Implementation problems and outlook of the “Environmental Protection Tax Law of the People’s Republic of China”

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Abstract. As an important measure of tax reform adopted by China to realize ecological civilization, the “Environmental Protection Tax Law of the People’s Republic of China” (hereinafter abbreviated as the “Environmental Protection Tax Law”) has been implemented for around one year, but defects of the “Environmental Protection Tax Law” have emerged both in the content of its clauses and its tax levitation and management mechanism. This paper focuses on studying problems with the clause content and tax levitation and management mechanism of the “Environmental Protection Tax Law” at an attempt to propose effective countermeasures for these problems.

1. Introduction
In the work report of the 19th National Congress of the Communist Party of China (CPC), General Secretary Xi Jinping points out, “Ecological civilization construction is a thousand-year plan for sustainable development of the Chinese nation”, and that it is necessary to “implement the strictest ecological environmental protection system, and form the green development model and lifestyle”, and “accelerate establishment of legal systems and policy orientations for green production and consumption”. On January 1, 2018, the “Environmental Protection Tax Law of the People’s Republic of China” (hereinafter abbreviated as the “Environmental Protection Tax Law”), the first of its kind in China, came into force, which levies tax on 117 major polluting factors nationwide, which fall into four categories of pollutants, including air pollutants, water pollutants, solid wastes and noises. Introduction of the environmental protection tax is conducive to promotion of green development and ecological civilization construction, standardization and promotion of environmental law enforcement level, and encouragement of enterprises to control pollution and reduce emissions. After being implemented for around one year in China, the “Environmental Protection Tax Law” has generally realized basic legislation expectations. On the other hand, the high specialization, new taxes, and variety of departments involved have resulted in a series of problems facing the law implementation, which have, to some extent, affected full play of tax policies and tax levitation and management efficacy. Under the above research background, this paper first comprehensively discusses problems existing in the implementation of the “Environmental Protection Tax”. On that basis, countermeasures are proposed to cope with problems with the institutional design and tax levitation and management of the “Environmental Protection Tax Law” at an attempt to boost the improvement of legislation and institutional construction in China.

2. Problems existing in implementation of “Environmental Protection Tax Law”
Problems arising from the implementation of the “Environmental Protection Tax Law” are mainly
reflected in two aspects—clause content and tax levitation and management.

2.1 Incompleteness of clause content

2.1.1 Outdated and narrow-scope taxation objects. The “Taxable Pollutants and Equivalent Value Form” attached to the current “Environmental Protection Tax” inherits regulations of the original pollution charge system on pollutants and equivalent value. The Form can trace back to the mid-1990s, when the former National Environmental Protection Bureau and the World Bank collaborated on the research program, “Reform and Implementation of China’s Pollution Charge System”. The research finding of this research program was adopted by China’s pollution charge reform in 2003. At the historical context of that time, the research finding was comprehensive and foresighted, and had undeniably played a positive role in China’s environmental treatment. With the rapid development of China’s economy and society, however, adoption of new technologies has caused new pollutants. In spite of changes of pollutant discharge, regulations on pollutants and their equivalent value have not yet been immediately adjusted and improved. Consequently, new pollutants, which are hazardous to the environment and the human body, have not been included in the “Taxable Pollutants and Equivalent Value Form”. These new pollutants include non-methane hydrocarbons (NMHC) discharged by furniture plans and printing plants, and dioxin and total nitrogen discharged by treatment of domestic sewage. Meanwhile, there are some pollutants which have not yet been wholly included, such as volatile organic chemicals (VOCs)—a kind of air pollutants which can easily trigger haze. Besides, the current “Environmental Protection Tax Law” pays attention to pollution caused by the production link of enterprises or individuals but ignores environmental pollution generated by the consumption link, and also fails to accommodate to different links which might cause environmental pollution.

2.1.2 Lack of scientific tax rate system. According to the “principle of burden translation”, the “Environmental Protection Tax Law” has inherited the previous fixed tax rate rather than adopted the proportional tax rate. On the one hand, the regulation is more acceptable to the public for it has not increased the overall tax burden of taxpayers. On the other hand, such a tax rate system is not the best choice from the perspective of environmental protection, because the local government, in order to boost local economic development, might considerably decrease the applicable tax rate. For example, the tax rate for tax objects, including air and water pollutants, can be ten-fold different. Besides, compared with countries starting early to levy environmental protection, China still follows a low environmental protection tax rate, which will retard solution of the increasingly worsening issues of environmental pollution.

