Abstract. In the year of 2015, China as a country whose total forest area ranked the 5th in the world and whose total forest area increased the most rapidly in the world during recent years, China’s forestry taxation is undoubtedly noteworthy. This paper studies the major changes in forest taxation purpose in varying phases including the period of transmitting from an agricultural country to an industrialized country, which could provide valuable reference to some developing countries who are still undergoing the transmission from an agricultural country to an industrial country. In ancient China, the major purpose of charging taxes on forests was to collect tax revenue; subsequent to the founding of the PRC but prior to its industrialization, the main purpose of forest taxation was to balance the land allocation between grain production and forestry production; in recent years of post-industrialization, in order to deal with the pollution caused by industrialization and urbanization, the major purpose of charging negative forestry tax, such as initiating some public expenditure projects in forestation and granting some fiscal subsidies to forestry are to make use of forest’s ecological function in environmental protection. This paper also provides reference to transitional economies which are experiencing...
the transformation from planned economy to market economy in the perspective of reforming their forest property right institutions and formulating forestry tax policies compatible with the complexity of varying forest property rights.

**Keywords:** Taxation on forestry, forestry property right

1. Introduction

Since Year 1949 to present, China has developed from an agricultural country to an industrial country, and also transformed from planned economy which was dominated by state-ownership and public-ownership to market economy which includes multiple ownership (including private ownership and foreign capital ownership). During this great historical process, China’s taxation purpose for forestry and its forest property right institution have also changed significantly. The aim of this paper, is to review the evolution in the purpose of forestry taxation, and analyze the changes made to forestry taxation during the transition period when the forest property rights were reformed from dominant state-ownership and public-ownership to multiple ownership inclusive of private ownership.

This paper studies the major changes in forest taxation purposes in varying phases where the changes naturally occurred during the historical period of transmitting from an agricultural country to an industrialized country. Based on the review to the historical evolution, findings showed that the major changes were mainly caused by the improvement in grain production efficiency and industrial production efficiency. Specifically speaking, in ancient China, the major purpose of charging taxes on forests was to collect tax revenue for either the royal family or the government; after the founding of the People’s Republic of China (hereafter: PRC), since China’s population increase rapidly but its grain output did not increase that rapidly, in order to guarantee its grain supply security and prevent the profitable forestry production from occupying too much lands which could also be used for grain production, China central government was forced to purposely charge a relatively high tax on forestry and apparently the high tax rate on forestry was to balance the proportion of grain production and forestry production and curb the competition between grain production land and forestry production land; after China’s grain production efficiency was greatly improved, China government changed its tax policy on forestry by charging lower tax or even no tax on forestry in order to encourage the free development of forestry; since China finished its industrialization, in
order to deal with the pollution caused by industrialization and urbanization, China government gradually paid more attention to the role of forest it played in the maintenance of ecological environment and beautifying of the landscape, and as a measure to encourage forestation China government implemented some public expenditure projects and granted some fiscal subsidies to forestry. In this sense, the changes in taxation purpose for forestry could provide valuable reference to some developing countries who are still undergoing the transmission from an agricultural country to an industrial country.

This paper also provides reference to transitional economies in the perspective of reforming their forest property right institutions and formulating forestry tax policies compatible with their forest property right institutions. As a country whose total forest areas ranked the 5th in the world in year 2015 and total forest area increased the most rapidly in the world during recent years2, the evolution and development in China’s forest property right institution and its forestry taxation are undoubtedly noteworthy.

2. The Evolution and Development of People’s Knowledge on Forest Functions and its Influence on Forest Taxation Purpose

After more than 30 years of continuous economic growth, China is already the second-biggest economy in the world. However, due to lack of forests, China is now still an ecologically fragile country. Its forest coverage in year 2015 is only 21.6%3, far less than the world’s average forest coverage rate of 31%4; its forest area per capita in year 2015 is only 0.15 square


4 The data is sourced from the State Administration of Forestry of the PRC. See: UNFAO 2015 Global Forest Resources Evaluation Report Shows that Global Forest Area
hectometer\(^5\), similar to \(1/4\) of the size of a football yard and only equal to \(28\%\) of the world’s average level\(^6\). Besides the unsatisfactory forest coverage, the pollution of water, soil and air along with the economy development is escalating. What makes it worse is that the first-tier cities such as Beijing, Shanghai and Guangzhou are sometimes enveloped by heavy frog and haze. Chinese people are very unsatisfied with the deteriorating ecological environment and gradually are aware of the importance of environment protection. With respect to people’s need, General Secretary of the Party, Mr. Xi Jinping raised a slogan “we need gold mountains and silver mountains, and we also need lucid water and lush mountains”\(^7\). This slogan emphasized the ecological function of forest, and expressed Chinese people’s desire for having a good ecological environment in this post-industrialized age. Under this background, some scholars started from the aim of protecting forests and preventing deforestation and designed some relevant tax policies from the perspective of pragmatism. Some scholars

\(^5\) The data of the national forest area in year 2015 is 207.69 million hectare (sourced from the official website of National Bureau of Statistics of the PRC, http://data.stats.gov.cn/search.htm?\(s\%)\), (accessed: 11.01.2018) and the total population in the year end of 2015 (sourced from the official website of National Bureau of Statistics of the PRC), http://data.stats.gov.cn/search.htm?\(s\%)\), (accessed on 11.01.2018) is 1374.62 million, thus the forest area per capita is 0.15 hectare (=207.69/1374.62).


