



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Response of Land Use Planning in Less Developed Areas to Economic Globalization

LIU Xiang-nan *

College of Public Administration, Nanjing Agricultural University, Nanjing 210095, China

Abstract Under the background of economic globalization, the development mechanisms of various regions face potential deep transformation, and the effective participation of less developed areas in China in economic globalization is of great significance to the sustainable development of Chinese economy and society. In this study, we summarized the characteristics and influences of economic globalization from the aspects of industrial recombination and transfer, competition, economic relevance and development modes, and analysed the opportunities and challenges of land use in less developed areas brought by economic globalization. Afterwards, based on the major problems of land use planning management in the middle of Jiangsu Province, we put forward some suggestion including management of planning process, balanced development of ecology and economy, strengthening planning use zoning, spatial agglomeration and protecting cultural diversity to response to economic globalization.

Key words Economic globalization, Less developed areas, Land use planning, Response

As the gradual deepening of economic globalization in China, every region face a choice of reasonable regional division of labour and cooperation in a wider market, and accurately grasping functional orientation in a macroscopic fashion during its development process, so as to make a strategic and prospective policy response of land use planning. It is of important significance to the scientific development of a region and optimizing allocation of urban and rural land resources. Here, less developed areas border on economically developed areas, and they are in the middle income level and the middle stage of industrialization according to our country's basic conditions and the criterion for income per capita and development stage of industrialization^[1-2]. For instance, less developed areas in Jiangsu Province include Taizhou, Yangzhou, Nantong and other regions in the middle of Jiangsu. At present, less developed areas, the key areas where current industrialization and urbanization will develop deeply, take on industrial transfer as well as the organic evacuation and radiation of urban function in developed areas; under the background of current man-land relationship, this function is closely related to land use strategy of less developed areas. Meanwhile, such areas have rapid decreasing of cultivated land and serious ecological degradation^[3]. Analysing land use planning of less developed areas under the background of economic globalization could improve the strategic height and predictability of the planning, promote its guidance and control function, and provide more powerful theoretical support for the inherent coordination of various planning systems.

1 The connotation and chief characteristics of economic globalization

Economic globalization means that goods and production factors flow freely among different countries, and global resources are combined and deployed together, so that global economy changes into an inseparable organic whole^[4]. Since becoming a member of WTO, China has taken part in economic globalization deeply day by day, which has profound influences on the economic development of various region in China.

1.1 Global industrial and production recombination With more free flow of production factors and more rapid propagation of economic information in the world, under the domination of the motivation for decreasing cost and expanding market, the optimal allocation of global resources has resulted in a large area of industrial transfer, that is, the industry with mature technology and low profit margin has been transferred from a developed country to a developing country. At the beginning, the labor-intensive processing manufacturing industry was transferred mainly; at present, there is a trend transferring towards capital-intensive and skill-intensive industries, and service transfer and advance of industrial transfer structure are becoming new focuses^[5]. The changes in the characteristics of international industrial transfer have led to new gradient shift within a developing country, and have brought a new opportunity to develop to its regions.

1.2 The preferred regions for international industrial transfer are Asian countries During the progress of international industrial transfer, labor price, complexity of management, monetary value, endowment of natural resources, political stability, governments' management and protection policies often determine the flow direction of capital and technology. Relying on resources superiority and relatively stable cultural tradition and politics, Asian countries often become the preferred regions for international industrial transfer. Presently, the transfer is still continued and deepened.

Received: September, 2012 Accepted: October 29, 2012

Supported by the Philosophy and Social Sciences Foundation of Colleges and Universities in Jiangsu Province (2010SJD630058); National Social Sciences Foundation (09&ZD046).

* Corresponding author. E-mail: lxn@njau.edu.cn

1.3 Irrational competition of developing countries or regions

During the progress of international industrial transfer, to attract more external funds and technology, developing countries or regions often compete with each other through decreasing price of natural resources and labor force and environmental protection threshold as well as giving tax relief to foreign investment. Moreover, the irrational competition can not only make natural resources more rare and global ecological crisis increasing serious, but also greatly affect the sustainability of developing countries and regions.

1.4 Enhancement of integral relatedness of economic turbulence

As the globalization of factor allocation, production and market, the integral interdependency and relatedness of global economy have strengthened constantly, and the economic turbulence of a country or region often influenced the whole world. For instance, American real estate bubble shattered in 2008 and current European debt crisis had affected the whole world for a long term. It is very important to economic macro-control, cultivate effective domestic demand for China where export orientation is one of significant driving forces for economic growth, wherein land policy is one of crucial choices.

