Potential Solutions to the Recession of Mineral Resources Due to Overexploitation in the Underdeveloped Areas in China

Zou Zaijin ¹, Zhao Shuliang ²

¹,² School of Public Administration, Yunnan University of Finance and Economics, Yunnan, P. R. China, 650221

(E-mail: ¹spa3238@163.com, ²pingyuanzhaosan@163.com)

Abstract

Resource depended industries became main part of economy in some underdeveloped areas in China. Recession of resources due to overexploitation brought series of economy and social problems. Therefore, research of potential solution to the recession of mineral resources due to overexploitation in the underdeveloped areas in China should be taken. This article analyzed the main situation of recession of mineral resources in the underdeveloped areas, carried out systematically design of resolve strategies, and produced potential solution to the recession of mineral resources for underdeveloped areas in China.

Keywords: Underdeveloped Areas, Mineral Resources, Recession, Solution

1. Introduction

There is no doubt that China is one of the largest consumers and producers of mineral ores and metals, accounting for example for nearly half of global production of aluminum (40%), coal (46%), refined zinc (40%), and ferrochrome (26%). However, even though China is by far the largest consumer for certain minerals such as copper, its domestic ore production accounts for less than 6% of global production.

Mineral resources reserves in China are mainly concentrated in the less developed regions, around the mining and processing of mineral resources and the formation of resource-based industries in the rich resources in possession of the position play a decisive role in national economy and social development in developed region.

Data shows, China's 390 mining cities and towns in China has 47 faces resource failure threat, accounted for 12.05%. In the 31 typical coal city, about 1/2 of the city facing a shortage of resources, are on the verge of exhaustion problem. China Geological Survey report shows, China has entered the large and medium-sized mines closed peak, industry recession caused by the increasing depletion of resources, and social city or regional economic development is slow and even stagnation problem, in the country is rich in resources of the less developed regions has gradually become a common trend, avoid "resources exhaustion " and strengthen the the declining industry assistance has been put on the important area in resource exhaustion on schedule.

2. General Framework of the Recession of Mineral Resources Due to Overexploitation in the Underdeveloped Areas in China

Due to exploitation of mineral resources in developed areas to aid declining overall train of thoughtless developed areas to aid declining mineral resources development is a system engineering, it is necessary to consider the government, mining enterprise requirements, must consider the need of miners, local residents and communities; to establish normal exit mechanism of mining enterprises, but also consider the succeed industrial development, regional economic transformation, mining staff turnover and then employment, difficult groups of relief, ecological environment treatment and recovery and a series of problems such as land reclamation.

2.1 Establish Regional Development Fund

According to the European Union "European structural funds" to support backward area or industry downturn in economic development and industrial structure adjustment policy, referring to some domestic mineral resources development recession area successful transition experience, in order to solve the biggest problem in less developed areas of future development of mineral resources declining aid--financial security problems, proposed the establishment of regional development fund, to broaden the financing channels, specifically to support the development of mineral resources of declining industry exits normally, substitution industries, mining area residents production and living,
ecological environment restoration and reconstruction.

2.2 The Positive Development of Alternative Industries

Selection and actively cultivate the substitution industry science, adjust the industrial structure, promote regional economic from resource exploitation to the comprehensive utilization, changing from single form to multiple structure, various risks actively respond to possible future.

2.3 The Implementation of Social Security Project

Problems of ecological control and compensation and land reclamation of mine closure and unemployment, the exploitation of mineral resources recession will inevitably bring mine workers in difficulty families after. Thus, in less developed areas to aid declining mineral resources development should implement the corresponding social security project, development of mineral resources recession negative impact on production and life of the residents in the mining area is reduced to a minimum, and ensure resources recession or depletion, mining area residents normal production, social stability, prosperity.

3. The Basic Starting Measures to Aid the Recession Areas Because of the Use-up of Mineral Resources

China should focus on the following four aspects of work because it’s necessary and urgent to aid the depression areas:

3.1 Miners Training and Re-employment Project

Raise funds to help them to improve their labor skills, enhance their ability in the non-mining industry employment.

Step by step, make plans to organize labor export, increase employment opportunities for laid-off workers in mines abroad.

