The Northwest Indiana Coincident Economic Index

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Mission

- From IUN's vision statement
  - *"…**advance the social, economic and civic health of the region.**"*
- From the School of Business' mission statement:
  - *"…**support the economic development of Northwest Indiana…**"*
- Fundamental question:

How should we **measure** and **track** the **Northwest Indiana Economy**?

Economic Indicators

Income?

Leisure?

Wages?

Interest Rates?

Output?

Prices?

Education?

Hours worked?

Steel?

Gross Domestic Product?

Stocks?

Poverty rate?

Unemployment Rate?

Earnings?

Profits?

Employment?

Manufacturing?

Tradeoffs in Economic Data

	Frequency	Scope	Delay
U.S. Output/Income (GDP)	**Quarterly**	**National**	**1-3 months**
State Output/Income (GDP)	**Annual**	**State**	**1 Year**
Census Data (income, poverty, etc.)	**Annual**	**Micro**	**1 Year**

What we really want:

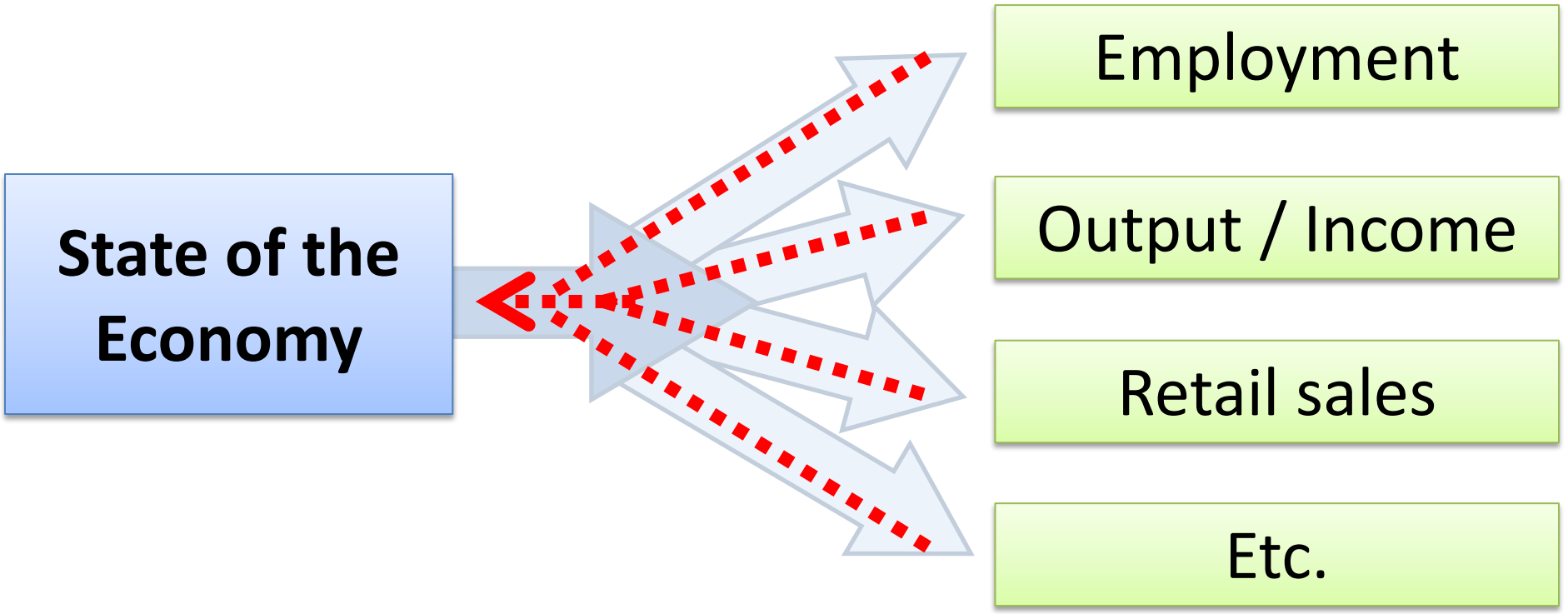
Ideal measure of NWI Economy?	**Monthly**	**Regional**	**1-2 months**

Also want it to be simple to use!

Stock-Watson (1989) Coincident Index

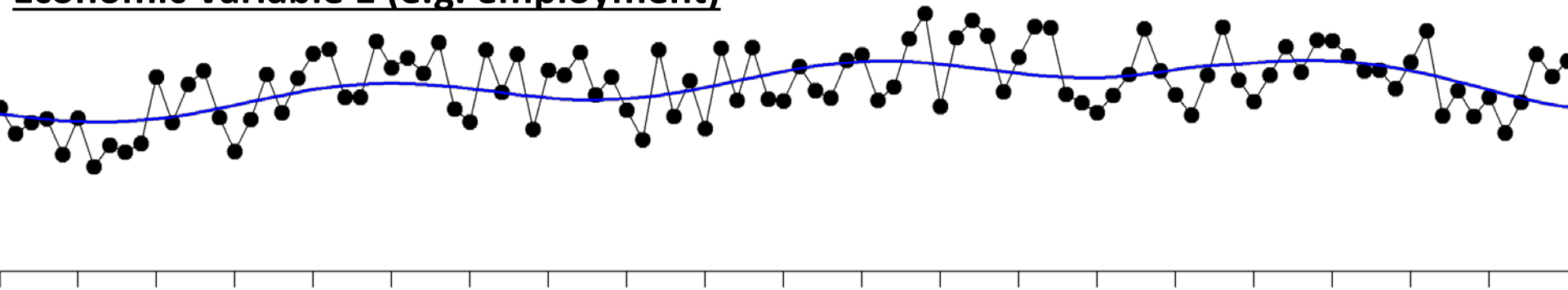
Underlying state (unobservable)

Economic variables (observable)

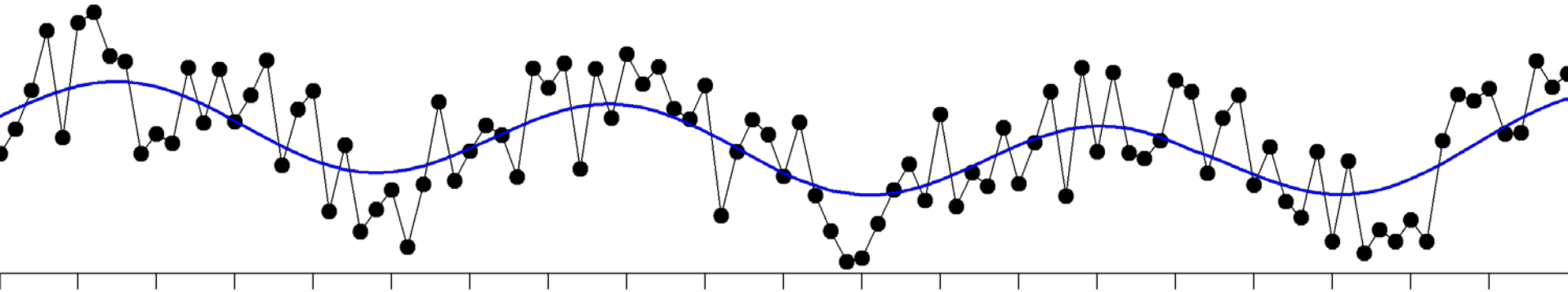


Coincident Index Example

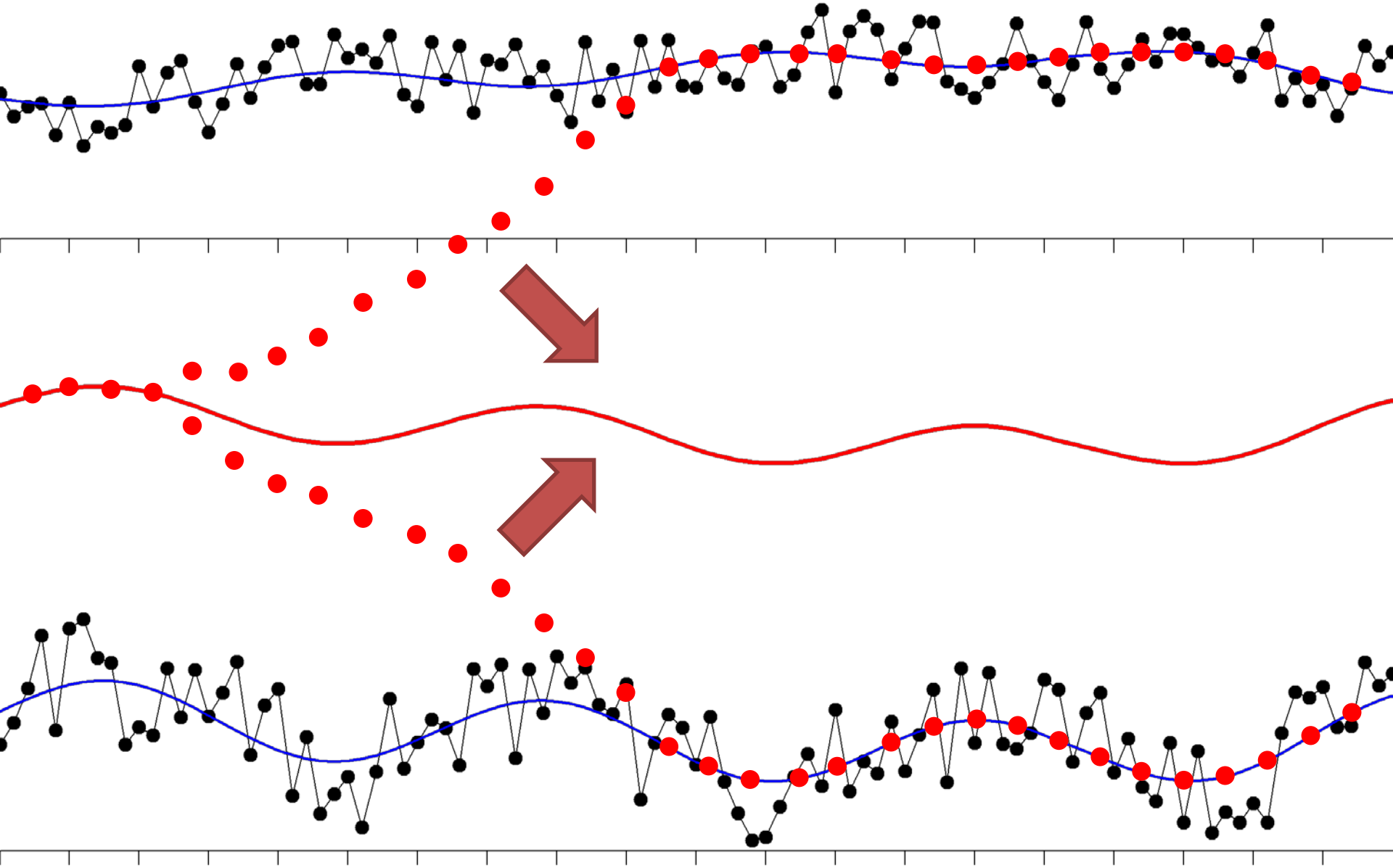
Economic Variable 1 (e.g. employment)