2.1.3 Difficulty in confirming tax base. Tax base refers to the direct quantity basis to decide the payable tax amount of tax objects. According to the “Environmental Protection Tax Law”, there are four methods to decide the tax base for taxpayers, including online testing, entrusted testing, coefficient method and material balance method, and verification computing method. The former two are based on actual measurement, while the latter two on manual estimation. Among them, online testing date rely on the testing equipment installed by enterprises. Currently, not all Chinese enterprises can undertake the financial burden of installing these testing equipment. Only enterprises under the national or provincial monitoring have realized online testing. Therefore, the installation percentage of online testing equipment to monitor pollutant discharge is still low. In terms of entrusted testing, qualified testing institutions are still small in number and charge a high amount for testing services, which can be as high as hundreds of thousands yuan. Considering the high cost, enterprises will not adopt entrusted testing unless they have to. Since most enterprises do not have testing equipment, and there has not yet been a clear sharing system of entrusted testing fees, environmental protection departments mostly refer to the manual estimation method. Restricted by the human, material and technological resources of the environmental protection departments, the complexity and
large computing quantity of the manual estimation method, and the influence of artificial factors and other discretionary behaviors, the manual estimation method can hardly obtain a convincing tax base. All these factors have posed huge challenges to accurate identification of the tax base for environmental protection tax levitation.

2.1.4 Limited role of preferential tax policies. According to 12.1.3 of the “Environmental Protection Tax Law”, there are preferential tax policies for concentrated treatment of waste water and domestic sewage. However, with the continuous promotion of “streamline administration, delegate powers, and improve regulation and services”, it is difficult for taxation departments to immediately acquire water sewage treatment plants’ illegal discharge information. The preferential tax policies which are directly linked with pollution discharge standard can hardly encourage water sewage treatment plants to effectively reduce pollutant discharge, and the pollution discharge beyond standard or the illegal pollution discharge is still seriously existing in water treatment plants [1]. Additionally, these preferential tax policies might prompt some waste water or domestic sewage concentrated treatment plant to strive to reach the pollution discharge standard only but make no efforts to reduce discharge. Therefore, the current preferential tax policies stipulated in Article 12 of the “Environmental Protection Tax Law” cannot encourage enterprises to reduce their pollutants on the basis of reaching the pollution discharge standard so as to materialize the goal of protecting the environment, stimulation environmental protection technological innovation, and promoting development of the environmental protection industry.

2.2 Obstacles facing tax levitation and management
Tax levitation and management has a close bearing on smooth implementation of the “Environmental Protection Tax Law”, fiscal income of the government, tax burden of taxpayers, and adjusting role of environmental protection tax. Therefore, tax levitation and management has been a major difficulty facing the implementation of the “Environmental Protection Law” [2]. To be specific, the current “Environmental Protection Law” has been confronted with the following environmental protection tax levitation and management problems:

2.2.1 Weak initiative of taxpayers to pay tax and government to collect tax. In the long term, levitation of environmental protection tax is consistent with the economic and social development goals, but in the short term it might reduce the operating income of taxpayers. From the perspective of enterprises, levitation of environmental protection tax will increase taxpayers’ production cost. At present, though the Chinese government has constantly promoted the tax-reduction reform, enterprises are still under a heavy tax burden. Levitation of environmental protection tax will further aggravate enterprises’ tax burdens and costs, reduce the profit margin of enterprises, and weaken competitiveness of enterprises in the international market. In this sense, it is understandable that enterprises’ initiative to pay tax is weak, which might even evade paying tax illegally. From the government’s perspective, the initiative to collect environmental protection tax is also weak. Since levitation of environmental protection tax will unavoidable impair economic interests of enterprises with a large pollution discharge, the local government might compromise with enterprises by intervening in tax departments’ tax levitation behaviors, either directly or indirectly, or regarding their connivance of these enterprises’ arbitrary pollution discharge as a policy support, for the purpose of maintaining their main source of fiscal income.

