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THE HISTORY OF ECOLOGICAL ECONOMICS THOUGHT IN CHINA*

This paper deals with of the ecological economics thought development in China. Specific historical features of Chinese ecological economics are considered. It is found that traditional Chinese economic management approaches had clearly defined the ecological principle. Much attention is paid to the development of modern environmental economics in China. The paper shows the main preconditions that led China to critical ecological situation. The important steps in restoring the environment are named in the research.

Keywords: ecological economics; history of economics thought; greening economy; Chinese economy; environment.

Лі Жуй

ІСТОРИЯ ЕКОЛОГІЧНО-ЕКОНОМІЧНОЇ ДУМКИ В КИТАЇ

У статті розглянуто розвиток екологічної економіки в Китаї. Показано історичні особливості розвитку даної науки у країні. Доведено, що навіть у традиційній економіці Китаю мав місце принцип екологічності. Значну увагу приділено сучасному етапу розвитку економіки природокористування. Вказано причини критичної екологічної ситуації у Китаї, а також найбільш значущі заходи з відновлення навколишнього середовища.

Ключові слова: економіка природокористування, історія економічної думки, економіка озеленення, економіка Китаю, навколишнє середовище.

Літ. 10.

Ли Жуй

ИСТОРИЯ ЭКОЛОГИЧЕСКО-ЭКОНОМИЧЕСКОЙ МЫСЛИ В КИТАЕ

В статье рассмотрено развитие экологической экономики в Китае. Показаны исторические особенности развития данной науки в стране. Доказано, что даже в традиционной экономике Китая присутствовал принцип экологичности. Значительное внимание уделено современному этапу развития экономики природопользования. Указаны причины критической экологической ситуации в Китае, а также наиболее значимые меры по восстановлению окружающей среды.

Ключевые слова: экономика природопользования, история экономической мысли, экономика озеленения, экономика Китая, окружающая среда.

Introduction. China is the third largest country by the territory and the most populated country in the world. Its influence on the world economy, politics, culture and environment is constantly growing. During 1990–2010 Chinese economy has shown the 10% of real GDP growth annually. However, such tremendous economic achievements were not an easy gain and in the same period environmental situation became troublesome. Among the most important ecological problems we could name emissions of sulfur dioxide into the atmosphere, shortage of water in the Northern provinces, pollution of water basins (rivers, seas and groundwater), continuing deforestation, desertification, growth of diseases caused by pollution etc. This is not a

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complete list of all the environmental problems Chinese economy is facing. Today ecological issues play one of the most important roles in economic decision-making.

Due to similarities in solving the problems, in our paper we will use both terms (ecological economics and environmental economics) as synonymous. Environmental history is a relatively new branch of historiography, which considers the human interaction with the natural world over time.

The main research questions of the paper are:

1. To investigate the origins and the history of ecological economics in its development.
2. To investigate the difference between Western and Eastern environmental economics.
3. To address the latest policy implications of environmental economics in China.

Specific historical features of Chinese ecological economics and its difference from Western approaches. The main difference in Eastern and Western ecological economics approaches are found in the attitude to the environment. The Westerners see Nature as subordinate, although the extent of this has been debated. The Easterners (Chinese, Indian, and Japanese) see themselves as a part of Nature (Kula, 2003). Let's discuss the historical roots of the current ecological economics attitude in China.

About 4000 years of traditional agriculture have enabled Chinese farmers to evolve sustainable agricultural techniques. Among them are the use of organic fertilizers, crop diversification, animal husbandry, irrigation, drainage and terracing. These practices, which were caused by historical coevolution of nature and culture, have contributed to maintenance of soil fertility over thousands of years of cultivation (Bray, 1999). Specific achievements have been done by Chinese farmers in use of organic fertilizers, which required little capital input and were adapted to relatively high population densities under different regional conditions throughout history (Shi, 2002a).

Historically and up to modern times, the dominant eco-philosophy in China was Taoism, which underlines community interests and harmony between Nature and human activity (Smit, 1994). This philosophical approach (in contrast to Western practice) indicates the necessity to live with and follow, rather than manipulate nature. Historical tradition of Taoism provides a base to achieve sustainability and an adequate food supply, keeping ecosystem cycles intact.

Moreover, traditional agricultural practice in China was characterized by self-sufficient natural agricultural economy oriented on satisfaction of basic needs. According to Thurston et al. (1999), traditional agriculture in China often shows a high degree of stability, reliability, and efficiency, although yields are usually low and labor demands to be higher than in modern farming systems.

