

## CHINA'S ANTI-POVERTY PROGRAMMES: WHERE SHOULD THE FOCUS BE?

Xiang Nan

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The remaining eleven regions in northwest and southwest China include north Shaanxi, Xibaigu, and Dingxi; the Daba mountain region of the Qinling mountain range; the mountain regions of Wuling, Jirwan, and Wuyang; the north-south extension mountain region; southeast Yunnan Province; northwest Guangxi Province; Qinghai; and Tibet. With mostly arid land; harsh natural conditions, including high elevations and a cold climate; high incidence of endemic disease; inaccessibility; and an extremely backward

### Section B

## Poverty: Development Policy and Strategy

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There has been an emphasis on economic construction during the process of reform and opening-up in coastal China in the east in the past ten years. Most of the funds and technology from abroad have been funnelled to the regions and cities in that part of the country. This has widened the gap in economic development between east and west. The focus of anti-poverty programmes in China has therefore been to move to the western and central-western regions.

The shift will mean increased funds, better human resources, and stronger leadership. The birthrates in some of the under-developed areas in west China, which are 50 to 100 per cent higher than the national average, are a serious problem. The rapid population increase there will eventually result in a vicious cycle of "the lower the living standard, the higher the birthrate, and the higher the birthrate, the lower the living standard". Birth control in these regions, therefore, should be made more effective.

The financial assistance provided by the government for these regions for development in the form of free aid and low or discount interest loans amounts to as much as nearly four billion *yuan* a year. Putting this amount of money to effective use is a matter of great concern. Practices prevalent in some places, such as diverting money from legitimate outlets so that "everyone gets a bit of it", making it available to members of the

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government to the exclusion of the people, or to the rich instead of the needy, must be stopped so that the impossible situation in which aid can only "keep the poor forever poor" will be brought to an end.

The anti-poverty programmes in these regions should also emphasise the role of science and technology in eliminating poverty. Also, the programmes for these regions should not be limited to purely economic purposes; but should be more comprehensive - including development of vocational education, training of personnel, and the selection of competent government officials.

Western China has great potential and is full of promise. Rich in metal and energy resources, this area extends over approximately 70 per cent of the country's territory and is inhabited by less than 30 per cent of the nation's population. A fledgling "third line" network of basic industries has emerged there, thanks to the enormous efforts made in the 1960s. Therefore, the focus of anti-poverty programmes should go beyond aid and help build the economy for a developed west which will benefit east and central China as well.

## TWO ISSUES INFLUENCING THE CURRENT DEVELOPMENT OF POOR MOUNTAIN AREAS IN CHINA

Shi Shan

In order to develop the poor mountain areas in China effectively, there are two issues that need attention. One is the perception of poor mountain areas, i.e., are the poor mountain areas in China burdens or potentially tremendous production bases? and the other is the issue of development strategy, i.e., whether individual development should be promoted to get rid of poverty or whether planned comprehensive development should be attempted from the very beginning? These two issues are closely linked and inseparable.

With regard to the first issue, the poor mountain areas of our country are potentially tremendous production bases. However, these areas have been thought of as burdens for a long period of time. This view is not only held by leaders at the lower levels but also by those at higher levels. One conclusion drawn in the book entitled 'Economic Growth in the Remote Areas of China' (published by the People's Press in 1990) was that, "during the 35 years from 1952 to 1987, the economic growth rate in the remote areas was far behind that of the national level" with a growth rate of 1.8 per cent for the former and of 4.8 per cent for the latter. Remote areas were regarded as survival zones. There was a striking contrast between the miserly attitude when allocating growth resources and the generous attitude when allocating survival resources in these areas. "The basic policies of the central and provincial governments are to meet the minimal survival demand and give insufficient attention to the issues of industrialisation and traditional agricultural reform in these areas" (p.157). This attitude is reflected in the perceptions of local government and also in those of the cadres. The predominant perception has been that remote mountain areas are "burdens" to the national economy.

Are the poor mountain areas really survival zones? What is the basis for regarding poor mountain areas as potential production bases? There are seven aspects that contribute to the productive potentials in mountain areas.

1. According to the investigation by agricultural division departments in 1983, there is a total of 1.17 billion *mu* of mountain wasteland that can be devoted to forestry, 720 million *mu* of mountain range, or hillside grassland, and 3.37 billion *mu* of utilisable grassland in north China. The mountain areas in south China have superior conditions and it is considered to be a land of treasures.
2. Mountain areas can produce large quantities of xylophyta food and oil, such as chestnuts, dates, persimmons, ginkgo, walnuts, oil-tea camellia, Chinese prickly ash, shiny-leaved yellowhorn (*Xanthoceras sorbifolia*), etc. There are more than 400 species of xylophyta food trees, and more than 100 species of xylophyta oil trees. All of them are superior products with high nutritional values. Once people's living standards begin to improve, the demand for such products will be greater both at home and abroad. The establishment of such production bases in

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mountain areas can also reduce the pressure on agricultural zones, meet the demands of cities, and earn foreign exchange via export.

3. Mountain areas can become the basis for silk production through mulberry plantation and raising silkworms on a large scale. Planting mulberry will not only afforest the mountain areas but also produce firewood, and the bark of the mulberry can serve as raw material for high-quality paper-making. The total production of silkworm cocoons in 1990 reached 440,000 tonnes, which is only 10.4 per cent of the total cotton production. Nineteen ninety was a bumper harvest year for cocoons, yet production was still too low. The production of cocoons in the Sichuan, Jiangsu, and Zhejiang provinces accounted for 80.1 per cent of total production. There is great production potential in all the mountain areas. Before the Tang Dynasty (A.D.618-907), China did not produce cotton and clothing was made of silk, flax, and hemp. Therefore it is short-sighted to produce silk only for foreign markets. The main market, in fact, is domestic.
4. The mountain ranges in south China have four times the area of pasture of New Zealand, with fairly similar natural conditions. If these ranges are used properly, large quantities of beef, mutton, milk, fur, and wool can be produced. The grasslands in north China have a lot of potential. China has limited arable land. In order to increase meat production, the main measure should be to develop grassland animal production. This will not only enrich the mountain and pastoral areas, but also alleviate the pressure on agricultural areas.
5. It is noted in the book, entitled "Contemporary Forestry in China", that there are about 450 species of wild animals, 1,186 species of wild birds, and 516 species of amphibians and reptiles. There are about 120 species of wild animals and 150 species of wild birds of important economic value. Making use of and raising wildlife are among the new endeavours undertaken. Many specialised households raise snakes, bears, mink, giant salamanders, pheasants, soft-shelled turtles, and scorpions. Experiments in wildlife husbandry could provide the basis for rational use of wildlife resources.
6. The traditional native products of mountain areas, such as fruits, tea, bamboo shoots, medicinal herbs, various industrial raw materials, various kinds of perfume crops, have considerable economic value. This is especially true for Chinese medicinal herbs which are in great demand in foreign countries.
7. The greatest feature of products produced in mountain areas is that they are pollution free. Mountain areas should make full use of this feature and protect it. Attention should be paid to avoiding the introduction of polluting industries.

Mountain areas were regarded as burdens in the past because of "paying attention to nothing except foodgrains." Because of the shortage of arable land with few possibilities for land expansion, mountain farmers cannot be self-sufficient in good grain. The emphasis on food self-sufficiency has led to reclamation of land by destroying the forests, resulting in soil erosion and increased occurrence of natural calamities such as drought and flood. In addition, the State had to allocate large sums of relief money for the poor people.

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At present, due to the increasing pressure of population in China, it is essential to open up new production domains in order to feed a huge population in China. Due to the development of a commercial economy and an increase in people's living standards, the demand for many native mountain products, such as fruits, chestnuts, walnuts, ginkgo, dates, bamboo shoots, medicinal herbs, etc., is increasing. This has widened people's vision and created favourable conditions for recognition of the potential of mountain areas.

The second issue concerns the strategy for development of poor mountain areas. The emphasis here should be on promoting planned economic development because poor mountain areas are complicated systems *per se*. If there are no conscientious investigations and no systematic planning, there will be no correct measures, let alone active achievements. There are several lessons in this regard. There are also successful models, i.e., the practical experience gained by a group of counties which conducted experiments in ecological agriculture. These counties organised technical staff to formulate an integrated development plan for social, economic, and ecological development; undertook development and construction in a planned manner by coordinating manpower, funds, and materials from various sectors; combined development production and construction in feasible ways; integrated the development of agriculture with the development of township enterprises; and coordinated various rural construction programmes. Under the same conditions of investment, manpower, and fund input, they have achieved significant results. There are examples of county leaders actively implementing the same development plans for three to four terms, and the achievements have been very significant. Cadres and the masses have provided full support during the whole process of implementation.

Is it difficult to undertake countywide comprehensive systematic planning for development and construction? Can it be extended to poor mountain areas? There are favourable conditions for such undertakings. Firstly, the work of agricultural divisions/departments has been carried out in each county. Secondly, the governments have been involved in helping poor mountain areas through specialised institutions and specialised funds. Thirdly, governments at various levels have organised efforts to help the poor mountain areas improve their economy. Fourthly, the Agricultural Systems' Engineering Committee of the Chinese Association of Systems' Engineering has helped more than 400 counties in the formulation of development plans in the past two decades, trained a group of specialised technical staff, and published a series of books on this subject which have provided manpower and training materials for large-scale undertakings of such integrated development plans. Many counties have accumulated rich experience. Longyan Prefecture, Fujian Province, which belongs to one of the 18 poor mountain regions, provides an example in formulating integrated development plans for the whole prefecture, as well as for every county and city in the prefecture.

