

Literature Survey: The Effect of State Economic Development Incentives on Regional Economic Growth

Background

Many American states have created tax incentive programs to maintain businesses, attract businesses from other states, and stimulate new start-ups. Tax-related incentives for business began in colonial times and have increased over time. According to Chi and Hofmann (2000), the number of states with tax incentives for businesses steadily increased since the 1980s. For example, 24 states offered tax incentives for job creation in 1984; 43 states offered those in 1998. R&D tax incentives were offered to businesses by 9 states in 1974 and by 39 states in 1998 (Chi & Hofmann, 2000). The reason for the increasing use of business incentives is that states see positive effects from these programs.

States believe that tax incentives are good fiscal and economic tools. Public officials create economic development programs to influence firm relocation and expansion, or rescue failing businesses, or protect them against competition, or start-ups (Burnier, 1992). The governments perceive tax incentives as revenue foregone because they are not cash paid-in. States view that benefits of tax incentives outweigh costs in the long-term (Buss, 2001). In spite of predicated benefits and billions spent annually, states do not evaluate tax incentive programs (Bartik, 1991). Buss (2001) argues that most business tax incentives are the outcome of interstate competitions to attract businesses from other states. Are tax incentives good economics or simply politics?

The broad use of incentives has generated interest in the effects of incentives on employment growth and regional economic growth. In this overview, I select several most cited and recent research works to illustrate the effect of tax incentive programs. How do states implement incentives? Do tax incentives induce regional economic growth? How effective are tax incentive programs? By reviewing the literature, I capture some answers to these questions. Researchers have utilized different methods to evaluate the costs and benefits of tax incentives. A good number of literature shows that certain types of tax incentive programs have positive effect on local job growth (Luger & Bae, 2005; Billings, 2008; Douglas & Paulo, 2008; Bartik, 1991). But many studies find an ambiguous relationship between tax incentives and economic growth (Fisher & Peters, 1997; Gabe and Kraybill, 2002). This review synthesizes these findings, methods, and data used. Because of the

complications of evaluation and paucity of data, many sub-questions still need to be studied in-depth.

Types of Tax Incentives

States offer incentives for businesses under two main categories: tax exemptions and financial incentives. Within 15 tax exemption programs, the most commonly used tax exemptions are on corporate income, land and capital investments, raw materials and equipment in manufacturing, and creation of jobs. Financial incentives offer cheap financing for 16 kinds of business activities, including bond financing, loans for building constructions and equipment, and financing aid for plant expansion (Chi & Hofmann, 2000). The literature discussed in the review cover a broad range of tax incentives. For example, the case study of North Carolina by Luger and Bae (2005) focuses on tax credit for job creation, machines and equipment, central administrative offices, and R&D. Studies of BMW plant in South Carolina (Douglas & Paulo, 2008) and enterprise zones in Colorado (Billings, 2008) show that targeted tax incentives attract private firms to a new location, stimulating the economy and creating jobs, through multiplier effect.

Economic Growth Correlation

The classic theory to demonstrate the economic growth from tax incentives is elasticity. (Buss, 2001). Elasticity is the percentage effect on state business activities resulted from a 1% change in state and local taxes. Bartik (1991) discovers that the mean of 49 tax studies was -0.25. This suggests that a 10% reduction of all taxes from their original level allows the local businesses and employment to have a long-term 2.5% increase above the growth that would occur without the reduction. Many scholars question the correlation between tax and growth and magnitude of the economic importance. Current economic conditions are likely caused by past economic activity. The areas with tax incentives are often economically different than areas without those (Billings, 2008). To better address the relationship, several recent studies try to separate out the non-tax confounding factors related to economic growth. I will mainly focus on the employment effect and its costs and benefits.

Job Creation

Most recent literature suggests that the relationship between employment growth and tax incentives is ambiguous (Gabe & Kraybill, 2002; Luger & Bae, 2005; Billings, 2008). The study of Colorado

enterprise zones finds that incentives do not substantially increase the number of job creations by studying firm expansions after two years. The relationship might even be negative. The businesses that received incentives have a decrease of 10.5 jobs per firm. In contrast, the establishments that did not receive incentives have an increase of 6.6 jobs per establishment. The finding is that enterprise zones, part of tax incentive programs, have no positive impacts for job creation (Billings, 2008). But the support is weak because the data is limited and the positive relationship does not apply to all industries studied. According to the case study of North Carolina, some 262 new jobs are induced from four types of tax credit, which otherwise would not be created, based on 1999 data. The results suggest that machine and equipment tax credit induces most jobs (48%) and job creation tax credit is the second-largest component (Luger & Bae, 2005). The mixed results continue the controversy of effectiveness of tax incentives.

Even if certain tax incentives result in some new jobs, the effect, however, is not the same in each community. Scholars of these studies find that job creation mostly occurs in more distressed areas, based on population growth, unemployment rate, and per capita income. For example, Enterprise zones in Ohio have to meet one of these certain criteria: lower than state average of employment rate, population growth rate, or per capita income (Billings, 2008). North Carolina divides counties into different tiers and gives a different amount of incentives to each tier. Areas with adverse economies normally receive a larger amount of incentives. With all other factors being the same, firms in distressed areas would have more cost-reduction benefits. Thus, more new jobs are likely to be generated (Luger & Bae, 2005).

Cost and Benefits Analysis

If we assume that these targeted programs in needy communities do induce some job growth, who actually benefits? The findings on this issue are skimpy. Peters and Fisher (2004) find that firms in enterprise zones hire from metropolitan areas instead of local labor markets. They look at the commuting patterns of workers in the zones in a number of states. Most workers in the zones do not live there; the majority of those who live in the zones do not work in them. BMW reported that they hired 5,000 employees at its Spartanburg, South Carolina plant (Douglas & Paulo, 2008), but all high-skilled workers were from outside of the community. Therefore the locals did not necessarily benefit from the job gain.

