
ABSTRACTS
An Analysis on the Padlock Shape of China's Urban Population Growth in the Past Ten Years and Its Implication
Huang Qiang · 2 ·

Further development of China's economy inevitably requires further increase in urban population and urbanization. However, since 2010 China's urban population growth has declined. How to effectively increase the urban population has become a difficult issue for all levels of government, and the increase of urbanization rate involves a variety of complex factors. This paper, based on the study of the increment of urban population in China in past ten years, with the computer graphics technology, finds that the deployment of urban population growth is like a padlock crossed by Hu Line. Then, taking the increase of urban population as a kind of immigration process, adopting immigration theories from the West, this paper analyses the factors of city's pulling and resistance to immigrants, and obtains six digital variables which can affect the urbanization rate. Through qualitative comparative analysis (QCA), we have several models to promote the urbanization rate, and conclude that: (1) the primary factor that stimulates the super-average-rate growth of the urban population is not an increase in income, but a good compulsory education environment. The secondary factor is low housing price. (2) The basic principles of international immigration theory can be applied to the urbanization of China's household registration system, but some of the factors are different. (3) To make the region's population super-average-rate growth, it is not necessary to put effort in all the pull-factors but in the key factors base on region's existing advantages. In addition, the paper predicts that by 2050, the urban population in the west of Hu Line will exceed 30% of the country's whole urban population.

A Study on Measurement and Influencing Factors of Citizen's Level of Floating Population in China
Su Lifeng · 12 ·

From the perspective of citizen's level of floating population, based on the data of dynamic monitoring migrant population in 2014, this paper estimates the level of urbanization of floating population in China by using multidimensional indicator system and estimates the impact on the level of urbanization of four characteristic factors by means of instrumental variables (IV). The results show that the overall urbanization level of the floating population in China is low and the interregional difference is not obvious, but the inter-provincial secondary index is quite different. The local family size, being only-child and the children lived in the local city have significant positive impacts on the citizen's level. However, the more number of children, the older of the children and the greater the family rearing desire for the floating population have significant negative impacts. Running business can effectively improve the mobility of the population of the level of urbanization. The longer the flowing time the higher the citizen's level, but greater scope of migration is not conducive to the urbanization. The more developed of the outflow areas, the higher is the level of urbanization.

A Study on Population Regulation Mechanism for Mega-cities in China During the 13th Five-Year
Qi Mingzhu Xu Fang · 25 ·

Based on public data concerned and field surveys in some urban and rural subdistricts in Beijing, this paper addresses the problems of population development in Beijing, Shanghai, Guangzhou and Shenzhen and discusses the challenges and the coping strategies of population management during the 13th Five-year. The results show that the main problems in population development include the large amount instead of the growth rate, the high urban population density with insufficient economic agglomeration, the sharper population ageing driven by population regulation, and unrelieved population aggregation coupling with the floating populations. Combined with current measurements and effects of population regulation, this paper points out the main difficulties and challenges faced by population control during the 13th Five-year. It includes that (1) The target of population policy is isolated and does not match the objectives of economic growth. (2) Floating populations have mainly worked in the low efficiency industries. (3) Market preparation to population regulation is insufficient. (4) Economic growth rates of the mega-cities have slowed down, and population regulation may further weaken the economy. In addition, the internal upgrading within industries can not support the population development targets, and population data are neither accurate nor timely to suit population administration. This paper proposes four suggestions about improving population regulation mechanism for mega-cities, including the combination of population with economy, overall industrial planning in each metropolitan area, interaction of population and industry re-distribution, and consideration of putting resources in population management, and advancing IT appli-

cation in population data management.