The issue of poverty in mountain areas is basically an issue that has persisted because of the lack of recognition of the potential of mountain areas. Policy changes, the need to open up new production bases, the rich experience of the past, and a number of successful examples provide a favourable environment in dealing with the poverty issue in the mountains of China.

# ECONOMIC DEVELOPMENT IN POOR MOUNTAIN AREAS OF CHINA: ON POLICY STRATEGY

Ai Yunhang

## 1. The Strategic Significance of Accelerating Economic Development in Mountainous Areas

Since 1979, profound and historical changes have taken place in rural China, the rural economy has developed rapidly, and farmers' living standards have distinctly improved. But, due to differences in resource bases, as well as historical and ideological reasons, economic development in different areas is uneven. Most of the poor areas are located in the mountains. These are also old revolutionary bases and areas where ethnic nationalities live. Development of poor mountainous areas is both an economic and social issue. Economic development in poor mountainous areas has to be hastened to take advantage of their rich natural resources and to realise the four modernisation goals (agriculture, industry, national defence, science and technology).

## 2. Features of Poor Mountainous Regions

The features of the 18 poor regions in China are as follows.

### *Abundant and Diverse Natural Resources but Lack of Rational Exploitation*

The poor mountainous areas occupy a vast territory and have rich land resources, but the proportion of cultivated land is limited, soil quality is poor, soil erosion is a serious problem, yields are low and uneven, and there are grain shortages.

There are also diverse biological resources; most of the 30,000 plant species and more than 1,800 terrestrial vertebrates of China can be found in these poor mountainous areas. These provide better conditions for the overall development of agriculture, forestry, livestock, fisheries, industries, and a variety of sideline activities. Historically, these plant and animal resources have not been used properly and forest resources have been over-exploited. There are more than 30 proven mineral reserves, above 20 rare metals, and more than 60 non-metallic minerals. Owing to the scarcity of capital and qualified personnel and inadequate technology and infrastructure, the mineral resources in these areas have not been used rationally.

### *Mountain Areas are Mostly Inhabited by Several Minority Nationalities with Diversified Economic Systems*

Among the 18 poor mountainous regions, 12 regions have minority nationalities, with five minority nationality autonomous regions, 24 autonomous prefectures, and 44 autonomous counties. There are 55 minority nationalities in the whole nation, of whom over 90 per

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cent live in poor mountainous areas. Besides, there are many different economic systems in poor mountainous areas, varying among the minority nationalities.

These areas are also characterised by poor infrastructure, underdeveloped economies, and financial crises resulting from low revenues and dependence on State subsidies.

### *Low Levels of Education and High Population Growth*

In spite of the work carried out to develop culture, education, and sanitation and to introduce science and technology, mountain areas still lag far behind. The level of education is low and in many areas the population growth rate is much too high. Poor sanitation and endemic diseases contribute to high mortality rates.

### **3. State Support to Poor Mountain Areas**

Since 1979, the Government has been extremely concerned about development in poor mountainous areas, and a series of supporting measures has been undertaken.

#### *Liberal Policies*

The main features of these liberal policies are given below.

- i) Minority nationalities can themselves select the optimum management method for their productive activities.
- ii) The contract period for cultivated land can be extended to 30 years, and the rights of contracting can be transferred.
- iii) Livestock can be priced and owned by farm households, private raising and private ownership are permitted, and livestock can be butchered and put on sale by the raisers themselves.
- iv) The contract responsibility system has also been extended to pastures and slope lands. Mountainous areas and open forests owned by collectives can be contracted out to private ownership and operated by households who can plant the trees and own the timber. Forestry farms and share-holder forestry cooperatives can be established. Shareholders can receive profits according to the number of shares they own, and the responsibility system is linked with remuneration.
- v) Enterprises and other units (State farms, State pastoral farms, reservoirs, hydropower stations, and other factories) established by the State are required to provide and share the profits with minority nationalities. Mountain farms and water and mineral resources that the State enterprises do not have the ability to operate can be contracted out to farmers. Employment of locals should be given priority.

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- vi) Participation of minority nationalities and local communities in the development of local resources is encouraged.
  - vii) There is a policy that discourages cereal crop cultivation on slopes of above 25 degrees. The idea is to revert these lands to forests or bring them under tree crops.

#### *Reduction of the Burden through Favourable Policies*

In recent years, the State has introduced special policies to alleviate poverty and promote development in these areas.

- i) Since 1985, in poor mountainous areas, agricultural tax has either been reduced or exemptions have been given; in the poorest areas or most difficult areas, exemptions from taxes can be given for five years, and, in other disadvantaged areas, they can be reduced for a period of from one to three years.
- ii) Prospective enterprises (forestry farms, livestock farms, hydroelectric stations, mining, and other factories) can receive income tax exemptions for five years.
- iii) Agricultural, forestry, livestock, sideline, and other native products can be sold or bought freely.

In addition, supply and marketing cooperatives have to act as agents for purchasing agricultural products and selling basic goods. Relief for poor areas should be tied to development work such as construction of roads, irrigation channels, drinking water schemes, etc.

#### *Rational Use of Interest-subsidised Loans*

Leadership under the State Council for Economic Development in Poor Areas is to be strengthened. In order to use the interest-subsidised loans provided to support poor counties, the following measures are necessary.

- i) The abundant natural resources in poor areas should be used to start productive activities and develop a commodity economy.
- ii) The policy for equal division of funds to each area needs to be reviewed. Funds should be used for concrete programmes.
- iii) Emphasis should be given to providing large-scale technical training and inputs (technology, information management and funds, and goods) for farmers and cadres according to the specific programme needs.
- iv) Attempts should be made to integrate the development of poor regions and developed areas through mobilising capital and technology from the latter and labour from the former.

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Bringing economic development to mountain areas is an arduous task, particularly in southwest and northwest China where minority ethnic groups live. But it is through such efforts that the economic development of poor areas can become part of the national, long-term economic development programme.

#### **4. Policy Measures for Future Economic Development in Poor Mountainous Areas**

##### *Improving Self-sufficiency in Grain and Diversifying the Economy*

Without sufficient grain, farmers cannot feed themselves, let alone develop mountain areas. One reason why forests and grasslands are destroyed is the short supply of grains. Grain production can be increased through better management of irrigated land, flatlands, and terraced fields. In places where irrigation is good, the concentration should be on increasing yields. In places where there is no irrigation, technologies to retain soil water and moisture and increase the organic manure input in order to improve the yields per *mu* should be encouraged. Intercropping of trees and grass can be encouraged. In certain places, livestock can be raised. The focus should be on the exchange of specialties and local products from the forests, livestock industry, and herbs and on producing grain in the plains.

To diversify the economy there should be equal stress on the use and protection of varied resources in mountainous areas. In forestry, for example, the emphasis should be on integrated development of timber forests, commercial forests, fuel forests, water source forests, and shelter forests, paying special attention to the growth of products such as fast-growing trees, fresh and reserved fruit, xylophyta grain, edible oil, tea, mulberries, crude drugs, etc which can produce benefits quickly. Township enterprises and other family and sideline activities should be developed positively. Jointly-managed processing industries for food, feed, and medicinal materials should be introduced and expanded. The State and local governments should promote the construction of infrastructure to support development in mountainous areas.

##### *Developing a Commodity Economy and Intensifying the Socialised Service System*

The main objective of economic development in poor mountainous areas is to use the resource advantages to develop a commodity economy.

In order to organise thousands of households to develop commodity production, we must mobilise the markets and make the service system efficient. The Supply and Marketing Cooperative of China and service organisations, in sectors such as agriculture and forestry, water conservation, livestock industry, farm machinery, science and technology, should be made active in order to provide good services for pre-production, production, and post-production activities.

##### *Manpower Development*

From a long-term point of view, an important outlet for improving the quality of labour in poor mountainous areas is to develop education. Large-scale technical training for

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farmers, particularly for school leavers in villages, should be developed and adapted to suit local conditions.

Achievements in science and technology made in other places have to be brought to bear to improve the production level and earn more profits.

#### *Strengthening Horizontal Links and Opening up to the Outside World*

In order to reap the benefits of resource advantages in mountainous areas, economic links with the outside world have to be strengthened. This means opening up to an outside world which includes the cities, prefectures, and provinces inside China. Only in this way can the capital, human resources, technologies, and experiences, both at home and abroad, be introduced. Joint ventures should be encouraged. Measures should be taken to attract technical personnel or enterprises from other cities, prefectures, and provinces to establish productive enterprises in mountain areas. The leaders should visit coastal areas to learn from others, widen their views, accumulate knowledge, and improve the capability for developing a commodity economy. State-run factories and mines, located in poor mountainous areas, should provide technological support to help the population develop township enterprises and local industries.

In order to improve the efficiency of fund utilisation, a competitive mechanism should be introduced.

