Report on the Development of Small Towns in Ethnic and Border Areas of Yunnan Province

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Located in the most southwest part of China, Yunnan is a multiethnic province featured by its bordering areas, mountains and poverty. There are eight ethnic minority autonomous prefectures and 29 ethnic minority autonomous counties in Yunnan, accounting for 60.5% or 78 counties in its total counties. Yunnan has 25 ethnic minorities, the highest number in the country. 94% of Yunnan's territorial area is mountainous. It is neighboring Vietnam, Laos and Myanmar, with more than 4000 km border lines and 25 border counties. Yunnan is the main battlefield of poverty reduction in China, with 56.6% or 73 counties being nationally designated poor counties. Therefore, developing small towns is one of the key measures in ethnic and border areas to solve problems brought about by urban-rural dual economic structure, to integrate urban-rural development, reduce disparities and alleviate poverty. By using mathematical statistics analysis methods to conduct comprehensive regional social and economic appraisal, this paper aims to specifically analyze the level, vitality and potential of development of small towns in ethnic and border areas; identify existing problems and constraints; and propose development outline and suggestions.

1. Current situation of the development of small towns in ethnic and border areas of Yunnan

(1) General situation. Urbanization rate has significantly increased in the 30 years of reform and opening up. In 1949, urban population was only 775,000 and urbanization rate of 4.8% only. This rate was 12.2% in 1978, 23.4% in 2000, and reached 34% in 2009, 21.8 percentage points higher than that of 1978. Urban population in 2009 was 4.14 times of 1978. Through years of development, currently Yunnan has more than 15 million urban population. Number of small towns has reached 585.

(2) Comprehensive appraisal of small town in ethnic and border areas. In order to have an objective assessment of towns in ethnic and border areas, we adopt the method of comprehensive regional economic and social appraisal to find a proxy of quantitative indicator. Each region is given a quantitative value which can reflect its overall level of economic and social development, and then the quantitative appraisal and positioning of different regions can be made. The focus of this research is towns in ethnic and border areas as above mentioned. According to the analysis and computation of data regarding 81 indicators, we selected 17 of them to form the indicator framework for comprehensive economic and social appraisal.

①*Specific appraisal method.* Based on basic statistics of towns in ethnic and border areas, 17 appraisal indicators of all towns are used to form characteristic matrix. Calculation matrix is then derived after standardization and dimensionless. principal components analysis, correlation analysis and other mathematic methods are used. After calculating characteristic vectors, the one with the maximum characteristic root is selected as the main component. The appraisal index by dimensions of each town can be gotten by substituting eigenvalues to the matrix. According to objective analysis and assessment, weights of the three development dimensions - namely level, vitality and potential – are determined and used to calculate out the overall appraisal index. This index is the final quantitative value reflecting economic and social development status of the town. Steps of calculation: (a) Standardization and dimensionless. Get the max of each appraisal indicator, $Yni = Xni/max$, Yni is the value of indicator n for town i after standardization and dimensionless, Xni is original value of indicator n for town i. (b) Determination of main components. Characteristic vectors

and roots of matrix Z (after standardization and dimensionless) are calculated, and the vector with the maximum root (set as Z1) is selected as the main component. The Zi th value of the vector is then the weight of indicator Xi. (3) Calculation of appraisal index by dimensions. Firstly calculate appraisal index of each dimension. The appraisal index of the kth dimension is $F_{ki}=\sum X_j Z_j$, j=1to n, n is the number of indicators of each dimension (9, 3, 5 respectively). Fki is then the appraisal index of the kth dimension (k = 1, 2, 3) of the ith town. (4) Calculation of overall appraisal index. Weights of the three dimensions are 0.6, 0.2, 0.2 separately. Overall appraisal index $P_i = F_{1i}*0.6+F_{2i}*0.2+F_{3i}*0.2$, Pi is the final appraisal index of the ith town. (5) Sort by Pi. The result of sorting shows the order of overall economic and social development level of towns - the higher the index, the advanced the town.

②*Findings of appraisal and analysis of characteristics.* Final economic and social appraisal index has been calculated out for each town in ethnic and border areas. The current development status of ethnic and border towns in Yunnan can be interpreted through typical analysis and overall appraisal of top 20 advanced towns and bottom 20 backward towns.

