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# The Practical Significance of Marx's Theory of Natural Force Resources

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**Abstract** Marx's theory of natural force resources is an indispensable part of Marx's economic theory. Natural force resources, as a kind of natural elements that do not cost a penny, are added to the production process free of charge, and play a special role in the production process. Grasping and understanding the scientific connotation of Marx's theory of natural force resources is of great theoretical value and practical significance for promoting the harmonious unity of man and nature and adhering to the strategy of sustainable economic development.

**Key words** Marx, Theory of natural force resource, Practical significance

## 1 Introduction

Natural force resources not only act as an important factor that determines productivity, but also restrict and restrict the production process. Therefore, Marx's theory of natural force resources has a strong sense of the times and has important implications for adhering to the sustainable development of nature and economy, building a civilized ecological environment and developing circular economy.

### 1.1 The natural force resource itself is a kind of productive force

Marx pointed out that the problem is not only the social productivity of labor, but also the natural productivity of labor determined by the natural conditions of labor<sup>[1]</sup>. Marx's conclusion shows that labor productivity includes two aspects: (i) productivity produced by exertion of labor force alone; (ii) productivity produced purely by natural factors. When analyzing the productive forces under capitalist conditions, Marx also pointed out that the natural productive forces of labor, that is, the productive forces found by labor in the inorganic world, like the social productive forces of labor, are represented by the productive forces of capital<sup>[2]</sup>. When analyzing the conditions for the formation of differential land rent, Marx also pointed out that the excess profit generated by making use of the waterfall does not arise from capital, but from the use of capital to a natural force that can be monopolized and has been monopolized by man<sup>[1]</sup>. This kind of productivity is combined with the utilization of natural force resources, and the degree of utilization depends on the level of development of science and technology and the degree of application in the production process. It is very obvious that natural force resources are the basis and prerequisite for producing this kind of productive forces, while science and technology are the conditions for producing such natural productive forces. If we destroy this natural condition or fail to make effective use of it, the natural productive forces will

be destroyed and disappear or fail to form realistic productive forces. At the same time, good natural force resources are the natural basis for the formation of surplus labor. Marx pointed out that natural force is not the source of excess profits, but only a natural basis of excess profits, because it is the natural basis of particularly high labor productivity<sup>[1]</sup>. In other words, good natural force resources are not only the natural basis for surplus labor, but also the natural basis for excess profits.

### 1.2 Natural force resources are the basis for human growth

Marx pointed out that nature does not depend on any philosophy, and it is the basis on which we human beings (which are the products of nature) depend for growth<sup>[3]</sup>. This is because people live on nature. That is to say, nature is the human body with which human beings must constantly communicate in order not to die. The so-called physical life and spiritual life are related to nature, because man is a part of nature<sup>[4]</sup>. That is to say, human beings have a strong purpose and practicality in dealing with the relationship between themselves and nature. The relationship between man and nature is not a question of who conquers whom and who enslaves whom, but the unity of opposites of interdependence and interaction. It is in this relationship of unity of opposites that mankind has realized the development and progress of productive forces. At the same time, natural force resources are also the guarantee of the development of human society. As Marx pointed out, apart from the different degrees of development of social production, labor productivity is related to natural conditions. These natural conditions can be attributed to man's own nature (race, *etc.*) and the nature around him. Economically, external natural conditions can be divided into two categories: natural sources of means of livelihood, such as soil fertility, water rich in fish products, *etc.*, and natural sources of labor materials, including flowing waterfalls, navigable rivers, forests, metals, coal, *etc.*<sup>[5]</sup>. The utilization of natural rich sources of means of livelihood is a stage in which human beings make use of natural force resources at a lower level. The use of natural and rich sources of labor materials is the stage of the gradual deepening of human understanding of

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nature and the development of social productive forces to a certain extent. Therefore, in the early stage of culture, the first kind of natural rich source is of decisive significance. In the higher stage of development, the second kind of natural rich source is of decisive significance<sup>[5]</sup>. It is very obvious that in the higher stage of social and economic development, human beings will make more and more use of the natural rich sources of labor materials.