#### *Strengthening the Leadership for Economic Development at Local Levels in Poor Mountainous Areas*

The leadership at county level is the key to developing the economy at the provincial or prefectural levels. Qualified leaders should be chosen and offices and institutions for economic development strengthened. Leaders who make significant achievements in economic development should be recognised by the State. The idea of the integrated development of various sectors should be reinforced.

Family planning policies should be implemented conscientiously by encouraging late marriage and promoting smaller families. Population growth should be strictly controlled. Medical and hygienic conditions in poor mountainous areas have to be improved, particularly with regard to the prevention of endemic diseases, epidemic diseases, and infectious diseases. Priority should be given to training medical workers.

# THE NEED FOR A SPECIAL ECONOMIC POLICY FOR THE DEVELOPMENT OF THE POOR DISTRICTS IN CHINA

Yan Ruizheng

## 1. An Evaluation of the Present Economic Policy for the Development of Poor Districts

Since 1978, when China started its economic reforms, the speed of rural development has been high. However, poor districts have made very slow progress. As a result the difference between poor districts and developed districts in rural areas has widened. The State Council established a specific leading group for the economic development of poor districts to strengthen the leadership and the provision of aid in these areas. Since then, a series of measures has been put into operation.

Firstly, a more privileged policy was adopted for the poor districts. Under the condition that the main ownership be socialistic, peasants can select their preferred management systems. The contracts for land management in poor districts can be up to a period of 30 years compared to fifteen years in developed rural areas. The grasslands and shrublands in the hills and mountains can be contracted out to peasants on a long-term basis. Mountain land, water, and mineral resources owned by State enterprises can also be contracted out to peasants. Mineral resources in poor districts can be exploited by the peasants through collectives. Cropping is prohibited on cultivated lands having slopes of more than 25 degrees. These can be afforested by peasants who can own and inherit them as properties.

Secondly, the government has allocated special funds for resource exploitation in poor districts. From 1986 to 1990, the government allocated an additional one billion *yuan* on top of the original 3.8 billion *yuan* for economic promotion in poor districts. Specific funds were also allocated for animal husbandry and local industry. These funds supported technical and material investments in poor districts and benefitted forty million people.

Thirdly, the government tried to lighten the burden on poor districts by reducing or remitting taxes. The commerce department sold a suitable amount of cloth and cotton on credit to the poorest districts where the peasants even lacked the clothes to maintain themselves in the bitter winter cold. It also organised the peasants in poor districts to construct small-scale irrigation systems and transportation lines, using government grain stocks and cloth as investments. In addition, special allocations were made to improve energy facilities and water conditions for several million people.

Fourthly, the government tried to improve education in poor districts and wipe out illiteracy. Primary education had been made universal in these districts. Education in poor districts emphasises professional education in agriculture and adult education for expert training in order to meet the needs of economic development. The National Committee for Science and Technology of the State Council has also organised a nationwide project, the SPARK Project, to achieve technical progress in poor districts. A

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model, which was developed in the Taihang mountain districts in Shanxi Province by SPARK, was popularised in all the poor districts of the nation known as "Taihang Ways to Progress".

Finally, economic development in poor districts was integrated with the development planning of the national economy. It laid stress on both improvement in present living conditions (enough grain to eat and clothes to wear) and long-term development of the regional economy. The government organised its department and mobilised various non-government organisations to aid the poor districts. These social organisations took charge of a specific county or a village and helped in the alleviation of poverty.

These efforts have paid some dividends. The impoverished population decreased to 5.3 per cent of the national population in 1988 compared to 12.2 per cent in 1985.

However, there are still serious problems which need urgent attention in these poor districts.

1. The conditions in poor districts still need much improvement. The people in these districts consume only 85.5 per cent of the standard amount of daily calories and 67.1 per cent of the standard amount of daily proteins. Impoverishment and malnutrition are common.
2. The figures on the impoverished population mentioned above were calculated without considering price changes and inflation. The actual population below the poverty line far exceeds this figure.
3. In terms of economic development the gap between poor districts and developed districts has become wider and is increasing.

## **2. Economic Problems in Poor Districts**

Poor districts are economically disadvantaged in the following ways.

1. With the same amount of investment as in developed districts, poor districts receive fewer products, because of poor infrastructure. In other words the returns on investment are low.
2. Transportation costs are high and the prices of production and materials for consumption are also high. Therefore, the same investments as in developed districts result in lower profits in poor districts. For example, the average prices of salt, kerosene, and coal are 0.31, 0.71, and 0.042 RMB *yuan*/kg respectively throughout most of China, whereas they are about 1-2.8, 2-3.2, and 0.06-0.066 RMB *yuan*/kg respectively in poor districts.
3. Because of advantageous investment conditions and advanced technology, developed districts can adopt intensive farming and can still obtain high profits. The poor districts, in contrast, can hardly obtain average profits because of undeveloped management and inefficiency in investment.

4. The burden of environmental deterioration, which was a toll exacted during development of the national economy, was transferred to the people in poor districts. The cost of environmental improvement, such as afforestation, water and soil and vegetation conservation, is surprisingly high. Environmental improvement efforts benefit mainly agriculture and industry in the plains. These efforts help maintain a smooth transportation network, reduce natural hazards, and provide raw materials for the national economy. Because of the high costs of construction and long period of returns on investment, poor districts carry the burden for environmental conservation, but the benefit of their efforts goes to developed districts. The four aspects mentioned above result in poverty, low economic efficiency, and slow development of poor districts. In 1988, we investigated Zhanhuang County, a poor county in the Taihang Mountains in Hebei Province, and Zhending County, a developed county near Zhanhuang County in the same province. A comparison of the economic efficiency of specific crop plantations in the two counties is given in Table 1. The comparison of wheat and maize crops in Zhanhuang and Zhending counties shows that the cost is low and productivity high in the developed district.

**Table 1: A Comparison of the Economic Efficiency of Wheat and Maize Plantation in Zhanhuang and Zhending Counties**

Project	Wheat		Maize	
	Zhanhuang	Zhending	Zhanhuang	Zhending
Productivity (kg/ha)	3171.50	4518.80	4574.20	6335.50
Cost (RMB Yuan/50 kg)	30.20	22.90	15.90	12.00
Profit (RMB Yuan/ha)	418.40	1063.40	774.90	1287.80
Cost/profit	0.44	1.08	1.06	1.60
Income (RMB/work hour)	2.48	6.18	4.25	6.66

Therefore, development in poor mountain areas should not be perceived as charity or aid but as a means of repaying for the environmental toll exacted by developed districts. This is why poor districts need a special preferential policy to prompt economic progress.

### 3. Specific Economic Policy for Poor Districts

Among all the measures for aiding poor districts, the most effective measure is to reform the political and economic system and establish a free market economy.

The present preferential policies of the government for poor districts need urgent revision.

1. The present system under the government planning framework in which funds are provided to purchase farm produce and side products is advantageous to developed districts but disadvantageous to poor districts.

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Poor districts have abundant native products, but lack the kinds of farm products which are included in government plans. Poor mountain districts normally produce no, or little, marketable grain. The government policy provides fertilisers, pesticides, and gasoline for districts which can produce marketable grain, in order to encourage crop farming in those areas. Poor mountain districts, therefore, cannot receive government-allocated fertilisers, pesticides, and gasoline and are forced to purchase them at high prices in the market. This adversely affects the economy of poor districts.

Considering these problems, the Government should rescind the policy for allocating production materials such as fertilisers, pesticides, and gasoline in proportion to the planned amount of marketable grain. In addition, in order to pursue the highest economic efficiency, a differential price system for the allocation of production material should be practised throughout the nation. The Government should reduce the selling prices of production materials for poor mountain districts and raise them for developed districts.

2. Special funds should be established for nature conservation and environmental construction in mountain areas. The conservation fund can be collected by raising the water price in the plains to support afforestation and natural conservation. The environmental construction fund can be collected proportionally from the enterprises and factories which maintain their production through exploitation of natural resources in mountain areas. In addition, the Government ought to increase investment to mobilise labour in mountain districts for road, irrigation system, and power system construction.
3. The main districts for agricultural investment in China are in the plains and along the coast. Investments get good returns in these districts. However, apart from grain and cotton farming, most other resources are abundant in mountain districts. Low interest loans should be allocated permanently for commodity production in mountain districts.
4. The native product tax, which has been levied since 1989, is suitable for most of the districts in the plains, but it is not suitable for poor mountain districts. The poor mountain districts ought to be either free from tax or lower taxes should be levied than those levied in the plains for native products.
5. Because of the move from a unified revenue and expenditure system to a differential system, government investment has shifted from poor districts to districts with highly efficient economies. Profits from enterprises, which were the main source of revenue in poor districts, are now taken by the State as payment for loans and interests. Financial reforms in poor districts should be responsive to the predicaments faced by such districts and should be different from those in developed districts.
6. The Government should introduce a special price system in poor districts. The more remote the district, the higher the price of farm and sideline products and the lower the taxes should be. Such a system could compensate for economic loss in poor areas.

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7. Considering the significant role of science and technology in economic development in poor districts, the Government should formulate a policy to encourage education and scientific progress in poor districts. The salaries of scientists and experts who work in poor districts should be raised.
  8. There should be preferential policies for tax collection, investment, loan and credits, and export and import for poor areas.
  9. At present, officers at the lower basic levels are elected once every three years. This system is incompatible with the economic characteristics of poor districts. In poor districts, longer tenure is needed to implement effective policies and programmes.

