

Warning and Enlightenment of the Economic Development in Resource-rich Regions to China

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Abstract

For a long period the resource-rich regions have made huge contribution to the development and construction of China's national economy; however, many drawbacks and problems have gradually been exposed in the economy of such regions. The level of development in resource-rich regions is lower than that in resource-poor regions. Against this background, after analyzing core-periphery theory, deteriorating trade terms theory, Dutch Disease theory, the resource curse theory and using for reference the development experience of developing countries and Shanxi region of China, this article proposes policy suggestions related to taxation mechanisms, resource production control, resource development fund and ecological environment compensation mechanism.

Keywords: Resource-rich Regions; Resource Development; Economic Development; Resource Curse

1. Introduction

Natural resources constitute an important part of national treasure and a requisite production factor, so there is no doubt that they play a significant role in the regional economic development. As Engels pointed out, "Labor is the source of all wealth, the political economists assert. And it really is the source – next to nature, which supplies it with the material that it converts into wealth." Since the inception of the new century, under the disturbance of multiple factors, the global resource consumption and structure is changing dramatically, posing severe challenges to the limited resource base and its supply guarantee system and making resource a worldwide major concern again and one of the largest constraints of China's economic development. As the developing country which currently produces and meanwhile consumes the largest amount of resources around the world, China has become an international focus due to resource problems. Since the founding of New China, resource-rich regions have contributed 93.6%'s coal, more than 70%'s natural gas, and over 90%'s oil to the economic construction of China and become the backbone that supports the national economic development of the country¹.

However for a long time, while making tremendous contribution to the economic take-off of the country, most resource-oriented regions and cities have tended to follow the development pattern shown in Fig. 1, that is, the large-scale resource exploitation and output is at the same time accompanied by a series of problems concerning development performance, the speed of economic growth in these regions is far slower than that of resource output and raw material consumption, and the exploitation of a great quantity of resources doesn't effectively drive the economic development there.

By contrast, the economy in eastern coastal regions that are relatively poor in natural resources takes on a trend of rapid growth, gradually widening the economic gap between resource-rich regions and resource-poor ones. Thus, it is very necessary to carry out a special study on the economic development in resource-rich regions no matter from the perspective of quantity scale, impact, or strategic status.

¹Sheng Kerong and Sun Wei (2004). Analysis on the factors of economic growth of China's mining cities. Mining Research and Development, 24(3), 5-8.