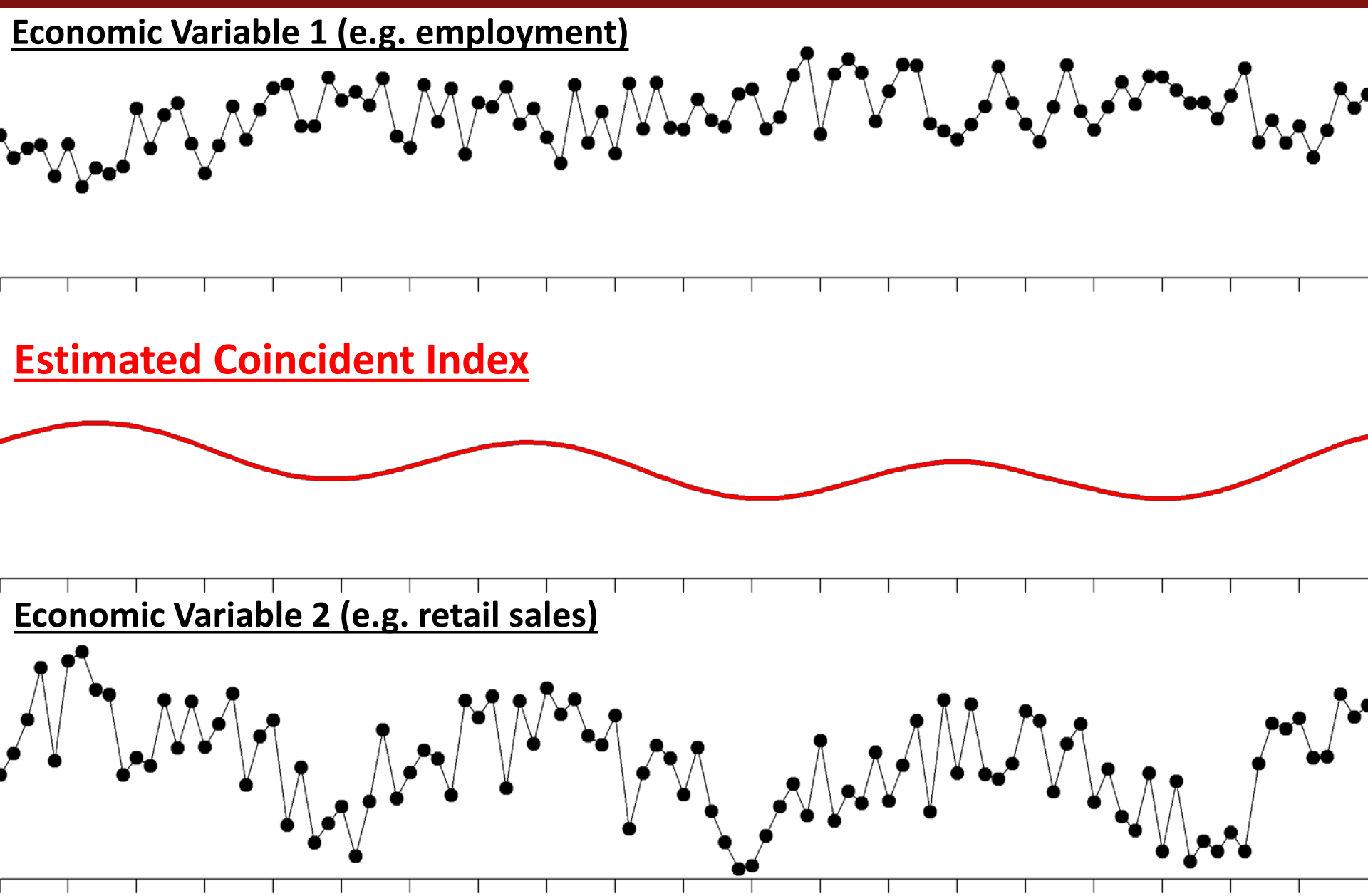
Economic Variable 2 (e.g. retail sales)



Coincident Index Example

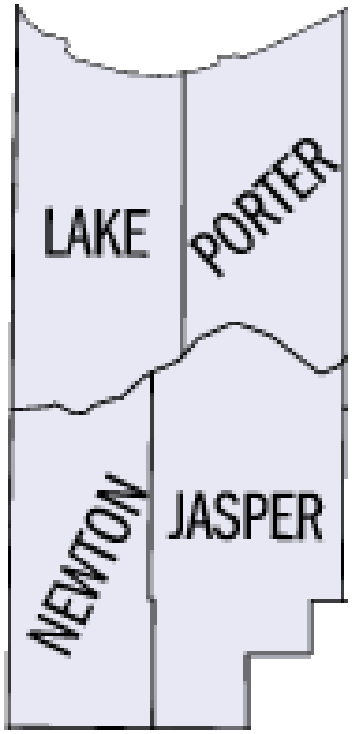


Coincident Index Example



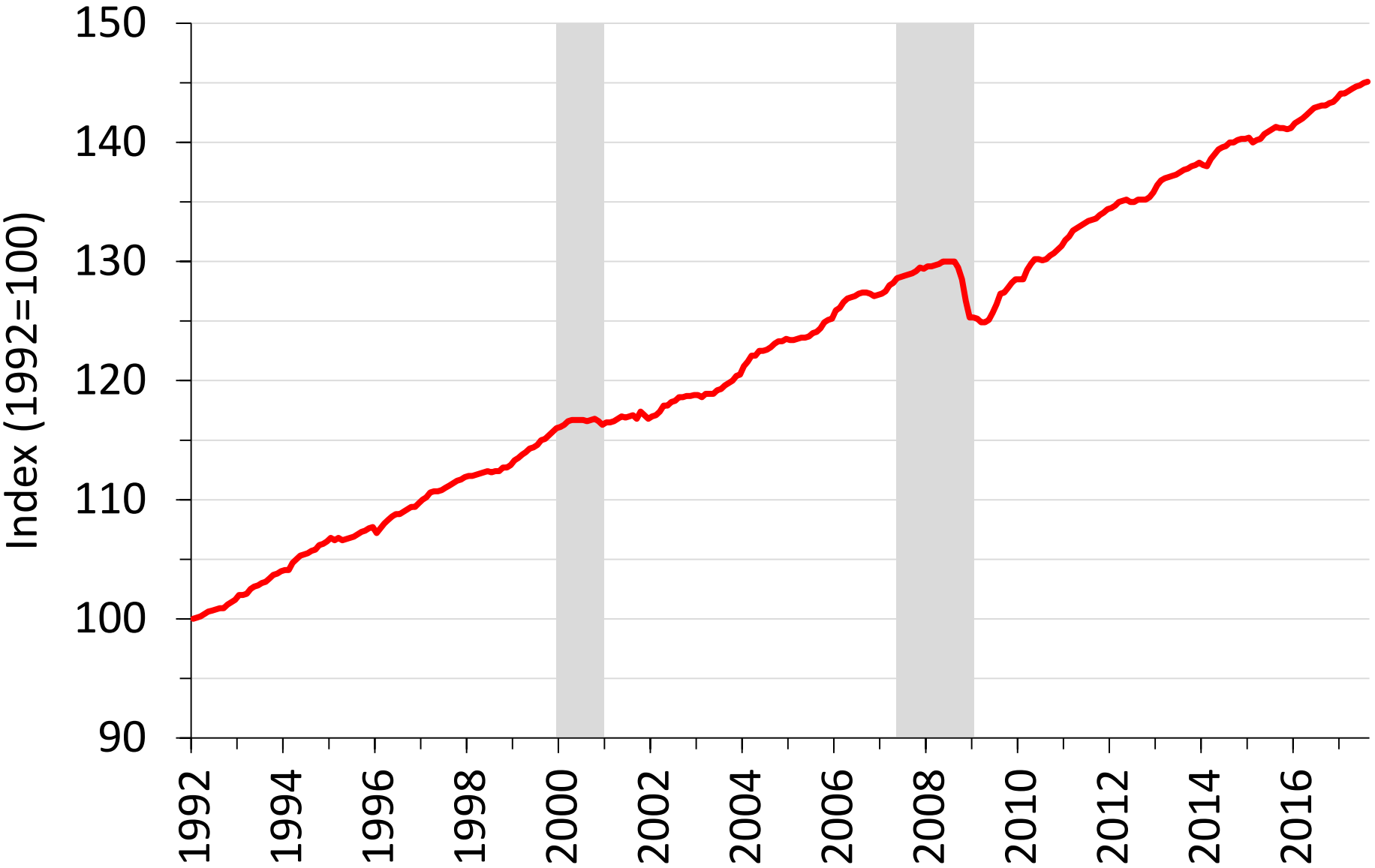
Northwest Indiana Coincident Index

- Use four variables for **Northwest Indiana** (four-county region):
  1. Steel production
  2. Total employment
  3. Retail sales
  4. Average manufacturing hours

