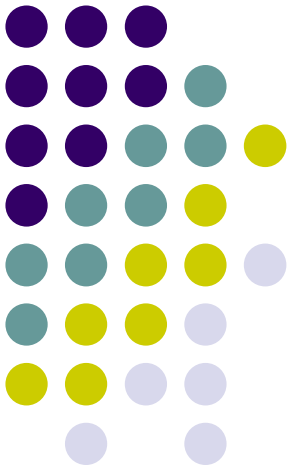
California's Enterprise Zones: An assessment

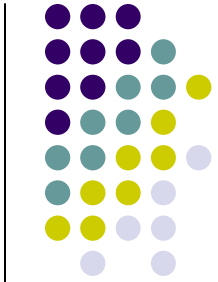
California Capital Campus

San Diego

January 19, 2007



Background



Targeted Tax Incentives for urban renewal born in the UK. Peter Hall (1977)

US policymakers in 1980s Jack Kemp and Robert Garcia (1993 federal EZs)

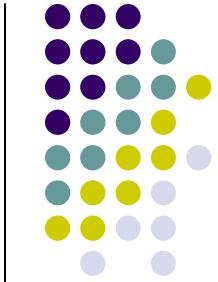
State EZs start appearing in the 1980s.

Today: HUD estimates there are over 3200 zones (state, local, federal)

California Zones

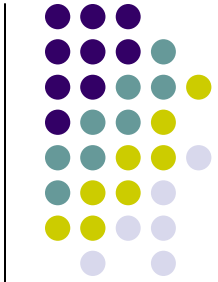
LAO states: 16 to expire in 2006
13 expire in 2007 and 2008.

Policy Question



- Should they be renewed, extended, or modified?
- Legislation considered in 2006 – details…
- AB 1550:
  - Ranks zones based on applications
  - Doesn't alter hiring tax credit, but requires zones to update boundaries.

What's the intent of the EZ?

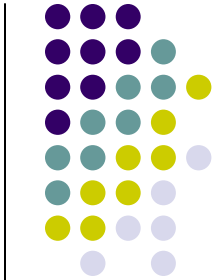


1) Stimulate business and industrial growth in depressed areas

2) Create increased job opportunities for all Californians

Debate: is the goal social or economic?

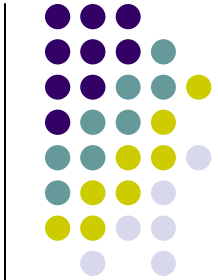
How?



1. Tax Credits for Qualified Hires

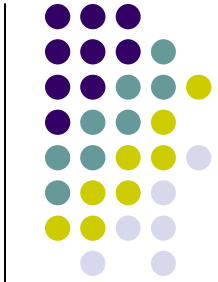
- Largest incentive in zone
- Employee must work for 270 or more days
- Value of credit falls over 5 years
- Max credit claimed = $34,000 (over period); 150% of the minimum wage
- Meeting certain criteria

Criteria



- Eligible for WIA job training program, CalWORKS
- Food stamps, SSI, state, local or county adult assistance
- Economically disadvantaged
- Qualified dislocated worker
- Certain vets, criminals, disabled
- Native American tribe members
- Residents of a targeted employment area, census tracts where over half the residents are under the median income
- Residents of an EZ, EC or RC

Hiring credit



2) In year one hiring credit equals 50% of the lesser of

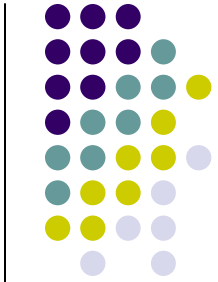
(i) the employee's actual wage or

(ii) one and half times the min. wage for the employees first year of employment.

The percentage is reduced to:

40% in the second year
30% in the third year
20% in the fourth year
10% in the fifth year
0% in sixth year

Hiring vouchers: usage

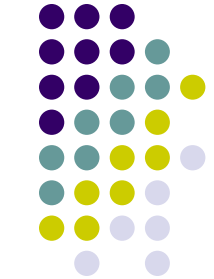


- 66 % of total incentive ($178 mil of $282 mil in 2003)
- Claims increasing: 24,190 (1999) to 71,150 (2003) (↑ 300%)
- 60 percent claimed by SMEs, assets <$5mil

but…

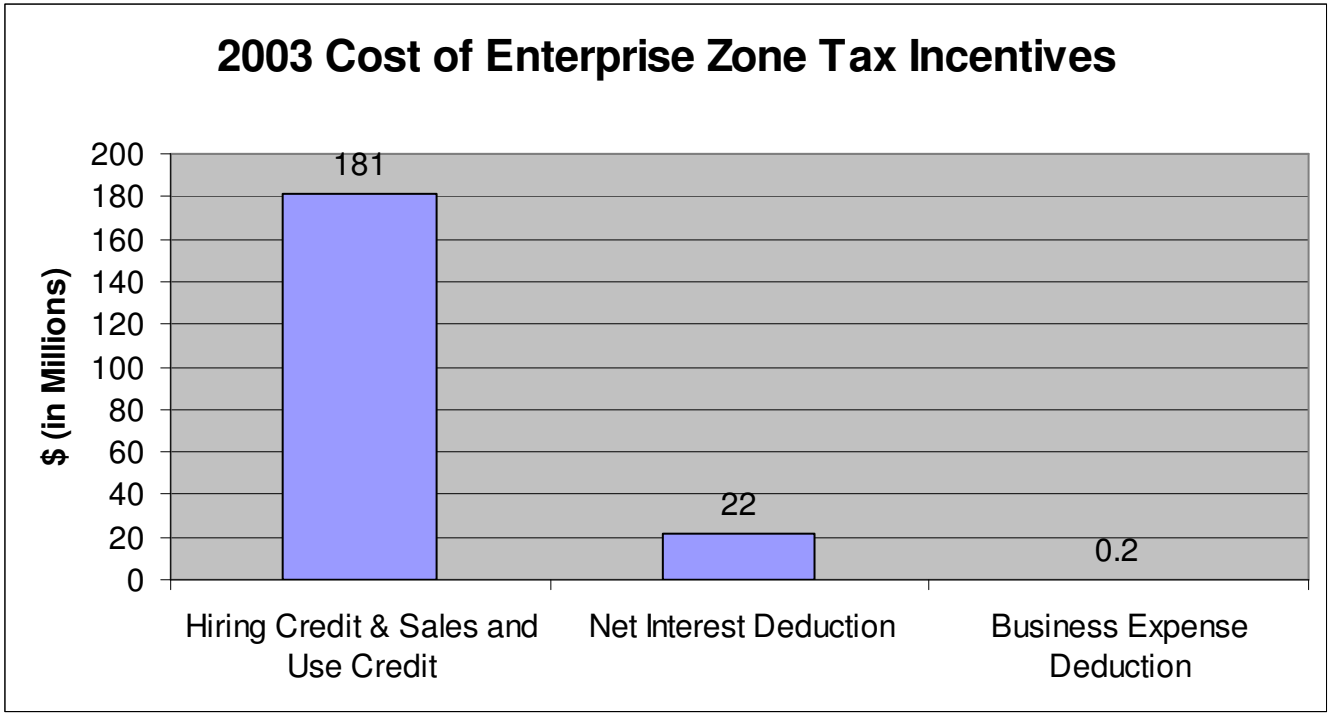
- 65% of dollar amount claimed by firms with assets > $1 billion.