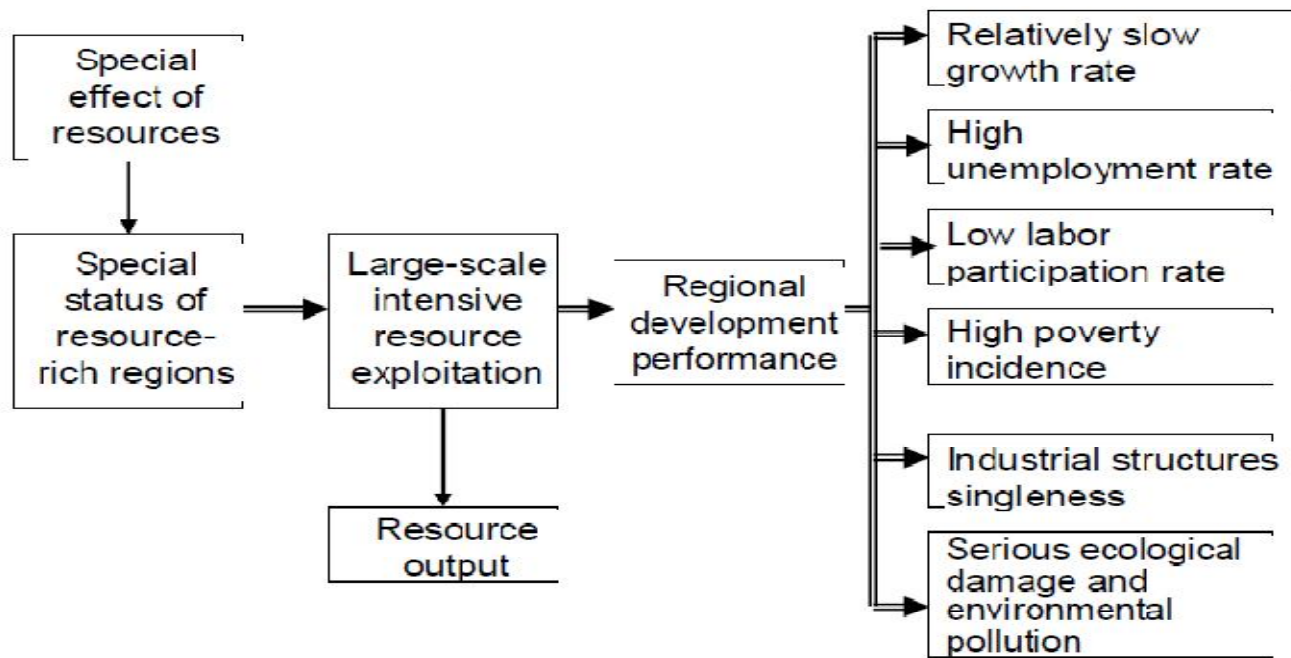


Fig. 1 Typical Economic Development Pattern in Resource-rich Regions of China

2. Foreign Theoretical Researches on the Relationship between Resource Endowment and Economic Development

2.1 Core-Periphery Theory

The “core-periphery” structure was first put forward by Raul Prebisch, a famous contemporary economist from Latin America. Prebisch classifies the world into two categories of countries. One is highly industrialized western countries, which export industrial products, or high-value-added products, while import raw materials or primary commodities and whose economic growth is all-sided and autonomous. The other is those countries that are not industrialized or are industrialized in a distorted way; their economy often follows the trend of growth without development and is subject to the economic cycle of the former category of countries to a large extent, and moreover, they usually export single raw materials in exchange for various industrial products. The former is at the core of the world system, whereas the latter lie at the periphery. The exchange between the core and the periphery is seriously unequal. The existence of the core is premised on that of the periphery, and the core develops at the sacrifice of the development of the periphery.

2.2 Deteriorating Trade Terms Theory

The “deteriorating trade terms theory” brought forward at the early 1950s had posed a great challenge to the established “beneficial trade theory” and aroused debates for half a century. The theory was originally proposed by Raul Prebisch, an Argentine economist holding a post in the United Nations for a long term, and German economist Hans Singer. Before that, people generally thought that the production of primary commodities relied upon land, natural resources, etc. and was in the tendency of diminishing returns, so the price of those products should be continuously rising; on the contrary, finished products enjoyed the benefits of scale economy and technological progress, so their returns should be increasing and their price should be continuously falling; as a result, the price ratio of primary commodities to industrial products should be increasing. However, Prebisch discovered from the long-term changes of national trades that the price of primary commodities exported by developing countries remained unchanged and even declined, but the price of finished products exported by developed countries was gradually rising, demonstrating the obviously deteriorating trade terms for developing countries.

2.3 Dutch Disease

The “Dutch disease” refers to the phenomenon that the expansion of resource industry during prosperous times is always at the cost of the development of others. Its classical model was given by Corden and Neary.

Both authors classify the economy of a country into three sectors, namely, tradeable manufacturing sector, tradeable resource export sector, and untradeable sector (mainly composed of domestic construction industry, retailing trade, and service industry). Assume the economy of the country is at the state of full employment at the outset. The discovery of a natural resource or the unexpected rise of a natural resource's price will lead to consequences. The first is that both labor and capital turn to the resource export sector, and the tradeable manufacturing sector has to attract labor force at higher price; the increase of manufacturing labor cost first of all affects the competitiveness of manufacturing industry. Meanwhile, the increase of foreign exchange earnings resulting from natural resource export impairs again the export competitiveness of manufacturing industry. Such a situation is called the resource transfer effect, under whose influence both manufacturing and service industries decline simultaneously. The second consequence is that the income increase brought by natural resource export will expand the demands for the products of manufacturing and untradeable sectors. But the expanded demand for manufactured goods in such a case is met by similar finished products that are imported from foreign countries at lower price, which is another disaster for the domestic manufacturing industry. The expanded demand for untradeable sector's products, nevertheless, cannot be satisfied through export; therefore people will find after a period of time that the service industry of the country will be revitalized. This situation is called the expenditure effect. The "Dutch disease" is manifested by the condition that the developing countries with rich natural resources will have a fading manufacturing industry but thriving service industry in the end.