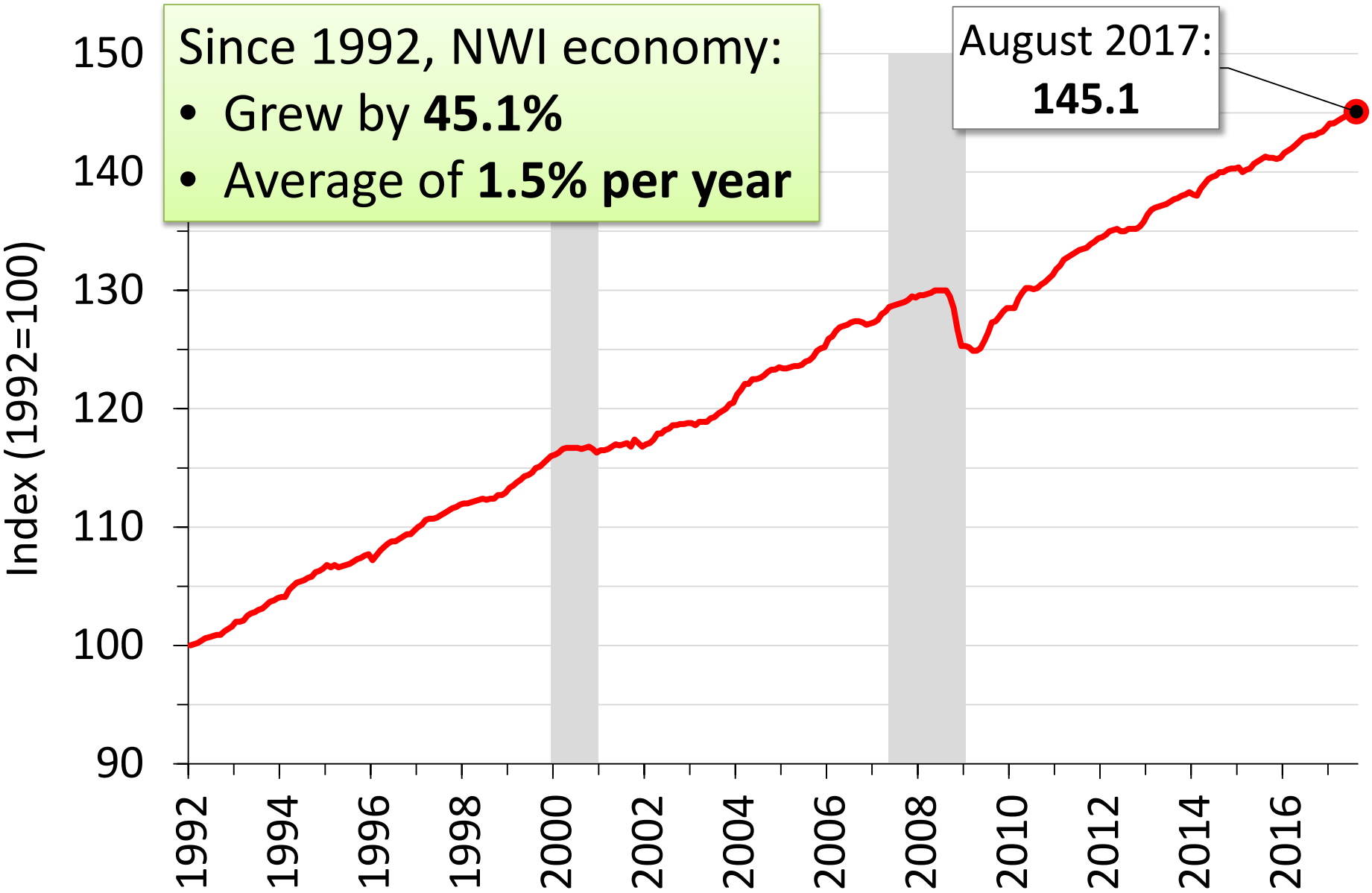


- Construct a **Coincident Index**
- Similar procedure used by:
  - Federal Reserve Bank: State & National Indices
  - Bureau of Economic Analysis: Business Cycles

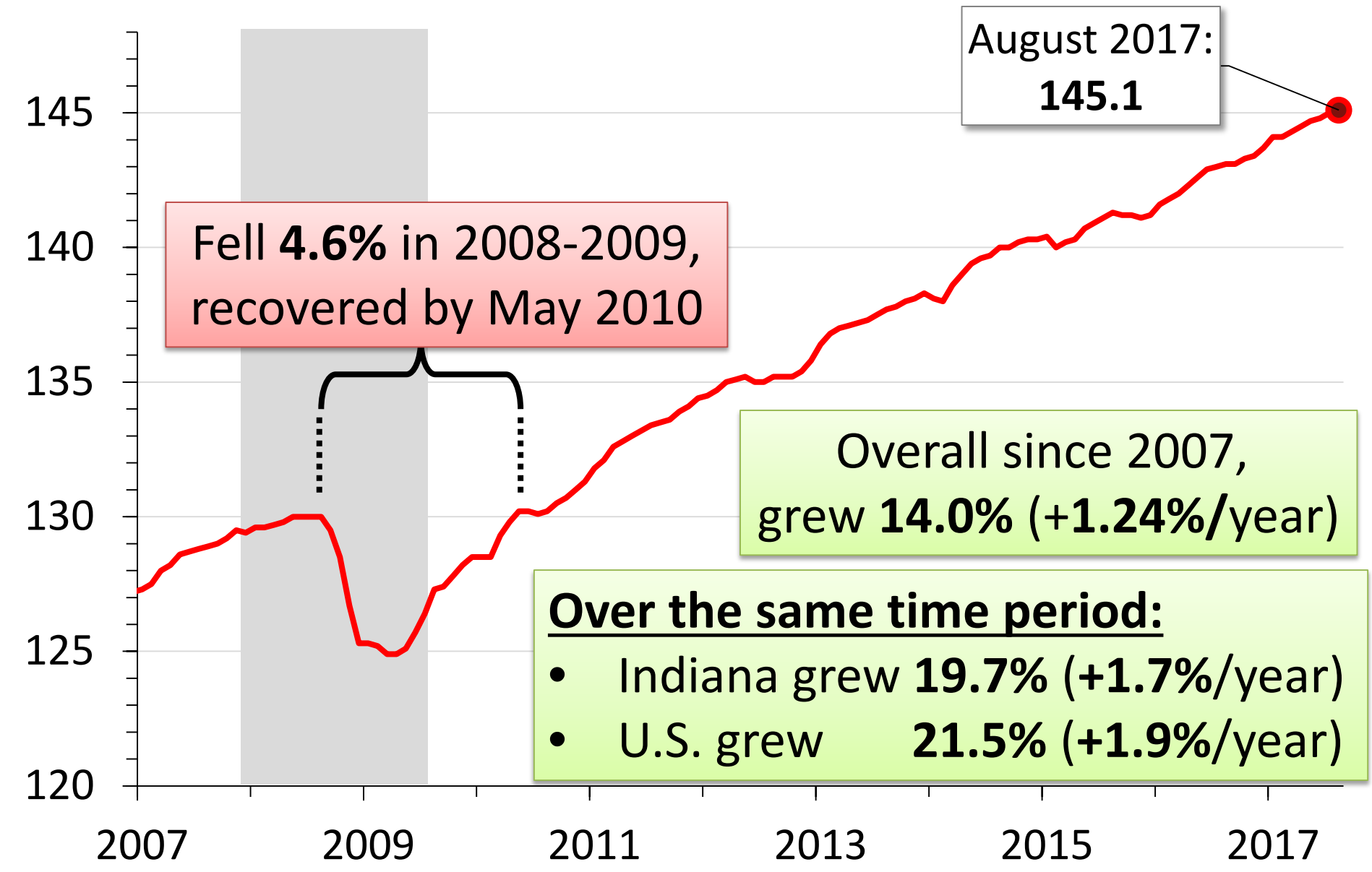
Northwest Indiana Coincident Index (1992-2017)



Northwest Indiana Coincident Index (1992-2017)



Northwest Indiana Coincident Index (2007-2017)



Northwest Indiana Coincident Index

The Northwest Indiana Coincident Index

- Standard and consistent way to track economy:
  - August, 2016: **143.1**
  - August, 2017: **145.1**

  About 1.4% growth in 2017
- A single number to track NWI economic health
  - Easy for businesses, government & institutions to use
- One of the first regional coincident indices:
  - New York City, Washington D.C., several in Oregon