2.2.2 Lack of cross-department cooperation and smooth cooperation mechanism. The “Environmental Protection Tax Law” clearly stipulates the necessity of mutual cooperation between environmental protection departments and tax departments to levy environmental protection tax. Establishment of the cooperation mechanism between these two departments is a basic condition for environmental protection tax levitation. Whether the cooperation mechanism is complete or not can directly decide whether the environmental protection tax, a new tax type, can be efficiently and smoothly collected.
Apparently, tax departments have the responsibility for tax levitation. From the deep layer, environmental protection departments shoulder more responsibilities of tax inspection and management as well as abnormal data recheck. In terms of information exchange, mutual transfer of social materials cannot be summarized simply by “periodically”. The sweeping regulation is not beneficial for cooperation and coordination between two departments. If the inspection and management of environmental protection departments are defected, and the data recheck is erroneous, tax levitation will be directly influenced.

2.2.3 Difficulty facing adoption of tax levitation and management technologies. Tax objects of environmental protection tax are pollutants, whose discharge is instantaneous. Therefore, measurement of pollutants’ equivalent value requires automatic monitoring equipment or professionals. Though some information technologies have been developed for levitation of pollution charge, more accurate measurement of taxpayers taxable discharge amount should be achieved to ensure fairness and efficiency of tax levitation. Nevertheless, the environmental monitoring information technology in China has not yet realized full coverage. The current technological conditions cannot ensure accurate and timely monitoring of the instantaneous environmental pollution. In other words, environmental protection tax is not so transparent as other turnover tax in that taxpayers of environmental protection tax might use monitoring equipment or technological loophole for tax evasion.

2.2.4 Ambiguity of regulations on right and use of environmental protection tax income. The current “Environmental Protection Tax Law” has not yet clearly specified on the tax levitation right. Meanwhile, there has a huge controversy among academic circles about whether the environmental protection tax income should be defined as the central tax, local tax or shared tax. Environmental pollution is diffusive and cross-regional. If the environmental protection tax is classified as the central tax, the severity of local pollution will be ignored, and the local enthusiasm for environmental protection will be seriously dampened. If the tax is classified as the local tax, the overall environmental treatment effects cannot be effectively guaranteed. Therefore, the environmental protection tax should be deemed as the shared tax, which should be proportionally shared between the local government and the central government. Proportional distribution is an issue at the center of environmental protection tax use, which is, however, not mentioned in the “Environmental Protection Tax Law”. Besides, from the perspective of interest distribution, the pollution charge has been an important fund source of environmental protection departments. If the environmental protection tax is collected by tax departments, the vested interests of environmental protection institutions will, to some extent, be damaged, thus influencing the enthusiasm and initiative of environmental protection organs to collect environmental protection tax levitation.

3. Reform outlook of the “Environmental Protection Tax”

3.1 Immediate revision of regulations on taxable pollutants and their equivalent value
The current “Environmental Protection Tax Law” inherits the previous regulations on pollution charge, which are restricted to a limited number of pollutants. The tax levitation scope is deviated from the legislation purpose of “environmental protection” reflected by the “Environmental Protection Tax Law”. Combining the general survey of pollution sources, taxable pollutants and their equivalent value should be immediately revised under the condition of steady levitation and management of the environmental protection tax. Pollutants with a large discharge and hazardous towards environment and human health should also be included in the scope of tax levitation, such as total nitrogen, polychlorinated biphenyl, NMHC, and dioxin. Meanwhile, the research focus should be on including all VOCs into the scope of tax levitation.

3.2 Optimization of tax computing model and full play of tax rate adjustment
First, the government should improve the taxation base. The taxation base of pollutants should be
identified according to the equivalent value of pollutants. By referring to overseas experience, the Chinese government can change taxation on discharge beyond standard to levitation on total discharge, change the single concentration standard to the standard combining concentration and total discharge. Second, the government should properly improve the tax rate. As mentioned above, the environmental protection tax burden in China is generally lighter than that in Western counterparts. Hence, the taxation intensity can be strengthened considerably by increasing the tax rate standards so as to encourage pollutants’ technological improvement and enhancement of pollution source governance. Third, the government should give full play to the guiding role of differentiated tax rate. The tax rate of environmental protection tax should be adjusted according to economic development and pollutant discharge.