As the implementation of the "employment priority" strategy, formulate preferential policies and take practical measures to support the ability to absorb employment, employment is relatively low threshold of the industry, so that they become preferential mine workers re-employment of the new superseding industry. Develop the part-time employment, short-term employment, dispatched employment, seasonal employment, temporary employment, part-time employment, employment, employment, remote contracting independent employment, self employment, family employment and flexible forms of employment, expand the mine workers again obtain employment channel.

Establish and improve mine workers reemployment assistance system, the implementation of priority support and help of the employment policy of special difficulties workers; commonweal sex post development of government investment, priority of mine workers again obtain employment difficult personnel, and give the corresponding subsidy; take special support measures to promote the miners in the disabled again obtain employment; employment of zero miner's family to the real-name system, the focus of assistance, the establishment of long-term management mechanism, ensure dynamic elimination of miner family zero employment.

3.2 Mine Workers Social Security and Difficult Family Assistance Project

Social insurance, social relief, social welfare as the foundation, with basic old-age pension, basic medical care, the minimum living security system as the focus, to charity, commercial insurance as a supplement, accelerate the improvement of social security system of mine workers.

Combined with China to establish the rural endowment insurance system, to explore the rural social endowment insurance as the foundation of private mine worker endowment insurance system actively.

In urban and rural minimum living security system as the basis for the establishment of the minimum life guarantee system of mine workers family, if necessary, set up a special mine workers families relief funds, so as to form a covering all mine workers difficult family assistance system, solve the mining area residents living difficulties.

3.3 Area Ecological Governance and Compensation Project

When conditions are ripe, levy to the mining enterprises ecological compensation fees, into the regional development funds earmarked for the structure, management and restoration of mining environment.

Carried out production and environmental protection "three simultaneous” system, environmental design, environmental investment and environmental impact assessment and the mining license "hook", the mine ecological environmental supervision and management and production supervision and management of organic combination, from the source to eliminate environmental damage.

In order to maintain the interests of nearby residents, negotiation mechanism should be established to compensate for environmental supervision and environmental damage in the enterprise and the surrounding area residents are mine. Led by governments at all levels, to
establish environmental protection coordination council for local residents, community participation, on the one hand, the environmental protection department under the guidance, to improve the enthusiasm of local residents and the community to actively participate in environmental supervision; on the other hand, considering the government, local residents, miners and mining interests of enterprises, establish environmental damage identification standard and standard of compensation, especially because of surface mining sinking, cracking, collapse, landslides and other life property safety threat to local residents environmental problems, we should pay special attention to strengthening the determination, extraction, high standard, focus on compensation, to ensure that the majority of people’s interests.

Combining the environmental governance, ecological compensation and compensation for environmental damage and the building of a new socialist countryside, and ensure the financial compensation for ecological compensation funds and environmental damage not only can relocate residents life, more important is to improve the local development of production capacity and quality of life and level.

Pollution and destruction of the old mining area ecological environment has been formed for many years, the government can give special funding, governance model can learn from Germany to the German Democratic Governance: the old mining area ecological environment treatment planning by the government, and then transfer special funds entrusted to qualified enterprises according to the unified planning fund governance from the regional development structure the government supervision, governance effect.

3.4 Land Reclamation

The exploitation of mineral resources in addition to unfavorable to ecological environment, thus affecting the normal production in agriculture and animal husbandry, the occupation of farmland is the existence of a large number of idle phenomenon, and most of which the farmland after mining damage, has lost its original has production conditions, which resulted in failure after vegetation restoration and mine, land reclamation task is very heavy.

With the restoration and land reclamation is not only about the ecological environment of mining area, mining area and agriculture development is more related to the life of local residents, is in developing alternative industries, the key to improve the ability of sustainable development, and therefore must be long-term planning, focus on the implementation of. Specifically, the main should take the following measures:

Land reclamation plan as a necessary content to obtain mining permits, as one of the basic conditions for industry access, and formulate specific reclamation standards. For no land reclamation plan or land reclamation plan is not up to the required standard of the mining right applicant, shall not be issued the mining license, strictly limit their access to the development of the mineral industry.

