinese Public Administration].

25 For example: social welfare entity, private school entity and religious entity.

26 For example, if income of these organisations is used for charity activities, then their taxable income from profiting activities can at most be reduced by 50% or 2 million Yen. Medical entities cannot enjoy the same taxation discount as a charity entity and they are treated as profiting companies and are taxed on the company income tax unless they are paid with social security. In such situation, special medical entity applies. Special medical entities are approved by the Ministry of Finance that specially provides charitable activities. The tax rate of the special medical entities is 27%, and some tax exemption applies (such as the exemption of property tax when purchasing nursing training facilities).

27 Used after legislation passed in 1998, while amended in 2002. Simplified the registration process as it only requires the social organisation to be accredited by the Economic Planning Department. After the Kobe

Table 4 Tax discount of social organisations in Japan

(Source: 靳东升，卡拉·西蒙 [Jin Dongsheng and Karla W. Simon], 《社会组织适用税法研究》 [*Research on applicable taxation on Social Organisation*] (世界银行委托课题[World Bank commissioned research topic] 2004) , summarised by 雨宫高子 [Amenomiya Takako], 《日本社会组织的免税制度》 [*Japanese tax exemption policy for social organization*])

Inheritance tax is payable but can be exempted if the inheritance is for the purpose of religion, charity, academic and other public services.

#### *Taxation policy on donors*

The legislation divides donations into two main categories: special donation and normal donation. Special donations are those donated to the central and local government, or to the Ministry of the Treasury, or to special public welfare improvement organisations<sup>28</sup>. All other donations are seen as normal donations. Donations related to social organisations are those given to special public welfare improvement organisations within special donations and normal donations. Depending on the type of donor one is, the tax application would differ. See Table 5.

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Earthquake, new legislation is implemented and more social welfare organizations have registered. One of the important questions discussed in Japan is whether to demolish the charity entity to simplify the registration process.

<sup>28</sup>Special public welfare improvement organisations are non-profit organization such as charities. This type of organization needs to be approved by the Ministry of the Treasury (of Company Taxation Act Section 37, subsection 3, paragraph 3 and Income Tax Act Section 78, subsection 2, paragraph 3). Organisations that are in this category are bounded by Section 217 of the Income Tax Act and Section 77 of the Company Taxation Act. Until 1 April 1995, 34 types of organisations, including organisations on scientific research, educational organisations, social welfare organisations, and criminal rehabilitation organization, were appointed as special public welfare improvement organisations. Although the number of organisations is not high, organisations that can be included as such are expanding. In the 26000 public organisation acknowledged in Section 34 of Civil Code, only 880 of them were special public welfare improvement organisations, consist of only 3.4%. Until 1 April 1996, there were 17000 special public welfare improvement organisations , most of them were social welfare organisations (14830) and educational organsations (1125).

As required by the Section 34 of the Civil Code, public organisations would be approved to be special public welfare improvement organisations for 2 years and it can be extended. In certain situations, the extension can be up to 5 years. If on company donates to a special public welfare improvement organisation, then that company can have tax discount up to net loss of 2 times. Individuals can enjoy 25% reduction in income tax, with a reduction as low as 10000 Yen. Yet, only very few organsations that accept donations would allow a reduction in tax.

	Company	Individual
Donation to special public welfare improvement organisations	Reduction in tax is calculated by a specific formula (1.25% of income plus 0.125% on taxed income)	For donation above 10000 Yen, there is a 25% reduction in personal income tax
Normal Donation	Tax reduction from normal donation from organisation <sup>29</sup> is calculated as follow: (Amount of capital $\times 2.5/1000$ + Amount of income $\times 2.5/100$ ) $\times 1/2$	For donation above 10000 Yen, there is a 25% reduction in personal income tax

Table 5: Taxation policy on different types of donors in Japan

(Source: 靳东升, 卡拉·西蒙 [Jin Dongsheng and Karla W. Simon], 《社会组织适用税法研究》 [*Research on applicable taxation on Social Organisation*] (世界银行委托课题[World Bank commissioned research topic] 2004) , summarised by 雨宫高子 [Amenomiya Takako], 《日本社会组织的免税制度》 [*Japanese tax exemption policy for social organization*])

Moreover, for inheritance donated to specific public welfare improvement entities, there are certain exemptions of inheritance tax<sup>30</sup>.

### 3.1.6 India

#### *Taxation policy on social organisations*

According to the *Income Tax Act*, if commercial income<sup>31</sup> has resulted from the process of achieving goals of social organisations, and there exists a separate account for such activities, then the profit from commercial activities can be exempted from

<sup>29</sup> Organisational donations are donations that donations by companies to social organisations that are not related to their commercial activities. It is not limited to the purpose of serving the public, but can also include donation political fund raising.

<sup>30</sup> 雨宫高子 [Amenomiya Takako], 《日本社会组织的免税制度》 [Japanese tax exemption policy for social organization].

<sup>31</sup> Profit from rent of housing and churches would not be counted as commercial income no matter it is rented for public or private purposes

tax. In terms of financial income, if no less than 85% of income is used for charitable purposes, then the financial income from properties holding by charities and religious organisations can be exempted from tax. In terms of the reduction of value added tax, some goods and services of the social organisations can enjoy tax reduction.

#### *Taxation policy on donors*

According to Section 80G of the *Income Tax Act*, certain types of organisation<sup>32</sup> are qualified to enjoy tax reductions. With the 80G certificate, donations to social organisations can have donations exempted from tax. Many of the organisations listed under section 80G are government related, in which case donors can have some of their donation 100% exempted from tax. Donations to non-governmental charities also usually enjoy a 50% tax exemption. The total amount of tax exempted cannot be more than 10% of the annual income of the donor. Also, donations must be not less than 250 Rupee and no more than 500,000 Rupees, or no more than 10% of the total annual income of the donor<sup>33</sup>.

### ***3.2 Summary on the benefits from international comparison***

Through the comparison with taxation policies with respect to social organisations, donation policies and the taxation management systems of different countries as well as considerations of the effectiveness of such policies within the actual economic situations of these countries, the pros and cons of the different systems can be summarised.

#### **3.2.1 Recognition of the eligibility of tax exemption**

In general, social organisations have to be registered as a legal organisation in order to enjoy tax exemption.

#### **3.2.2 Taxation policy on social organisation**

Tax discounts on social organisation mainly involve income tax, value added tax, operational tax, property tax, land use tax and inheritance tax. The most important tax type concerned is income tax.

#### **3.2.3 Taxation on donations**

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<sup>32</sup> Mainly includes social groups, charity funds and companies listed under Section 25 of the Income Tax Act

<sup>33</sup>国家税务总局政策法规司课题组 [Office of Policy and Rules of National Taxation Bureau Policy], 《社会组织税收制度研究》 [Research on taxation on social organisations].

Countries mostly have supportive policies for donors. The four main taxation discounts for donors are tax reduction, tax credit, beneficial policies and specific policies.

#### **4. Suggestions on the improvement of taxation policy to encourage development of social organisations**

Regarding the development of social organisations in China, progressive improvements on the existing taxation policies should be made to encourage the development of social organisations.

##### ***4.1 Guiding thoughts and basic principle***

###### **4.1.1 Guiding thoughts**

Based on the Deng Xiaoping Theory, theory of the Three Represents<sup>34</sup> and the theory of Scientific Outlook on Development,<sup>35</sup> a taxation system that aimed for structural optimisation and improvement on social equality would be implemented, as required by the report of the 18<sup>th</sup> National Congress of the Communist Party of China. Taxation discounts should be improved and taxation collection methods simplified in order to raise the effectiveness of the tax discount policies. This would facilitate the aim of taxation in social regulation and encourage the development of social organisations.

###### **4.1.2 Basic principle**

Principles of progressive development should be followed, which includes implementing easier policy before harder policy, unifying standards, separating treatment of different social groups and benefiting the general public.

##### **4.2 Implementing tax discount on social organisations and improving the management of social organisations**

Firstly, the problem of implementation of taxation discount on social organisations should be solved whilst simultaneously improving the taxation management of social organisations.

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<sup>34</sup> *Three Represents* are a socio-political ideology credited to General Secretary Jiang Zemin which became a guiding ideology of the Communist Party of China at its Sixteenth Party Congress in 2002.

<sup>35</sup> Credit for the theory is given to former Chinese leader Hu Jintao and his administration, who was in power from 2002 to 2013.



#### **4.2.1 Building an independent system of certification of tax exempted organisations**

Based on the existing management of non-profit organisations, a certification system of the eligible social organisations based around the government's taxation departments should be set up. Promotion on general taxation registration should be implemented; the list of certified social organisations should also be published to allow public scrutiny.

#### **4.2.2 Separation of the management of different types of taxation discounts on social organisations and the simplification of the process of obtaining discount**

Depending on the credibility of the tax payer, management of their taxes will be separated into different levels. If organisations are found to be acting against requirements in participating in profiting activities, then the organisations will lose their eligibility to tax discount and would be publicly announced. This would allow only legitimate social organisations to enjoy tax discounts and improve the effectiveness of the taxation discount policy.

#### **4.2.3 Setting up communication mechanisms between the different departments that manage social organisations**

By setting up a communication mechanism between the different departments that manage social organisations, regular communications will be encouraged to ensure that the taxation department has complete information on the registration, changes and deregistration of social organisations. This would allow better management on the taxation of social organisations<sup>36</sup>.

### ***4.3 Expansion of the existing tax discount policy***

Taxation discount policy should be adjusted by increasing necessary tax discounts, regulating existing tax discounts and abolishing inefficient tax discounts, which are often overcomplicated to the extent of causing negative impacts. The simplification of taxation management by dismissing such complicated procedures and declaration requirements will allow the expansion of the range of tax discounts and avenues for accepting donation.

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<sup>36</sup>邵金荣[Zhao Jinrong], 《公益组织认定与社会公平正义》[*Recognition of Social Organisation and the Equality and Justice of Society*] (中国社会出版社 [Chinese Social Publishing], 2010) 261-262.

#### *4.4 Scientific management of social organisation, emphasising on quality of taxation discounts*

By further exploring ways of improving the effectiveness and the quality of tax discounts, a more systematic approach to implementing efficient taxation discount policies will be achieved.

