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## Benefits vs. Costs of Business Incentives

Timothy J. Bartik

*W.E. Upjohn Institute*, [bartik@upjohn.org](mailto:bartik@upjohn.org)

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# Benefits vs. Costs of Business Incentives

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**Timothy J. Bartik**

**Senior Economist**

**W.E. Upjohn Institute for Employment Research**

**[bartik@upjohn.org](mailto:bartik@upjohn.org)**

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# What is incentives' goal?

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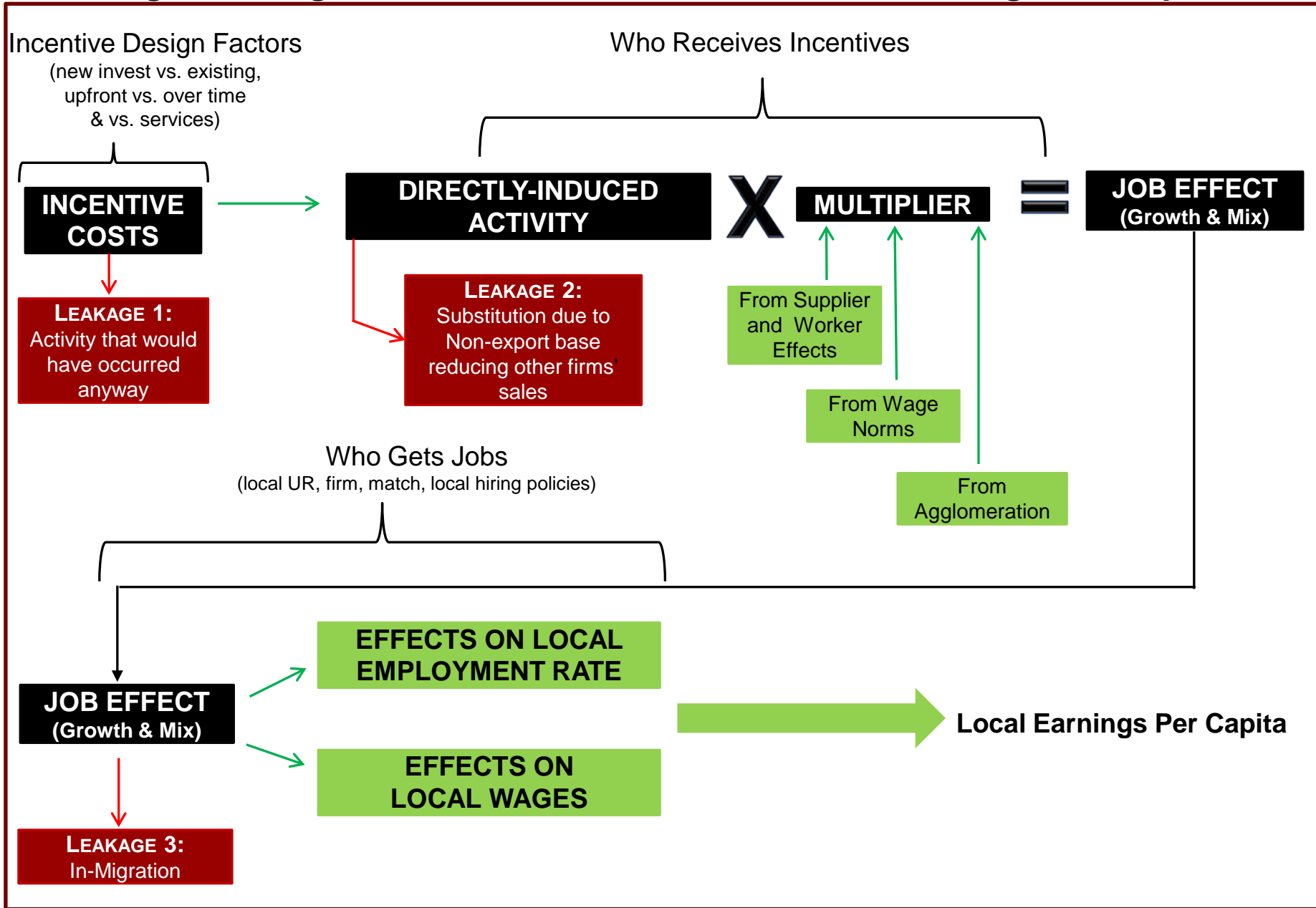
- Goal: Increase in per-cap income of original residents, mostly due to higher earnings per cap due to higher employment rates & wages.
- Why original residents? (1) They're paying for incentives; (2) In-migrants have minimal gains.
- Why earnings focus? What about fiscal benefits? Fiscal benefits small because: (1) state/local fisc captures small portion of increased earnings; (2) limited responsiveness of S/L taxes to growth; (3) job growth increases pop growth 80% as much, which has large fiscal costs.
- Fiscal benefits of job growth typically less than 10% of earnings per capita benefits.