Other Credits

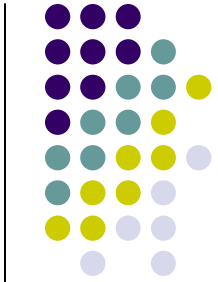


2. Longer Net Operating Loss Carry-Forward Period (up to 15 years)
3. Sales and Use Tax Credit – reduce taxes by amount of sales or use tax paid on certain machinery
4. Accelerated Depreciation – up front expensing of certain depreciable property (up to $20,000/year)
5. Lender Interest Deduction for those lending to zone businesses.

Composition of Use



Other EZ features



- Retroactive vouchering – amend past returns to claim hiring credits. Reward instead of incentive.

- Cross-vouchering – EZ issue eligibility voucher for hiring credit in another EZ. (Oversight issue)

(LAO 2005)

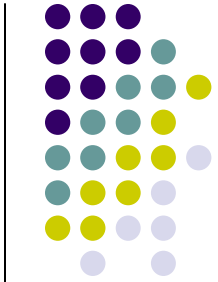
- Preference on contracts

Policy Debate: Who's Benefiting?

If aim is social - create employment for disadvantaged then concerns are:

- Zones are not targeting most distressed residents
- 64.8% credits claimed in 2004 for zone residents, but not necessarily the disadvantaged. About 3% of EZ workers are eligible for federal assistance. (source: CBP)

If aim is economic…



To create jobs, attract firms, increase investment in California, the evidence of EZ effectiveness in the literature is mixed.

Why is it mixed?

What do we make of conflicting results?

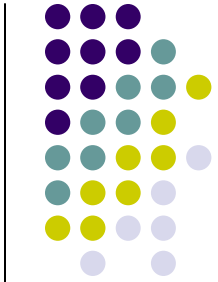
The idea
Taxes affect Growth

EZs based on insight that taxes affect business location decisions (this was *not* the consensus up until the mid-1980s, and then it changed)

Basic hypothesis: ↓ taxes ↑ economic activity in distressed areas

Taxes and development incentives are a "spatially-variable business cost" and should affect firm location decisions at the margin.

Other costs matter too…



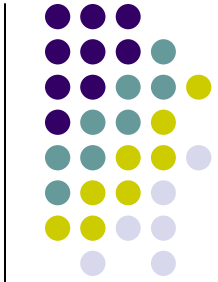
1) Wages – costs of locally supplied labor are 14 times state and local business tax costs. A small wage premium in an area, could wipe out the gains of the incentive.

e.g. A 2 percent difference in wages could wipe out as much as 40 percent in taxes (Cornia, Testa and Stocker, 1978)

2) Regional variations in construction, transportation, energy costs may be larger than variations in state and local taxes.

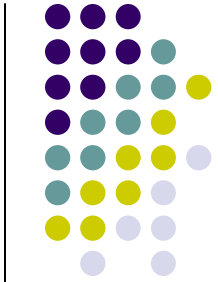
Tax-incentives may be a tie-breaker between essentially similar locations (Schneider 1982)

What do we want to know?



- Need to measure the impact of the incentive on firm location and on regional economic growth.
- EZ studies draw upon the tax literature.
- Lots of studies and techniques over 25 years.

Five main approaches



1) Econometric- model impact of taxes and other variables on growth (i.e. jobs, investment, firms, domestic product)
2) Surveys
3) Hypothetical Firm – look at the effect of spatial tax differentials on a firm's income
4) General Equilibrium – describe economy by aggregating firm behavior
5) Case studies

First, a step back: Do taxes affect growth?

In 1991, Timothy Bartik synthesized 84 studies completed since 1979 on the impact of state and local taxes on economic growth.

Example model:

$$\uparrow firms = \alpha + \beta 1(effective\ tax\ rate) + \beta 2(avgwage) + \beta 3(airport) + \ldots + \varepsilon$$

The widely quoted -0.3% elasticity

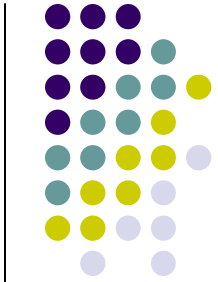
Bartik: tax policy *can* affect state economic development, but the size of the effect is modest across interstate and intermetro areas, and bigger *within* a metro area.

Middle of the interstate range: -0.3

Taxes ↓ 10%→ economic growth ↑ 3%

(note: the studies look at effects of across-the-board reduction in taxes, results are extended to apply to the effects of tax incentives)

A shaky consensus



ecn1

Most of these studies synthesized by Bartik looked at mfg. Some looked at how taxes affect firm location; others on how they affect employment.

A variety of data sets, time periods, places, and only some of these studies were statistically significant. (p. 45 Wasylenko)

Based on this, Fisher and Peters, and Wasylenko think…-0.3% for interstate (interregional elasticity) is probably too high.

