

# Study on the Town Evolution in the Southwest Border Area of China

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**Abstract:** The policy environment, geographical location, natural environment, humanities, history and other factors have driven the town development model of southwest border area of China to show great convergence. The adverse consequences of convergence have in turn hindered the development of towns. Taking the theory of “convergence evolution” as the starting point. The evolutionary economics theory of evolution, variation and selection is used to explore the town evolution model and development path. By analyzing the general logic of evolution, find: in the early stage of town development in the southwest border area of China, the “big environment” of development will inevitably produce similarities in development patterns between towns; in the process of development, towns in order to seize the “optimal development position” leads to competition; the long-term competition will evolve into vicious competition and adversely affect town development; therefore, cities will gradually cooperate in the process of competition and communication. So, towns in the southwest border area of China should actively explore cooperation and coordinate development mechanisms to enhance the complementarity and interactivity between towns to offset the adverse consequences of convergence.

## 1. Introduction

“Convergence evolution” is derived from biology and is a common phenomenon in nature. As early as 1859, Darwin studied the similarities and dissimilarities of various local organisms in the book “The Origin of Species”, especially focusing on biological evolution. The definition of “convergent evolution” is: in the process of evolution, different species show phenotypic similarity due to adaptation to similar environment, which also refers to the similar structure and function of protein or nucleic acid molecules of different origins [1] [2] [3]. At present, there is a lack of literature on the application of “convergence evolution” in the field of economics.

China's “13th Five-Year Plan” points out: necessary to promote new urbanization construction, optimize urbanization layout and form; promote regional coordinated development, promote the healthy development of ethnic areas, promote the border areas development and opening up. According to the report of the 19th National Congress of the Communist Party of China: need to implement a regional coordinated development strategy and increase efforts to support the accelerated development of old revolutionary areas, ethnic areas, border areas, and poverty-stricken areas. However, the development pattern of town in southwest border area of China is very similar, because it is affected by national policies, geographical location, natural environment, economic basis, history, location, population and other factors. Due to similar development environment, the pattern of town development also shows a certain similarity. This similarity can be called the convergence of town development patterns. The convergence of this development model has caused the lack of innovation and lack of characteristics in the development of regional urbanization. Competition between towns lasts for a long time, which in turn creates vicious competition, which is not conducive to coordinated development between regions and regions.

Why the development pattern of towns in southwest border area of China is similar

Since the reform and opening up, the towns in the southwest border area of China have made certain achievements in economic and social aspects. But the external factors of town development (such as national policy, regional geographical location, natural environment, humanities, history, economic factors, transportation infrastructure) and internal factors have great similarity. It makes the development pattern similar in towns along the border. The specific performance is industry,

business mode, and external communication method similar. This kind of convergence reflects the reference and imitation of the development mode, while its own advantages and characteristics are less explored. The result is that it will lead to some adverse consequences, such as the intensified competition between towns, the lack of innovation in towns, and the lack of strong internal power for sustainable development of towns.

For example, there are many towns in Guangxi border area to develop processing industry, and there are many towns in Yunnan border area to develop tea industry. However, due to backward infrastructure, complex terrain and scattered distribution, these industries have not formed scale. On the contrary, the industry similar which has led to fierce competition between towns, hindering the development of towns. Therefore, in order to promote the upgrading of towns, it is necessary to eliminate the adverse consequences of convergence, and establish new development mechanisms and take a characteristic development path.

## **2. The Application of “Convergence Evolution” in Town Evolution**

### **2.1 Characteristics of “convergence evolution”**

Convergent evolution is a phenomenon which different species appear the same characteristics due to their adaptation to the environment. Combined with previous studies, this paper considers that “convergence evolution” has four main characteristics: First, different species live in the similar environment and have adaptability to the similar environment; Second, different species appear some similar structural and functional in the process of adapting to similar environments; Third, because of the similarity of structure and function, the competition for space and resources arises; Fourth, in the process of competitive communication, a “universal language” (or path) for resolving disputes is generated.

### **2.2 The mechanism of action of “convergence evolution”**

The characteristics of convergence evolution can be summarized as: the adaptability of different species to the big environment; adapt to the big environment and produce commonality; the competition brought by the similarity; the tendency of competition to gradually turn to cooperation. Therefore, convergence Evolution has three mechanisms of action: hereditary evolution, variability evolution, and selective evolution.

Hereditary evolution: The large environment can create good living and development conditions for the species, including providing the material basis for survival, optimizing the time and spatial location of its development so that different species are in a favorable position in each other's interactions. When species adapt to this environment, its internal structure and external features are formed and stabilized.

Variability evolution: Different species compete for space, seize opportunities for survival, and constantly improve their various functions in the process of competition, thus promoting the internal structure to adjust and enhance the ability to evolve.

Selective evolution: Species cause “convergence evolution” due to competition or social interaction. Convergence and evolution will bring adverse consequences such as interspecific hybridization. However, when a species has a different choice in the process of social interaction, it will make the species develop different characteristics from other species, thus effectively counteracting convergence and avoiding adverse consequences.