\(^7\) On 7 September 2013, General Secretary Xi Jinping gave a speech in Nazarbayev University, Kazakhstan and answered questions raised by the college students. When talking about the environment issue, he pointed out that “we need clear water and green mountains as well as mountains of gold and silver. We prefer to have clear water and green mountains rather than mountains of gold and silver, and furthermore, clear water and green mountains are also equal to mountains of gold and silver.” See J. Xi, Clear Water and Green Mountains Are Equal to Mountains of Gold and Sliver, http://theory.people.com.cn/n1/2017/0608/c40531-29327210.html, (accessed: 11.01.2018).
proposed to impose natural resources tax on forest\textsuperscript{8}; some scholars studied and proposed forest ecological compensation or suggested to charge forest ecological tax\textsuperscript{9}; and some other scholars called for tax exemption and tax reduction for forestry\textsuperscript{10}. However, these previous studies did not make a systematic study on the key factors which influenced the taxation on forests, including the evolution history of people’s awareness of the forest functions and the forest property right institution; nor did these scholars analyze how these key factors influenced the taxation on forests. Therefore, it is hard to judge and evaluate whether or not these suggestions raised by these scholars are justified or feasible.

In order to compensate the shortage in this research field, this paper will review China’s historical evolution and development in people’s awareness of forest classification, functions and development and how these evolution and development influenced the taxation on forests at different phases. This paper will also discuss the influence of forest property rights on the taxation of forests. Upon the historical review and discussion on forest taxation, this paper sets out suggestions on forest taxation which shall be compatible with China’s current forest property right institution and also compatible with people’s latest consensus on the forest functions.

Peoples’ awareness of the forest functions was in a process of continuous evolution and development. Being the representative of its people, government also continuously adjusted its forest tax policies to keep up with the evolution and development of people’s awareness on the forest functions during varying periods. In another word, the historical evolution and development in people’s awareness of the forest functions influenced or even determined the formulation and amendment of forest tax policies. This paper will analyze people’s awareness of the forest functions at different historical phases since

ancient times to present, and will also discuss the justification and rationality of these tax policies by using historical analysis method and comparative approach, and then discuss during this post-industrialization age what function of the forest people should be biased toward and what kind of tax policies the government should formulate in order to respond to this favored function.

2.1 Ancient China’s Preference on Forest’s Fiscal Function and its Influence on the Taxation Purpose

China’s favorable condition to charge tax on forests is that it has a long history of imposing taxes on forests. In ancient China, there was a tax collectively called as “mountain, forest, river and lake tax”11. After the establishment of the PRC, there was a tax called as “agriculture and forest specific goods tax”. These forest tax practice in the past will be discussed in the following passage. These forest tax practice in the past provided valuable references to the discussion of the proposed forest tax policy in the near future.

In Xizhou Dynasty (1046 B.C. – 771 B.C.) the government imposed mountain and lake tax, which was also called as “duty of mountain and lake”.12 According to the original record in an ancient book namely “The Ritual of Zhou”12, the government at that time set nine occupations to employ its people with its third profession called as “Yuheng industry” which focused on exploitation of natural resources produced in mountains, forests, rivers and lakes; the government at that time also established nine tax policies to impose taxes and duties with its eighth policy being aimed to levy taxes arising in mountains and forests; and also the government stipulated nine policies to collect contribution in the form of real goods or materials from its subordinate kingdoms or territories with its fifth policy being aimed to collect the contribution of bamboos and timbers and its sixth policy being aimed to collect contribution of pearls, shells, gold and jade (note: its broad meaning refers to mineral resources)13.

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11 The name of this tax is translated by the author. It is unofficial translation.
12 The name of this book is translated by the author. It is unofficial translation.
13 The is an unofficial translation. It is sourced from an ancient book written in West Zhou Dynasty namely “Zhou Rituals”. The commonly available edition of this book is the Thirteen Classics Explanatory Notes and Commentaries (note: unofficial translation from Chinese to English and this book does not have English translation version) edited by Ruan Yuan during the dominance period by the 7th Emperor of Qing Dynasty (named as “Emperor Jia Qing”), since year 1796 to year 1820, a photocopy of which was published by China Publishing House, first version, 1980, Beijing. For the original quotation in ancient
An ancient politician in ancient state of Chi during Spring and Autumn Period (770 B.C. – 476 B.C.) named Guan Zhong advocated that the woods produced in mountains and hills inclusive of firewood and timber for construction use should be controlled by the state, and the government should open the mountains and hills regularly\textsuperscript{14}. The 5\textsuperscript{th} article of “Scholar, Farmer, Artisan and Merchant” in the Book of “Guanzi”\textsuperscript{15} stipulated the forestry tax rates on various kinds of forests which were located in lower hills, high mountains and flat lands. The tax rate was also depending on the economic value of the timber produced in these forests, for example, whether or not the timber could be used for making wheel of a horse carriage, wooden coffin, horse carriage and boat where the value of these products increased in sequence. The tax rates set out in this article have already considered the taxpayers’ variation in the capability of paying tax.

In Qin Dynasty (221 B.C. – 207 B.C.) and West Han Dynasty (202 B.C. – 8 A.D.), the royal household finance was independent of national finance. The royal household finance was mainly sourced from the income arising in mountains and lakes. The mountain and lake mentioned here was collectively referred to as state-owned natural resources which included forests in mountains and hills, lakes and seas, rivers, grasslands, gardens and ponds, etc. Income arising in mountains and lakes meant the rent income charged on the persons who exploited these natural resources. However, at that time the tax on these natural resources duty was called as neither rent nor tax, but called as contribution. Since East Han Dynasty (25 A.D. – 220 A.D.), Emperor Liu Xiu began to combine this royal household revenue into national finance, and in the following years this come was gradually transformed to various kinds of agricultural specific taxes, such as what were called as salt tax, tea tax, mineral tax, bamboo and wood tax and so on\textsuperscript{16}.

\begin{quote}
Chinese, see: 《周礼天官冢宰第一・大宰》 “以九职任万民……三曰虞衡，作山林之材……以九赋敛财贿……八曰山泽之赋……以九贡致邦国之用……五曰材贡，六曰货贡……”, which is available in https://shici.chazidian.com/wenyanwen56775/, (accessed: 14.01.2018).

\textsuperscript{14} Guang Zi, The Light and Heavy, written during the Warring States Period (475 B.C. – 221 B.C.) and the Qin and Han Dynasties.