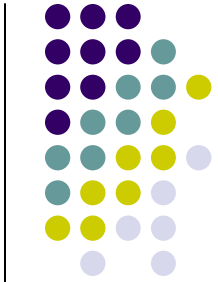
Slide 21

ecn1 Eileen Norcross, 1/11/2007

Tax elasticity results are unstable

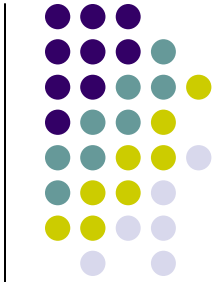
- Conflicting results among the best-designed studies, unrelated to the data used, other variables, or how taxes are measured.
- They may be more important locally. Bartik: intra-regional elasticity is -1.5.
- i.e. The smaller the overall business location region, the more likely other factors are the same (same labor pool, energy costs) fiscal factors become more important.

Do state taxes matter?



- Wasylenko thinks only a little (-0.2)
- Effectiveness depends on the degree to which the state's tax burden deviates from relevant comparison states.
- If the tax elasticity is negative and close to one, high tax states will lose more activity than low tax states.
- (California vs. Nevada?)

The next question: Do EZs work, do they affect growth or firm decisions?



What do we do with -0.3% from the tax literature?

Peters and Fisher ask:

How (which and to what degree) do incentives affect firm decisions and thus, economic growth?

The Hypothetical Firm Model – what's the monetary value of the incentive?

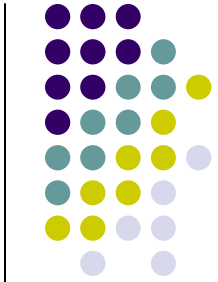
A more precise question for EZs

- Most econometric studies look at how zone designation affects overall growth.

- P&F: designation is a signaling mechanism. It doesn't tell us about the effects of *individual incentives on firms or localities. Argue for another methodology.*

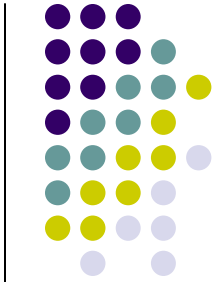
- And, many factors influence growth. Must account for all before EZs alone can be properly measured.

Hypothetical Firm Technique



- TAIMez model – construct financial statements for typical firms (mfg). Apply tax code and incentives offered by different regions.
- The extent to which a particular incentive increases the firm's IRR is the monetary value of the incentive to the firm.
- Use this data in an econometric model to estimate how incentives might influence a firm's location decision

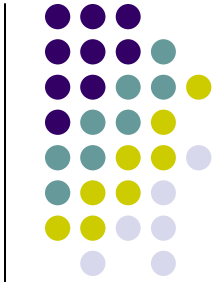
Rationale



- Firms are profit-maximizers. Government can influence firm decisions by changing after-tax profitability of operating at particular sites.

- Technique allows quantitative assessment of incentives on firm decisions

We need to know:



By how much zone incentives reduce the tax burden on business, increasing profitability.

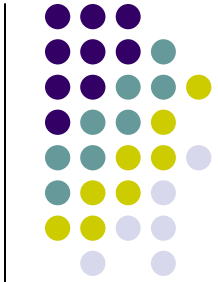
It is this reduction in burden that gives government leverage over firm behavior.

Run model to calculate the effective tax rate.

What they did to calculate the effective tax rate for the firm

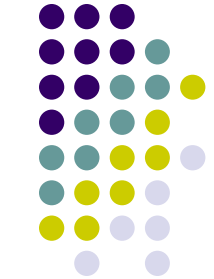
- Run model twice
- 1) calculate NPV of incremental after-tax cash flow to the firm resulting from new plant in (e.g.) California, assuming no state or local taxes. Hypothetical firm has existing operations in other states and pays state and federal income taxes on income generated at new plant.
- 2) applies California state and local taxes plus incentives to new plant. Reduction in cash flow = tax bite.
- Tax bite/pre-tax income = effective tax rate.

The value to the firm



- Is the amount the package adds to the profitability of new investment in that locality.
- The effect of the package depends on the characteristics of the firm: (sector, capital and labor composition)
- e.g. (inadvertently) Calif. Incentives favor rubber and plastics over publishing and printing.

California in TAIMez model



- All incentives reduced California effective tax rate for mfg in 1998 from 9% to 7.1% (21% cut)
- Worth $3,528 per mfg job to the firm.
- Consider, value should be discounted over time. The firm has a higher federal burden…value of incentive is even less to firm. (only 60 percent , or lower)

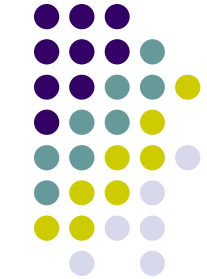
How much is it really worth to the firm?

- F&P also ask: are incentives enough to wipe out wage premiums? Wages are 14 times larger a cost than taxes to firms.

- Incentives equivalent of a 0.61 to 0.8 cent wage reduction (Calif. 1998). A small wage premium in an expensive location could wipe out the value of the incentive.

Conclude: unlikely incentives affect firm location decision

What do they cost the state?



Compare what EZs are worth to business to size of non-EZ incentives to measure cost to government. That is, induced versus non-induced jobs.

Whether incentives are positive or negative for revenue depends on how they affect economic growth. How sensitive is business activity to a tax cut?

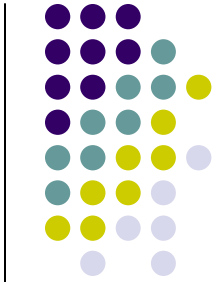
Elasticity = %Δ business activity / %Δ taxes

The more business responds to a change in tax, the larger the elasticity.

F&P extend -0.3 elasticity to incentives.

A 20% tax cut → a 6% increase in business activity

The revenue effect of a tax cut



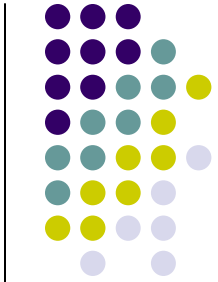
Revenue change = R/J (1 + 1/E)

R/J = average revenue per job prior to cut.

To break even, elasticity = 1. At -0.3, we're not even close.