### **2.3 The Application Mechanism of “Convergence Evolution” in the Evolution of Town Development**

The mechanism of convergence evolution shows that convergence evolution is the process of species adaptation, competition and cooperation. Cooperative development is the best expression of convergence evolution. At this time, although there are structural and functional similarities between species, they fully exert their own the characteristics, and thus offset the adverse consequences of convergence. According to the convergence evolution theory, the evolution of

towns in southwest border area of China should also be a process from adaptation to the environment to competition and finally to cooperation and coordinated development.

**Adaptive evolution.** Since the reform and opening up, China's economic construction has achieved remarkable results, and urbanization has achieved rapid development. However, the town development in the areas along the southwestern border is still lagging behind. The state has adopted a series of policies to promote the development and opening up of border areas, such as the action of invigorating the border and enriching the people, the strategy of the western development, especially "the Belt and Road" initiative has promoted an unprecedented rise in the status of border areas. The National New Urbanization Plan (2014-2020) also pointed out the direction for the town construction of ethnic areas. The towns along the southwest border area of China should actively integrate into the wave of modernization according to their own location, resources, human history and other conditions to promote their own development.

**Competitive evolution.** In the context of the national policy support, towns in the same region and neighboring regions are inevitably producing similarities in industries and business models due to factors such as the natural environment. This similarity plays a certain role in the early stage of town development, towns can learn from each other and imitate. But with the advancement of urbanization, the drawbacks brought about by the similarity of development models are increasingly exposed. The most obvious performance is competition arises because towns in order to seize the "optimal development position". And this kind of competition may develop into vicious competition in the long run. For the town itself, lack of characteristics and advantages, resulting in insufficient endogenous development momentum, and then is not conducive to regional coordinated development for the region.

**Cooperative evolution.** In the process of competition evolution, competition leads to the looting of resources and space. And resulting in poor complementary and interaction between towns, which in turn restricts town development. The towns gradually shift from competitive to cooperative, the basis of cooperation is to play compare advantages and the establishment of its own characteristics. It also requires the strengthening of communication and connection between towns within the region, complementary advantages, continuously innovate the develop dynamics, and realize the transformation and upgrading of the towns.

### **3. Avoidance of Adverse Consequences of the Convergence of Town Development Modes along the Southwest Border Area of China**

#### **3.1 Differentiating town development orientation, strengthening complementary cooperation and promoting coordinated development**

The differentiated towns development orientation refers to the comprehensive operation of the central town in the region. Other towns are engaged in the specialized operation and production with local characteristics but different from other towns and with high production efficiency according to their own more prominent resource advantages or industrial advantages. The central town and other towns respectively define their own functions and responsibilities in the regional development it can. This is the key transition from competition to complementary cooperation and coordinated development.

#### **3.2 Deepen the field of cooperation**

In the ethnic areas along the southwestern border, people have long been closed in thought and have a weak sense of cooperation. Therefore, it is necessary to promote inter-regional coordination and cooperation step by step.

First of all, need to actively seek the entry point of regional cooperation, and gradually expand to infrastructure, industry and investment, business and trade, tourism and other fields. Carry out cooperation in multi domain, all-round and in-depth. Secondly, positive improve the scientific and cultural quality of the regional population, establish a cooperative concept in the government and enterprises. Thirdly, promote regional cooperation awareness according to local conditions.

### **3.3 Establish a “cooperative network” between the provinces, cities and towns**

The development of towns along the border is not a purely self-development. It is necessary to strengthen communication and contact with provincial and municipal cities. It is necessary to establish a model of interaction and complementarity among provinces, cities and towns to jointly promote regional cooperation. To jointly implement regional cooperation from the three levels of province, city and town. The three levels interact and complement each other and jointly promote regional cooperation. It is necessary to improve the inter-provincial, inter-city and inter-town infrastructures, and eliminate administrative barriers at all levels, forming a unified regional market conducive to the circulation of commodities and production factors at all levels.

## **4. Summary**

The report of the 19th National Congress of the Communist Party of China pointed out that “development is the basis and key to solving all problems in China.” At present, China is in the historical stage of building a modernization in an all-round way. Promoting the development of areas along the border have great significance. Due to historical, geographical, infrastructure and other reasons, the development of towns in southwest border area of China has lagged behind for a long time, while the lag of town development has hindered the development of the region. Only breaking this vicious circle can promote the areas economic development. Based on the theory of biological convergence evolution, this paper analyzes the town development model of southwest border area of China. Think that the towns in the southwest border area of China: on the one hand, must fully grasp the development of the western region, and “the Belt and Road” initiative opportunities; on the other hand, necessary to combine its own comparative advantages and actual conditions to build its own advantageous industries; at the same time, towns should strengthen cooperation and establish corresponding cooperation mechanisms to offset the adverse consequences brought about by the convergence of towns development models, thereby promoting the transformation and upgrading of towns internal economic structure and promoting regional coordinated development.

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