

The Policy Framework for the Economy Development of Mountain Valley Areas in Beijing

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Abstract—it has great significance for achieving the construction goal of Beijing Mountain Valley Areas' Economy (MVAE) by innovating management policies and mechanisms. Based on self-organization theory, a policy framework model of MVAE development was developed and established in this paper. Moreover, this paper has presented suitable policies for resource-development, financial-supporting and macro-regulating from the aspects of basis policies and matching policies, providing scientific bases for perfecting the policy system of MVAE. The research results of this paper have enriched regional economic theory, provided references for formulating MVAE development policies by Beijing municipal government as well as other similar governments.

Keywords—Beijing; mountain valley areas economy; policy system

I. INTRODUCTION

Mountain areas approximately account for 62% of the total area of Beijing city. They are an inalienable organic part of the capital, undertaking the function of ecological conservation. They are also the ecological protective screen and water resources protection areas of the capital. Therefore, they are the critical areas to ensure the sustainable development of Beijing. Over past years, the excavation industry of agriculture, forest and mineral resources were the major pillars of regional economy development, undertaking the heavy responsibility of social economy primitive accumulation at the early stage of urban industrialization, and huge price had been paid for this reason. The economic development of mountain areas in Beijing exposed following shortcomings: the exhaustion of resources and decline of industrial benefit; the simplification of industrial structure, shrinking of resources industry and non-performance of substitute industries; the insufficient of economic output and weakness of local financial resources; the over-exploitation of resources and serious damage of natural environment and so on. Almost as same as the "Three Agriculture" issue, the economic problems of mountain areas are also very complex and important, hard to be solved. In 2007, guiding by the principle of ecological protection as the precondition, resources advantages as the backing, green industry—developing as the basis, "the mode of MVAE" was proposed in Beijing, in which each mountain valley areas is a single

development unit, based on its agricultural and basin economy as well as featured by its geographical environmental conditions. The target of MVAE model was first to build sizable mountain valley industries, which was varied in content, different in forms, blended in industries and distinct in features; second to raise the whole economic level; Third is to increase farmer's income and to realize the sustainable development of the economy. In order to realize the MVAE construction goal, the internal mechanism and movement rules of transformation and development of MVAE should be revealed. Based on it, related aid policy system can be established to support the economic system optimization and regulation of MVAE. In accordance with the requirements of self-organization theory to achieve the economic transformation path of mountain valley areas, the paper has designed the framework of MVAE development policy system, proposed recommendations of resources development policies, industries nurtured aid policies and coordinated development of macro-control policies for mountain valley areas [1].

II. THE NECESSITY OF POLICY ASSISTANCE

As an external factor and "catalyst" for the successful transformation of MVAE, public policy assistance is the important external condition and guarantee for the start and smooth operation of the MVAE transformation, which is of great significance to deal with the dilemma and problems in the MVAE transformation. Although the MVAE development mainly depends on its subjective efforts because "internal factors are the basis for the development and changes of things", under certain circumstances, external factors also have played decisive roles in the development and changes of things. In fact, the MVAE development did not lack of internal factors, on the contrary, the people lived in mountain areas had strong desires and enthusiasms to transform the backward conditions. When their desires were inspired, it should be noticed that the indispensability of external factors. After the shutdown of resource extraction enterprises, the MVAE was in downturn and fell into the depths of trouble. Without external assistance and policy support, the start of the economic transformation is almost impossible. According to the view of Western Welfare Economics, under the condition of "Market Failure" in resource allocation, it should be relied

on the government's macro-control to make up for lacking of market mechanism. Usually, policy intervention is the most effective method [2].

III. POLICY FRAMEWORK OF MOUNTAIN VALLEY AREAS ECONOMY

According to the self-organization theory, the self-organization conditions of open, far from equilibrium, nonlinear and fluctuation should be satisfied to achieve the successful transformation of MVAE [3]. As an external input "negative entropy", public policy is helpful in promoting mountain areas to jump into "being far from equilibrium" status through promoting the exchange of resources, information and energy between mountain areas and the outside, the free flow of factors of production and transfer of macro mechanism. It also can complete the self-organizing evolutionary process of MVAE by using of "fluctuation" leading to an ordered status.

A. *Increase Capital Investment and Break Free from Equilibrium State*

Regional economy was almost in the state of thermodynamic equilibrium or near equilibrium after the long-term sustainability of coal mining in mountain valley areas where natural resources were taken as economic basis as well as important driving force. The MVAE had the problems of weak economic foundation, heavy ecological conservation task and underpowered economic transformation. In this case, it was not able to overcome the internal resistance of the system by only relying on the slow internal changes to keep the industrial structure far from equilibrium. Therefore, it is necessary to take a mandatory change method that could push the MVAE development onto a non-equilibrium state and continually enhance the ability against external threats and challenges to achieve the transformation smoothly. The most important powerful driving forces are the resources development compensate policy funds (finance, banking, tax revenue and so on) and the investment of policy capital of industrial assistance dominated by the government.