3.3 Strengthening of technological innovation and establishment of cross-department information sharing mechanism
Under the rapid development background of big data, artificial intelligent, mobile Internet and cloud computing, levitation of environmental protection tax should also be equipped with corresponding technological devices, particularly devices accommodating to the instantaneous discharge of pollutants. Environmental protection departments should seek government fund support or social fund support, introduce technological achievements, including Internet of Things, big data, and inspection technologies, and make use of the Internet and cloud computing to realize real-time monitoring, networking at all levels, data integration and information sharing of pollution discharge. In addition, efforts should be made to speed up upgrade of testing devices, which can not only track the environmental monitoring of new pollutants, but also effectively prevent taxpayers from maliciously capitalizing on loopholes of testing equipment for tax evasion or other illegal behaviors. Moreover, an information sharing mechanism should be built between the environmental protection departments and the tax departments. A cross-department information sharing team can be set up, which will make use of big data and cloud computing technology to erect the online levitation platform, and ensure accurate, timely and convenient communication and sharing of data. This can not only largely reduce tax levitation costs, but also facilitate taxpayers’ fulfilment of taxpaying obligation.

3.4 Clarification of department cooperation obligation and establishment of accountability mechanism
The obligation of environmental protection departments and tax departments to work with each other should be just limited to information transmission. Instead, a long-term standardized and legalized cooperation system should be put in place between these two kinds of departments. Systematic and specialized regulations should be promulgated. Environmental protection departments can contribute their professional advantages and tax departments can contribute their data resources and levitation advantages to further clarify their cooperation obligation and improve harmony of cross-department cooperation. Meanwhile, the inspection responsibilities of the third-party institutions should also be pinpointed. For example, environmental protection inspection institutions and environmental protection departments should be held accountable for accuracy, objectiveness and reliability of testing reports and tax base. The focus should be on implementation of the obligation of cooperation. When there are difficulties facing implementation of the obligation or if departments shirk this obligation, the accountability system will be necessary. To prevent buck-passing and inaction, the government should introduce clearly-stipulated punishments. Department personnel going against the environmental protection tax regulations will also be held accountable. At the same time, the cross-department monitoring and public monitoring are important to ensure effective and smooth cross-department cooperation.

3.5 Improvement of preferential tax policies, connection between environmental protection tax and other tax, and reduction of tax levitation barriers
The high threshold of tax reduction is also a problem facing the “Environmental Protection Tax Law”. Article 13 of the “Environmental Protection Tax Law” stipulates two tax reduction thresholds, namely
30% and 50%. However, as Yao Sheng, a member of the National People’s Congress, pointed out, the tremendous difficulty in reducing pollutant discharge concentration by 50% might discourage enterprises \[3\]. With the adjustment of the environmental protection tax levitation scope and tax rate, and the introduction of new taxable items, China’s preferential environmental protection tax policies should not set up thresholds, which are too high, but should adhere to the scientific and rational principles to encourage enterprises to save energies, reduce emissions and seek technological innovation. Apart from the environmental protection tax, there are several other taxes in China’s current tax system, which can also contribute to environmental protection. Moreover, there have been a large number of charge items in the field of environmental protection. This necessitates the coordination between environmental protection tax and other relevant taxes. For example, improve labor distribution and cooperation among environmental protection tax, consumption tax, vehicle and vessel tax in terms of taxation objects; further promote tax rate reform, cancel unreasonable charge in the field of environmental protection, and eliminate repeated tax levitation. Reasonable setting of preferential tax policies and effective combination of various tax types can alleviate taxpayers’ tax burden, and effectively reduce resistance facing environmental protection tax levitation.

4. Conclusions

As an effective legal approach to cope with environmental protection, the “Environmental Protection Law” has gained wide attention in China. However, China is still in the preliminary stage of implementing the “Environmental Protection Law”, which still lacks experience in improving clause content and tax levitation and control, so the above problems and difficulties existing in the implementation process are inevitable. According to the above discussions and analysis, this paper finds out that these problems are mainly reflected in two aspects. In terms of clause content of the “Environmental Protection Tax Law”, the tax levitation objects are too outdated and narrow in scope, the tax rate system is not scientific, the tax base identification is difficult, and the role of preferential tax policies is limited. With regard to tax levitation and management, the initiative of taxpayers to pay tax and the government to collect tax is weak, cross-department cooperation on environmental protection tax levitation is lacking, cross-department cooperation mechanism and use of levitation technologies are faced with difficulties, right and use of environmental tax income are ambiguous. To address the above problems, this paper proposes the following countermeasures: 1) revising and improving current regulations on taxable pollutants and their equivalent value, optimizing tax computing models, and giving full play to the adjusting role of the tax rate; 2) strengthening technological innovation, and building the cross-department information sharing mechanism; 3) further clarifying the obligation of cross-department cooperation and building the accountability system; 4) improving the preferential tax policies, integrating the environmental protection tax with other taxes, and alleviating hindrance of tax levitation and management.

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