**1.3 Natural force resources are natural elements that do not cost a penny** Marx pointed out that apart from the natural matter, all kinds of free natural forces can also be used as elements to merge into the production process with high or low efficiency. The extent to which they are effective depends on various methods and scientific advances, which do not cost the capitalists a penny<sup>[6]</sup>. The reason is that the natural substances used in production, such as land, oceans, mines, forests, are not the value elements of capital. As long as we increase the tension of the original labor force and do not increase the prepaid monetary capital, we can strengthen the use of this natural substance in terms of extension or connotation<sup>[6]</sup>. As a result, the realistic elements of productive capital increase without the need for additional monetary capital. Marx also compared waterfalls with coal to illustrate the free nature of natural force resources. Marx pointed out that coal itself is the product of labor, so it has value, and it must be paid for by an equivalent, and requires a certain amount of money. Waterfall is a natural factor of production, its production does not require any labor<sup>[1]</sup>. The reason why natural force resources can be used free of charge is that natural force resources are not people's labor products and are of no value. Although the natural force resource has no value, it has use value, and its use value is to be able to participate in the production process and provide services for the formation of product use value. This service includes two forms: (i) Essential service. It refers to indispensable and irreplaceable services such as rain water, air and sunshine. (ii) Alternative service. It refers to the free replacement of manpower and other production conditions by natural force resources, such as the replacement of manpower by natural forces. Because the natural force resources have no value and do not participate in the formation process of product value, it can save human labor and production costs and increase profits.

**1.4 Scarcity and limitation of natural force resources** Marx pointed out that the natural conditions for great productivity of labor do not depend on capital at all. This natural condition exists only in some places in nature. Where it does not exist, it cannot be created by a certain investment<sup>[1]</sup>. In the underdeveloped period of human society and economy, the degree to which natural force resources are used by people is relatively low. The number of potential natural force resources that have not been utilized is relatively large, and it seems difficult for people to feel that natural force resources are scarce and limited.

On the contrary, people mistakenly think that natural force resources are an inexhaustible natural treasure. However, with the development of economic activities, the number and types of social

needs are gradually expanding. The breadth and depth of people's utilization of natural force resources are increasing day by day, which constantly exposes the scarcity and limitation of natural force resources. There are many natural force resources in nature, especially those that are scarce and suitable for people to use, as well as those that are critically needed by society, and will be exhausted after being used by human to a certain extent. As a considerable part of natural force resources cannot be regenerated, people must invest more labor and funds in order to carry out deep mining, resulting in an increase in mining costs. Thus it can be seen that the more scarce and limited the natural force resources are, the greater the impact on economic development is. When discussing the natural force resources of the agricultural sector, Marx pointed out that in agriculture, the growth of social productive forces can only compensate or even cannot compensate for the decrease of natural forces, and this kind of compensation can only play a temporary role. Therefore, despite the technological development, the product will not be cheap, but the price of the product will not be higher<sup>[1]</sup>. When discussing the relationship between labor productivity and natural conditions, Marx also pointed out that labor productivity is also related to natural conditions. What these natural conditions can provide often decreases accordingly with the increase of productivity determined by social conditions<sup>[1]</sup>. In short, with the continuous development of social economy and productivity, natural force resources are always decreasing, which is an objective economic law independent of human will.

**1.5 Protection of natural force resources** Marx pointed out that after a long and often painful experience, and through the comparison and study of historical materials, we have gradually learned to recognize the indirect and distant social effects of our production activities. Therefore, it is possible for us to control and adjust these effects<sup>[3]</sup>. In history, there have been countless times when natural resources were used recklessly and retaliated by nature. Therefore, in the use of natural force resources, we must consider the long-term interests, and take practical measures to prevent the serious destruction of natural force resources. Marx also pointed out that certain goods can only be consumed within a certain limit, and it is the object of need. For example, only a certain amount of grain can be eaten. Therefore, as the use value of the product, there is a certain limitation in itself, that is, the restriction on the needs of the product, but this restriction is now measured not by the needs of the producers, but by the total needs of the exchangers. When a particular use value is no longer needed, the product is no longer use value<sup>[7]</sup>. In other words, production should not only meet the needs, but also adapt to the needs. If it exceeds the need, the use value of the excess part cannot be realized, which will result in a waste of natural force resources. At the same time, with the progress of science and technology and the application of scientific and technological achievements in social production, the natural force resources which cannot serve production can serve human production. This is because

each such thing is the sum of many attributes, it can be useful in different ways. It is a historical thing to discover these different aspects and thus to discover the multiple uses of things<sup>[5]</sup>. The function of natural force resources is also multifaceted, which requires people to be good at discovering and developing the diversity of their functions when making use of natural force resources, so that the role of limited natural force resources can be brought into full and maximum play.