Basic information and characteristics of advanced towns: Of 332 ethnic and border towns in Yunnan, although top 20 only accounts for 6% in terms of the total number, they have prominent advantages in economic and social development. Firstly, they possess strong economic power and people are relatively richer. Administrative area of 20 advanced counties accounts for 4.1%, population accounts for 14.8%. Average population of each town is 94,000, 2.5 times of the overall average. Per capita revenue and Per capita savings deposit balance are 2.4 times and 1.83 times of the overall average respectively. Per capita annual net income of rural households is 1.5 times of overall average of the province, 1.73 times of the average of all ethnic and border towns. Secondly, location advantage brings cluster effect. The average population density of 20 advanced towns is 400 persons per square kilometers, 3.6 times of the overall average. Migrants account for 10%, one time higher than the average of ethnic and border towns. Thirdly, industry structure is more appropriate with higher degree of industrialization. Non-agricultural employment accounts for 52%, which is 25 percentage points higher than the overall average. On average, there are more than 900 enterprises in each town, paying taxes of more than 50 million yuan, 4.3 times and 5.9 times of the overall average respectively. Fourthly, they have better construction of infrastructure, and more inputs for social development of people's livelihood. Access rate of electricity, telephone and highway all reach 100%, access rate to cable TV and tap water is 93% and 87% respectively. 70.7% of arable lands are effectively irrigated. Per capita electricity consumption reaches 713 kilowatt-hours (average is 252 kilowatt-hours). Density of highway is 0.44 kilometers per square kilometers. Per capita investment in fixed assets is 1,298 yuan (the average of all ethnic and border towns is 703 yuan). While focusing on develop economy, 20 advanced towns pay attention to the development of science, education, culture, health and sports, with relatively larger investment. On average, each town spends 4.82 million yuan on science and education (average is 1.93 million yuan); has 29 schools (average is 20); 16 kindergartens (average is 4.2); has 3.3 libraries and culture stations (average is 1.3); 1.2 cinemas and theaters (average is 0.28); 8 hospitals and clinics (average is 2.3); 856 hospital beds (average is 126); 378 doctors (average is 65); Fifthly, they make full use of local resources and form industry advantages. For example, special industries are developed based on ethnic, human and culture, border and topography features. Border trading / tourism is largely developed.

Basic information and characteristics of backward towns: Firstly, poor natural conditions and low efficiency of agriculture production, such as being located in mountainous areas or high & cold mountains, harsh climate conditions, traffic inconvenience, serious water shortages, and poor ecological environment. The average rate of effective irrigation of agricultural land is only 24%, 27 percentage points lower than the average. The average grain yield is 178 kg. Secondly, backward concepts and way of life and economic poverty cause mutual restraints. Thirdly, infrastructure is underdeveloped, living conditions need improvement. The average electricity access rate is 97.9%, telephone access rate is 91.7%, highway access rate is 96.6%, cable TV access rate is 26.9%, tap water access rate is 85.5%. Per capita electricity consumption is 56 kilowatt-hours, even less than 1/4 of the average level, while less than 30 kilowatt-hours

in 5 towns. Density of highway is 0.36 kilometer per square kilometer. There are about 88 teachers and 7.3 doctors per 10,000 people. On average, each town has 1.1 clinics, 0.9 culture stations. Number of cinemas, theaters and sports venues is nearly zero. Fourthly, there is a lack of investment environment, pillar industries, and market competition, while high degree of dependence on government and society. Fifthly, the main source of income is agriculture, 83% of people are engaged in agricultural production. Per capita net income of rural households is only 1,225 yuan, and only 29.6% of the national average.

(3)*Major development modes of small town in ethnic and border areas.*

①Drive by featured agriculture. Actively develop the modern agriculture, coordinate the layout planning for agriculture, processing, trade & commerce, and warehousing and storage, foster leading industries and backbone enterprises, rely on towns to develop the agricultural product processing industry and drive the commerce, trade and service industry, form the industrialized operation to drive feature towns incorporating logistics, processing, wholesale, transport and sales. This mode has created a new space of employment for farmers to enter towns.

