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# Comparison of Electronic Taxpayer Services in OECD Countries and Recommendations for China

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**Abstract** Through comparing development trend electronic taxpayer services in OECD countries and analyzing its drawbacks, it gained beneficial experience of electronic taxpayer services. Then, it came up with policy recommendations for China. It is recommended that China should raise the electronic taxpayer services to national strategy level, improve the efficiency of electronic taxpayer services in line with the taxpayer-centered principle, develop ways of electronic taxpayer services with Chinese characteristics, increase convenience for taxpayers on the precondition of guaranteeing information security, make effort to reduce compliance costs of taxpayers, and promote popularization of electronic taxpayer services with the framework of laws.

**Key words** Taxpayer services, E-government, Whole of government, International comparison

## 1 Development trend of electronic taxpayer services in OECD countries

**1.1 Strategy trend of development of electronic taxpayer services** Since the middle and later periods of the 1990s, OECD countries energetically developed the electronic taxpayer services. They have made considerable progress in service technologies, service approaches, service ranges, and service depth, which are largely benefited from strategic plan of OECD countries for electronic taxpayer services. Strategic plans of these countries take on three characteristics: (1) taking reduction of compliance cost and increasing taxpayer compliance as primary objectives (OECD, 2007, 2010)<sup>[1-2]</sup>; (2) stressing increasing the efficiency of electronic taxpayer services and increasing manpower, materials and funds for technological development and infrastructure construction of electronic taxpayer services; (3) Taking expanding range of electronic taxpayer services, improving service quality, and increasing the efficiency of electronic taxpayer services as their primary strategic tasks (OECD, 2010)<sup>[2]</sup>.

**1.2 Diversified trend of development of electronic taxpayer services** Government of OECD countries, especially tax authorities, rely more and more on electronic service to improve quality of public services and reduce administrative cost (OECD, 2012), and the development of electronic taxpayer services takes on diversified characteristic. Electronic taxpayer services of OECD coun-

tries can be divided into four types: (1) network – based electronic taxpayer service, mainly depending on Internet technology; (2) e-mail taxpayer service, mainly including general e-mail service and security e-mail service; (3) telephone taxpayer service, mainly including telephone voice service, short message service, and call center telephone service; (4) intelligent device service, mainly including the form of self – help taxpayer service device and intelligent mobile phone.

**1.3 Integrated trend of development of electronic taxpayer services** In recent years, OECD countries comprehensively improved automation of taxpayer services, to realize integration of electronic taxpayer service. In the propaganda of electronic taxpayer services, it is mainly to propagate tax policies, guide handling of tax affairs, and provide online consultation services through official websites. Most OECD countries design their electronic taxpayer service websites in accordance with the "taxpayer type standard". For example, Australian Taxation Office (ATO) divided its website into six modules: individual, enterprise, non-profit organization, government organ, tax intermediary, and Australian pension fund according to types of service objects. In declaration of electronic taxpayer, there are clearly more countries providing electronic taxpayer services of major categories of tax, and more taxpayers adopt electronic taxpayer service (OECD, 2010)<sup>[2]</sup>. In Spain, the electronic declaration rate has already reached 100% for individual income tax, corporate income tax, value added tax (VAT), employer information, and income report. Besides, OECD countries also actively promote development of electronic tax payment. Firstly, they make effort to raise the security level of the electronic tax payment system. For example, the United States adopts the highest level of security measure to safeguard transaction through Electronic Federal Tax Payment System (EFTPS). Secondly, they give special authority for electronic tax payment. For example, the United Kingdom provides longer declaration period for taxpayers who use the electronic tax pay-

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ment. Thirdly, they actively promote the electronic tax payment system. For example, New Zealand and the United Kingdom require compulsory electronic declaration of income taxes and electronic tax payment.