**4.1.1** Under a more simplistic system of tax exemption, all taxes would be exempted for charities that are certified, with only partial exemption given to other social organisations. Strictly separating profiting activities from non-profiting activities can only allow only non-profiting activities to be encouraged by tax discounts. This requires social organisations to separate their commercial and non-commercial activities and divide their income into commercially related and unrelated parts.

#### **4.1.2 Transition from starting point management to end point management.**

The existing system for initial certification should be transformed into a monitoring system that would require an annual examination of a social organisation's qualification and eligibility. To support the monitoring system, information would be published under a compulsory framework where social organisations are required to provide information on their financial situation, internal structure and operation so that they can be scrutinised by the public.

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Organisation: Scientific Research department of the National Taxation Bureau and School of Taxation, Central University of Finance and Economics

Organisation address: 5, West Yang Fang Dian Road, Hai Dian District, Beijing

Post code: 100038

Phone: 010-63417403

Email: [jds6666@yahoo.com.cn](mailto:jds6666@yahoo.com.cn)

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## Empirical Study on the Income Redistributive effect of Personal Income Tax in China

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Ying WAN <sup>☆</sup>

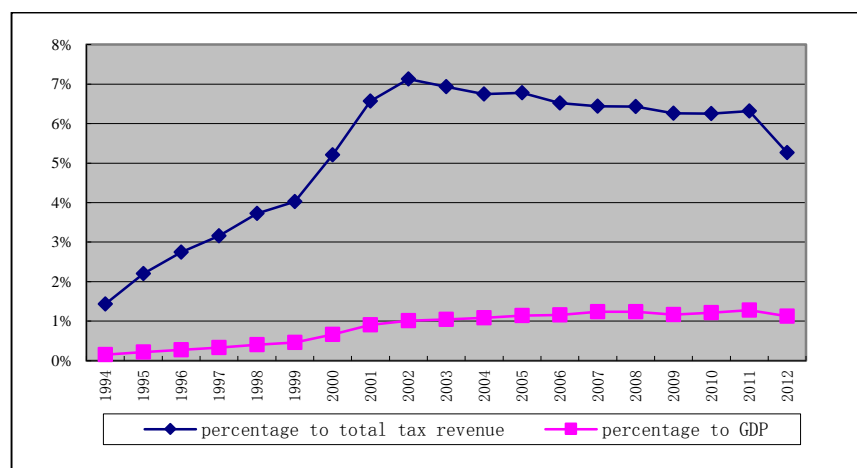
**【Abstract】** To what extent could personal income tax redistribute individuals' income is decided by the progressivity and average tax rate of the tax system. This article analyzed the redistributive effect of personal income tax in China from these two aspects and obtained the following three judgments basically: First, the legal and actual progressivity of personal income tax have already reached the developed country's level; Second, the average tax rate of personal income tax is significantly lower than the average rate in the world; Third, the income redistributive effect of personal income tax is very small compared to other countries. And the core reason is the too low average tax rate. Therefore, the key point to strengthen the redistributive function of personal income tax in China is to improve the tax administration, expand the tax base and increase the average rate of personal income tax to individuals' income.

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<sup>☆</sup> Ying WAN, Professor and PhD supervisor in Jiangxi University of Finance & Economics, Nanchang, China. The research field is policy and practice of public finance and taxation. Address: School of Public Finance and Administration in Jiangxi University of Finance & Economics. Post code: 330013. Phone: 13879195032 0791-83816322. E-mail: jxcjdx\_wy@163.com

## 1. Introduction

Since its beginning in China in 1980, the tax revenue of personal income tax has developed rapidly. Especially after the 1994 tax reform, the personal income tax revenue increased steadily at 30% per year on average. The total tax revenue increased from 7.3 billion Yuan in 1994 to 582 billion Yuan in 2012, its relative percentage to GDP increased from 0.15% to 1.2%, and its relative percentage to all the tax revenue increased from 1.43% to 6% (see Figure 1). Nowadays personal income tax has become the fifth largest domestic tax in China.<sup>1</sup>



**Figure 1 Size of Personal Income Tax in China**

In modern society, personal income tax not only has the function of raising sufficient revenue for the government, but also has the function of equalizing income distribution. Since the reform and opening up, the income gap in China has expanded all-round and consistently. The income gap measured by the Gini Coefficient has greatly exceeded the international warning line of 0.4, which steadily ranged between 0.47-0.49 in the last ten years, and the figure was 0.474 in 2012.<sup>2</sup> So both the government and the citizens have high expectations on income redistributive tax policies. In February 2013, the State Council approved the “Opinions on deepening the reform of the income distribution system”, which clearly confirmed that tax system is one of the most important income redistributive mechanisms in China (The other two mechanisms are social security and transfer payment). Meanwhile, because the personal income tax in our country started relatively late, the social consciousness of tax is relatively weak, in addition to the imperfection of tax system and limited capacity of tax administration, the weak or even reverse redistributive effect is often questioned and criticized by the society. The actual redistributive effect of personal income tax seems far from the high expectation of the society. To what direction and to what extent does the personal income tax change personal income distribution? All these questions must be answered by accurate empirical analysis.

<sup>1</sup> The main reason for the decline of personal income tax in 2012 is the new policy of personal income tax implemented on September 1, 2011, which greatly improved expense deduction standard of wages and salaries income from RMB2000 per month to RMB 3500 per month.

<sup>2</sup> Website of Bureau of Statistics of China, 18<sup>th</sup> January 2013.

Wang Ya-fen *et al* (2007) calculated the Gini coefficient of total income and disposable income of Chinese urban residents, the average tax rate of different income classes and established econometric model to analyze the income redistributive effect of China's personal income tax. As a conclusion, they argued that after 2002, the personal income tax has played a positive role in income redistribution. This study used the difference of total income and disposable income per capita in the statistical yearbook to measure the size of personal income tax, did not deduct the social security expenditure, but in fact the individual pays social security far more than personal income tax, so it can not accurately reflect the independent effects of personal income tax on the income redistribution.<sup>3</sup>

Liu Xiao-chuan, Wang Chong (2008) used Kakwani progressivity index to analyze the relationship between per capita personal income tax and per capita income among 31 provinces and autonomous regions in China. The study found that inter-regional tax progressivity of wages and salaries has reached the level of developed countries, while the personal income tax on property income and operating income both are regressive. Because this study conducted empirical analysis from inter-provincial aspect, it just treated each province as a separate urban resident and a separate taxpayer. However, the study of income redistributive effect must be established on data of individuals' level, so it is difficult to draw a convincing conclusion.

Li Lin-mu *et al* (2010) analysed the relationship between the share of personal income tax and the bad index of income distribution, pointed out that since the 1994 tax reform the increase of personal income tax share not only failed to narrow the income gap, but actually widened income gap to certain extent. The linear model used in this study is relatively simple, it is difficult to reflect the impact of the personal income tax on different income groups.

Also some scholars analysed the influence of personal income tax on income distribution from the tax structure aspect. For instance, Li Shao-rong (2005) analysed the impact of tax structure change on income distribution by constructing the production function, found that with China's current economic system and tax structure, the increase of income tax share will expand income gap between the capital owners and the labour owners, while the increase of specific behavior tax share will narrow income gap between capital owners and labor owners.

Other scholars made some effort to decompose the effect of personal income tax on income redistribution. Peng Hai-yan (2011) analyzed the redistribution effect of China's personal income tax from 1995 to 2008, found that the income redistribution effect was very limited, the degree of progressivity of tax decreased over time, and among different tax factors, the exemptions play a leading role in the limited progressivity, and then follows the tax rate schedule.

This paper is trying to analyse the effect of China's personal income tax on income distribution from two aspects: one is average tax rate, and the other is the degree of progressivity, point out the underlying reasons that weaken the income

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<sup>3</sup> Disposable income in the statistical yearbook = Total income – personal income tax – social security – accounting subsidy.



redistribution effect of China's personal income tax, and accordingly put forward suggestions to enhance the income redistribution function of China's personal income tax.

## 2. Theoretical Analysis on Factors Affecting Redistributive Effect of Personal Income Tax

In general, the most comprehensive index to measure the effects of Taxation on income redistribution is income redistributive effect (RE), that is, the change percentage of Gini coefficient of pre-tax income and after-tax income. If the Gini coefficient of after-tax income declines, then the existence of tax helps to narrow the income gap, the tax has positive effect on income redistribution. Otherwise, if the Gini coefficient of after-tax income increases, then the existence of tax increases the income gap, the tax has negative effect on income redistribution. Australian Economist Nanak C. Kakwani proved that the relationship between Gini coefficient of pre-tax income and after-tax income can be formulated as follows:

$$G^* = G - \frac{tP}{(1-t)} \quad (2.1)$$

Where  $G^*$  and  $G$  represent Gini coefficient of after-tax and pre-tax income respectively,  $t$  represents the average tax rate, namely the ratio of tax liability actual paid to total personal income,  $P$  represents degree of tax progressivity ( $P$  index). The  $P$  index specially defined by Kakwani is used to measure the degree of tax progressivity, whose calculation principle can be illustrated in figure 2:

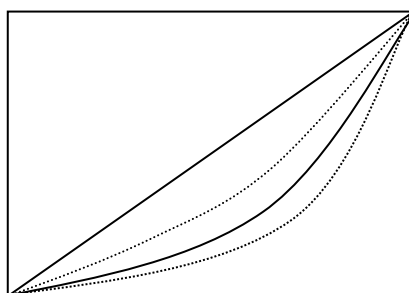


Figure 2 Concentration Curve of tax and  $P$  Index

In figure 2, the horizontal axis represents the cumulative percentage of household or population ranking by income from low to high, the vertical axis represents the corresponding cumulative percentage of household income or tax payable. 45° diagonal  $OO'$  shows the situation when income and tax burden are distributed completely equally, i.e. the Gini coefficient is zero. When we depict pre-tax income of all income groups, we can get the concentration curve  $OAO'$  of pre-tax income (i.e. the Lorenz curve); when we depict cumulative percentage of tax payable of each income group, we can get a similar concentration curve of tax like Lorenz curve. When concentration curve of income and tax coincide, it means the same proportion of income bears the same proportion of tax, the tax system is proportional, which has no impact on the income gap; when the concentration curve of tax is below the concentration curve of income (as  $OCO'$  shown in figure 2), it means the tax share of low income earners is less than their share of income,

and the tax share of high income earners is more than their share of income, the tax system is progressive, which helps to reduce the income gap; on the contrary, if the concentration curve of tax is above the concentration curve of income (as OBO' shown in figure 2), it means the tax share of low income earners is more than their share of income, and the tax share of high income earners is less than their share of income, the tax system is regressive, which will increase the income gap.

