

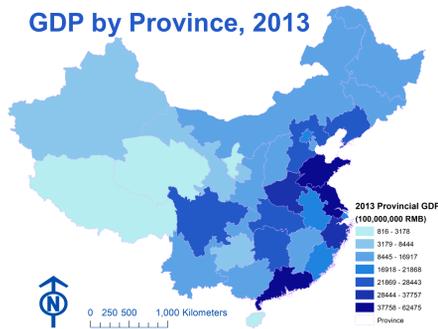
UNPACKING GROWTH

Regional Development of Firms in China (2004-2013)

INTRODUCTION

Firms, one of the key economic actors on the micro level, reflect the economic development level and potential of a region. The imbalanced economic growth pattern in China is manifested by the heterogeneity of many aspects of the economy, including firms' density and development. Examining the growth patterns of the firms in China over 2004-2013 helps us better understand Chinese economy in the 21st century and regional development gaps. Specifically, we look at the firm density, average foreign capital per firm, and productivity on the county level to unpack the regional development of firms in China.

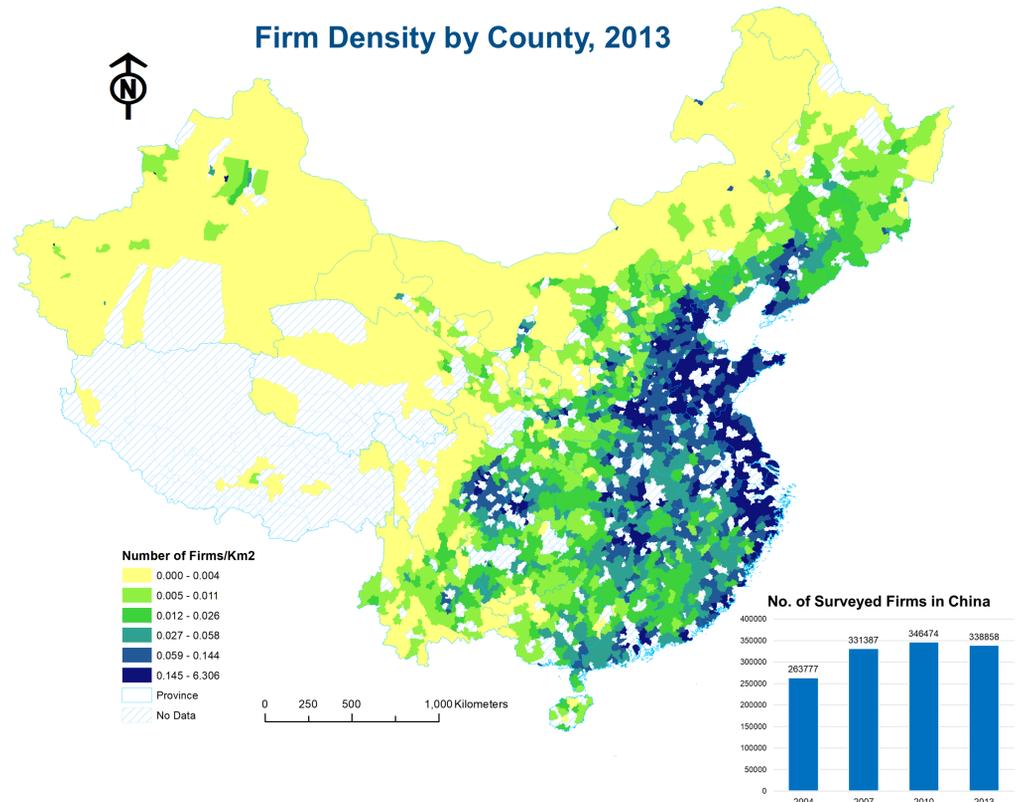
GDP by Province, 2013



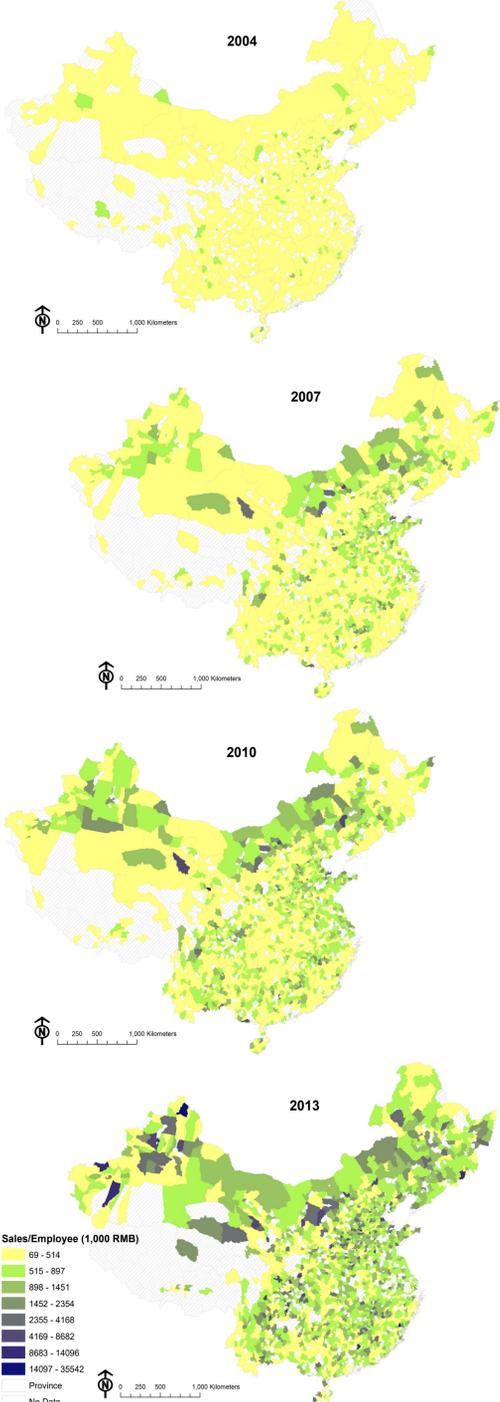
METHODS