**1.4 Information security trend of development of electronic taxpayer services** The data security of electronic taxpayer services mainly involve following aspects. (1) Confidentiality of data: The electronic taxpayer service system must ensure confidentiality of data transmitted between taxpayers and tax authorities, and never disclose to any third party. (2) Integrity of data: The electronic taxpayer service system must ensure that the data transmitted between taxpayers and tax authorities will not be changed during transmission. (3) Non-repudiation of data: The electronic taxpayer service system must strictly prohibit data sender to repudiate or refuse to acknowledge data transmitted by him for any excuse. For example, France adopts 256-bit Advanced Encryption Standard (AES) Secure Sockets Layer (SSL) to ensure data confidentiality; Turkey adopts compressed file format of data package to ensure integrity of data; Australia adopts data backup and contractual terms and conditions to ensure non-repudiation of data (OECD, 2012)<sup>[3]</sup>.

**1.5 Overall trend of development of electronic taxpayer services** With developed countries like the United Kingdom launching the reform of "whole of government", OECD countries universally incorporate the electronic taxpayer service into the "whole of public service" on the basis of "whole of government" concept, and provide whole and seamless public service for the society (West, 2004)<sup>[4]</sup>. OECD countries have widely established single E-government portal, and taxpayers can access to nearly all public services only through logging in the website. For example, Denmark set up a public service website of single point government (www.borger.dk). In this website, taxpayers can access to all related information and realize self-help taxpayer service (OECD, 2009)<sup>[5]</sup>. Secondly, OECD countries have established uniform registration coding system, to rapidly and accurately recognize identity information of taxpayer. For example, Sweden integrated electronic services of Enterprise Registration Bureau, Taxation Bureau, and Swedish Agency for Economic and Regional Growth (SAERG) in 2010, and taxpayers can access to all electronic taxpayer services through the website www.Verksamst.se. Thirdly, tax authorities and other government departments sharing taxpayer information can greatly increase administrative efficiency (OECD, 2010)<sup>[2]</sup>.

## 2 Drawbacks of electronic taxpayer services in OECD countries

### 2.1 Unbalanced development of electronic taxpayer services

In the past decade, electronic taxpayer services had a comprehensive development in OECD countries, but such development is unbalanced. Firstly, the development is unbalanced in different countries. Compared with 2003, the electronic declaration rate of corporate income tax in Belgium and Norway increased 40% and

46% respectively in 2009, while in Turkey and Slovenia, the figure reached 99% and 100% (OECD, 2010)<sup>[2]</sup>. Secondly, the development is unbalanced in different service channels. For over ten years, the network based electronic taxpayer service has kept the stable development trend; telephone service keeps high speed development trend, times of telephone consulting about taxpayer in OECD countries in 2007 increased more than 10% compared with the same period in the last year (OECD, 2007)<sup>[1]</sup>; Canada, South Korea and the Netherlands are no longer to provide taxpayer service through e-mail (OECD, 2012)<sup>[3]</sup>. Thirdly, the development is unbalanced in different service links. Such unbalance is manifested as the development speed of electronic tax payment lower than electronic tax declaration all the time (OECD, 2010)<sup>[2]</sup>. Fourthly, the development is unbalanced in different categories of tax. In general, the progress of electronic taxpayer service (especially the electronic tax declaration) in income tax field is far greater than the progress in turnover tax declaration and employer information and income declaration.

**2.2 High cost of electronic taxpayer services** The primary strategic objective of OECD countries developing electronic taxpayer services is to reduce cost and increase taxpayer compliance. However, in recent ten years, at the same time of making great progress in developing electronic taxpayer services, OECD countries also paid high price, but the effect in cost reduction is not satisfactory. Firstly, the cost for maturity of electronic taxpayer service is relatively high. Secondly, in the process of extension of electronic taxpayer service, the operation training also needs considerable cost. Thirdly, routine maintenance of the electronic taxpayer service system needs much manpower, material resources and financial resources.