Northwest Indiana Coincident Index

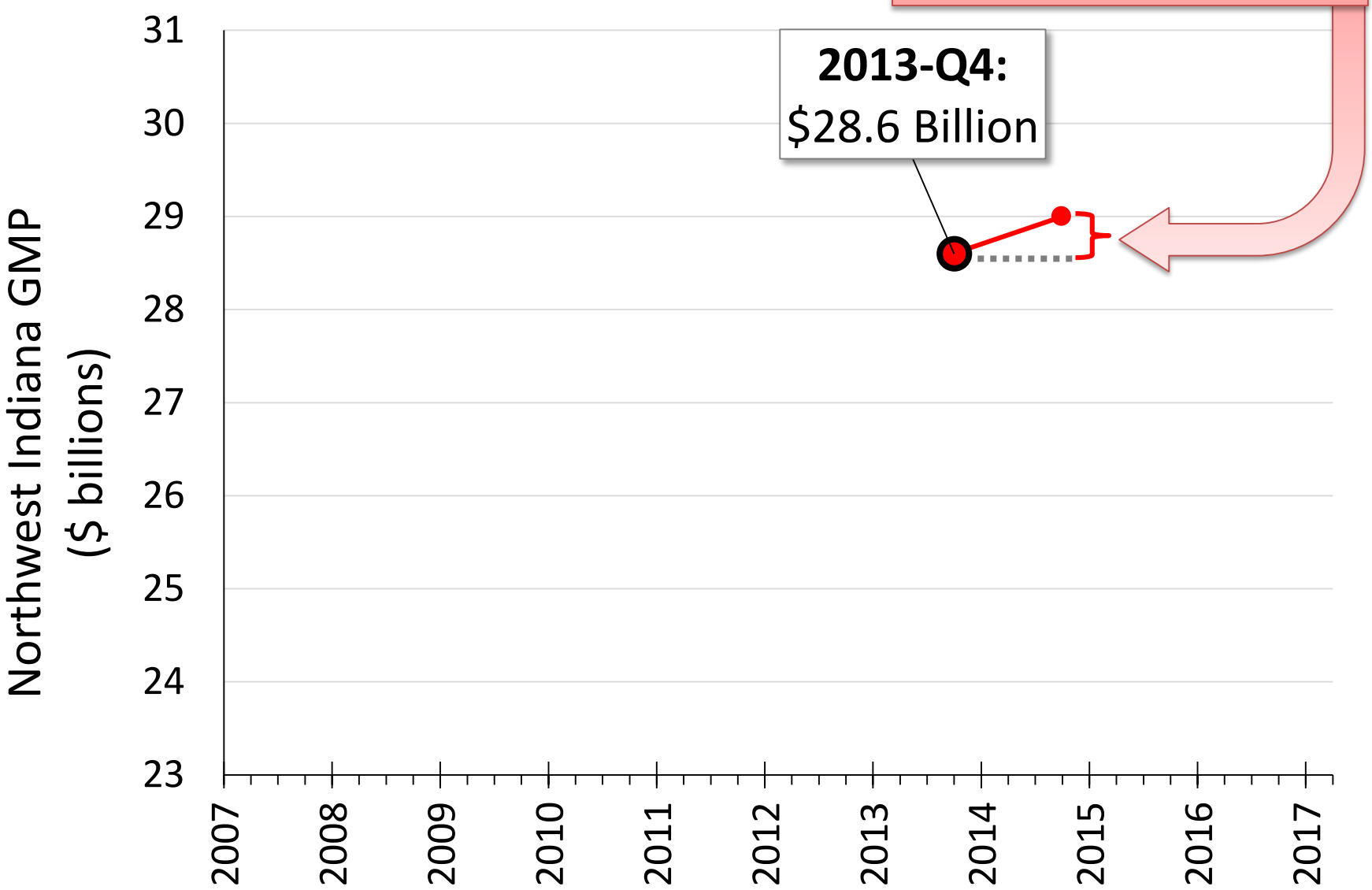
The Northwest Indiana
Coincident Index

- Can also be used to forecast growth
- Combine Index with leading economic variables:
  - Housing market, stock market, manufacturing, interest rates, other leading indicators.
- **Forecast:** Approximately **2%** economic growth in 2018 for Northwest Indiana
- IUN publishes **Index** & **Forecast** every month.

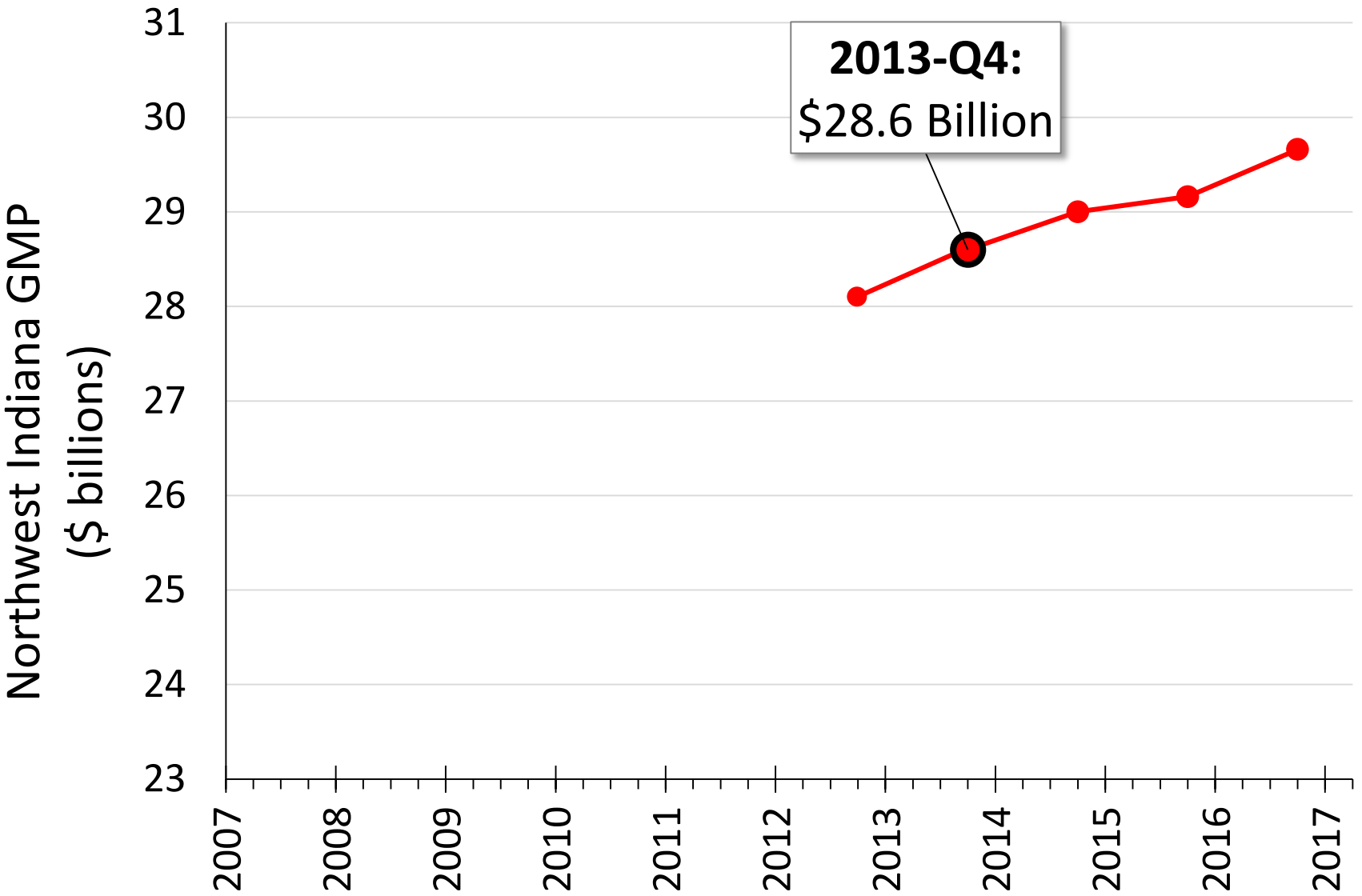
Limitations of the Index

- What does the number **145.1** actually mean?
- **Gross Domestic Product (GDP)**, common measure
- How can we compare **Northwest Indiana** with:
  - **U.S.** GDP at… **$19.2 trillion** or **$59,253/person**
  - **Indiana** GDP at… **$349 billion** or **$52,568/person**
- Any way to estimate GDP for **Northwest Indiana**?
  - BEA publishes GDP for Chicago MSA
  - In 2016, U.S. Conference of Mayors report: Gary MSA Gross Metropolitan Product (GRP) of **$28.6 billion**

