W.E. UPJOHN INSTITUTE
FOR EMPLOYMENT RESEARCH

Presentations | Upjohn Research home page

11-3-2017

# A New Business Incentives Database

Timothy J. Bartik
*W.E. Upjohn Institute for Employment Research*, bartik@upjohn.org

## Citation

Bartik, Timothy J. 2017. "A New Business Incentives Database." Presentation prepared for Roundtable on Evaluating Economic Development Tax Incentives, Philadelphia, PA, November 3, 2017.
https://research.upjohn.org/presentations/52

This title is brought to you by the Upjohn Institute. For more information, please contact repository@upjohn.org.

# A New Business Incentives Database

Authors
Timothy J. Bartik, *W.E. Upjohn Institute for Employment Research*

Upjohn Author(s) ORCID Identifier
https://orcid.org/0000-0002-6238-8181

This presentation is available at Upjohn Research: https://research.upjohn.org/presentations/52

# A New Business Incentives Database

**Timothy J. Bartik**
**Senior Economist**
**W.E. Upjohn Institute for Employment Research**
**bartik@upjohn.org**

**November 3, 2017**

**Based on: "A New Panel Database on Business Incentives for Economic Development Offered by State and Local Governments in the United States"**

**Support for this project was provided by the Pew Charitable Trusts. The views expressed in this report and this presentation are those of the author, and do not necessarily reflect the views of the Pew Charitable Trusts or the Upjohn Institute.**

# What is “new” about this new incentives database?

- More industry detail (45 industries, over 90% of wages)
- More years (26 years, 1990-2015)
- 33 states (over 90% of US output)
- Detail on 5 incentive types: job creation tax credits, property tax abatements, investment tax credits, R&D credits, customized training
- Detail on incentive time pattern: how varies from Year One to Year 20 for new facility
- Free, open-access database

# Database helps address these questions

- Is magnitude of incentives enough to significantly affect business location decisions?
- Do high-unemployment states offer more incentives?
- Do states target high-wage industries?
- Do states emphasize more “efficient” incentives?
  - e.g., frontloaded incentives, customized services
- How much do incentives matter for growth?
- For evaluation of an individual state, database provides useful context, and model for what questions to ask and what methodological tools to use.

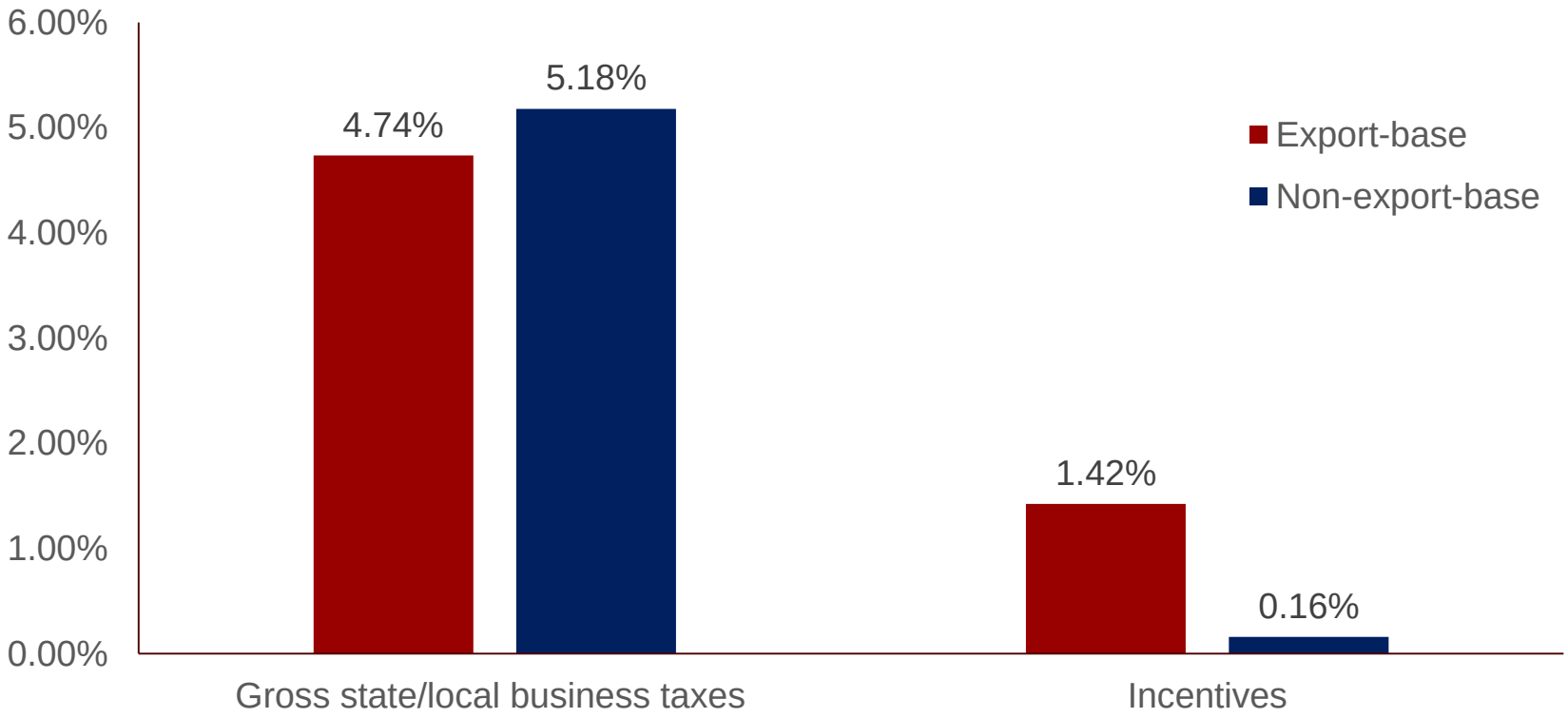
# Methodology of database

- Hypothetical firm model
- Assumes new facility that opens up in base year, stays at same scale for 20 years. Taxes & incentives of base year projected forward
- Tax & incentive calculations based on BEA/IRS data on how mix of jobs, real property, machinery/equipment, R&D, and wage rates vary by industry.
- Taxes included are property taxes, sales tax on business inputs, and corporate income tax.
- Incentives included are job creation tax credits, property tax abatements, investment tax credits, R&D credits, and customized job training.
- Incentives only included if they are part of “usual deal.”

