



Research Article

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Study on the urbanization and green economy development in Fujian province

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ABSTRACT

The development of green economy is the key to speeding up the urbanization process. By analyzing the relationship which is complementary and progressive each other between urbanization and green economy development, researching the current situation of the urbanization and the green economy development in Fujian province, further investigating the development of urbanization and green economy in Fujian Province not only has a national strategic opportunities and congenital natural advantage, but also faces with serious barriers to technical and ideas challenges, finally putting forward six feasible suggestions to realize the synergetic development of urbanization and green economy in Fujian Province: guiding by governments' policy and formulating reasonable planning; strengthening implementation efforts and carrying out the standard; perfecting management system and breaking the obstacle of institution; optimizing the industrial structure and transforming the mode of development; improving the technical ability and making the core team, and last but not least is deepening the green consciousness and realizing the "greening" of the whole city.

Key words: Fujian Province; Urbanization; Green Economy

INTRODUCTION

Along with the deepening of reform and opening up, urbanization has become an important means of promoting the adjustment of economic structure, motivating the transformation of economic development mode, and achieving economic stability and healthy development in our country. However, in the past few decades behind the extensive economic growth, China's urbanization is facing a bottleneck for further development, a series of environmental pollution, resource shortages, social conflict, cultural loss and other issues frequently emerged, instead restricted economic growth. Therefore, the urbanization in the traditional sense is in need of reform, it should be clear that urbanization is not just to pursuing the economic efficiency, but also to pay attention to good social and ecological benefits. On March 5, 2014, Premier Li Keqiang made the government work report at the 12th session of the second meeting of the National People's Congress, put forward the new urbanization of human-centered, stuck to the new path of urbanization development of "people-oriented, four modernizations synchronization, optimize layout, ecological civilization and inherit culture", pointed out the direction for our country urbanization, and enriched the era connotation of urbanization again. Fujian province as an important coastal province in the south, it's economy output continued to rise in recent years, plays an important role in the development pattern of China's economy. March 10, 2014, the State Council formally issued "About the several opinions of supporting Fujian Province in further implement the strategy of ecological province to speed up the construction of ecological civilization demonstration zone ahead "(hereinafter referred to as "Opinions"), resulted in Fujian Province becoming the first national ecological civilization demonstration zones set by the State Council since 18th National Congress of the CPC. "Opinions" clearly positioned the four strategic objectives of development for Fujian Province: land and space science development pilot area, the green circle low carbon development area, urban and rural residential environment construction demonstration area, ecological civilization system innovation experimental area[1]. Based on this, in response to national policy and realize the economic take-off in Fujian province, the development of

green economy is imminent. Green economy refers to the value orientation of ecological civilization, regards ecology, knowledge and intellectual capital as the basic elements, orders the harmonious development of man and nature and the coordination development between ecology and economy as the ultimate goal, to realize the sustainable economy of ecological capital appreciation[2]. Thus it can be seen that the fundamental objective of developing a green economy is also to achieve the harmonious development among economy, society and ecology, which is mutually consistent with the essential requirement of urbanization development. Therefore taking the first ecological civilization demonstration area--Fujian province as an example, to study the relationship between the urbanization and green economy development, which not only has strong representativeness, but also has a great positive significance for realizing ambitious development goals of Fujian province as soon as possible.

2.The relationship between the urbanization and green economy development

2.1 The scientific urbanization background is an opportunity of developing green economy

Urbanization is caused by technology progress and social productivity development, scattered settlements in function area of the agricultural population in the rural areas into focusing gathered in non-agricultural function of non-agricultural population, and then it is the historical process that the traditional rural society into a modern society[3]. Therefore, urbanization is not just a simple population transfer process, also need to experience a long process of demographic transition and population adaptation. Based on this, we should make good use of the urbanization development platform to vigorously develop the green economy. Of course, the precondition is need to ensure that the urbanization development platform is robust, that must be stable grasp the direction of the urbanization development, and can not deviate from the development law of urbanization. If the blind pursuit of urbanization development scale, ignoring the quality requirements of urbanization development, then the development of green economy lose fertile soil, it is difficult to achieve development under the background of urbanization, and may even be killed in infancy. So the scientific background of urbanization is conducive to the sustainable development of green economy. In the process of urbanization, we should gradually abolish the extensive economic growth pattern of "three highs", and introduce harmonious and efficient green economy mode into the process of urbanization, constantly build green development environment in the whole society. Within the scope of the binding environment as much as possible to have population transfer, resource development, system construction etc, and adhere to the sustainable developing green urbanization path, in order to seek to maximize the integration of economic growth, social harmony and ecological environment.

