Workforce Incentives

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Balancing

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Study frame: North Carolina from 2002-2013

Data:

- 487 traditional, cash-based incentive deals (OneNC, JDIG, JMAC)
- 2,138 workforce training awards (CTP)
- 12 years of county-level wage data

Question: How effective/efficient are these programs at raising

wages in North Carolina?

- PDF scraping through python & OCR
- Web scraping using webdriver
- Merge & fuzzymatching in Stata

Preprocess

performance and interpretability

Analysis

- Linear & logistic regression modeling
- Survival analysis
- Propensity score matching

- Two presentations for Data+
- Presentation to clients at NCJC
- Poster
- Policy memo

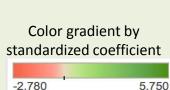
Outcome

Dealing with different data sources and missing data

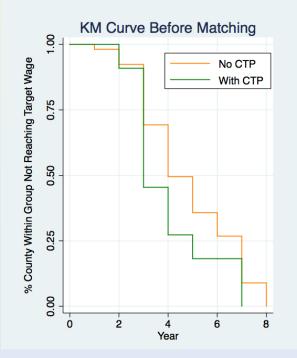
Results

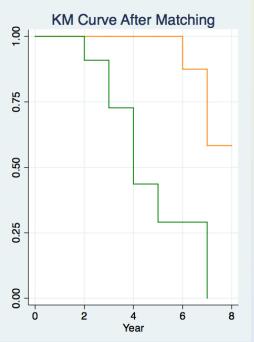
Linear and logarithmic regression:

Outcome = β_0 + β_1 YearofAward + β_2 RuralPercentage + β_3 LogAwardPerJob + β_4 CTP + β_5 OneNC + β_6 FirmSize + β_7 Headquarter + β_8 Manufacturing + β_9 Recruitment + ϵ









Survival analysis & propensity score matching:

- Used to measure how fast a county reaches 110% of its average wage when the study started.
- Comparisons, both non-parametric (KM curve) and parametric (log-rank test) were made between counties that received CTP during study period (treatment) and those that did not (control).
- Counties were matched to their closest neighbor based on rural population, starting unemployment rate and starting average wage, so that the effect of customized training on wage growth could be isolated.

Conclusions

Recommendations:

- More awards, both traditional and workforce development should be distributed to rural or economically distressed counties.
- The higher success rate of OneNC suggests focus should be on smaller, more numerous awards paired with CTP grants.
- The use of worker training programs should be increased, specifically in counties with lower rates of wage growth, firms in manufacturing industries, and branch or recruited firms.

Impact:

- Policy recommendations can be used to modify existing strategies in order to limit inequality and improve wage growth across the state.
- Millions of dollars of state funds can be more effectively and efficiently allocated to create jobs and raise wages.