If the concentration index of tax is  $C^4$ , Gini coefficient of pre-tax income is  $G$ , Kakwani progressivity index  $P$  is the difference between  $C$  and  $G$ . If the  $P$  index is positive, which means the income elasticity of tax is greater than 1, the tax system is progressive; if the  $P$  index is negative, which means the income elasticity of tax is less than 1, the tax is regressive; if the  $P$  index is zero, which means the income elasticity of tax is equal to 1, the tax system is proportional.

Formula 2.1 shows that the Gini coefficient of after-tax income  $G^*$  is the function of pre-tax income Gini coefficient  $G$ , average tax rate  $t$  and tax progressivity index  $P$ , namely the inequality degree of after-tax income and pre-tax income are positively correlated, and the inequality degree of after-tax income and average tax rate  $t$  or tax progressivity index  $P$  are negatively correlated. Other things being the same, the inequality degree of after-tax income decreases as the average tax rate or tax progressivity increases; the inequality degree of after-tax income increases as the average rate of tax or tax progressivity decreases. Particularly worth mentioning is that, the changes of average tax rate and tax progressivity index may not be synchronized. Under the same level of progressive, the higher the average tax rate is, the more the Gini coefficient of after-tax income decreases, the smaller is after-tax income gap. Because the elasticity of after tax income Gini coefficient to average tax rate is greater than the elasticity to tax progressivity index, therefore, after-tax income Gini coefficient is more sensitive to the changes of average tax rate than to tax progressivity index.

The progressivity of personal income tax mainly depends on specific arrangements of the tax system. First of all, the most important factor is the rate structure. But it doesn't mean that the higher the marginal tax rate, the more the rate bands, the more progressive the tax system is. The actual progressivity of tax system is still affected by the pre-tax income gap and the structure of taxable income. Secondly, the higher the tax exemption, the more progressive the tax system is. And the effect of tax deductions and tax credits on tax progressivity is uncertain. For example, the living expenses deduction is usually helpful to promote the progressivity of tax system, while the capital income or the mortgage interest deduction will reduce the progressivity of tax system.<sup>5</sup>

In summary, measured by the difference between the Gini coefficient of pre-tax and after-tax income, the redistributive effect of personal income depends on the average tax rate and progressivity of personal income tax. Gini coefficient of after-

<sup>4</sup> The calculation principle of tax concentration index and Gini coefficient of income is the same, which is the outcome of dividing the area surrounded by tax concentration curve and 45° diagonal OO' by the area of triangle OX O'.

<sup>5</sup> Gerlinde Verbist, "Redistributive Effect and Progressivity of Taxes: An International Comparison across the EU Using EUROMOD", EUROMOD Working Paper, No. EM5/04, 2004.

tax income decreases not only closely related to the increase of progressivity of tax system, but also closely related to the increase of average tax rate. In order to reduce after-tax income gap, we can raise the average tax rate as well as improve the progressivity of tax system. And after-tax income gap is more sensitive to the change of average tax rate than to the progressivity degree of tax system.

### 3. Empirical Analysis of Income Redistribution Effect of China's Personal Income Tax

#### 3.1 Sources of Statistics

The pre-tax income data in this study comes from the "Statistical yearbook of China", the personal income tax data corresponding to different income groups of urban residents comes from "Chinese city (town) Price Yearbook". Considering that the rural residents in China mainly engaging in agricultural activities should not pay any personal income tax under current tax system, this study is only confined to the urban residents.

#### 3.2 Overall Income Redistributive Effect of Personal Income Tax in China

By calculating the Gini coefficient of pre-tax total income( $G$ ) and disposable income after personal income tax( $G^*$ ) for urban residents from 1997 to 2010, and the change percentage of Gini coefficient (RE) before and after tax, we can get the overall income redistributive effect of personal income tax in China. The results are shown in table 1.

**Table 1 Gini coefficient of pre-tax income and disposable income after PIT**

Year	G	G*	RE (%)	Year	G	G*	RE (%)
1997	0.21797	0.21776	0.097	2004	0.32611	0.32389	0.681
1998	0.22549	0.22522	0.119	2005	0.33206	0.32974	0.700
1999	0.23236	0.23202	0.146	2006	0.32848	0.32627	0.674
2000	0.24477	0.24430	0.192	2007	0.32439	0.32193	0.758
2001	0.25529	0.25466	0.246	2008	0.33029	0.32776	0.769
2002	0.30896	0.30781	0.371	2009	0.32349	0.32088	0.805
2003	0.31749	0.31576	0.546	2010	0.31791	0.31496	0.926

We can get the following conclusions from table 1. First, in all the selected years, the Gini coefficient of pre-tax income ( $G$ ) is greater than the Gini coefficient of after-tax income ( $G^*$ ). It means the personal income tax to some extent definitely reduce the income gap among urban residents. Second, comparing the data in different year, we can see percentage reduction of RE (%) increases steadily, rising from 0.097% in 1997 to 0.926% in 2010. It means the redistributive function of personal income tax is becoming more and more significant. Third, the absolute value of percentage reduction of Gini coefficient (RE) in each year is below 1%, with the average of 0.502%. The highest value of RE in 2010 is only 0.926%. It means the overall redistributive effect of personal income tax in China is very small. In the United States, for the year 2004, Gini coefficient of pre-tax income was 0.5008, it dropped to 0.4668 after personal income tax, decreased by 6.8%.<sup>6</sup> In Japan, for the year 2008, Gini coefficient of pre-tax income was 0.4539, it fell to 0.4326 after personal income tax, decreased 4.7%.<sup>7</sup> In Korea, for the year 2000, Gini coefficient of pre-tax income was 0.4008, it declined to 0.3790 after personal income tax, decreased by 5.4%.<sup>8</sup> For the 13 countries in OECD percentage reduction of Gini coefficient after personal income tax averaged more than 5% in the early 1990s. Especially in welfare states such as Sweden, percentage reduction of Gini coefficient after tax is even more than 10%.<sup>9</sup> On comparison, the weakness of redistributive function of personal income tax in China can be suggested.

### 3.3 The Progressivity of Personal Income Tax in China

First, using the same data, we can figure out concentration index  $C$  and Kakwani progressive index  $P$  of personal income tax in China for the selected years, as shown in table 2.

**Table 2 Progressivity Index of PIT in China**

Year	$G$	$C$	$P$ index	Year	$G$	$C$	$P$ index
1997	0.21797	0.63299	0.41502	2004	0.32611	0.69737	0.37126
1998	0.22549	0.61550	0.39001	2005	0.33206	0.67505	0.34299
1999	0.23236	0.60366	0.37130	2006	0.32848	0.72760	0.39912

<sup>6</sup> Kinam Kim and Peter Lambert. "Redistributive Effect of U.S. Taxes and Public Transfers, 1994-2004", *Public Finance Review*, 2009, Vol. 37, No. 1, pp.3-26.

<sup>7</sup> Liu Xing-ying. "Japan: Using tax to redistribute income disparities". *Chinese Taxation News*, November 10, 2010.

<sup>8</sup> Hyun, J.K. & Lim, B.I.. "Redistributive effect of Korea's income tax: equity decomposition". *Applied Economics Letters*, 2005, 12, 195-198.

<sup>9</sup> Gerlinde Verbist, "Redistributive Effect and Progressivity of Taxes: An International Comparison across the EU Using EUROMOD", *EUROMOD Working Paper*, No. EM5/04, 2004.

2000	0.24477	0.59458	0.34981	2007	0.32439	0.72704	0.40265
2001	0.25529	0.61060	0.35532	2008	0.33029	0.73587	0.40558
2002	0.30896	0.65440	0.34544	2009	0.32349	0.71389	0.39040
2003	0.31749	0.68810	0.37061	2010	0.31791	0.69162	0.37371

From table 2, we can draw the following conclusions. First, the  $P$  indexes for all the years are positive, which indicates that China's personal income tax is absolutely progressive. Second, comparing the data in different years, the  $P$  index is relatively stable in China, ranging from 0.35 to 0.40. Among them, the highest  $P$  index occurred in 1997 at 0.415, the lowest  $P$  index occurred in 2005 at 0.343. Third, from the international comparison of tax progressivity index, progressivity of personal income tax in China has already reached the level of developed countries. From 1997 to 2010,  $P$  index of China's personal income tax averaged 0.378, and the  $P$  index of United States in 2004 was only 0.334;  $P$  index of South Korea in 2000 was 0.426;<sup>10</sup> the  $P$  index of 15 EU countries in 1998 averaged 0.2834.<sup>11</sup>

Second, the degree of progressivity of personal income tax can also be observed from the statutory tax rate structure itself. The key to effectively redistribute income for personal income tax is to choose a proper progressive rate structure. A simple formula to measure the progressive degree  $\nu$  of the rate structure is as follows:<sup>12</sup>

$$\nu = \frac{(T_1 - T_0)}{T_0} \div \frac{(I_1 - I_0)}{I_0} \quad (3.1)$$

Where  $T_0$  and  $T_1$  represent the true tax liabilities at income levels of  $I_0$  and  $I_1$  ( $I_1$  is greater than  $I_0$ ). The tax system with higher value of  $\nu$  is said to be more progressive. According to equation 3.1, let's make a comparison of progressive degree  $\nu$  of the personal income tax rate structure between China and United States. The left side of table 3 lists the progressive degree  $\nu$  of personal income tax in China. And the right side of table 3 lists that of US. Table 3 shows that, as a whole, the statutory rate structure of personal income tax in China is far more progressive than that in United States, especially for the first 3 rate brackets.

**Table 3 Progressivity of PIT in China and US**

Rate Schedule in China (for wages and salaries)			Rate Schedule in US (for single return)		
Taxable Income (Yuan per month)	Rate	Progressivity	Taxable Income (Dollar per year)	Rate	Progressivity

<sup>10</sup> Kinam Kim and Peter Lambert. "Redistributive Effect of U.S. Taxes and Public Transfers, 1994-2004", Public Finance Review, 2009, Vol. 37, No. 1, pp.3-26.