1.5 Transformation from the traditional economic mode to a new technical economic mode

The traditional economic mode based on patrol and other fossil energy use is facing challenges from economy, ecology, society and so forth, while every country tends to establish a new technical economic mode with sustainable resource utilization^[6]. Large quantities of less developed areas and underdeveloped regions enjoy the late-development advantage due to being slightly restricted by the traditional economic mode. The response of land policy to the great transformation is of far-reaching significance for their long-term development in future.

2 Opportunities and challenges faced by less developed areas under the background of economic globalization

From the characteristics of economic globalization, we see that the choice of land policy and land use pattern in the less developed areas of China is of important significance for effective response to the development progress of economic globalization, grasping new development opportunities, and promoting the sustainable development of Chinese economy. Next, we mainly discuss the opportunities and challenges faced by less developed areas in land use under the background of economic globalization.

2.1 Expansion of demand for construction land caused by industrial transfer and rapid development of industrialization

In the developed region of East China, the development mode taking processing manufacturing industry as the principal industry is being restricted by resources and environment increasingly seriously, and the region needs to speed up industrial upgrading toward upstream industries like finance, research and development industry, so as to deeply take part in economic globalization. Meanwhile, external factors like appreciation of the RMB and city image also promote the indus-

trial transfer toward low-cost regions. Besides having location advantage, nearby less developed areas also have comparative advantages in labor quality, government ability, infrastructure conditions and basis for industrial development. Moreover, deepening of industrial transfer and rapid improvement of industrial level are bound to result in the expansion of construction land, which will put greater pressure on the spatial protection of less developed areas under the limit of cultivated land, ecological protection and construction land planning indicators. But at the same time, a large quantity of job opportunities created by industrialization, heating up of construction land market, and abundant government finance will bring more opportunities to rural land reclamation and transfer based on the effective prognosis and response of land use planning management system.

2.2 Organic evacuation of city functions in developed areas affects the transformation of land use goals

As the improvement of living cost in developed regions, city functions like habitation, leisure and functions in our daily life have moved to the surrounding regions of cities, while improvement of traffic conditions will promote this expansion. Due to low cost of habitation, rich agricultural products, convenient living facilities, less developed areas will become the preferred object during the function transfer. For example, the building of Yangtze River Bridge in Jiangyin City has made the relation between Jingjiang City and Jiangyin City in economic development closer day by day, and has created large quantities of opportunities for the development of secondary and tertiary industries in Jingjiang City. In addition, the location of regional functions will deeply affect the transfer of land use goals, so it is needed that current planning management system should make an effective response to keeping good ecological environment, carrying out reasonable layout of urban development, creating a comfortable living environment, so as to bring more strategic growth points and competitive advantages to long-term development.

2.3 Collaboration among regions needs to be guided by effective land policies

Economic globalization has resulted in the deepening of collaboration among regions and establishment of comparative advantages. In order to avoid detours and determine long-term advantages for development, less developed areas need carry out rational functional location and establish a different and collaborative industrial structure among regions, which needs to be guided and controlled by effective land policies. The supply control of industrial land can be strengthened through the spatial agglomeration of the planning, and effective management policies of industrial land like land price, planning conditions and land revenue are used to ensure the development space of competitive industries, avoid repetitive construction and low-efficiency investment, eliminate backward industries to make the development more sustainable.

2.4 Formation of late-developing advantages demands for the innovation of land use policies

In fact, there disorderly competition, environmental deterioration, resource waste, strong dependence on developed regions and other late-devel-

opment disadvantages in less developed areas, but they also have late-development advantages at the same time, and the formation of late-development advantages may be an important opportunity to become developed regions ahead of time. From the aspects of late-development advantages, less developed areas have greater potential for land space and more policy support resources compared with developed areas, and have better conditions for the development of infrastructure, government management level and spatial location compared with underdeveloped areas, so that they can directly take part in the international transfer of capital-intensive and skill intensive heavy and chemical industry as well as advanced manufacturing industry. Meanwhile, due to weak dependence on the traditional development mode, they may obtain more development opportunities after adopting the new technical and economic development mode. To obtain these development opportunities, less developed areas should establish a long-term and predictable land use strategy, cast off traditional land use pattern with characteristics of extensive expansion and dispersed layout, strengthen spatial agglomeration and layout optimization of land use, improve the level of public facilities, expand land use space and enhance land use conditions. At the same time, less developed areas can draw lessons from the reform and exploration of urban and rural land system in developed regions, and through the linkage between urban and rural construction land, transfer of collective construction land, land share cooperation and other system innovations, less developed areas can further ensure development space, optimize spatial structure, and expand domestic demand and make private economy active through the reasonable share of land value-added income, which lay a solid foundation for their sustainable development.