Why losses? Impossible to target incentives at firms that would otherwise locate in another state. Tax cuts will go to firms that would make the same location decision without the incentive, costing the state money.

How much money?



- Avg. mfg job revenue pre-incentive = $26,000.
- Package = $7,800
- $26,000 - $7,800 = $18,200
- Revenue gained per induced job = $18,200
- Revenue lost per non-induced job = $7,800

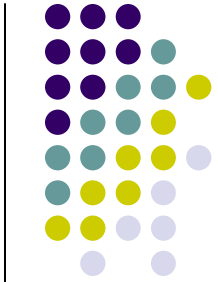
- State comes out ahead….right?

How many jobs were induced?

- Estimate it with the elasticity – the proportion of new jobs that locate due to the tax incentive.
- 30% reduction in tax due to incentives
  Induced jobs = (-0.3) (-.3) = 9

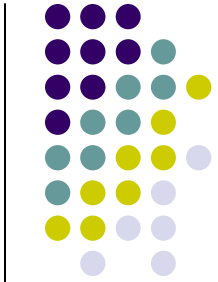
- For every 100 jobs, 9 are induced.

Ultimate cost (over 20 years)



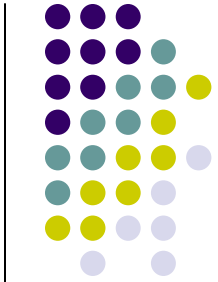
- 9 * $18,200 = $163,800
- 91 * $7,800 = $709,800
- Net loss = $546,000 or $60,700 per new induced mfg job.
- Convert to annual flow – state and local govn't lose $7,130 annually for each job gained.

Peters and Fisher caution



- Tax incentives don't matter enough to induce the amount of activity needed to offset the cost.
- Most firms would have located there anyway, making the credits a reward, not an incentive.
- If they are moving from one part of the state to another, this doesn't expand the tax base for the state.
- Front-loading: generous at first, then phased-out. Require a higher elasticity to break even. Firms do not live forever. New firms enter and expand claiming credits, even as older firms phase out. Cheaper for state to offer one time permanent cut. Will lower exit rates.

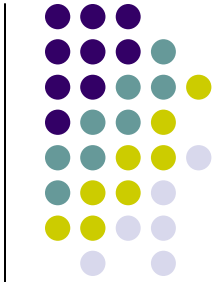
For revenue gains…



- Induced jobs should be 30% or >
- On average, inducement is probably closer to 9%.

  We'll see in a few moments, O'Keefe and Dunstan (2001) arrive at 30% inducement in their study of CAEZ.

Front-loading



1) Non-induced firms produce losses immediately (Firms get windfall from the state)
2) Net revenue gains from induced jobs may be minimal or negative in the early years. When they do flow in, they are heavily discounted.
3) Firms die, move, take incentive and leave.
4) May be cheaper to give one-time permanent cut.

What about economic growth?

- P&F move on to their own econometric model to study effect of tax incentives on # new establishments (before they looked at how they affected the average firm).

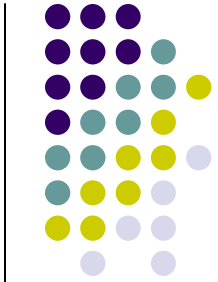
  # new firms = α + β1educ + β2 poverty + β3 previous growth + β4 race + β5 taxnet + β6Ue +….+ε

- Shocked by findings:

  An *increase in taxes* produces a *slight increase in business activity!*

  Conclude: EZs have no discernable positive effect on new economic activity. A very small negative effect is discernable in all models

P&F econometric model



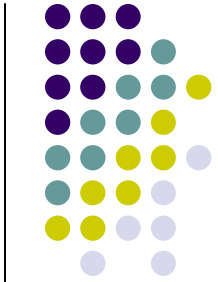
Their caveats:

1) Compare EZs to each other (no control groups) “no true comparison regions exist.”
2) No historical controls – impossible for their data
3) Maybe ‘mere designation’ does have an effect.
4) Ran model for 65 zones in 13 states for three time periods.

Methodological pitfalls in modeling

- Some things affecting growth may not be measurable: wages, public services, the real overall tax burden, regulations.
- 2) Fixed effects – characteristics you can't observe, that may affect growth in that city. Create a dummy variable – otherwise – omitted variable bias.
- 3) Endogeneity – the explanatory variables affect the dependent variables and vice versa – biased and inconsistent estimates.
- 4) Time – need a lagged measure – An economy's growth in time 't' due growth that occurred in time 't-1'
- 5) EZs are non-random; need to establish good control group.

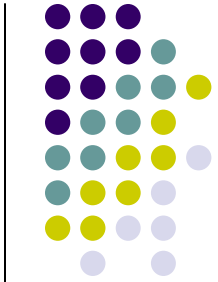
EZ studies of note



- L. Papke (1994) Indiana. Precise data, careful model. EZs ↑ E, ↓ use of machinery.
- Boarnet and Bogart (1996) NJ. Similar method: EZs – no effect.
- Greenbaum (1998) ↑ business activity ↓ business establishments; no effect on E.
- Bondonio and Engberg (2000); value or structure of EZ doesn't affect growth.

- Are different results due to Methodology, data, different structure of programs? F&P Suggest policy caution.

California studies: conflict



1. Dowall, Dowall (1994) no effect
2. Bondonio & Engberg (2000) no effect
3. O'Keefe and Dunstan (2001) create jobs in EZs
4. O'Keefe (2003) ↑ E, but wages don't grow as much.
5. Bostic and Prohofsky (2006) – EZs boost income for low income workers in the short-run.

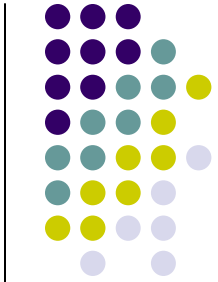
Dowall Study (1994)

Shift-share analysis: break out employment changes due to: zone, industry, county. Implicitly uses surrounding region as the control group.

But, technique doesn't allow for tests of statistical significance.

Control group around the EZ isn't a good comparable. Because it's close, doesn't mean its similar.