2.4 Resource Curse Theory

The study on the phenomenon that abundant natural resources tend to undermine national economy has become a major development direction of economics over recent two decades. Economists Sachs, Auty, Gylfason, et al. published a large number of papers to seek for the transmission mechanism between rich natural resources and long-term economic growth. During the study on the issue of mineral countries' economic development, Auty first put forward the concept of "resource curse", pointing out that abundant resources are rather a kind of constraint than an adequately favorable condition for the economic growth of certain countries. After that, Sachs and Wamer released three theses in succession to carry out groundbreaking empirical test on the hypothesis of "resource curse". They selected 95 developing countries as samples and calculated their annual GDP growth rates from 1970 to 1989. The results revealed that only two resource-rich countries had an annual growth rate higher than 2%. The regression test indicated that there was a significant negative correlation between natural resource endowment and economic growth and each increase of 16% in the export proportion of the resource-oriented products (agricultural products, minerals, and fuel) in GDP would result in a decrease of 1% in economic growth rate. Even though more explanatory variables, such as institutional arrangement, regional effect, price fluctuation, etc., are brought into the regression equation, the negative correlation still exists.

3. Warning of the Lagging Economic Development in Resource-rich Regions

3.1 Experience and Lessons of Africa

The oil in Africa was discovered first in Algeria and Nigeria in 1956. Till 2006, the daily oil output of Africa had reached 11 million barrels, making Africa the third largest oil-producing area after the Middle East and Latin America. During the oil exploitation for several decades, with respect to oil-producing countries in Sub-Saharan Africa, resource development doesn't only bring about the rapid economic growth within a short term, but also imposes adverse impacts including imbalanced economic growth pattern, frequent conflicts, unfair oil income distribution, and so forth. The root causes are the unstable political foundation, poor management capacity of governments, and development policy fault of African countries. "Old" oil-producing countries represented by Nigeria become the victims of imbalanced national economic development and rampant corruption that comes with that. The per-capita income in Nigeria has been basically the same since the country's independence in 1960. Equatorial Guinea used to be a poor backward resource-rich African country, but along with the constantly soaring oil output, its development is becoming more and more promising with days. Its daily oil output was 5,000 barrels ten years ago, but the number has increased to 385,000 barrels by now; however, the corruption problem is also quite serious in this country.

3.2 Experience and lessons of Latin America

Not a few resource-rich Latin American countries had attached one-sided importance to the development of resource industry but ignored others, thus causing the imbalanced development of entire national economy and ultimately impairing the healthy economic development, and economic crisis even broke out in many countries in the 1980s. Take Mexico for instance. As the second largest country after Brazil in Latin America, this country possesses abundant oil resource. Due to improper policy, Mexico had once followed the path of “resource curse” that laid one-sided stress on developing oil industry. Though the oil income was high, it was not utilized for the development of other industries but for the offsetting of financial deficit. Consequently, the oil industry of the country developed vigorously, but other industries developed slowly. It was not until 1994 that the “resource curse” of Mexico was relieved: in that year, Mexico joined the North American Free Trade Area (NAFTA) established jointly by it with the US and Canada and exported oil to the US market by taking advantage of the NAFTA. Then by virtue of the funds and technologies obtained from the US, it established export processing industry at its boundary with the US, developed industries like textile, and broke into the US market with its textile products.

3.3 Coal-Based Economy of Shanxi, China: A Sample of “Resource Curse”

International studies on resource curse are mostly in the unit of country, and few specifically focus on a certain region inside a country. However, China is a country with large population and vast territory, and some provinces of it are by no means second to some large countries in terms of population and economic scale. Therefore, it is strongly persuasive to explain the economic collapse and environmental destruction arising from the resource industry singleness in Shanxi through the analysis of core-periphery theory, Dutch disease, and resource curse.