2.2 Develop green economy is the key to promote urbanization in the long term

Under the background of increasingly scarce natural resources, if we still adhere to the traditional development model of urbanization, blind pursuit of speed and scale, wantonly engaged in industrial production and emissions, it is extremely easy to trigger the load-bearing edge of ecological resources, and then pose a threat to human survival and development. Thus the urbanization development must insist on the harmony of economy, society and ecology. Indeed, "green economy" pay attention to the highly unified of natural resources and economic development, and have a positive impact on the reduction of environmental pollution, reducing energy dependence, promoting the sustainable use of natural resources[4], it also can create a strong economic and social benefit, and it is an effective way to coordinate economic, social and ecological interests. However as a new way of economic growth, green economy development is not mature enough, and it is maybe difficult to effectively play its strong economic driving potential in the early stage. This would require the unremitting exploration, practice and found, otherwise the development of green economy would be in trouble and it is hard to effectively play positive role on urbanization, even make urbanization tends to stagnate. Therefore, the concept of "green economy" should be implement comprehensively systematically on the realistic urbanization process, and consistently seek the effective match between the urbanization and green economy, to create favorable conditions of playing a role in green economy for the promotion of urbanization.

In conclusion that the relationship between urbanization and green economy development is shown as below:

3. The current situations of urbanization and green economy development in Fujian province

3.1 Status of urbanization development

The history of urbanization shows that changes in regional structure of the population and industrial structure is one of the most important indicator of the level of urbanization[5]. On the one hand, geographical structure of the population here is mainly reflected in the distribution of urban population and urban landscape. Shown in the following table 1, the proportion of urban residents in Fujian province from 2008 to 2012 continued to rise, and higher than the national average level on the whole. From the numerical point of view, the proportion of urban residents in Fujian province have been more than 50%, and it is approaching 60%. According to the general law of urbanization, urbanization rate begin to speed up after it reached 30%, to stabilize after reached 70% and to accelerated development within the range of 30% ~ 70%[6]. This shows that urbanization is in stable acceleration stage in Fujian province, and it have a larger development space. However urban distribution pattern of Fujian

province is not optimistic, for instance that Xiamen, Fuzhou and Quanzhou with rich economic strength in the urbanization level was significantly higher than the central and western regions of Fujian province, and Midwest urbanization efficiency has not been fully realized. On the other hand, output value proportion of three industry also reflects the level of urbanization to a certain extent. In general, the higher the urbanization level, the higher the proportion of the tertiary industry, three industry gradually show "321" model of industrial structure. As shown in Table 2 below, compared with the three industry structure models under ideal conditions, the current structure of the three industries in Fujian Province was unbalanced situation, and nearly three years has not improved much, significantly higher output value proportion of secondary industry, but output value proportion of the primary industry and secondary industry is too small. This illustrates that in the process of economic development Fujian province was depend on the second industry too much, the first and third industry's lack of contribution to the economic development.

