

Research Article

The Analysis of the New Urbanization Development Strategy in China by Synergism of Five Laws Theory

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Abstract: The synergism of five laws theory has important guiding significance on the new ecological and intensive urbanization. Use of the synergism of five laws theory, analyzed from five aspects: urban nature, society, economy, technology and environment. This could put forward prospectively development strategy for the new urbanization in China. It makes the development of the town fully considered in various factors, complied with the laws.

Keywords: New urbanization, synergism of five laws, sustainable development, ecological and intensive

INTRODUCTION

Since the reform and opening, the urbanization has been relying on cheap labor supply and extensive economic growth mode, which hasn't changed for a long time in China. Under this trend, many cities are in the blind pursuit of urbanization rate rapidly increasing, and present the unsustainable development phenomenon, like the loss of soil and water, the decrease of the quality of the forest ecosystem and biodiversity, etc. In 2012, the concept of new urbanization proposed in China to change the unsustainable development pattern, established ecological development route, making the urban comprehensive, healthy and coordinated developed. How to achieve this goal, what specific policies can be parsed by synergism of five laws theory.

Synergism of five laws theory

Throughout history, the rule of human development has five categories, namely natural laws, social laws, economic laws, technology laws and environment laws [1].

- Nature laws point to the inner connection of the objective things movement, change and development themselves, without human intervention.
- The technology mainly comes from experience and science. Technical laws are the technological principles which are stable and inevitable connection formatted in different

forms and at different stages of technological development.

- The economic law is the inherent, essential and inevitable connection and the trend does not be transferred with human will in the economic activities.
- Social laws refer to the essential and inevitable link between the social phenomenon and issues, which are the inevitable direction of social development and power promoting social development and progress.
- Environmental laws don't refer to the natural environment, but to the interaction and coordination laws between the people and the environment, including three kinds of interaction laws between the human and natural environment, human and artificial environment, artificial environment and natural environment.

The five laws like five fingers of one hand are independent and connected with each other, forming a collaborative and organic entirety. (Fig-1) So as to realize the goal of the new urbanization, also will be affected by joint action of the five laws. When the goal and direction of five laws are accordant, they will promote the realization of the goal, and this state is called [2]. So the synergism of five laws theory provides the development direction and strategy for new urbanization.

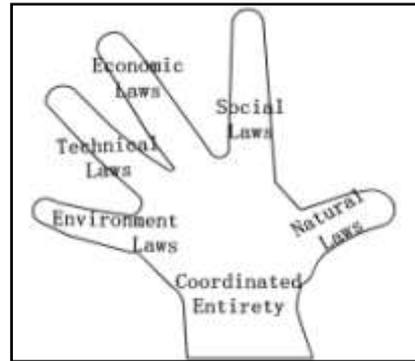


Fig-1 schematic diagram for synergism of five laws

Five laws analysis for new urbanization development

The natural laws analysis for new urbanization strategy

The natural environment is the material basis for the urban development, providing energy, resources and spaces for the human production and living, deciding and restricting the way and scale of economic activities in the town. The nature factors mainly include the geographical location, natural resource endowment and human cognition of the nature in specific historical conditions, and so on.

For example, Daqing was an unknown wild city 60 years ago. In 1960s, with the exploration and development of oil, Daqing entered into the start-up phase of the development. During the construction process, Daqing located in the northeast old industrial base, a very important part of the ha-da-qi industrial corridor, coupled with the rapid development of petroleum and petrochemical industry, rapidly increasing developed. However, in recent years, with the decay of oil resources, the government and people have realized that the development of natural resources, mining and utilization is not a path to sustainable development of cities and towns.

Therefore, Daqing and similar cities should comply with the laws of nature in the new urbanization, and use natural resources sufficiently and reasonably, play a regional geographical location advantages, develop follow-up industry, rationally exploit energy, change the fuel composition, control the air pollution; protect and rational utilize the water resources, improve the utilization of water resources; not take the cultivated land and improve land utilization, construct the compact and intensive town; recover the excessive used and destructed ecological resources, and so on.

The economic laws analysis for new urbanization strategy

Economic law is like an "invisible hand" to guide urban development direction and model. The urban ecological economic advantage should be fully exerted in the new urbanization. The first industry is the base, to which actively the construction of urban agriculture is

an effective way. Urban agriculture can act as urban greenbelt, prevent the urban unlimited expansion, prevent and control environmental pollution in cities, and create a green landscape, keep pure and fresh, quiet living environment; provide fresh, health, pollution-free agricultural products to meet the demand of urban residents consumption, and increase agricultural laborers jobs and income. Urban agriculture not only maintains the natural ecology in the city, but promotes the development of the economy.

On the basis of the steady first industry, the development of the green and low carbon, named second and third industry, made the new urbanization sustainable developed. Guangming new district in Shenzhen is a typical case to explore the green urbanization development model. The new district constructed as the goal "new green city, business town, and harmonious city", bringing the new energy, new materials, biological medicine and other emerging industries in, forming the green industry cluster with advantaged traditional industries. It made the new district turn into the high-end industry project zones and new growth poles in Shenzhen. It shows that the green development in the second and third industry can make the new urbanization developed fast and well.