Coal is the leading and pillar industry of Shanxi. The total coal output of Shanxi has accumulated to 5.42 billion tons, occupying 1/3 in the total coal output of China, since 1980s till now. At present, the annual coal output of Shanxi is around 0.3 billion tons, among which more than 0.2 billion tons is transferred to the whole country, amounting to 80% of China’s inter-province transferring quantity, and meanwhile, over 17 million tons of quality coal is exported to more than 20 countries and areas. It was revealed by the “Special Survey on the Sustainable Development of Coal” organized by the National Development and Reform Commission of China and Shanxi Province in 2005 that the costs of resource, ecological environment, life, and follow-up development capability were shocking once they were calculated and the problem would be more striking if “the opportunity cost” was taken into account. According to the statistics, coal mining in Shanxi has destroyed up to 20,352 square kilometers’ water resource, taking up 13% of the total territory area of the province. This large coal-mining province has almost become a large subsidence province. The mining area of Shanxi Province has so far reached 8,000 square kilometers, including 5,000 square kilometers of goafs and over 2,940 square kilometers giving rise to severe geological disaster; the subsidence area is increasing by about 94 square kilometers each year; and 1,900 natural villages and 950 thousand people are affected by the secondary geological disaster². These harsh facts indicate that the problem of resource curse is really prominent in Shanxi, rendering the province difficult to sustain. If the resource development of resource-rich regions continues to take the old path of Shanxi’s single development of coal-based economy instead of looking for a sustainable development road, the consequences would be more disastrous.

4. Countermeasures for Coordinated Economic Development in Resource-rich Regions of China

Phenomena above show that the quantity of natural resources has no longer been able to determine the wealth level of a country. We can also find from the development experience and historical lessons of developing countries that if a country fails to implement effective and moderate development, establish a transparent and fair mining and trading system, practice relevant environmental protection, and link the development up with the improvement of its people’s living standard while exploiting its mineral resources, its economy cannot develop sustainably and will be bound to develop towards the opposite side. For the resource-rich regions in China, the following countermeasures are advisable if they want to transform their patterns of resource development and economic growth:

²Wang Zhaokun and Chen Zhonghua (Oct. 20, 2005). China’s coal industry urgently cast off extensive economy [N]. Economic Information Daily.

4.1 Setting up Scientific and Reasonable Resource Price System and Corresponding Taxation Mechanism

For the purpose of long-term development of the country and all regions, China must set up scientific and reasonable systems for resource and resource price in close combination with market supply and demand, international market, resource reserve, and difficulty level of development. The pricing must take into full consideration the costs of resource, ecological environment, life, and follow-up development capability, together with “the opportunity cost”, incurred during resource development in order to maintain the sustainable development of both resource-rich regions and the national economic society. The tax policy for import and export should be adjusted and improved: increasing the export tariff rates of those resource-based and primary products of high energy and material consumptions, high pollution, and low efficiency and gradually decreasing and even canceling the export of products that are in short supply in China and pollute the environment, such as coal and coke, electrolytic aluminum, phosphorite, etc.

4.2 Scientifically Controlling the Resource Output Based on Technological Progress and Reasonable Price

Although the proposal that natural resources should be left under the ground seems to be a relatively extreme opinion, we must admit its reasonability to a certain degree. In resource-rich regions, on account of industry singleness, the focus on large-scale development and export of natural resources will make the local economy weaker. The slow-down of resource development may provide more opportunities and higher ability for a country or region to coordinate the accompanying income flow and develop relevant industries, and stable constant income flow is easier to be managed than rapid, great, but transient one. The resource transfer and crowding-out effects brought about by Dutch disease will be relieved accordingly.

4.3 Establishing the Funds for Resource Development and Stabilization of the Country and Regions

Establishing the funds for resource development and stabilization is very necessary and beneficial for controlling the fluctuation of resource supply price, stabilizing resource production and employment, developing new resource, and developing industries after non-renewable resources are exhausted. It is proposed to set up the new resource development fund to guarantee fiscal subsidies, price subsidy, discount loan, and R&D input for the implementation of other policies concerning renewable and non-renewable resources.

4.4 Establishing and Improving the Ecological Environment Compensation Mechanism

The resource paid-use system and the ecological environment compensation mechanism should be established and improved in a speeding-up manner. The use fee should be strictly charged for various resources and the resource exploitation, conservation, and protection mechanism improved in the principle of “resource paid-use”; the charge for total pollution discharge capacity should be strictly practiced to impel enterprises to control pollution in the principles of “polluter pays” and that “whoever destroys the environment shall restore it”; and research and exploration should be conducted to set up the ecological restoration margin system, requiring institutions and individuals who impair ecological service functions and values because of development and construction to pay the ecological restoration margin.

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