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The preference for larger cities in China: Evidence from rural-urban migrants☆

Chunbing Xing[a], Junfu Zhang[b,*]

[a] Beijing Normal University, 19 Xinjiekouwai St, Haidian District, Beijing 100875, China
[b] Clark University, 950 Main St, Worcester, MA 01610, USA

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ABSTRACT

China has long aimed to restrict population growth in large cities but encourages growth in small and medium-sized cities. At the same time, various government policies favor large cities. We conjecture that larger cities in China offer a better quality of life and more opportunities. We thus predict that a typical rural-urban migrant is willing to give up some income in order to live in a larger city. We present a simple model in which rural-urban migrants choose destination cities to maximize utilities from consumption and urban amenities. Drawing data from a large-scale population survey conducted in 2005, we first estimate each migrant's expected earnings in each possible destination city using a semi-parametric method to correct for potential selection bias. We then estimate the typical migrant's preference for city population size, instrumenting population size with its lagged values to control for potential omitted-variables bias. From these estimation results, we calculate the typical migrant's willingness to pay to live in larger cities. Our results show that indeed rural-urban migrants strongly prefer cities with larger populations. We explore possible explanations for this preference and discuss the implications of these findings.

1. Introduction

Cities come in different sizes. Traditional urban economic theory explains the distribution of city sizes based on various agglomeration economies and diseconomies (Henderson, 1974). However, such economic forces are not the only determinants of city sizes; political factors sometimes feature more predominantly. For example, dictators may invest disproportionately more in their capital cities for political stability concerns, producing urban giants that are hard to explain on pure economic grounds (Ades & Glaeser, 1995). Similarly, in a planned economy, policy makers—in both central and local governments—can influence city sizes through investment decisions and migration controls (Au & Henderson, 2006a, 2006b).

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* Corresponding author.
E-mail addresses: xingchb@bnu.edu.cn (C. Xing), juzhang@clarku.edu (J. Zhang).

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China provides an interesting case for studying the effect of government policies on city sizes. During 1949–1992, China was officially a planned economy, where central and local governments always intended to manage city growth through planning and regulations. As is well known, China has for decades had a residence registration system, which has controlled internal population migration and (especially in its early years) made it particularly difficult for rural people to move into cities. Meanwhile, as a result of government planning, major industries are dispersed over different regions. Consequently, industrial clusters are relatively small and fail to take full advantage of localization economies (Lu & Tao, 2009). In addition, China has long encouraged the growth of small and medium-sized cities, and contained the growth of population in large cities (Henderson, 2005).

Along with its remarkable economic growth, China has experienced a rapid urbanization in the past three decades. While only 18% of the population lived in urban China in 1978, over 50% reside in cities today. This is mainly a result of relaxing the control of internal migration and accommodating labor mobility required by fast-growing urban sectors. During this period, the Chinese government has continued to curb population growth in large cities and direct migrants to smaller cities. At the same time, economic development policies favor large cities. For example, larger cities receive more investment, are granted more political power, and enjoy more freedom in managing local development. As a result, the quality of life in larger cities tends to be higher.

In this paper, we empirically show that larger cities in China are more attractive, as evidenced by the revealed preferences of rural-urban migrants. To guide our empirical analysis, we present a simple model in which rural-urban migrants choose destination cities by trading off expected income (and thus consumption) for urban amenities. Drawing data from a large population survey, we first estimate each migrant's expected earnings in different cities using a semi-parametric method to correct for potential selection bias. Based on actual migration choices, we next estimate the typical migrant's willingness to pay for living in different cities. This willingness to pay is then regressed on city population size to quantify the preference for larger cities. To address potential omitted-variables bias in the city-level regression, we instrument city population with its lagged values. Our results show that rural-urban migrants are willing to give up a substantial amount of income in order to live and work in larger cities. Observed city characteristics explain little of this willingness to pay. We explore deeper reasons why migrants prefer larger cities and discuss policy implications of these findings.

The main contribution of this study is to demonstrate the consequence of some policy distortions in the urbanization process of China, which helps us better understand the growth path of this major developing country. On the methodology side, we treat city size as a nonmarket urban amenity and implement a new method to assess the value of this amenity. Traditionally, the value of urban amenities is measured within the Rosen-Roback framework, which assumes zero moving costs for economic agents (e.g., Albouy, 2012; Blomquist, Berger, & Hoehn, 1988; Roback, 1982). This approach has limited application for a country like China, where migration costs are prominent. In a seminal paper, Bayer, Keohane, and Timmins (2009) propose an alternative method to evaluate nonmarket amenities. They estimate a discrete choice model of migration to measure the value of clean air in U.S. cities, explicitly incorporating moving costs into the model. Timmins (2007) uses this method to quantify the value of climate amenities in Brazil. We believe that this discrete choice approach is particularly useful for studying urban amenities and related issues in China, and this paper serves as an illustration. On the data source side, we make use of a large survey database created by the National Bureau of Statistics of China, which allows us to examine detailed migration choices of a very large number of rural-urban migrants. This helps us better understand internal migration patterns in China.

In the next section, we briefly introduce the institutional context in China. We then present a simple model to provide a structural framework for empirical estimation and interpretation of results. After a brief introduction of data sources, we present our estimation results. Finally, we conclude with a few remarks.

2. Institutional background in China

Under the household registration (*hukou*) system, China used to have strict control on internal population movement, making rural-urban migration (and particularly cross-region or interprovincial migration) very difficult. After the inception of economic reform in 1978, the fast-growing urban sector, especially in the coastal regions, increased the demand for cheaper labor from the rural sector. At the same time, reforms in rural areas through the household responsibility system greatly improved productivity in agriculture, releasing a large amount of surplus labor in countryside. As a pragmatic policy response, China started to allow rural people to migrate to cities on a temporary basis, without granting them the urban *hukou* and associated benefits in cities. In 1995, there were about 80 million rural-urban migrants in China, who held a rural *hukou* but lived and worked in cities (Chan & Li, 1999). By 2008, when the government first started to systematically track these migrants, the number had climbed to 140 million.[1] Knowing that they do not have equal access to urban public goods and urban sector jobs, these rural migrants have decided to move to cities in pursuit of higher wages. In principle, they may choose any city to live, because non-*hukou* rural-urban migration is not restricted. Most cities require rural migrants to apply for a temporary residence permit, but the permit is not restrictive and can be easily obtained after arrival.

Starting in 1980, China officially pursued a policy that "contains the scale of large cities, reasonably develops medium-sized cities, and aggressively promotes the growth of small cities." Government policies repeatedly advocated that surplus labor in rural areas should "move away from the soil but not the village, enter the factories but not cities." Consistent with this

[1] See the official statistics here: http://www.stats.gov.cn/ztjc/ztfx/fxbg/201003/t20100319_16135.html