The main data come from annual surveys administrated by the National Bureau of Statistics of China at the individual firm level. The cartographer used Stata and Excel to clean the data into the shape for county- and province-level spatial analysis. Meanwhile literature review was conducted about China's regional economy and firms' relocation strategies. The major tools used in ArcMap are attribute joins, spatial queries, and a series of functions in the attribute tables, including field calculator, summarize, and calculate geometry.

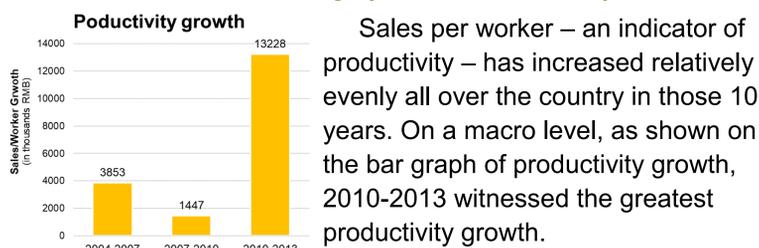
Firm Density by County, 2013



Average Sales Per Worker by County, 2004-2013



Productivity (Sales/Worker)



Sales per worker – an indicator of productivity – has increased relatively evenly all over the country in those 10 years. On a macro level, as shown on the bar graph of productivity growth, 2010-2013 witnessed the greatest productivity growth.

