

The Institutional Analysis on “Rich Poverty” Issue of Energy and Chemical Industry Base in Northern Shaanxi

Jing Zhao

Research Center for Energy Economy and Management, Xi'an University of Science and Technology

Xi'an, 710054, China

Tel: 86-29-8558-3835 E-mail: zhaojing@yeah.net

The research is financed by the Soft Science Research Project of Shaanxi Province, No. 2008KR84 and Humanistic Social Science Research Special Plan Projects of Shaanxi Provincial Education Department, No. 09JK149.

Abstract

System defects and policy-related exclusion in the development and utilization of energy resources bring the problem of rich poverty to energy and chemical industry base in Northern Shaanxi. The long existence of the rich poverty problem of energy and chemical industry base in Northern Shaanxi forms deep-seated constraints to the sustainable development of energy economy in Northern Shaanxi and the state's energy security. From the present situation of poverty in Northern Shaanxi to build an institutional analytical framework of resource-based poverty problem in Northern Shaanxi, from several aspects including the irrational property rights system of natural resources, finance and taxation system, pricing mechanism of resource products, ecological compensation mechanism and social responsibility system of energy corporate in the operation of resource economics of China, to give systematical analysis on the long-standing system causes of rich poverty, and then propose specific ideas to reduce poverty in Northern Shaanxi.

Keywords: Energy and chemical industry base, Poverty, System

1. Introduction

Since the Nobel laureate in economics Paul Samuelson gave another explanation to the concept of “poverty in the midst of plenty” proposed by John Maynard Keynes from the aspects of institutional gaps and inequitable distribution, economists from all over the world have paid the long and broad attention to the paradox of poverty during the rapid growth of national and regional economies. In large-scale development of west China, with the rapid development of region economy, the “rich poverty” problem that resources and poverty coexist is the contradiction which exists in resource-rich regions commonly. Northern Shaanxi is the resource-rich region in our country and even in the world, known as Chinese “Kuwait”. Approved by the former State Planning Commission in 1998, Northern Shaanxi became the only state-level energy and chemical industry base under planning and construction. Driven by the construction of energy and chemical industry base, economic output and fiscal revenues of Northern Shaanxi grew rapidly, and has become the fastest region in economic growth and fiscal revenue growth in Shaanxi Province at present. However, because there are defects in the property rights system of natural resource and the tax system, as well as distortions in the distribution chain and other reasons, most local residents not only can't benefit from it, but involve in all kinds of ecological disaster caused by development and become poorer than before. Domestic and foreign scholars have conducted in-depth study on poverty for many years and proposed a large number of hypotheses and theories. For example, there are Nurkse's “vicious cycle of poverty”, Nelson's “low-level equilibrium trap”, Myrdal's “echo effect theory” and the “cumulative causation model”, Schulz's “human capital theory” and Lewis's “dual structure theory”. All of these theories aren't free from the thinking set of Nexus's “vicious cycle of poverty”; they treat the “inadequate capital formation”, “resource scarcity” and “low human capital ability” as the root causes of poverty, so it is difficult to use these theories to reveal “rich poverty” mystery in Northern Shaanxi. Based on systematical analysis on the long-standing system causes of rich poverty of the energy and chemical industry base in Northern Shaanxi, the paper wants to build an institutional analytical framework to solve the resource-based poverty problem in Northern Shaanxi in accordance with the basic logic, systematic analysis and development ideas of governance theory in public property.

2. The poverty status of energy and chemical industry base in Northern Shaanxi

Northern Shaanxi is a resource-rich region, but for the natural and historical reasons, it is also a long-term poverty region. By the end of Year 2000, among 13 counties in Yan'an, 6 of them are state-supported impoverished counties, 7 of them are province-supported impoverished counties, there are a total of 600 thousand people living in poverty, and 281,000 among them have no adequate food and clothing (Poverty Alleviation Office of Yan'an, 2006). After 7 years of poverty alleviation development, there are still 43,100 people living in poverty can't solve the problem of food and clothing, and 284.3 thousand poor people haven't shake off poverty (the Yan'an Bureau of Statistics, 2008).

Among 12 counties and districts of Yulin, 10 of them are state-supported impoverished counties, 2 of them are

province-supported impoverished counties; there are totally 5510 villages, among them, 1378 villages are impoverished counties, accounting for 25%; since Year 2000, the government of Yulin efforts to improve rural poverty, so poor population from 1.0877 million in Year 2000 reduced to 387,000 in Year 2008. But because the poverty line in China is 1196 Yuan per capita net income, this is relatively low according to overall price and consumption level of Yulin City, the actual number of poor population will still increase. The problem of poverty is still an important issue to persecute economic and social development of energy and chemical industry base in Northern Shaanxi for a long time in the future (Wang, 2009).