Bondonio and Engberg



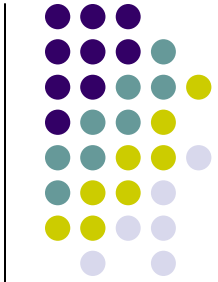
Impact of EZ on local employment (several states)

- They use TAIMez to calculate the monetary value of the incentive, include as variable.
- Include several policy variables: business plan, job creation and investment incentives, land occupied by EZs.
- Fixed effects; propensity matching

O'Keefe and Dunstan (2001)

- Propensity matching to establish comparison zones with EZ zones. Compare employment growth between two.
- Some zones increased jobs faster than non-zones.
- Note: No econometric model to measure what is causing the growth.

Their numbers

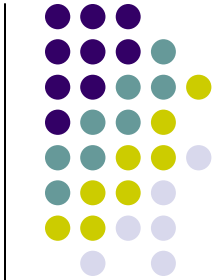


- 1990-1998: 153,943 new jobs in EZs
- 101,045 jobs created in non-zones

Assume that 101,045 jobs would have been created in zones without the incentive.

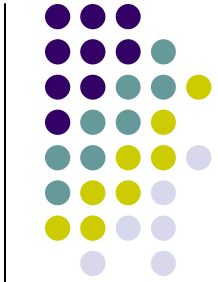
Attribute 52,898 jobs to the zone. Infer they are induced by the tax incentives.

A few caveats



- Yes, we have a good control group.
- But haven't isolated what caused growth: was it zone designation, Federal EZs, other conditions?
- Range of performance. West Sacramento E↑ 445%, Madera ↓ 51%
- Who took the credits?
- ES 202 data

The data



- ES 202 data: business with multiple locations may report all employees at one corporate address– don't indicate if they are in the zone or not.
- Don't know if jobs are reaching the target populations.
- Wage findings indicate jobs are minimum wage jobs.
- Local conditions - 37 zones have redevelopment offices: expedited permitting, infrastructure improvements? Did this improve employment? Federal EZ status? Some other policy variable? Previous economic conditions.

Based on one-third

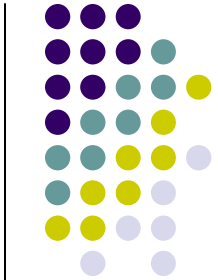
- Bradshaw (2003) performs a cost-benefit analysis for CAEZ based on Dunstan and O'Keefe's finding: one-third of jobs due to zone. Has an inducement estimate.

- Criticizes F&P for using ZIP Code data (in some cases only 10% of a zip code is in a zone). But, he uses ZIP Code data, adjusting by asking zone managers for estimates of the percent of business in the zone, and also a "series of informed guesses." This is likely to skew estimates.
- Compares EZ 1992 E = 965,000, 2002 E = 1.8 mil; ↑889,206
- (.333333) (889,206) = 296,402 induced jobs

Cost-benefit analysis: problems

- Calculates tax revenue from income, sales, firms = $1.85 billion.
- Then says, for the 2/3rds non-induced, they paid $3.6 billion.
- But, the question not considered: how much money was lost giving incentives for the 592,804 jobs that were non-induced! Windfall for firms that would have done this anyway.
- Retroactive credit: reward people already there.
- Firms leave; 5 years, when do they pay their full freight in taxes?
- Uses FTB's cost estimate

Franchise Tax Board



- They calculate costs by totaling the number of credits claimed by corporations.
- “We have no way of knowing the affect of this credit on the relative proportions of jobs that would have been created anyway, elsewhere, or at all.”
- They don’t have an inducement figure.
- Bradshaw is missing a key piece in his cost-benefit analysis.

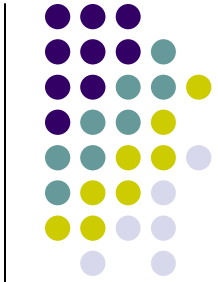
Housing Department Study (2006)

1) More precisely defined US EZ zones. Geocoding.
2) Compares EZs to geographic region, and to state. Are these Controls?
3) Uses "border approach." Does activity increase abruptly when one crosses the border?
4) Regression for US: $Yj = \beta state + \beta EZ + \beta NEZ + \varepsilon$
5) "Cannot prove causality, may be other reasons why those areas improved."
6) Surveys

Best recent CA studies

- O'Keefe (2003): propensity matching, regression with fixed effects; EZs grew faster, but wages did not.
- Bondonio and Engberg (2000): propensity matching, fixed effects, EZs have no effect controlling for monetary value, and structure of incentives.
- Bostic and Prohofsky (2006): welfare benefits to individuals.
- Conclusions: Calif. EZs tend to create minimum wage jobs. Broader economic effects unknown, likely not cost-effective as economic development policy.

Methodology matters



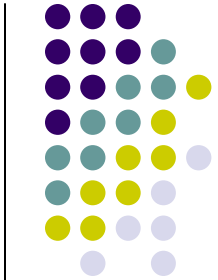
Boarnet (2001) What's a good EZ study? First, need to compare zone to non-zones

1) Shift-share (Dowall 1994) – shortcomings discussed

2) Quasi-experimental control group method –choose non-zones similar to zones. Compare performance. Okay, if zones are randomly assigned. But they aren't. May be selection bias in choosing cities. Some may not apply. In Calif. level of staff support matters in winning status – this could be a systematic difference between a zone and non-zone.

That means, we must do more than just compare zones and non-zones. Could still be misleading. (O'Keefe and Dunstan, Bradshaw, Swenson and Imrohoroglu)

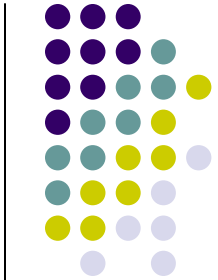
A well designed study



3) Econometric Controls for Non-random Zone Selection – (O'Keefe 2003, Bondonio & Engberg 2000)

Control for differences between zone and non-zone. Allow each city in data to have own initial employment level, and growth rate. Test link between EZ status and employment. Issue isn't that the two groups differ, but each city is potentially unique. Fixed effects controls for fact that some zones may have been selected due to low employment. Control for things we can't observe.