# FRAMEWORK FOR A DEVELOPMENT STRATEGY FOR POOR AREAS IN CHINA

Chen Guojie

## 1. Opportunities and Challenges in Impoverished Regions of China

Although great improvements have been made in the poor areas of China, a number of contradictions characterise these areas. These are outlined below.

### *Strategic Position vis-a-vis Low Economic Level*

The poor areas are mainly located in mountain regions and in boundary areas between provinces, interiors, and frontiers. In spite of the strategic position, the low economic level in these areas at present has inhibited comprehensive, regional economic development.

### *The Conflict between Modern Needs and Cultural Traditions*

Impoverished areas in China have insular, self-sufficient social formations in which minority nationalities live in compact communities. A good life according to traditional precepts in northwestern Sichuan means "storing something (that is butter, cake, and tea) inside their tent and tying some animals (horses, oxen, and sheep) outside their tent". The small-scale peasant economy is manifest in "raising pigs for a festival, raising sheep to keep out the cold, and raising chickens for exchange". Because they are afraid that "rich water flows into the field of another person", they are often not willing to open themselves to the outside world. They also close their areas because they are afraid that they will be exploited by the people of flourishing areas.

### *Poverty Alleviation vis-a-vis the Problem of Relative Poverty*

Poverty alleviation efforts, at present, are not deep-rooted. The possibility of many counties reverting back to poverty still exists. Moreover, poverty alleviation efforts at present are focussed on the problem of absolute poverty. The problem of relative poverty is meanwhile becoming more acute.

### *Rich in Natural Resources and Poor in Development Conditions*

Generally speaking, the poor areas possess abundant resources such as land resources, forest resources, grassland resources, mineral resources, and tourist resources, etc.

However, development of these resources is hindered by a number of factors, including inaccessibility, distance from major markets and urban-industrial complexes, frequency of natural disasters, climatic conditions, etc.

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## *The Urgent Need for Investment vis-a-vis an Unfavourable Investment Environment*

More investment is required in poor areas because of their poor economic foundations. Additional funds should be invested to improve the backward infrastructure, construct cities and towns, and enrich culture and education. It is only through higher investment that an economy of scale can be realised. However, to attract such massive investment, it is necessary to create a good investment environment. Unfortunately, investors are not willing to invest their funds in these areas because of many disadvantages, including poor transportation and communication.

## *Increasing Economic Development and Degrading the Ecological Environment*

In order to get rid of poverty and reduce the gap between poor areas and developed areas, it is necessary to hasten the process and scale of economic development.

However, poor areas are often situated in ecologically fragile areas where the environment is severely degraded. Economic development of these areas can further aggravate environmental problems. Poor areas, such as the arid hill areas in Ganshu and Lingxia, the loess hill areas in north Shanxi, the stone mountain regions in the Luliang and Taihang Mountains, the alpine desert mountain region in Xizhang and Qinghai, and the desert areas in west Neimen and Xingjiang, have very little forests, are severely dry and fragile, and are susceptible to soil erosion, as well as frequent natural hazards such as landslides and debris flows, etc. Economic development efforts could easily trigger further environmental degradation.

## *The Problem of Human Resource Development and Technology*

The development of poor areas depends mainly on the ability to turn primary products into a series of intermediate final products which are unique and excellent with high value. Furthermore, the key to economic development in the poor areas is to raise the level of industrial development and technology. Human resource development is the key to success.

Unfortunately, poor areas have a low level of HRD and technology. Over 30 per cent of the population in poor areas in China are illiterate. The fact that most of the technical personnel move to other regions makes it more difficult to develop the poor areas.

## *Developing Opportunities and Increasing Competition*

Firstly, the development of a whole county needs both natural resources and markets for the poor areas. Secondly, there are possibilities of increasing the investment in poor areas as people from developed regions try to expand their economic influence and as the amounts of domestic and foreign investment increase. Finally, the central and local governments have been supporting and helping the development of the poor areas.

While opportunities for development are expanding, owing to the market economy, competition among different regions is also increasing. As the competition for domestic and foreign investment intensifies, this has become a great challenge for poor areas.

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## 2. Development Strategies in the Poor Regions of China

Development strategies in the poor areas must make full use of the advantage of regional resources and rely on a combination of sufficient manpower and scientific technologies. Following the needs of the market economy, the emphasis should be on developing township enterprises, setting up point-axis systems of regional development, regulating the structure of regional industry, establishing industry with high output value and high profits, promoting unique and excellent products, speeding up light industries and processing industries, and, at the same time, helping in the development of the tertiary sector. In order to attract investment, it is also very important to expand infrastructure, mainly transportation and communication.

### *Tendencies to be Avoided*

There are two tendencies that need to be avoided: the first is the tendency to be satisfied with the alleviation of 'absolute' poverty. This is dangerous, because it leads to development inertia. The second tendency is the hope of achieving quick results. Overestimation of achievements in the process of alleviating poverty can easily lead to establishing unrealistic goals, strategies, and methods of development. This can lead to strategic failure and the overall "restoration" of poverty which would seriously dampen the enthusiasm of the people. Generally speaking, it is impossible for poor areas to surpass developed areas without decades of arduous and unremitting efforts. There are three stages before the poor areas can catch up with developed areas.

Stage one: Narrowing the gap between poor and developed areas and taking care of absolute poverty. This stage should be achieved within this century.

Stage two: Keeping pace with developed areas in development. This goal could be achieved about 20 years after 2,000 A.D.

Stage three: Decreasing the gap between poor and developed areas with the possibility of surpassing the development level of developed areas.

## 3. Specific Problems Concerning the Development of Impoverished Areas

### *Exploitation of Resources*

Past experience suggests that the following points should be taken into consideration.

Begin with Small Development Programmes. It is impossible for poor areas to attract big investments in a short period of time.

Aim for the Market and develop unique products with comparative advantages. Poor areas must begin with unique, marketable products to expand their influence, to establish their reputation, and to attract investment. For example, making use of the opportunities that pine mushrooms have in domestic and foreign markets, the people in Ganzi Prefecture have devoted their efforts to developing this product. As a result, in 1988,

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1,020 tonnes were exported, worth 100 million *yuan*. The production of pine mushrooms has become a strong base for the regional economy.

Combining Short-term with Long-term Goals. The case of Miyi County will illustrate this. Inter-planting of apples (harvested after 7 years), peaches (shrub, harvested after 3 years), and non-irrigated crops (soybeans, radishes, potatoes, and melons, etc, ripe in one year) was carried out to take full advantage of the mountain ecology and to meet the needs of local peasants. In the first few years, because apple trees have few branches, non-irrigated crops, which are planted on the ground can grow well, so that some profits can be realised within the year; in addition, non-irrigated crops can be used as green fertiliser. After three years, the peach trees can yield profit. After the first few years, the apple trees begin to yield returns. Finally, apple production becomes the major agricultural activity. There are many cropping patterns like this which mix short-term with long-term profits in developing poor resources.

### *Education and Culture*

It is impossible for the poor areas to catch up with the average development level without emphasising universal education and focussing on the training required to harness mountain resources. Conditions to facilitate these measures, such as better pay for teachers and scholarships and financial support to the meritorious and needy, have to be created.

### *Promoting Science and Technology*

Science and technology, which are the key to comprehensive development, can be promoted through

- assigning adequate technical personnel to work in poor areas,
- providing training programmes,
- giving practical training to university students in poor areas,
- arranging visits for cadres and peasants to more developed areas, and
- enhancing production linkages between city-based enterprises and those in mountain areas.

### *Funds for Development*

It is necessary for the government to put special policies into practice and to increase the investment in poor areas. At the same time, developed areas should also help the development of poor areas through the promotion of enterprises or through direct investment.

However, external efforts can only create the conditions, internal efforts are the decisive factor. For this purpose, poor areas should gradually enhance their ability to accumulate funds for investment and improve their capacity to reinvest.

Development strategies for poor areas should also take advantage of the availability of a large amount of cheap labour in these areas. Labour can contribute to the creation of

basic facilities and public development programmes such as highway construction, water resource projects, high output croplands, and the establishment of industries, etc.

As for the utilisation of funds, it is necessary to plan development projects carefully in the context of what is to be developed; where to develop it; which project should be given priority; and how to solve the problems of production, transportation, and marketing.

There are two tendencies that need to be taken into account in the development of mountain areas. The first is the tendency to concentrate investment in the mountain areas. This is because of the fact that the mountain areas are the most backward areas in the country. The second tendency is to concentrate investment in the mountain areas. This is because of the fact that the mountain areas are the most backward areas in the country.

**Stage one:** Narrowing the gap between poor and developed areas and taking care of science and technology. The key to the development of mountain areas is to narrow the gap between poor and developed areas and to take care of science and technology.

**Stage two:** Keeping pace with developed areas in science and technology. The key to the development of mountain areas is to keep pace with developed areas in science and technology.

**Stage three:** Developing science and technology in mountain areas. The key to the development of mountain areas is to develop science and technology in mountain areas.