# Implications of targeting incentives on goal of higher earnings per capita

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- Incentive ROI models should compare present value of higher earnings per capita with PV of incentive costs.
- Incentive policy should be viewed as a type of state labor demand policy & part of overall state labor market policies. Coordination with other state labor market policies (e.g., training, education) should be considered.
- Incentive policy must consider what jobs pay, not just jobs created.
- Incentive policy must consider who gets jobs, not just # and types of jobs created.
- Maximizing jobs growth or earnings growth or gross state product growth not same as maximizing earnings per capita.

# Figure 1 Logic Model for How Incentives Affect Earnings Per Capita



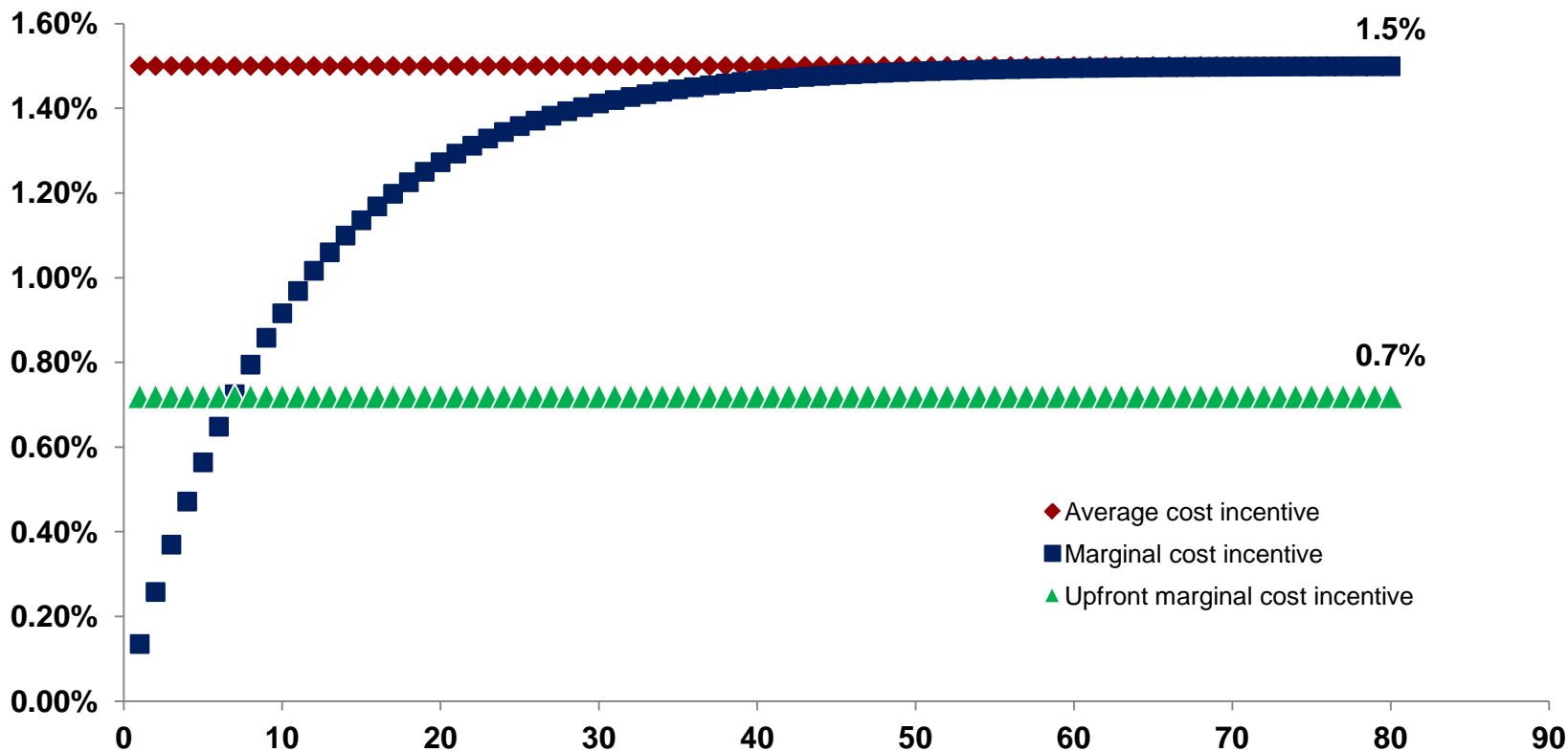
# Incentive design (Part 1): How sensitive is business investment to costs?

