Land Use Policy 36 (2014) 1–12

Contents lists available at ScienceDirect

Land Use Policy

journal homepage: www.elsevier.com/locate/landusepol

State land policy, land markets and geographies of manufacturing: The case of Beijing, China☆

Gao Boyang[a], Liu Weidong[b], Michael Dunford[b,c,*]

[a] School of Management Science and Engineering, Central University of Finance and Economics, 100039, Beijing, China
[b] Institute of Geographical Sciences and Natural Resources Research Chinese Academy of Sciences (CAS), 100101 Beijing, China
[c] School of Global Studies University of Sussex, Brighton BN1 9QN, England, United Kingdom

ARTICLE INFO

Article history:
Received 1 November 2012
Received in revised form 17 June 2013
Accepted 22 June 2013

Keywords:
Land policy
Land market
Manufacturing
Industrial decentralisation
Economic geography
Multi-level governance

ABSTRACT

The aim of this article is to explore the relationship between state land policies, land markets and geographies of manufacturing in Beijing. Industries have decentralised moving from the centre, and agglomerating in various types of development zone in the outer city. The new patterns of industrial location in Beijing are to a significant extent due to state land policies that impact on manufacturing geographies through land prices, the land supply system and land property reforms. However, industrial relocation involves not only negotiations between government and firms, but is also a game played among different levels of government. National, provincial, municipal, county and even rural level governments bargain with each other to shape and gain from the relocation of industries.

Introduction

China's great post-1980 economic reforms and rapid industrial growth have created new geographies of manufacturing. Chinese cities have experienced a decentralisation of industry from the centre, and industrial agglomeration in various types of suburban and rural development zones (He et al., 2007; Feng et al., 2008). Most commentators attribute this change in the geography of industrial activities in China to the loosening of state control, the creation of a form of state capitalism and a 'transitional market economy' model (Nee, 1989; Lin and Bian, 1991; Lin, 1995; Guthrie, 1997), although this argument conflates markets and capitalism and, as we shall show, under-emphasizes the significance of government regulation and planning. The Chinese government has pursued a path of market-led development to promote export-oriented industrialisation in special economic and open zones, most notably in eastern coastal cities (Fan, 1995, 1997). These measures are applicable to spatial restructuring at a national or provincial level. The spatial relocation of manufacturing at a more micro level in China, and particularly at a municipal level, has received little attention.

A rich body of theoretical and empirical work deals with the spatial distribution of manufacturing activities. Early studies concentrated on the interaction of enterprise strategies and geographical circumstances, while more recent studies have paid greater attention to institutional factors. In China state-market relationships and especially land use policies play a particularly important yet often overlooked role in shaping the changing geography of manufacturing at the municipal level (Lin, 1999).

In this paper we shall argue that new patterns of industrial location in Beijing are to a significant extent a result of state policies, and that processes of industrial relocation involve not only relations between government and firms, but also between different levels of government. More specifically, we shall show that state action operates at multiple scales, and that land use change in the central urban area is affected mostly by state- and provincial-level policies, while suburban districts and rural areas are mainly controlled by lower level governments. These results challenge economic geography literature that underestimates the role of the interactions between different levels of government in shaping industrial space, and that under-emphasizes the significance of land-use and land policy issues in Chinese metropolitan industrial dynamics.

The paper is divided into five parts. In the next we shall outline a conceptual framework that incorporates land use issues into analyses of urban industrial dynamics and identifies aspects of the Chinese land use system that have shaped changes in Beijing's

☆ The authors would like to express their deep appreciation of the care and thought of one of the referees that have added significantly to the quality of this paper and to the Editor for his support.

* Corresponding author at: School of Global Studies University of Sussex, Brighton BN1 9QN, England, United Kingdom. Tel.: +44 1273 606755.
E-mail address: m.f.dunford@sussex.ac.uk (M. Dunford).

0264-8377/$ – see front matter © 2013 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.landusepol.2013.06.007

industrial geography in the last two decades. Section "Method" deals with the methods used. In Section "Changing manufacturing geographies in Beijing" we explore the city's changing geographies of manufacturing. In Section "Impacts of state land policy and land markets on the geographies of manufacturing" the role of state land policies and land market mechanisms in promoting and constraining industrial relocation are examined. In the final section we shall consider the implications of a greater concern with land use issues in economic geographies of manufacturing.

Theoretical background: land-use and geographies of manufacturing decentralisation

At least three areas of research have a bearing on the issues examined in this paper: the Anglo-American literature on intra-metropolitan location and change, the literature that deals with urban land-use and transport, and the literature that deals with the specific institutional conditions that underpin Chinese development. As we shall argue understanding intra-metropolitan location in Beijing involves drawing together ideas from these three areas of research.