The technological laws analysis for new urbanization strategy

Technology is the first productive force. If the technological laws are mastered, the new development of urbanization will be shown in the effective way. Such technological means and strategies can promote the effective implementation of the new urbanization like green and low carbon transport system, efficient use of resources, research on urban ecological system and to evaluate urban development benefit, using the Internet+ and wisdom city, and so on.

Building green and low carbon transport system refers to consummate the slow traffic system, advocate the transportation that bus is prior and the car is restricted, construct rapid rail traffic network, form the inverted triangular structure of transportation(Fig-2),

and create vigorous and charming open space system in

the city playing ecological service functions.

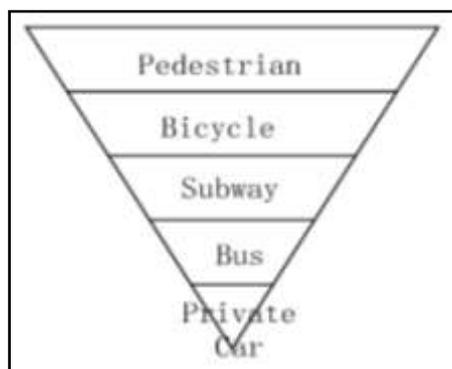


Fig-2: Inverted triangular structure of all kinds of city land for travel

As is known to all, the traditional one-tenth theory in ecology means that there is a stable order of magnitude with biomass transfer in different trophic levels. Usually, biomass used by lower level is only equal to or less than 1/10 of the former level. The inevitable quantitative relationship between different users in ecosystem was named as "one-tenth law" by ecologist Lindeman in Yale University. The traditional development model of the town has been in accordance with this law. The resource utilization is very inadequate, large amounts of energies are losing unnecessarily in the process of using. Following this kind of development model, it must be certain that the resources exhaust and environmental disaster arise. Therefore, the new urbanization should be according to "Reduce, Reuse, and Recycle" 3R principle, protect and efficiently utilize the resources of the towns, including saving the use of non-renewable resources such as water, land and so on; innocently dispose the house refuse and industrial waste, and recycle as much as possible to prevent waste discharged into the natural ecosystem; rational utilize the plants, animals, microorganisms and other renewable resources, make full use of light, water, wind and other renewable resources.

The ecological footprint technology as a measure of urban sustainable development forecasts the bearing capacity of the town, and evaluates urban construction achievements: If the construction of the towns is too small, the resources will be wasted; whereas if the construction of the towns is too large beyond the bearing capacity, it will aggravate contradictions and problems of the town, damage the environment seriously, increase the recovery and maintenance costs, not improve the urban power, even bring the irreparable damage to the sustainable development of the town. The establishment of the decision-making system and technical indicators system can avoid the blind development and construction of towns.

Wisdom city as an important way to new urbanization measure, analyze and integrate the key

information of core system in the city with fully application information, communication and Internet + technology to reasonably utilize the resources, protect the ecological environment, make urban management activities run efficiently, finally bring more convenient, ecology, comfortable life to urban residents.

The social laws analysis for new urbanization strategy

The human basic properties are natural and social attributes. The towns as the human cluster are affected and restricted by many social factors, including history, politics, law, economy, culture, education and so on. Compared with the previous urbanization, the town is cultural, regional, historical and the public which can participate in the planning and construction of is more dynamic and coherent with the development of the new urbanization.

The key to build the towns with cultural characteristics is to research and excavate the deep cultural connotation of the city and regional advantages, such as architectural landscape features, the landscape characteristics and urban framework features. Then the space of the towns should be characteristic, and the new urbanization should be regional and national.

The historical memory is carried out not only in some historical, cultural cities and towns but also in every city and town. The ways to promote the historic city are to protect the valuable cultural relics and historic building and also all the aspects that remain the historic culture consecutiveness of the town, and pay attention to build modern ecological civilization of the town corresponded to the historical context. Then the town would have internal cohesiveness and external attraction, and make the urban residents feel strong sense of belonging and identity, which will promote the new urbanization better and faster.

Pay attention to public participation. The urbanization construction is not only to rely on the government's and builders' efforts, but also to recall

every resident to participate at the same time. Public participation can make the planning concept deeply rooted in the folks' minds, also make the new ecological urban develop and carry out more stably.

The environmental laws analysis for new urbanization strategy

The role of environment in the development of urbanization, on the one hand is to affect the quality of the urban development, on the other hand is to pursue the better way for it. Urban development experience shows that outstanding landscape environment in high quality often pull the development of the town greatly, conversely, the deterioration of environment also can make the town lost investment attraction, uncondutive to promoting urbanization.

In the late 19th century or early 20th, many cities in Europe rise rapidly. For example, the urban population in the United States raised from 6.217 million in 1860 to 54.158 million in 1920, has increased 7.7 times in 60 years. The instant city also led to the backward infrastructure and the deterioration of the environmental quality. To restore the environment and attraction of the city center the landscape renovation movement spread in many cities in Europe and America, which is famous in the urban development history, named "the City Beautiful Movement". The urbanization in China can't be economization, urbanization first and then ecologicalization, like many countries in Europe and America, and must be the new ecological urbanization followed the environmental laws.

Understanding the laws between the town and the environment, the urban position will be accurate and the managers should make the right development direction and strategy for the towns.

CONCLUSION

Five rules together determine the towns, a region and even the country's development. The research of five laws theory makes the development of the town fully considered in various factors, combined the five rules optimization, and complied with the laws.

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