3 Major problems of land use planning and management in less developed areas

3.1 Weak guidance and control of orderly expansion of construction land Most less developed areas are at the middle stage of industrialization, and land expansion has obvious characteristics during the process of economic development. However, their current construction land scatters with low industrial concentration degree and low land use efficiency, so that their annual land use indicator is small. At the same time, their urbanization level lags obviously, and rural residential areas distribute disorderly, and even land use shows a "counter urbanization" trend which means that rural population reduces in some regions while rural land increases, so that it is difficult to effectively revive their potential of the stock of land. For instance, in the middle of Jiangsu Province, newly-added construction land far exceeded the planning target during the implementation of the last overall land use planning from 1997 to 2010, and their proportion reached above 2 in some areas; the land proportion of most rural residential areas was higher than the expected value; there are above four industrial parks in a county-level administrative area, and most of them have characteristics of large scale, low benefit, land vacancy and extensive land use.

3.2 Effectively meeting the demand of cultivated land protection by planning layout and management is difficult

At the middle stage of industrialization, expansion of construction land and decrease of agricultural land are common, but the relationship should be reasonable, namely suitably reflecting the scarce dynamic relation between land and other factors. According to a previous study, excessive loss of farmland conversion accounted for 21.7% of actual non-agricultural quantity in China during 1989–2003^[7], and cultivated land loss was serious. In some counties and cities during the implementation of the last land use planning, corresponding to the scale of newly-added construction land, new construction land changed from cultivated land was about two times the area planned. It is because that there was an obvious contradiction between previous planning layout of land and rapid economic development, and frequent planning adjustment decreased the authority of the plan; next, current planning and execution system is locked by the weakening rural land property right, and it is difficult to effectively restrict expropriation of land through economic mechanisms to promote intensive use of urban construction land; finally, village arrangement, which is of great significance to the balance between occupation and compensation of cultivated land, lacks an effective implementation mechanism, so that it is difficult to realize additional targets of arable land. The implementation of farmland protection goals is not in place, so the spatial advantages of land development in less developed areas are running away artificially under the rigid pressure of farmland protection.

3.3 Effective mechanism for public participation is scarce during the process of planning formulation and implementation

During the current process of planning formulation, implementation and adjustment, administrative color is strong, while effective mechanism for public participation is scarce, and the phenomenon is mainly shown in the clash between overall land use planning and special plans of city, traffic, water conservation and industry. For example, land use planning and urban planning have different boundaries of main urban zones; during the planning of industrial parks, the particularity of industrial planning is rarely shown in land planning, so that the planning has been adjusted frequently. Besides, there is no coordination mechanism in the establishment time, procedure and planning system design of various plans, and land use planning often varies with projects passively. On the other hand, the way to reflect reasonable demands of different interest subjects during the process of the planning management lacks actual arrangement. For instance, weakening protection of farmers' property rights during the process of land expropriation made it difficult to provide restraint mechanisms for the effective implementation of the plan. In fact, insufficient mechanism for public participation also restricts land use policy innovation.

3.4 Lack of substantive design of ecological and environmental protection during the process of planning management

At present, there are no effective actions to protect ecological environment in many regions, so that ecological environment had decreased in quality. First, grassland, marsh,

mudflat and water with ecological value were transformed into cultivated land, so that service functions of ecosystem dropped on the whole; second, excessive use of fertilizer, pesticide and other chemicals during agricultural production, as well as shortage of effectively controlling discharge of industrial wastes, resulted in universal water and soil pollution; third, most people only pursue economic benefit instead of ecological laws during the utilization of land resources, such as hardened river channels, vegetation damaged by quarrying and mining, and filled natural ponds during farmland remediation. Fourth, they paid no attention to ecological benefit but put emphasis on visual effect during greening construction, such as building large areas of lawn, single form of artificial forests, and paying no attention to self-recovery of ecosystem. These phenomena show that current land planning management lacks a substantive design under the guidance of ecological and economic theory.

4 Effective response of land use planning in less developed areas to economic globalization

Under the background of economic globalization, less developed areas need build their own comparative advantages when facing new development opportunities, and need grasp and arrange land use planning management strategically and prospectively in space, consider both multi-targets and long-term benefit of land use, reasonably arrange land use structure, and improve the idea of planning management.