# Database's outputs

- Taxes and incentives of each type for each of 20 years of facility operation, for 45 industries, 33 states, and 26 starting years.
- Taxes/incentives calculated as % of "value-added" = measure of firm's production = value of firm's sales minus its inputs from other businesses.
- Also calculate weighted average for 31 "export-base" industries: industries that sell goods/services outside state, bringing new $ into state.
- Report/database focus on "present value" of taxes/incentives as % of present value of value-added over those 20 years.
- Present value is calculated using very high 12% real discount rate. Why? Research evidence that this is discount rate corporate executives use in evaluating investment decisions.
- Implications of 12%: future heavily discounted. $ in year 10 worth only $0.36 in Year One.

# 2015 National Average for Incentives: 1.42% of value-added for export-base industries




NOTE: 2015 U.S. average, as percentage of value-added. Figures are for state/local business taxes, and state/local incentives.
SOURCE: Bartik (2017).

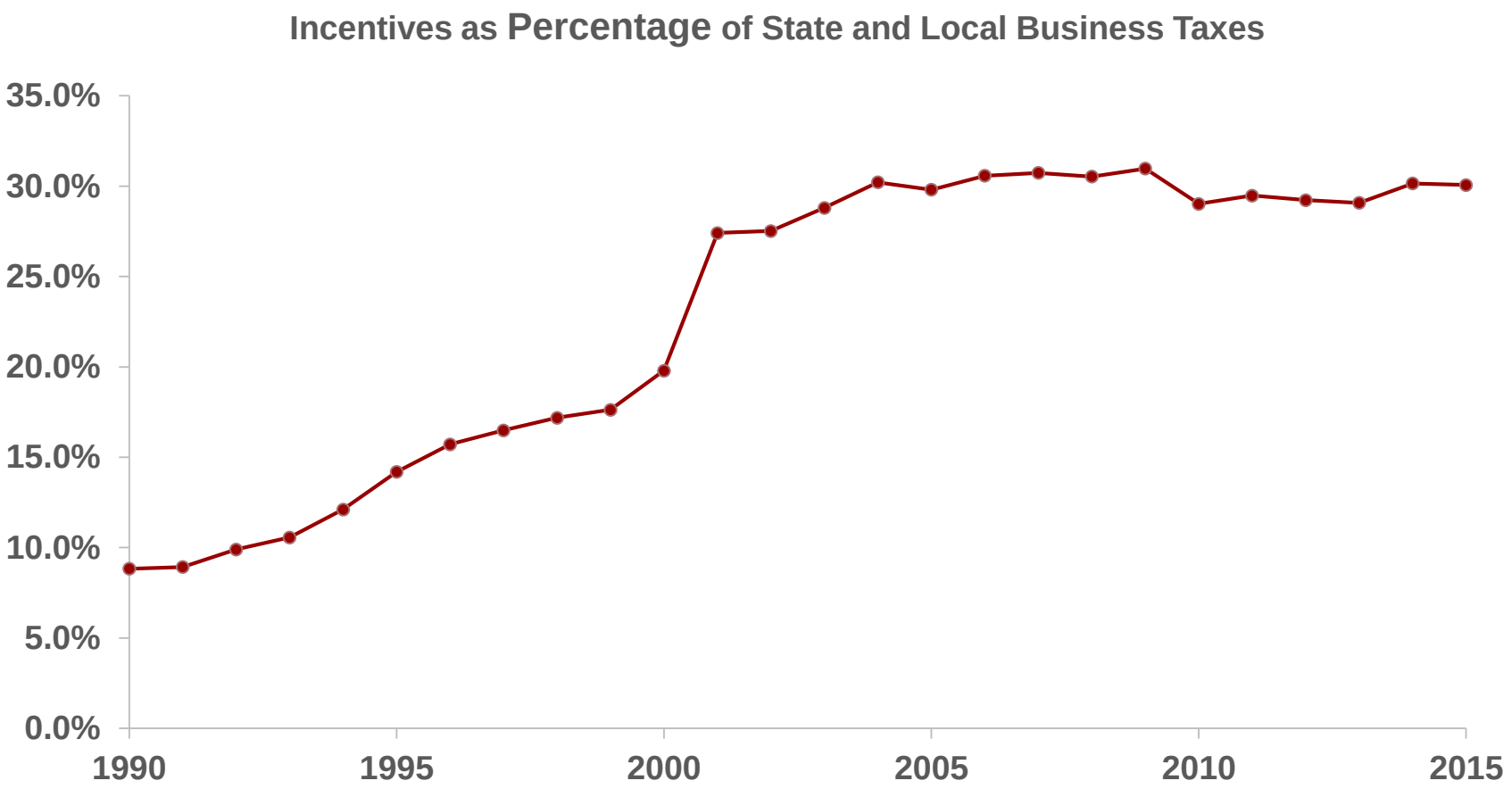
# Is 1.42% of value-added large?