In many aspects, traditional agriculture provides a strong basis for sustainable agricultural development, although they are challenged by the emerging resource and environmental constraints with constantly growing China's population (Shi, 2002b).

Chinese traditional historical behavior usually rejects Western view of the dominant human relationship with Nature. In Taoism and also in similar philosophies (Hinduism and Zen), humans do not have dominion over the Earth.

While the current Western approach is one of dominance and use selfish interests, Chinese traditions offer a passive "let it be" approach to the relationship with Nature. The Westerns also use some kind of "let it be" approach, which was formulated by Adam Smith in his famous "Wealth of Nations" as "lesse fer lesse passe". Although the difference between these two approaches is substantial, Western economic theory assumes not to prevent an individual to make his own economic decisions. It is considered that selfish economic interests of each individual will make the whole society prosper. Even today individual economic freedom is considered to be the main engine of Western economic growth.

Chinese approaches are much deeper, because if you "do nothing, from unforced order greater order results". In such circumstances, things free of domination are naturally self-governed and self-creating. Furthermore, Nature is not a mere instrument, like source of resources, but something of big value by itself. Taoist philosophers assumed that Nature is itself inclined to harmony and balance, not through being forced but rather through following its own way – Tao. In other words, Nature is something to be cared and respected, to be left alone to take its own course, and not to be interfered with or destroyed by policies created by mankind. It was considered in China that human deeds that are likely to damage the natural order are, basically, immoral, irrespective of how useful they may be to individuals.

One of the main ideas in Taoism considers Nature as unique and eternal, operating entirely spontaneous and self-originating. Taoism respects the so called law of Nature as the best criterion for human behavior. It was considered that order and balance in Nature and economy is achieved as reasonable proportions between extremes sides. Traditional Chinese approaches by its entity are ecological one, which found its traces in many written sources. Many of these traditions share a unitary view (tianren heyi, Heaven/nature and human/society merged into one), which underlines interconnections and dependency between humans and Nature (Shi, 2002b). A man has to be adapted to surrounding environment and not the other way round. It is mainly during the New-Age European history Nature was considered as something to be won and took under the control of humanity. In China many important constructions, including the Walled City, were built to observe and placate the spirits of the Earth, incorporating the needs of a man to the environment. According to Kula there are records as early as the Eastern Chou period (8 – 3 centuries B.C.) indicating the existence of land and animal conservation, even specific forces have been created to control the conservation process. These officers (services) were ruled by the principle that Nature should not be disturbed, also they warned about harmful consequences of deforestation, such as soil erosion and flooding. One important argument for Nature conservations for local people was that cutting down of forests encouraged horse-riding barbarians to penetrate more deeply into the lands (Kula, 2003).

Later on, when humans' behavior and activities changed from survival to achieving higher living standards, Tao philosophy was not able to support new standards. Vast deforestation was carried out as Chinese population grew, due to expansion of agricultural land and construction of new cities and also what is important for household heating. In addition, Buddhism introduced into China the idea of cremation of the deceased which created wood shortages, especially in the South. The last situation is very close to the Tragedy of the Commons natural scenario, which describes a

situation with many sheep and many sheep owners and only one piece of grazing area. In this scenario, a shared area eventually suffers from overuse and ecosystem collapse. Because no individual will reduce the number of his animals for there is no warranty that his neighbor will do the same to save the grazing land. On the contrary, it is always beneficial for each herdsman individually to add another sheep to the pasture, and that addition by itself will cause little ecological stress. However, if each does so whenever possible, as economics dictates, over time all will be ruined.

From the economic point of view, Adam Smith's "invisible hand" can be viewed in completely opposite directions. Ruin is the destination toward which all men rush, each pursuing his own best interests in a society that believes in freedom. Freedom in commons brings ruin to all.

In a purely capitalist system with no government constraints, pollution is not regulated or controlled by a government. So if it is possible to save money by pollution it will definitely happen. Any business must rationally fear that its competitors by polluting may gain an economic advantage with lower costs. Taking this into consideration, each business in order to remain competitive must pollute. Socialist systems in fact face different problems, being subject to political pressures to maximize short-run production that may result in equal or greater environmental damage (Goffman, 2007).