②Drive by tourism and sightseeing. Exert the function of ethnic cultures, tourism, convention & exhibition and resort in boosting towns to promote the development of tourism commodities, convention & exhibition services, presentation and performance of ethnic cultures as well as traffic, shopping facilities, entertainment facilities, hotel facilities and F&B facilities in towns and scenic spots, to develop the sightseeing and recreational agriculture, to extend the industrial chain of tourism, to adjust the industrial structure in rural areas and to prosper the economy in small towns.

③Border port. Leverage the policy advantage and geographical location in the opening of border areas and combine such advantages with Yunnan's objective of building a "Grand Passage" and strategy of implementing universal opening to develop trade & commerce, processing trade and outbound tourism, to propel transportation, building materials, real estate, finance, F&B, entertainment and other industries, and by doing this to promote the construction and prosperity of towns along the borders.

④Drive by market development. Rely on professional marketplaces in towns to build a good image in investment promotion, to construct towns by prospering commerce and gathering wealth and promote commerce in turn, to build towns into important terminals of featured agricultural products, and to wield the important functions of towns in pooling commodity flows, talent flows, technology flows, fund flows and information flows, and thus act as the engine to boost the rural economic development.

⑤Drive by transportation. Regional terminals of material flows, human flows and information flows and a batch of small towns along the rivers, the roads/railways and the border have developed, providing a way to promote the development and flourishing of transportation-based towns.

⑥City outskirt mode. Develop featured agriculture, township enterprises, agricultural product and deep processing industry, raw material processing industry, building material industry and mining industry and set up industrial communities oriented to satellite towns and city outskirts; develop real estate industry and origin wholesale marketplaces, and build residential house districts and trade & commerce districts; develop hi-tech industries, cultural industry, recreation services, and tourism & entertainment industry to form extended areas of cities and economic corridors.

⑦Reliance on industry and mining. Benefiting from the development of nonferrous metal and phosphor chemical industry as well as the construction of large-sized hydropower stations, offer relevant supporting services, attract many local rural laborers, develop a lot of non-agricultural industries, and form a lot of small towns that rely on industrial enterprises and mining enterprises. This mode has helped many farmers beat poverty and get rich, and boosted the process of industrialization and urbanization in Yunnan.

2. Major problems in small town development of ethnic and border areas

The urbanization level of the ethnic and border areas is relatively low in small towns mainly because of a lack of industrial support, the unsound market system, the weak market service functions, the underdeveloped nonpublic economies, the outdated industrial development, the small scale and weak strengths of enterprises, and the subsequent weak capacity in pooling economic resources and influencing

other areas. Furthermore, judging from the population size, only 2.4% of the administrative towns have a population of more than 10,000 people, and up to 70.3% of the administrative towns a non-agricultural population below 1,500 people. The small population size of these small towns makes it hard to exert the town functions. Third, the overall level of planning management is low, evidenced by the inadequate scientific planning and feasibility, the scattered layout and the lack of effective implementation means.

3. Development strategy of small towns in ethnic and border areas

(1) Guiding ideology and principles. Guiding ideology: It will take the scientific concept of development as the overwhelming guide, by sticking on the integrated rural and urban development and preparing the "Overall Strategy for Small Town Development", planning the strategy scientifically, adjusting and optimizing urbanization process. It aims to focus on the development priorities, enhance the characteristic and functions of towns, so as to formulate an integrated economic growth pattern for small towns with a rational industry development layout and the dominant green economy. An intensive urbanization development path will be followed to further explore development potential and improve infrastructure and public facilities in small towns. It encourages the mechanism innovation to construct a good policy environment facilitating the health development of small towns. The proposed strategy should be a farseeing strategy, enabling the sustainable development for small towns from the perspectives of population growth, resource development and protection, environment and ecological friendly. Till 2020, it aims to achieve over 10% of small towns with 30,000-50,000 population in the province, to achieve the balanced development for the large, medium and small sized cities and small towns, to be the pillar for the accomplishment of an enriched, democratic, civilized and opened harmonious society in Yunnan.