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- Cost reduction = 1% of value-added has average effect of increasing LR economic activity by 4%.
- Although mean is 4% effect, plausible range from 1% to 12%.
- Larger effects more plausible if special reasons for higher sensitivity (footloose large multinationals? Metro areas straddling border?)
- Avg. state/local incentive package = 1.5% of value-added, which implies increases economic activity by 6%. 5.7% ( $=.06/1.06$ ) of incented activity is induced.
- At extreme, 5% of VA incentive might increase economic activity by 60% ( $12*5$ ). 38% ( $.60/1.60$ ) of incented activity is induced.
- Conclusion: incentive models must allow for large deadweight loss

# Relative incentive costs to government of different mechanisms of delivering a MC reduction: new vs. old capital, timing

Annual costs of three incentive designs that lower marginal costs of new investment by 1.5%



NOTE: Vertical axis shows incentive costs as percentage of industry VA. Horizontal axis is year since incentive regime started. Assumptions: 9% annual job creation and destruction in incented industry; firms use 12% discount rate.

# Lowering PV of governmental cost of delivering a particular MC reduction via incentives

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- Always better to target new capital rather than including old capital.
- If “social discount rate” is less than 12% used by firms, than upfront incentives have lower PV to achieve a given MC reduction.
- Relative costs versus AC incentive: At 3% discount rate, MC incentive costs have 75% of PV costs, upfront MC incentive has PV of 48%; at 7% discount rate, PV ratios are 60% and 48%.
- Other issues: clawbacks; budget planning and sustainability.
- Customized services (e.g., customized training, MEP) have been found to sometimes reduce business costs by 2 times their governmental costs. Implication: can lower PV costs to 24% of AC incentive