Use different methods

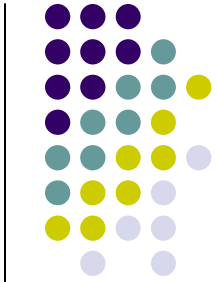


Might produce different results.

Rubin & Armstrong (1989) vs. Boarnet & Bogart (1996) NJ zones: opposite conclusions.

Bondonio and Engberg vs. O'Keefe

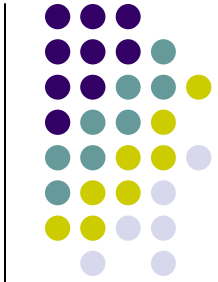
Data also matters



Ideally, we'd have data for zone and non-zone but…

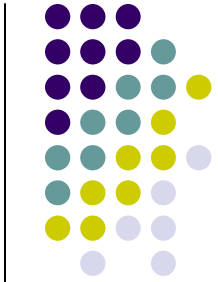
- Zones don't correspond to geographic area, and must estimate boundaries (zip codes change, added, eliminated)
- Techniques used to improve zip code matching. (Swenson and Imrohoroglu)
- ES 202 data: where are the jobs really located?
- Need data from non-zones, harder to get.

Advice to policymakers



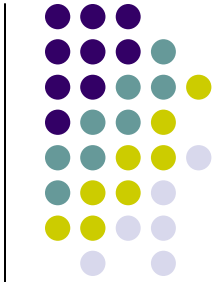
- 1) Mandate good methodologies in program evaluations.
- 2) Program admin: encourage state to collect better data.
- 3) Include non-zone cities in data collection
- 4) Need to know how many jobs were induced to do the cost-benefit; and need to calculate the losses for non-induced jobs.

Some other thoughts



- If zones have a big picture economic goal, what is it?
- Often policymakers promote job creation as a goal.
- But, job creation does not create economic development. Economic development creates jobs.
- What should we be measuring?

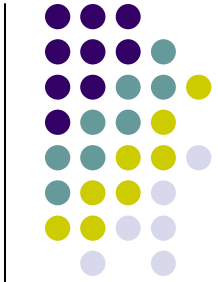
Jobs as a goal



Courant (1994), it's not so much, "Does this program create jobs, it's: "what can we do to promote increased economic welfare."

The job trap: "Let's create them. But wait…what kind, for whom? What's a 'good job' anyway?"

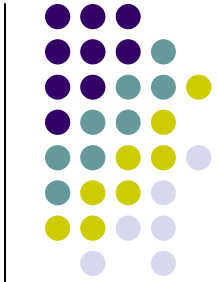
Economic Development



Economic Development → Jobs

Jobs do not create Economic Development

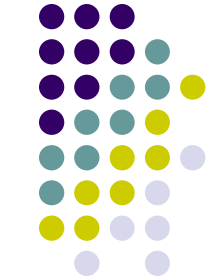
Is the goal social?



- Bartik argues EZs are justified if they create positive social benefits. *They need not be zero-sum* (move activity from A to B), if job is given to a disadvantaged person. Over time, this person gains skills, earnings. This is a net benefit to society.

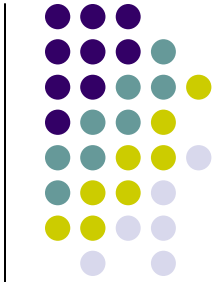
- Evidence in Calif: jobs aren't necessarily targeted to the disadvantaged.

Spatial mismatch hypothesis



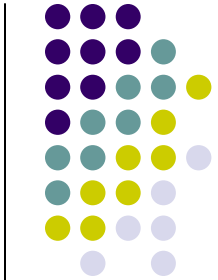
- Idea: bring jobs to people.
- Inner-city residents face higher rates of Ue. Can't take advantage of suburban opportunities.
- P&F skeptical: main cause of Ue = skills mismatch, racial discrimination.
- Commuters take EZ jobs.

Provocative suggestion….



- If you are trying to improve E of inner-city residents. Subsidize commuting?
- Cheaper to buy residents cars.
- Politically infeasible, but thought-provoking.
- More spending on infrastructure? Education?

If your goal is big-picture



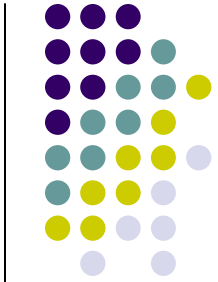
"What's wrong with having more people eligible if it's creating more payroll and revenue for the state?" (Fresno EDC)

EZs are unlikely to lead to state-wide economic development. Unless there is a market failure, you're encouraging businesses to do what they would do anyway; costing revenue and adding complexity to the tax code.

Research fails to measure the extent to which markets have failed and tax incentives were justified (Buss 2001)