Principles：The principles of benefiting intensive economic development of small towns should be followed, in terms of persisting on the intensive economic growth, promoting rural population mobility and increasing income both for rural and urban residents, so as to facilitate a new rural-urban integrated development pattern. The small town development strategy should follow the principles of protecting and saving arable land, alleviating the contradictions of high density of population living on limited land resource. In addition, the formulated development strategy should be good for the economic growth in small towns. It should follow the principles of integrations, which means the integration of developing town economy in ethnic and border areas with the market-oriented economic principles; the integration with the readjustment of industry structure; the integration with the sustainable development pattern; the integration with the science and technology innovation, culture heritage protection, excellent ethnic culture promotion, so as to formulate a coordinate development pattern with the coordination of industry and enterprise development and town construction, the coordination of economic growth panel and living environment and public service facilities so as to enable the leading role for small towns in motivating regional economic growth and social development, served as the sources of economic vitality and economic radiation.

(2) Development priorities. It plans to take the non-equilibrium, diversified and optional development strategy, giving priorities to the selected counties and centralized towns of relatively larger size and better facilities in ethnic and border areas, as well as less developed small towns. It intends to motivate the growth of the rest towns by providing development priorities to the top and bottom towns in the province, to scale up development scale and raise development levels so as to promote the level of urbanization in the remote border areas. It prior will set up a centralized town in the area with about 200,000 people so as to enable population convergence amounting 30,000-50,000 for each centralized towns. Similarly, an administrative town will be prior set up in the area with about 30,000-50,000 people so as to enable population convergence amounting 10,000 for each administrative town. In addition, a batch of satellite cities or administrative towns will be set up along the central cities in order to stream down the gathered population and reallocate traditional industry. It aims to construct a batch of characteristic small towns, which will serve as pioneers in piloting the balanced rural and urban development projects, enjoying moderate scale, rational industry layout, facilitated, multifunctional, economic viability and beautiful environment.

(3) Scientifically planning to highlight the characteristic of small town construction in ethnic and

border areas. It needs to address the concept of Scientific Planning, following the environmental friendly and resource saving oriented development strategy, and highlight the principles of taking individual strategy according to local circumstance, land saving oriented project activities with adaptability and simplicity. It requires rational spatial arrangement for all elements of production, living and ecological service function, and properly providing public service facilities on education, medical service and entertainment etc. Regarding the management of small town development planning, special attentions should be given to the four crucial network issues in terms of geological location, contact relationship, historical culture and economic growth. Inappropriate planning should be strictly modified. It would be an overall planning and construction with the integration of urban-rural communities, the integration of industry and agriculture parks, the integration of infrastructure and ecological environment. It needs to coordinate the relationship between the overall planning and land utilization planning, so as to firmly protect arable land, especially the farmland, enabling it to be served as the rural scene belt connecting towns and villages.

(4) Classified guidance in accordance with the characteristic of towns, to speed up small-town development in ethnic and border areas. Small towns which are featured by transformation of resources utilization need to develop new products relying on the existing resources, enabling the advantage of resource for the towns to be transformed as economic growth advantage. Small towns which enjoy the advantage of scene and travel should prepare a considerable planning on ecotourism industry. The border trading oriented small towns should take the advantage of ports to facilitate the prosperous of town economy by promoting border trading. Regarding small towns enjoying economic pass, they should develop their specialized economy by taking the great advantage of accessibility of transportation. Finally, the newly developed small towns should construct the dragon head industry, and motivate the economic viability.

(5) Facilitating the development of specialized industry, to construct economic growth pattern for small towns in ethnic and border areas. Firstly, it will support the development of green industry to explore a new path of reconstruction of industry structure. The adaptation of new products and new technology will upgrade the traditional industry, approaching the development trend with good quality, high productivities and efficiency, more safe and ecological friendly. Secondly, it will focus on the support to dragon head enterprises so as to promote the processing industry of agricultural products. Meanwhile, it will actively accept the transformation of urban industry, to develop intensive labor demanded and resource oriented industry. Thirdly, it will greatly develop private economy based on market demand. The integration of private sectors will serve the main role of the prosperous economy in ethnic and border areas, formulating a diversified co-existing economic growth pattern in small towns.

