
Growth Rate Changes in Comparison with the Rest of the Midwest and the US

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Presentation by the Illinois Economic Observatory
Introduction

• Analysis in this presentation will explore Illinois’ experience by comparing each sector’s growth rate with
  – Overall US and Midwest growth rate
  – Growth rate of the same sector in the US and Midwest
  – Growth rate if Illinois had had the same economic structure as US or Midwest
• Analysis will provide some additional insights into the Illinois experience
• Methodology does not provide explanation but decomposition to reveal any tendencies or trends
• As before, two reference areas will be used
  – Midwest (WI, IN, OH, MI, MO)
  – US
Use Shift-share analysis

- Decomposes the growth into three different parts:
  \[ g_i = G + (G_i - G) + (G_i - g_i) \]

  where
  \[ g_i = \text{Illinois growth of sector } i \]
  \[ G_i = \text{Benchmark’s growth of sector } i \]
  \[ G = \text{Benchmark’s growth of all sectors} \]

- Two benchmarks: US and Midwest employment growth
Regional shift effects

- The growth difference between Illinois’ and the benchmark’s sectoral employment growth
- Two benchmarks: US and Midwest
- Positive effect means that Illinois employment grows faster than that in the benchmark.
Total non-farm

[Graph showing two lines, one labeled National and the other labeled Midwest, representing data from 1991 to 2003 with percentage changes on the y-axis.]
Natural resource and mining
Construction

![Construction graph showing percentage change over years 1991 to 2003 for National and Midwest regions.](image-url)
Manufacturing
Trade


National
Midwest
Information
Financial services
Professional-business services

% 
-5 -4 -3 -2 -1 0 1 2 3

National

Midwest
Education-health services

[Graph showing trends in education and health services from 1991 to 2003, with lines representing national and Midwest data, and percentage changes on the y-axis.]
Leisure and hospitality
Other services


National

Midwest
Government
Industry mix effect

• In shift-share analysis

\[ g_i = G + (G - G_i) + (G_i - g_i) \]

\((G - G_i)\) is called industry-mix effect, showing how sector \(i\), at the national level, fares with the overall growth for all sectors

• The industry-mix effect is computed for Illinois, Midwest and US
• Positive (negative) industry-mix effect means that the sector grows higher (slower) than the economy as a whole
In 2003, when MW and US are in increasing trend, Illinois is Declining. In this decline, IL suffers more Than US or MW.
Manufacturing

US on downward turn

Illinois Midwest US
IL and MW were always better than US, up to 2001. Then, IL and MW plunged down. The recovery in 2002 peaked in early 2003, and now back to downward trend.
IL suffered a lot, while the US was booming. In the recovery IL seems better than MW or US. But trend wise, IL and MW are back to US pattern.
Financial services

US and MW are in increasing trend, while IL is decreasing.
Professional-business services

IL and MW decreasing, while US is in increasing trend
Education-health services

![Chart showing education-health services trends in Illinois, Midwest, and US from 1991 to 2003.](chart)
Leisure and hospitality

Major hit in IL and MW
Other services
Government

[Graph showing the government expenditure trend from 1991 to 2008 for Illinois, Midwest, and US, with a y-axis ranging from -2 to 5 and x-axis from 1991 to 2008.]
How Much Better/Worse off would we have been with a different Employment Structure?

- Homothetic employment ($E_i^*$) is the number employed in sector $i$ in the region if the region had the same structure as the nation:

$$E_i^* = e \cdot \left( \frac{E_i}{E} \right)$$

where $e$ is total employment in region; $E$ is total employment in the nation; $E_i$ is sectoral employment in the nation
Homothetic employment (cont.)

- Two benchmarks are used: US and Midwest
- Three graphs are drawn:
  - IL graph shows the Illinois actual number of employment in the sector
  - MW graph shows the number of Illinois employment in the sector, had IL followed the Midwest rate of growth
  - US graph shows the number of Illinois employment in the sector, had IL followed the US rate of growth
Natural resource and mining
Construction

[Diagram showing construction data from 1991 to 2003 for National, Midwest, and IL regions, with trends indicated over the years.]
Manufacturing

Illinois employment levels way below those of MW or US structure
Trade

![Trade Chart]

*National, Midwest, IL*
Illinois experience parallels US and is better than MW
Sector is which Illinois far more specialized than US or Midwest
Professional-business services
Leisure and hospitality

![Graph showing leisure and hospitality data for National, Midwest, and IL over years 1991 to 2003.]
Other services
Summary

• For the most part Illinois recent experience can be traced to slower than MW or US growth

• Part of the explanation lies in differences in the mix of economic activities in Illinois in comparison with Midwest and US