### 3. Specific Problems Concerning the Development of Mountain Areas

**Exploitation of Resources**

It is necessary for the government to put special policies into practice and to increase the investment in poor areas. The development of poor areas should be through direct development of poor areas through the promotion of enterprises or through direct investment in poor areas.

However, external efforts can only create the conditions, internal efforts are the decisive factor. For this reason, the government should give priority to the development of mountain areas. The government should give priority to the development of mountain areas.

## INTERNAL ECONOMIC ACCUMULATION IN POOR MOUNTAIN AREAS

*Dai Sirui*

The mountain areas, being generally remote and with poor communications, have long been isolated from the outside world. They are core poverty areas where economic development is far behind that of the plains' and coastal regions. Development in the 1980s freed many of the mountain areas from poverty, nevertheless, economic development is still rather slow, and people are still living in poor conditions. Several factors are responsible for the low level of economic development, but the lack of internal accumulation and the lack of investment are among the most important limiting factors.

Internal economic accumulation includes monetary investment, labour force, infrastructural facilities, and so forth. The present paper focusses on investment accumulation in poor mountain areas.

### 1. Accumulation of Material Production Industries in Mountain Areas

Investment is the initial source of economic development and is of decisive significance in the development of any economic system. Internal investment accumulation is derived mainly from material production industries (including industry, agriculture, building, transportation and communication, and commerce) and secondarily from the income from labour. The study and analysis of accumulation in the material industries are important and useful for a correct understanding of the characteristics of internal accumulation in mountain areas.

The accumulation of material production industries can be expressed as:

$$\sum M_{2i} = (\sum TR_i - \sum TC_i - \sum TV_i) - \sum M_{1i} \quad (1)$$

where,

$TR_i$ ,  $TC_i$  and  $TV_i$  represent respectively the total income of production, total cost of materials used in production (including the depreciation of fixed assets), and labour payments,  $M_{1i}$  and  $M_{2i}$  refer to the taxes and duties provided and the accumulation invested by' the  $i$ -th industry. The part in parentheses is the total profit of all the material production industries. Obviously, accumulation is only a part of the total profit.

Based on this function, the following two situations for accumulation by material production industries can be envisaged.

1. When  $(\Sigma TR_i - \Sigma TC_i - \Sigma TV_i) > \Sigma M_{ii}$ , i.e., the total profit is greater than the total taxes and duties, the material production industries contribute to accumulation, and the greater the profit, the larger the amount of accumulation which can be afforded.
2. When  $(\Sigma TR_i - \Sigma TC_i - \Sigma TV_i) < \Sigma M_{ii}$ , i.e., the total profit is less than or equal to the total taxes and duties, there will therefore be no accumulation.

In poor mountain areas, there are several rigorous realities which make the increase of profit and the provision of more accumulation very difficult for production industries.

Firstly, the unitary industrial structure of mountain areas, which is based mainly on agriculture, has at least three limitations: firstly, it limits the development of potentially large profit-making industries such as product-processing, building, transportation and communication, and so on. Secondly, profit in these areas is primarily derived from agriculture, but agricultural profit is itself very limited and is greatly affected by natural weather conditions. Thus, the total profit in these areas is inevitably low and unstable. The efficiency of agricultural production sectors is low. This consequently hinders the optimal combination of essential production components and greatly limits the total profit. The reduction in total profit will certainly result in a weakening of the economic accumulation potential.

Secondly, science and technology and cultural and educational undertakings remain underdeveloped, and so technological and management levels are considerably low. The advancements in science and technology are difficult to extend to commercial applications in these areas. Therefore, both quality of products and economic benefits are low. As a result, increase of economic profits and accumulation through scientific and technological advancements remains obstructed.

Thirdly, mountain areas are generally remote and suffer from poor transport and communication facilities, scattered resources, and frequent natural disasters. This increases the costs of production and transaction and decreases comparatively profit and accumulation ability. For some products, local consumption is very limited because of an undeveloped economy and low purchasing power. The products often remain uncompetitive in outside markets, sometimes even resulting in economic losses.

Finally, poor mountain areas export their agricultural and mineral products, but import the processed end-products. Because of price differences between agricultural and industrial products, the terms of trade are not favourable to the mountains. This weakens the profitability and accumulating ability of mountain areas. According to an assessment made by Tang Zejiang of the Sichuan Academy of Social Sciences, the mountain districts of Wumengshan, Hengduanshan, Wulingshan, Qinbashan, and Liangshan lose up to 2,000 million *yuan* a year due to the low prices of agricultural and mineral products and the high purchasing prices of light-industrial products. This unequal exchange results in significant reduction in internal accumulation.

The primary source of economic accumulation is agriculture, and this remains an unstable sector in poor mountain areas. Therefore, in poor mountain areas, the development of industries must be accelerated and efficiency should be enhanced through application of science and technology.

## 2. Changes in External Investment and Internal Accumulation

Since there is little internal accumulation capacity in poor mountain areas, the Government has supported them by removing taxes, giving direct financial support, providing loans with no interest or low interest, and by making increased credit available. A considerable amount of money is allocated for poverty alleviation in such areas through various channels. In recent years, the labour export from poor mountain areas has been very high and the income resulting from labour export returns to the place of origin. These two types of capital income change the accumulation equation to equation.

$$M_2 = [(\sum TR_i - \sum TC_i - \sum TV_i) \sum TVM_{1i}] + (M_3 + M_4) \quad (2)$$

where,

$M_2$  is the total accumulation of the economic system of poor mountain areas,  $M_3$  is the total capital supporting poor mountain areas,  $M_4$  is the capital income from labour export,  $TR_i$  represents the scale of distribution and re-distribution,  $TC_i$  is used to compensate the consumption of productive material,  $TV_i$  represents the basic living requirements of labourers and their households, and  $M_{1i}$  refers to the consumption of non-material production.

Theoretically, the input of capital should increase total accumulation. This input of capital would then be able to facilitate the economic development of poor mountain areas. This is true in some areas. However, there are many areas where input of capital did not improve economic development and where it even led to loss of the input capital itself. This depends upon the different uses of input capital.

Input capital will induce different results depending upon the destination or areas of use. The destination of  $M_3$  is generally arranged by the local government. The destination of  $M_4$  is decided by the residents who own the capital. The exact destination of the capital depends on the combination of multiple factors.

Local government may have three possible choices of destination for  $M_3$ .

- (1) If  $[(\sum TR_i - \sum TC_i) - \sum T_i^i] > \sum M_{1i}$ , that means the output of the production department can satisfy the basic living requirements of labourers and their families, the requirements of the non-production department, and even can provide some accumulation for enlarging reproduction.  $M_3$  therefore may be used, in such a case, as additional input for expansion.
- (2) If  $(\sum TR_i - \sum TC_i) = \sum TV_i$ , then the output of the production department can only compensate for the consumption in production and satisfy the basic living requirements of labourers and their families in the production department.  $M_3$  therefore should be used to satisfy the requirements of administration, education, cultural, health, and other non-production departments. Only when residual capital remains can it be used to expand.

- (3) If  $(\Sigma TR_i - \Sigma TC_i) < \Sigma TV_i$ , then the output of the production department cannot compensate for material consumption and satisfy the basic living requirements of labourers and their families. The support capital for poor mountain areas in such a case is insufficient to compensate and there is no residual for use in expansion.

There are also three possible ways in which  $M_4$  may be used.

- (1) If  $[(\Sigma TR_i - \Sigma TC_i) - \Sigma TV_i] > \Sigma M_{ii}$ , that means family production output can, at least, compensate the material production and satisfy the basic living requirements of families and pay the taxes.  $M_4$ , therefore, may be used preferably for expansion.
- (2) If  $[(\Sigma TR_i - \Sigma TC_i) - \Sigma M_{ii}] < \Sigma TV_i$ , then family production output cannot satisfy the basic living requirements of families after extracting the material consumption and payment of taxes.  $M_4$  certainly should be used to supplement any insufficiencies in the basic living needs of families and only the residual part can be used for expansion.
- (3) When there is a possibility for all of  $M_4$ , or part of it, to be used for expansion and the expected efficiency of expanded production is very high,  $M_4$  can be used for expansion. Otherwise,  $M_4$  should be used for basic consumption or to save.

Poor mountain areas also receive some gifts of capital, low, or free interest loans from national and international organisations. The use of this input capital by local government is quite similar to the use of supporting capital from the national government.

The analysis above clearly shows that the total capital is not always used to expand production in all conditions and in all poor mountain areas. Whether it is used in production and how large a part is used to expand production is critically determined by the capital input tendency of local governments and residents.

The types and results of turnover vary distinctly with the destination of the input capital. When the capital is used for additional inputs, it will increase the total input, expand production, raise the supplemental level, and increase the economic foundation and accumulation if it is combined with native production. The type of turnover is characterised by currency capital being turned into production capital and turned into product capital through the production process. Consequently, it is turned into increased currency capital through the commodity exchange process. The increased value, realised through turnover in the production of input capital, can be used again as new additional accumulation to be invested into further expanding production. If input capital is not used for additional input, it will be used in different ways in consumption. As soon as input capital is used in consumption, it will lose the direct link with material reproduction and lose the potential for starting economic development and increasing accumulation.

