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# Measuring the Effect of Job Creation Tax Credits

By

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Research Question – How effective are job tax credits in creating jobs that would not have otherwise been created?

Most States have a jobs tax credit.

Prominent Credit at the state level

Tax Year 2009 = \$42m utilized, Tax Year 2010 = \$53m utilized

Does the credit just move jobs around?

Are the jobs permanent?

What kind of jobs are created?

## Georgia's Job Tax Credit -

- Began in 1991
- Counties divided into 4 Tiers
- Credit Value and Qualifications vary by tier
- Tier designation is based on poverty level, per-capita income, unemployment rate
- Typically does not include retail establishments
- Credits taken for 5 years

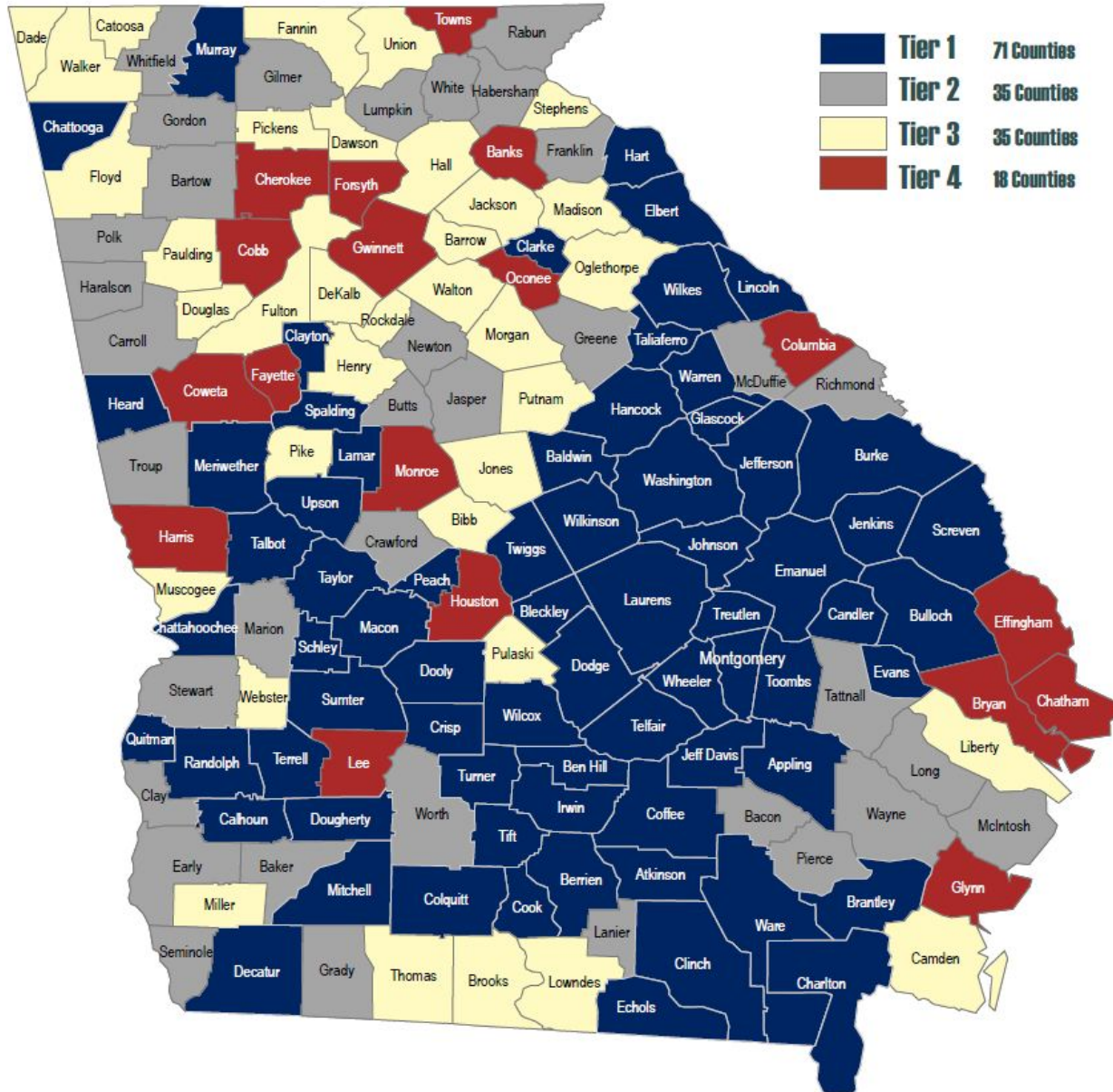
## Other Significant Changes –

- Expanded definition of eligible industries
- Added Less Developed Census Tract status
- Added Wage Requirement
- Allowed the credit to be taken against withholding

## General Parameters -

|              | <b>Tier 1</b>                                 | <b>Tier 2</b>                                 | <b>Tier 3</b>                                | <b>Tier 4</b>                            |
|--------------|---|---|--|--|
| 1991-1992    | Counties: 40<br>Jobs: 10<br>Credit:<br>\$1000 | Not Eligible                                  | Not Eligible                                 | Not Eligible                             |
| 1993         | Counties: 40<br>Jobs: 10<br>Credit:<br>\$2000 | Counties: 40<br>Jobs: 10<br>Credit:<br>\$1000 | Not Eligible                                 | Not Eligible                             |
| 1994-2000    | Counties: 53<br>Jobs: 10<br>Credit:<br>\$2500 | Counties: 53<br>Jobs: 25<br>Credit:<br>\$1500 | Counties: 53<br>Jobs: 50<br>Credit: \$500    | N/A                                      |
| 2001-Present | Counties:71<br>Jobs: 5<br>Credit:<br>\$3500   | Counties:35<br>Jobs: 10<br>Credit:<br>\$2500  | Counties:35<br>Jobs: 15<br>Credit:<br>\$1250 | Counties:18<br>Jobs: 25<br>Credit: \$750 |