3. The system causes of poverty in energy and chemical industry base in Northern Shaanxi

The cause of the rich poverty problem in energy and chemical industry base in Northern Shaanxi can not exclude the factors of history and natural conditions, but the key lies in the fairness of the policy system, mainly shows in the irrational property rights system of natural resources, finance and taxation system, pricing mechanism of resource products, ecological compensation mechanism and social responsibility system of energy corporate.

3.1 The property rights system of natural resources is unreasonable

Through 30 years' reform, China has preliminarily solved the problems of the corporate assets and land property rights, but it did not perfect the property rights system of subsoil resources according to the needs of market economy development, basically followed a full state ownership of the initial rights of resources used under the conditions of the planned economy. The existing mineral resources development and management system caused a conflict between unified mineral rights and dual land rights (Hu, 2003), led the dependent relationship between the dominant position of the residents in resource regions and the natural resource been diluted (Wang, 2006), thus the development pattern of which central enterprises, provincial enterprises and foreign capital became the main body have formed, local enterprises have been marginalized because they subjected to system, policy, capital, technology and other factors. For example, total allocation of coal resources in Yulin is 49.167 billion tons; the local government gets only 8.472 billion tons, accounting for only 17.23% (Survey Research Office of Yulin Municipal Government, 2008). Yulin's oil and gas resources are mainly concentrated in the Changqing Oilfield Company, so the residents who paid a living environment cost for the construction of the energy and chemical industry base are unable to fully enjoy the great achievements of resources development in Northern Shaanxi.

3.2 Reform of finance and tax system lags behind

In actual operation of the fiscal and taxation system, the unreasonable tax policy of resources development made the county economy development in Northern Shaanxi lagging behind the pace of the construction of energy and chemical industry base, the local regions got less benefit in resource development. Among central, provincial and municipal governments, the proportion of municipal governments' disposable income has a gradual decline. From Year 2002 to Year 2007, transfer revenues to the central government and the provincial government of Yulin rose from 51.3% to 68.5% of total fiscal revenue, while the proportion of remaining revenues in cities and counties decreased from 48.7% to 31.5%. Among different regions, the problem of departure from taxation to tax source is serious, causing an unreasonable tax transfer among regions. In Year 2007, among total tax revenues from only three categories of mineral resources including coal, oil and natural gas in Yulin, 5.51 billion Yuan have been transferred because of headquarters and branches and cross-district operations, 7.282 billion Yuan have been transferred because of non-market pricing of the resource product. These tax revenues should reflect the tax of resource exporter originally, but flow to resources importer. Local fiscal revenue of Northern Shaanxi is unequal to its contribution to the energy need of the country (Yulin Financial Bureau, 2008).

3.3 Pricing system of resource products is not perfect

Resource prices in Northern Shaanxi are distorted for a long time, they neither reflect the real value of resources, nor reflect the external costs of resources. The security costs, development costs, exit costs especially environmental costs of resources exploitation get no effective remedy from the resource development revenues. The external costs caused by destruction of the ecological environment in Northern Shaanxi and other reasons during the course of resource development are not reasonably internalized, optimal allocation of resources lack of institutional mechanisms to guarantee. The incompleteness of pricing system of resource products mainly shows in two aspects: market-oriented degree of resource prices is low and constitute of resource prices is incomplete. On the one hand, constrained by the economic system, the prices of mineral resources in Northern Shaanxi are governmental pricing or government referential price, can't truly reflect the market supply and demand relationship and the extent of resource scarcity, resulting in lower resource prices. On the other hand, impacted by many factors including imperfect tax system of coal resources, unsound environmental protection system, and so on, the social cost which directly related to resource development has not been internalized reasonably by coal enterprises (Su, 2007).

3.4 Eco-compensation mechanism is not perfect

At present, mining every ton of coal and crude oil in Yulin's energy and chemical industry base will bring 52 Yuan and 260 Yuan losses of ecological resources environment separately; the annual loss reaches 9.88 billion Yuan in total (Decision-making Consultant committee of Shaanxi Province, 2008). According to estimates,

nearly 60,000 acres of the forestland converted from farmland in Yan'an are destroyed every year due to resource development. Nearly 1 million tons of waste water is directly discharged without treating every year, resulting in the main basin in Yan'an subjecting to serious pollution (People's Political Consultative Conference of Yan'an, 2008). However, because eco-compensation mechanism is not perfect, developers and users of the resource haven't afford the environmental costs, resulting the funding for environmental governance is difficult to fulfill, the conflicts between economic development and environmental resources, the central enterprises and local governments, energy companies and the residents become sharper. Although from July 2009, Shaanxi Province implemented firstly in the country that compensation fee for soil and water loss caused by coal, oil and natural gas mining be collected by the local section of tax, the range of compensation is still too narrow, and the compensation standard is still low.