B. *Focus on Creating a Soft Environment for Investment and Promote All-round Opening*

According to the self-organization theory, in order to form the dissipative structure development state that will reduce the total entropy of the system within the mountain valley areas, the breadth and depth of MVAE should be increased, and the exchange of raw materials, products, information, technology, capital, talents and management experiences with the outside world should be accomplished. Studies showed that the mountain valley areas have advantages in biological resources, tourism resources, agricultural resources, personnel resources, which was an important factor to attract outside investment. Meanwhile, the soft investment environment, such as a good ecological environment, a solid infrastructure and so on, was another important factor to attract outside investments. Under conditions of market economy, it is not advisable for the government to take so much direct redistribution to promote

the MVAE development. On the contrary, the government should increase public investments in the backward areas, create a favorable external economic, improve the investment environment, and focus on improving infrastructure conditions and ecological environment of mountains, water, forests, fields, road, etc. At the same time, it is necessary to increase the labor quality and health inputs, prevent funding and brain drain and enhances the ability of capitalizing on market opportunities and participating in competitive.

C. *Rely on Management Innovation and Promote a High Effective Transformation of MVAE*

Innovation is the source of motive force of economic growth. Innovation has produced a high-efficient, transformational and non-linear mechanism that can help the mountain valley areas use fewer inputs to obtain more outputs in the exchange of matter, energy and information with the outside world [4]. Through the innovation at different levels and on different directions to enlarge the "fluctuation", the whole symmetry of the mountain valley areas is broken, an orderly evolution occurs, new leading sectors are established, and therefore a high-level structure will take shape. The management of the mountain valley areas is a systematic engineering, it should be considered as a whole in industry selecting and developing, right assignment and coordinating management between upstream and downstream, and moreover, industry management means should be innovated constantly. In order to avoid the phenomenon of "tragedy of the commons" of the MVAE, it is essential for the government to play the role of the "tangible hand" to strengthen guidance and management in the areas where market failure existed on allocation of common resources. Through restricting the amount and manner of public resources being used or defining the property right of certain resources, innovating management policy has ensured the development and usage of resources orderly and sustainability.

D. *Focus on Human Capital Investment and Increase the Ability to Control "Fluctuation"*

Information (knowledge, technology) is the most important thing in the "negative entropy flow" exchanged between the mountain valley areas with the external environment, while Substance is unchanged, capacity is conserved, and the human capital is the carrier of information. In accordance with the dissipative structure theory, when the system was in a critical region that has not reached the top, the direction of system development was decided by the random selection in "fluctuation". In the mountain valley areas where the development of rural economy was dominant, it was the professional and skilled laborers that have played decisive roles in the process of random selections. The professional team that has mastered the advanced technology and management experiences can accurately grasp the opportunities and "fluctuation" type, therefore complete the self-organizing process of the system [6]. The most direct way to improve the quality of labor forces is to manage the enterprises that have managed and

hired the labor forces, and the human capital investment policy made by the local governments is matching MVAE policy [7].

TABLE I. THE POLICY SYSTEM OF BEIJING MVAE DEVELOPMENT

	Policy type	Policy role
Foundation policy	The opinion of Beijing municipal people's government on promoting the MAVE development	economic transformation, regional harmonious development
Foundation policy	Resource development compensation policy, Industry cultivation aid policy	Away from equilibrium policy
Matching policy	Ecological restoration policy, Investment promotion policy, Land management policy	Open policy
Matching policy	Technology innovation policy, Management innovation policy	Non-linear effect policy
Matching policy	Personnel training, Farmers employment support policy	"Fluctuations" policy

IV. POLICIES AND SUGGESTIONS ABOUT THE DEVELOPMENT OF MVAE

A. Compensation Policy on the Resources Development of Mountain Valley Areas

We should establish a stable growth fund on ecological compensation. The resources exploitation in mountain valley areas have provided the city with primary accumulation and made great contributions and sacrifice to ensure water resources security of the middle and lower reaches of the river, the ecological environment and human settlement security. Therefore, guided by the goal of realizing urban-rural integration and regional economic integration, the regional ecological compensation mechanism should be constantly refined through the medium of government's transfer payments to compensate farmers' economic loss within the region. At present, the ecological compensation fee in Beijing belongs to temporary or transitional measures to some extent, which falls short of the demand of the long-term implementation of ecological compensation [9]. It is suggested that the current ecological compensation fee should be upgraded to "ecological compensation fund" with lawful bases and increasing simultaneously with the economic development. At the same time, the usage and management methods of compensation funds should also be formulated.