\textsuperscript{15} The book was written during the Warring States Period (475 B.C.–221 B.C.) and the Qin and Han Dynasties. Book of “Guanzi” was a book recording the deeds of words and deeds of Mr. Guan Zhong and his followers.

\end{quote}
Based on the aforementioned review of forest taxation in varying dynasties, ancient governments were more biased to forest’s fiscal functions rather than its ecological function. In ancient times, natural forests supplied to people wood and timber, wooden carbon, bamboo, tea and other economic resources. As a tradition or commonly accepted routine, the royal household possessed the ownership of these forest resources. However, it was impossible for the royal family members to harvest these forest resources by themselves, and as an alternative solution the royal family opened the forests to its people and as a return it imposed certain forest taxes or duties in order to cover the cost of exhausting its natural forest resources and also to compensate the costs of re-planting trees and cultivating these trees. In ancient times people did not pay much attention to forest’s ecological function. This is not hard to explain, since in ancient times, there were no modernized industries but only handcraft industries and the size of handcraft industries in ancient times was limited, which did not cause much pollution to the natural environment. Since the harm to ecological environment was limited, governments in ancient times did not see forest’s ecological function as a factor which should be given special consideration when the governments tried to formulate their forest tax policies.

Nevertheless, ancient governments in China did organize people to plant trees along both sides of the main roads in order to offer shadow for passengers\textsuperscript{17}. Ancient governments in China such as Song Dynasty (960 A.D. – 1279 A.D.) also arranged to plant intensive forests in the northern and western borders in order to defend the cavalry of the nomadic people\textsuperscript{18}. Intensive forests could effectively slower the speed of these cavalry troops and buy time for the local governments to transmit urgent military messages to other inland areas and also buy time for organize military force for defending these cavalry troops. But this military defense function assumed by forest in ancient times was not treated as a mainstream function.


2.2. PRC government’s Preference on the Forest’s Regulatory Function since the “Supporting Grain Production and Curbing Forestry Development Age” to “Balancing Grain Production and Forestry Development Age”

In order to regulate the yielding rate of grain crops and other economic crops, and to prevent the other economic crops from occupying more lands which were supposed to be used to produce grains and encourage grain production\(^{19}\), on 12 November 1983, China State Council promulgated a circular namely “Several Stipulations on the Imposition of Agriculture Tax on Agriculture and Forest Specific Income”. This circular put forest goods into the taxation scope of this agriculture tax. The forest goods income mentioned in this circular include gardening income and wood income. The gardening income was referred to as fruits, tea, mulberry trees of which leaves shall be used to feed silkworms, flowers, nursery stock, Chinese medical herbs, etc. Wood income was defined as income sourced from bamboo, wood, natural rubber, oak trees being used to feed Chinese tussah silkworms, woody oil-bearing plants, raw lacquer, and other tree goods. The tax rate for this agriculture tax on agricultural specific goods was ranging from 5% to 10%. Every provincial, autonomous regional and autonomously municipal government shall determine its own tax rates for different types of agricultural and forest goods on the basis of profit level for each type of goods but not lower than the actual tax burden level for grain lands. For some kinds of goods which are profitable, the tax rates may be raised on a reasonable basis but not exceeding the maximum level of 15%.

In order to collect tax revenue sourced from specific agriculture goods and forest goods and to balance the tax burden between these specific goods and grain crops as well as other economic crops, and to stabilize the grain production, the State Council promulgated another circular namely “Notice on the Improvement of Administration and Collection on Agricultural Forest Specific Tax” on 13 March 1989 and decided to charge agriculture and forest specific goods tax since the year of 1989 and implement nationally unified tax rates and among these tax rates the rates involving forest goods be set out as: 10% for fruit income, but 15% for

orange, banana, litchi and apple income; 8% for log income, but forestry enterprises being exempted of tax temporarily.

In the practice, every region was also permitted to raise the tax rates to a maximum level not exceeding 30% for some goods which generated handsome income or occupied grain lands. Upon decision of the provincial, autonomously regional and autonomously municipal government, a local surcharge was permitted to levy with its surcharge payable not exceeding 10% of the taxable amount of agriculture and forest specific goods tax. 

On 30 January 1994, the State Council promulgated “The Stipulation on the Imposition of Agriculture Tax on Agriculture Specific Goods Income” (State Council Order No. 143) in which the State Council determined to charge agriculture specific goods tax on some specific agriculture goods. The forest income items involved by this order mainly include: (1) gardening income such as income sourced from sales of fresh fruit, dry fruit, raw tea, silk cocoon, medicine herbs, various melons as an alternative of fruits, flower, seedling of economic forest, etc; (2) timber income from sales of bamboo, log, raw lacquer, natural rubber, natural resin, woody oil-bearing plant, etc.

Since year 2000 China began to implement a pilot reform21, the major content of which was to adjust the agriculture specific goods tax in order to relieve peasants’ or forest peasants’ tax and fee burden. In the year of 2004, the state council determined to suspend the collection of agriculture specific goods tax except for the collection of tax on tobacco leaves. On 17 February 2006, the agriculture specific goods tax was annulled. The reason of abolishing the agriculture specific goods tax was interpreted as “since the agriculture specific goods tax established in year of 1983 was to balance the profit level between grain crops and economic crops, to avoid economic crops occupy more cultivated lands and to encourage

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20 Circular namely “Notice on the Improvement of Administration and Collection on Agricultural Forest Specific Tax” issued by the State Council promulgated on 13 March 1989.


23 Decree of the State Council no. 459 released on 27 Feb 2006 by the State Council of the PRC.
grain production, after 20 years development the situation has changed greatly. Under the new circumstance that grain yields are far more than demands, the continuous imposition of agriculture specific goods tax is not good to either adjust agriculture structure or improve the international competitiveness of Chinese agricultural products.”

