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# Transfer of Rural Surplus Labor Force in Liaocheng City, China

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**Abstract** Based on the introduction of research theories about rural labor force transfer at home and abroad, taking Liaocheng City as the representative of medium and small cities, transfer situation of rural labor force in Liaocheng City is discussed from several aspects, including the transfer of total labor force, structure of labor force, flow of regional labor force, industry selection of labor force, and income of labor force. Combining with the situation of labor force transfer in Liaocheng City, social benefits, including both negative and positive benefits, of labor force transfer are analyzed. From the aspect of positive benefit, foreign labor is one of premier builders for in-flow area (city), fills in the structural lack of labor force, and has made huge contributions to urban construction. Meanwhile, for out-flow area (village), transfer of surplus labor force can reduce the employment pressure in rural areas, increase the income of peasant households, and promote the development of rural economy. From the aspect of city, and cause difficulties in the management of city. At the same time, a large number of young labor forces work in cities, leaving only the old and sick in rural areas. This might become a hidden danger to the development of agriculture. Push – Pull Theory is used to analyze the so-cio-economic factors affecting labor force transfer. Suggestions are put forward to reform the household registration system, to improve the cultural quality of rural labor force, to develop rural secondary and tertiary industries, to promote the rapid and harmonious development of economic society in underdeveloped regions, and to provide scientific reference for the sustainable development of regional economy and the construction of new so-cialist countryside in Liaocheng City.

Key words Labor force transfer; Push - Pull Theory; Liaocheng City, China

Marxism holds that the transfer of rural surplus labor is the redistribution and reconfiguration of total social labor in agriculture, industry and tertiary industry. And improvement of social productivity, especially agricultural labor productivity, is the foundation of this change. According to the national condition of China, transfer of labor force refers to the professional, interindustrial and inter-regional movements of surplus labor force compared with the change of labor market <sup>[1]</sup>. Mobility of rural surplus labor force is a temporary migration of population, having the following main features. Firstly, mobility of labor force, separating labor forces from their families, does not mean to cut off the relationship with land. And family is the main force to call for the return of labor force. Secondly, mobility of labor force is determined by the whole family and has nothing to do with the government. Thirdly, educational degree of rural labor force is generally low and their status and occupation are unstable, usually in the traditional industry of a city. Fourthly, labor reflow has the characteristics of both periodicity and uncertainty. Important traditional festivals are the main time of their return. Besides, when economic condition changes or situation becomes unfavorable, rural labor force may return home as they want<sup>[2]</sup>. Flow of agricultural labor force from rural agriculture to urban non-agriculture is not only an inevitable result of the development of social productive forces, but also is a his-

torical trend of great progressive significance during China's modernization process. There are a lot of researches with relatively complete theoretical systems on transfer of rural labor force both at home and abroad. Western scholars have achieved fruitful results in exploring the flow of agricultural labor force. For instance, D.J. Bagne et al. propose the Push - Pull Theory of population flow; M. P. Todaro puts forward the Expected Income Theory; and W. A. Lewis brings forward the Lewis Model<sup>[3]</sup>. At the same time, scholars in China has concluded several theories through studying on the rural labor force transfer, including Internal and External Transfer Theory, Labor Export Theory, Urbanization Theory, and Directional Transfer Theory<sup>[4]</sup>. Based on the investigation on rural labor force transfer in Liaocheng City, transfer factors are analyzed by combining with the Push – Pull Theory and the improved Push – Pull Theory, so as to provide scientific references for the sustainable development of regional economy and the construction of new socialist countryside in Liaocheng City.

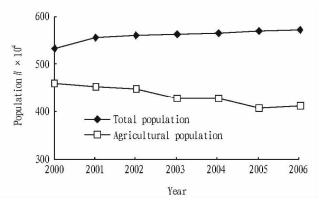
#### **1** Situation of rural labor force transfer

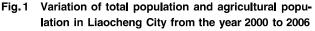
**1.1 Total population of labor force transfer** Fig. 1 illustrates that total population of Liaocheng City is 5 335.8 thousand people in the year 2000, among which, agricultural population is 4 592.7 thousand people. In the year 2006, total population of this city reaches 5 728.2 thousand, an increase of 392.4 thousand people. And agricultural population at the same year is 4 110.6 thousand people, a decrease of 482.1 thousand people. Total population increases steadily but the number of people engaged in agricultural activities is reducing. Thus,

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more than 900 thousand rural labor forces have transferred to secondary and tertiary industries. At the end of 2008, migrant labors from Liaocheng City reach more than 1 100 thousand.





