Fiscal Decentralization and Economic Development in China - Before and After the Tax-Sharing Reform

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Research Question

- In the last 40 years, especially after the tax-sharing reform in 1994, what is the role of fiscal decentralization in economic development in China?

- Lin and Liu (2000) conducted research on the role of fiscal decentralization on economic development in China using data in 1980s and 1990s (before 1994)

Background

- ◻ Before 1978: All collected by central government and then redistributed to local governments

- ◻ 1978 – 1994: Local governments retained a fixed portion of local revenue

- ◻ After 1994: Tax sharing system – tax distribution between central and local governments by tax categories

Key Literatures

- Lin and Liu (2000)

- De Valk (1990) viewed fiscal decentralization as a cause of better economic development
  - fiscal decentralization increases effectiveness and efficiency of economic development
  - local governments have more and better information about local needs, so they can distribute money more efficiently.

- Bahl and Linn (1992) held the point of view that fiscal decentralization is resulted from economic development.

Data

- National Oceanic and Atmospheric Administration (NOAA) (2014)
  - Nightlight data as proxy for economic growth

- National Bureau of Statistics of China
  - Other variables

Model

Table 1: Variable abbreviations and definitions

Variable	Definition
GGDP	Growth rate of real per capita GDP (%)
NL	Night Light Proxy
FD	Fiscal Decentralization: calculated in 2 ways: local government revenue/central government revenue, and local government expenditure/central government expenditure
NL	Night Light Proxy
POPSHR	Rural population (%)
TPOP	Total population (in thousands)
FPMP	Relative price of farm products to nonfarm product: the ratio of state's real procurement price index for farm products to real price index of manufacture goods in rural area
NSOESH	Share of Non-SOEs' output in the total industrial output (%)
GI	Growth rate of per capita fixed asset investment (in real term) (%)

(Lin and Liu, 2000)

NL_{it} or $GGDP_{it} = \beta_0 + \beta_1 FD_i t + \beta_2 NSOESH_{it} + \beta_3 GI_{it} + \beta_4 (FISCAP)_{it} + \beta_5 FPMP_{it} + \beta_6 POPSHR_{it} + + \mu_i + \lambda_t$

where *i* is province, *t* is time, and *i = 1, ..., N; t = 1, ..., T.*

Nightlight & Economic Activities
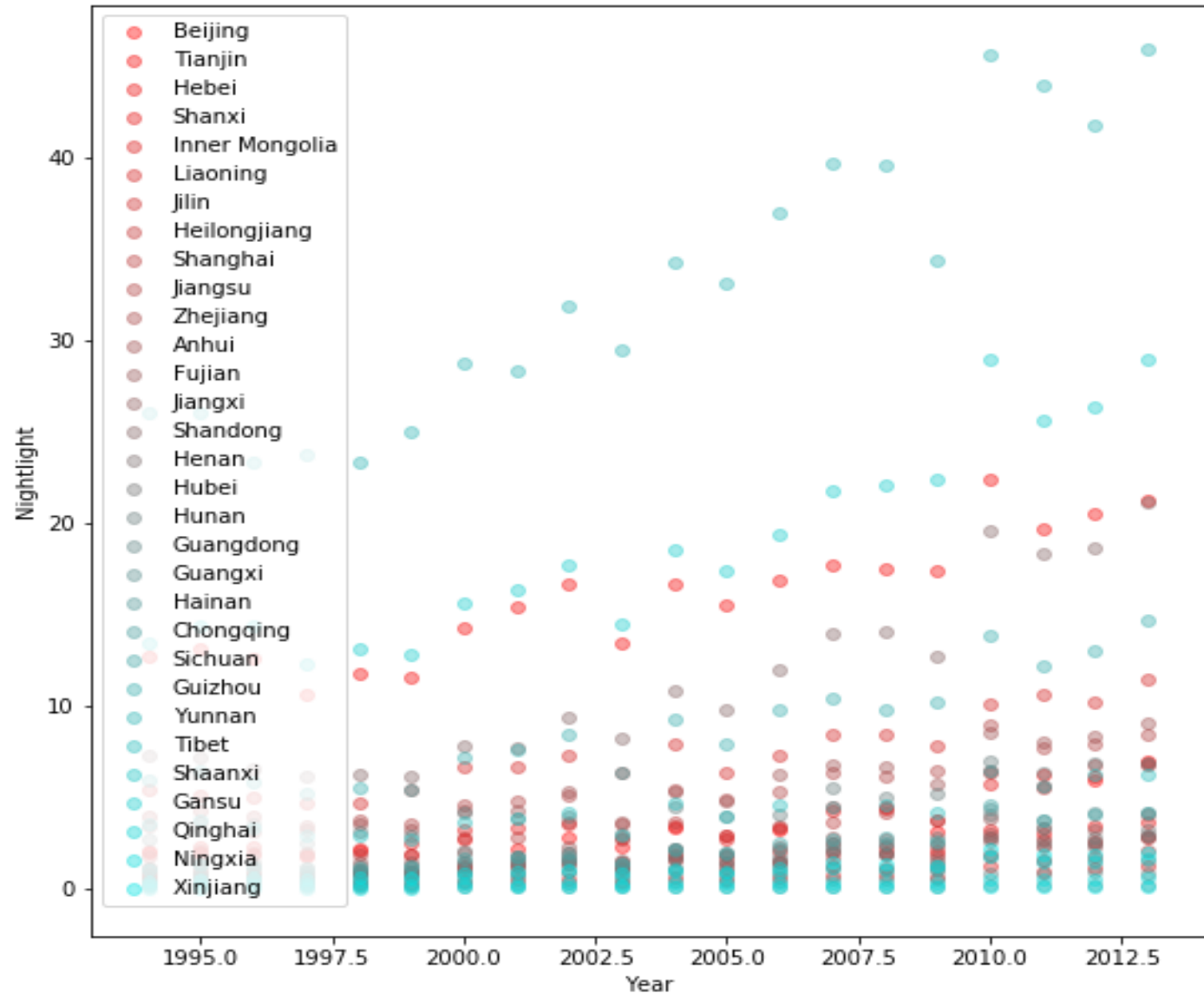
Random-effect Models

- LGR/CGR and LGE/CGE have contrasting effects on economic growth.

- Revenue ratios exhibit positive effects, while expenditure ratios show negative effects.

- The growth rate of real per capita fixed assets investments have strong positive correlation with GGDP, but its correlation with nightlight is not significant.

- Higher rural population ratio results in significantly lower nightlight measurements, and areas with more total population have brighter nightlights.

LGR: Local Government Revenue
CGR: Central Government Revenue
LGE: Local Government Expenditure
CGE: Central Government Expenditure

Fixed-effect models

- Motivation
  - Remove portion of the effect from time varying controls that is not related to the dependent variable – for example, GI may just be increasing but not necessarily be correlated with economic growth/nightlight proxy
  - Therefore, provincial and time fixed-effect dummy variables were included

- Conclusion: almost the same trend as in Random effect models

Conclusion

- No obvious relationship between fiscal decentralization and economic growth

- Disentanglement between revenue and public service responsibilities for local governments