(6) Deepening the reforms and opening up, to innovate a mechanism for small town development in ethnic and border areas. Firstly, focusing on the protection of arable land, it will establish a mechanism of land transformation market under the instruction from the government. Regarding the house construction in towns for farmers, it could unify the quota of land for house construction by converting the original house construction land in rural area into the house construction land in town. In addition, in order to encourage town enterprises to be centralized in small towns, it would take a rational land acquisition price t these town enterprises. Secondly, it will initiate the reformation of household registration system (Hukou) in small towns of ethnic and border areas in order to promote the parity of treatment both for the migrant workers and urban residents in small towns. Thirdly, it will gradually optimize social development environment, and establish social security system. The migrant workers who have resided in small towns should be provided with social welfare covering the basic social security of pension, medical service and unemployment etc. Fourthly, it will further explore a market oriented macro management system for the modern small towns in ethnic and border areas, so as to highlight the implementation of small town development planning, macro-economic readjustment and the role and function of public governance for small towns.

(7) Carrying out "Three Centralization", to transform the development approach of small towns in ethnic and border areas. Focusing on the promotion of balanced rural-urban development strategy, it has initiated "Three Centralization", which is the centralization of (a) specialized industry to parks, (b)

population to small towns and central villages, and (c) land resource for intensive management, so as to explore an effective model which integrates small town development and new rural construction,. It plans to facilitate community-based residence, enable the sales and management activities to be carried out in the markets, promote production activities to be implemented in industry parks. It intends to promote the communization of villages close to cities and suburbs. It would achieve the motivate effectiveness of land tenure circulating to the industry parks, and largely promote the construction of centralized towns. It is suggested to promote the civilization construction of small towns in line with the requirements of optimized layout, concreted road surface, secured sanitation, cleaning river course, beautified house and strengthened function of service. Finally, it is recommended to enhance infrastructure construction and public facilities including water supply, power and road, education and health to upgrade the image of small towns, improve functions of small towns, and enable small towns become a home of prosperous industry development, well facilitated public service and convenient access to schools and hospitals.

REFERENCES

° Related editorial, New Edition of Status of Yunnan Province, People's press of Yunnan, November 1996
° Research team of Ministry of Construction, Research on the New Era Development of Small Towns, January 2008
° Wang Zhiqiang, Development Studies of Small Towns, Southeast University Press, July 2007
° Li Jiheng, Development Theory in Poor Areas, Press of the Party School of the CPC Central Committee, May 1997
° Liu Bin, Zhang Zhaogang, Huogong, Issues of Agriculture, Farmer and Rural Areas in China, January 2004
° Tian Yongsheng, Priorities of China, Guangming Daily Press, March 2005
° Fu Shuli, The Construction and Development of Small Town in Ethnic and Border Areas, March 2005

ABSTRACT

The purpose of this research is to address the problems of urban-rural dual economic structure, promote the integrated urban and rural development, and explore the difficulties of economic development in ethnic and border areas. Methods including principal components analysis are deployed to conduct comprehensive appraisal of regional economic and social development, and in-depth analysis of development level, vitality, potential, characteristic, type and/or mode of towns in ethnic and border areas of Yunnan province. The development disparities, causes and problems in relation to towns in ethnic and border areas of Yunnan are summarized and analyzed. Policy implications and suggestions are proposed to develop small towns in the process of new rural construction and building a comprehensive well-off society in ethnic and border areas.

Biography of Yang Wen

As a senior statistician and associate professor, he got his bachelor in 1984 and master's degree in 1991 from Yunnan University. In 2003 he got another master in technical economics from Nanyang Technological University, Singapore. His previous working experiences include: faculty deputy-director and associate professor of Yunnan University; deputy-commissioner of Yunnan Provincial Bureau of Statistics; vice mayor of Kunming Municipal Government; deputy-director of Yunnan Information Industry Office. Currently he is the director-general of the Survey Office in Yunnan of NBS; executive member of National Statistics Society; vice chair of National Statistical Information Society; and vice chair of Provincial Statistics Society of Yunnan. His main research and publications include: Research on Population, Resources, Environment and Sustainable Development of Yunnan, outstanding award of National Statistical Scientific Research Achievements; Strategic Outline of Constructing Statistical Information Automatization in China, presented at 53th International Statistical Conference; Yunnan Survey Report, published by Press of Yunnan University.