- Large? 5.83% of business profits, 30.1% of state/local business taxes, annual national cost of $45 billion
- Small? 0.63% of sales, 3.07% of regular wages, $2,326 per worker "job-year"
- Based on literature on how taxes affect location decisions, reduced costs of 1% of value-added increases location decisions by 3 to 17 times as much
- Therefore, 1.42% cost reduction as % of value-added should tip between 4% and 24% of location decisions.

# Incentives vary a lot across states, even nearby states

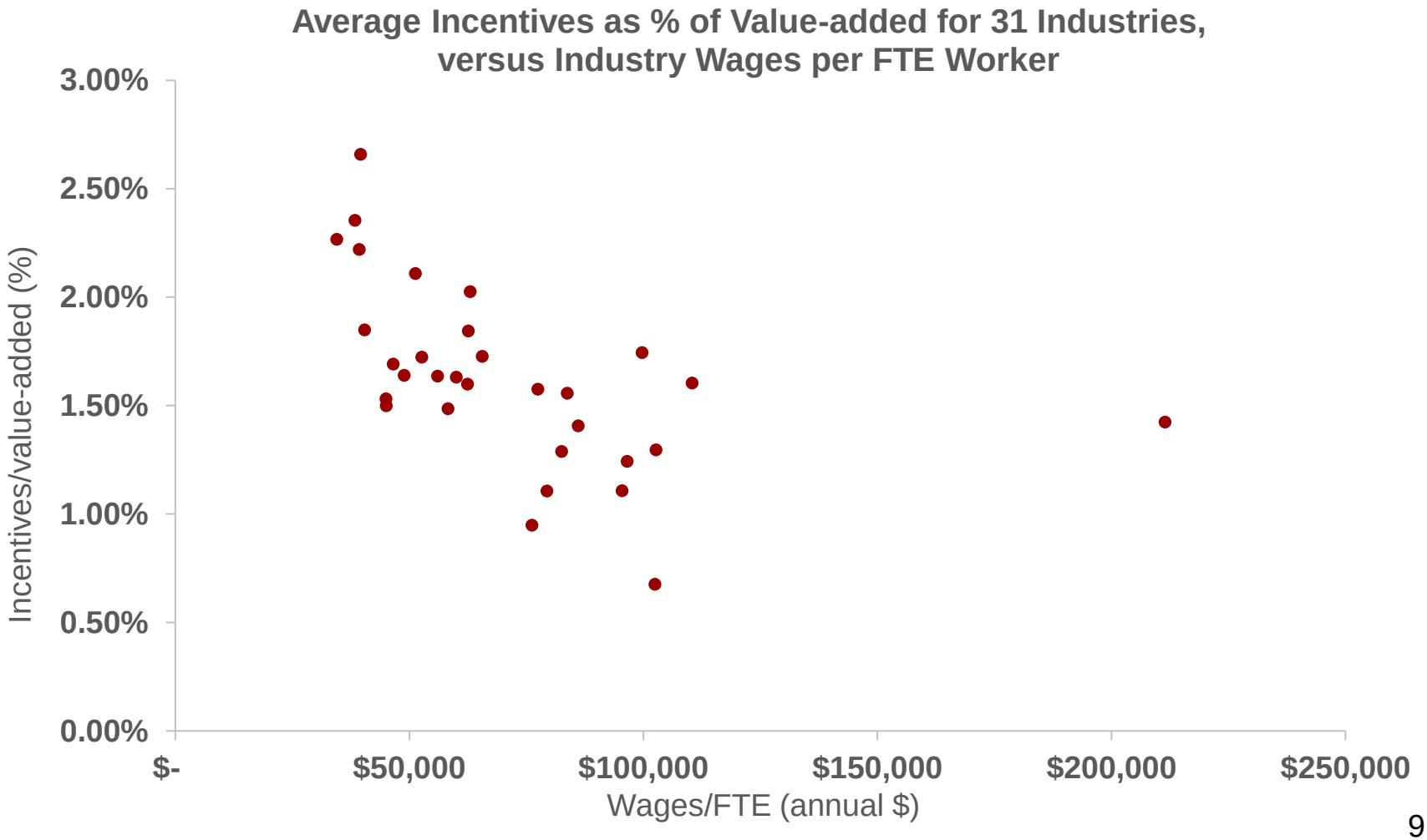
- New Mexico: 4.23% of value-added; Arizona: 1.06%
- New York: 3.53%; Connecticut: 0.65%
- Louisiana: 3.33%; Texas: 1.24%
- Indiana: 2.68%; Illinois: 1.35%
- S. Carolina: 2.39%; N. Carolina: 0.93%
- Wisconsin: 1.52%; Minnesota: 1.14%
- Oregon: 0.70%; Washington: 0.09%