## **2 The limitation and restriction of natural force resources on sustainable development**

**2.1 Natural force resources are the prerequisite for human survival** Marx pointed out that labor is first of all a process between man and nature, a process in which man causes, adjusts and controls the material transformation between man and nature through his own activities. In the process of material transformation between man and nature, it is a purposeful activity to create use value, a possession of natural objects for human needs, and a general condition for material transformation between man and nature, and an eternal natural condition of human life. Therefore, it is not transferred from any form of human life, but rather, it is common to all social forms of human life. Therefore, we do not have to describe the relationship between a worker and other workers, on the one hand, man and his labor, on the other hand, nature and its matter<sup>[5]</sup>. Therefore, no matter how human beings develop and change, nature is still a prerequisite for human survival, because human beings themselves are the product of nature, developed in their environment and developed with this environment<sup>[7]</sup>. Man is inseparable from nature and has to live on nature, and the two are interrelated, influence and depend on each other.

**2.2 Natural force resources are the first source of social material wealth** Marx pointed out that only when one treats nature as the first source of all labor materials and objects as the owner from the very beginning, and treats nature as something belonging to him, can his labor become the source of use value and thus the source of wealth<sup>[8]</sup>. For human beings to carry out social production, in addition to the element of human labor, it also needs to have two elements: the object of labor and the means of labor. The former is the subjective factor in the production process, while the latter is the objective factor in the production process. The earliest objective element to enter the process of human production is the natural force resources, that is, the external natural conditions that enter the process of social production. Whether people produce products directly for their own consumption, or produce goods for the market, natural force resources are more or less involved in the formation of the use value of goods, which is an indispensable factor in the formation of use value. Therefore, natural force resources are the first source of social wealth. Therefore, in the process of social development, human beings must pay attention to natural reproduction. If the production behavior of human beings destroys the stock of natural force resources and weakens the reproduction capacity of natural forces, it will inevitably

cause natural reproduction to lag behind the reproduction of material materials. Natural productive forces will hinder and restrict the sustainable development of social productive forces. As Marx pointed out, the reproduction process of economy, regardless of its special social nature, is always intertwined with the natural reproduction process in this sector (agriculture). The obvious conditions of the latter will clarify the conditions of the former and eliminate ideological confusion caused only by the illusion of circulation<sup>[6]</sup>.

**2.3 Natural force resources are an important symbol of the progress of human civilization** Human beings are in the transition from industrial civilization to ecological civilization. In the process of transition, we must re-understand the relationship between human beings and nature, respect nature, care for the environment, and be kind to natural force resources. Only in this way can natural forces continue and develop, because these two aspects are closely related. As long as there are people, natural history and human history restrict each other<sup>[9]</sup>. In order to realize the harmonious unity between man and nature, it can only be the future communist society, because communism, as accomplished naturalism, is equal to humanitarianism. and as a completed humanitarianism, it is equal to naturalism. It is the real solution to the contradiction between man and nature and between man and man<sup>[10]</sup>. In the public-owned society where the means of production are owned by the society, under the joint control of the government and enterprises, organizing the material transformation between man and nature in the most intensive way according to human needs, can help to avoid the waste of resources and products, thus it is conducive to the sustainable development of human society. As Marx pointed out, socialized people, united producers, will reasonably adjust the material transformation between them and nature, putting it under their common control, rather than letting it rule themselves as a blind force; by consuming the least power, this material transformation will be carried out under the conditions that are most worthy of and most suitable for their human nature<sup>[11]</sup>.

**2.4 The depletion of natural force resources seriously affects the sustainable development of the economy** Marx pointed out that we only need to think about the impact of the seasons that determine the quantity of most raw materials, the depletion of forests, coal mines, iron ore, and so on. In history, there have been countless shocking examples of the use of natural resources without considering the consequences. For example, deforestation and reclamation of wasteland, and destruction of grass, result in depletion of water sources, soil desertification, climate deterioration, flooding. The predatory exploitation of natural resources affects the sustainable development of economic activities. Since the reform and opening up, the strong demand for energy, raw materials and various material resources generated by the rapid development of China's economy has led to the over-development and impact of the natural ecological environment, resulting in the cumulative degradation of ecological functions. At the same time, due

to the backwardness of technology, low utilization rate of resources, destruction and waste are also very serious, restricting the speed of economic development of our country. From the perspective of China's long-term historical mission in the future, economic development is still the most fundamental task. Economic development requires that all kinds of natural resources must be used scientifically, reasonably and effectively to meet the needs of economic development.

