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Benefits vs. Costs of Business Incentives

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What is incentives’ goal?

• 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

• 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 Factors**
(new invest vs. existing, upfront vs. over time & vs. services)

**Incentive Costs**

**Leakage 1:** Activity that would have occurred anyway

**Directly-Induced Activity**

**Leakage 2:** Substitution due to Non-export base reducing other firms' sales

**Multiplier**

**Job Effect** (Growth & Mix)

**Who Gets Jobs**
(local UR, firm, match, local hiring policies)

**Who Receives Incentives**

**Leakage 3:** In-Migration

**Effects on Local Employment Rate**

**Effects on Local Wages**

Local Earnings Per Capita
Incentive design (Part 1): How sensitive is business investment to costs?

• 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

- 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

- 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

• 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

% of jobs to local non-employed in "average" situation

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

- 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

• 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

• 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?