Research on China's Urban Population Mobility Network: Based on Baidu Migration Big Data

Jiang Xiaorong Wang Shenglan ·35·

Based on the Baidu Migration big data, using the complexity network analysis tools, this paper constructs a model of the urban population mobility network covering 334 cities, and measures and analyses the characteristics of the complex structure of the network. The result shows that there is a positive correlation between the level of urban administration and the influence of population mobility. Most cities are in a state of "relative equilibrium" in the population mobility, and the urban population mobility network shows obvious hierarchy. Although the eastern coast of the three major urban agglomerations remain as the hot areas of population mobility, the central cities of the western region keep enhancing their influence within the network. The whole network presents obviously multi-core network pattern, which contains "Two hubs and Four sub-centers". Beijing and Shanghai are the two hubs, and the four sub-centers contain Chongqing, Xi'an, Guangzhou and Wuhan. These six center nodes are in absolute dominant position in the whole network, but the distribution of each migration network is different. In this network, the ranking of cities and the migrant distance are positively related, but spatial distance is still one of the important binding forces of population mobility. The whole network is in line with the characteristics of the scale free network, and it presents a typical "small world" network characteristic, which shows that China's urban population mobility network has high connectivity and accessibility.

Improving the Stochastic Mortality Model and Its Forecasting: A Change-point Detection of Principal Component Scores

Zhang Zhiqiang Yang Fan ·47·

The paper uses the multiple change-point detection method to forecast population mortality. The principal component extraction is performed on the deviation of age mortality, and change-point detection method is used to estimate the number of the optimal change points and the location of the change points of the main principal component scores with time. Then the principal component scores are fitted by piecewise linear regression, and predicted values of the principal component scores are extrapolated according to the last regression model, which can be taken into the classical PC model to obtain the predicted mortality. Using 1951–2010 mortality data for 60 consecutive years in developed countries to compare the improved PC model with the classic Lee–Carter model, the results show that the improved PC model is superior to the classical Lee–Carter model in accuracy and stability of mortality prediction, and the multiple change-point detection method improves the prediction accuracy of the mortality model. The time factor of the classical Lee–Carter model based on singular value decomposition and the first principal component of the classical PC model based on eigenvalue decomposition reflect the almost uniform trend of mortality change. The second principal component of the classical PC model synthesizes the influence of cohort effect on mortality.

Family Electricity Consumption, Family Income and the Targeting Rate of Minimum Living Standard Security System: An Analysis on the CFPS2012 and CFPS2014 Data

Zhang Xiang Zhang Xiaoxin ·60·

Due to the difficulty of family income evaluation and high costs of household survey, the targeting rate of Minimum Living Standard Security System is unsatisfactory in China. Livelihood Asset Measurement, Proxy Means Testing and some other methods are hard to be used due to lots of manpower and resources are required to collect and verify the data. This paper finds that the family electricity consumption is significantly correlated with the family income based on the analysis on the CFPS2012 and CFPS2014 Data. The family electricity consumption data is accurate, hard to forge and easy to access. The Family Electricity Consumption Ranking Method can lower the mis-targeting rate effectively and economically. To achieve targeted poverty alleviation, this paper suggests that uses families' last annual electricity consumption as a reference index and to carefully verify those families with more electricity consumption in the means test of the Minimum Living Standard Security System.

The Impact of Non-agricultural Income on Input Structure of Agricultural Factors under the Background of Rural Labour Migration

Wu Weiwei Liu Yaobin ·70·

Under the background of the continuous expansion of rural labour migration, this paper analyses the impact mechanism of non-agricultural income on the input structure of agricultural factors, and examines the actual impact of non-agricultural income on different agricultural factors of production by using the provincial panel data from 2000 to 2013. The results show that from the national perspective farmers have self-motivation to allocate family resources reasonably, and the non-agricultural income have played a significant role in promoting the input of agricultural machinery, fertilizer and pesticide. From the regional perspective, due to economic development and the cost of factor substitution, the impact of non-agricultural income on the input of agricultural factors shows obvious regional difference. The eastern region has the strongest desire to change the traditional structure of agricultural factors. Impact of non-agricultural input on the three agricultural factors in eastern region is stronger than that in the central and western regions. In the area where wheat is mainly cultivated, the cost of alternative input of agri-

cultural machinery is relatively low, and the impact of non-agricultural income on agricultural machinery is stronger than that in the area where maize or rice is mainly cultivated. The change of agricultural factors input structure is mainly to save labour. In the area of rice-based cultivation, the substitution cost of chemical fertilizers and pesticide inputs is lower than that of agricultural machinery, and the impact of non-agricultural income on the input of fertilizers and pesticide is more significant than that of wheat-based and maize-based areas. The change of agricultural factors input structure is mainly to save land.