### **3 The practical significance of Marx's theory of natural force resources**

**3.1 We must face up to the position and role of natural force resources in social and economic development** For a long time, due to the influence of the traditional mode of thinking of anthropocentrism, people tend to deliberately enlarge the position and role of human beings in conquering and transforming nature in economic activities. They regard nature as the object of arbitrary occupation, plunder and transformation, ignore the role of natural force resources in the process of economic development, and ignore the reaction of natural force resources to human development, which leads to global ecological crisis and environmental deterioration. Therefore, we must change the traditional mode of thinking, face up to the status and role of natural force resources in social and economic development, and scientifically deal with the relationship between man and nature. It is true that conquering nature reflects the initiative of human practice, but it also one-sidedly exaggerates the antagonistic relationship between man and nature. Human society cannot always be in a state of conflict with nature, but should coexist peacefully, strive to adapt to the rhythm of the development and changes of nature, and let nature benefit mankind. At the same time, in the process of production, the management of natural force resources should be strengthened, scientific and overall planning should be made to avoid man-made waste. It is necessary to maximize the use of limited natural force resources and strive for the maximization of social benefits.

**3.2 We must actively explore the development model of coordinating economy with resources and environment** It is inevitable for any country to have environmental pollution in the process of industrial growth. We need not only a good ecological environment, but also the material wealth brought by industry. This requires us to fully consider the carrying capacity of resources, the production capacity of the region, the buffer capacity of the environment and other factors when formulating economic development strategies, and to do a good job in the comprehensive management of the environment. With the growth of industry and economic development, it is necessary to gradually increase the proportion of investment in environmental protection and carry out comprehensive environmental protection construction. At the same time, when using the standard of productivity to measure social and economic development, we should give it a scientific connotation, increase the relevant contents of natural force resources, and oppose mechanically and unilaterally understanding the standard of

productivity. We should adhere to the unity of the increase of material wealth and the consumption of natural force resources. It is necessary to unify the improvement of labor productivity with the improvement of the utilization rate of natural force resources. It is necessary to change the traditional evaluation criteria and evaluation system, and incorporate ecological factors into the assessment indicators of local governments.

**3.3 We should rely on scientific and technological progress to solve the problem of natural force resources** Relying on scientific and technological progress can greatly improve labor productivity, reduce the input of industrial factors of production, and change the state of extensive growth, which mainly depends on the high input of resources and funds. It is necessary to establish an intensive growth model with low input and high efficiency, and form a resource-saving industrial system. It is necessary to develop production processes that can make full use of energy and resources, and industrial production technologies with no waste and less waste, so as to reduce pollution and consumption, and solve the problem of waste utilization. It is necessary to reduce the discharge of waste resources in nature, so that natural force resources can be used to the maximum extent, to alleviate the contradiction between the supply and demand of natural force resources. At the same time, it is necessary to use scientific and technological innovation to discover and create renewable resources to replace non-renewable resources, and to invent technologies with low resource consumption and low environmental pollution to replace technologies with high pollution and high consumption, so as to achieve material reduction, resource utilization and reuse, and minimize resource consumption and environmental pollution.

**3.4 We must improve and perfect relevant policies, laws and regulations** On the one hand, it is necessary to strengthen the government's regulation, supervision and management of resources and environmental issues. As public goods, natural force resources and ecological environment have obvious external characteristics, so it is necessary for the government to build reasonable systems and policies for regulation, management and supervision. The government levies a use tax on the users of natural force resources through financial and tax means. In this way, we cannot only guide all users of natural force resources to save the natural force resources in terms of cost, but also compensate for natural force resources by collecting use tax, so as to adjust, restore and maintain the balance of the natural ecosystem. This is the inevitable choice to realize the symbiosis of environmental resources and economy. On the other hand, it is necessary to constantly improve resources legislation and environmental legislation, improve the legal and regulatory system for the economical use of energy and resources, and implement the capitalization management of resources and the environment. On the basis of defining the property rights of resources and environment, efforts should be made to realize the legalization and standardization of ecological compensation.

(Continued)

First-level indexes	Second-level indexes	Third-level indexes
	Teaching and research papers (B9)	Number of papers on education reform published in the past three years (C19)
Team operation and management (A4)	Team management system (B10)	Establishment and perfection of member evaluation and reward system (C20) Establishment and perfection of the rules and regulations of the team (C21)
	Cultural atmosphere of the team (B11)	Common values of team members (C22) Harmony within team members (C23)

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