

Research on Circular Economy's Mechanism toward Environmental Safety

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Abstract: In this paper, by analyzing the relationship between unemployment, poverty and environmental safety, it reveals the cross-cutting among the social problems, which concludes environmental degradation, poverty and unemployment. We can expand the employment and increase the stability of the employment by developing circular economy. This owes to circular economy's effect on extending the industry chain. Circular economy is conducive to establishing a long-term mechanism of employment which plays an effective role in environmental safety.

Keywords: Unemployment, Poverty, Environmental safety, Circular economy.

1. Introduction

At present, there is a transition of society in China. A series of social problems, such as unemployment, poverty and environmental degradation ensued. Environmental safety Challenges the development of economy. By thinking the question of development, people selected the circular economy in order to achieve sustainable development. Zhang Wen-Hong (2005) indicates that eco-industry, circular economy and sustainable development are the three main directions towards Environmental Protection. ⁽¹⁾ By the view of technology and logistics, Qin Si-Yi and Hao Bing analyzed the mechanism of action between environmental development and sustainable development. ⁽²⁾ Dai Liang(2009)has also discussed the vital function which circular economy imposed on environmental safety with the perspective of the resource-saving(reduction). ⁽³⁾ In this paper, with the perspective of expanding employment, the writer analyzes the mechanism of action which circular economy imposes on environmental safety. In order to strength the people's confidence of developing circular economy, it manifests the effective action again, which circular economy imposes on environmental safety.

2. Unemployment and Poverty

Unemployment refers to these people in the stage of a certain age, who have certain ability to work and try to find work, but they cannot get work. It has become a globe problem. From Eastern Europe to Western Europe, South America to North America, whether developing countries or developed countries are all suffering the unemployment. Unemployment and employment become the focus of attention. Almost all countries have to strive to create opportunities of employment, draft and implement a series of anti-unemployment policies and measures, as well as even sacrifice efficiency to exchange for the reduction of domestic unemployment. Today, in a period of transition, because the reform of the labor system gets deeper and deeper, China withstands the superimposed pressure of employment which comes from the new workforce, urban laid-off workers and rural surplus labor. From 2006 to 2010, the NBS 's data shows that the annual registration of urban unemployment in China is more than 4.0%. ⁽⁴⁾ Simultaneously, there is a large number of rural labor force idle due to the reduction of arable land, innovation of the productive technology. Scholar pointed out that there are 155.183 millions rural surplus labor in China in 2008. To achieve the urbanization, before 2020, we must transfer 6.4 to 11 millions rural surplus labor to the city every year. ⁽⁵⁾ A

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large number of people unemployed will cause a series of economic and social consequences, the most important consequence of which is the poverty. Poverty has become a universal significant socio-economic problem which impeded the development all over the world. Poverty can be divided into absolute and relative poverty. Relative poverty refers to live a lower standard compared to the average standard of a certain country or region; Absolute poverty refers to that under a certain social production and lifestyle, individuals or families which rely on their labor income or other income can not meet the most basic needs for survival, undoubtedly it is a living conditions at the margin of subsistence. There is an intrinsic connection between poverty and unemployment, In a sense, poverty is the essential attribute of unemployment. There is a variety of reasons, such as illness, war, lazy, which causes poverty, however, unemployment is the most main reason. Among various types of urban poverty, jobless poverty accounted for the largest proportion. ⁽⁶⁾ As it can be seen, the jobless poverty constitutes the mainstream of the urban poor.

3. Poverty and Environmental Safety

Environmental safety is a safety free from the threaten of environment, that is, it strives to avoid environmental degradation that threatens human survival. ⁽⁷⁾ It mainly consists of two means: One is to make economic foundation free from the threat of ecological degradation, the other is to prevent the discontent of the masses caused by environmental damage and shortage of resources. In a sense, the issues of environmental safety are still a problem of poverty. Poverty and environmental degradation are often bound together, that is to say, the issues of environmental safety have a close relationship with the size of the poverty. Poverty, especially the survival-type of absolute poverty impacts on the environmental safety seriously. Research on the network of poverty-environmental degradation (PEDN) has shown that poor people tends to rely on environmental resources more than the non-poor. Relatively, it can cause more damage to the environment. ⁽⁸⁾ “If you live on a mountain, you live off the mountain; if you live by the water, you live off the water”. The so-called regional survival mode vividly illustrates that the poor areas more depend on environmental resources. The poorer area is, the higher dependence on the resource is. In many areas, poverty has become the main reason for the excessive use of resources and environmental pollution.

Nevertheless, there is not the internal logical necessity between poverty and environmental degradation. Poverty is not inevitable to damage the environment. Whether poverty is leading to environmental degradation, depends mainly on the solutions of poverty which the poor is available to get, as well as on the reaction to the stimulation and pressure from outside. In the world, the poorest population is usually distributed in the ecologically fragile areas. In 2001, in “China overcome rural poverty”, the World Bank pointed out that Chinese absolute poor is distributed in the areas which carrying capacity of environmental resources is small. It can be said that the feasible scheme for the poor is few because of bad living environment and short time. poverty has deprived of them to make more reactions and to take more actions. As a result, they can only make two reactions, which they either take advantage of the free public property and open resources to increase their assets, or abandon land to migrate to urban areas. ⁽⁹⁾ If they choose the former, for their livelihoods, they will destroy the environment and result in environmental degradation, The deteriorated environment further exacerbates poverty, thus it falls into the vicious cycle of poverty-environmental damage. If they take the latter, it will exacerbate the deterioration of the city’s environment, leading to “urban disease”. In 2011, China Urban Development Report pointed out that Chinese urban poverty had become an increasingly important issue, as well as urban residential environment is facing serious challenges.