4.1 Set up the process management philosophy with the guidance of effectiveness From the current implementation international experience of land plans in China, land planning should be a continuous process containing plan compilation, implementation and management, and takes effectiveness as its quality standard^[8]. Outstanding problems of current land use show mechanical system and single means of current plan management. In order to respond to the deep changes brought by economic globalization better, the compilation and management of land use plan should take implementation effect as its guide to transform from one-off compilation into whole-process management, so as to make the plan become a relatively independent guide system for spatial control and means of public governance instead of a technical tool serving administration awareness. It need to improve the compilation level of land plan to promote the mechanism design and effective implementation of public participation, improve the implementation of security system of the plan, and make relative subjects take part in the plan based on effective interest mechanism. For instance, during the process of land structure optimization like rural residential area arrangement and centralization of industries towards industrial parks, effectively ensure relative subjects' economic benefit is the key to the successful implementation of the plan, which not only demands scientific spatial layout of land plan, but also needs to systematically innovate systems in finance, employment, public input, transfer of collective construction land and so forth. The practice of current land use plan in China has provided successful experience, which should be sum-

marized actively to improve the plan management system.

4.2 Use the concept of ecological and economic equilibrium to guide spatial transformation of land use structure

As ecological environment problems of China have been increasingly serious and have been paid more attention to by the whole world in recent years, the planning system of land use should have more macro perspective and uses the concept of ecological and economic balance to guide the compilation and implementation of land plan. Under the conditions of considering economic demands of social development and fully ensuring the ability of ecosystem to renew and develop continuously, the spatial transformation of land use structure can be carried out. During the progress of plan compilation, the protection and restoration of natural ecological environment under the guidance of ecological laws should be implemented firstly, followed by protecting basic farmland and optimizing agricultural structure, and finally determining construction and development of space. Through orderly transformation, economic construction can be restricted in space to promote the structure optimization of construction land and intensive land use, so as to ensure the sustainability of construction development mode and environmental factors related to the quality of people's lives. It needs to intensify relative specifications of approval management during plan compilation, constantly introduce and study new planning ideas, and use spatial analysis techniques, public participation in the design and other planning methods in the process of plan compilation, so as to provide effective theoretical and technical support for addressing the contradiction between environment protection and economic development.

4.3 Strengthen the practical exploration of planning use zoning Zoning planning purposes is an important way to solve the contradiction between rigidity and flexibility of the plan. However, current plan use zoning is still be explored. For example, there is no clear and definite understanding of internal relation between planning purpose zoning and spatial zoning of construction land as well as the connotations of various zones; some new concepts about use areas like safe control area of ecological environment and protection zone of natural heritage lack enough emphasis during the process of plan compilation. In the future process of land use plan implementation and management, we need to explore and deepen the theoretical system of plan use zoning, form definite technical specifications for compilation, and integrate the different management demands of various zones into the management system of land use plan, so as to protect the key resources of basic farmland, water head sites, habitats of wild animals and plants and other eco-sensitive areas, and provide essential flexibility for the development direction of urban construction land and layout of traffic and water conservancy.

4.4 Optimize the utilization structure and efficiency of construction land through spatial agglomeration According to the demand of construction land under the background of rapid industrialization and urbanization, we ought to determine the multi-targets of land use and their order mainly through orderly transformation and optimization of spatial structure of con-

struction. In industrial parks and concentrated areas, we should strengthen centralized layout and industrial agglomeration to change current dispersed layout, make industries move to industrial parks through financial transfer and employment system, and improve land use efficiency through planning and controlling use intensity of newly-added land to relieve land use contradiction. In rural residential areas, we ought to establish scientific programme for layout of towns and villages firstly, and then increase the investment in public facilities in rural centralized residential community, explore effective mechanism of benefit distribution of collective construction land transfer as well as the linkage of construction land, strengthen training and guidance of rural land co-operative organizations, promote the concentration of rural population toward towns and new rural communities, arrange and replace dispersed industrial land and rural residential land. Meanwhile, it provides spatial conditions for improving rural public facility level, promoting centralized control of industrial environmental protection, and enhancing government's public investment benefit.