Northwest Indiana GMP



Northwest Indiana GMP



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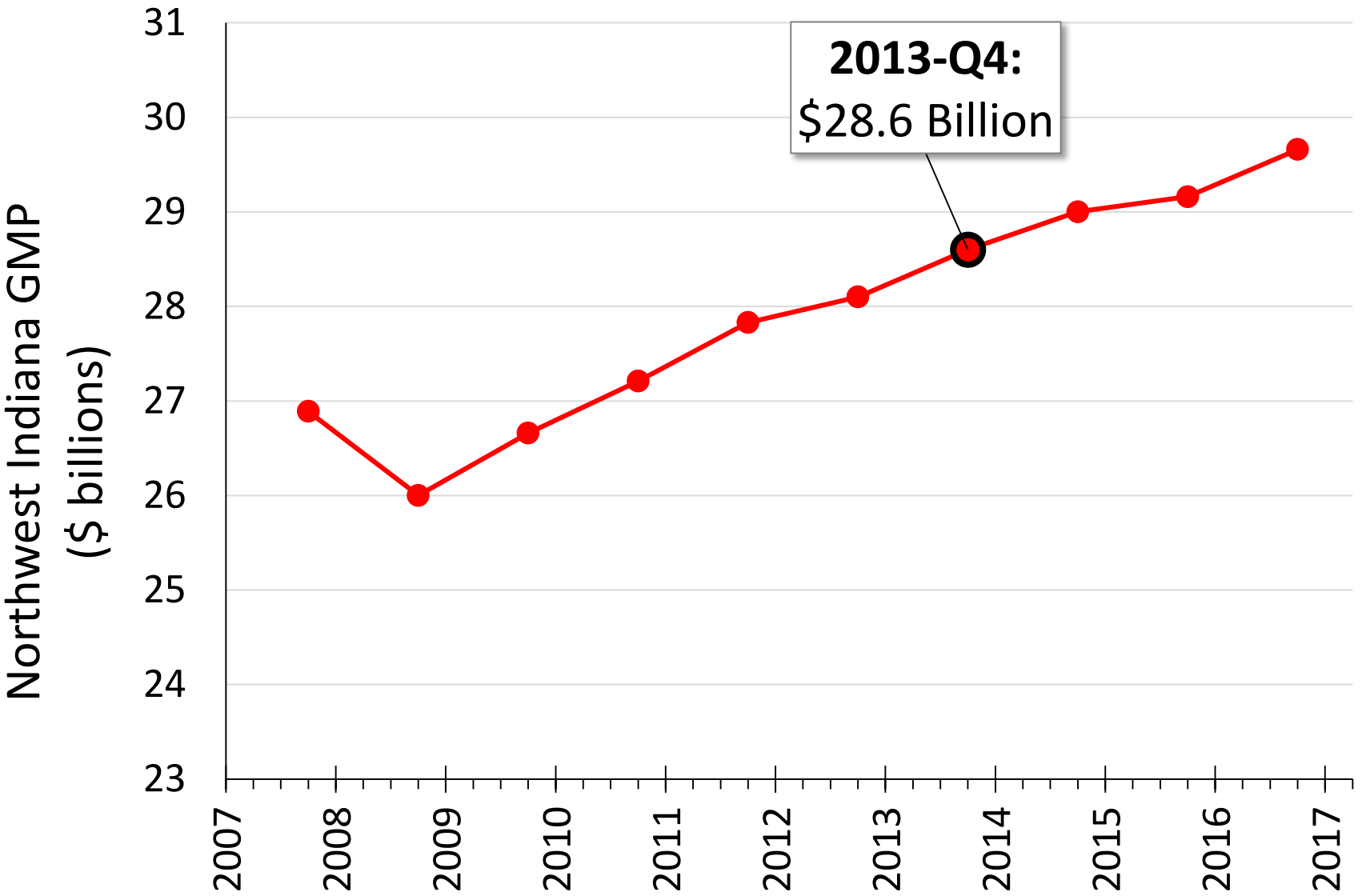

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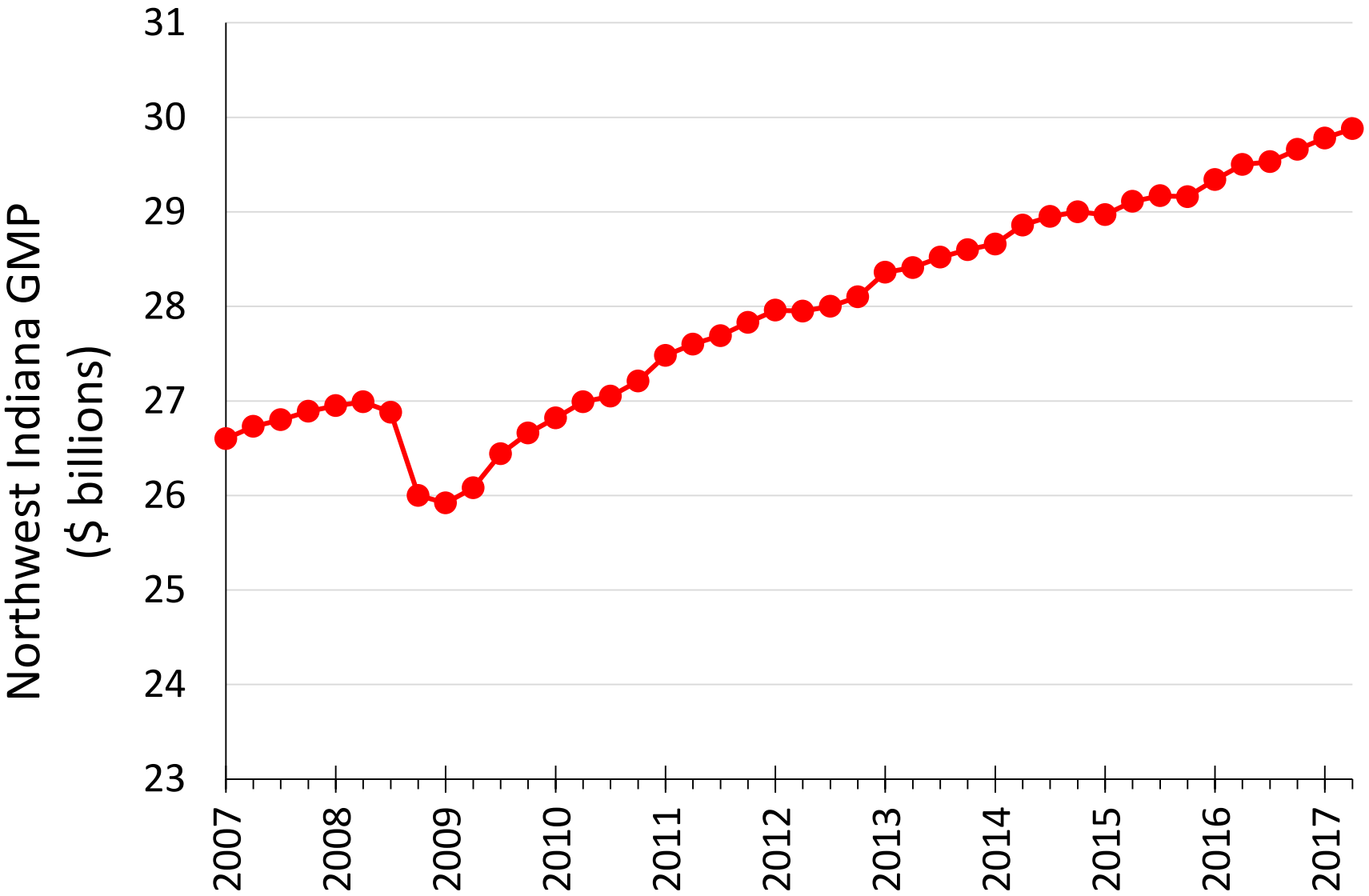

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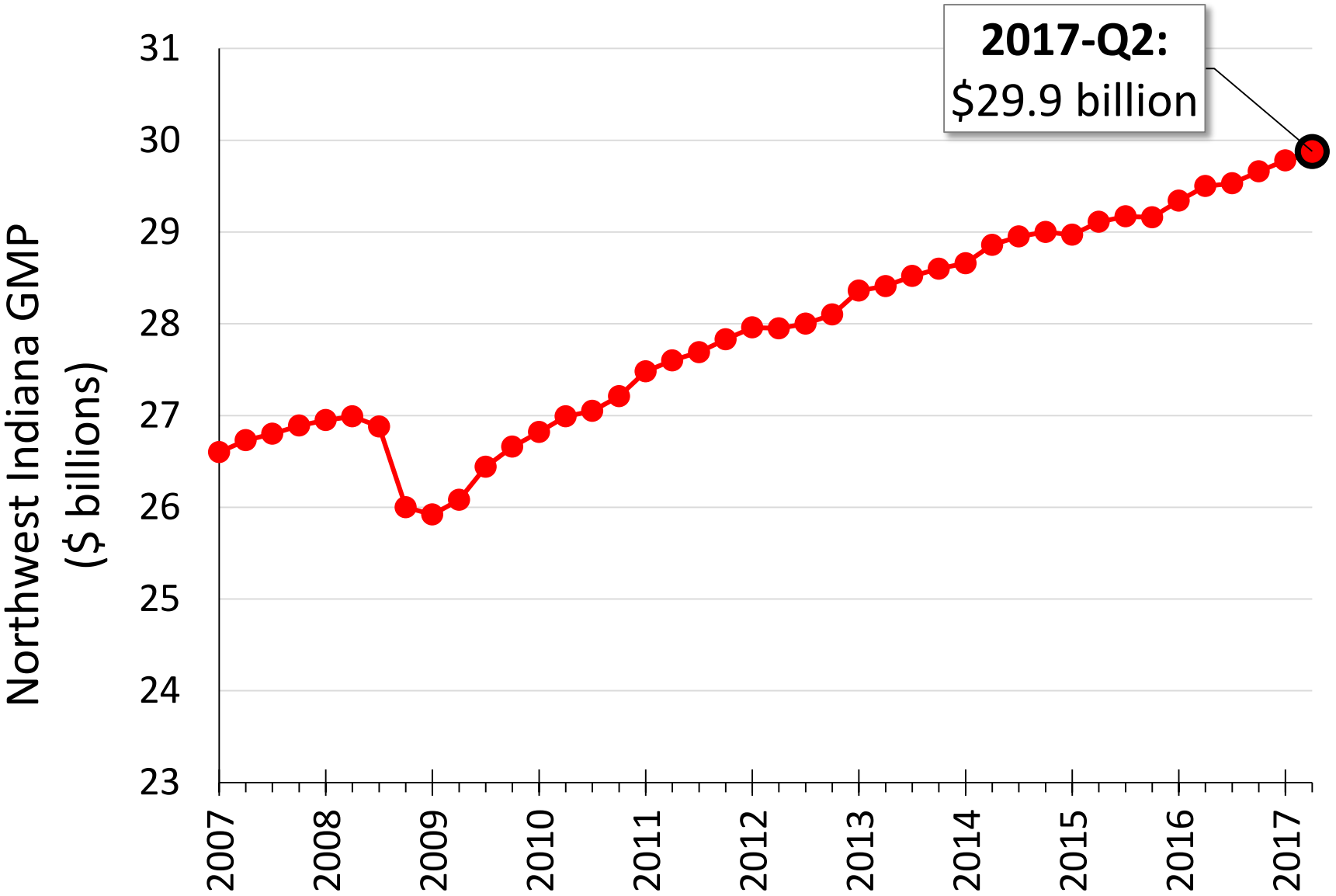