From the experience of western countries to establish land reclamation, land reclamation bond system. Companies to obtain mining licenses at the same time, must to the relevant departments according to the occupation of farmland area and the influence of the scale, reclamation bond to pay a certain amount of. Enterprises in the production process, or in the production, deal with the occupation and the effects of farmland to governance, governance standards, the special funds to enterprises. If the enterprise's own lack of technical capacity of reclaimed land, may entrust other unit qualification to complete, otherwise, the deposit will not be returned, so as to enhance the sense of responsibility of land reclamation enterprises.

Led by the local government, establishing the land reclamation joint-stock companies, mainly to receive the government and the mining enterprises engaged in the work of farmland reclamation affected by mineral development, specifically including those engaged in environmental governance, restoration of vegetation, the farmland water conservancy construction, agriculture and other basic services, the management and reclamation to reach the required standard, then reclamation of land by the local government or community.

4. Solutions

4.1 Establish Mineral Resources Development Committee

Proposed by the chief executive director of the local direct, clear responsibilities of mineral resources development committee, the main leadership of the relevant functional departments as members, often to establish the system of coordination of efforts to solve the development of mining industry, less developed areas of some major strategic issues and major problems of coordination, overall planning and comprehensive coordination of the exploitation of mineral resources recession aid work.

4.2 Resource Development Planning for Sustainable Development

According to the mineral resources development, infrastructure construction, ecological environmental protection and industrial
development to replace make package of overall planning, on the one hand, the exploitation of mineral resources to take appropriate development strategy, improve resource recovery rate; on the other hand, according to comparative advantage, the development of deep mining and deep processing, encouraged to extend the industrial chain, and actively developing alternative industries, form a new pillar industry.

4.3 Establish a Mining Enterprise Development Fund

In order to improve the enthusiasm of mine enterprise self development, strengthen the transformation of the guide innovation and production in mining enterprises, mining enterprises suggestions in pre-tax profits in proportion for mine development fund, the fund enjoy duty-free treatment, earmarking, carried out by the government supervision in accordance with the provisions of. Mining enterprises will be the fund is mainly used in two aspects: one is used in enterprise innovation and technological innovation, to improve the recovery rate of mineral resources, to extend the time to failure; two is used for mine enterprise diversification, improve the transformation ability of mining enterprises.

4.4 Increase the Intensity of Resource Exploration and Development

Regional governments to increase mineral resources exploration investment, strengthen the basic geological survey, the priority evaluation of comprehensive geological survey and exploration in the construction of key mineral development base, provides the basis and pilot data for the management of mineral development of mining enterprises, reduce the mineral resources exploration investment risk. Encouraging all kinds of social capital to participate in the commercial prospecting work take the market demand as the guidance, take the economic efficiency as the goal, to encourage mining enterprises in the mining area, especially in resource failure area surrounding and deep development of resources exploration work, increase reserve resources, extend the mine life cycle.

4.5 Improve the Efficiency of Resource Use, Promote New Industries

By raising the level of equipment, the introduction of technical personnel, improve resource utilization, resource depletion time delay, at the same time, through scientific and technological innovation, promote the industry chain extension and growth of new industries, to replace the cultivation and development of industrial growth.

The government response to the mature technology of resource recycling project, study the introduction of such as financial subsidies, low-interest loans, priority support policies to support the development of circular economy, the project of mining enterprises, improve the utilization rate of the mineral resources.

5. Conclusions

China's underdeveloped areas are mostly the reserves of mineral resources rich region, resource-based industries around the mining and processing of mineral resources and the formation of constitute an important pillar of the economy in underdeveloped regions to a great extent. But the characteristics of mineral resource is limited and non-renewable, determines the resource-based industries all are eventually declined or closed due to the increasing depletion of resources, resulting in less developed region to a series of economic and social problems will inevitably. For the less developed regions of China due to resource depletion caused serious economic, social and ecological problems, for system planning aspects from financial support, industry, infrastructure construction, focus on the "project" supporting, policy system and corresponding, can really save, promote underdeveloped areas of the comprehensive sustainable development.

References