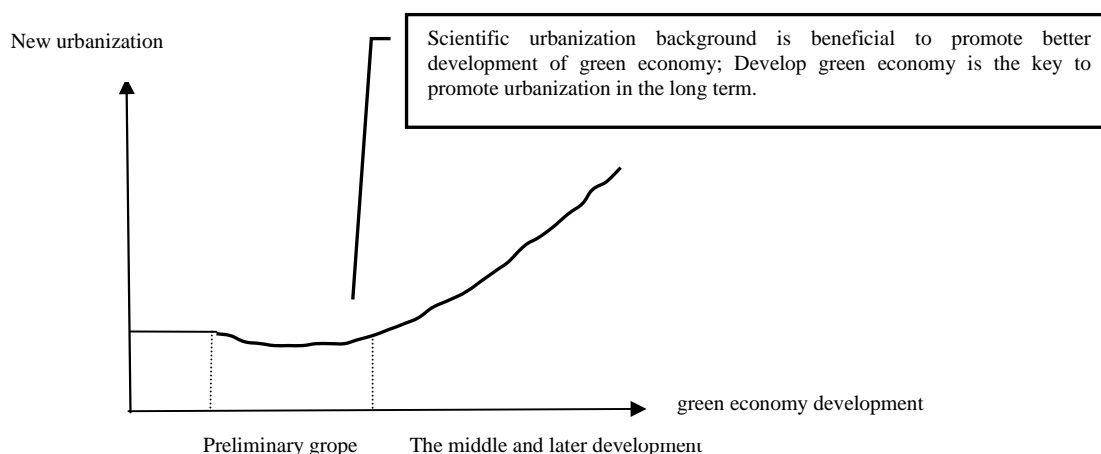


Figure 1: the relationship between urbanization and green economy development

Table 1: 2008~2012 Proportion of Urban Population in Fujian Province (%)

Years	2008	2009	2010	2011	2012
China	46.99	48.34	49.95	51.27	52.57
Fujian	53.00	55.10	57.10	58.10	59.60

(Note: this data comes from the 2013 Statistical Yearbook of China)

Table 2: Composition of three industrial structure in Fujian province in recent years(%)

Years	Primary Industry	Secondary Industry	Tertiary Industry
2010	9.3	51.0	39.7
2011	9.2	51.6	39.2
2012	9.0	51.7	39.3
Ideal Conditions ⁽⁷⁾	12.7	37.9	49.4

Note: this data comes from the 2011/2012/2013 Statistical Yearbook of China)

3.2 Status of green economy development

Since 1989 the British environmental economist David Pearce mentioned the "green economy" for the first time in the "Green Economy Blue Book"[8], the United Nations Environment Programme (UNEP) proposed national governments to build low-energy, environment friendly and sustainable "green economy" growth model in October 2008, the green economy development has been highly concerned by the domestic and foreign governments. As a new economic growth mode, green economy was valued increasingly by Fujian provincial government, and continuously introduced related policy document about green economy development, making the green economy development in Fujian province has obtained some achievements. With wider range of green economy, from the perspective of economics, covering the main areas of green production, green circulation, green consumption, green living, green investment, green distribution and green technologies etc, and each specific areas is the important economic carrier of developing the green economy. For example in green investment fields, in 2012 Fujian Provincial Forestry investment of 22.15019 billion yuan, growing 32.6% compared with 2011 forestry investment of 16.70013 billion yuan. In 2012 Fujian industrial pollution control completed investment of 2.37635 billion yuan, increasing by 66.6% compared with industrial pollution control completed investment of 1.42599 billion yuan in 2011 and so on, fully manifesting the determination of Fujian province to make the sweeping measures for promoting green economy development. On the other hand, "energy saving" as well as an important part of the green economy. In 2008 GRP (ten thousand yuan)energy consumption index of Fujian province is 0.843, and it

dropped to 0.644 in 2011, it reflects that energy consumption is on the decrease in Fujian Province which product ten thousand yuan GDP every, and the situation of saving energy and reducing consumption has been improved. But the level of energy consumption per unit GRP is still high, the gap between Fujian province and other developed area is very obvious, Fujian province is badly in need of strengthening energy saving adjustment. Overall, Fujian Province is being make efforts to develop green economy at present, but the results obtained is still limited, it can not very well promote urbanization to the positive direction.

3.3 The problems of urbanization and green economy development in Fujian province

3.3.1 The rate of urbanization and green economy development does not match

In recent years, Fujian province urbanization development rate is relatively quick, and it will keep accelerating trend in the coming period, that more and more people continue to migrate from the countryside to the towns, causing huge population, employment, social security and other pressures to cities and towns. However the pace of green economy development in Fujian province is very slow compared to the speed of urbanization. Although Fujian province is actively advocating to develop green economy, also introducing the corresponding policy planning, then at present the development patterns of green economy has not yet deeply rooted in the hearts of people, the concept of green economy development within the whole society is not clear enough, this result in that the development of green economy is just a slogan in most cases, it is real insufficient to carry out in practice, obviously it is difficult to play a role in promoting urbanization. On the contrary, the urbanization level is difficult to improve losing of green economy as a strong point, it would expand quickly and blindly only in a certain period, but soon it will face with a series of crises, such as social contradictions, environmental degradation, lack of energy etc, making the urbanization is in trouble again. Therefore, accelerating the urbanization process cannot be going faster but should be refine, the continuous development of the green economy in order to achieve positive interaction between the two complement each other.