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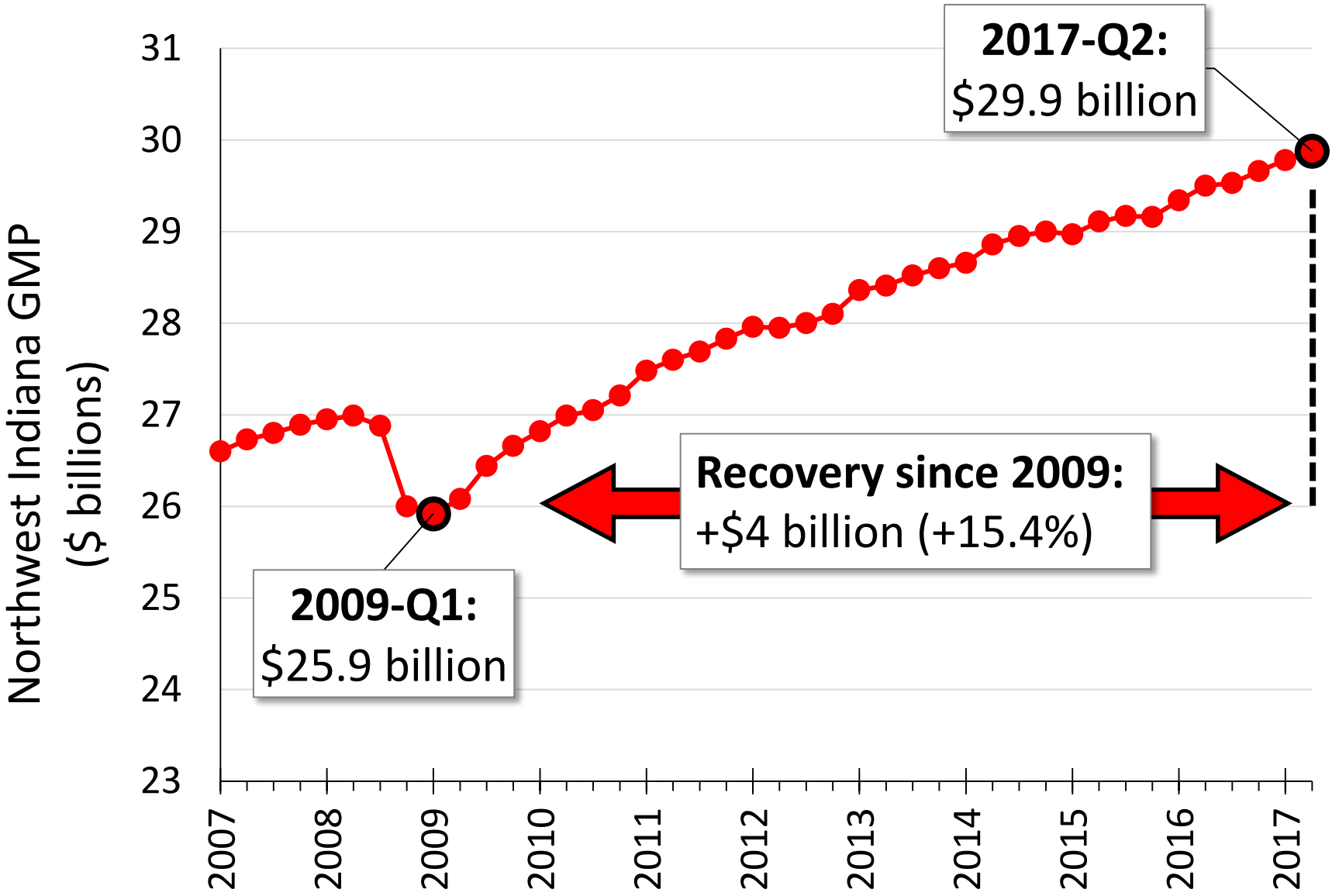


Northwest Indiana GMP

In 2017 (Q2), GMP for **Northwest Indiana** was…

$29.9 billion

Equivalent to:

4.6% of **Chicago metropolitan** area GDP

8.6% of **Indiana** GDP

94.3% of **Vermont** GDP

0.2% of **United States** GDP

- Go one step further:
  - Adjust for **inflation** to get **NWI Real GMP**
  - Adjust for **population** to get **NWI GMP per capita**

Comparison with U.S. and Indiana

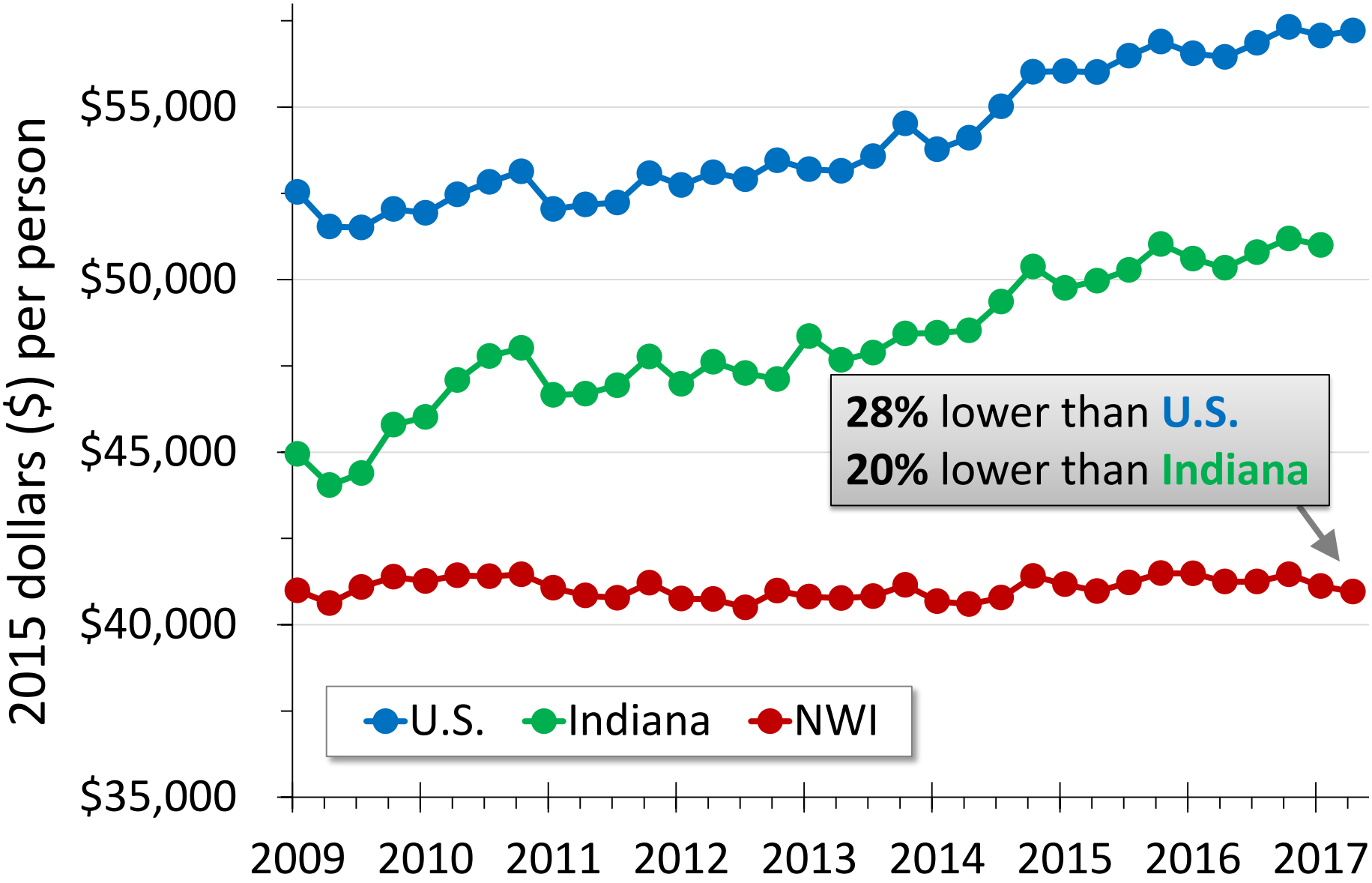
GDP/GMP in 2017:

	United States	State of Indiana	Northwest Indiana
GDP/GMP ($ billions)	**$19,250**	**$349**	**$29.9**
2016-17 growth (nominal)	3.8%	3.6%	1.3%
2016-17 growth (real)	2.2%	1.1%	**-0.3%**

GDP/GMP per capita (per person) in 2017

	United States	State of Indiana	Northwest Indiana
GDP/GMP per person	**$59,253**	**$52,568**	**$42,416**
2016-17 *growth (nominal)*	3.0%	3.2%	0.9%
2016-17 *growth (real)*	1.4%	0.8%	**-0.7%**