# Incentives have tripled since 1990

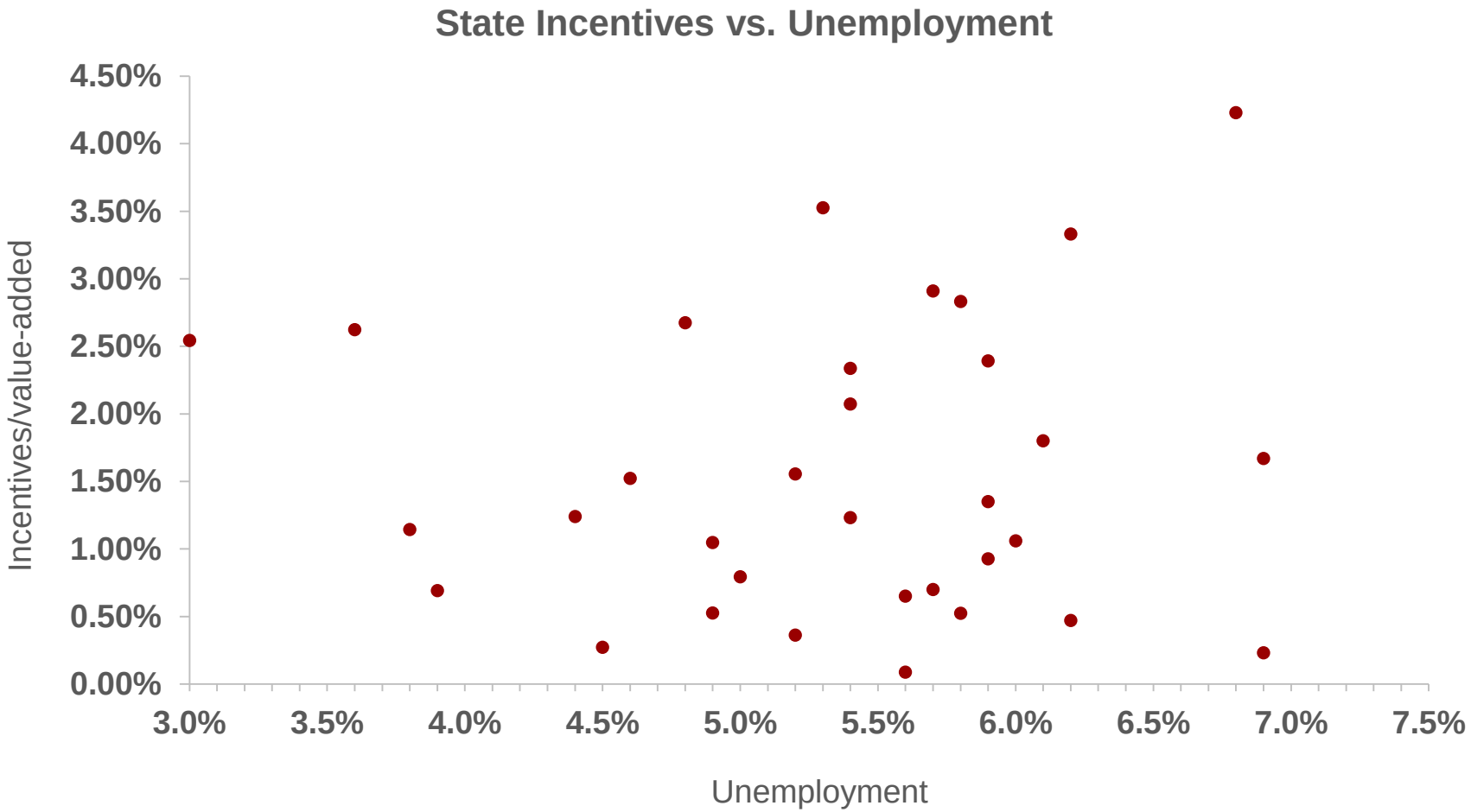



SOURCE: Author's calculations.

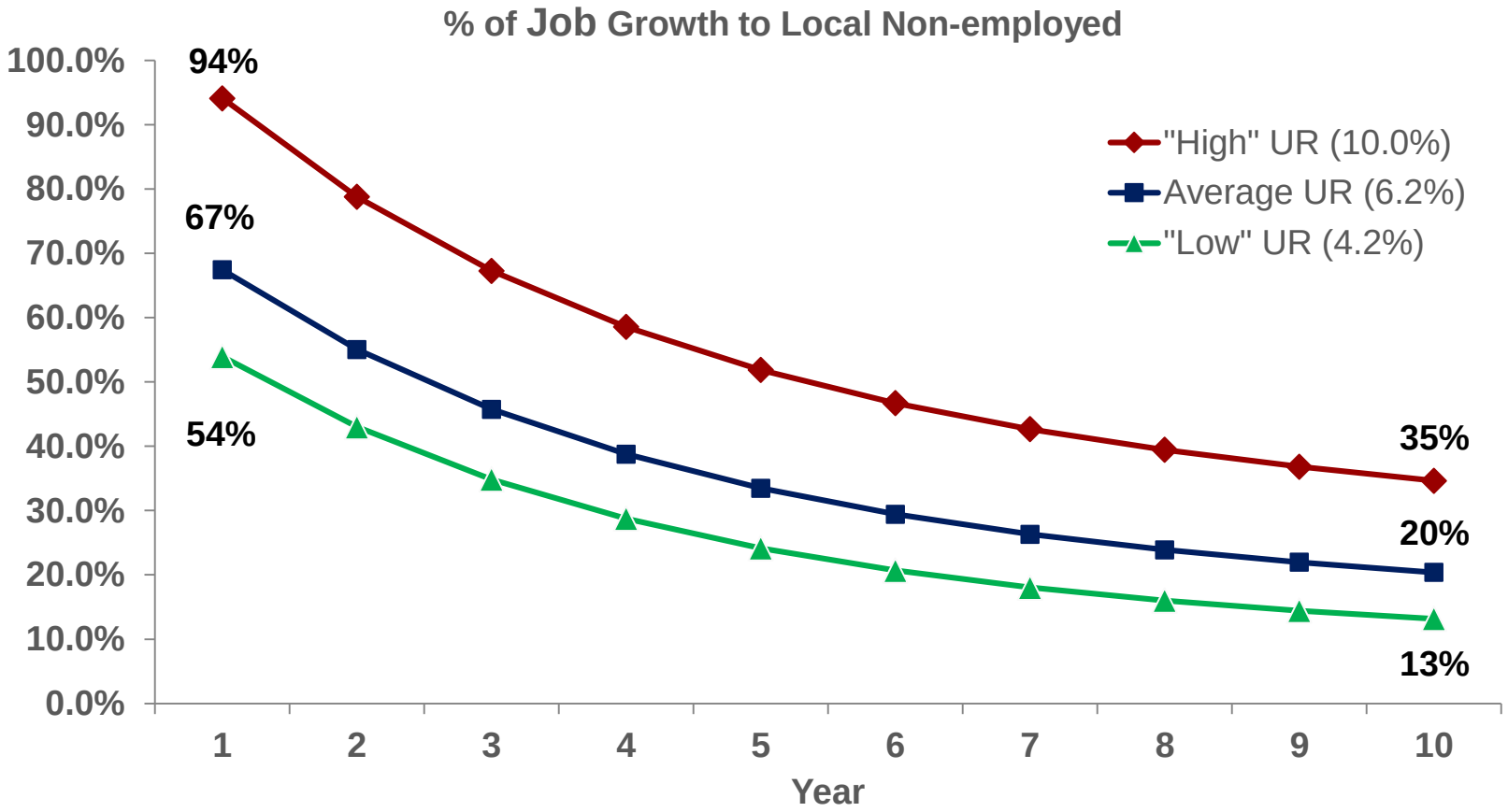
# Incentives don't vary enough with industry characteristics that predict how much new industry will benefit state residents. For example, not much variation with wages:



# What determines incentives? Doesn't have much to do with a state's unemployment rate

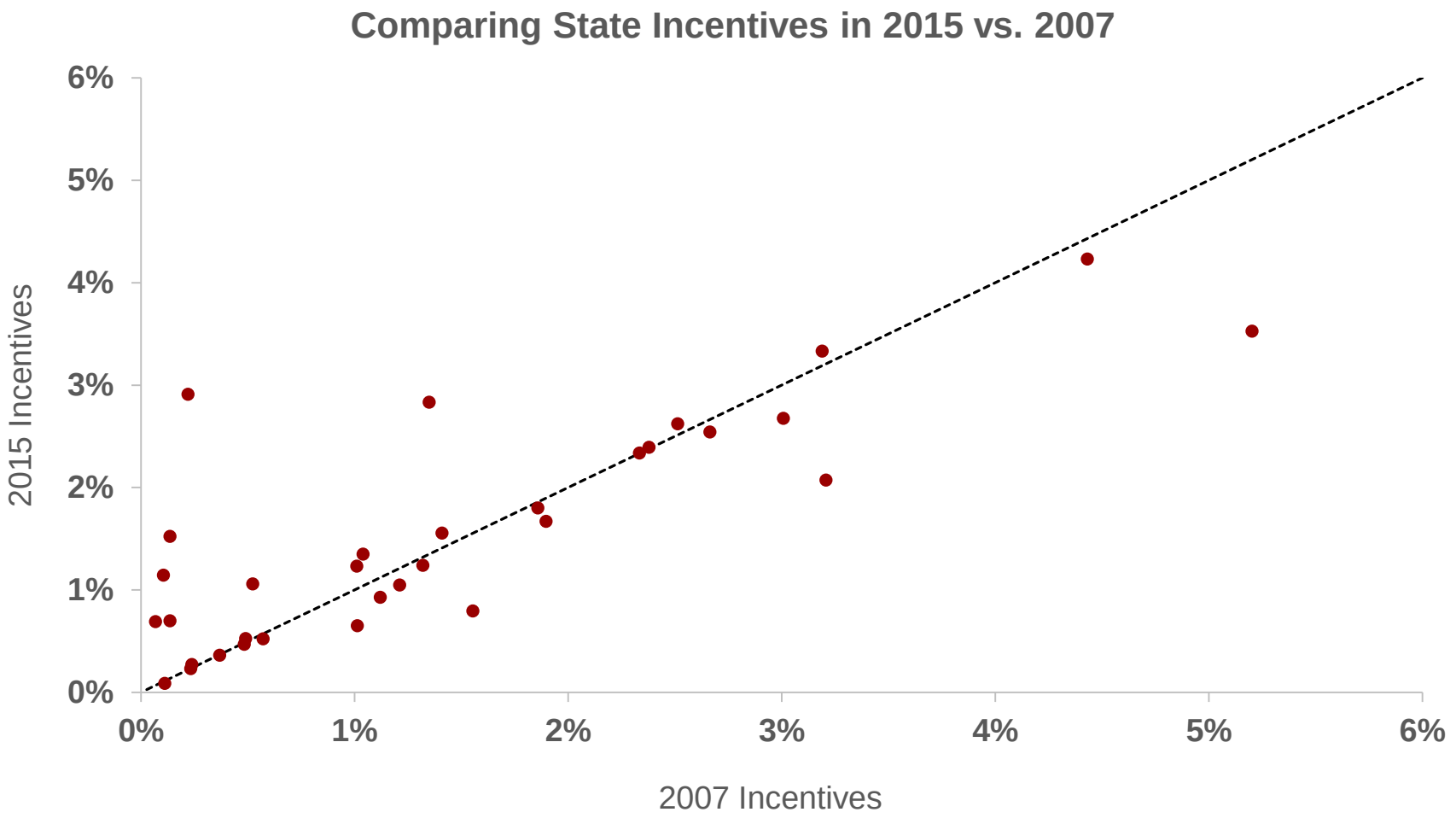


# Job growth increases employment to population ratios more when unemployment is high: This increases labor market and fiscal benefits of new jobs.