### 2.3 Obstacles to extension of electronic taxpayer services

OECD countries widely adopt incentive mechanism and compulsory electronic taxpayer service policies to promote extension of electronic taxpayer services. These measures have really increased the rate of utilization of electronic taxpayer services, but there are still some problems. The prominent problem is that compulsory electronic taxpayer service leads to discontent of some taxpayers. In fact, the compulsory electronic taxpayer service lacks legal basis. Only few countries, including the United Kingdom and New Zealand, have passed the parliament act to promote compulsory electronic taxpayer declaration and electronic tax payment. Besides, extending immature electronic taxpayer declaration and electronic tax payment in a compulsory manner may result in additional administrative burden and taxpayer compliance cost, and excessive complaint and discontent may lead to taxpayer unwilling to use the electronic taxpayer service (Saga and Zmud, 1994)<sup>[6]</sup>.

### 2.4 Conflict between security and convenience and low cost of electronic taxpayer services

In recent years, many OECD countries constantly increase the security level of electronic taxpayer services, and some countries even apply many information security technologies to certain link of electronic taxpayer services. For example, Belgium applies Secure Sockets Layer (SSL)

and Digital Certification (DC) technologies to taxpayer account information inquiry, basic information modification, tax declaration, and secret-involved information of network-based electronic taxpayer services. Besides, too high security technology standard leads to high cost for electronic taxpayer service system and also results in waste of resources. France adopts 256 – bit Advanced Encryption Standard (AES) Secure Sockets Layer (SSL) to ensure data confidentiality, but in fact, the 128 – bit Secure Sockets Layer encryption technology is fully able to ensure data confidentiality; Belgium applies Secure Sockets Layer technology and identity certification technology to guarantee data confidentiality.

### **3 Recommendations about electronic taxpayer services in OECD countries for China**

**3.1 Lifting the electronic taxpayer service to national strategy level** In recent years, China has made considerable progress in network tax declaration and construction of 12366 taxpayer service hotline. However, due to lack of overall strategic plan, the development of electronic taxpayer service falls into wrong path. Due to unclear development goal and direction, the tortuous road is unavoidable in the development of electronic taxpayer service. Therefore, it is recommended to lift the electronic taxpayer service to national strategy level, make clear development goal, direction and tasks, and make overall development plan. The development strategy of electronic taxpayer service should focus on two key points. Firstly, it should make effort to reduce cost. In the aspect of reducing administrative cost, it is recommended to make overall plan in construction of electronic taxpayer service system. In the aspect of reducing compliance cost, it is recommended to simplify processes of electronic taxpayer service, to realize easy and simple operation. Secondly, it should make effort to increase efficiency of electronic taxpayer service. On the one hand, it is required to grasp the taxpayer-centered principle in the design of service processes; on the other hand, it is required to establish performance appraisal system, to promote increase of overall service efficiency.

**3.2 Promoting comprehensive and balanced development of electronic taxpayer services** The core principle of development of electronic taxpayer services is taxpayer-centered principle. Thus, it is required to promote comprehensive and balanced development of electronic taxpayer services, to provide sufficient options for taxpayers and reduce their additional burdens. Options of taxpayers are guaranteed mainly through expanding range of electronic taxpayer services and providing diversified services. At present, the network technology and call center based electronic taxpayer services develop faster and become more mature. Therefore, it is recommended to promote other electronic taxpayer service forms, such as e-mail, telephone, and mobile intelligent device, to constantly expand range of electronic taxpayer services. Reduction of burdens of taxpayers is realized mainly through deepening electronic taxpayer services and providing integrated services for taxpayers. Firstly, it is recommended to constantly ex-

plore potential of existing electronic taxpayer services, let taxpayers obtain all basic taxpayer services through a certain channel, rather than separating demands of taxpayer services. Secondly, for service channels, including e-mail, telephone, and mobile intelligent devices, it is recommended to constantly deepen the taxpayer service functions, and provide more services for taxpayers as far as possible.