4.5 Pay more attention to the inheritance and protection of cultural diversity In developing countries and regions, economic globalization easily results in homogenization of urban construction, while differentiation will make a region more competitive. Hence, during the process of planning formulation and implementation, we should pay more attention to the special protection and development of urban architecture, blocks, old towns and ecological culture with value of cultural heritage, which has a long-term important value for keeping the peculiar scene and cultural atmosphere and increasing living amenity and urban attraction, but current planning hardly pays attention

(From page 60)

average economic grade of cultivated land went down greatly. It is because that all grading parameters and methods referred to *Regulations of Farmland Grading*, during the process of renewing farmland grades in Daxing District, and land economic coefficient was calculated based on actual "yield-cost index" / maximum "yield-cost index" model and the latest input and output data. Farming cost rised obviously due to the great price increase, while grain yield went up slightly, so that land economic coefficient and average economic grade of cultivated land declined. In fact, as the constant improvement of technical input and management level, the benefit of cultivated land should improve continuously, so we ought to further discuss whether the economic grade obtained by using the current grading method system of cultivated land is scientific, and the grading method of cultivated land can be improved through making the calculation model of land economic coefficient more scientific in the follow-up study.

References

- [1] SUN WJ. County-level agriculture land gradation update [J]. Guangdong Land Science, 2007, 6(2): 45–48. (in Chinese).
- [2] ZHOU XW, ZHANG QY. The research on country agriculture land

to that.

References

- [1] CHENERY H, ROBINSON S, SALQUINN M. Comparative study on industrialization and economic growth [M]. Shanghai: Shanghai People's Publishing House, 1995. (in Chinese).
- [2] GUO KS. China industrialization process, problems and outlet [J]. China Social Science, 2000(3): 60–71. (in Chinese).
- [3] HUANG NS. Two types of cultivated land area reducing based on farmland–economic–population [J]. China Soft Science, 1999(9): 41–43. (in Chinese).
- [4] ZHU YS. Impacts on the economic development of developing countries by the economic globalization and their solutions [J]. On Economic Problems, 2008(4): 18–20. (in Chinese).
- [5] GU LM. International industry transfer trend [J]. Securities & Futures of China, 2008(10): 50–51. (in Chinese).
- [6] RAMIREZ LS. On current globalization [J]. Learning and Exploration, 2008(5): 139–143. (in Chinese).
- [7] TAN R, QU FT. Farmland conversion and protection in China [J]. Management World, 2006(12): 50–59. (in Chinese).
- [8] XING YM, WANG L. Rural planning methodology characterized by rural resident participation in Japan [J]. City Planning Review, 2010(2): 54–60. (in Chinese).
- [9] PAN J, QIAN MJ, YUAN T, *et al.* Land use planning decision–making and demonstration system research [J]. Journal of Anhui Agricultural Sciences, 2011, 39(16): 10001–10003, 10054. (in Chinese).
- [10] ZHENG CG, ZHANG XC, LI JZ, *et al.* Digital problems and strategies of partial revision in overall plan of land use [J]. Asian Agricultural Research, 2010, 2(3): 62–64.
- [11] DENG XZ, HUANGW, DU JF, *et al.* Identification of heterogeneity of social and economic environment of land uses in China [J]. Agricultural Science & Technology, 2010, 11(1): 167–170.
- [12] ZHANG GL, GONG ZT. Soil investigation laboratory analysis method [M]. Beijing: Science Press, 2012. (in Chinese).
- [13] CUI Q, WU YL, LI Q. Construction of the classification and grading index system of cultivated land based on the viewpoint of sustainable development [J]. Asian Agricultural Research, 2010, 2(9): 45–48, 52.
- [14] YANG SY. Grading, classification and evaluation technique of farmland based on GIS [J]. Agricultural Science & Technology, 2010, 11(11–12): 162–166.
- [15] HAN X, TAO W, GUO P, *et al.* Study on division method of utilization grades for agricultural land in Jilin Province [J]. Journal of Anhui Agricultural Sciences, 2010, 38(13): 6900–6902. (in Chinese).
- [16] ZHANG GL, GONG ZT. Soil investigation laboratory analysis method [M]. Beijing: Science Press, 2012. (in Chinese).
- [17] CUI Q, WU YL, LI Q. Construction of the classification and grading index system of cultivated land based on the viewpoint of sustainable development [J]. Asian Agricultural Research, 2010, 2(9): 45–48, 52.
- [18] YANG SY. Grading, classification and evaluation technique of farmland based on GIS [J]. Agricultural Science & Technology, 2010, 11(11–12): 162–166.
- [19] HAN X, TAO W, GUO P, *et al.* Study on division method of utilization grades for agricultural land in Jilin Province [J]. Journal of Anhui Agricultural Sciences, 2010, 38(13): 6900–6902. (in Chinese).