



Shrinking cities and resource-based economy: The economic restructuring in China's mining cities

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ABSTRACT

Resource-based cities play a crucial role in China's economic development. However, they are faced with the challenge of urban shrinkage due to the slowdown of economic growth in China, single industrial structure and the 'boom and bust' industrial cycle. To reverse the expected decline of these cities in the future, the Chinese Government has implemented active policies at national, provincial and municipal levels. This paper reviews the current planning policies and practices in resource-based cities in China from the macro perspective, and analyses how the Government engages with the pressing economic problems faced by resource-based cities, in particular, focussing on economic restructuring. To further analyse the policies from Central Government and the diversification of practices in local contexts, this paper presents two case studies, a petroleum mining city (Daqing City) and a coal mining city (Pingxiang City). Through discussion and an evaluation of general and place-based policies and practices for resource-based cities, this paper aims to enhance the understanding of shrinking cities in China and shed light on the policy-making of economic development for other resource-based cities in developing countries.

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1. Introduction

Urban shrinkage is a common phenomenon throughout the world (Oswalt, 2005; Richardson & Nam, 2014). It is a highly diversified and multidimensional process (Großmann et al., 2013; Martinez-Fernandez et al., 2012a) which has far-reaching effects on different sectors of society. A shrinking city is usually characterised by population loss, economic downturn, a decline in employment, social crisis, functional impairment and increasing numbers of vacant and abandoned buildings (Bradbury et al., 1982; Hoekveld, 2012; Martinez-Fernandez et al., 2012a). Specifically, population loss, which is the result of a low fertility rate, ageing and out-migration, is the core indicator of city shrinkage (He, 2014; Long et al., 2015). Furthermore, it is noticeable that most shrinking cities are experiencing an economic downturn.

From a global perspective, economic slowdown usually occurs in the later stages of resource-based cities and further leads to urban shrinkage, since resource-based industry, especially for those based on nonrenewable resources, often follows the 'boom and bust' cycle. The primary reason for these phenomena is that the supply of natural resources that are relied on by the resource-based industry for its mass production are

unsustainable, since these non-renewable resources will eventually be depleted. Moreover, resource-based industry may lose its competitiveness in the global market due to technological change and a market shift in certain products (Martinez-Fernandez et al., 2012b). Another reason leading to the shrinkage of resource-based cities is the weak connection between the resource-based industry and other businesses, such as knowledge and innovation transfer; this will isolate resource-based cities from global knowledge networks (Martinez-Fernandez & Wu, 2007).

Though less of a serious phenomenon, shrinking cities in developing countries deserve timely attention as some resource-based cities are entering the resource depletion stage which results in a population decline (He, 2014). The aim of this research is to examine the latest development of China's resource-based cities and to review the policies regarding economic restructuring. In China's economic development, resource-based cities have played a crucial role. According to the Plan of Sustainable Development for Resource-based Cities in China (2013 – 2020) issued by the State Council (The State Council, 2013), there are 262 resource-based cities in total. These resource-based cities are further classified into four types: growth, mature, recession and regeneration (The State Council, 2013). There are 31 (12%) grouped as the growth type, 141 (54%) as the mature type, 67 (25%) as the recession type and the rest 23 (9%) as the regeneration type. Among all the resource-based cities, 126 cities are at a prefecture level, accounting

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for 44.5% of the total number of prefecture cities. Fig. 1 maps the locations of these prefecture-level resource-based cities, 24 of which (a substantial share of 19.0%) have been categorised as resource-depleted cities (recession). According to a recent study (He, 2014), roughly 17% of resource-depleted prefecture cities are experiencing shrinkage in terms of their population.

Resource-based cities in Fig. 1 are differentiated based on the resources in which they are rich, such as oil, coal and forestry. The majority of coal mining cities are concentrated in central China, while most of metal mining cities are located in south China. Coal mining cities comprise a majority of prefectural-level resource-based cities with a total number of 57, and account for the highest proportion of shrinking cities (25%). The total number of metal mining cities (40) ranks second, followed by the non-metal mining cities (12) and oil mining cities (10). Considering that oil mining cities and coal mining cities in China are in different development stages, with quite a number of coal mining cities but few oil mining cities in the recession stage, we will choose a representative city from each category as our case study in the latter part of this paper to understand the characteristics of these cities and the challenges they are facing.