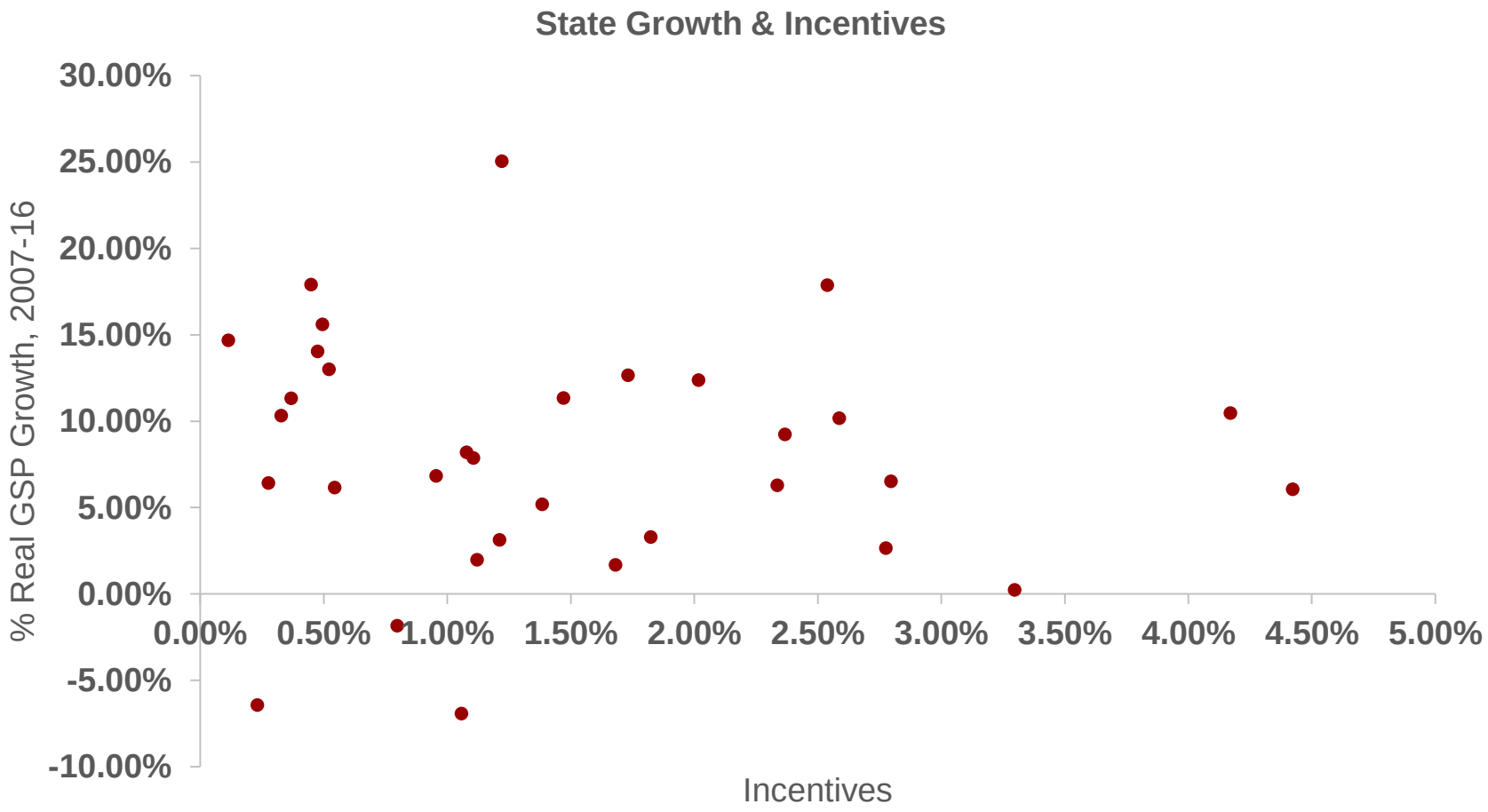



SOURCE: Bartik, T. (2015). *Growth and Change*.