<sup>11</sup> Gerlinde Verbist, "Redistributive Effect and Progressivity of Taxes: An International Comparison across the EU Using EUROMOD", EUROMOD Working Paper, No. EM5/04, 2004.

<sup>12</sup> Harvey S. Rosen: Public Finance(7<sup>th</sup> edition), McGraw-Hill, 2005, pp.278.

0—1500	3%	1	0—11950	10%	1
1500-4500	10%	3.33	11950-45500	15%	1.50
4500-9000	20%	2.61	45500-117450	25%	1.83
9000-35000	25%	1.81	117450-190200	28%	1.36
35000-55000	30%	1.36	190200-372950	33%	1.41
55000-80000	35%	1.60	Above 372950	35%	—
Above 80000	45%	—			

What's more, progressiveness of personal income tax can also be measured from the results of tax collection. The more tax paid by the high income individual, the more progressive the tax system is. According to the statistics of Finance Ministry in China, in 2008, 2.4 million taxpayers whose annual income is above RMB120,000 Yuan (more than 5 times per capita GDP) accounted for 3% of all the taxpayers of personal income tax, but contributed 35% of the total personal income tax.<sup>13</sup> While in 2007, 12.56% American taxpayers whose annual adjustment gross income (AGI) above \$100,000 (more than 2 times per capita GDP) contributed 52.09% of total personal income tax; 2.1% American taxpayers whose annual adjustment gross income (AGI) above \$250,000 (more than 5 times per capita GDP) contributed 27.16% of total personal income tax.<sup>14</sup> From these two sets of data, we can judge that the personal income tax in China is more progressive than that in the United States. And it is known the progressivity of American personal income tax is relatively high even in developed countries.

### 3.4 The Average Tax Rate of Personal Income Tax in China

Divide average personal income tax paid by each urban resident by total income per capita, we can get the average tax rate of personal income tax for each year. The average tax rate of personal income tax in China is shown in table 4.

**Table 4 Average tax rate of PIT in China**

Year	Total income per capita ( Yuan)	PIT per capita ( Yuan)	Average tax rate (%)	Year	Total income per capita ( Yuan)	PIT per capita ( Yuan)	Average tax rate (%)
1997	5188.54	2.67	0.05146	2004	10128.51	60.31	0.59545
1998	5458.34	3.84	0.07035	2005	11320.77	74.94	0.66197
1999	5888.77	5.47	0.09289	2006	12719.19	69.19	0.54398

<sup>13</sup> "The Outline of Personal Income Tax", Website of Ministry of Finance, June 17, 2009.

<sup>14</sup> IRS: Individual Income Tax Returns, 2007. <http://www.irs.gov/pub/irs-soi/09sprintaxreturn.pdf>

2000	6316.81	8.64	0.13678	2007	14908.61	90.56	0.60743
2001	6907.08	12.42	0.17982	2008	17067.78	103.45	0.60611
2002	8177.40	28.44	0.34779	2009	18858.09	121.89	0.64635
2003	9061.22	43.84	0.48382	2010	21033.42	160.90	0.76497

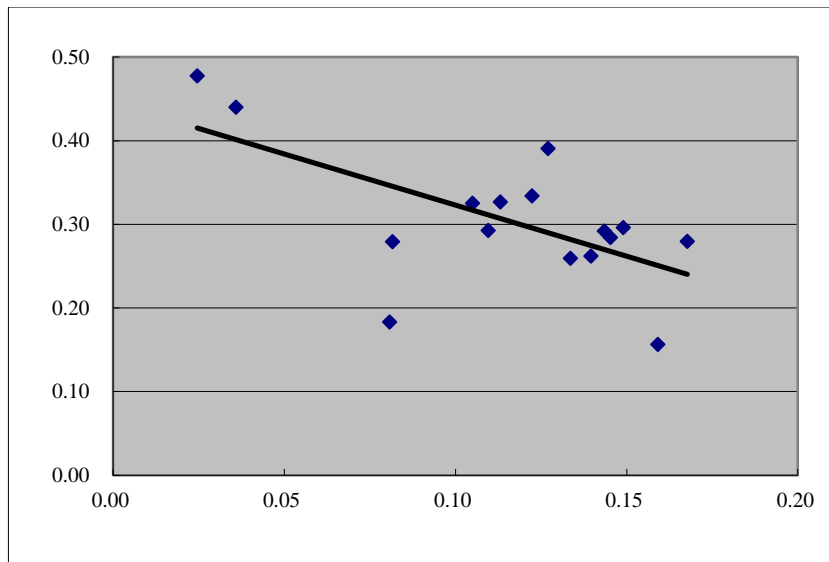
From table 4, we can draw the following conclusions. First, the average tax rate of personal income tax increases continuously, rising from 0.05% in 1997 to 0.76% in 2010, which shows the China's personal income tax has a more and more significant impact on income redistribution. Second, after so many years growth the average personal income tax rate is still very small, with the average of only 0.41%, less than 0.5% of pre-tax gross income, which indicates the overall scale of personal income tax in China is still too small to change the basic structure of income distribution of urban residents as a whole. While the average tax rate of personal income tax for the United States in 2004 was 12.24%, the average tax rate of personal income tax for the Republic of Korea in 2000 was 6.91%,<sup>15</sup> the average tax rate of personal income tax for 15 European Union countries in 1998 was 11.44%.<sup>16</sup> In contrast, the revenue size of personal income tax in China scale is far behind that in developed countries, and also is far away from the requirement of effective income redistribution.

It is worth mentioning that the empirical research on the 12 EU countries showed a negative correlation between average rate and Kakwani progressivity index of personal income tax, with correlation coefficient of -0.75, significant level of 0.5%. It means the lower the average tax rate, the more progressive the personal income tax is; while the higher the average tax rate, the less progressive the personal income tax is (Wagstaff et al, 1999). Verbist (2004) studied the personal income tax of 15 EU member states and also came to the similar conclusions. Moreover, the empirical analysis of Verbist found that this rule is not only applicable to the personal income tax, but also applicable to all the other direct taxes. Figure 3 depicts the scatter diagram that shows the relationship between average tax rate and progressivity index personal income tax in the United States and 15 EU member states. The horizontal axis represents the average tax rate, and the vertical axis represents the progressivity index. Where the American data comes from Kim and Lambert (2009), and the data of 15 EU countries comes from Verbist (2004).

<sup>15</sup> Kinam Kim and Peter Lambert. "Redistributive Effect of U.S. Taxes and Public Transfers, 1994-2004", Public Finance Review, 2009, Vol. 37, No. 1, pp.3-26.

<sup>16</sup> Gerlinde Verbist, "Redistributive Effect and Progressivity of Taxes: An International Comparison across the EU Using EUROMOD", EUROMOD Working Paper, No. EM5/04, 2004.





**Figure 3 Scatter diagram about the relationship between average tax rate and tax progressivity**

As shown clearly in figure 3, there is virtually a negative correlation between average rate and progressivity index of personal income tax. This is probably because when a government chooses a low tax level with a high degree of progressivity the overall tax burden is mild, it is not so difficult to put more of this burden on the broadest shoulders. But when the tax level is high, it seems difficult to avoid that everybody pays his tax share, such that the average tax rate increases less with income level. Interestingly, if we add the average tax rate and progressivity index of personal income tax in China in 2010 to figure 3, we can see this point is very close to the left side of the trend line. Therefore, the combination of low average tax rate and high level of progressivity of personal income tax in China seems to confirm this tax rule in a sense.

#### 4. Conclusion and Implications

In the modern tax system, although both personal income tax, consumption tax, social security tax, property tax, estate and gift tax have the function of income redistribution, but many studies have showed that the personal income tax still functions as the main income redistributive tax. And the redistributive effect of personal income tax depends on the progressive level and average tax rate of the tax system. This paper decomposes the income redistribution effect of personal income tax in China from the tax progressivity level and average tax rate, and gets the following conclusions:

1. As far as the rate schedule of personal income tax is concerned, statutory progressive level of personal income tax in China has reached the average level of the world, and even higher than that of the United States, especially for the initial 3 rate brackets. It is worth noting that this paper only compares the tax rate applicable to wages and salaries in China, but under the current Chinese personal income tax system there are a considerable number of labor remunerations and property income is suitable for flat tax rate of 20%, which greatly reduces the overall progressive level of the tax system.

2. Measured by Kakwani progressivity index, the personal income tax in China virtually is very progressive, with the progressive index ranging within 0.35 to 0.40, and the progressive degree has actually reached the level of developed countries. The top 3% taxpayers in China paid 35% of the total personal income tax, which means that, the personal income tax indeed narrows the income distribution gap.

This conclusion may be conflict with the feeling of most people. The possible reason may lie in the following two facts: on the one hand, our study is based on the income survey data published by the National Bureau of statistics, which is always questioned for the systematic sample error. Because of the non-cooperative attitude and the motivation of income concealment of high income individuals, too less high income individuals are covered by the income survey, which leads to high-income groups underrepresented and overestimate of tax progressivity. According to the state bureau of statistics, the disposable income induced from urban and rural household income survey is only about 70% of that induced from the national cash flow statements, which indicates that the urban and rural households survey data does exist substantial systematic underestimation bias.<sup>17</sup> On the other hand, because the income distribution mechanism, especially the initial distribution mechanism, is imperfect, there are a lot of off-books incomes in the economy. According to the survey on urban households income and expenditure hold by professor Wang Xiao-lu in 2008, the hidden income of urban residents that never reported to the government already exceeded 9.3 trillion Yuan (accounting for about 15% of the total national income), and 80% hidden income concentrated on the 20% highest income urban residents.<sup>18</sup> The existence of enormous hidden income not only distorts the resource allocation, so as to reduce the efficiency of economy, but also results in the rapid expansion of the income gaps. In fact, quite a number of critics about the unfairness of personal income tax focus on these hidden incomes.

3. As far as the average tax rate of personal income tax is concerned, although the average tax rate in China has increased continuously in the past fourteen years, the average tax rate is only 0.41% of the total income with the highest rate of 0.76% in 2010, which is far more less than the global average level of 10%. So the revenue size of personal income tax is relatively too low to change the structure of income distribution at all.