Resource-based cities in China are faced with multiple economic, social and environmental problems, including resource depletion, unbalanced industrial structure, weak extended and substitute industry, unsatisfactory social welfare, unemployment and poverty, and pollution together with land degradation and subsidence. The key to solving these pressing issues is economic restructuring, which is mainly guided by the Government. The Government realised the importance of economic restructuring in the 1990s (Zhang & Kong, 2003). Without proper government policies, these cities were expected to decline in size in the near future. A timely comprehensive analysis of the relationship between urban shrinkage and resource-based economy is an important step in the country's economic bid to recognise the possibility of productivity decline and shrinkage. This study intends to document the challenges in resource-based cities and to enlighten the design of sustainable development policies for other resource-based cities across China. The findings of this research will advance our understanding of

the evolution of Chinese cities and provide insights from an Asian perspective of shrinking cities.

2. Policy and planning for shrinking cities

Urban growth, shrinkage and recovery has experienced a cyclical process throughout history. Shrinkage is regarded as the normal development path of a city rather than a short-term interruption of growth (Wiechmann & Bontje, 2015). Before the industrial era, urban shrinkage occurred sporadically due to war, epidemics and disasters together with economic, social and political changes. After the Second World War, urban shrinkage became a global and structural phenomenon (Bontje & Musterd, 2012) in terms of the number, intensity and duration of population loss (Rieniets, 2009). In particular, regions such as industrial Western Europe, Central and Eastern Europe under the post-socialist transformation, the Rust Belt (USA) and Japan, have witnessed significant population decline. The situation also holds true for Mainland China, containing a significant number of resource-depleted cities and regions (He, 2014). The shrinkage of a certain place, embedded in local, regional, national and global contexts, is a result of diverse causes and has different shrinking trajectories due to place-specific background and features.

Traditionally, planning for urban and regional development focusses on growth, which combines large urban regeneration and small-scale neighbourhood renewal programmes (Wiechmann et al., 2014), in order to reverse urban deterioration and demographic decline. Yet practices based on pro-growth models are not adequate and have a tendency to fail to tackle the problem of shrinkage. If redevelopment plans acknowledge the shrinking context and abandon the illusion of growth, they will "bring about new guiding principles, models of action, and practices, ultimately resulting in a new orientation for society" (Oswalt, 2005, p.13). The primary guiding principle, therefore, might be able to satisfy the needs of the remaining residents and improve their quality of life (Hospers, 2014; Schatz, 2010). Policy making will also shift to non-growth strategies, standard public services, infrastructure, quality of life and the environment, accordingly.

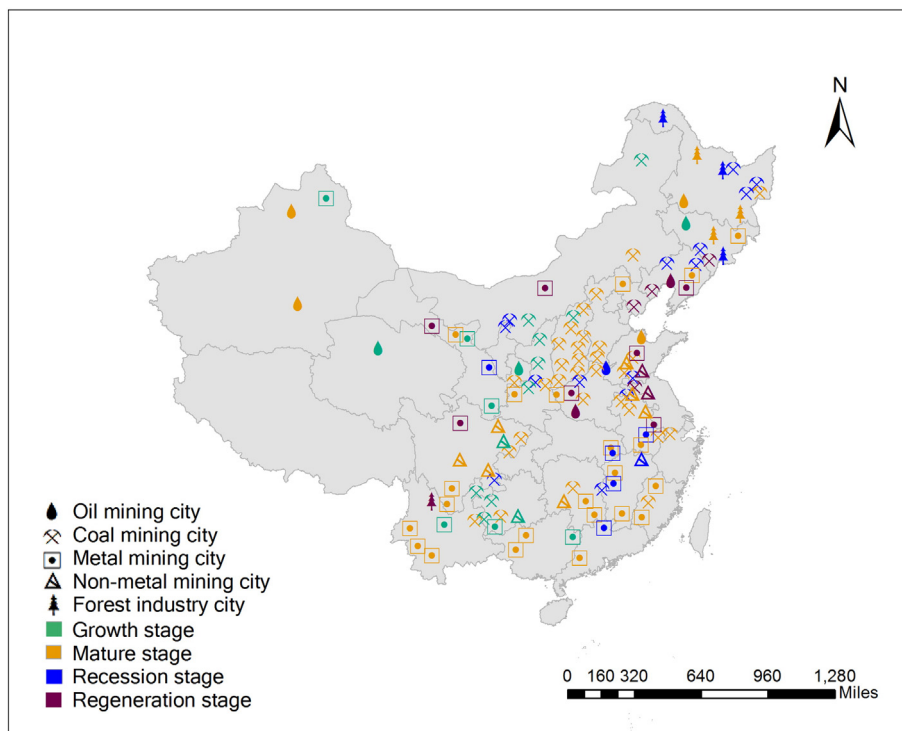


Fig. 1. Map of resource-based cities in China.

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