It should be emphasised that it is only a possibility that input capital will initiate economic development and increase the accumulation of poor mountain areas when the input capital is used to increase input. For this possibility to be realised, we have to choose better projects, provide reliable technical support for the projects, provide services

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for the processing and sale of products, optimise management, reduce production costs, and increase benefits. These problems can be quite difficult to deal with in poor mountain areas. These problems can be solved only when applicable and effective measures are put into practice.

### **3. The Internal Accumulation Mechanism in Mountain Areas**

As poor mountain areas lack internal investment, it is necessary for governments to adopt preferential policies to support these areas. However, if an internal accumulation mechanism has not been formed, the money invested from outside will flow out rapidly. On the other hand, if a fine internal accumulation mechanism exists, the money invested will act as an engine to propel rapid development of the economy.

A fine accumulation mechanism is a mechanism that should absorb and drive internal re-investment. With this absorbing and driving force, even a little internal accumulation and outside investment will lead to expanded production. The economic development of poor mountain areas can be accelerated through this process. For this process to be operational, five measures should be taken into account.

Firstly, a mechanism should be set in motion that makes re-investment profitable. Only when investment and reinvestment can bring in economic benefits will investors take the initiative. This is relevant to two issues. Firstly, the correct investment decision and appropriate projects must be assured. In the initial stages, limited money should be invested in projects requiring little investment but yielding rapid results. Secondly, the price system needs to be adjusted. At present, most projects for economic development are concentrated in the field of farming and only a few are agro-processing projects. Under the current price system, investment in farming is not so profitable. Production increase does not always bring about profit increase. Nevertheless, the full development of agriculture is a prerequisite for economic development in poor mountain areas. Focus should be given to a price system that can ensure that agriculture is somewhat profitable.

Secondly, the loss of funds for investment and reinvestment should be prevented. Normally investment funds in poor mountain areas are often used for consumption of non-essential items. One method of preventing the loss of accumulated funds is to have effective management and supervision. Poverty alleviation funds should be allocated directly to enterprises and farmers to prevent misuse by the managing authorities. Lastly, management and supervision of the enterprises and farmers receiving poverty-alleviating funds should be enhanced to prevent funds from being shifted to non-productive fields.

Thirdly, capital accumulation through labour should be well organised in order to enlarge the sources of accumulation. Local governments should actively organise local labourers to plant trees, build roads, and transform low-yield fields so as to improve the basic conditions for economic development in poor mountain areas. Use of such labour should be well-planned to avoid waste or over-consumption of the labour force. Labour export from poor mountain areas is one important way of increasing internal accumulation. In Tongren Prefecture, located in the Wulin mountain area of Guizhou Province, income from

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labour exports was over 75 million  *yuan*, equivalent to a 25  *yuan* increase of annual per capita net income in the prefecture. Such income, if used well, can become a driving force to promote local economic development.

Fourthly, a favourable environment must be created to incorporate local resources in the poor mountain areas with resources from outside. Mountain areas are rich in natural resources, but lack money and technology. If inputs from financial investments and advanced technology can be well integrated with local resources, mountain areas can turn out market-competitive products. As a result, accumulation will rapidly increase. Wanyuan county, for example, is a poor area located in the Dabashan mountain area of Sichuan Province. Under the guidance of the technological team of Southwest Agricultural University, this county has popularised applied technology in areas such as crop planting, fish farming, animal raising, and agro-processing. For instance, leopard palm was once a wild plant there; through variety breeding, scientific planting, and fine processing, its products now have entered international markets. The output value of this new industry amounted to over 50 million  *yuan* in 1991. This example shows that effective integration of outside advanced technology with the local resources of mountain areas can play an important role in promoting economic development and enhancing the accumulating capacity of mountain areas.

Fifthly, a set of rules and regulations needs to be established for internal accumulation in poor mountain areas. As it is, the enterprises and farmers decide upon the input, the investment is therefore uncertain and unstable. An effective way to overcome this difficulty is to set up a foundation for mountain area development, which can consist of a some internal funds, funds for poverty alleviation, and other sources. A special organisation can be established to manage the foundation and to decide which important projects to undertake. In this way, the instability of investment and reinvestment would be largely reduced.

If all these five measures are implemented properly, a fine accumulation mechanism would be in place to sustain the economic development of poor mountain areas.

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# ANALYSIS OF THE INDUSTRIAL STRUCTURE IN POOR VILLAGES IN XING YUAN COUNTY, SHANDONG PROVINCE

*Gao Guan*

## 1. Characteristics of the Production Structure in Xing Yuan County

Xing Yuan county is one of the poor counties in Yimeng district, Shandong Province. There are 357 villages in the county and the annual per capita income was lower than 200 RMB  *yuan* in 1985. These villages account for 56 per cent of the total number of administrative villages in the counties. Investigations in the 357 villages in 1991 showed the following characteristics of the industrial structure (Table 1).

1. Production is dominated by agriculture. The profits from agriculture account for 80 per cent of the gross profit. Plantations and animal husbandry are the main occupations. The proportion of forestry, sideline occupations, and fisheries in the industrial structure is lower than 10 per cent.
2. Construction is the major industry, ranking after agriculture.
3. Transportation is the third major industry.

**Table 1: The Industrial Structure of 357 Poor Villages in Xing Yuan County (1991)**

	Amount (10'RMB <i> yuan</i> )	Proportion (%)
Gross income	13,489.33	100
<u>Primary Activities (Agriculture)</u>	<u>10,710.53</u>	<u>79.4</u>
Plantation	6,608.39	48.9
Farming	2,859.70	21.3
Forestry	813.99	6.0
Side occupations	409.31	3.0
Fisheries	19.14	0.2
<u>Secondary Activities</u>	<u>390.11</u>	<u>10.3</u>
Industry	471.77	3.5
Town and village enterprises	141.31	1.0
Construction	777.03	5.8
<u>Tertiary Activities</u>	<u>388.69</u>	<u>10.3</u>
Transportation	440.91	3.3
Commerce and restaurants	195.80	1.5
Services	173.58	1.3
Others	578.40	4.2

## 2. Industrial Structures and Poverty

We compared the villages with the highest incomes and the villages with the lowest incomes among those listed as poor villages by the Government and found that there was a big difference in their industrial structure. In Hanwan village, the village with the

highest income among the poor villages, the annual per capita income is up to 757 RMB  *yuan* and exceeded the annual per capita income in wealthy villages. The income from non-agricultural occupations accounts for 32.2 per cent of gross profits; the income from industry accounts for 18 per cent of gross profits. In Yangjaling village, the village with the lowest income among the poor villages, the annual per capita income is only 148 RMB  *yuan* and all of it is from agricultural production. Villages with predominantly agricultural incomes were impoverished (Table 2).

**Table 2: Comparison of the Industrial Structure between Developed and Undeveloped Villages (1991)**

Types	Income (Per cent)		Annual Personal Disposable Income (Average)
	Agricultural income	Non-agricultural income	
Undeveloped villages (357)	79.4	20.6	362
154 villages where the average per capita income is below 300 RMB <i> yuan</i>	87.0	13.0	
203 villages where the average per capita income exceeds 300 RMB <i> yuan</i>	74.7	25.3	
Developed villages (297)	57.0	43.0	730
Total (636)	64.3	35.7	546

In general, high per capita disposable income in towns and villages is associated with secondary and tertiary industrial activities. The results suggest that industrial development plays a leading role in the alleviation of poverty in impoverished areas (Table 3).

### 3. Problems in Adjustment of the Industrial Structure

In order to make efficient use of mountain resources, the government department of Xing Yuan county proposed a series of measures to adjust the industrial structure in 1986. The measures included reducing the area under grain crops, afforestation on formerly cultivated sloping lands, fruit farming, and animal husbandry. Forestry and animal husbandry were emphasised as the main bases of production. The implementation of these measures changed the composition of the rural economy.

After several years of effort, the industrial structure in Xing Yuan county has undergone changes. The proportion of area under crops has decreased and the proportions of forestry, animal husbandry, and fisheries have increased. The increase in animal husbandry is especially obvious. Forestry has developed relatively slowly. The proportion of sideline occupations is lower than the level in 1984. These changes suggest that there are many barriers to the development of non-agricultural occupations.

**Table 3: Industrial Structure and Incomes in Poor Villages, Xing Yuan County, (1991)**

Villages and Towns	Number	Gross Income						Personal Disposable Income (RMB yuan)
		Total	Agricultural Income	Non-Agricultural Income				
				Total	Industry	Construction	Tertiary occupations	
Hanwang	14	100	60.69	39.11	12.98	12.28	13.85	491
Tumen	10	100	58.60	41.40	14.10	9.40	17.90	489
Nanma	15	100	43.30	56.70	24.00	7.80	24.90	383
Zhangjape	26	100	88.00	12.00	0.70	4.20	7.10	372
Dongli	40	100	81.40	18.60	5.20	4.20	9.2-	365
Yuanzhuang	30	100	82.30	17.70	3.80	3.60	10.30	344
Gouque	12	100	85.00	15.00	4.00	5.70	5.30	337
Shiqiao	21	100	78.00	22.00	6.00	4.50	11.50	334
Shancha	32	100	87.00	13.00	0.70	2.10	10.20	330
Shobeilin	23	100	84.00	16.00	3.40	4.60	8.00	328
Dazhangzhuang	32	100	93.00	7.00	1.00	1.60	4.40	314
Zhongzhuang	22	100	88.00	12.00	0.30	2.40	9.30	306
Jingxing	19	100	81.00	19.00	2.70	8.00	8.30	299
Xujazhuang	14	100	76.00	24.00	2.30	12.5	9.20	297
Yanya	17	100	87.00	13.00	1.10	4.40	7.50	288
Louchong	30	100	76.00	24.00	1.60	7.70	14.70	271
Total	357	100	79.40	20.6	4.50	5.80	10.30	362

Note: Industrial income includes allocations for town and village enterprises.