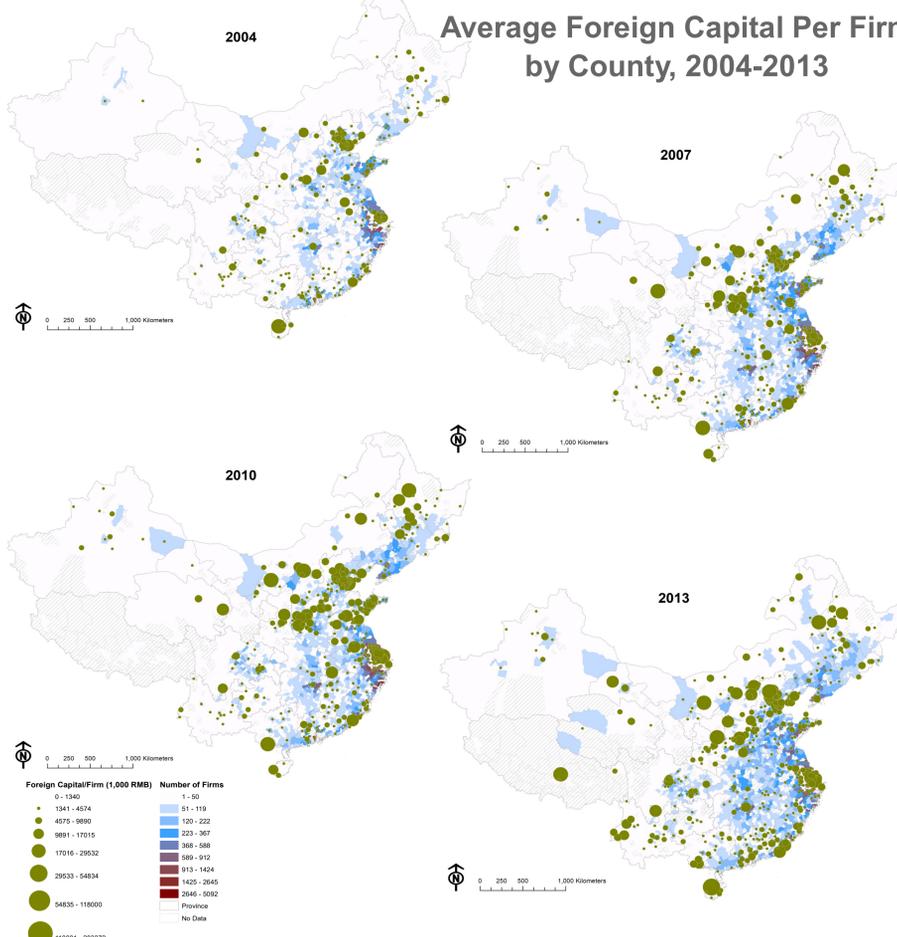
Firm Density

The number of surveyed firms and their distribution has remained largely unchanged in 2004-2013. The firm distribution has generally reflected the imbalanced growth pattern of regional economy in China. Despite the high costs in the developed regions, firms are potentially attracted by the availability of advanced technology, talents, and financing opportunities in the southeast, and thus stay put in their original locations.

Foreign Capital

Foreign capital has concentrated in the eastern region and largely stayed in major counties there over the decade, even after normalizing the differences in numbers of firms. However, foreign capital has been growing in a few major counties in the less developed regions (western and northeastern) as well.

Average Foreign Capital Per Firm by County, 2004-2013



CONCLUSION

Firms and foreign investments in China have concentrated on the big cities and along the seacoast, potentially because of existing infrastructure and economy of scale. This reflects the imbalanced development of Chinese economy – the middle, northeastern, and western regions are left behind in industrialization. The good news, however, is that the productivity level has been increasing in a balanced manner.

LIMITATIONS

The data come from surveys instead of census, so the self-selection of the respondents has possibly affected the comprehensiveness and representativeness of the sample.

Cartographer: Luxi Liu
UEP 232: Intro to GIS

Data source: National Bureau of Statistics of China; GeoData@Tufts/GfK Marktorschung (2004)
Coordinate System: WGS 1972 BE South China Sea Lambert
Date: May 7, 2019