2.3. People’s Preference to Forest’s Ecological Function in this Post-Industrialized Age and Discussion on the Tax Policies Compatible with this Preference

Since China’s entry into the WTO, its foreign trade continuously grew and its manufacturing industries developed rapidly. Within twenty years it has developed into a “World Manufacturing Base”. However, industrialization also generates harmful effects to China, including the exhaustion of its natural forest resources and the deterioration of ecological environment. These negative effects are pushing Chinese people and their governments to pay more attention to forest’s ecological function.

2.3.1. The Preference to Forest’s Ecological Function in Post-Industrialized Age

China’s traditional forest areas are facing the crisis of forest ecosystem degradation and even no forest for harvest. China’s state-owned forest areas are composed of 138 state-owned forestry bureaus, mainly located in North East of China, Inner Mongolia, South West of China and North West of China. The key state-owned forest areas in North East of China and Inner Mongolia have conducted a long-term excessive deforestation

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25 See the statistics on China’s total investment to curb environmental pollution (year 2000–2015) in the annex, which shows how the total investment to curb environmental pollution increased rapidly within 15 years. This is an evidence to reflect the urgency to curb environmental pollution by China government.


and its workable forest reserves have been exhausted\textsuperscript{28}. Sixty forest bureaus of the eighty-seven forestry bureaus have been in a situation of having no forest for harvest and forest ecosystem severe degradation\textsuperscript{29}. After the implementation of Natural Forest Resources Protection Project (hereafter briefly called as “Natural Protection Project”) by the forest areas both in South West of China and North West of China, these two forest areas have ceased their commercial harvest of timber.

In order to protect domestic forest resources, China governments take a series of measures, such as returning the grain plots to forests, protecting natural forests, replacing domestically-produced timber with imported timber. In year 2014, the State Council ratified a “Overall Plan for a New Round of Returning Grain Plots to Forests”\textsuperscript{30} and under this plan federal government would pay RMB1500 within five years to each family who agreed to return the grain plots to forests.

China also implemented a few national forestry key ecological projects. For example, for the year 2014, China’s completed investments in forestry key ecological projects reached the amount of RMB 66.59 billion, which increased by 24.21\% than year 2013\textsuperscript{31}. Among these projects, the size for natural forest resources protection project, returning grain plots to forest project, Beijing and Tianjing sandstorm source control project, the three Norths shelter forest project\textsuperscript{32} and shelter belt in Yangtze River basin were 410.5 thousand hectares, 379.6 thousand hectares, 239.1 thousand hectares and 898.7 thousand hectares respectively\textsuperscript{33}.


\textsuperscript{32} Three Norths means northwest China, north China and northeast China.

In order to protect domestic forest resources, China is importing timber from overseas markets in order to balance the deficit between limited domestic supply volume and huge demand volume. In year 2015, USA and Japan were China’s major forest products export markets; USA, countries in South East Asia, Canada and Russia were China’s major import markets.

2.3.2. People’s Consensus on Forest’s Major Functions Determines its Fiscal Characteristics: As Public Goods or Private Goods?

Forest functions and positioning stipulated by Forest Law and relevant regulations determine a forest’s tax related nature. If a forest is defined by law as public goods, the beneficiaries who benefit from the public goods should pay taxes to the supplier of the public goods in order to cover the costs of offering the public goods. Generally speaking, the supplier or the owner of this public goods is federal government or local governments, or the agents appointed by the government, i.e. state-owned enterprises, and sometimes government could also purchase these public goods from private enterprises.

If forests are treated as pure private goods or private assets, government has every reason to treat forests the same as other private goods. Government would charge income tax on the forest producers, or charge value added tax on the forest products or charge property tax on the owners of the forest assets.

If forests are defined as semi-public goods by law, which has both the characteristics of public goods and private goods, the fiscal and tax policy would become more complicated. The fiscal and tax policy for forests should be a mixed policy, combined with the tax treatments for both pure public goods and private goods. The characteristic of being a public goods means forest beneficiary shall pay tax to the government in order to cover the costs of planting and cultivating forests. In another word, the holders of the forests or the forest-planting enterprises shall have chance to receive fiscal subsidies. On the other hand, the characteristic of being a private goods means the producers of forest goods or holders of the forests as well as the forest-planting enterprises shall not be qualified to enjoy fiscal subsidies and thus shall have its tax treatment be the same as other ordinary goods or service or other immovable property owners.

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2.3.3. The Diversity in Forest Functions Justifies and Facilitates China’s Implementation of Distinguished Tax Policies on Forest

The diversity in forest functions justifies and facilitates China’s implementation of distinguished tax policies on forest. China’s current forest classification system separates forests into shelter forests, timber stands, economic forests, firewood forests and forests for special uses\(^{35}\).

Shelter forests are defined as forests, trees and shrubberies that mainly serve the purpose of protection, which include forests for water and soil conservation, for windbreak and sand-fixation, for farmland and pasture protection, and for protection of river bank and roads\(^{36}\).

Timber forests are defined as forests and trees mainly used for producing timber, including bamboo groves which are mainly aimed at producing bamboo timber\(^{37}\).

Economic forests are defined as trees mainly used for the production of fruits; edible oils, beverage ingredient, industrial raw materials and medicinal materials\(^{38}\).

Firewood forests are defined as trees mainly used for producing fuel wood\(^{39}\).

Forests for special uses are defined as forests and trees that are used mainly for national defence, environmental protection and scientific experiments, inclusive of national defence forests, experimental forests, seed stands, environmental protection forests, forests trees at scenic spots, historical sites and places of historical significance in the Chinese revolution and forests in nature reserves\(^{40}\).

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\(^{35}\) Article 4 of Forest Law of the People’s Republic of China, adopted in the Seventh Meeting of the Standing Committee of the Sixth National People’s Congress on 20 September 1984, and revised by the Second Meeting of the Ninth National People’s Congress Standing Committee on 29 April 1998.