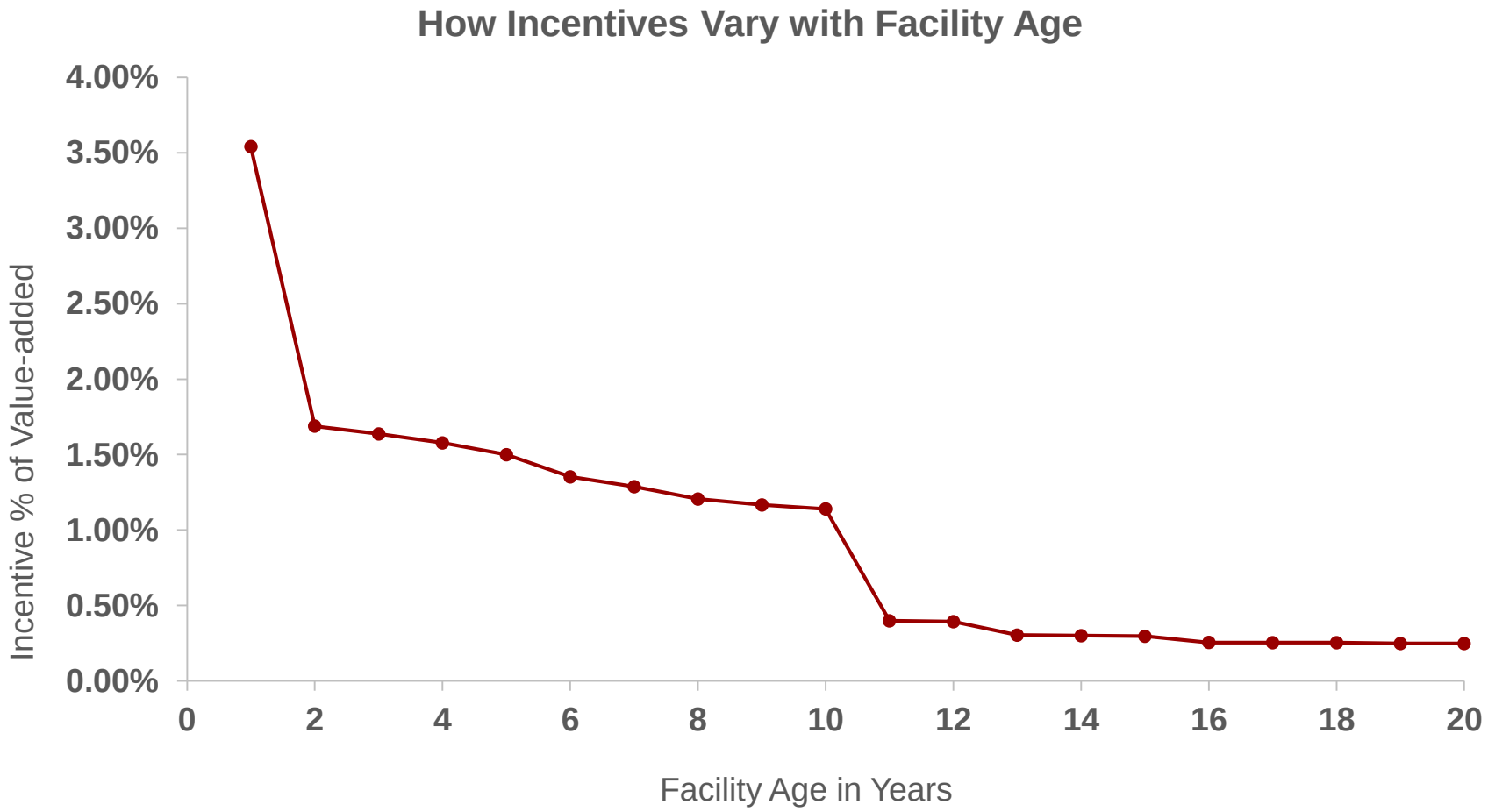
# Biggest determinant of a state's incentives is its past incentives



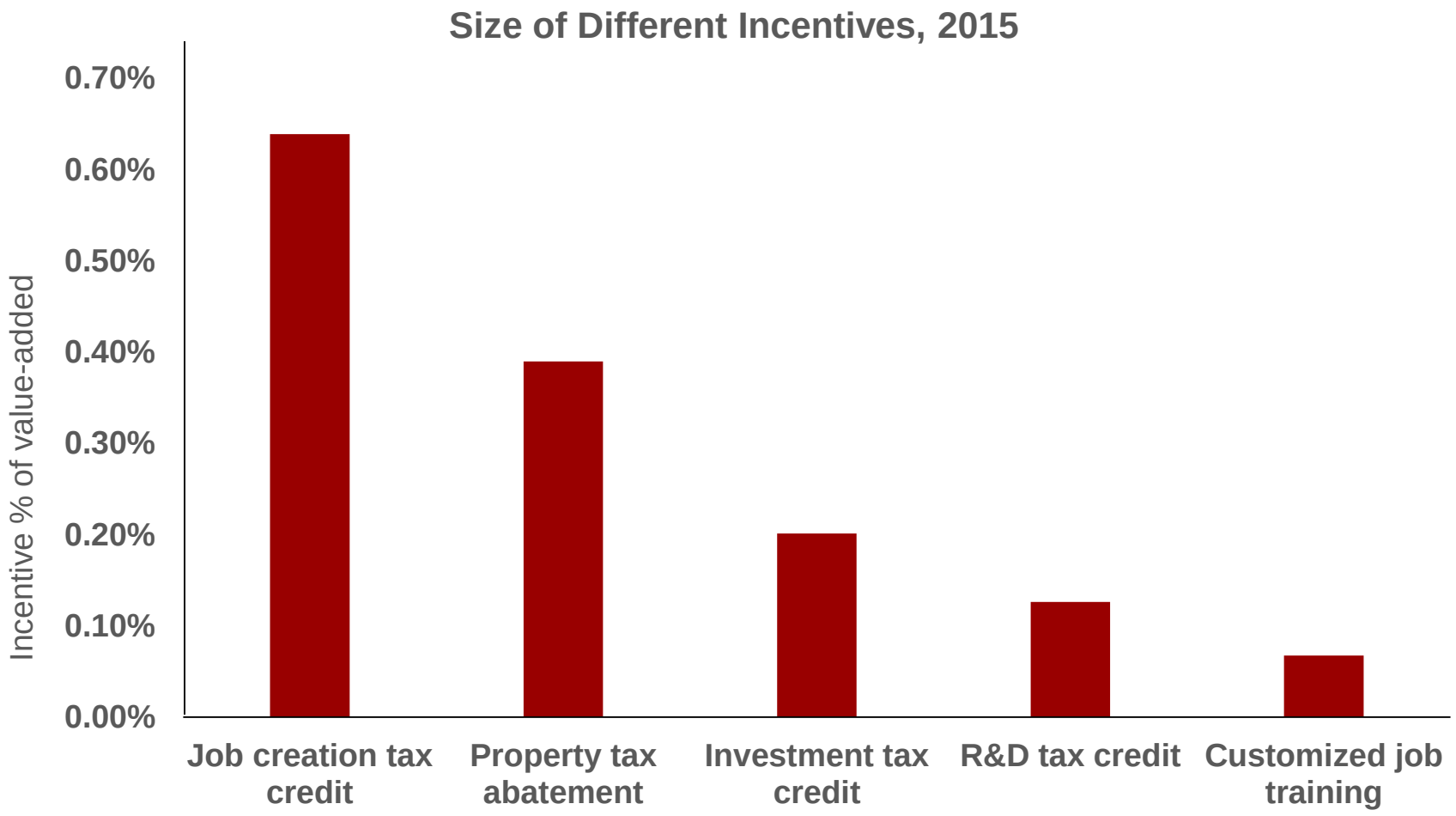
# What are effects of incentives? No obvious strong effects of incentives on state growth