# 2012 Job Tax Credit Tiers



Source: Georgia Department of Community Affairs

# Related Literature

## Jobs Tax Credit Evaluation -

- Gabe and Kraybill (2002)
- Chirinko and Wilson (2010)
- Faulk (2002)
- Hicks and LaFaive (2011)

## Enterprise Zone Evaluation -

- Papke (1994)
- Greenbaum and Engberg (2004)
- Bondonio and Greenbaum (2007)
- Hanson (2009)

## Data Sources –

1. County level data
2. Firm level data from Georgia Department of Revenue merged with Establishment level data from Georgia Department of Labor

## Methodology –

1. Simple OLS/Time and Year Fixed Effects
2. Regression Discontinuity Model
3. Border County Comparisons



## Descriptive Statistics, by Tier Status, 2002-2011

| <b>MEANS</b>                               | <b>Tier 1</b> | <b>Tier 2</b> | <b>Tier 3</b> | <b>Tier 4</b> | <b>All Tiers</b> |
|--|---------------|---------------|---------------|---------------|------------------|
| Number of Observations                     | 714           | 347           | 349           | 180           | 1,590            |
| Total Employment                           | 4,825         | 19,512        | 35,529        | 48,864        | 19,755           |
| County Population                          | 19,020        | 53,098        | 95,820        | 154,466       | 58,648           |
| County Area                                | 406           | 346           | 359           | 329           | 374              |
| Interstate dummy                           | 0.23          | 0.49          | 0.57          | 0.62          | 0.40             |
| Value of Tier Credit                       | \$3,500       | \$2,500       | \$1,250       | \$750         | \$2,477          |
| Percent of Population with BA degree, 2000 | 10.50         | 13.45         | 16.33         | 24.59         | 13.98            |
| Total qualified employment                 | 2,287         | 9,295         | 17,755        | 25,840        | 10,062           |
| Change in Qualified Employment             | -33.02        | 46.05         | 6.47          | 258.28        | 28.27            |

Table 7. The Effect of the Job Tax Credit on County Employment in Qualified Industries (standard errors in parentheses)

| <b>Variables</b>     | [1]                 | [2]                 | [3]                 | [4]                 | [5] <sup>#</sup>    |
|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Credit               | 16.70**<br>(7.47)   | -1.06<br>(9.06)     | 3.64<br>(8.77)      | 1.57<br>(8.67)      | 36.55<br>(41.05)    |
| Interstate           |                     | 98.89<br>(89.30)    | 99.93<br>(86.68)    | 91.65<br>(84.66)    |                     |
| BA                   |                     | 13.32<br>(8.69)     | 8.74<br>(8.38)      | 8.01<br>(8.21)      |                     |
| Population           |                     | -3.74***<br>(0.45)  | -3.34<br>(0.43)     | -3.33<br>(0.42)     |                     |
| Area                 |                     | 0.15<br>(0.26)      | 0.06<br>(0.26)      | 0.07<br>(0.25)      |                     |
| JobGrowth            |                     |                     | 0.41***<br>(0.03)   | 0.38***<br>(0.03)   | 0.38<br>(0.31)      |
| Year dummies         | No                  | No                  | No                  | Yes                 | Yes                 |
| County fixed effects | No                  | No                  | No                  | No                  | Yes                 |
| Constant             | -340.41<br>(103.13) | -175.32<br>(221.79) | -174.14<br>(215.78) | -400.15<br>(248.47) | -890.78<br>(581.02) |
| R <sup>2</sup>       | 0.003               | 0.060               | 0.153               | 0.198               | 0.146               |
| N                    | 1542                | 1542                | 1510                | 1510                | 1510                |

**Table 8. Regression Discontinuity Analysis**

(standard errors in parentheses)

| <b>Variable</b> | [1]                 | [2]                  | [3]                  |
|-----------------|---------------------|----------------------|----------------------|
| Treatment       | 102.30<br>(122.37)  | -205.10<br>(516.93)  | -427.02<br>(622.96)  |
| Rank            | 6.67<br>(9.71)      | -47.12<br>(40.91)    | -53.94<br>(48.57)    |
| Constant        | -645.88<br>(748.24) | 4837.99<br>(4623.86) | 7770.00<br>(7193.16) |
| R <sup>2</sup>  | 0.002               | 0.008                | 0.004                |
| N               | 333                 | 362                  | 359                  |

Table 9. Employment Growth Across Border Counties (standard errors in parentheses)

| Variables      | Border Counties     |                     |                          |
|----------------|---------------------|---------------------|--------------------------|
|                | [1]<br>Tiers 1 & 2  | [2]<br>Tiers 2 & 3  | [3]<br>Tiers 3 & 4       |
| DiffCredit     | -154.82<br>(109.92) | -46.40<br>(452.08)  | -5136.42***<br>(1887.00) |
| Constant       | 807.67<br>(568.76)  | 666.81<br>(2901.02) | 12543.43***<br>(4878.57) |
| R <sup>2</sup> | 0.003               | 0.000               | 0.020                    |
| N              | 649                 | 452                 | 359                      |

## Future Work –

1. Incorporate establishment level data
2. Account for interaction between less developed census tracts and tier effects
3. Control for spatial effects
4. Firm Duration

Comments and Suggestions  
appreciated.

Thank you.



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FISCAL RESEARCH CENTER