\(^{36}\) Article 4 (1) of Forest Law of the People’s Republic of China. The official translation version of this law is accessed in the official website of the National People’s Congress: http://www.npc.gov.cn/englishnpc/law/2007-12/13/content_1383970.htm, 3.04.2018. Articles hereafter quoted from this Forest Law are also sourced from this official translation version.


From the above definitions, timber stands, economic forests and firewood forests obviously could be theoretically treated as profit-making forests and thus they have the possibility of bearing tax burden but in practice it still depends on their owners’ capability to pay or bear tax. The reason to charge property tax on these profit-making forests is the similar to the reason of charging real estate tax on commercial-purpose real estates.

At present China’s shelter forest and forests for special use are prohibited from cutting except for the forest felling which serves for cultivation and regeneration purposes. This prohibition makes it impossible for the owners of these protection forests and special use forests to recover their forestation costs and thus these owners do not have the capability to bear forestry tax. Therefore, it does not make sense to charge forestry tax on these forests or these forest lands. In view of the functions of these special use forests and protection forests, they should be treated as pure public goods of which the beneficiary are national people or at least local residents. Therefore, the special use forests and protection forests should not be subject to forestry tax and instead they should enjoy the grants or subsidies from either central government or local governments so as to cover their forestation costs.

Some special use forests, such as wind protection forests, generate positive effects such as environment protection effect, ecological effect or beautiful scenery effect and so on. These positive effects cause some groups to enjoy the spill-over effects. According to the “who benefit, who pay tax” principle, these benefit group should pay more forest compensation fees than other groups who do not benefit from these effects. This distinguished treatment is justified by tax fairness.

As a summary to the above analysis, China’s forest classification system provides necessary technical support for granting distinguished tax treatments to different kinds of forests. Charging forestry tax on commercial purpose forests and subsidizing / paying ecological compensation to public purpose forests could balance the need for developing economy and protecting environment.

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3. DISCUSSION ON THE INSTITUTION OF FOREST PROPERTY RIGHT AND THE FORESTRY TAXATION IN COMPATIBLE WITH THIS PROPERTY RIGHT INSTITUTION

Prior to make a decision on whether or not to impose forestry tax, the institutions related to the imposition of forestry tax should be discussed, and then the logical relationship between these institutions and taxation on forests should be clarified. Only based on understanding of this correlation, could the forestry tax system being compatible with these institutions be designed. Logically speaking, these institutions are the foundation for imposition of forestry tax, no matter the country charging this forestry tax is China, Poland or other countries, and no matter these institutions are already established or these institutions are not yet in place but need to be established before imposition of forestry tax. Among these institutions, the most important institution is the forest property right institution.

For instance, assuming in a country which implements forest private ownership, a forest land is owned and possessed by an individual or a family, under this situation, either the imposition of property tax on this forest land or imposition of forestry tax on the cutting of trees located in this forest land appears reasonable and feasible. However, assuming in a pure public ownership country or in a transitional economy which is in a transition from a public-ownership economy (or planned economy) to a market economy, it is meaningless for the government to charge property tax on state-owned forest land or charge forestry tax on the cutting of state-owned timber, because this taxation charged to the owner of forest is equal to the government’s imposition of forestry tax on government itself. In another word, if all the forest lands are exclusively owned by the government in the name of the whole people, it does not make sense to charge forestry tax on these forest lands since it is like a monopoly landlord of these forest lands charges forestry tax on his own forest property. It is economically inefficient since the imposition of taxes would cost tax collection and administration costs and it does not increase the only one landlord’s revenue, or change the situation of income distribution or wealth distribution.

Therefore, prior to study the forestry taxation, it is necessary to do a theoretical analysis on the forest property right institutions.
3.1. A Discussion of the Institution of Forest Property Right and the Foundation for Charging Forestry Tax from a Theoretical Perspective

Before imposition of any taxes, the tax authority needs to know where the tax source is, and similarly the charging of forestry tax should follow this sequence. For the convenience in determining a property benefits / interests linked with forest, Chinese academic scholars and people in forestry industry created a new word called “forest right”, which is used frequently in practice. Forest right institution determines a package of benefits or interests which are closely connected with or derived from the ownership, use right and beneficial right of forest. In this sense, the new word “forest right” is not a lawful word but a word commonly used in practice.

3.1.1. Who Holds the Forest Property Right Means Who Is the Potential Taxpayer of Forestry Tax

If according to the forest right institution we could identify who is possessing the benefits derived from forest rights, it means we find the potential taxpayer of forestry tax. Logically speaking, a person without forest property right is not capable of paying forest property tax. From economic efficiency perspective, if the forest-related property right is possessed and managed by an individual or an enterprise, it is more convenient and feasible to charge property tax to the individual or enterprise. Comparing with charging taxes on numerous consumers of forest goods or forest peasants, charging forestry tax on the person who possesses forest right is easier, simpler and more cost efficient.

3.1.2. The Shares of State-owned, Collectively-owned and Privately-owned Forests Determines a Nation’s Net Revenue from Forestry Tax

The shares of state-owned, collectively-owned and privately-owned forests determine a nation’s net revenue from forestry tax. A nation’s charging tax on state-owned forests is like taking money from the nation’s one pocket and then putting the money in its other pocket, without increasing any tax revenue and what makes it even worse is that this taxation behavior would incur unnecessary tax administration costs and thus decreases the nation’s net revenue. Undoubtedly this is not economically efficient. On the contrary, if a nation’s government charges tax on collectively-owed forest or privately-owned forest, government’s net revenue would increase.
3.1.3. The Proportion of Domestically-owned Forests over Foreign-owned Forests Determines the Extent of Urgency in Imposing Forestry Tax

Privately-owned forests could be separated into domestic-private-capital-owned forests and foreign-capital-owned forests. Whether or not the proportion of these two kinds of capital is significant determines the extent of urgency in starting to charge forestry tax. If foreign capital owns a significantly share of a nation’s forest resources, it means that this nation’s government needs to charge forestry tax on foreign capital as soon as possible. By this taxation, the nation’s government could participate in the income distribution and prevent this nation’s natural forest resources from being deforested and exhausted and thus prevent this nation’s wealth from flowing out. In the opposition, if most of forest resources are still possessed by domestic private capital, even though a nation’s government does not bother to charge tax on forest or delays in charging forestry tax, it does not trigger a big-scale outflow of a nation’s net wealth but only causes most of forest-related wealth are possessed and hidden by this nation’s citizens or residents.