The low average tax rate of personal income tax is basically due to the imperfection of tax administration, a huge number of incomes are actually beyond the effective control of personal income tax, which results in the large revenue losses and very low coverage of personal income taxpayers to the total population. According to the report of Finance Ministry, in 2008, the number of self-declaration taxpayers whose annual income is above 120,000 Yuan is only 2.4 million, accounting for 3% of total personal income taxpayers. Accordingly, the number of total personal income taxpayers is only 80 million, accounting for about 6% of the total population.<sup>19</sup> The research report of International Monetary Fund showed that in the early 1980s the percentage of personal income taxpayers to the total population averaged 46.17% in industrialized countries (In some welfare countries such as Denmark, the proportion was as high as 77.80%), and averaged 4.68% in developing countries.<sup>20</sup> According to Congressional Budget Office of the United States, in 2008, a total of almost 183 million personal income tax returns were filed, accounting for nearly half of the total population. So the narrow population coverage seriously restricts the income redistribution effect of personal income tax in China.

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<sup>17</sup> Zhang Dong-sheng, "Annual Report on the Income Distribution: 2009", Economic and Science Press, 2009. pp.4.

<sup>18</sup> Wang Xiao-lu, "Hidden Income and Income Gap", Comparison, 2010 (3).

<sup>19</sup> "The Outline of Personal Income Tax", Website of Ministry of Finance, June 17, 2009.

<sup>20</sup> Walter P Gandhi *et al*, "Tax Policy of the Supply Side", China financial and Economic Publishing House, 1993, pp. 315.

4. As far as the actual income redistribution effect of personal income tax is concerned, although the percentage reduction of Gini coefficient after personal income tax increases continuously for the last fourteen years, the decline of Gini coefficient is very small, with the highest absolute value of 0.926% in 2010, which is far below the international average level of 5% to 10%.

Therefore, if excluding the statistical errors, the overall impact of China's personal income tax on income distribution is positive. But it is hard to deny that, income distribution effect is quite limited. Because the progressive level of personal income tax has reached or even exceeded the average level of developed countries, the main reason accounting for the weak redistribution effect of personal income tax rate is the too low average tax rate and too small coverage of tax scope. So in the future the key point to strengthen the redistributive function of personal income tax is to improve the average tax rate and the coverage of tax scope gradually and continuously by effective administration of personal income and property.

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## **Analysis of the effect of the VAT on the size of the government and recommendation on the reform of the VAT in China**

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**Ying WANG and Qi FAN** <sup>☆</sup>

### **Abstract**

Since the implementation of the value-added tax (VAT) in 1994, such tax has become the most prominent source of taxation income in the Chinese taxation system. However, its reform is far from complete as the VAT is not fully deductible and its coverage is incomplete within industries causing the future roadmap of the reform to be unclear. This article resulted in two conclusions based on the analysis of the relationship between the VAT and governmental size. Firstly, the VAT is a significant factor that leads to the expansion of the government. Secondly, the VAT reform was not only an economic reform, but also a political reform. Subsequent reforms will have to depend on the balance of economic and political interest and also the balance of power between the central and local government.

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<sup>☆</sup> Ying Wang (1972- ) Professor, Shanghai Finance University, PhD Post Doctorate in Economics. Qi Fan (1982-) Lecturer, Shanghai Finance University, PhD in Economics

## 1. Proposition

In public economics, the size of government could be measured by the ratio of government expenditure to GDP (factor cost), to GDP (market price), to GNP (factor cost) or to GNI (factor cost).<sup>21,i</sup> In political science, the size of government could also be measured by the proportion of government employed workers to the total number of employed and the number of government administrative organisations in a country.<sup>22</sup> Rosen<sup>23</sup> had proposed that annual government expenditure is a more reasonable and popular method to measure the size of a government, in which government expenditure is divided into three categories: purchases of goods and services, income transfer to individuals, companies and other levels of government and interest payment. Nevertheless, calculating the size of the government can be very subjective and no single measuring method is absolutely correct. The usefulness of the different measuring methods would depend on the purpose of the research.<sup>24</sup>

There are various explanations on the size and expansion of the government. Keynes, in 1936, had proposed that the size of the government would follow the increasing economic growth in order to rectify market inefficiency.<sup>25</sup> In political science, the two major theories on the size of the government are the Citizen-over-State Theory and the State-over-citizen Theory. The former considered the size of the government being linked to the level of governmental response to the demand of the needs of the civil society while the latter considered the expansion of the government a result of the inefficiency in the bureaucracy and the incentives offered to the bureaucrats.<sup>26</sup> Apart from that, the average income of voters,<sup>27</sup> expansion of governmental functions, increase in administrative costs,<sup>28</sup> and the

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<sup>21</sup> C. V. Brown and Peter Jackson, *Public Sector Economics* (China Renmin University Press, 2000) 134-5.

<sup>22</sup> Mei Jixi, 'Expansion and limitation on the size of the government' (2005) 1 *Administrative Forum* 6-8. 梅继霞 "论政府规模的扩张与限制", 《行政论坛》2005 第 1 期, 第 6-8 页.

<sup>23</sup> Harvey S. Rosen, *Public Finance* (China Renmin University Press, 4<sup>th</sup> ed, 2000) 13.

<sup>24</sup> C. V. Brown and Peter Jackson, *Public Sector Economics* (China Renmin University Press, 2000) 134-5.

<sup>25</sup> John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (Harcourt Brace, 1936).

<sup>26</sup> Thomas A. Garrett and Russell M. Rhine, 'On the Size and Growth of Government' (2006) January / February *Federal Reserve Bank of St. Louis Review* 13.

<sup>27</sup> Allan H. Meltzer and Scott F. Richard, 'A Rational Theory of the Size of Government' (1981) *Journal of Political Economy* 916.

<sup>28</sup> Lu Da and Cao Ku, 'Few important factors that could restrain size of the government' (2003) 4 *News of the National Administrative Academy* 25. 吕达、曹琨: "制约政府规模的几个主要因素", 《国家行政学院学报》2003 年第 4 期, 第 25-28 页.

development of the third sector are also factors that could be considered in measuring the size of the government.<sup>29</sup>

In recent years, public economists had discovered that the value added tax could be used indirectly in expanding the government. In fact, in almost all countries with VAT, their tax rate increased over time, meaning that the proportion of taxation income in the countries' GDP grows.<sup>30</sup> For example, in Denmark, the VAT had increased from 10% in 1967 to 22% in 1978, while the proportion of taxation income on GDP increased from 36.1% to 43.6%.<sup>31</sup> In the Eurozone countries, the average VAT rate was initially 13.9% but increased by 40% to 19.3% in 2001.<sup>32</sup> In 2011, the average VAT tax rate was 20.7% and increased to 21.0% in 2012.<sup>33</sup>

VAT would lead to an expansion of the government sector since the VAT is a consumption tax that had excludes intermediate goods and services from the tax base.<sup>34</sup> The ability of the VAT to generate large sums of taxable income is due to its taxation on final consumption of goods and services. If the United States were to impose a VAT of 5%, it would be expected to raise an extra 500 billion dollars of taxation income.<sup>35</sup> Moreover, since the VAT would be hidden in the price of final consumption, it would not be seen as a direct taxation burden, thus it is politically beneficial to legislators but detrimental to taxpayers.<sup>36</sup> Fiscal decentralisation was seen to be the most effective method to suppress the expansion of the government, as it would incentivise local governments to increase competition in order to maintain taxation income from residents and companies, thus reducing the over expansion of the government.<sup>37</sup>

<sup>29</sup> Kang Xinhang, 'Reasonable size of government – an economic analysis' (2004)1 *Soft Science* 15.康新航：“合理政府规模——经济学的分析”，《软科学》2004年第1期，第15-16页

<sup>30</sup> Harvey S. Rosen, *Public Finance* (China Renmin University Press, 4<sup>th</sup> ed, 2000) 435.

<sup>31</sup> Henry J. Aaron, 'Introduction and Summary.' in Henry J. Aaron (ed), *Value-added Tax –Lessons from Europe* (Brookings Institution, 1981) 14.

<sup>32</sup> Sijbren Cnossen, 'Tax Policy in the European Union-A Review of Issues and Options' (Working Paper for European Union, 2002) 6.

<sup>33</sup> *Further increase in VAT rates in 2012*, Eurostat newsrelease, 77/2012-21 May 2012, [http://epp.eurostat.ec.europa.eu/cache/ITY\\_PUBLIC/2-21052012-BP/EN/2-21052012-BP-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-21052012-BP/EN/2-21052012-BP-EN.PDF).

<sup>34</sup> David N. Hyman and Zhang Jincang, *Public Finance-A Contemporary Application of Theory to U.S. and Chinese Practice* (Peking University Press, 2011) 439.

<sup>35</sup> Daniel J. Mitchell, Will a VAT Turn America into a Greek-style Welfare State? (23 February 2011) Reuters.

<sup>36</sup> Milton Friedman, *Our New Hidden Taxes* (14 April 1980) Newsweek 90.

<sup>37</sup> G. Breman and J.M. Buchanan, *The Power to Tax: Analytical Foundations of a Fiscal Constitution* (Cambridge University Press, 1980), 197-217.

Since the transition to the VAT in China in 2009,<sup>ii</sup> related research focused mainly on: (1) the analysis on the effect of the transitioning to VAT<sup>38</sup>; (2) the paths of expansion of the VAT<sup>39</sup>; and (3) the analysis on the effect of the expansion of the VAT.<sup>40</sup> These research were all written from the perspective of a company or an industry to evaluate the economic impact and the reform orientation of the VAT, yet none has been written from the perspective of the government. Thus, this article will analyse the relationship between the VAT in China and the size of the government, and would provide recommendations on subsequent VAT reforms.

## 2. Trends in the change in size of the government after the VAT reform

The evaluation of the size of the government should be based on objective standards, as using different standards may result in different outcomes. The size of the government can be determined by three factors: the number of government-employed staff, the number of government organisations, and the expenditure of the government. It was generally considered that the higher the number of government employed employees and the number of governmental organisations, the larger the size of the government, and vice versa. Having more organisations indicate a higher demand for government-employed staff and facilities, thus the size of the government should be larger. In addition, higher government expenditure would depict a larger governmental size. Alternatively, government expenditure is positively related to the value of governmental functions. The more functions that the government of a country has, the higher the related expenditure, and the larger the size of the government. Thus, government expenditure is the most frequently used indicator of the size of the government. Both the absolute government expenditure and the proportion of government expenditure on GDP are included in the measurement of government size using government expenditure.

