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Timothy J. Bartik

*W.E. Upjohn Institute for Employment Research*

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## Labor-Demand-Side Economic Development Incentives and Urban Opportunity

### Authors

Timothy J. Bartik, *W.E. Upjohn Institute for Employment Research*

### Upjohn Author(s) ORCID Identifier

 <https://orcid.org/0000-0002-6238-8181>

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## CHAPTER 9

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# Labor-Demand-Side Economic Development Incentives and Urban Opportunity

Timothy J. Bartik

This chapter focuses on “labor-demand-side” economic development policies that target specific firms or relatively narrowly defined groups of firms. The central focus: how such policies might broaden urban opportunities.

The “labor-demand-side” economic development policies analyzed in this chapter are targeted government subsidies to firms, intended to affect labor demand. The targeting means that government either chooses which specific firms get subsidies, or which groups of firms undertaking the desired actions get subsidies. Subsidies may be financial; for example, consider a property tax abatement to reduce a firm’s property taxes below their usual level, which may be offered to entice a new branch plant to locate in a particular local area. Subsidies may be customized services; as part of an economic development deal, a new or expanding firm may be offered a free training package from a local community college, which will train workers for that specific firm’s needs.

In the United States, these subsidies are mostly financed and run by state and local governments, sometimes with federal help. These subsidies’ central goal is typically to increase the quantity and quality of local jobs in a local labor market, such as a metro area or a state.

Some subsidies go beyond promoting overall job growth for the metro area or state to promoting more specific forms of economic development. For example, some subsidies also aim to help employ the disadvantaged. Such subsidies include tax credits or cash payments that are conditioned

on employers hiring the long-term unemployed, or welfare recipients, or other needy groups. Other subsidies aim at redeveloping specific neighborhoods or land parcels within metro areas. These subsidies include enterprise zone programs for distressed neighborhoods, and brownfield development policies.

Labor-demand-side incentives for firms are not the only way to promote state or local economic development. The quantity or quality of local jobs may also be increased by other policies. For example, local labor supply policies may increase the numbers or wages of local jobs by attracting new workers to the local area, or by improving local workers' education. Other state and local policies may affect labor demand, for example local labor demand will be affected by overall state and local taxes and spending.

But targeting specific firms or groups of firms for incentives is more politically controversial. The immediate benefits of such incentives go to firms. Are there broader benefits for local residents, which might justify incentives' costs for local taxpayers? Furthermore, there is the important issue of fairness across different firms. Under incentive programs, either individual firms are chosen to receive incentives, or groups of firms receive special tax breaks or services because they invest in a narrowly defined area or hire certain workers. Other firms do not receive these incentives. Are there sufficient social benefits from this assistance to specific firms or specific groups of firms that might justify this differential treatment?

This chapter focuses on how such labor-demand-side incentives might broaden economic opportunities, particularly for urban residents. The chapter identifies "leakages" that impede subsidies to firms from expanding opportunities. Leakages include subsidizing jobs that would have been created anyway, subsidizing jobs that substitute for other jobs (both within a local area, and across the entire United States), and creating jobs for persons who otherwise would have found similar jobs. The chapter also discusses "multiplier" effects beyond the subsidized firms. Multipliers include increased demand for local suppliers to the subsidized firms, increased local consumption spending by workers in the subsidized firms, and technology spillovers from subsidized firms to other local firms. For incentives to have higher ratios of benefits to costs, policy makers must better target such subsidies, both to increase multipliers and to reduce leakages. State and local governments have some reasons to better target incentives, but federal policy may also be needed, particularly when a state's subsidies produce negative spillovers, for example by reducing jobs in other states.

This chapter's empirical findings conclude that labor-demand-side economic development incentives are most effective if provided in the form of customized services. These customized services provide information or job training that is in short supply to many small and medium-sized businesses, and that can provide a high bang for the economic development buck. Tax incentives for economic development can work, but only if carefully targeted at high-wage firms with high local multipliers in the local export-base sector. For hiring subsidies for the disadvantaged, the available evidence is that such tax or other cash incentives are more effective if combined with screening and training services that help assure firms that these hires will be productive. For neighborhood development subsidies for distressed neighborhoods, the evidence suggests that tax incentives for firm location or expansion are more effective if combined with support for neighborhood services that will make the neighborhood more productive for business. When there are real barriers to using some factor of production, whether it is disadvantaged workers or distressed neighborhoods, cash alone as an incentive for such utilization is more effective if combined with services that help overcome the real barriers to employing these workers or utilizing this land.

The next section further describes economic development subsidies. After that, a logic model will be presented for understanding subsidy effects. Evidence on subsidy effects will then be summarized. This theory and evidence lead to policy recommendations.

### **The Varieties of Economic Development Subsidies**

Although all state and local policies affect local jobs, "labor-demand-side" economic development incentives are distinguished by being targeted with discretion at specific firms or at groups of firms that invest in specific areas or hire specific workers. This targeting allows greater flexibility in achieving policy goals, while also allowing a greater chance for costs to escape accountability.