3.1.4. Forest Property Right Circulation Institution Create Market Price Which Is the Basis for Charging Forest Tax in the Form of Ad Valorem Duty

Assuming there is an institution which allows the circulation (or called as trading) of forest rights and also allows the establishment of platforms for trading of these forest rights, this arrangement would activate the trading of forest rights. Active and frequent trading of forest rights means the market price of forest right would be generated through this market mechanism. If this forest right trading market is a free trading market, the forest right trading price arising from this market would be a fair and reasonable market price, and thus this forest right trading price could be serve as a market means to measure the value of the tax base for property tax, value added tax or capital gains tax on forest property. This market price of forest right trading is the foundation for the tax authority’s taxation on forest.

In the absence of the forest right trading market, it would be very difficult for the tax authority to charge forest-related taxes, no matter these taxes are forest property tax, value added tax on the transfer of forest land or capital gains tax on the transfer of forest land, because no objective comparable market price is available to the tax authority and thus the tax base is hard to measured. Even though the tax authority could use other alternative assessment methods such as future cash flow method, cost of
re-purchase method or cost of re-forestation method, these alternative methods are heavily relied on subjective assumptions and are not as objective and reliable as the genuinely occurred market transaction price. And these alternative methods are very complicated and thus increase tax administration costs. In a word, cash flow method, cost of re-purchase method or cost of re-forestation method are less objective and less reliable than fair market value for the assessment of forestry tax.

3.2. Discussion on China’s Existing Forestry Property Institution and the Compatible Forestry Taxation from an Empirical Perspective

The aforementioned discussion focuses on the linkage between forest property right institution and forestry taxation. The following passage will further discuss what kinds of taxes are possibly compatible with the existing forest property right institution and relevant forest law and practice from an empirical perspective.

3.2.1. China’s Diversities in Forest Property Rights Make it Possible for Taxation on Forest

China’s forest ownership is public ownership, including state-ownership and collective-ownership. Private persons do not have forest ownership but are allowed to do contract afforestation and enjoy the forest land use right and timber ownership according to the contract. The provisions about forest ownership, timber or trees ownership and forest land ownership are mainly contained in the Constitution and Forest Law.

Provision 9 of China’s Constitution stipulates that all mineral resources, waters, forests, mountains, pasture, uncultivated land, beaches and other natural resources are owned by the state, and, for the whole people, excluding the resources which are owned by collectives as described by the law.42

Provision 3 of Forest Law stipulates that “Forest resources shall be owed by the state exclusive of the forest resources which are owed by the collective as stipulated by the law. For the forests, trees and woodlands owned by the state and the collective and the trees and woodlands owned by private individuals... the legitimate rights and interests of these owners and users

shall be protected by the law; no organization and private individual shall breach such rights and interests.”

Provision 7 of Forest Law stipulates “The State protects the legitimate rights and interests of forest growers… the State protects the legitimate rights and interests of the collectives and private individuals who have contracted for forestation.”

The above provisions admits the diversities in forest rights, which are described as different entities’ ownership, use right or other relevant economic interest relevant to forests. These various forest rights are seen as a kind of property. The “privatization” in forest rights makes it possible to charge a property tax on these rights.

3.2.2. State-owned Forest Resources are the Economic Foundation for the Imposition of Natural Resources Tax on the Exploitation of Timber

The state-ownership of forest resources is the economic foundation for charging natural resources tax on the exploitation of forest resources. State-ownership of forest resources means the government represents the state to hold the ownership of the forest resources. Private individual or private enterprises who want to cut the trees or exploit the forest resources should pay a reasonable compensation fees to the government in accordance to the market rule in order to cover the costs caused by the exhaustion of natural forest resources and also to finance the re-planting and cultivating trees in this forest land. Only by this means, could the government maintain the size of the existing forest areas. In this sense, the government should be entitled to the right to charge compensation fees on the exploitation of forest resources.

The way of charging compensation fees could vary depending from country to country. For instance, government may impose a natural resources tax, charge rent, collect permission fee or license fee to private capital. Russia’s practice offers many experiences in this regard: “In accordance to the existing forest law, the government charges forestry tax and rent fee to the persons who make use of forests. Forestry tax is a fee

charged for the short-term use of federal forests and rent fee is to pay for the long-term lease of forests.\(^{45}\)

3.2.3. Private Land Use Right and Ownership of Timber Expand the Sources of Property Tax

The private real right arising in the circulation of forest rights is the premise for charging property tax on forests. In planned economy period, forests are either state-owned or collective-owned and at that time private capital or forest peasant is not qualified to possess any forest rights. In another word, forest, forest land and tress do not belong to private person or private capital and thus the condition for charging property tax is not available. However, with the forest rights confirmation and forest right circulation being in place in recent years, the use right of some state-owned or collective-owned forests or forest lands have been transferred to private capital or private peasants and the relevant forest rights become private properties of private capital or private peasants. This offers realistic foundation for the imposition of forestry tax.