Through above analysis, we can easily see that poverty is caused by unemployment, as well as poverty has spawned environmental degradation, leading to serious issues of environmental safety. Unemployment, poverty and the issues of environmental safety are often mixed together. They should not be solved only

from a single level. Simply emphasizing the protection of the environment, strictly limiting the use of public resources, it will aggravate the rural population of inequality and deepen poverty. Because the poor are more dependent on environmental resources, they will stand more pain when they are banned to use environmental resources. As a result, as pointed out in the 2003 World Development Report, inequality and poverty deepened in turn hinder the implementation of environmental protection. To realize environmental safety, we must first improve conditions of the poor, and to improve the poor condition, it will be well solve the problem of unemployment. Similarly, if we will improve poverty, the problem of unemployment must be well solved. How can we achieve the win-win situation among expanding employment, improving poverty and environmental protection. With the new technological paradigm, circular economy adapts to the win-win needs.

4. Mechanism of Circular Economy to Expand Employment

It is generally believed that employment will be corresponding increase, as long as the reasonable growth rate of economy is guaranteed. But civil and external experiences have proved that economic growth can't achieve maximization of employment. It will not keep the same proportion between the economic growth and the growth of employment. To really alleviate employment pressure, you must change the growth mode of traditional economy and follow the development of circular economy. Particularly, it has a special significance for the period of Chinese transition. At present, much unemployed population makes economic development of China into a dilemma. On one hand, to expand employment, we will vigorously develop labor-intensive industries, which will contradict to improve international competitiveness. On the other hand, if you want to conform to the trend of social development and improve the international competitiveness, you must vigorously develop new and high technology industries, reversely, reduce labor intensive industries. This means that it will reduce the labor force and increase the difficulty of employment. Nevertheless, this dilemma will be well solved by developing circular economy. Circular economy as "resources-products-waste emissions-recycling", closed-loop flow economy, it should belong to high and new technology industries, as well as intensive labor process. In this way, the labor-intensive industries and high-tech industries are well to put together. Therefore, it can fundamentally solve the problem of unemployment. Circular economy to expand employment mainly reflected from the extension of the industrial chain.

Firstly, circular economy transversely stretches the industry chain. Circular economy improves the efficiency of resource utilization through the industrial symbiosis. The so-called industrial symbiosis, which has the coupling effect of the industries configured together, strengthens horizontal integration among the industries to significantly improve productive efficiency, as well as reduce resource consumption and waste. The products of a particular industry or wastes, may be just raw materials of another industry. Different industrial products and wastes can be mutually recycling, in order to achieve a symbiotic combination shared resources among industries and interchangeable byproducts. The industry chain transversely stretched expands the business scope of the enterprise and promotes development of the third industries, especially the productive services. At the same time, it also provides more jobs to effectively alleviate employment pressure. In city, by developing the park of industrial ecology, mutually beneficial cooperation among the industries can comprehensively utilize resources of the park, as well as absorb laid-off workers and new labor to employ; In countryside, through the construction of agricultural ecological industrial park, we can promote comprehensive utilization of agricultural waste, as well as we can exploit agriculture resources and transversely expand agricultural business channel. All of these can effectively solve the problem of employment of rural surplus labor.

Secondly, circular economy longitudinally extends the industry chain. Circular economy requires that economic activities are organized into "resources-products-waste-renewable resources," the feedback process,

in order to achieve a closed loop recycling of matter and energy, thus greatly reducing the final waste emissions. By elongating the industrial chain through the expansion of upstream and downstream products, the enterprise reaches to internal material integration, energy integration and information integration, so as to form the scale economy to save cost and strengthen the ability of competition. At the same time, because of the development of the new department and business, it promotes the employment of labor force. In city, we vigorously develop the environmental industry, waste recycling industry and create employment space to provide re-employment opportunities for the urban laid-off workers. In 2005, the annual output value which created by waste resources recycling industry of the United States reached 236 billion dollars and provided 1.1 million jobs.⁽¹⁰⁾ Relying on township enterprises in the rural areas, we can carry out deep process of agricultural products and add the value of products, as well as develop the “green” products to exploit the international market. There is tremendous potential employment to solve the problem of the countryside surplus labor.

Practice has proved that longitudinally extending enterprise production chain and transversely broadening the scope of business by developing circular economy, have increased the needs of employment. For example, in 2003, there are 63000 laid-off workers in Fushun mining group, accounting for 50 percent of the total number of laid-off workers in the city. In 2004, Fushun Mining Group began to develop circular economy. By the end of 2007, it has created nearly 40000 jobs. It is expected by the end of 2012 that it may receive 9 billion Yuan in sales income and promote the employment of 60000 people.⁽¹¹⁾

5. Conclusions

Unemployment, poverty and environmental degradation are usually interwoven together. For us, it is difficult to solve from a single aspect. In a certain sense, unemployment leads to poverty, and poverty usually is the direct cause of the deterioration of the environment. To realize environmental safety, we will leave no stone unturned to improve poverty and expand employment. By developing circular economy, we can effectively combine economic development, environmental protection and expanding employment. The extension of the industry chain has created the favorable conditions to establish the long-term effective mechanism of employment, which can increase the stability of social employment. In a word, Stable employment for the poor will be beneficial to ameliorate poverty and effectively realize environmental safety.

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