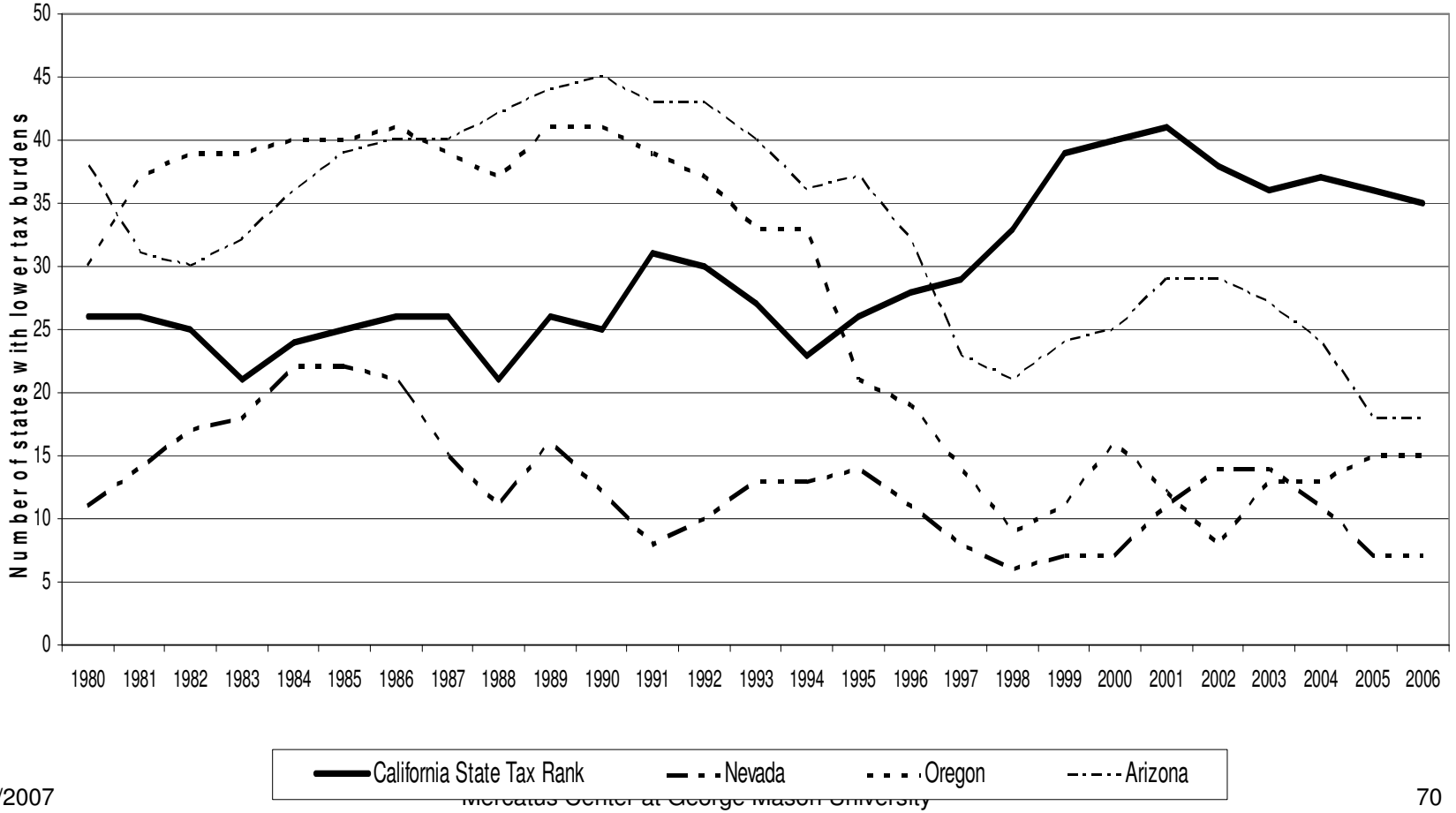
Is there a market failure?

What is a tax incentive?



- Important to remember. Tax breaks are not tax reform. In fact, their over-use may point to the need for tax reform.
- A tax incentive is an expenditure, like a grant. Redistributes income among economic sectors or residents.
- It is industrial policy using taxes as the instrument.
- Better to levy taxes with low marginal rates and broad bases: tax neutrality. Should not attempt to pick winners and losers, or favor one group over another.
- This is more efficient for the state, and the will likely produce the economic development outcomes you are seeking.

California Tax Burden Versus Top Three States of Net Emigration (2001-06)



What we can say

- Tax climate affects growth. It is one of many things that affect business location decisions.
- Tax incentives pick winners; they band-aid the underlying causes for less growth (which could be any number of things.
- Do they encourage entrepreneurship?

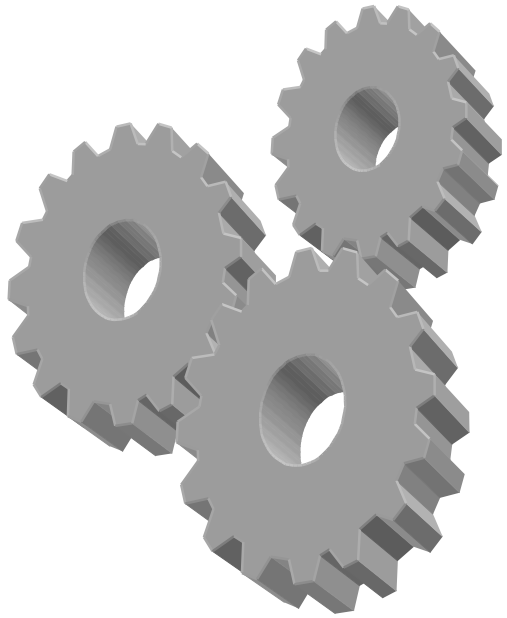
Entrepreneurship: what is it?

- It is always present
- The creative power of the human mind
- In the personal, social and economic setting
- Technological advancement, organizational change, capital accumulation

Kirzner and Sautet, “The Nature and Role of Entrepreneurship in Markets”

Does the policy encourage…

The deliberate production of knowledge, an increase in the number of new businesses, an existing technology….(churning)



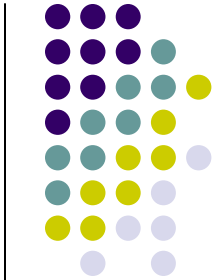
Does a policy encourage:

Stimulation of new ideas (the guy in his basement outside the EZ with the blueprint for….?)

How might the entrepreneur see it?

- There is a cost to navigating the EZ bureaucracy that diverts resources that could be put to innovation

The meaning of it all



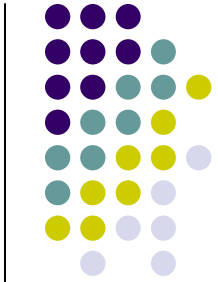
Innovation drives productivity and productivity frees up resources and promotes economic growth

The human mind – innovation – entrepreneurial activity – economic growth (jobs, businesses) - prosperity

The goal of public policy

- If the goal is state-wide prosperity: remove barriers to opportunity
- The right institutional environment
- Foster entrepreneurship. Don’t isolate and contain it.

Real Tax Reform

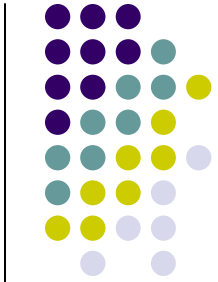


- James Buchanan Nobel Laureate 1987 “Politics by Principle not Interest”
- The concept of **tax generality**

Avoid discrimination and arbitrariness in taxation

- Tax reform should create an environment for people to discover the *diversity* of economic opportunity.
- It must be broad-based and allow people and capital to *move freely.*

The trouble with EZs

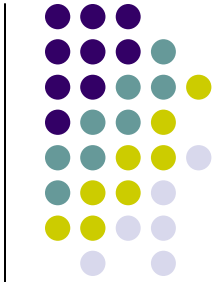


- It's hard to give away just one
- What does it say about the underlying tax system?
- Why not make the whole state an "EZ"? It may be harder to measure, but then you're not 'picking winners.'
- Bang for buck?