3.2.4. State-owned Forest Land and Collectively-owned Forest Land Should Be Treated as the Sources of Property Tax

Is it reasonable to charge property tax on the forest lands owned by either the state or the collective? Recently, China’s state-owned forest lands are generally possessed and operated by forest stations which are of enterprise nature. Collective forest lands are also held and operated by relatively independent economic units, collectives. State-owned forest stations and collectives holding forests are lawfully independent economic entities and have their own autonomy in operation and also have their independent economic interests. The forest lands or trees held by these economic entities should belong to their properties. Therefore, state-owned forest stations and collectives holding forests have their own independent properties and are capable of paying property tax. Furthermore, some of these state-owned stations and collectives holding forests are also carrying out profit-making tree plantation and timber sales activities. They are competitors to

\(^{45}\) The ways of leasing forests are categorized into two kinds: short-term lease and long-term lease, where the short-term lease is ranging from 1 to 5 years while the long-term lease is ranging from 1 to 49 years. See Lin Xin, *Review of Russian Forestry Administration System*, “China Forestry Industry”, 2008, no. 5, pp. 116–118.
private capital who runs forestation business in a fair market. Therefore, if the government intends to charge property tax on either forests or forest lands, these state-owned forest stations and collectives who are holding forests should also be treated the same as other taxpayers who are either private persons or private entities. They should not enjoy forest property tax exemption merely because of their state-ownership or collective-ownership.

In China, it is not hard to find a precedent case for implementing equal tax treatment regardless of the diversities in taxpayers’ ownership. For instance, China’s existing real estate tax is a property tax. According to Provision 5 of China’s provisional regulations of real estate tax, government authorities, institutions and army force are not qualified to enjoy the exemption of real estate tax provided their real estates are used for commercial purpose (i.e. lease or commercial business) other than officially self-use purpose.

From the above precedent case, China does not grant distinguished treatment on the same commercial activities in the perspective of real estate tax even though these activities are performed by public entities or these real estate are owned by public entities. Technically speaking, real estate shall be categorized as immovable property and similarly forest lands also shall be classified as immovable properties. In this sense, by making reference to the above precedent case, there is no reason to grant distinguished tax treatment to profit-making forest lands even though the ownership of these forest lands is different.

Poland charges forestry tax on the ownership of forest land, where the Polish forestry tax is of the nature of property tax.46 According to the statistics, Poland has forest areas of 8.732 million hectare and its forest coverage rate reaches 28.7%.47 Its state-owned forests accounts for 83%, private-owned forests accounts for 17%.48 Among its state-owned forests, 94% of the state-owned forests are managed and operated by state-owned forestry enterprises and the rest of 6% state-owned forests are managed

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47 The statistics about Poland’s forestry are sourced from the official website of State Administration of Forestry. See http://poland.forestry.gov.cn/ (accessed: 11.01.2018).

48 See above.
and operated by national parks and other national organizations\textsuperscript{49}. From the perspective of forest functions, Polish state-owned forests are separated into production forests, defense forests, and cutting prohibited forests. From these statistic data, it is obvious that even though Polish state-owned forests account for 83% of the total forests, the state-ownership does not become a reason to prevent the Polish government from charging forestry tax on state-owned forests. Similarly, if China charges a similar property tax on forests or forest lands as Poland, it does not seem to have impassable law obstacle in the tax system.

3.2.5. Taxation on Holding of Forest Lands is Helpful to Curb the Phenomenon of Forest Lands Desolation

Imposition of forestry tax would increase the cost of holding forest lands and thus be helpful to curb the phenomenon of forest lands desolation. China has experienced years of forest rights confirmation and forest rights circulation. After the collective forest lands were contracted to forest peasants or circulated to private capital, however, the clarification of property rights did not necessarily bring about the improvement in forest operation efficiency. Since the investment cycle of operating a forest land is a long-term period, the investment rate is not competitive with other industries. Therefore, in practice some forest peasants abandoned the forest lands contracted to them and then left their homelands and immigrated to cities in order to look for well paid jobs. Some private enterprises do not re-plant young trees by the end of the year or by the following year after they cut the trees as required by the circulation contracts, and in another word, they just deforest and exhaust the available forests as rapidly as possible. All these behaviors cause the idleness of forest lands. In this sense, imposition of forestry tax is helpful to curb the phenomenon of forest lands desolation.

4. Conclusions

People's knowledge on the functions assumed by forestry taxes has experienced a long-term process of gradual evolution and development. In ancient China, due to the low productivity level and less developed industries, people relied on natural forests to obtain the necessary materials

\textsuperscript{49} See above.
for their production and life, and naturally people at that time were more concerned about forest's economic function. Similarly, either the royal family or government at that time was biased toward the fiscal function assumed by forestry taxes. Since ancient China was not very densely populated, the competition or contradiction between grain crop lands and forest lands was not that sharp. In view of this reason, the government in ancient China did not need to implement specific policy to intervene and regulate the proportion of land areas between grain crop and forest.

After the founding of the PRC in 1949, China has enjoyed many years of peace. At the age of Chairman Mao Zedong, China government believed in “there is strength in numbers” and the underlying birth policy was characterized as free and tolerant. Under this background, China's population increased rapidly after the founding of the new country. But at that time, constrained by the less development in agricultural techniques, limited capital input and low utilization rate of chemical fertilizers as well as the peasants’ lack of production initiatives and enthusiasm in the People’s Commune Period, the unit output of grain crops was not satisfactory. In order to ensure sufficient grain supply to the huge population, China government was forced to do a trade-off between grain crop lands and forest lands. The result turned out to be the grain crop lands were set at high priority and forest lands were not allowed to occupy the lands reserved for grain crops. At that time, plantation of some forest goods, such as fruits and teas, did generate a higher yielding rate than grain crops. Peasants were rationale economic persons and naturally tended to plant these profitable

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50 The population in end of 1953 was around 594.35 million; the population in the year end of 1964 was 694.58 million; the population in the year end of 1982 was 1008.18 million; the population in the year end of 1990 was 1133.68 million and the population for year 2000 was 1265.83 million (for the source, see Figure 4-4, Basic Statistics on 5th National Population Census of “2002 China Statistical Yearbook” published by National Bureau of Statistics of the People’s Republic of China, Beijing (available in http://www.stats.gov.cn/yearbook2001/indexC.htm, (accessed: 14.01.2018).