3.3.2 The benefit of urbanization and green economy development has not been fully played

Although the proportion of urban population in Fujian province is increasing continuously, and the green economic input-output ratio is also increasing year by year, they do not fully exert the efficiency of the development. On the one hand, urbanization scale of Fujian province expands unceasingly, but it do not play the maximum scale. The differences of urbanization level are growing in different cities which are in different levels of economic development. The urbanization level of the eastern coastal city is significantly higher than the Midwest cities, not only higher salary, better working environment and employment opportunities for advancement, but also higher social reputation. This makes the underdeveloped city's labor force tend to be employed in the developed cities, while the quality of remaining workforce is difficult to effectively improve the level of urbanization in the region, resulting in the city's urbanization backward into an infinite loop of development. On the other hand, urbanization and the continuous development of green economy should be better adjusted to the industrial structure of Fujian province, but the reality is the opposite. Three industrial output structure is always unbalanced, the proportion of secondary industry output proportion is too high, and they ignore the green economy in two important modules, namely the effective development of the first and third industry. There are still large room for adjustment in the current industrial structure and the three industries with the ideal state.

4. Opportunities and challenges of urbanization and green economy development in Fujian Province

4.1 Leading green economy into urbanization process is the requirement of the national development strategy

With the enhanced binding environment, green economy applied to the development of urbanization has been strongly supported by the national government and local governments. In March 2014, the Central Committee of the Communist Party of China and the State Council issued "the national new urbanization planning (2014-2020)", Which points out the emphasis of green city construction, pays attention to green energy, green building, green transportation, industrial park loop transformation, the comprehensive improvement of urban environment and new green life action etc. And gradually the green development mode throughout the system of urban development, it has important strategic significance for guiding Fujian province to promote the new urbanization. In March 2014, the State Council officially issued the "Opinions", which identified Fujian Province as the country's first ecological civilization demonstration area, it put forward higher requirements to further strengthen the green economy development of Fujian province, also promoting the strategic height of realizing the organic integration between green economy and urbanization development in Fujian province, so it is in favor of realizing early the grand goal of "the area of scientific development, the area of reform and opening up, the civilized and peaceful area, area of ecological beauty " of Fujian Province.

4.2 Fujian province has the congenital advantage of developing green economy to boost urbanization process

The location of closing to the mountains and the sea of Fujian Province determines that there exists a huge industry development vitality. What is called "Eight mountain and a field of water", Fujian province is particularly rich of mountain resources, and mostly mountainous is covered with forest, its forest coverage is in the first in China. This

will greatly enhance the development potential of primary industry represented by agriculture and forestry, what's more, the geographical environment of mountainous structure make the unique natural scenery for Fujian province, there are nine national key scenic area in Fujian province, its tourism resources are rich and unique, and conducive to developing green tourism in Fujian province. Meanwhile, the superior terrain is conducive to develop hydropower, wind energy, light energy and other recyclable green energy, reducing the frequency of the use of non-renewable energy in urbanization process, effectively improving pollution and reducing the damage of the economic development to the ecological environment. So unique "resources endowment" not only fulfill the "ecological beauty", but also offer the possibility to achieve "rich people" of Fujian Province.

4.3 Accelerating the urbanization of green development needs high level of technical support

Developing green economy not only needs to have a new round of green technology improvement of traditional industry, but also have the capability of green technology innovation of developing new energy, new materials etc. However there is a big limitation of the level of green technology to speed up the green urbanization development in Fujian Province. Although some social talents from Fujian province has a forward-looking vision, pay attention to the huge potential opportunities of green economy, gradually invest capital, human resource and other production factors to do the technology research and development, but most of them can finally let the matter rest. Because green technology itself is an emerging technology, the development of time and space is limited, the level of overall development in society is low, with relatively high technical requirements and a higher risk of failure, which are big reasons for the government and companies often off green technology innovation. However, for relying on green economy development to speed up the urbanization process, Fujian province needs to face the technological challenges and improve the entire province's technological innovation capability.