Spatial Linkage Effects of Population Migration and Regional Economic Disparity in Ethnic Minority Areas

Li Yuxin Cheng Xiejun · 80·

Based on the analyze of the interaction mechanism and spatial pattern evolution of population migration and regional economic disparity in ethnic regions, combined with fieldwork experience, this paper studies spatial linkage effect between population migration and regional economic disparity in ethnic minority areas. The results show that population migration and regional economic disparity in ethnic areas have to a certain degree spatial agglomeration and displacement, and their spatial association also tends to shift from deviation to consistency. The expanded economic gaps and insufficient population mobility among the ethnic regions are caused by uncoordinated status between religious culture and market culture. Also low quality of partnership support, inadequate transportation facilities, stable urban and rural dual structure, and serious shortage of human capital aggravate the situation. The government's unreasonable market behavior makes the market economy deviate from the comparative advantage, weakening local economic strength and resulting in economic differentiation. The high sense of happiness is the main reason for the ethnic populations staying behind, and the unlimited government aid enlarged the migration inertia in those ethnic regions. Irrational urbanization is no longer conducive to narrowing the economic disparities and promoting migration. The paper presents suggestions to improve the situation.

The Supply of Local Public Goods and Population Migration: Empirical Evidence from 260 Cities at the Prefecture Level or Above

Yang Yiwu and Others · 93·

This paper estimates the effect of local public goods supply on population migration by using instrumental variables and threshold models. The results show that local public goods supply has a positive effect on population migration significantly. However, the effect of public goods on migration is related to the size of cities, because that one tended to migrate to large cities takes into more consideration of economic factors, and the other to small cities considers more public services. Further research shows that the supply of local public goods has the threshold effect on interprovincial migration obviously, but it has a promoting effect on migrate within one province. Besides, the supply of infrastructure has a positive effect on population migration. When the supply level of social welfare is lower than a certain threshold, its effects on population migration are not significantly. Once the curve is passed the threshold, the positive effect shows significantly.

The Impact of Urban Public Services Quality on Population Mobility

Yang Xiaojun · 104·

Using urban panel data in 2006-2014 and the SYS-GMM estimation method of dynamic panel model, this paper analyses the impacts of urban public services quality on population mobility in China based on the whole country, diverse regions and city size. The results show that urban public services quality attracts population to cities, especially in the eastern cities, and this attractiveness and city size are positively correlated. Among types of public services quality, the overall contribution of medical services quality is the largest. Medical services quality of eastern region, environmental services quality of middle region and cultural services quality of western region all obviously improve population mobility. To attract floating population, smaller cities rely on good quality of medical services and transportation services, medium-sized cities rely on more comprehensive public services quality, and larger cities rely on excellent quality of medical services.

Development Bottleneck of Old-age Care Institution and Solution: Based on the Survey of 45 Old-age Care Institutions in Shandong Province

Cui Shuyi Tian Yang · 115·

Old-age care institution is important to China's old-age services. Based on the survey data of old-age care institutions in Shandong Province in 2016, this paper analyses main problems in developing old-age care institutions, including high growth rate with high beds vacancy, restriction to private institutions due to operation without license, poor integration of medical resources and nursing care, imbalance of regional development, lack of professional nursing workers, and difficulties in implementing policies. The paper suggests paying attention to both endogenous factors and exogenous factors to resolve the development bottleneck of old-age care institutions. To achieve sustainable development of such institutions, it is necessary to have enough capital, infrastructure, staff and service. For the external environment, the policies should be conducive to institutions' construction from the indexing to the precision, and from management formalization to realization as well. Self-discipline of this industry should be strengthened, and vicious and disorderly competition and monopoly should be avoided. The social support should be supplementary. The effective demand of the elderly should be improved and satisfied.