51 In year 1949, China’s grain production volume was 113.2 million tons, grain production volume per capita was 210 kg; and the total grain production volume in year 1978 was 304.8 million tons (for source of these grain statistics, see the white book of “China’s Grain Issues” published by the Information Office of the State Council of the PRC in October of 1996 in Beijing). The grain production volume per capita in year 1995 was 380 kg (including beans and potato and sweet potato, sourced from the white book of “China’s Grain Issues” published by the Information Office of the State Council of the PRC in October of 1996 in Beijing) and reached world’s average level.
forest goods rather than grain crops. In order to curb or constrain the plantation of forest goods and encourage the enlargement of grain crop areas, China government charged a high tax on these forest goods. At this time, forestry tax was utilized as a policy tool for regulating the proportion between grain crop plantation area and forest goods plantation area.

Since 1980s, along with the widespread promotion of hybrid rice and the commonly usage of chemical fertilizers as well as the fundamental land institutional reform named as “Household Contract Responsibility System” which greatly encouraged peasants’ production initiatives and enthusiasm, China’s total grain output and grain yield per unit increased rapidly. In year 1995, China State Council released a white paper “China’s Grain Issue” and announced that China’s grain per capita in year 1995 was 380kg (including beans and potatoes and sweet potatoes) and reached world’s average level. Under this circumstance, it was no longer appropriate to implement the previous policy of “Curbing the Development of Forestry to Ensure Sufficient Lands for Grain Crops”. Accordingly, the taxation purpose for forestry taxes was converted to encourage the development of forestry and balance the proportion between grain production and forest goods production. Therefore the underlying tax policy for forestry at this time was characterized by alleviation in tax burden.

Since entry of the World Trade Organization in 11 December 2001, China has been gradually developing and finally became a “World Factory”. China government had abundant annual fiscal revenues by charging Value Added Tax, Business Tax, Corporate Income Tax, Individual Income Tax and other taxes as well as non-tax revenues. In this sense, China government did not rely on the tiny tax revenue sourced from forestry. At this phase, pollution issue caused by industrialization and urbanization attracted more and more people’s attention. Chinese people who have been rich expect a healthy and beautiful environment and also want to enjoy their leisure time by walking, sightseeing or riding bicycles in forests. In

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another word, pollution and the rise of middle class forced the China government to value forest’s unique functions in maintaining ecological environment and beautifying landscapes. Accordingly, government’s aim of charging forestry taxes changed. Except for some specific type of commercially planted forests and some natural forests located in limited forest zones, China government should not charge taxes on forests which assume the function of maintaining ecological environment and military defense. In the opposition, China government should spend more money on forest plantation and grant fiscal subsidies and supports to the entities and individuals who are concentrated in forest plantation, cultivation and management.

For specific type of commercially planted forests and some natural forests located in some forest zones, the foundation for tax shall be discussed separately. These commercially planted forests have shorter production duration and the major purpose of planting these forests is to cut woods, sell timber and make profit. This means that these specific forests have the ability to bear taxes. In view of this, the government may consider charging taxes on these specific forests. In some forest zones (even though these zones are diminishing now), forest units are still cutting woods and selling woods. In order to protect these state-owned natural forest resources, the government shall be justified to charge forest natural resources tax.

China government is implementing the reform on forest property right institution. On the one hand, China government is doing property right confirmation for forests; on the other hand, government is encouraging the circulation of forest property rights. The initial and major purpose of this forest property right institution reform, is to realize the separation between forest land ownership and forest land operation right, which is similar to a limited company’s separation of shareholders’ equity ownership with its operation right. This institution reform on forest rights is good to enhance forest enterprises’ independence in making decision in forest operation and is also helpful to improve their operation efficiency. Under this background, the government may consider charging property tax on the landlords of these commercially planted forests-owners of these state-owned or collectively-owned forest lands, charge corporate income tax on the profits of these forest enterprises which plant and run these commercially planted forests and also charge Value Added Tax on the sales of timber.
Annex

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Figure 1. China's Total Investment to Curb Environmental Pollution (2000–2015)
Unit of the Investment in the Following Table: RMB100 million

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**Streszczenie.** W 2015 r. Chiny zajęły piąte miejsce pod względem całkowitej powierzchni lasów na świecie. Ponadto odnotowano najszybszy wzrost całkowitej powierzchni lasów w skali światowej, co sprawia, że problematyka opodatkowania lasów w Chinach jest niewątpliwie warta analizy. W niniejszym artykule przeanalizowano główne trendy w zakresie opodatkowania lasów w ujęciu historycznym, w tym zwłaszcza w okresie przejścia z gospodarki rolno-towarowej do gospodarki uprzemysłowionej, co może stanowić cenne doświadczenie dla niektórych krajów rozwijających się. Autorka wykazała w nim, iż w starożytnych Chinach głównym celem poboru podatków od lasów był głównie cel fiskalny, zaś w okresie ChRL, przed uprzemysłowieniem, głównym celem opodatkowania lasów było zrównoważenie podziału gruntów między produkcję zboża a produkcję leśną. W epoce postindustrialnej podatek leśny staje się narzędziem walki z zanieczyszczeniem środowiska spowodowanym industrializacją i urbanizacją. *Ratio legis* wprowadzenia podatku leśnego, jak wynika z przeanalizowanych projektów aktów normatywnych regulujących problematykę wydatków publicznych gospodarce leśnej i zasad udzielania niektórych subsydów dla leśnictwa, jest wykorzystanie funkcji ekologicznej lasów w procesie ochrony środowiska naturalnego. Artykuł ten zawiera także porównanie rozwiązań obowiązujących w Chinach do państw, które przeszły, podobnie jak ChRL, proces transformacji gospodarki planowej w gospodarkę rynkową w perspektywie reformy ich instytucji regulujących prawo własności lasów, a także analizę sformułowanych celów polityki podatkowej w zakresie leśnictwa wynikających ze złożoności różnych praw własności lasów.

**Słowa kluczowe:** Opodatkowanie lasów, prawo własności lasów