1.2 Composition of labor force According to statistics, number of rural labor force at working age (18-60) is 3 035.8 thousand in Liaocheng City at the end of the year 2008. Among them, there are 1.73 million male workers, accounting for 53%, and 1 305.8 thousand female workers, occupying 47%. According to the age structure, 349.1 thousand people are below the age of 20, accounting for 11.5%, 941 thousand people are at the age of 21 - 30, accounting for 31%, 667.9 thousand people are at the age of 31 - 40, occupying 22%, and 1077.8thousand people are above the age of 40, occupying 35.5%. From the perspective of education degree, there are 2 632 thousnad labor forces having received the education of junior high school and below, accounting for 86.7%, 364.3 thousand having received senior high school education, occupying 12%, 39.5 thousand labor forces graduated from college or above, only accounting for 1.3%. Fig.2 illustrates that labor forces in Liaocheng are mostly primary school and junior high school graduates along; few of them are graduates from senior high school, college and above; and some are illiterate labor forces. This indicates that the educational level of labor forces in Liaocheng City is relatively low with irrational structure.

Young labors are the main body of labor transfer with most male (61.8%) and few female (38.2%). Among the migrant workers, 94% of them are between the age of 18 and 40 with the average age of 24.3, who accept new things quickly, have a strong commodity consciousness, and have received certain education. According to the investigation, 5. 3%, 46. 5%, 24.7%, 18.6% and 4.9% labor forces are graduates of primary school and below, junior high school, senior high school, technical secondary school, and college and above. Besides, work skills of young labors are generally low. 56.9% of them have no certificate of technical qualification, 20.1% have certificate of primary technical qualification, 19.8% have middle professional title, and only 3.2% have high professional title.

**1.3 Regional flow of labor force** Large and medium sized cities and developed areas along the coast offering high wage have attracted a large number of rural surplus labor forces. Rural surplus labor forces of Liaocheng mainly work in the Yangtze

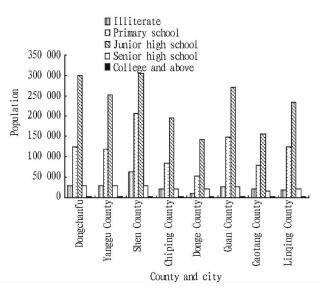


Fig. 2 Distribution of educational levels of labor forces in cities and counties of Liaocheng in the year 2008

River Delta, the Pearl River Delta and the cities of Shandong Province<sup>[5]</sup>. In the year 2008, a total of 37% migrant workers are employed in cities of Shandong Province, mainly Qingdao, Yantai, Zibo and Liaocheng, indicating that the major labor forces of Liaocheng work within Shangdong Province. This is because Shandong Province is a coastal area with developed economy, having the market to attract the rural surplus labor forces: and migrant labor forces would like to work near home where the living habits are mostly the same. Meanwhile, there are 63% migrant workers employed in other provinces, mainly in Yangtze River Delta (14.3%) and Pearl River Delta (13.4%). These two regions are the major working places for labor forces due to the leading economic positions in China. Labor forces working in Beijing, Tianjin and Hebei Province account for 11.4%, 6.8% and 4.9%, respectively. And other provinces and municipalities together account for 15% (Fig. 3).

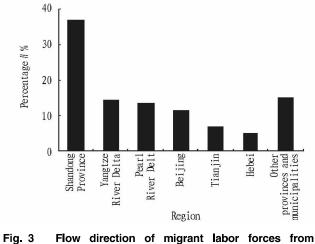


Fig. 3 Flow direction of migrant labor forces from Liaocheng City

**1.4 Industry selection of labor forces** Due to the low education level and the lack of necessary skills, migrant workers are mainly employed in labor-intensive industries that need few skills. Thus, labor-intensive industries are suitable for the hardworking labor forces in rural areas with low level of education.

In the year 2007, there are 9.1%, 49.8% and 60.3% labor forces from Liaocheng City working in primary, secondary and tertiary industries, respectively<sup>[6]</sup>. In 2008, the top five industries employing the most migrant workers are manufacturing, information transmission and computer services, construction industry, accommodation and catering services, wholesale and retail trade. Among them, male labor forces mainly work in manufacturing, construction industry, resident services and other services; while female labor forces mainly find their jobs in manufacturing, information transmission and computer services, accommodation and catering, leasing and business service.

