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Study of Influencing Factors of Shrinking Cities Based on Factor Analysis: The Example of Halle Germany

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Abstract : City shrinkage is one of the thorny problems that many European cities have to face with nowadays. It is mainly expressed as the decrease of population in these cities. Eastern Germany is one of the pioneers of European shrinking cities with long shrinking history. Selecting one representative shrinking city Halle(Saale) in eastern Germany as research objective, collecting and investigating nearly 20 years (1993-2010) municipal data after the reunification of Germany. These data based on five dimensions, which are demographic, economic, social, spatial and environmental and total 16 eligible variables. Using Factor Analysis to dealing with these variables in order to assess the most important factors affecting shrinking Halle. The Factor Analysis shows that there are three main factors determine the shrinkage of Halle, namely demographical and economical factor, social stability factor, and city vitality factor. Three factors acts at different period of Halle's shrinkage: from 1993 to 1997 the demographical and economical factor played an important role; from 1997 to 2004 the social stability is significant to city shrinkage; since 2005 city vitality factors determines the shrinkage of Halle. In recent years, the shrinkage in Halle mitigates that shows the sign of growing population. Thus the city Halle should focus on attaching more importance on the city vitality factor to prevent the city from shrinkage. Meanwhile, the city should possess a positive perspective that to shift the growth-oriented development to tap the potential of shrinking cities. This method is expected to apply to further research and other shrinking cities.

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