B. Policy on Industry Cultivation of Mountain Valley Areas

Leading industry refers to industry with top technology, which obviously promotes the development of MVAE. Regarding the actual situation of MVAE, some important industries should be supported such as light manufacturing, amusement and travel, transportation, storage, mail business, tenancy, business services, wholesale and retailing[8]. These industries are characterized by high demand elasticity, fast growing of productivity, wide market prospects and strong ability of survival and development. Therefore, there is no need for the government to take the excessive preferential policies to protect and support the leading

industry. On the contrary, the government should put emphasis on the development of high-assembled processing industry in order to improve the outer environment of leading industry department and enterprise, in the meantime appropriate financial support should be complemented. The leading industry ought to advance its technical reform, take various financing methods, and build sound management tools to increase the competitiveness.

C. Control Policy of Coordinated Development of MVAE

1) Ecological Security Policy

We should perfect the supervision mechanism of ecological security. The environmental supervision department in Beijing should be responsible for supervising, patrolling the environmental protection of the cross-province and cross-town mountain valley areas and coordinate the specific department to execute the law mutually, and strengthen the patrol and supervision over the polluting projects in basic level and make sure that each item of the repair tasks have been implemented. The sound evaluation mechanisms of comprehensive coordination and unified charge and joint administration working mechanism should be established. In addition, it is favorable for the relevant departments to implement the system of "a veto against environmental protection" resolutely, rate the environmental work as the evaluating system of leading cadre at all levels, and carry out the ecological cradling responsibility [9].

2) The Policy to Attract Investments

Mobilize the social forces to participate in the MVAE construction. The relevant departments should take the development of MVAE as the key point to enable the social forces to participate in new rural construction in the near future and mobilize the social forces such as government, enterprises and some business associations to bear a part in the construction of MVAE development in various forms. The MVAE development should be included in the cooperation between districts and counties [10]. The relevant departments should regard the MVAE development as a platform and combine the county governments to play a role of a bridge linking. The affiliated units should be mobilized to develop multi-level cooperation with villages and towns in the mountain valley areas on industry development, ecological environment, rural infrastructure, cultural and social construction by means of economic cooperation of mutual benefit and public welfare undertakings. The municipal government should regularly reward the advanced units and individuals that take part in and make great contributions to the MVAE construction and cooperation between districts and towns.

3) Land Management Policy

Land as a kind of non-renewable resources has vigor and appreciation potential within the mountain valley areas. The introduction of enterprise will inevitably occupy lands, therefore saving intensive land resources would be the important breakthrough point of the land development and arrangement in mountain valley areas. Land authority should adopt the policy of increasing the land of city-building while decreasing the rural collective

construction land, replace and circulation, conversion of rural collective construction land, by means of increasing the land of city-building, such as transforming old villages within the area, saving lands by centralizing natural villages to main villages, dispersing the deserted mining sites, integrating the scattered collective construction land etc. For land use which involving demolition and new-built, it should be approved as a whole instead of single agricultural and converting according to the principle of linkage between increase and decrease. For land use which is saved after development and consolidation and targets for industry construction, state-owned companies set up by villages and towns can be authorized as first class subjects to absorb social capitals and participate in the development and management of mountain valley lands. For land use by well-known leading enterprises at home and abroad which targets high-end encouraged programs in accordance with industry functional orientation, boasts a large scale and drives strongly the development of mountain valley areas, it should be supported in terms of Land planning adjustment and yearly construction land supplying.

D. Planning and Management Policy

Following principles should be insisted in mapping out the scheme of the mountain valley areas on a high starting point: planning first, construction after; high standard and high starting point. The fundamental requirements of MVAE policies are to increase farmers' income, serve for city life and construct ecological civilization. The planning of MVAE should stick to the principle of laying equal stress on the development, utilization, and protection of resources, taking into full consideration of the regional eco-environmental carrying capacity, adapting to local circumstances, and highlighting the characteristics.

E. Personnel Training and Employment Policies

The training of rural labor quality should be strengthened. The government is advised to organize trainings on management and service knowledge of leading industries, set up fast-channel and funds for talents

introduction, introduce a group of talents majored in agricultural economic management, marketing, tourism management, information networks, and so on. Meanwhile, the government should also implement a variety of policies and measures to optimize the allocation of human resources encourage and support college students to serve in Beijing mountainous and rural areas, therefore to build a team of talents that adapts to the MVAE development of Beijing.

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