The development of industries is severely limited in most of the poor villages. Generally speaking, the limitations are due to

- high transportation costs;
- low economic efficiency because of the small scale;
- lack of trained manpower; and
- paucity of funds.

As a result the industries in poor areas do not have a competitive edge.

Because of increased population, low efficiency of agricultural production, and changes in market demands, the profits from agricultural production are very low. In 1990

agriculture accounted for only 37 per cent of the gross profit in Xing Yuan county. Even though products such as silk and tobacco were in great demand in the market, the response of the peasants was not enthusiastic because these products were purchased by the government at low prices.

#### 4. Strategic Considerations

The general experience of economic development in China suggests that the sectors that can make efficient use of the resource advantages should be chosen as the lead sectors. Agricultural processing is the connection between agriculture and industries. Silkworm farming in Xing Yuan county is a traditional occupation and has been managed for more than two thousand years. The production of silkworms in Xing Yuan is the third largest among the counties in Shandong Province. There are 488 villages where peasants are involved in producing cocoons and which account for 70 per cent of the villages in the county. Traditional experience, large-scale production, and high efficiency are the advantages in silkworm rearing and cocoon production. Silkworm farming is also closely related to agriculture and forestry. The plantation of mulberry trees can improve environmental conditions, and the branches and bark of trees can be used for paper making. The root of the mulberry tree is an ingredient in Chinese medicine. The side products of sericulture, such as the silkworm chrysalis and excrement, can be fed to pigs, cattle, sheep, and fish. The silkworm chrysalis is also an excellent protein ingredient which can be used to produce mixed forage and which can be refined into resolutive proteins. Silkworm excrement is a highly effective fertiliser. The amount of excrement produced by the silkworm on one *mu* of mulberry trees is equal to 10kg of nitrogen fertiliser. Sericulture can also prompt the growth of the textile industry. Furthermore, the economic returns from sericulture are high.

In spite of the potential, sericulture has not done well in Xing Yuan county because of government policy. The government purchasing price for cocoons is low and trading in silk is a government monopoly.

The promotion of agro-based and related industries in poor mountain areas should be based on

- transfer of light industries (such as silk-processing and textiles) to poor mountain areas;
- integrated planning of raw material production and processing;
- emphasis on efficiency of production through application of technology and training; and
- preferential tax and credit policies for industrial growth in poor mountain areas.

# A STUDY OF THE MAIN PROBLEMS LIMITING DEVELOPMENT OF POOR MOUNTAIN AREAS: THE CASE OF THE CHAOYANG MOUNTAINS

Wang Benlin  
Cheqwen Zhang

The Chaoyang mountainous area lies in Western Liaoning Province. The total area is 19,698 square kilometres, including one city, two districts, and five counties. The total population of the area is 3.18 million, of which 2.49 million are in agriculture. The density of the population is 162/km<sup>2</sup>.

## 1. Development Characteristics of the Chaoyang Mountain Area

The area is located between the developed coastal area and the undeveloped Inner-Mongolian area. The level of development in this area is higher than the average for the nation's poor areas, but it is still very low compared to the developed areas. In 1990, income per capita in this area was 831 *yuan*, though it varied considerably in different counties. However, the problem of the lack of basic living conditions has not been solved in most parts of the area.

Most of the area ranges from 500 to 1,000masl. The plains account for 21 per cent, the low mountains and hills respectively account for 37 and 42 per cent of the area. Soil erosion is a serious problem and involves about 52.3 per cent of the total area. Sloping land makes up two-thirds of the cultivated land. The soil quality is poor, the content of organic matter being between 0.24 per cent and 0.85 per cent, and productivity is low. The area falls into the arid-humid climatic region. Annual rainfall is from 440 to 550 millimetres, 71 per cent occurring in June, July, and August. There are many gales and strong sunlight in spring. This intensifies evaporation and leads to serious drought and water shortages. Between 1952 to 1980, spring drought occurred during 13 years and summer and autumn droughts occurred for 10 and five years respectively. Drought threatens both agriculture and stock raising.

There is considerable disparity in development. Industries are concentrated in Chaoyang city, Lingyuan county, and Beipiao city and other county towns. There are few industries in most other areas. Ninety-two per cent of industries, 80 per cent of county towns, and 67 per cent of irrigated cultivated land lie in the Daling River Basin. Jianping county and Chaoyang county are particularly poor areas. Poverty is prominent.

## 2. The Primary Problems of Development in the Chaoyang Mountain Areas

Rapid increases in population and low levels of human resource development are the most important factors limiting the development of poor mountain areas. After liberation, the population in the area nearly doubled. Although the national income increased by 198 per cent, the national income per capita increased by only 120 per cent. A considerable

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percentage of the increased national income is consumed by the increased population. Chaoyang city is now experiencing high birth rates. The population is predicted to be about 3.5 million by 2,000 A.D. In the area, 23.7 per cent of the population are illiterate or semi-illiterate. Forty per cent have received primary education and only 11 per cent college education.

Shortage of funds is another key factor limiting the development of poor mountain areas. Chaoyang city generates only 48.7 per cent of its budgetted expenditure. Development of processing industries, strengthening basic facilities for agriculture, or developing technical education, all of these need large amounts of funds.

The backwardness of transportation and communications is also a barrier affecting the development of poor mountain areas. Transportation and communications are not well-developed because of the mountainous topography. The railway capacity is low. Highways remain undeveloped. For instance, Jinzhou-Chengde railway has only a 60 per cent freight capacity to Chaoyang city. It is predicted that the disparity between freight transportation needs and transportation capacity will be 70 million tonnes by the year 2000.

The prospects of development in the coastal areas and the policies of local and national government are also important factors affecting the economic development of Chaoyang mountain areas.

The area and population of Chaoyang mountain areas account for one-seventh and one-tenth respectively of those of Liaoning Province. During the period from 1949 to 1985, fixed assets' investment in Chaoyang city by the State was only one thirtieth of that of the province as a whole. During the period of the Sixth Five-year Plan, this proportion fell to one forty-eighth and is still falling. Recently, the opening of Liaodong Peninsula and the pursual of policies favouring developed coastal areas have brought new difficulties for the development of poor areas.

### **3. Suggested Measures to Stimulate Growth in Chaoyang**

On the basis of experience the following measures to stimulate growth can be suggested.

#### *Strict Control on the Increase in Population and Expansion of Education*

There is an urgent need to intensify people's acceptance of family planning and to strictly control the population increase. Education has to be expanded, particularly at primary levels. Technical education and training to enhance productivity are other areas requiring urgent attention.

#### *Expansion of Financial Resources and Their Efficient Use*

There is currently a large gap between the need and the availability of financial resources, particularly investment funds. Priority should therefore be given to developing those industrial and agricultural products which can bring in large revenues. Mountain areas have sufficient mineral and agricultural resources, so it should be possible to attract both

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internal and external private investment to the areas. At the same time, the available funds must be used efficiently.

Financial resource needs' projection shows that, by the year 2,000, Chaoyang city alone will need 12,347 to 13,534 million *yuan*. It will, however, only have the capacity to generate 5,786 million *yuan*, i.e., around 40 per cent of its needs. Therefore, all sources of financial resource mobilisation, including national investment loans, funds for developing poor areas, credit facilities, and foreign investment should be tapped.

### *Investment in Infrastructure*

One of the most prominent characteristics of poor mountain areas is the backwardness in transportation and communications. As far as Chaoyang city is concerned, the railways should be rebuilt and improved to enhance their transportation capacity. This is particularly true for the Jinzhou-Chengde and Qianxi-Shenyang railways. In the mean time, it is also important to accelerate the construction of highways and to intensify highway transportation capacity. The highway connecting Chaoyang city and Jinzhou seaport should naturally receive priority. This calls for a massive increment in investment in transportation and communication.

### *Economic Integration of Rich and Poor Areas*

In recent years, the national strategy has been to give priority to the economic development of coastal areas. Consequently, in Liaoning Province, the priority is for the economic development of Liaodong Peninsula. Acceleration in economic development in coastal areas can bring about the economic development of other areas and even of the whole nation. To some extent, this strategy adversely affects the development of interior areas, especially poor mountain areas, and the productive potential of these areas remains neglected. For example, Chaoyang city is the biggest base for cotton and wheat and an important base for fruit production in Liaoning Province. It is also the source of the Liaohe River and therefore an area for water and soil conservation. If Chaoyang city develops properly, it can ensure the development of the economy and ecology and environment of the coastal areas of Liaodong Peninsula and the whole province. Investment in these aspects in Chaoyang city actually contributes to development of the coastal areas and the province. Therefore, it is important to harmonise the relationship between developed areas and poor mountain areas.