Real GMP/GDP per capita



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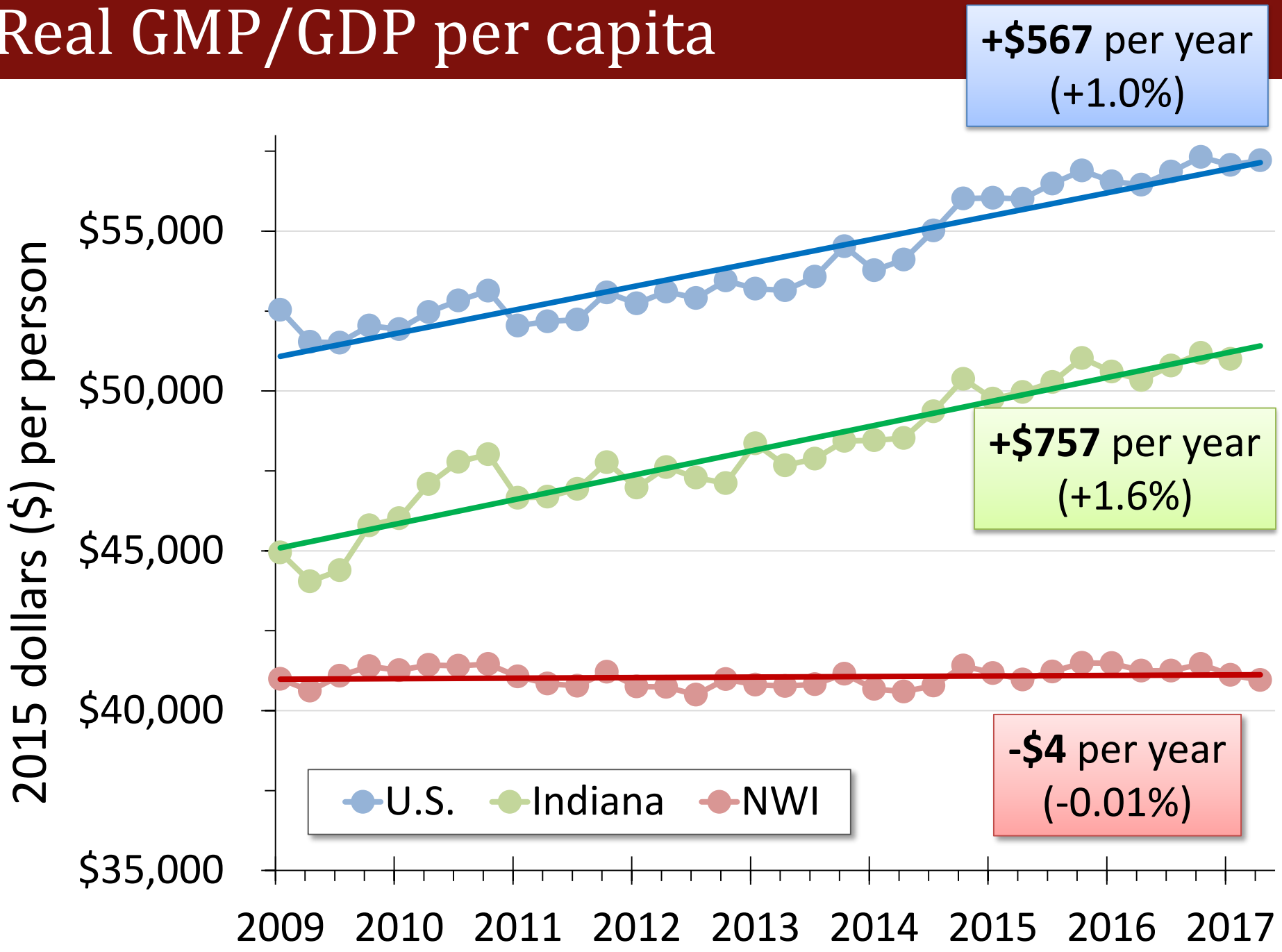
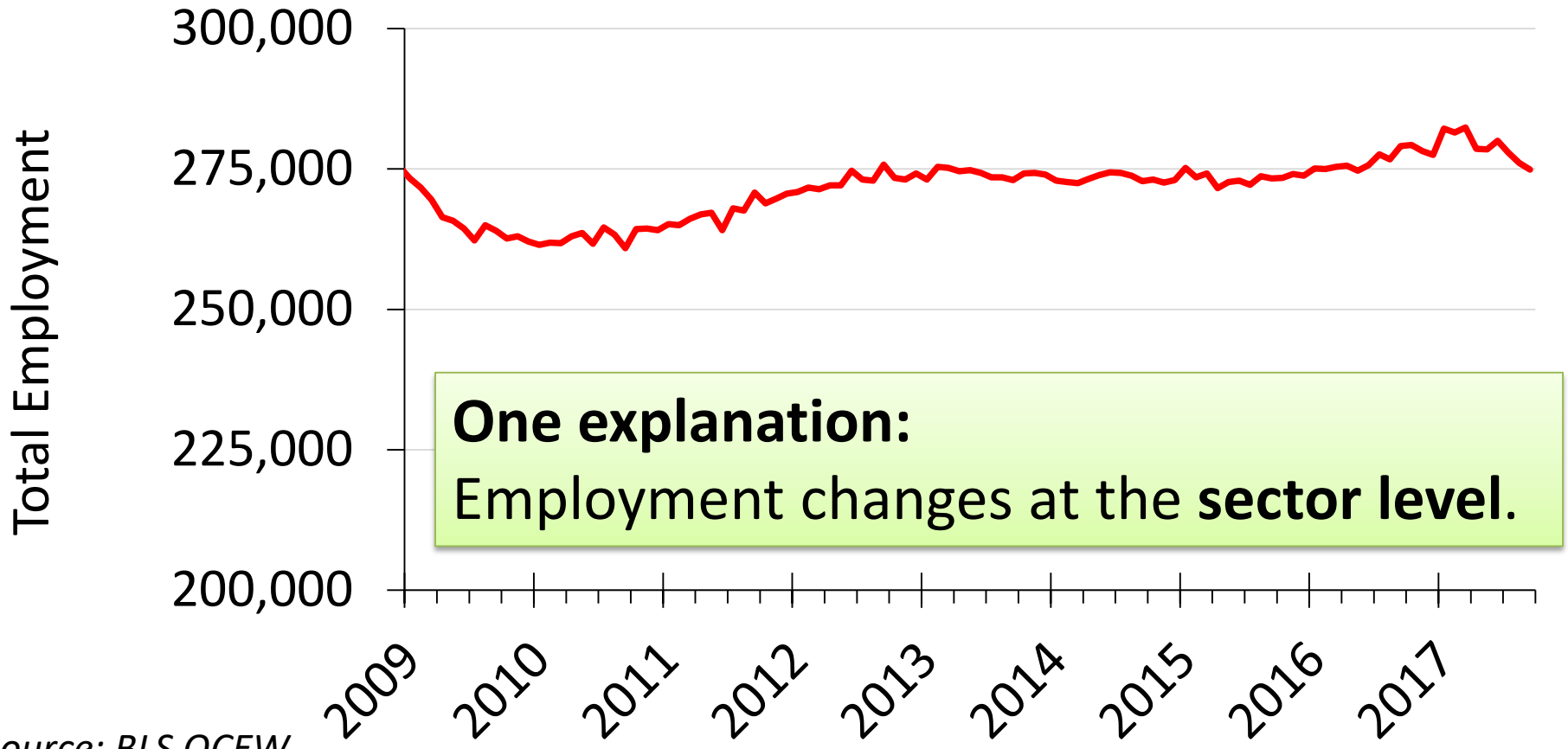