Development of modern environmental economics in China. When the People's Republic of China was established in 1949, the Chinese leadership adopted an ideology to overcome the West and put industrialization as the country's first priority. Those processes were not always economically grounded, for example, almost each small community (household) was forced to produce certain amount of metal by its own efforts. That metal was of extremely low quality because poor technologies were used during production. Also ecological losses were tremendous. To resolve the situation environmental practice was introduced from the Soviet Union (Shi, 2002). However, not only ecological standards were taken by Chinese government after the origination of Republic, but Communist party brought ideas of Marxist philosophy and political economy. Even today Marxism as an ideology and social theory plays a crucial role in contemporary science of China. Scholars were and still are encouraged to apply Marxist theory to solutions of theoretical and practical problems. Marxist dialectical materialism philosophy and dialectical analytical approach (like in the former USSR) have been legitimized as the dominant methodology in scientific research. Early ecological economics research in China as a socially conditioned activity has been greatly influenced by Marxist philosophy and political economy. Scholars tried to apply Marxist analysis to ecological problems however the methodology was not always correct. So basic approaches and the framework for ecological economics research in China have been largely of Marxist philosophy and political economy (Shi, 2002). The political regime based on Marxist theory, combined with language and institutional differences, made Chinese scholars feel relatively isolated for many years.

With start of market reforms in China, the continual introduction of Western modern economic theories enriched local theoretical basis of environmental economics and expanded the study scope of environmental economics. With the introduction of environmental economic theories and efforts of Chinese scholars, theo-

retical research level in the field has reached the international top level. The development of environmental economics theories has built up a foundation for China environmental economics development. In recent years the research interests of both societies (Chinese and Western) have increasingly converged to the issue of sustainability, which calls for transdisciplinary research to accommodate ecological, economic and social dimensions (Wang et al., 2004).

Generally accepted environmental economics was introduced in China only in the late 1970s. In 1981 Seminar on Environmental Economics Research was held and some books related to environmental economics were published. Hereafter, environmental economics made progress as a unique subject and the basis for economic development policy, environmental protection policy and sustainable development policy was created (Wang et al., 2004).

The history of latest Chinese ecological economics can be broadly divided into 3 phases. The first phase (1980 to 1984), focused on the establishment of ecological economics as a new research field. According to Shi (2002a), initially researches explored economic and environmental problems from their own disciplinary perspectives, such as ecology, economics, and philosophy emphasizing the necessity of studying ecological economic problems. Generally speaking, the first period was the time of understanding ecological problems and increasing the society concern on the issue. As a result of those early efforts the first national workshop was held in Beijing (September, 1980). That was the first time in China that natural and social scientists worked together to establish a new field of research. The next important step was the origination of Chinese Society for Ecological Economics (CSEE) in Beijing (February, 1984). The main results of the first period are origination of interdisciplinary ideas and skills of researches, so that scholars could go beyond their own disciplines.

The second phase of Chinese ecological economics covered the period from 1985 to 1994. That stage was characterized by transdisciplinary research and the theory of harmonious development of economy and environment.

The scholars gradually realized that traditional ecology and economics focus too much within their disciplinary boundaries, losing the solutions to complex ecological economic problems. To overcome this shortcoming, researches were encouraged to go beyond disciplinary boundaries and managed to enlarge the boundary of traditional economics, which had neglected the environment. During this decade a major achievement was the formation of harmonious development theory (*xietiao fazhan*), similar to the idea of sustainable development.

The third phase of Chinese ecological economics started from the China's Agenda 21 (1994) in which theoretical ecological issues were linked with real world problems. Theoretical research has more frequently permeated and integrated with the emerging field of sustainable development. The appearance of sustainable development economics has illustrated a tendency towards broadening the theoretical framework of ecological economics. Meanwhile, a dialogue drawing on Marxist and non-Marxist economics has taken place and more attention has been paid to seeking integrative analytical tools and pluralistic approaches to sustainable development (Shi, 2002a).

Conclusions. Specific historical features of Chinese ecological economics are considered in the research. It is found that traditional Chinese economic manage-

ment approaches had clearly defined ecological principle. More than 4000 years of traditional agriculture have enabled Chinese farmers to evolve sustainable agricultural techniques in use of organic fertilizers, which required little capital input and were adapted to relatively high population densities under different regional conditions throughout the history. However, later on quick population growth and industrialization processes during the early decades of the Republic led to significant deterioration of the environment. The history of new Chinese ecological economics is broadly divided into 3 phases, showing gradual improvement in mechanisms of regulating environmental situation.

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