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<sup>38</sup> Fu Guangjun, Analysis of the effectiveness of Chinese VAT reform (Chinese Market Publishing, 2010). 付广军: 《中国增值税转型效应分析》, 中国市场出版社 2010 年版。

<sup>39</sup> Yang Moru, Research on the expansion of the Chinese VAT: Calculation on the change in the VAT based on business and other taxes (Chinese Taxation Publishing, 2010). 杨默如: 《中国增值税扩大征收范围改革研究: 基于营业税若干税目改征增值税的测算》, 中国税务出版社 2010 年版。

<sup>40</sup> Hu Yijian, 'Analysis on the effectiveness of the reform of the VAT in the Shanghai service industry' (2012) 1 *Development in Science*; Hu Yijian, *Changing from business tax to the VAT is a structural reform* (8 August 2013) First Financial Daily. 胡怡建: 上海服务业“营改增”改革试点效应分析, 《科学发展》2012 年第 1 期; “‘营改增’是系统性制度变革”, 《第一财经日报》2013 年 8 月 8 日。



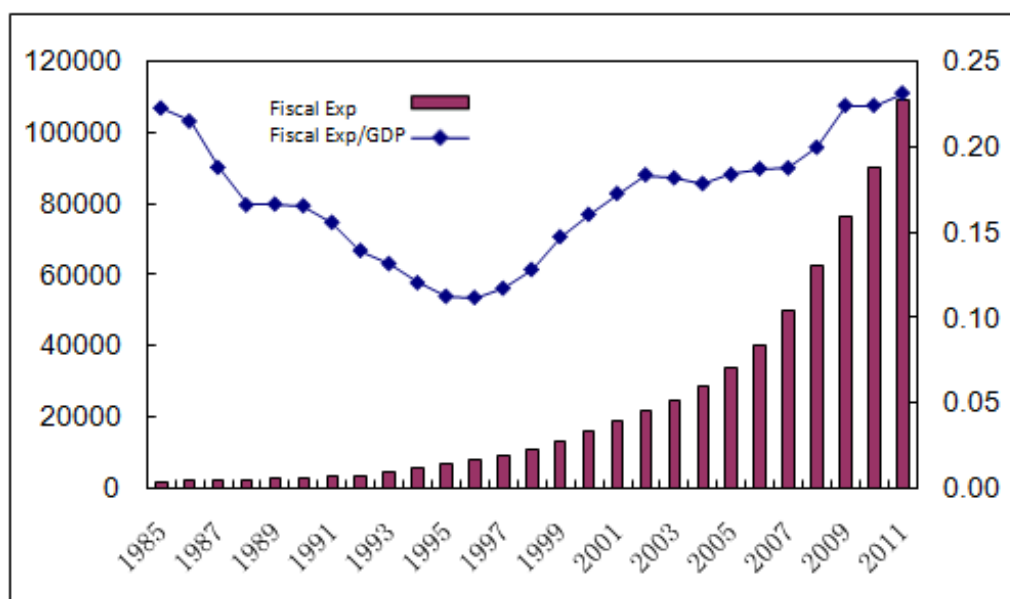


Figure 1: 1985- 2011 Size of the Government

Source: *Chinese Statistical Yearbook 2012*

Figure 1 shows the government expenditure and the proportion of government expenditure on GDP between 1985 and 2011. In terms of absolute value, government expenditure seems to increase continuously. It has increased from 200.425 billion dollars in 1985 to 10.924779 trillion in 2011, which is almost a 55-fold increase, depicting a continuous increase in the size of the government. In relative terms, the value of government expenditure over GDP had a curve in U-shaped, reaching its lowest of 11.22% in 1995 and highest of 23.10 % in 2011.

The continuous increase in expenditure was a result of the rapid increase in government financial income. As the contribution of the VAT to total taxation income is of the highest proportion and yields the highest value within the current taxation system it led to the rapid increase in government financial income.<sup>iii</sup> It is well known that the taxation income from the VAT before the 1993 tax system reform was minimal.<sup>iv</sup> Yet, after the publication of *Provisional Regulations of the People's Republic of China on Value Added Tax* in 13 December 1993 by the State Council, and the *Provisional Regulations of the People's Republic of China on Value Added Tax Detailed Rules for Its Implementation* in 25 December 1993 by the Ministry of Finance, with its official implementation from 1 January 1994,

income from the VAT had increased rapidly, so as its proportion to total GDP. The proportion of the VAT income to total GDP in 1985 was only 1.64%. It increased to 4.79% in 1994, reached its peak of 5.91% in 2006 and maintained at a level above 5% since then. This trend had proven Rosen's view that a higher proportion of the GDP consist of income from the VAT. The increase in income from the VAT led to an increase in government expenditure. Hence, this could be an important factor in the expansion of the government.

### **3. Empirical Investigation of the Relationship between the VAT and the Size of the Chinese Government**

#### ***3.1 Source of Samples and the Selection of Variables***

##### **1 Source of Samples**

In this investigation, the size of the government has been chosen as the dependent variable and the VAT as the independent variable. Based on data from 1985 to 2011 from China, this article investigates the impact of VAT on the size of the government. Main sources of data include the Statistical Yearbook of China<sup>41</sup> and the Financial Statistical Yearbook of China.<sup>42, 43</sup>

##### **2 Selection of the VAT indicator (the independent variable) and the Characteristics of such Data**

This article uses the VAT data of China (excluding VAT on imported goods) from 1985 to 2011. As shown in Exhibit 2, the VAT as a taxation income for the government grew rapidly. The growth exceeded 15% p.a. for most years within the sample period. In 1985, the VAT was merely \$14.77 billion RMB, whereas in 2011 the VAT provided an income of \$2426.663 billion RMB to the government. In order to investigate the impact of VAT on the size of the government, this article uses the growth of VAT (*g\_vat*) as the dependent variable.

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<sup>41</sup> 中华人民共和国国家统计局 [National Bureau of Statistics of China], 《中国统计年鉴》 [Statistical Yearbook of China], (中国统计出版社 [China Statistics Press]).

<sup>42</sup> 中华人民共和国国家统计局 [National Bureau of Statistics of China], 《中国财政统计年鉴》 [Financial Statistical Yearbook of China], (中国统计出版社 [China Statistics Press]).

<sup>43</sup> This work has used the internal VAT figures between 1985 and 2011 in the China Statistical Yearbook ( “中国统计年鉴” ). Although in the 1994 reform, the VAT structure was fundamentally changed, this work focuses on the correlation between VAT and sizes of governments. In other words, this work focuses on the quantitative analysis, irrespective of change of the underlying taxation system.

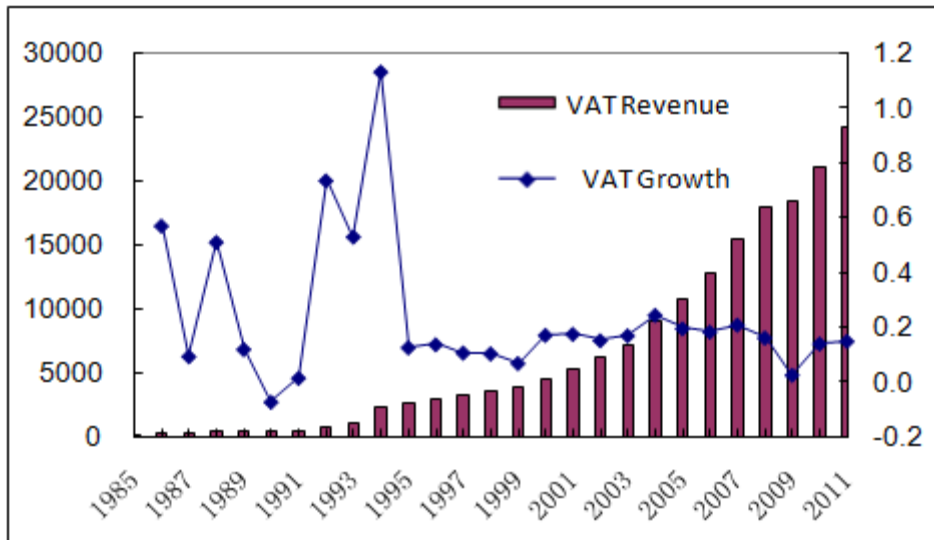


Figure 2: VAT as a taxation income for the Chinese government between 1985 and 2011 (Unit: 100 million RMB)

### 3 Selection of the Indicator for the Size of the Chinese Government (dependent variable) and the Characteristic of such Data

Corresponding to the selection of growth of VAT as the indicator of the dependent variable, this article uses the ratio of government expenditure over GDP ( $G_{sg}$ ) as the indicator of government size. The average of the sample data is 0.004, with the minimum value of -0.126, maximum value of 0.149 and standard deviation of 0.073.

### 4 The Relationship between the Variables

Figure 3 compares the growth of VAT and the growth of the size of the Chinese government. As shown in Exhibit 3, the relationship between the two indicators is not a simple linear one. It is highly probable that the relationship is non-linear. Therefore, there needs to be an examination of the existence of non-linear terms of high orders.

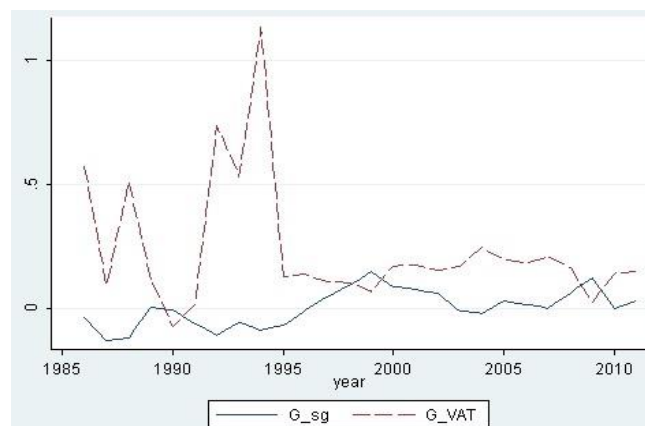


Figure 3: Correlation between VAT Growth and the Growth of the size of the Chinese Government between 1985 and 2011.