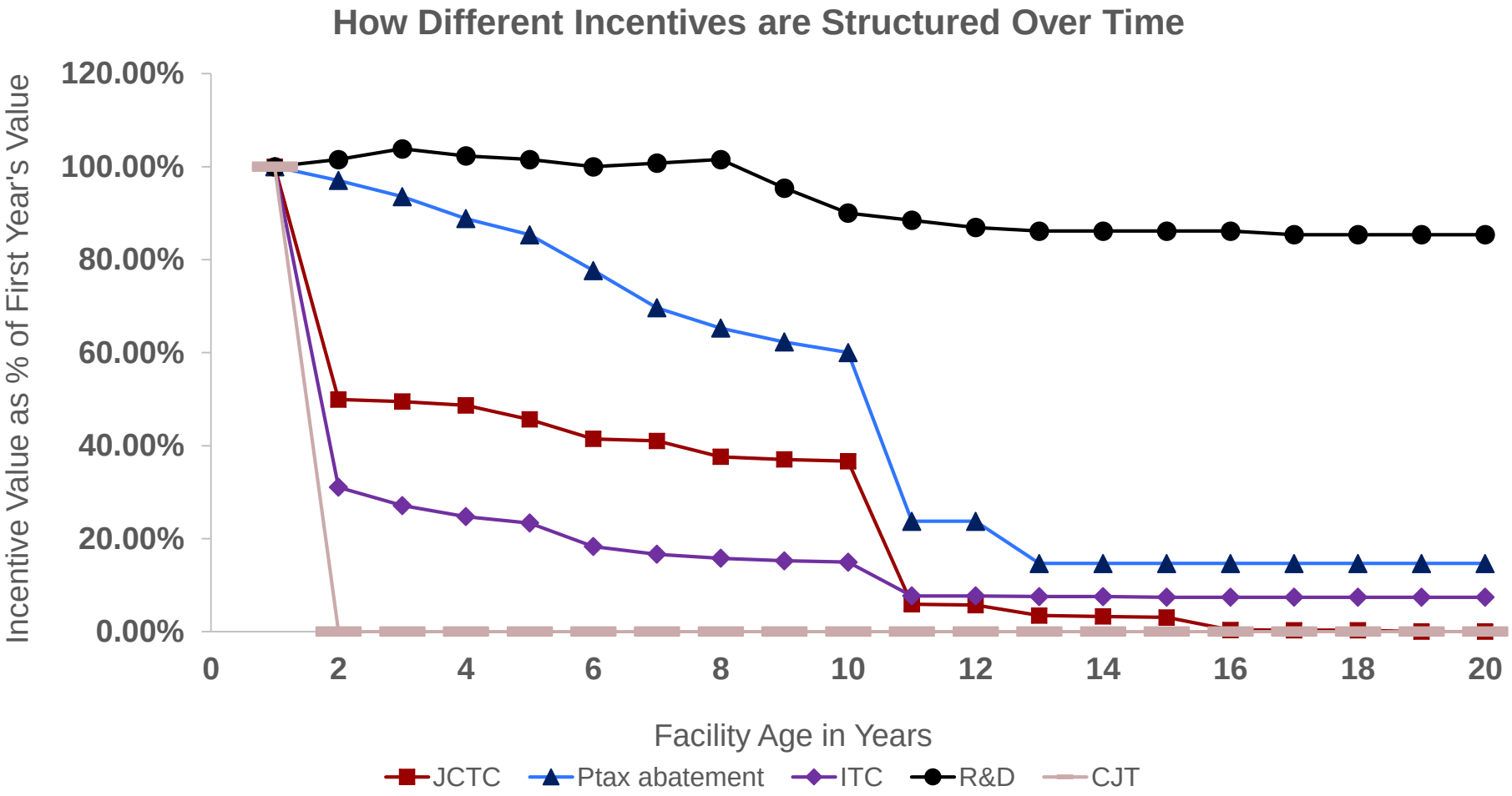
# What is time pattern of incentives? Front-loaded, but full incentive payout still delayed, which is economically inefficient and politically problematic



# What types of incentives are most important? JCTCs & abatements



# Time structure of different incentives: JCTCs, abatements, & R&D have lengthy payouts; ITCs & customized training more front-loaded



# Research on customized services

- Some research on customized job training find effects per dollar on job creation decisions of perhaps 10 times tax incentives: Hollenbeck (2008), Holzer et al. (1993), and Hoyt, Jepsen, and Troske (2008).

- Some research on manufacturing extension services find similarly high cost-effectiveness ratios: Jarmin (1998; 1999), Ehlen (2001).

- Why? (1) Targeted at small/medium-sized businesses, which are easier to affect; (2) Upfront, so more salient; (3) Overcoming market failures in information & education markets, so can have value greater than cost.

- Why don't states use more? (1) Harder to deliver; (2) Less politically visible; (3) Doesn't help larger businesses as much.

# Conclusions

- Incentives are large relative to state budgets, not necessarily large relative to private economy. But probably some incentives large enough to have significant effect on specific location decisions.
- Vary a lot across states (based more on political inertia than economic need?)
- Don’t vary enough across industries (the “reverse potato chip” rule?)
- Too long-term, not front-loaded enough
- Over-emphasis on tax incentives, under-emphasis on services to smaller businesses