# Who gets incentives: export-base, multipliers, and wage premia

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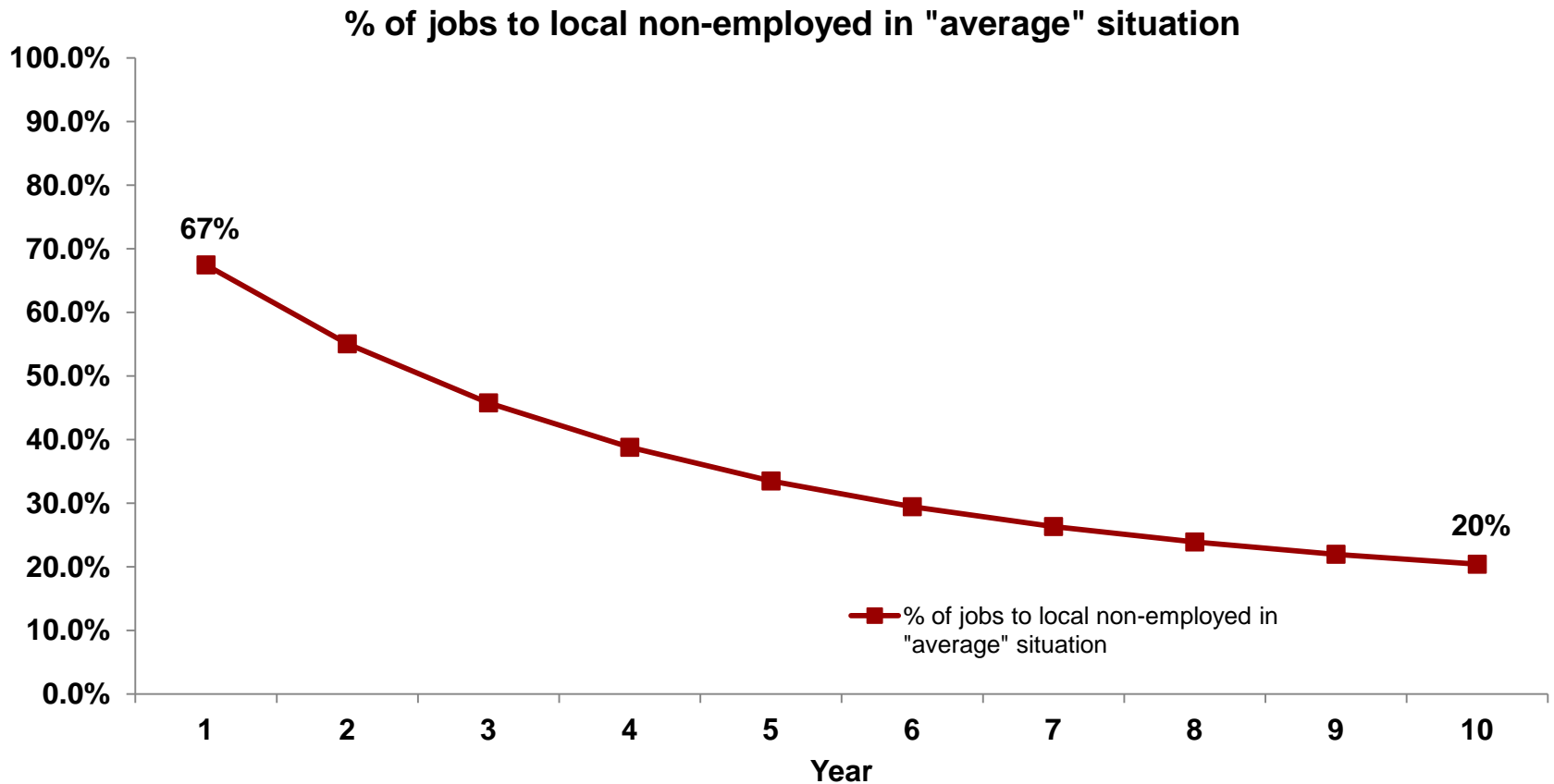
- If incented activity is not export-base, has no multiplier or even net direct effects on incented industry.
- Benefit-cost ratio of incentives varies proportionately with multiplier.
- Recent research by Moretti suggests multiplier not just determined by input-output relationships, but also by cluster/agglomeration effects (e.g., estimated multiplier of 6 for high tech).
- Wage premia of incented jobs also matters. Rule of thumb: simulations suggest that 10% higher wages in incented firms increases earnings per cap benefits of incentives by about 10%.