**1.5** Income of rural labor force It is investigated that the income of rural labor force has increased. In the year 2007, average monthly income of rural labor force is 1 390 yuan with the expenditure of 530 yuan. And in the year 2008, average monthly income reaches 1 450 yuan with the expenditure of 580 yuan. Among this expenditure, there are 258 yuan for food, 85 yuan for renting room, 55 yuan for transport, 69 yuan for communication and 113 yuan for others. In 2008, annual operating income of farmer engaged in agriculture is about 3 000 yuan per capita in Liaocheng, while that of farmer working outside is 17 400 yuan. Assuming that there are three farmers and one migrant worker in a family, the migrant worker earns 1 450 yuan each month (an average level) and the total money saved by the end of the year is 10 thousand yuan, which is 1.11 times of the total income of other three members in the family. Thus, the migrant worker has greatly improved the living condition of the family.

# 2 Analysis of the social benefits of labor force

Positive benefit of reallocation of rural surplus labor force is manifested in the improvement of overall labor productivity of the whole society and the rapid growth of national economy caused by the transfer of labor forces from inefficient agricultural sector to the high efficient non-agricultural sector. Surplus labor force transforming from inefficient agriculture to high efficient non-agriculture not only promotes the general labor productivity of the whole society, but also enhances the labor productivity in the agricultural sector<sup>[7]</sup>. Negative benefit is mainly reflected in the urban issues, talent outflow, unused land and reemployment.

**2.1 Positive benefit** As for in-flow cities, migrant labor is one of the important builders, filling the city's structural lack of labor force and having made great contributions to urban construction. Migrant workers are mainly engaged in some dirty, tired, dangerous and inexpensive industries that urban residents are unwilling to take. Thus, industry structure and employment structure in cities become reasonable, and migrant labor has made contribution to the overall development and industry refinement of cities<sup>[2]</sup>.

As for out-flow rural areas, transfer of surplus labor force has reduced the employment pressure in rural areas. At the end of 2008, number of migrant workers of Liaocheng reaches more than 1 100 thousand people, among which, 100 thousand people are newly added during the years 2007 and 2008, accounting for one third of the total labor forces in rural areas and having positive impact on rural households and economy. Working outside has brought high economic efficiency to rural families, and has promoted the local economic development and market prosperity. In rural areas, working outside has become one of the main route to increase peasants' income. Taking Yanggu County as an example, annual income from agriculture is more than 3 000 yuan per capita; while a migrant worker graduated from junior high school or above earns 1 200 - 1 800 yuan per month in Hitachi Global Storage Technologies (Shenzhen) Co., Ltd., so that he can bring back 10 thousand to 20 thousand yuan to home at the end of the year. Moreover, after working in cites, migrant workers bring back modern enterprise management experience to home, has grasped proficient skills in technology, and has become a formidable force of Liaocheng during the development of urban society and economy. Migrant worker of Liaocheng is expected to have an annual revenue of 7 billion yuan in the years 2007 and 2008. In recent years, migrant workers have returned home, have established township and village enterprises, and have accelerated the transformation and urbanization process of rural production mode.

**2.2** Negative benefit As for the in-flow cities, a large number of workers have poured into cites and brought great pressure on urban management. And the unstable factors of city have increased, including pressures on urban transportation and infrastructure. At the same time, migrant worker has greatly affected the employment of urban population. With the indepth political and economic reform, urban unemployment is increasing year by year. Statistics show that more than 5 million people reach the working age every year, and rural migrant labor force makes the situation of urban employment become even more tense.

As for out-flow rural areas, transfer of rural labor force has left a hidden danger for the development of agriculture. Loss of the young labor force in agriculture is the most prominent. At present, about 94% of the migrant workers from Liaocheng are below the age of 40, which has weakened the potential for agricultural production to a certain extent. Affected by the financial crisis at present, more labor forces have returned home. Most of them are relatively aging workers, accounting for 17%. Having single or no technical expertise, they can hardly find a job again and need the guidance of government. For instance, a harmonious and stable social relation can not be established without properly handling the problems of training, employment and children's schooling of the returned migrant workers.