4.4 Ideas is difficult to transfer in the short term

The concept of green development appears in a relatively short time, and its penetration is relatively low in the whole society, it is impossible for people to change the original production, life concept in the short term. In recent years, there has been increasing energy conservation, pollution prevention and governance consumption, and encouraging green investment, promoting green production in Fujian province, but there is still existing a certain degree of indulgence and ignorance in the certain field of economic interests violation. At the same time, many companies also could not change the concept of production and operation rightly. And they mistakenly think that the development of green economy is contrary to the corporate business development, the development of green economy not only increases the production of the enterprise operation cost, but also spends a certain amount of manpower, material and financial resources to carry out green technology improvement. Therefore, the production of green consciousness that the government advocates is relatively weak. Besides, consumer groups's green consumer awareness is still relatively backward in Fujian province. Many people consume a large mount of energy for the sake of convenience, and do not to establish a clear green awareness. So speeding up urbanization, promoting green economy development is still facing severe ideological barriers in Fujian province, it is urgent to resolve the idea difficulty of green economy development.

5. Advices of realizing the coordinated development of urbanization and the green economy in Fujian province

5.1 Guiding by government' policy and formulating reasonable planning

In recent years, the development of urbanization is faster in Fujian Province, but in the process of development inevitably have accumulated large resources pressure and social contradictions. It requires Fujian province learns a lesson and gives full play to the role of the "visible hand", strengthens the government's macroeconomic regulation and control in the urbanization process. Policies to support the depth of integration between green economy and urbanization, to guide the green healthy development of urbanization, to compensate the development of green industry, to attract more social elite into the area of green economy, to popularize the positive impact of developing the green economy to urbanization. Gradually perfecting the relevant provisions of the policy to support the development of "the sound and rapid" within the society. In the meantime, Fujian province should formulate scientific and rational planning of urban development, follow the law of urbanization development, unify economic, social and ecological benefits for urbanization development, strengthen the benign development mode of the urbanization relying on the green economy, and step by step to avoid going in for grandiose projects. Then gradually improving the rationality of urban space layout, adjusting measures to realize the joint development among big cities, medium-sized towns and small towns. And the big cities should radiate medium and small towns, attache great importance to construction of the medium and small towns, constantly optimize the spatial layout of urbanization of Fujian province.

5.2 Strengthening implementation efforts and carrying out the standard

As the saying goes "a deployment, nine points to implementation", if there is no powerful executive ability, the perfect urban planning is only an armchair strategist. Therefore, Fujian province should cling to the actual

implementation of policy planning, in order to offer reference for government personnel, business organization and the general public. In particular, Fujian province should strengthen the organization's green monitor, and encourage enterprises to carry out activities related to green businesses while improving the standards of bringing in, using, handling and emission the non-renewable energy. Strengthening the intensity of energy conservation, emissions reduction and anti-fouling for consumption, taking rewards and punishment system and setting up the standard quota of rewards and punishments, to award the excellent greening enterprise which is far less than the whole society of energy consumption index and a great contribution to the social environment. At the same time punishing high pollution and high emissions of black enterprise by means of laws and administrative punishment, and regularly announcing by the media to strengthen the public recognition about green economy development model. Encouraging the public effectively supervise the government and the enterprise organization, to increase the government's determination to develop green economy by and by.

5.3 Perfecting management system and breaking the obstacle of institution

Fujian province should gradually improve relevant social security, population employment, residence, education management system in the process of promoting urbanization, to ensure the smooth transition of rural urbanization from institution, to break the non-standard and unreasonable of the original urban and rural dual system one by one. Firstly Fujian province should establish and improve a wide coverage and high levels of social security system, intensify the urban pension, medical, maternity, unemployment, work injury and other basic social security system reforms, then gradually build a social security system balancing between efficiency and fairness. At the same time, Fujian province should attach great importance to the development of green economy in the process of urbanization, and guide the part of labor force employed by the corresponding industry to further solve the problem of population employment, and to promote the optimal allocation of urban labor resources. On the other hand, the existing household registration system is a big barrier to hinder the urbanization process, Fujian province should be positive to reform the household registration system, and encourage the rural population shifting to urban, also protect the rights of rural and urban population supported relative responsibilities etc. Thus contributing to redress the wrongs of institutional system about employment, education etc, and further ease the social conflicts and contradictions in the process of urbanization, to ensure the maximization of social benefits of urbanization.