### **3.3 Promoting electronic taxpayer services progressively**

Electronic taxpayer service technologies need period of adjustment and maturity, in such period, it is required to improve and optimize electronic taxpayer service technologies. Besides, the society needs a long time of psychological adaptation to electronic taxpayer services, and adjustment of behavioral preference of taxpayers can not be realized in one step. Therefore, it is required to make adequate preparation for long work, make proper top-down design, and promote electronic taxpayer services progressively. Firstly, it is recommended to promote popularization of electronic taxpayer services in the framework of laws, and prudently use the compulsory electronic taxpayer service system. The state should formulate laws and regulations, increase legal status of electronic taxpayer service, and make definite provisions on obligations of government in providing and improving electronic taxpayer services, to gradually realize replacement of traditional tax payment method. Taxpayers are obliged to cooperate with electronic taxpayer services of government. At the early stage of development of electronic taxpayer services, it is required to take care of the use of compulsory electronic taxpayer services. Otherwise, it will bring additional compliance cost to taxpayers. Secondly, government should adhere to taxpayer-centered principle, to satisfy individualized demands of taxpayers through constantly improving and optimizing functions of electronic taxpayer services, so as to increase overall efficiency of the electronic taxpayer service system. On the one hand, demands of electronic taxpayer services should select relevant data and tables according to actual conditions of taxpayers, to reduce time cost of taxpayers. Secondly, electronic taxpayer services should give taxpayers the feeling of traditional taxpayer services as much as possible.

### **3.4 Seeking reasonable balance between security and convenience**

The extension of electronic taxpayer service depends on its security and convenience. There is a reciprocal relationship between security and convenience. No matter in security and convenience, it will influence acceptance of taxpayers and tax intermediaries to electronic taxpayer services, and consequently influence extension and popularization of whole electronic taxpayer services. Therefore, in the process of extension of electronic taxpayer services, it is required to seek a reasonable and effective balance between the security and convenience. At the same time of seeking the balance between the security and convenience, it should note that different categories and stages of tax payment need different security levels, which are restricted by factors, including legal systems, cultural systems, and preference of taxpayers. Differentiated requirements for security levels inevitably re-

quire that the electronic taxpayer service system adopts different information security technologies in different links. For tax declaration and tax payment, it is required to adopt higher level data encryption technology, while for taxation registration and inquiry, general security technology is acceptable.

## **4 Recommendations for development of electronic taxpayer services**

**4.1 Developing channels and forms of electronic taxpayer services with Chinese characteristics** Firstly, it is recommended to develop electronic taxpayer service platform and channel unique to China on the basis of network service products with Chinese characteristics. For example, as a brand-new communication tool based on intelligent mobile phone, WeChat can provide instant communication service similar to Kik and is already widely accepted by the society. In future, the electronic taxpayer service can take advantage of WeChat platform to provide basic taxpayer services, such as tax payment propaganda, inquiry and complaint. Secondly, it is recommended to provide taxpayer services using traditional network tools and platforms according to behavioral preference of Chinese netizens. At present, many tax authorities have set up discussion groups and grass-roots tax authorities also set up discussion groups for inquiry of tax payment, which have provided much convenience for tax authorities and taxpayers. In future, the development of electronic taxpayer services should explore potential in serving tax authorities and taxpayers more deeply.

**4.2 Integrating existing electronic taxpayer service resources** In recent years, the electronic taxpayer service has received remarkable development in China, but there are still many problems. In the first place, taxpayer service links are artificially separated, and taxpayers need handling many formalities to complete entire taxpayer service flow process. In the second place, construction of electronic taxpayer service platform lacks overall plan, and there is serious problem of repetitive construction, which results in severe problem of waste of resources. National tax and local tax systems have different collection and management software and taxpayer service websites, and different levels of tax authorities may also have their own electronic taxpayer service platforms, which consume much manpower, materials and financial resources. In this situation, the development of electronic taxpayer service in China should integrate resources to avoid repetitive construction. Firstly, it is required to integrate national and local tax system collection and management platform, to promote extension and popularization of the third phase of golden taxation project. Secondly, it is recommended to integrate electronic taxpayer service platforms of national and local tax system. In a short period, all provinces should integrate the construction of national and local tax platform, and tax authorities below the provincial level will not set up separate electronic taxpayer service platform. In addition, it is required to provide general format of tax-related documents for convenience of taxpayers filling and downloading. In a long period, it is expected to integrate electronic taxpayer

services of the whole country into a common platform, to break the space limit of electronic taxpayer services.