### 3 Analysis of the socio-economic background of labor transfer

**3.1** Push – Pull Theory is one of the most important theories of population flow and migration A large number of scholars have contributed to this theory, such as Everett Lee, Bagne, Trewartha and Myrdal. Push – Pull Theory argues that under the market economy and free flow of population, people can improve their living conditions through the inflow and outflow of population. As a result, factors causing the improvement of living conditions in in-flow area have become the pull of population migration; while the adverse socio-economic conditions in out-flow area have become the push of population migration<sup>[8]</sup>. Population migration is formed by the combination of push in out-flow area and pull in in-flow area. Moreover, previous studies have also suggested that there are both push and pull in in-flow areas have both attraction and repulsion forces. Meanwhile, there are intermediate barriers between in-flow and outflow areas, such as the cultural differences which may also affect the population migration<sup>[9]</sup>.

#### 3.2 Analysis of factors

3.2.1 Analysis of push and pull. Factors affecting the migrant workers in cities are mainly high income in city, going out to see the outside world, low income in rural area, no chance to make money, poverty in rural areas, bitter life, lack of better development opportunities in rural areas, influence of other people, better living condition in city, being dissatisfied with current job, excessive taxes and fees in rural areas, nothing to do at home, poor study condition in hometown, less education opportunity, unwilling to do farming, conservative thinking pattern in hometown, bad working style of village cadres, and going out to have more children. Among these factors, adverse living conditions, that is the push factors, includes low income in rural area, no chance to make money, poverty in rural areas, bitter life, lack of better development opportunities in rural areas, being dissatisfied with current job, excessive taxes and fees in rural areas, nothing to do at home, poor study condition in hometown, less education opportunity, unwilling to do farming, conservative thinking pattern in hometown, and bad working style of village cadres. And the pull factors are high income in city, going out to see the outside world, influence of other people, better living condition in city, and going out to have more children.

The application situation of Push - Pull Theory is similar in Liaocheng City. Firstly, according to the income, annual per capita net income of rural residents is 5 108 yuan in Liaocheng City in the year 2008, an increase of 13.5%. Among the income, wage income is 1 801 yuan, increased by 10.31%; and household operating income is 3 079 yuan, increased by 15.21%. Although the income increases, there is still a great gap between Liaocheng and developed city. For instance, per capita disposable income of urban residents in Beijing has reached 24 725 yuan in the year 2008; per capita net income of farmer is 10 747 yuan; and per capita GDP in Guangdong Province has broken through 5 000 U.S. dollars, reaching the level of moderately developed countries. Therefore, income gap between regions and between urban and rural areas is the main driven force of the transfer of rural labor force in Liaocheng. Secondly, Liaocheng is located in the inland area of Shandong Province, a poverty city having no leading industry. It is an underdeveloped city and even poorer than some countylevel cities of Qingdao. As the markets are underdeveloped, there are relatively few opportunities to make money and lack better development opportunities. In rural areas, many young labors want to go out in search of better living conditions and development opportunities, so that they choose to work outside in developed coastal cities. Thirdly, according to the transfer mode, during the transfer of labor forces, spontaneous transfer accounts for 54%; and the transfer introduced by labor export agencies of government departments and relevant intermediary organizations occupies 45%. Labor export agencies are mainly the Luxi Human Resources Development Center and the labor service export offices at county level. Impact of migrant workers in the same village and the improvement of labor export agencies have further promoted the labor force transfer of Liaocheng City.

Push and pull have shown quite coordination to a certain extent. For instance, the pull of high income in urban area is consistent with the push of low income in rural area. This is a natural socio-economic phenomenon caused by the income gap between urban and rural areas during the development. Therefore, adjusting the push and pull to promote the transfer of rural surplus labor has very limited function. Resistance of push and pull should be adjusted in order to promote the faster transfer of surplus labor force, to increase the income of farmers, and to give farmers a better life.

**3.2.2** Analysis of resistance. Resistance affecting the transfer of labor force can be divided into constant hindering factor and variable hindering factor. In China, constant hindering factor is mainly from the land system. Agricultural land in China belongs to the public and can not be transferred arbitrarily. The ultimate purpose of the peasants working in cities is to return home. Investigation result shows that 89.7% farmers work in cites only for a certain period of time and will return home ultimately. This is a population transfer with Chinese characteristics caused mainly by the restriction of land system, as well as the traditional Chinese custom. Since land system of China can not be changed, we call it constant hindering factor.