### 3.2 Construction of the Model and the Research Hypothesis

#### 1 The Model

According to the hypothesis and the characteristics of the data, the following model is postulated:

$$y_t = b_0 + b_1y_{t-1} + \dots + b_{p_1}y_{t-p_1} + a_1x_{t-1} + \dots + a_{p_2}x_{t-p_2} + g_1x^2_{t-1} + \dots + g_{p_3}x^2_{t-p_3} + e_t + q_1e_{t-1} + \dots + q_h e_{t-h}$$

where  $y$  denotes the growth rate of the government size,  $x$  is the growth rate of the VAT,  $x^2$  is the non-linear term for the growth rate of the VAT,  $\{e_t\}$  is the background white noise, and the assumption that the distribution is a normal one  $N(0, \sigma_e^2)$ .

#### 2 Hypothesis

Hypothesis 1: there is a positive correlation between growth rate of taxable income from the VAT and the growth rate of the government size.

VAT is a multi-stage sales tax that excludes the purchase of intermediate products and services from the tax base. The ability of the VAT to generate large sums of taxable income is due to the use of final consumption as the tax base. As the revenue and expenditure of the government increase, the size of the government will increase. Therefore, it is hypothesized in this article that there is a positive correlation between the growth of VAT and the growth of government size.

### 3.3 Empirical Study

#### 1 Misspecification testing

The data was processed using Stata 11.0 and the results of the misspecification testing (see Table 2 for test results) strongly reject the assumption that omitted variables do not exist. In other words, the results suggest the existence of omitted non-linear terms of high order. The introduction of  $g\_vat2$  as a normalisation variable (denoted as  $g\_vat2$ ) significantly improved the result.

#### 2 Unit Root Tests and Co-integration

The data was put through the ADF test, the PP test and the DF-GLS test. Outcomes of all tests unanimously suggest that it is “unable to rule out the existence of unit roots” (see Table 3). A recursive co-integration test with constants and time trends has revealed the existence of a linearly independent co-integration variable (See starred items in Table 4). Furthermore, through the testing it is discovered that the VAR expression corresponding to this system has a lag value of degree 4 (See starred items in Table 5).

### 3 Results of the VECM Regression Analysis

Johansen's MLE test was used to estimate the Vector Error Correction Model (VECM) (See Table 6 for Regression Result). For a long-term equilibrium relation to exist, the estimation function can be written as:

$$G\_sg = 0.116 + 1.105g\_vat - 1.073g\_vat2$$

Hence, a non-linear correlation between the growth of the government size and the growth of the VAT can be inferred.

## 4. Policy Advice on VAT Reform

The VAT's disadvantages outweigh its advantages in developing countries when compared with other forms of sales tax.<sup>44</sup> However, the reform of VAT in China is unstoppable. The transformation from sales-based tax to VAT has been regarded as one of the main objectives in China's macroeconomic control in 2013. It has also been viewed as the "fuse" for a new round of financial and taxation reform and for a more comprehensive reform. This reform to VAT has been said to be an important mechanism through which the government can start the restructuring of China's economy.<sup>45</sup> Therefore, given the high expectations of the impact of the VAT reform requires more thorough consideration.

### *4.1 Cost-Benefit Analysis of the Sale-to-VAT Taxation Reform from a Macroeconomic Perspective*

The advantages of VAT include its neutrality in distributing burden, and promotion of professionalism development and fair competition. These advantages have been the main reasons why policy-makers and the academia have recommended the transition to the VAT. However both the historical experience of the EU and the empirical studies within this article have suggested that the VAT will lead to expansion of the government. Countries that wish to limit the size of its government to create a more cost-efficient and service-oriented government will be faced with a dilemma.

Moreover, China's VAT reform has been based on the EU experience. It is worth-noting that countries of the EU are developed countries with market economies. Their political systems, market environment and cultural backgrounds are all fundamentally different from the less developed market economy as found in China. The advantages of introduction of VAT in less developed countries include high degree of political legitimacy, adequate preparation in the pre-reform stage, the opportunity to have trial and experimental transition within designated geographical areas, the investment of human and financial resources in tax administration etc. On the other hand, the disadvantages include the flaws in the design of the system itself, the lack of cooperative policies, the need to challenge

<sup>44</sup> S.R. Lewis, *Taxation for Development: Principles and Applications* (Oxford University Press, 1984).

<sup>45</sup> 高培勇 [Gao Peiyong], '营改增'的历史使命 [The Historical Significance of transition from Sales Tax to Value-Added Tax], (2013) 1 涉外税务 *International Taxation in China* pp5-7.

taxpayers' preconceptions, the disadvantages brought by a self-reporting system, the lack of a tax refund system, the incomprehensiveness of audit systems, the lack of sophisticated data processing capabilities and so on.<sup>46</sup> To counteract the above weaknesses, the design of the VAT reform needs to be detailed and comprehensive, especially with regard to corresponding policies and infrastructure before it is introduced.

Currently, the proceeds from the VAT are shared between the central authority (75%) and the local governments (25%) while the business tax is a local tax. The expansion of the VAT will involve an adjustment to the financial system. The method of adjustment can be through a change in the proportion being shared between the governments, a change in the tax return value, or fixed amounts of redirection of payments.<sup>47</sup> But regardless of the method employed, there will be major difficulties in the adjustment of the reform. Therefore, many rounds of negotiation between the central and local governments is required. The complexity of negotiating such reform will surpass that of the tax sharing system reform in 1994. Furthermore, if the VAT replaces the business tax, the local governments will lose their main tax base. Therefore, it is important to determine what the new major tax base for local fiscal income is to enable a reconstruction of the local taxation system after implementation of the reform.<sup>48</sup> Certainly in terms of macroeconomics, any ends can be achieved by the government's management policy if associated costs are ignored. Nonetheless, it should be presupposed that the government would choose regulatory tools that will have minimal impact on the social welfare system.<sup>49</sup>

## ***4.2 Details and Problems of the VAT Reform from a Microeconomic Perspective***

### **1. Selection of Strategy to Expand**

There are two main strategies in expanding VAT after its introduction, namely the "one-stop" strategy and the "multi-staged" strategy. The "one-stop" strategy has the benefit of resolving all the conflicts in a concentrated manner. But given the intricate relationships and interrelatedness of the interests of the parties involved, this strategy will take a long time to design and therefore, it is unlikely that the strategy can be rolled out during the Twelfth Five-Year Plan<sup>50</sup> The "multi-staged" strategy can overcome some of the problems that the "one-stop" strategy has, but it will take too long to implement. The completeness and stability of the taxation system cannot be guaranteed. Comparing the two strategies, and taking into consideration the opportunity of having a trial and experimental transition within

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<sup>46</sup> Pierre-Pascal Gendron, VAT Treatment of Financial Services: Assessment and Policy Proposal for Developing Countries, (2008) November Bulletin for International Taxation p503.

<sup>47</sup> 孙钢 [Sun Gang], 增值税'扩围'方式的选择 [Selected Methods for Tax-base Expansion of VAT] (2012) 地方财政改革与发展研究 *Reform, Development and Research of Local Government Finance* p247.

<sup>48</sup> 施文波 [Shi Wenpo], 贾康 [Jia Kang], 增值税'扩围'改革与中央和地方财政体制调整 [Reform of VAT expansion and Systematic Reform of Central and Local Government Finances], (2010) 11 财贸经济 *Finance and Trade Economics* p51.

<sup>49</sup> 杨斌 [Yang Bin], 税收学原理 [Principles of Taxation] (高等教育出版社 [Higher Education Press] 2008) 198.

<sup>50</sup> 孙钢 [Sun Gang], 增值税'扩围'方式的选择 [Selected Methods for Tax-base Expansion of VAT] (2012) 地方财政改革与发展研究 *Reform, Development and Research of Local Government Finance* p247.

designated areas as a developing country, this article is inclined to support the “multi-staged” strategy. The “multi-staged” strategy entails the expansion of the VAT in limited designated geographical areas and industries first before expanding into other geographical areas and new industries. Through this strategy, it allows corresponding policies and infrastructure to be introduced to new areas and new industries to smoothen the transition into a VAT system based on experience and mistakes from previous stages.

## 2. Steps to Expand into New Industries

After the “1+6” phase in the expansion of the VAT within the designated areas and industries<sup>51</sup>, the question as to which other service industries to introduce the VAT to will arise. The selection of industries to introduce the VAT to depends on the situation of each service industry. Scholars have suggested the method of elimination. Industries that have not been included in the business tax base or have been exempted from business tax, such as education, public health, social welfare etc. should be eliminated first. Industries into which the introduction of VAT will be met with gross difficulties and complication, such as the financial services industry should be eliminated next. Finally, industries that are consumption-intensive, that comprise mainly of small businesses and sole traders, and where tax evasion is the norm, such as the F&B industry, travel and sports should be eliminated as well.<sup>52</sup> After these rounds of eliminations, the second sets of industries concerned will be the rental market, the postal industry, the entertainment industry, the news and publishing industry, and the real estate industry. Subsequently, there should be gradual introduction of VAT into the F&B industries, travel, sports, and finally into the financial services, education, public health and social welfare industries.

## 3 Considerations in Regulating and Collecting the VAT

Effective regulation and collection of the VAT depend on the integrity of the characteristics of the tax itself and of the chain of transactions, instead of a particular transaction. Therefore, it is undesirable to impose separate VAT on every single transaction. Traditionally, whenever a new form of taxation is introduced in China, a large amount of human, material and monetary resources would be put into enforcement of the tax. This practise should not be employed in the expansion of the VAT because it will increase the costs to regulate and collect the VAT and this form of enforcement is unsustainable. The government should consider improving its information management system, upgrading its data processing capabilities, educating the public regarding their tax obligation, in order to reduce the costs of enforcing VAT regulations.

## 4. Pre-emptive Solutions to Potential Problems

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<sup>51</sup> The “1+6” phase included service industries such as traffic and transportation, research and technology, IT, culture and creativity, Logistics, Rental services of movable goods, and the Forensics Consulting industry.