5.4 Optimizing the industrial structure and transforming the mode of development

Aiming at the current situation of the unbalanced industrial structure in urbanization process, Fujian province should suit the remedy to the case and optimize industrial structure positively. Firstly stimulating the development vitality of first industry in a phased and focused manner, then the technical innovation throughout the developing of primary industry to increase the technological content of the first industry. And gradually promotion of traditional agriculture, forestry, animal husbandry and fishery changes to modern agriculture, forestry, animal husbandry and fishery, to animate the contribution of first industry for economic development. Secondly, reorganizing the development path of the second industry, phasing out polluting and energy-intensive industry development mode. The use of new energy, new materials and renewable energy alternatives to traditional energy industry status, and support the greening mode of industrial production. Finally, steadily improving the market share in the economic development of the third industry, actively developing green industry of low-carbon, environmental protection, energy saving and reducing consumption. And increasing investment of new energy and new materials, excavating the potential huge market of green industry, continuously improving development pattern of three industry, and greatly improving the proportion of green economy in the region's GDP, to realize the transformation and promotion of economic development mode in Fujian province step by step, thereby facilitating further urbanization level extended to upward.

5.5 Improving the technical ability and making the core team

For realizing the perfect convergence between urbanization and the development of green economy, the key is to enhance the level of regional technology, and talent is the core of the level of technological innovation, therefore Fujian province should train professional talents and elite team of the field of green economy with a purpose and a key. First, the government actively supports the development, introduction, training, motivating and retain of green technology talents, and introduces the corresponding policy system to encourage green technology talents. Second, enterprises should be attach great importance to green technology talents and regularly training and communication, also set up fair promotion development mechanism to encourage employees to improve the knowledge and skills of green technology etc. Third, schools should set up corresponding courses to train the relevant professional talents, and actively cooperate with organizations to carry out technology research, gradually achieve the height combination of the theory and practice. Finally individuals should also be targeted to improve knowledge and skills in the field of emerging technologies. Fully mobilizing the positivity of each group in the whole society, building the core of the team of the urbanization development. This will greatly to the benefit of developing the level of green technological innovation in the process of Fujian province urbanization from all-round and multiple-angle, in order to seek the commanding heights of the regional competition.

5.6 Deepening the green consciousness and realizing the "greening" of the whole city

The use of green economy to guide the urbanization of Fujian province tending to be efficient and healthy development, which needs to strengthen the green concept of government related department, the enterprise organization and the public, in order to realize spontaneous constraints of the organizational and individual thought impacting on their behavior. Government should popularize the concept of green regularly to relevant departments, and introduce the thought of green economy into government work, as well as criticize the staff whose thought is wrong, to make the relevant departments realize irreplaceable strategic significance for green economy development. Thus continuously mobilizing the general public and enterprises to carry on actively green production and green life, seeking to the profit pattern of green rich. In addition to actively the advocacy of government, also giving full play to the advantage of media and strengthening the publicity media effectively. The green economy conscious blend in the urbanization development process, advocating to establish healthy and green consumption, inducing production concept of green enterprises by "bottom-up" mode, calling for the whole society to value the importance of green economy, thus building positive atmosphere of urbanization of green management, green production and green living.

CONCLUSION

A green economy as a new economic form has received the attention from all walks of life. In this paper, on the basis of previous studies, taking Fujian province as an example for urbanization and green economy development research, that has the bright time. By analyzing the relationship between the urbanization and the green economy development, researching status of urbanization and green economy development in Fujian province, founding the rate of urbanization and green economy development does not match and the benefit of urbanization and green economy development has not been fully played. Then analyzing Fujian province is facing strategic opportunities, resources advantage, technical challenges and thought disorder to realize the development of urbanization and green economy. In the end putting forward six feasible suggestions to realize the synergetic development between urbanization and green economy in Fujian Province: governments' policy guidance and formulate reasonable planning; strongly grasping of efforts to implement to carry out the standard; perfecting management system and break system obstacles; optimizing the industrial structure and transform the mode of development; improving the technical ability and establish the core team, deepening the green consciousness and realize the whole "green city."

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