The top ten difficulties for farmers are a variety of restrictions against outsiders, local discrimination against foreigners, few job opportunities, too much pressure on work, too furious competition, lack of relatives and feeling lonely, various charges on outsiders, education problems of children, instable accommodation, poor living conditions, and fear of illness. L, female, 24 years old, has been working in Shanghai for 4 years. Her hometown is in the rural areas of Yanggu County. Now she can earn more than 3 000 thousand yuan per month and lives in the dormitory offered by the company, which has a better living condition than at home. L admits that she has no sense of belonging in city and will go back to hometown ultimately. But she will continue doing business instead of farming in order to seek development at hometown. L says that she feels inferior to the urban residents, and what she do now is just earning money at other people's place. Interviewee G, male, 22 years old, was born in Yanggu and now works in Shenzhen Electronics Factory. He says there are many people from Shandong Province and they rarely interacts with workers from other provinces,

showing a certain discrimination against urban residents. It can be seen that there do have some significant barriers that can be removed for peasant workers in cities. Therefore, these factors can be named as variable hindering factor.

#### 4 Countermeasures for labor force transfer

Through the analysis of Push – Pull Theory, it can be concluded that we should start from the hindering factors in order to solve the transfer problem of labor force. Countermeasure should be taken to solve these hindering factors, such as restrictions against outsiders, local discrimination against foreigners, few job opportunities, too much pressure on work, too furious competition, lack of relatives and feeling lonely, various charges on outsiders, education problems of children, instable accommodation, poor living conditions, and fear of illness.

4.1 Reforming the household registration management system Restricted by the urban and rural household registration management system, migrant workers in cities are very difficult to make a living, having great pressure on finding a job and suffering the discrimination of policy, culture and even moral. From a macro point of view, a large number of migrant workers are not guided by the system, but are driven by the income gap over the past years. Transfer of labor force has the characteristics of blind, spontaneous, unstable and inefficient. To change this blind and inefficient situation of labor force, city manager should be tolerant and government should also offer some supports. After entering the new century, household registration system in China has changed greatly, and many areas have released the restrictions on migrant workers in cities. But this change is still far from catching up with the pace of economic development and has caused even greater gap between rural and urban areas<sup>[10]</sup>.

Though counties, towns and rural areas have changed their household registration system, most large and medium cities still have relatively strict household registration system. The key to change this system is to gradually implement a unified household registration management system, to conduct household registration according to the residence, to divide urban and rural households according to their residents, and to classify agricultural population and non-agricultural population based on occupation. At the same time, governments and departments at all levels should reduce or not charge for urban capacity increasing tariff, lower the threshold of migrant workers in cities, reform the employment, enrollment and social security systems, give equal rights and obligations to new urban residents, exempt the worries of transferred farmers, cultivate farmers to have the sense of belonging during working in cites, gradually realize the free movement of population, and establish the integration of urban and rural household registration management system.

**4.2** Making efforts to improve the cultural quality of rural labor force Improving the quality of rural labor force can be achieved through the following channels. Firstly, increase investment in human capital in rural areas, including increasing the education and culture investment in rural labor force. Gov-

ernment, society and business should contribute capitals to construct an improved rural education system, to create a group of farmers with large scale and high quality that can adapt to modern agricultural development. Meanwhile, investment in rural social security system should also be increased, so as to lay a solid foundation for investment in human capital in rural areas. Secondly, take all effective measures and means to bring technological power and scientific concepts to rural areas through benefit mechanism and market economy mechanism. Popularize science and technology education in rural areas and extend scientific thinking and spirit in order to change the traditional agriculture, to improve the scientific and technological content and market competitiveness of agricultural products, to enhance the capacity of economic development and poverty alleviation, to establish a scientific world view of farmers, and to improve the quality of rural labor force. Thirdly, implement family planning and healthy birth and child care. In the long run, the most important, direct and fundamental way to improve the quality of farmers is to implement family planning and healthy birth and child care. Thus, we should continue to implement the family planning policy in rural areas, strictly control population growth, and gradually change from knowledge extension to promotion of science and technology, from morphological bearing to molecular bearing, and from healthy birth in a certain region to the whole society. Thus, quality of newborn population can be improved through healthy birth.

4.3 Vigorously developing tertiary and secondary industries and diversified economy in rural areas and expanding the field of employment in rural areas So far, digesting surplus labor force on the spot is an effective and practical way to solve the problem of surplus labor force in rural China. We should vigorously develop the industrialization management of agriculture, integrate the whole process of agricultural production, and offer various socialized services through exerting the comprehensive role of agricultural industrial chain, so that most of the employees in traditional agricultural production can work before and after production and do not directly participate in agricultural production. According to the comparative advantage of agriculture in China, we can adjust the planting structure, develop labor-intensive cultivation of fruits, vegetables and other cash crops, deepen the depth of employment in animal husbandry and aquaculture, and effectively utilize the surplus labor force in rural China.