3.5 Energy enterprises lack of social responsibility

After the county government of Fugu in Yulin published a document of "Work arrangement about implementing 'double hundred' helping projects and promoting new rural construction" at March 29, 2007, more than 170 private enterprises in Fugu County participate actively in poverty alleviation and development of the county and help to build a new countryside. In two short years, private enterprises have invested nearly 0.5 billion Yuan of aid-the-poor funds, completed 258 helping projects, the absolute poverty population and low-income population in county have a decrease of more than 80,000, providing a successful "Fugu phenomenon" paradigm to mechanism innovation of the new stage of China's poverty alleviation (Hu, 2010). Comparing to central enterprises, although coal prices and corporate profits of state-owned large-scaled coal mines have increased by more than 10 times, the 0.2 yuan per ton of governance compensation for surface subsidence has not changed for 10 years. Whatever in the new countryside construction, or in "ecological victims" resettling, the central enterprise Shendong is much less than the local coal mines (Chen, 2008).

4. Thinking and countermeasures to institutional renovation

The reduction of "rich poverty" in the energy and chemical industry base of Northern Shaanxi needs to innovate mechanism of poverty alleviation, but to really eliminate the phenomenon of "relief poverty every year, be poor every year" can only resort to institutionalized means, based on construction of property rights system of natural resources to ensure equitable distribution of development benefits from public property resources. In particular, it must improve market-oriented and socialize property rights system of resources gradually, advance system reform of resource tax, perfect the cost-accounting system of mining enterprises, improve the ecological compensation mechanism, and strengthen the social responsibility management of resources enterprises.

4.1 To perfect market-oriented property rights system of resources

Perfecting governance system based on the definition of property rights of common property resources is the key to resolve "rich poverty" problem. With regard to governance of common property resource, the Nobel laureate in economics Elinor Ostrom agreed with the truth revealed by theoretical models such as "tragedy of the commons" (Hardin, 1968) and the "logic of collective action" (Olson, 1995), that is the individual rational action may lead to collective irrational consequences. However, she strongly opposed to the so-called "only" option proposed, that is, to reinforce the central power or to be completely privatized (Ostrom, 2000). Based on a large number of empirical studies, Ostrom proposed the collective action theory about self-organization and management of public affairs, she considered that the problems such as free-riding, evading responsibility and allured by opportunism can be overcome through self-governance model, and then the realization of persistent common interests can be obtained. Thus, in the governance to poverty problem of the energy and chemical base in Northern Shaanxi, firstly, the state should reform the system of property rights, expressly provides that the residents in the mining areas have legitimacy to gain resource development gains in the Constitution, and expressly provides revenue-sharing policies consistent with the provisions of the Constitution in the resources law. Secondly, to establish a modern property rights system of resources, and implement using resources with compensation, stop the administrative examination and approval of energy and mineral resources in Northern Shaanxi, through market operation to take public auction and go public listing and auction; thirdly, to make assessment approach of cost of mining right, to achieve the asset management of mining rights. To establish the trading system of mining rights, to make a sound system of the compensated use of mineral resources, and to implement a limited, ordered and compensated development of energy and mineral resources; fourthly, to develop self-governance organizations organized by ordinary villagers and by the residents, to establish mineral rights system which unifies the mineral rights and land rights, to give certain rights of resources disposal to the local government in Northern Shaanxi, to establish the management committee of mineral resources rights consisted jointly by the central government, local government and self-governance organizations organized by the public, to coordinate the benefits of four sides, including the central and local governments, enterprises and local residents (Yao, 2006), to explicate the content of mining rights and income obtained by person who have various types of mining rights, to build a resource sharing mechanism which can make local residents having a real benefit, to regulate the relationship and behavior of the government and enterprises, and then to bring the resource development in Northern Shaanxi really into the track of marketing economy.