Tax incentives and development programs

- May stall more significant tax reform.
- On one hand, complex and targeted taxation drives out entrepreneurs. While targeted breaks don't necessarily bring them back.

Looking forward



- California can have its revenues and its entrepreneurs.
- Simplify, don't add layers of complexity
- This means: more wealth, expanded tax base, and the freedom to use revenues on infrastructure, education and health care.

How do the Studies stack up?

- Bondonio and Engberg (2000)
  - Findings: Enterprise zones do not have a significant impact on local employment, and the impact of the program does not depend on its features or the amount of monetary support it gets.
  - Innovations:
    - Investigates the effects of monetary investments in incentive packages on program outcomes.
    - Looks at the effects of different program features on local employment levels.
    - Uses a fixed-effects and propensity scoring approach to establish sound "control groups."
  - Cautions:
    - This study only considers the impact of enterprise zone programs on local employment – says nothing about other indicators.
    - When creating control groups, it's hard to determine every dimension on which two different geographic areas can be similar. The fixed effects approach addresses this, but is not error-free.

How do the Studies stack up?

- O'Keefe and Dunstan (2001)
  - Findings: Employment levels in enterprise zones grew faster than in similar comparison areas, especially during the first few years of their establishment. This increase in jobs, however, occurred primarily at the lower end of the wage spectrum.
  - Innovation: Uses a propensity scoring approach to compare EZ areas to similar non-EZ areas.
  - Cautions:
    - It's difficult to account for all dimensions on which two geographic areas can be similar.
    - This analysis suggests that enterprise zones are associated with job growth, but that the jobs created fall on the lower end of the wage spectrum. How does this align with the program's goals?
    - This study doesn't isolate which program features contribute the most to the increased employment levels associated with EZ programs.

How do the Studies stack up?

- O'Keefe (2003)
  - Findings: Designating an area as an EZ is associated with rising employment in that area, while the level of employment at individual firms in EZ areas tends to rise faster than at firms without similar tax incentives. Tends to favor min wage workers?
  - Innovations:
    - Again, uses the propensity scoring method to establish a valid control group.
    - Investigates the effect of EZ policies on employment at the level of individual firms.
  - Cautions: Same as before – there's no such thing as a perfect control group, and this study only speaks to employment levels among a variety of indicators of program "success."

How do the Studies stack up?

- Bradshaw (2003)
  - Findings: Cost-benefit analysis of the EZ program indicates that it is fiscally beneficial to the state of California.
  - Innovation: This study is one of the few in the literature that addresses the cost-effectiveness of the EZ program.
  - Cautions:
    - The calculations in this study are based on O'Keefe's (2001) findings – if they're incorrect, this could seriously affect the results of this analysis.
    - Most studies indicate that the data are not sufficient to adequately calculate the costs and benefits of the EZ program (i.e. it is very difficult to determine the cost per job created without making several assumptions). (inducement?)
    - What costs or benefits should be included in the calculation (i.e. should we include opportunity costs)?
    - Many costs and benefits, such as residual economic effects and foregone tax revenue, are very difficult to quantify.

How do the Studies stack up?

- Bostic and Prohofsky (2006)
  - Finding: There is a positive association between individuals' wages and adjusted gross income and their participation in the California EZ program, while participation in the program also increases the likelihood that individuals will file tax returns. Favors min. wage workers?
  - Innovations:
    - Investigates the impact of EZ program policies on individuals, as opposed to business activity.
    - Uses a more direct measure of program "success" by tracking individuals' incomes in comparison to a similarly situated control group over a period of time.
  - Cautions:
    - These benefits tend to accrue to individuals that are comparatively worse off prior to entering the program, and are observed only in the short run – again, is this consistent with the program's goals?
    - The sample used in the study was not randomly selected, so these results cannot necessarily be generalized across all EZs.
    - The study was inconclusive in determining if the income boost associated with EZ participation is permanent or transitory.

How do the Studies stack up?

- Imrohoroglu and Swenson (2006)
  - Finding: Prior to their designation, EZs performed consistently worse along several economic indicators in comparison to neighboring areas, while they performed significantly better along some indicators once they were designated as EZs.
  - Innovations:
    - Analyzes EZs across the United States.
    - Tests the cross-border effects of EZ programs on business activity in neighboring geographic areas.
    - Uses sophisticated techniques to tie data to specific geographic areas.
  - Cautions:
    - The study uses neighboring areas and areas around the rest of the state as comparison groups to EZs. While they may be similar on some grounds, it is unlikely that the similarity of these areas makes them an adequate control group.
    - Some of the statistical analyses the authors include in the study lend support to the conclusion that EZ programs have no statistical effect on certain economic outcomes.
    - Some of the statistical models in the study fail to control for factors that could likely be alternative causes of the trends the authors cite in their conclusions. For example, we can't say for sure that seemingly sharp decreases in poverty in EZ areas isn't due to the fact that poverty rates were unusually high in the recent past.

How do the Studies stack up?

- Report to the California Department of Housing and Community Development (2006)
  - Findings: EZ areas showed decreases in poverty rates, unemployment rates, and vacancy rates, along with increases in household income and median rents when compared with non-EZ areas. The authors also found that new job creation is associated with EZ designation, and that firms find the program useful when it comes to their hiring and retention decisions.
  - Innovations:
    - Uses advanced techniques to associate data with as specific geographic areas as possible.
  - Cautions:
    - This study also uses neighboring areas and areas around the rest of the state of California as a source of comparison with EZ areas. It is unlikely that these areas are similar enough to justify their use as a control group.
    - Some of the conclusions the authors make are statistically insignificant.
    - The authors use survey research to draw their conclusions about the effects of EZ programs on business activity and job creation. It is likely that the results of this analysis are biased.