**4.4** Strengthening the guidance and management of migrant workers in cities There are many factors affecting the transfer of labor force, such as unreasonable restrictions, arbitrary charges, wage arrear, poor working environment, occupational diseases and accidents. To solve these problems, we should strengthen the management and guiding role of public opinion, and protect rural migrant workers by legal means.

**4.5** Establishing and improving the risk sharing system and the social security system of peasant employment Social security system includes unemployment insurance, pension insurance, labor safety and other social welfare projects. Current social security system in China is a product of rural-urban separa-

tion system, which mainly offers services to employees in stateowned enterprises and urban collective enterprises. But farmers who already have a stable work in urban areas can not enjoy the same treatment as the urban residents. Since migrant workers always worry about employment, many of them still keep back the contracted land and property as their own social welfare and security. In some areas, there is even a phenomenon of population reflow, that is, the migrant workers in cities turning back to rural areas. Therefore, in order to protect the legal rights of rural surplus labor of transfer during job selection and change, the social security system should be extended to private enterprises, township and village enterprises and foreign-funded enterprises so that all the employees can enjoy the benefit and employment fluctuation of migrant workers can be avoided.

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### 聊城市农村剩余劳动力转移研究

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**摘要** 在介绍国内外关于农村劳动力转移研究理论的基础上,以聊城市为中小城市的代表,从劳动力转移总量、劳动力构成状况、劳动力区域流 向、劳动力行业选择、用工报酬和务工收益5个方面探讨了聊城市劳动力转移情况。结合聊城市劳动地转移状况,分析了劳动力转移的社会效 益--正效益和负效益。从正效益方面分析,对流入地(城市)而言,外来劳动力是城市重要的建设者之一,填补了城市的结构性劳动力缺失, 为城镇建设做出了巨大的贡献;对流出地(农村)而言,剩余劳动力的流出减轻了农村的就业压力,增加了农户收入,促进了农村经济社会的发 展。从负效益方面分析,对流入地(城市)而言,大量的劳动力涌进城市给城市的交通运输、基础设施带来了压力,使城市的不稳定因素增加,给 城市的管理带来了压力;对流出地(农村)而言,大量的青壮年劳动力流出,留有人员大多数是老弱病残或者缺乏一技之长,给农业的发展留下 了隐患。运用推拉理论分析了影响劳动力转移的社会经济因素,提出了改革户籍管理制度、提高农村劳动力文化素质、大力发展农村二、三产业等 方面的对策建议,以期促进经济欠发达地区经济社会的快速和谐发展,为聊城市区域经济的可持续发展和社会主义新农村建设提供科学参考。 **关键词** 劳动力转移;推拉理论;聊城市

(From page 36)

## 基于粮食安全视角的干旱半干旱地区耕地压力动态变化的定量分析

——以甘肃省酒泉市为例

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**摘要** 以甘肃省酒泉市为例,在介绍研究区域概况的基础上,依据酒泉市土地利用总体规划修编前期调研资料、酒泉市第2次全国土地调查数据、1997~2004年酒泉市土地利用变更调查数据、1997~2007年《甘肃统计年鉴》和《酒泉市统计年鉴》等相关统计资料,采用最小人均耕地面积和耕地压力指数模型,基于粮食安全的视角,对1997~2007年酒泉市耕地面积、人口数量、粮食产量及粮食播种面积等影响干旱、半干旱地区耕地压力的因素以及最小人均耕地面积和耕地压力指数的时序变化进行定量分析和评价,计算得到酒泉市的耕地压力指数,进而分析面临的耕地压力态势。通过构建耕地需求函数,最终确定酒泉市2020年全面建设小康社会阶段为满足粮食安全目标的耕地需求量,即耕地和基本农田的保护面积,表明干旱半干旱地区的耕地压力指数呈递增趋势。最后基于国家粮食安全需求的考虑,借助 PSR 模型,提出应该从加强政府的宏观调控职能、保护脆弱的生态环境和加强城市化进程中的土地集约节约利用等方面有针对性地减轻干旱半干旱地区的耕地压力,以期为干旱半干旱地区

关键词 粮食安全;耕地压力;干旱半干旱地区

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