**4.3 Promoting construction of "whole of government" electronic taxpayer services with the third phase of golden taxation project** In the aspect of longitudinal development, it is proposed to integrate electronic taxpayer service resources according to long-term objectives, to realize high concentration of electronic taxpayer service platform. As to network-based electronic taxpayer services, it should establish national uniform online taxation service hall and provide various basic electronic taxpayer services. In the construction of call center, it is required to unify construction standard and personnel training, set the call center at the general tax bureau, and set up branch centers in provincial tax authorities. In the aspect of horizontal development, it should take the third phase of golden taxation project as opportunity in accordance with the "whole of government" principle, and strengthen communication and cooperation with other departments, to realize share of tax-related information. In a short term, it is required to actively communicate with public security, social security, house registration and land administration departments, to realize networking of the third phase of golden taxation project and databases of all departments, so as to share tax-related information and effectively prevent loss of sources of taxation. In a long term, it should promote electronization, intensification, and integration of entire public services on the principle of "whole of government", and explore the mechanism for sharing information with financial institutions such as banks.

**4.4 Strengthening construction of auxiliary facilities** Firstly, it is required to improve uniform identity system of enterprises and individuals. For enterprises, it means to establish the uniform but unique taxpayer identification number; for individuals, it means to the individual taxpayer identity coding system based on identification card coding system. Existing taxpayer identity coding system has following drawbacks: (1) national tax and local tax have different identification code for the same taxpayer, leading to disorder of basic collection and management data of national and local tax system after the third phase of golden taxation project going online; (2) it fails to realize automatic connection and real-time update of taxation registration of taxpayers in head and branch institutions; (3) for the same taxpayer, especially the case that one individual starts several branch institutions (stores), it has not set up uniform and scientific coding rule, leading to the difficulty in collecting and managing taxes of these taxpayers. Secondly, it is required to accelerate legislation process and provide support for extension of electronic taxpayer services at legal level. In particular, in the selection of channels and ways of taxpayer services, it must fully safeguard selection right of taxpayers. For those aspects related to compulsory electronic taxpayer services, it is required to take protection measure through legislation. Otherwise, compulsory electronic taxpayer services will fall into the situation of lack of legal basis.

(To page 20)

## 4 Conclusions

The healthy and sustained development of agriculture should be supported by agricultural insurance. Under the influence of many factors like market malpractice, agricultural insurance and development are required to be supported by governmental finance. There is close relationship between agricultural insurance depth and agricultural damage degree. The impact of agricultural insurance on reducing damage degree is theoretically analyzed. These two variables are measured and the dynamic relation is discussed with cointegration analysis, error correction model and Granger causality test. The result shows that agricultural insurance depth and damage degree have been stationary since 1997 and both are first-order sequence. The long-term equilibrium relation has been proved. In the long run, there is positive correlation between agricultural insurance depth and the reduction of damage degree. It is tested that agricultural insurance depth is the Granger reason for damage reduction while there is negative correlation in the short term. Moreover, this research also discusses the significance of fiscal support in agricultural insurance development from agricultural production features, fundamental position of agriculture as well as agricultural insurance features. However, what is worth mentioning is that the unstable development of agricultural insurance market is not beneficial to reducing damage. Government should pay attention to modes of financial support, proper selection and perfection of related regulations. Furthermore, governmental intervention in agricultural insurance market may exert unfavorable impact. Excessive intervention and agricultural insurance subsidy may cause huge financial burden, distort the functions of agricultural insurance and decrease the effectiveness of social funds.

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(From page 15)

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