Lastly, it should be emphasised that the development of poor mountain areas must consider economic benefits, social benefits, and ecological benefits simultaneously. Unless the three aspects are well coordinated, it is difficult to solve the problems affecting the development of poor mountain areas. There is no single policy measure that can change the face of poor mountain areas. Only when measures for controlling the population, preserving, and improving the environment, developing transportation and communications, accumulating funds, using external investment, and favourable State policies are made to work in a coordinated fashion can poor mountain areas develop rapidly.

## KEY PROBLEMS AFFECTING THE DEVELOPMENT OF POOR MOUNTAIN AREAS

Ma Hongyong

In spite of natural resource potentials why are many mountain areas in China so poor? A number of factors (both internal and external) have contributed to the poverty in mountain areas.

### 1. Effects of Internal Factors

Poor mountain areas in China are often remote areas that were old revolutionary bases and inhabited by minority nationalities. These areas have a low productive capacity in relation to production in the plains. Traditionally closed economies and historic discrimination by feudal rulers are internal factors that have contributed to poverty in mountain areas.

### 2. Effects of External Factors

Because of their geographic locations, mountain regions lack basic infrastructure and remain disadvantaged in terms of financial resources, technology, and qualified manpower. In spite of the abundance of natural resources these regions have long been separated from the outside world. Further, the government policy has encouraged investment in accessible regions which have better development infrastructure, not only for development projects but also in areas like education and culture.

### *Dealing with Poverty in Mountain Areas*

In terms of the causes and characteristics of poverty in poor mountain areas, the following countermeasures should be adopted in order to alleviate poverty and initiate a swift process of economic development.

- (a) As far as any development project in mountain areas is concerned, economic development, comprehensive use of natural resources, and environmental safeguards must be considered as a social package.

Integration of economic and environmental development must be reflected in economic returns, ecological benefits, and social benefits in the short or the long-term, at local, regional or national levels, or collective and individual benefits. In order to bring the natural, social, and economic advantages of the poor mountain areas into full play, economic development and environmental development must be conceived of as a package.

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- (b) It is necessary to realise the strategic importance of agriculture, so the emphasis should be on developing agriculture whenever the opportunity exists. It is necessary to change the existing traditional land management practices in favour of intensive management, so that agriculture and industry grow in a balanced way.

For this reason, economic development in mountain areas needs more investment for the completion and repair of infrastructure, farmland, and irrigation channels. Also, efforts should be made to control water and soil erosion and to carry out scientific farming based on intensive management. Based on the policy of self-sufficiency in grain, the non-agricultural sector should be developed. The rural economy should be developed through coordinated development of agriculture, forests, animal husbandry, sideline production and fisheries, industry, commerce, the building industry, transportation, and the service industry.

- (c) The experience of more than a decade has proved that developing a commodity economy is an effective way to end poverty in rural areas. Developing township industries to seek additional income is another way of dealing with poverty. It also mobilises the farmers to develop a commodity economy and to make full and rational use of natural and socioeconomic resources. All the old ideas, concepts, and traditions that are unfavourable for developing a commodity economy and opening up to the outside world should be avoided.

- (d) Priority should be given to hastening the construction of infrastructure and market towns. These include the basic construction of water supply works, electricity and roads, basic farmland construction, and development of market towns. The lack of such basic infrastructure seriously hinders economic development in mountain areas. High mountains and long distances in poor mountain areas make transportation difficult, thus hampering exports as well as imports.

Marketing is a major problem in the mountains. Therefore, market towns should be set up in rural areas of the prefectures and counties in a planned way. Market towns are the political, economical, scientific, and technological centres in urban and rural communities and also the providers of social services. Market towns help develop small-scale markets of various kinds and act as collecting and distributing centres. With these markets the natural resource advantages in mountain areas can be explored, and manpower, capital, and technologies can be attracted. Market towns can play a decisive role in developing commodity economies in poor mountain areas.

- (e) Economic development in poor mountain areas depends on the uses of science and technology, and the development of sciences and technology is dependent upon qualified personnel. With the development of a commodity economy, there is an increasing demand for personnel qualified at the management, technical, and professional levels. Appropriate policy measures should be adopted to retain qualified professionals in the mountains and prevent their outflow to other regions.

The introduction of technologies in the mountains should focus on practical techniques. It is also important to take advantage of advanced technologies that hold promise for the development of natural resources in mountain areas.

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- (f) **One** of the important **factors** hindering economic development in poor mountain areas is the high population growth rate. Family planning and mandatory birth control measures are still necessary. Mountain areas - for various reasons - have a high proportion of disabled in the population. The social and economic needs of this population have also to be taken into account. This makes family planning an extremely **essential task**.
- (g) A number of other preferential policies needs to be adopted in poor mountain areas. Some of these are given below.
- i) A support and protection policy for special forests that provide a base for specialised industries.
  - ii) Preferential policies for the development of mineral resources, processing industries, the construction industry, and the transportation industry.
  - iii) Food supply remains a pressing problem in the mountains. The mandatory State grain purchasing quota in these areas should be reduced so as to encourage the initiative of local inhabitants to work hard for self-sufficiency in food.
  - iv) Apart from the above-mentioned policies, there is a need for special policies in many other fields such as an industrial policy, tax collection policy, credit policy, training policy, aiding-the-poor policy, investment policy, and "three wastes" disposal policy, etc.

It should, however, be noted that outside aid can only help, the basic initiative for poverty alleviation has to come from the local inhabitants.

# EXPLOITATION OF MOUNTAIN RESOURCES AND DEVELOPMENT OF THE MOUNTAIN ECONOMY

Shi Yulin

## 1. Resource Characteristics of the Mountainous Areas of South China

Among the mountainous areas of China the tropical and sub-tropical zones of south China manifest the highest development potential. The mountain and hilly areas of tropical and subtropical China (i.e., the area south of the Huihe River and east of the Yungui Plateau) occupy about one million square kilometres. This region has 11.34 million ha of farmland, 53.4 million ha of forest land, three million ha of marginal land suitable for agricultural use, and 77.7 million ha of bare mountain and grass slopes suitable for forestry and animal husbandry. Temperatures are high, the rainfall and water resources are abundant, and the altitude is moderate. Mountains and hills are alternated with valleys. The land has high productivity and timber grows fast. Here the timber forest needs only about 20 years to reach maturity, while the forests in the northeast need 50 to 60 years, and the forests in the high mountains and deep gorges of southwest China need about 80 years to reach maturity. Land resources in mountainous areas of tropical and subtropical China not only have high productivity but are also suitable for a wide range of uses from tea plantations to subtropical fruits, including citrus fruits, bananas, litchies, lungan, and pineapples. They are also suitable for grain crops, cash crops, and the development of animal husbandry. Mountainous areas of tropical and subtropical China are richly endowed by nature.

## 2. The Need to Change from Monoculture to a Diversified Economy in Mountain Areas

In the mountain areas of China, only eight to nine per cent of the total land is used for agriculture. Sloping lands, which make up about 90 per cent of the total land area in the mountains, remain completely neglected. Monoculture is one of the important reasons for undeveloped economies in these areas. The idea has been only to "use the mountain" and not to "conserve" the mountain. Over-cultivation, over-cutting, and over-grazing have not only destroyed the resources but have also degraded the environment. The way out for the development of mountainous areas is to strengthen river valley and plains' agriculture and focus on fruit and trees on the slopes.

The Qianyanzhou experimental station in the red earth hilly mountain district of Taihe county in Jiangxi Province provides an example of this. Of the 200ha of land in 1983, about 14.7ha (6.6 per cent) were used for cereals, and 33ha for orchards (16.6 per cent) where citrus trees were planted for commercial production. On 113.4ha of forest land, Slash pine (*Pinus elliottii*), Masson pine (*Pinus massoniana*), and fir (*Abies*) trees were planted for the development of forestry and to conserve the environment. About 8.9ha of ponds and reservoirs were constructed for the storage of water. Thus long-term benefits were combined with medium and short-term benefits. In 1990, there were 56 families and

241 persons in the station area. **With a per capita net income** of about 1,400  *yuan* annually, there was an eleven-fold rise in income. **Forest coverage** increased from four to 62 per cent, and soil erosion was fundamentally controlled. The output of citrus fruits makes up 72 per cent of the total agricultural output. In about seven to eight years, forestry and sideline production will provide a considerable source of income for the station.

Another example is Miaoguo village in Yannan Prefecture, Shaanxi Province. It has a population of 5,000 with 100 families and 666.7ha of land, out of which farmland constitutes 500ha. Not long ago, 333ha of this farmland were returned to forest or grassland. So today there is only 167ha of farmland. Terraces were built and intensive agriculture practised. Apple trees were planted on 153.4ha and 226.7ha were devoted to timber forest, with about 100 ha of grassland for grazing. This village changed from monoculture and extensive farming to diversified agriculture and intensive farming.

In order to develop mountain resources, the special features of mountainous areas and local conditions should be given due consideration. Natural resource use should be guided by consideration of natural comparative advantages. Agriculture, industry, and trade should be allowed to evolve as a complete system.

It should, however, be noted that while the basic idea of developing mountain resources by natural resource use is correct, the main initiative for poverty alleviation must come from the local inhabitants.

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