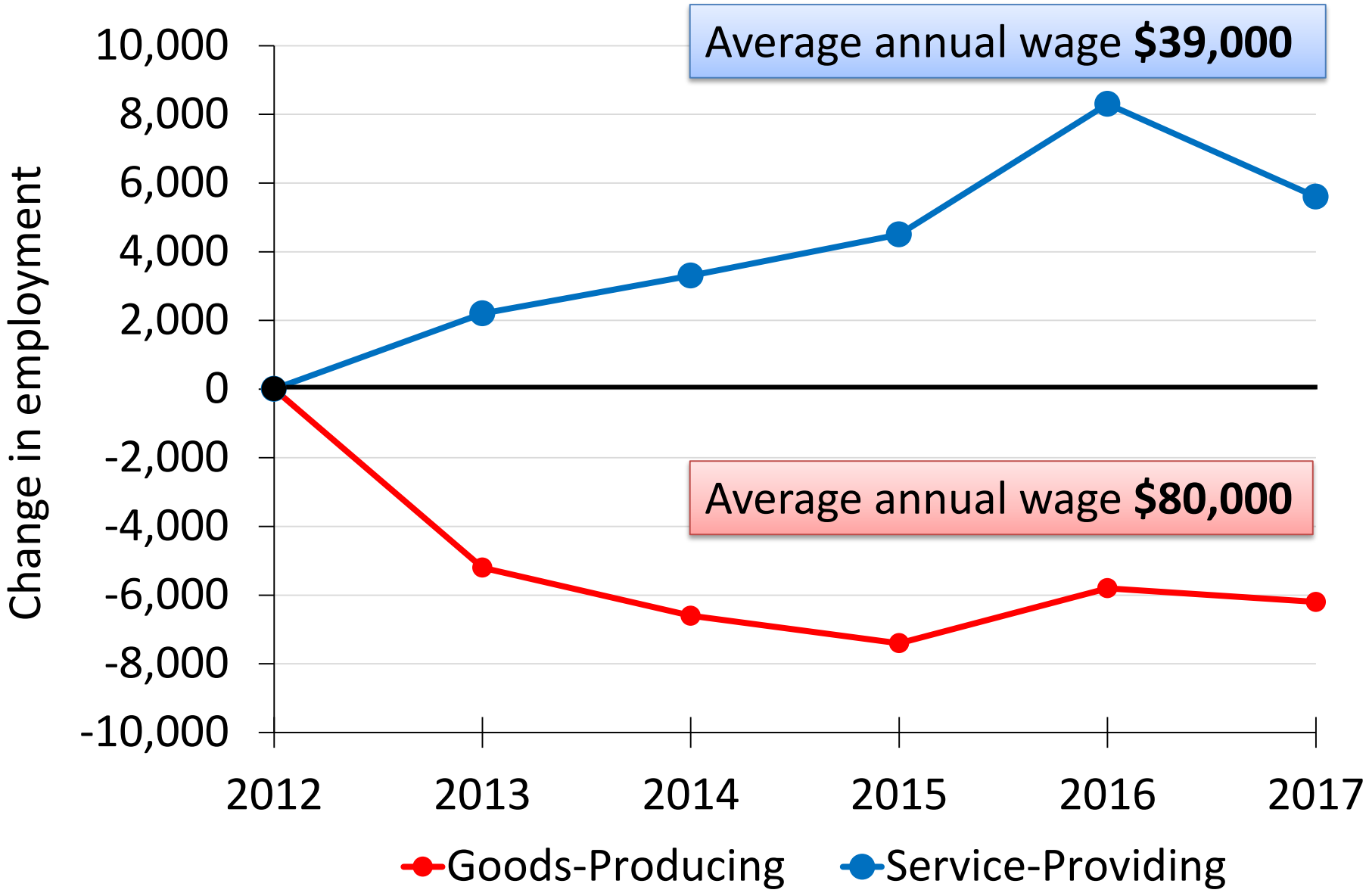
Understanding our Economy

- Since **2009**:
  - Unemployment rate fell from **10.3%** to **4.9%**
  - Total Employment has remained stable/risen:



Source: BLS QCEW

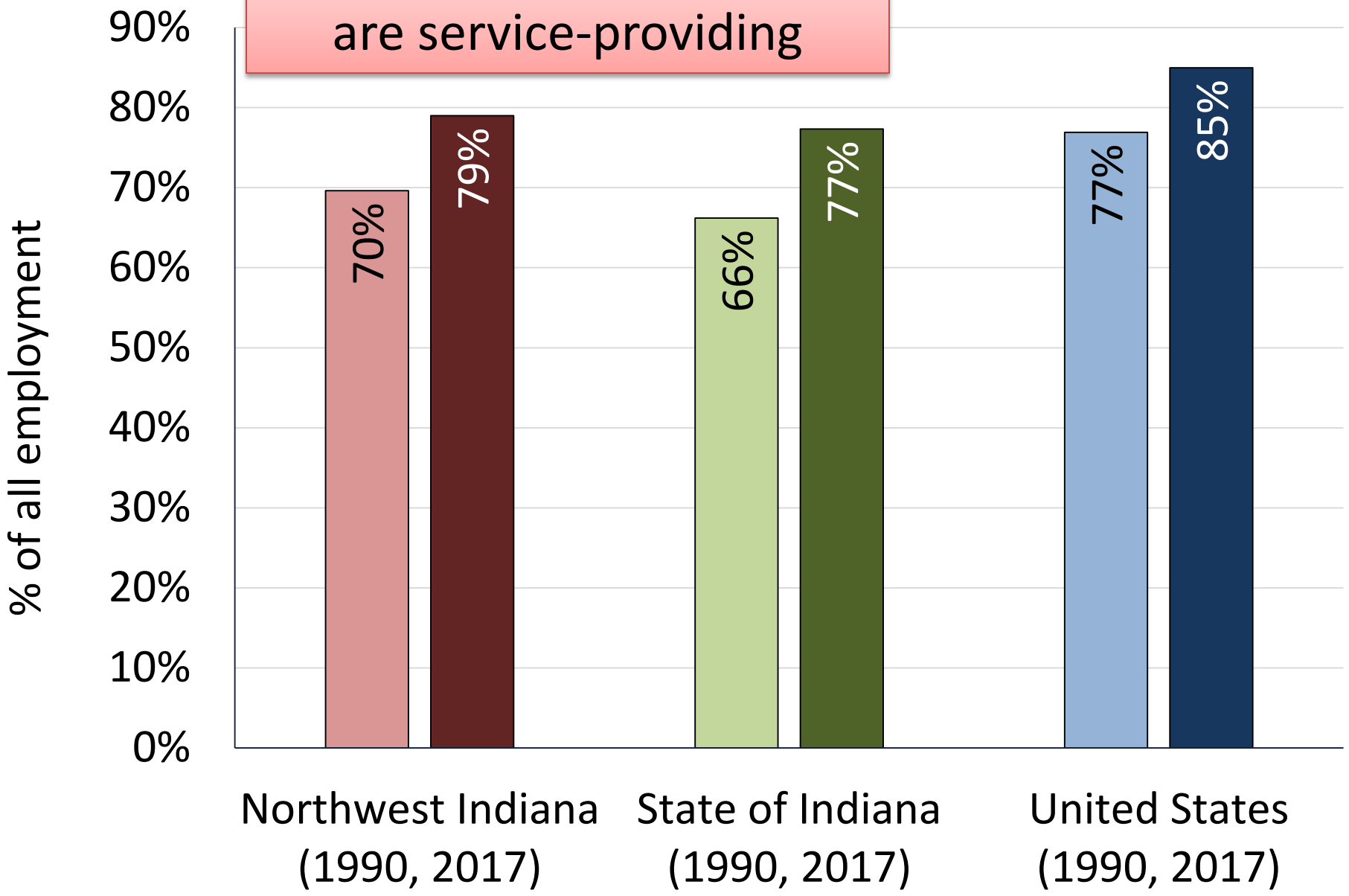
Change in Employment since 2012



Source: BLS QCEW

Continued Rise of Service-Providing Jobs

Four out of every five jobs are service-providing



Source: BLS QCEW

NWI Top 7 Fastest **Growing** Subsectors

NAICS Subsectors	2007-2015 Job Growth	2015 Avg. Annual Pay
1. Ambulatory health care services	+3,059	$54,992
2. Food services and drinking places	+2,456	$13,313
3. General merchandise stores	+669	$18,248
4. Beverage & tobacco manufacturing	**+417**	**$52,446**
5. Animal production and aquaculture	**+405**	**$10,316**
6. Food manufacturing	**+386**	**$33,443**
7. Truck transportation	+374	$37,011
Combined growth & average pay	***+7,766***	***$34,242***

Source: BLS QCEW

NWI Top 7 Fastest **Declining** Subsectors

NAICS Subsectors	2007-2015 Job Decline	2015 Avg. Annual Pay
1. Specialty trade contractors	-1,790	$60,775
2. Amusements, gambling, and recreation	-1,412	$28,106
3. Exec., leg. and gen. government	-1,293	$35,301
4. Machinery manufacturing	-1,237	$58,227
5. Professional and technical services	-1,161	$49,308
6. Merchant wholesalers, durable goods	-981	$53,970
7. Primary metal manufacturing	-796	$89,439
Combined growth & average pay	***-8,670***	***$51,618***

Source: BLS QCEW

U.S Top 10 Fastest **Growing** Subsectors

NAICS Subsectors	Avg. Annual Pay (2015)	
	U.S.	NWI
1. Food services and drinking places	$17,647	$13,313 (-25%)
2. Ambulatory health care services	$58,915	$54,992 (-7%)
3. Social assistance	$23,612	$20,988 (-11%)
4. Professional and technical services	$89,629	$49,308 (-45%)
5. Hospitals	$61,106	$50,642 (-17%)
6. Educational services	$47,213	$31,836 (-33%)
7. Administrative and support services	$36,415	$27,497 (-24%)
8. Mgmt. of companies and enterprises	$116,737	$90,995 (-22%)
9. Nursing and residential care facilities	$30,229	$26,854 (-11%)
10. Food and beverage stores	$23,509	$18,011 (-23%)

Source: BLS QCEW

ALL service-providing subsectors!

U.S Top 10 Fastest **Growing** Subsectors

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	U.S.	NWI	
1. Food servic		13,313	(-25%)
2. Ambulatory		54,992	(-7%)
3. Social assistance	$23,612	$20,988	(-11%)
4. Professional and technical services	$89,629	$49,308	(-45%)
5. Hospit	$61,196	$50,642	(-17%)
6. Educat		36	(-33%)
7. Admin		97	(-24%)
8. Mgmt		95	(-22%)
9. Nursin		54	(-11%)
10. Food		11	(-23%)

Between 2007 and 2015:

- Grew 12.8% across the **United States**
- Declined 12.5% in **Northwest Indiana**

Examples of professional and technical services:

accounting, finance, computer systems, design, consulting, management, advertising, public relations, etc.

"human capital is the major input"
"wholly dependent on worker skills"

ALL service-providing subsectors!

Source: BLS QCEW

What can we do?

1. **Defend manufacturing jobs**
   - **Manufacturing** is "in our blood" but…
   - Declining across the U.S., increased competition over fewer and fewer jobs.

2. **Recognize the future is in knowledge-based jobs**
   - Focus on attracting **high-paying service jobs**. How?
   - Better human capital and education.
   - Education for the knowledge-based economy.
   - College degrees in Northwest Indiana?
     - 15% less than **Indiana,** 30% less than **United States** average.

Index and GMP data available for all

[go.iu.edu/nwi](go.iu.edu/nwi)