

# Do local tax incentives affect economic growth? What mean impacts miss in the analysis of enterprise zone policies

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## Abstract

This paper exploits the exogenous variation of U.S. state enterprise zone policies to estimate the impact of geographically-targeted tax incentives on a number of dimensions of local economic growth. The econometric analysis uses establishment-level data to sort out growth outcomes into gross flows separately accounted for by new, existing, and vanishing establishments in the target areas. Results offer empirical evidence with strong external validity to support specific policy recommendations and show that the impacts of the incentives have more complex dynamics than those revealed by the null mean impact estimates obtained from analyzing net growth outcomes.

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## 1. Introduction

Since in the early 1980s, a substantial majority of US states have implemented geographically targeted economic revitalization programs, mainly referred to as enterprise zone (EZ) programs. A quarter-century later, state legislatures are revisiting the programs in order to decide whether and how to proceed with the programs. Unfortunately, findings from the existing enterprise zone literature are difficult to translate into useful policy recommendations, and conflicting results limit

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the ability to generalize them. Studies have used various methodologies ranging from descriptive case studies to careful econometric evaluations. Many of the evaluations have examined programs in only one state, and a few have evaluated only a single zone. Findings are particularly hard to generalize because of the variety of EZ approaches and local economic conditions, and their usefulness is further limited because most impact evaluations only consider the presence or absence of the program in a particular time and place rather than taking into account the policy features of the zone or the generosity of tax incentives (Peters and Fisher, 2002).

This paper contends that an effective way to evaluate state EZ programs is to use establishment-specific panel data across multiple states to comparatively estimate the impact of state-specific policy implementation features on gross flow measures of economic growth. State programs vary considerably in terms of designation criteria, geographic size of the program, and incentives offered. This variation is a precious resource for evaluation analysis, as it stems from political decisions that are likely uncorrelated with future economic trends in the target areas. These natural experiment conditions are conducive to comparative analysis to test the effectiveness of different implementation features as best practices for future business incentive interventions. EZ areas are also small enough that appropriate comparison areas can be found within the same regional economies. Thus, program impacts can be estimated from empirical models that control for factors contributing to the observed outcomes that are independent from the program intervention. State EZ programs therefore have the potential to offer valuable empirical evidence, with strong external validity, on the effectiveness of geographically targeted business incentives and to contribute evidence regarding the longstanding debate on the effect of tax differentials on firm location and investment decisions.

By making use of the policy heterogeneity across 11 different state programs and taking advantage of longitudinal plant level manufacturing data from the U.S. Census Bureau, this paper moves beyond the measurement of net employment changes due only to the presence or absence of a program. Not only are net changes in the economic outcomes of employment, capital expenditures, sales, and payroll per employee estimated, but the models developed also estimate the marginal impact of specific EZ policy features on the baseline growth rates of those four different economic measures separately sorted into outcomes accounted for by new, existing and *vanishing* establishments, business establishments that have either closed or moved. Net changes can mask the churning of establishment births and deaths that are common in both growing and shrinking economies (Davis et al., 1996; Dunne et al., 1989), and sorting growth outcomes into the gross flows is important to properly account for the impacts of different policy features. For example, testing whether particular policy features favor the attraction of new businesses versus the retention of existing production activities can help better align policy choices with their intended outcomes.

The remainder of the paper is organized as follows. Section 2 discusses recent empirical literature on zone effectiveness, and Section 3 describes the ZIP code level programmatic and outcome data. Section 4 describes the two-step econometric model that estimates impacts that are reasonably free of selection and omitted variable biases under plausible assumptions on the selection into treatment process. Section 5 presents the results, and Section 6 discusses the major findings, which highlight that while zone incentives do not have statistically significant net outcomes, separation of the various outcome measures into the distinct gross flows reveals a complex underlying dynamic. Positive zone impacts on new and existing establishments are offset by induced losses due to vanishing establishments. The analysis of the policy features indicates that restricting the geographic extent of the programs helps increase business activity due to new establishments, and requiring strategic planning and tying incentives to job creation has some positive impacts on existing establishments. Section 7 concludes the paper.

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