In addition, job creation from tax incentive programs is costly. The cost per job created in North Carolina in 1999 was about \$147,463 on average. The high costs are because the job creation from increases in investment on machine and equipment and R&D are smaller than from direct job creation credits (Luger & Bae, 2005). States buy jobs through targeted tax incentives. BMW in South Carolina pays \$1 a year to lease a \$36 million piece of land. It pays no land tax, and the building and equipment tax on the first phase is 43 percent lower than what other firms pay (Douglas & Paulo, 2008). Regardless of the revenue loss, state still needs to pay for public services and infrastructure to maintain and attract businesses. These incentive programs make it harder for states to finance important functions, such as transportation systems, public education, and utilities programs (Kaye, 2008). By keeping up the tax incentive programs to attract businesses, states would decrease the ability to offer financing for foundations for future economic growth. The distressed areas would be likely to maintain at the bottom in the competition.

However, some scholars argue that several positive externalities are not considered. Based on the study of the BMW plant in South Carolina, the establishment has spread economic benefits through the multiplier effect. Not only have regional suppliers generated more jobs and revenue, but also employees have purchased more at local businesses. The spending leads to more jobs and income in other establishments. The study finds that BMW's South Carolina plant supports 23,050 jobs through the multiplier effect and that the value of property, such as housing and land, has increased as well. In addition, four counties in South Carolina have received an additional revenue of \$2.4 million every year from the increase of property, income and sales taxes (Douglas & Paulo, 2008). Even though this study shows that targeted tax incentives are beneficial, more research needs to be conducted regarding costs and benefits of employment effect.

Methodologies

Scholars have used various methods to study tax incentive effects, such as case study, survey, econometric regression, and simulation. Previous models have adopted regression analysis to evaluate the correlation between state economic growth and tax incentives. But most models have problems in separating out non-tax confounding variables, such as effects of agglomeration economy, firm establishment-levels, and self-selection of enterprise zones (Gabe & Kraybill, 2002). Furthermore, previous static models might produce incomprehensive outcomes, given economies or establishments are dynamic.

The recent studies discussed in this review address these issues by modifying previous aggression or simulation models. Gabe & Kraybill (2002) develop a two-stage regression model to control non-incentive growth factors, such as industry, size and age of a firm, regional growth, and infrastructure. This approach helps evaluate effects of incentives after business expansions. The North Carolina case study is conducted through a simulation, which projects the employment growth with firm-level data. This approach demonstrates how firms respond to state tax incentives regarding changing in employment (Luger & Bae, 2005). To eliminate bias of self-selection of enterprise zones, Billings (2008) employs a border-matching methodology, which matches only enterprise zone and non-enterprise zone areas in close geographical proximity. This could control time-varying unobservables and economic conditions, generating more accurate relationship between tax incentives and employment growth.

Further Studies

As most related literature suggests, relationship between tax incentives and regional economic growth might be weak at the state level. Two possible reasons could lead to the findings. First, tax effects are likely to be small in larger economies, especially at the state level. Secondly, it is possible that incentives do induce significant new growth in poor and needy communities. But little effects of more developed areas in the state cancel out the growth. Therefore, cases of different states or areas should be studied separately. In addition, more time-varying and micro-level data are needed to produce more in-depth results. Because states are unwilling to conduct evaluations, this issue might be difficult to address. But further studies can be done with available data.

Scholars could develop a multilateral simulation to evaluate the effectiveness of state tax incentives because one state could generate tax exportation and incidence to businesses in other states. Further analysis of costs and benefits should be done, given little work on cost and benefit analysis of tax incentive programs. I would like to look closer at effectiveness of distressed areas from the perspective of the locals. The cost and benefit analysis should take into account the multiplier effect and intangible effect, such as benefits for future generations. But the analysis should not include benefits or costs of workers coming from outside of the area. Hopefully the more detailed and quantitative analysis can contribute to the study of the relationship between tax incentives and regional economic growth.

Reference:

Bartik, T. J. (1991). Who benefits from state and local economic development policies?. Kalamazoo, Mich: W.E. Upjohn Institute for Employment Research.

Billings, S. (2009). Do enterprise zones work? an analysis at the borders. *Public Finance Review*, 37(1), 68-93.

Burnier, D. (1992). Becoming competitive: How policymakers view incentive-based development policy. *Economic Development Quarterly*, 6(1), 14-24. doi: 10.1177/089124249200600102

Buss, T. F. (2001). The effect of state tax incentives on economic growth and firm location decisions: An overview of the literature. *Economic Development Quarterly*, 15(1), 90-105. doi: 10.1177/089124240101500108

Chi, K. S., & Hofmann, D. J. (2000). State business incentives: Trends and options for the future Council of State Governments.

Douglas P Woodward, & Paulo Guimarães. (2009). BMW in south carolina: An update. *Business and Economic Review*, 55(2), 13.

Fisher, P., & Peters, A. (1997). Tax and spending incentives and enterprise zones. *New England Economic Review*, 109-109.

Gabe, T. M., & Kraybill, D. S. (2002). The effect of state economic development incentives on employment growth of establishments. *Journal of Regional Science*, 42(4), 703-730.

Kaye, T. A. (2008). The gentle art of corporate seduction: Tax incentives in the united states and the european union. *University of Kansas Law Review*, 57(1), 93.

Luger, M. I., & Bae, S. (2005). The effectiveness of state business tax incentive programs: The case of north carolina. *Economic Development Quarterly*, 19(4), 327-345.

Peters, A., & Fisher, P. (2004). The failures of economic development incentives. *Journal of the American Planning Association*, 70(1), 27-37. doi: 10.1080/01944360408976336