Intra-metropolitan industrial location

In Anglo-American economic and urban geography numerous studies of metropolitan scale industrial decentralisation were conducted in the 1950–1980 period (see Dunford, 1977 and Scott, 1982 for critical surveys). In the nineteenth century large-scale material intensive industries were located near central city transport terminals, while small-scale labour intensive industries were concentrated in clusters in central locations. In the first half of the following century there was a massive decentralisation of manufacturing, as capital-intensive plants in inner-city areas were closed or contracted, and/or relocated, newly established or expanded at cheaper sites in suburban and peripheral areas, while labour intensive clusters remained in highly accessible central locations. These movements saw the emergence of distinctive suburban economies and edge cities (Walker, 1981; Phelps, 2010) and redefined the spatial scale at which external economies operate (Phelps and Ozawa, 2003).

In the 1980s it was increasingly recognised that intra-metropolitan industrial location must be understood in terms of the interaction of (1) the structural characteristics and restructuring or internal dynamics/evolution of industrial enterprises, (2) the evolving characteristics of urban places, and (3) their reciprocal impacts. Capital-intensive firms grew in size to exploit the advantages of standardisation and scale economies and assumed new functions. As industrial structures and strategies changed, so did the firm's requirements for capital (investment in plant and equipment, working capital and material and immaterial inputs), labour, land, infrastructure and agglomeration economies. These changes reduced their dependence on the resources of existing agglomerations. The distribution and accessibility of these resources depended however on the actions of other economic and political actors, as well as of the enterprise itself, whose own location and growth changed its environment by attracting resources to places where they did not formerly exist. The costs of labour depended on the evolving distribution of the population, accessibility and reproduction costs. The costs of land per unit of floor area declined away from centre, but at rates that depended on local conditions and national rules. Obsolete plant in central locations was abandoned, and the rental value of central sites appropriated, while different functions were located in different places, with manufacturing and later routine office jobs growing around the edge of the expanding metropolis. Small-scale labour intensive industries were predisposed to remain concentrated/clustered due to intensity of transactions and to occupy central position in urban areas due to their high accessibility.

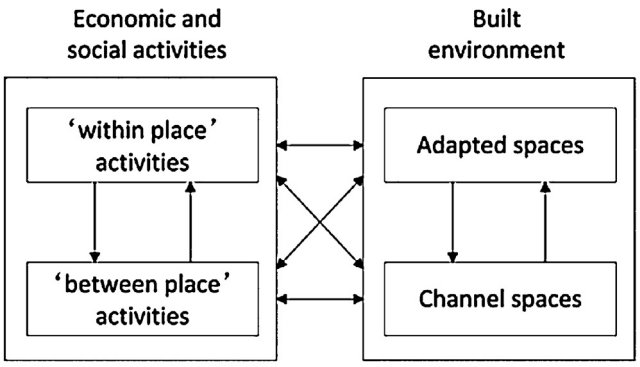

Fig. 1. Urban and regional land use and the built environment.
Source: adapted from Echenique et al. (1969); see also Echenique (1994); Echenique et al. (2012).

In subsequent decades industrial geography saw a series of rapid innovations: a political economy approach (Storper and Walker, 1989; Sayer and Walker, 1992) emphasised the role of sector-specific sequences of technological change derived from learning-by-doing, and the evolution of specialisation, the division of labour and inter-industry relations; transaction cost approaches centred on identification of the increasing importance of the horizontal integration of related activities rather than vertical integration as drivers of industrial landscapes (Scott, 1988); conventionalist and institutional approaches explored the impact on organisational and technological dynamism of learning processes, untraded assets (as opposed to traded input–output relations) and non-market rules and networks (Storper, 1995); evolutionary economic geography (EEG) has emphasised the 'historical' and path dependent nature of cluster development, 'historical accidents' (Krugman, 1991), chance/stochastic processes (Arthur, 1994) and the way developments at one stage create the conditions for the next.

These approaches considerably deepened the analysis of the dynamics of industrial landscapes and the creation and evolution of industrial development paths. These theories are however subject to certain limitations. The first is that, in examining underlying processes of location, clustering, relocation, dispersal and the creation of new centres of activity, too much emphasis is placed on chance events and too little on their economic and regulatory context (Martin and Sunley, 2006). A second is that the role of some actors is under-emphasised with in particular too little attention to institutions (MacKinnon et al., 2009). This absence is especially important in the case of industrial decentralisation in Chinese cities.

Land-use transport models and intra-metropolitan location

A particularly important limitation is the absence of attention to the relationships between industrial development and the drivers of land use in city regions. (An exception is Sénécal et al., 2002). Fig. 1 puts the decisions of actors concerning the type, land-intensity and location of industrial activities (one type of in-place activity) in their urban and regional land-use context. These decisions about land-use give rise to and are influenced by an