<sup>52</sup> 李艳、谭郁森 [Li Yan and Tan Yusen], 上海‘营改增’试点下一步扩围行业选择研究 [Studies on Selections of Industries for VAT Expansion in Shanghai], (2013) 3 税收经济研究 *Tax and Economic Research* pp11-13.



If the VAT is successfully rolled out under the “multi-staged” strategy, it will cover all industries. Modern industries, especially the financial industry, are developing rapidly. There are always new circumstances, new products and new services. But the taxation system has to be relatively stable. There should be careful consideration given to ensure the design of the system incorporates mechanisms that maintain a stable VAT system in the midst of dynamic development within the financial industry. For example, financial companies prefer internal transactions when providing all kinds of products and services. Rules should be established in regulating and imposing the VAT for such transactions in order to avoid the problem of non-deductibility of certain financial products. For instance, a parent company in the financial industry provides IT services, which is worth \$100, to its subsidiary. If the VAT rate is 17%, then the consideration for this internal transaction should be priced at \$117 (including VAT) to allow the subsidiary to obtain a \$17 deduction. If the subsidiary subsequently resells the services to a third party with a \$100 markup, the gross price should be \$234. The VAT regulation will have to mandate that the receipt, which the subsidiary will issue to such third party, indicates gross VAT of \$34, in order to allow the third party to get a \$34 deduction on this transaction.

## 5. Summary

VAT is the most significant and lucrative taxation for the Chinese government. Hence, there is growing expectation of its impact. Foreign experiences have suggested that it is not too difficult to introduce the VAT on a policy level. Nonetheless, the government should concentrate on its long-term effects, rather than viewing it merely as a stable source of fiscal income and an incentive for economic reform. These long-term effects include the VAT’s growing power to collect revenue, its increasing share within the GDP, and increasing size of the government. As a matter of fact, all taxation reforms should reflect public interest rather than focus on its revenue generating power.<sup>53</sup> In contemporary China, the effects of the VAT, especially those on the government, will require broader and more in-depth research.

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<sup>53</sup> John Galbraith, *Economics and the Public Purpose* (Houghton Mifflin, 1973).



## Appendix

### Appendix 1 Proportion of Domestic VAT in GDP (1985-2011)

Year	GDP (per 100 million yen)	Domestic VAT	Proportion of Domestic VAT in GDP (%)
1985	9016.0	147.70	1.64
1986	10275.2	232.19	2.26
1987	12058.6	254.20	2.11
1988	15042.8	384.37	2.56
1989	16992.3	430.83	2.54
1990	18667.8	400.00	2.15
1991	21781.5	406.36	1.87
1992	26923.5	705.93	2.63
1993	35333.9	1081.48	3.06
1994	48197.9	2308.34	4.79
1995	60793.7	2602.33	4.28
1996	71176.6	2962.81	4.16
1997	78973.0	3283.92	4.16
1998	84402.3	3628.46	4.30
1999	89677.1	3881.87	4.33
2000	99214.6	4553.17	4.60
2001	109655.2	5357.13	4.89
2002	120332.7	6178.39	5.13
2003	135822.8	7236.54	5.33
2004	159878.3	9017.94	5.64
2005	184937.4	10792.11	5.84
2006	216314.4	12784.81	5.91
2007	265810.3	15470.23	5.82
2008	314045.4	17996.94	5.73
2009	340902.8	18481.22	5.42

2010	401512.8	21093.48	5.25
2011	472881.6	24266.63	5.12

Source: China Statistical Yearbook 2012

## Appendix 2: Nonlinear TermTest

reg G\_sg g\_vat2

Source	SS	df	MS			
Model	.028297899	1	.028297899	Number of obs =	26	
Residual	.104686194	24	.004361925	F( 1, 24) =	6.49	
Total	.132984092	25	.005319364	Prob > F =	0.0177	
				R-squared =	0.2128	
				Adj R-squared =	0.1800	
				Root MSE =	.06604	

G_sg	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
g_vat2	-.1240564	.0487059	-2.55	0.018	-.2245804	-.0235325
_cons	.0190993	.0142382	1.34	0.192	-.010287	.0484855

## Appendix 3: Unit Root Tests

### ADF Test

. dfuller G\_sg, lags(8) reg

Augmented Dickey-Fuller test for unit root Number of obs = 17

Test statistic	Interpolated Dickey-Fuller		
	1% Critical value	5% Critical value	10% Critical value
z(t)	-2.738	-3.750	-3.000

Mackinnon approximate p-value for z(t) = 0.0677

D.G_sg	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
G_sg						
L1.	-.8959037	.3271881	-2.74	0.029	-1.669581	-.1222269
L2.	.1713688	.2801552	0.61	0.560	-.491093	.8338306
L3.	-.2187381	.3075104	-0.71	0.500	-.9458847	.5084086
L4.	.5754442	.280953	2.05	0.080	-.0889041	1.239793
L5.	.4307822	.3096626	1.39	0.207	-.3014536	1.163018
L6.	-.1397334	.3230167	-0.43	0.678	-.9035464	.6240797
L7.	-.2119191	.2719859	-0.78	0.461	-.8550636	.4312255
L8.	-.3650219	.2579174	-1.42	0.200	-.9748995	.2448557
L9.	-.029565	.2219853	-0.13	0.898	-.5544768	.4953467
_cons	.039414	.015761	2.50	0.041	.0021452	.0766828

### PP Test

. pperron G\_sg

Phillips-Perron test for unit root Number of obs = 25  
Newey-west lags = 2

Test statistic	Interpolated Dickey-Fuller		
	1% Critical value	5% Critical value	10% Critical value
z(rho)	-7.185	-17.200	-12.500
z(t)	-1.989	-3.750	-3.000

Mackinnon approximate p-value for z(t) = 0.2914

DF-GLS Test

. dfgls G\_sg

DF-GLS for G\_sg Number of obs = 17  
 Maxlag = 8 chosen by Schwert criterion

[lags]	DF-GLS tau Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
8	-1.283	-3.770	-3.240	-2.611
7	-1.239	-3.770	-3.014	-2.488
6	-1.379	-3.770	-2.927	-2.471
5	-1.527	-3.770	-2.946	-2.534
4	-3.128	-3.770	-3.043	-2.654
3	-3.176	-3.770	-3.188	-2.805
2	-1.913	-3.770	-3.349	-2.963
1	-2.197	-3.770	-3.498	-3.103

Opt Lag (Ng-Perron seq t) = 3 with RMSE .0366138  
 Min SC = -5.948023 at lag 3 with RMSE .0366138  
 Min MAIC = -5.235958 at lag 1 with RMSE .045623

Appendix 4: Cointegration Rank Test

. vecrank G\_sg g\_vat InvAT2, lags(2) trend(trend) max

Johansen tests for cointegration  
 Trend: trend Number of obs = 24  
 Sample: 1988 - 2011 Lags = 2

maximum rank	parms	LL	eigenvalue	trace statistic	5% critical value
0	15	32.205517	.	43.6434	34.55
1	20	43.796002	0.61935	20.4624	18.17
2	23	52.587452	0.51935	2.8795*	3.74
3	24	54.027201	0.11306		

maximum rank	parms	LL	eigenvalue	max statistic	5% critical value
0	15	32.205517	.	23.1810	23.78
1	20	43.796002	0.61935	17.5829	16.87
2	23	52.587452	0.51935	2.8795	3.74
3	24	54.027201	0.11306		

Appendix 5: Lag Order Test

varsoc G\_sg g\_vat g\_vat2

selection-order criteria  
 Sample: 1990 - 2011 Number of obs = 22

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	54.2107				1.9e-06	-4.65552	-4.62047	-4.50674
1	68.6858	28.95	9	0.001	1.2e-06	-5.15325	-5.01306	-4.55814
2	85.7208	34.07	9	0.000	6.0e-07	-5.88371	-5.63837	-4.84226
3	97.4223	23.403	9	0.005	5.4e-07	-6.1293	-5.77882	-4.64151
4	124.717	54.589*	9	0.000	1.4e-07*	-7.79242*	-7.3368*	-5.8583*

Endogenous: G\_sg g\_vat g\_vat2  
 Exogenous: \_cons

## Appendix 6: Vector Error Correction Model (VECM) Regression Results

Cointegrating equations

Equation	Parms	chi2	P>chi2
<b>_ce1</b>	<b>2</b>	<b>13.92146</b>	<b>0.0009</b>

Identification: beta is exactly identified

Johansen normalization restriction imposed

beta	Coef.	std. Err.	z	P> z	[95% Conf. Interval]
<b>_ce1</b>					
G_sg	<b>1</b>	.	.	.	.
g_vat	<b>-1.105254</b>	<b>.3803794</b>	<b>-2.91</b>	<b>0.004</b>	<b>-1.850784</b> <b>-.359724</b>
g_vat2	<b>1.072796</b>	<b>.3332601</b>	<b>3.22</b>	<b>0.001</b>	<b>.4196184</b> <b>1.725974</b>
_cons	<b>.1160772</b>	.	.	.	.

<sup>i</sup> The difference in ratio depends on whether the denominator is GDP, GNP or GNI, whether the denominator is calculated in factor cost or market price and whether capital consumption is calculated in total value or net value. Public expenditure has the smallest proportion in GDP (market price), while public expenditure has the highest proportion in GNI (factor cost).

<sup>ii</sup> Reform in the VAT was to convert from a producer based VAT to a consumer based VAT. The main aim of the reform was to allow companies to deduct VAT from investment in capital goods.

<sup>iii</sup> In 2011, VAT was 41.1% of the total tax income, while Business Tax was 15.25%. After the changes in the regulation of the Business Tax, the proportion of VAT on total taxation income is expected to increase.

<sup>iv</sup> In 1979, research had been conducted to investigate the practicability of imposing the VAT. Later in 1980, VAT was piloted in the machinery and agricultural machinery industries in selected cities such as Liuzhou, Changsha, Xiangfan and Shanghai, as serious duplication in taxation charges had been observed in these industries. In 1981, VAT had been expanded to products such as bicycles, electric fans and sewing machines. In 1983, VAT was charged in all parts of the country. In 1984, the State Council published the *Provisional Regulations of the People's Republic of China on Value-Added Tax (Draft)*. Some researchers thought that the Regulations had only merely introduced methods of calculating the VAT as there are some many different tax rates and the taxation coverage does not include all products and relevant stages of circulation. In this sense it is not a real VAT system.