4.2 To propel reform for the tax system of resources

Irrational tax system of resources causes that business power and financial power lack of unity, resources advantage can not be effectively translated into economic and financial advantages of Northern Shaanxi, and then the enthusiasm of developing the local economy is seriously dampened, the regional poverty reduction have also been impacted. Therefore, it must follow the principle of “giving more and taking less” or “only giving no taking” to reform the system of tax. Firstly, to raise the standard of resources tax in Northern Shaanxi and to change the current status of having optimal resources but having the lowest tax standards in the country; secondly, in accordance to the principles of tilting to base and tilting to people’s livelihood, to appropriately increase the sharing proportion of income tax to the cities and counties; thirdly, according to the principle that taxation and revenue sources should be unified to solve the problem of irrational transfer of tax in the energy output corporate. Fourthly, to carry out the pilot in energy and chemical industry base through referencing to the practice of Australia, Canada and other countries. No matter who invest in the mining area to develop resources, excluding taxes, about 20% of profits must be kept in the location of resources for improving local people’s production and living conditions; fifthly, to improve the system of imposing resource tax on the resource possession step by step; sixthly, according to the great loss of ecological environment in Yulin and its contribution to the country’s economic development, the state’s ministry of finance should invest to improve and governance the ecological environment and to safeguard the sustainable development of economy and society in Yulin; seventhly, according to the long-term prices distortions of natural resources and the ecological damage in the output region in Northern Shaanxi, to establish the interests compensation mechanism that the governments of favored areas in the eastern and central China transfer payments to the local governments of Northern Shaanxi.

4.3 To reform the cost-accounting system of mining enterprises

As a national energy and chemical industry base, its resource development brings a huge loss to the ecological environment in Northern Shaanxi. The existing cost accounting system used in mining enterprises should be changed as soon as possible, the costs to improve and restore the ecological environment should be included into the production costs of mining enterprises. According to perfect full-cost of coal production, the five kinds of external costs, namely security costs, resource costs, environment costs, exit costs, development costs should be added to the original production costs. To calculate price of energy products through three kinds of calculating approaches, including currently used calculating cost approach, current policy-based calculating cost approach, predict from the authority departments and experts, to transfer safety, environment, development, and ecological damage to the cost of resources product and get remedy from resources product, so as to achieve the sustainable development of the energy and chemical industry and harmonious development of economy, ecology and environment (Gao, 2008).

4.4 To improve the mechanism of resources and ecological compensation

The insufficient compensation for resource development results in environmental degradation and welfare decline of local residents, brings serious problems to sustainable development in that area, and even causes a threat to the stability of local society. Therefore, firstly, the interest compensation mechanism of the residents and mechanism of ecological restoration of the mining areas should be established. Suggesting to in accordance with “Guiding suggestions on exploring the piloting work of eco-compensation” proposed by the State Environmental Protection Administration, to pass through resources and environmental management regulations of the energy and chemical industry base in Northern Shaanxi drafted systematically by Shaanxi Provincial People’s Congress, to promulgate the governance and remedy methods and their detailed rules for mine subsidence and waste pollution, and to improve mechanisms of the ecological and environmental compensation and repairing. It should to increase the proportion of differential incomes came from resources exploitation left to the local government (Gao, 2008), to change the situation that resources compensation in Northern Shaanxi are separated from the price index, to set the standard of compensation according to the output. Referencing to the practice of Shanxi Province, it can levy the sustainable development fund for energy base by 20 Yuan per ton of coal, levy mining environmental management deposit by 10 Yuan per ton of coal, levy transformation fund of coal mine by 5 Yuan per ton of coal. To explore the compensation mechanism for interests of the mining masses actively, to arrange production and life of the mine masses properly and build a harmonious development pattern of the base (People’s Political Consultative Conference of Yulin, 2007).

4.5 To Strengthen the Social Responsibility Management of Resources Enterprises

Resource enterprises are often the main producers of environmental pollution, while resource development can cause eco-environmental damage; this will inevitably lead to interests’ loss of the people. Therefore, it should to establish the evaluation and management system of social responsibility involved by multi-stakeholder including the local governments and local mass organizations, and change the situation that resource enterprises one-sided pursuit of economic profit and reduce the compensation to evade obligations completely. It should stipulate that both the central state-owned enterprises, the provincial state-owned enterprises, foreign large enterprises and local enterprises should define their own responsibility of “social care” from the beginning of allocating

resources for mining, the local government should in accordance with the principle of “managed by the ownership place, manage the ownership place” to urge enterprises to effectively carry out the responsibility for building a harmonious mining area. Within a enterprise, to construct the harmony atmosphere among the various stakeholders, to implement safe production, to save energy and reduce emission as much as possible; out of the enterprise, it should handle the relationship between the neighboring local governments and the masses properly, to enable the enterprises taking the initiative to undertake the responsibility of harnessing pollution sources, managing ecological recovery, using resources comprehensively and establishing economizing mining area; to strive for the support of the central and provincial governments, to develop dialogue mechanism of equal consultation with the central enterprises and the provincial enterprises, making them to undertake their social responsibilities, to eliminate and mitigate interests disputes with the local masses, and take the road of win-win cooperation.