# Who gets the jobs: the vacancy chain logic

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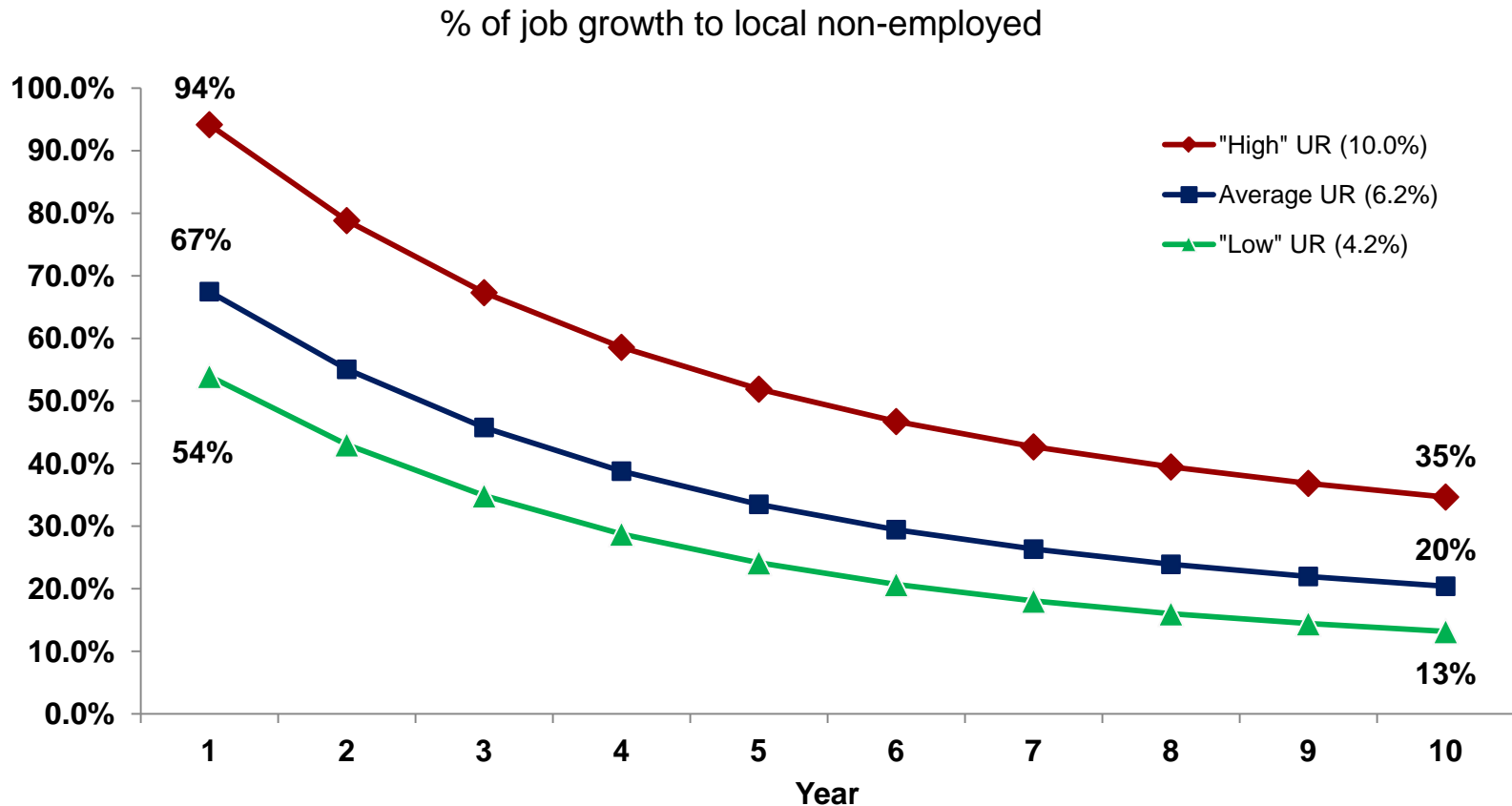
- Ultimately, newly created jobs must result either in employment of local non-employed, or employment of in-migrants.
- If created jobs hire mix of local non-employed/in-migrants/local employed, the jobs filled by local employed create other vacancies, which are filled also by some mix.
- This vacancy chain is only terminated when net new jobs are divided only among local non-employed and in-migrants.
- Example: 100 new jobs: 20 in-migrants, 10 local non-employed, 70 local employed. 70 vacancies filled by some mix. Jobs filled by in-migrants/non-employed increase as vacancy chain proceeds.
- Employment rate effects of job creation depends not just on incented firms' hiring, but on how local labor market works

# Average effects of job growth on local employment rates



NOTE: Chart shows percent of job growth that goes to local non-employed as of various time periods after growth shock. Remainder goes to in-migrants.

# Job growth has much greater benefits for higher ERs when UR is high



NOTE: Earnings per capita benefits end up being 40% higher when UR is 10% compared to 6.2%; 20% lower when UR is 4.2% rather than 6.2%.

# Increasing incentive benefits by affecting who gets jobs

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- Target high-UR areas: each 1% of higher unemployment increases benefits of job growth by about 10%.
- Target firms more likely to hire locally, and more likely to hire local non-employed.
- Improve the overall quality of local workforce system.
- Local first source hiring standards may help, IF linked to effective workforce system.
- Customized training may increase local hiring rate and hiring of local non-employed.

# Summary

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- Main benefit of incentives is higher state earnings per capita. Job growth and earnings growth are means to end .
- Incentives have higher benefit-cost ratio if:
  - Target more sensitive decisions;
  - Lower PV of government cost versus cost reduction delivered to firms via targeting new capital, making incentives more upfront, or delivering incentives via cost-effective services.
  - Target export-base firms with high multipliers & high wages;
  - Target high UR areas, and seek to increase hiring of local non-employed.

# Discussion questions

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- In analyzing benefits vs. costs of incentives, what is your state implicitly identifying as main goal of state economic development policy?
- In modeling incentives, what assumptions is your state making about how powerful incentives are in inducing location or expansion decisions?
- How does your state take into account export-base status of firms?
- How are multipliers included, and how are they estimated?
- How does your state's modeling of incentives take into account effects of induced job growth on employment rates versus population growth?