References

- Chen, Gang. (2008). Difficult livelihood of the people in Western County. *Outlook Weekly*, 14.
- Decision-making Consultant committee of Shaanxi Province. (2008). Make strenuous efforts to solve the contradiction between the resource development and environmental protection of the energy and chemical base in Northern Shaanxi. [Online] Available: http://www.sxjzw.gov.cn/admin/pub_newsshow.asp?id=202669&chid=100128 (Nov. 6, 2008).
- Gao, Shan, Guo, Wenying, Zhang, Li, & Zheng, Jiali. (2008). Studying price of coal from full-cost of coal. *Shaanxi Coal*, 4, 38-39.
- Garrett, Hardin, (1968). The Tragedy of the Commons. *Science*, 162, 1243-1248.
- Hu, Chi. (2010). The survey of private enterprises directly involving in poverty alleviation and development in Fugu. [Online] Available: http://www.cpad.gov.cn/data/2010/0127/article_342018.htm (Jan. 27, 2010).
- Hu, Jian, Ma, Xingtian, & Zhang, Fanyong. (2003). A study on the relationship between national and local interests in the development of oil and gas resources in Shaanxi. *Journal of Xi'an Petroleum Institute (Social Sciences)*, 1, 5-15.
- Olson, M. (1995). *Logic of Collective Action*. Shanghai: Shanghai Joint Publishing.
- Ostrom, E.. (2000). *Governing the commons: the evolution of institutions for collective action*. Shanghai: Shanghai Joint Publishing.
- People's Political Consultative Conference of Yan'an. (2008). Actively promote the building of a modern enterprise system and vigorously promote the coordinated development of regional economy. [Online] Available: <http://www.yazx.gov.cn/WeiYuanYiZheng/dysc200831.html> (March 1, 2008).
- People's Political Consultative Conference of Yulin. (2007). Suggestions on levying three kinds of pilot reform funds proposed by the State Council such as the sustainable development fund of coal mine and so on in Yulin. [Online] Available: <http://www.ylzx.gov.cn/News/Show.asp?id=762> (March 20, 2007).
- Poverty Alleviation Office of Yan'an. (2006). Led by the government and increasing investment to speed up the pace of poverty alleviation and development along the Yellow River and the Baiyu mountainous area. [Online] Available: <http://www.shaanxinz-fpb.gov.cn/2006/3-1/15470744098.asp> (Feb. 27, 2006).
- Su, Xun. (2007). Resources-poverty: phenomena, reasons and compensation. *China Mining Magazine*, 10, 11-14.
- Survey Research Office of Yulin Municipal Government. (2008). The hidden worries and their strategic adjustment under the rapid development of Northern Shaanxi region. [Online] Available: http://www.yldy.gov.cn/News_View.asp?NewsID=224 (Dec. 17, 2008).
- The Yan'an Bureau of Statistics. (2008). The thinking of fostering alternative industries and promoting sustainable development in Yan'an City. [Online] Available: <http://www.sei.gov.cn/ShowArticle.asp?ArticleID=154201> (Jun 30, 2008).
- Wang, Duyin. (2009). Driven by Yulin plate to solve the problem of dual economy. [Online] Available: http://www.cpad.gov.cn/data/2009/0922/article_341249.htm (Sep. 22, 2009).
- Wang, Wenchang, Sa, Rula, & Li, Junfeng. (2006). *Research on Western Resources Development and Sustainable Development*. Beijing: Central Nationalities University Press.
- Wang, Xiaoqiang, & Bai, Nanfeng. (1986). *Rich Poverty - the Investigation of Undeveloped Regions in China*. Chengdu: Sichuan People's Press.
- Yao, Zhongkai. (2006). Explore and analyze the problems of the benefits distribution in energy economic development strategy - take Shanxi Province for the case. *On Economic Problems*, 7, 15-16.
- Yulin Financial Bureau. (2008). Research reports for the financial income growth and the coordinated income growth of urban and rural residents of the energy and chemical base in Northern Shaanxi. [Online] Available: <http://www.yldrc.gov.cn/detail/2008-7-29/20087291731528678.htm> (July 29, 2008).