Economic development subsidies include financial subsidies and customized services. Either of these types may be further targeted at hiring specific types of workers, or targeted at specific geographic areas within the local area. Both financial subsidies and customized services may sometimes be combined to encourage economic development. For example, the federal Empowerment Zone program of the 1990s, to be discussed further below,

combined both tax incentives and subsidies for services in encouraging redevelopment of distressed neighborhoods. As another example, Minnesota's MEED program of the 1980s, also to be discussed further below, combined cash incentives for firms hiring the long-term unemployed with screening and training services.

Financial subsidies include tax incentives. For example, property tax abatements reduce a new or expanding firm's tax rate. Firms may also be provided with free land, grants for research and development, or loans at below-market interest rates.

These subsidies also include customized services. A frequently provided customized service is free or subsidized job training customized to the individual firm's needs. This may include job training for new hires in expanding firms, or job training for new hires or incumbent workers in firms facing competitive threats. Such subsidized or free job training is most commonly provided by local community colleges.

Other customized services address a firm's specific infrastructure needs. Access roads may be provided on an expedited basis to a firm's new site. Infrastructure may be paid for by tax increment financing, in which the property tax increment from new development within a specified area is devoted to infrastructure within that area.

Many customized services are informational. Economic developers help individual firms to deal with regulations and government programs. Entrepreneurs and new firms may be provided with entrepreneurial training and advice. Manufacturing extension services may help small or medium-size manufacturers with advice on upgrading the firm's technology, human resources, marketing, or products.

As will be reviewed below, the empirical evidence suggests that customized services are frequently more cost-effective, compared to tax incentives or other financial incentives, in achieving economic development goals. Why this is so will be clearer as we discuss the logic of economic development and the evidence.

Financial subsidies and customized services are often specific to particular firm types. Firms targeted by economic developers are usually "export-base": businesses that sell most of their goods or services outside the state or local economy. (See below for why such targeting makes sense from a state or local perspective.) Targeted firms may be required to pay a "living wage." Informational services often specialize in particular business types, such as

start-ups, small business, manufacturing, or high technology. High-tech clusters are often given special attention.

Some subsidies are tied to hiring from disadvantaged groups. Hiring incentives may be provided by tax credits. Hiring incentives are sometimes provided not as tax incentives but as explicit cash spending supported by the spending of local workforce agencies, tied to hiring the disadvantaged workers who are trained or screened by these agencies' programs. Some regular tax incentives for economic development purposes are transformed in part into hiring incentives by being tied to "first source agreements." Under such agreements, a firm can only receive an economic development tax incentive (e.g., a property tax abatement) if the firm agrees to make a good faith attempt to use local workforce agencies as a "first source" for entry-level hires (Bartik 2001; Molina 1998). As will be reviewed below, the empirical evidence suggests that tax credits or other financial incentives for hiring the disadvantaged are more effective if tied to workforce services that help assure firms of these workers' productivity.

Although most subsidies aim at job growth for an overall metro area, some subsidies may promote development only for smaller areas. One example is enterprise zones, in which firms in some neighborhood are made eligible for subsidies. Another example is brownfield programs, which promote the redevelopment of contaminated land. These neighborhood and land development subsidies vary in whether they exclusively rely on tax incentives and other financial services, or whether they also include services. For example, most state enterprise zone programs rely exclusively on tax incentives for redeveloping targeted distressed neighborhoods. In contrast, the federal Empowerment Zone program of the 1990s expanded on the enterprise zone concept by combining tax incentives with considerable funds for expanding services in distressed neighborhoods. As will be reviewed below, the empirical evidence suggests that adding services to tax incentives is more effective in redeveloping neighborhoods with significant development barriers.

Despite this variety, the bulk of economic development subsidies are tax incentives. For example, in one study of Michigan, about two-thirds of economic development subsidies are tax incentives (Bartik 2011).

Most economic development subsidies are financed by state and local government. However, the federal government has provided subsidies for neighborhood development (e.g., Empowerment Zones), hiring the disadvantaged (e.g., Work Opportunity Tax Credits), small businesses (Small

Business Development Centers), and manufacturers (Manufacturing Extension Partnership).

Economic development incentives for firms may total \$40 billion a year (Bartik 2001). Total incentives are higher if we include “tax expenditures” that entitle all businesses meeting the law’s criteria to a tax break. For example, journalist Louise Story of the *New York Times* concluded that economic development subsidies were \$80 billion/year nationally, but \$50 billion was due to state tax laws exempting interbusiness sales from the sales tax (Story 2012; K. Thomas 2012). Kenneth Thomas (2010) estimates that annual economic development subsidies are \$70 billion, but his total includes tax expenditures. Distinguishing incentives that target specific types of firm behavior, from more general tax provisions that define business tax bases, is not always straightforward.

This dizzying array of highly varied economic development financial subsidies and services for firms poses a challenge for policy evaluation. How are we to understand these programs’ effects? To do so requires a specific model for evaluating the benefits and costs of such assistance to firms, which will be developed in the next section. The model used here focuses on how much incentives cost per net job created, and what benefits jobs created provide in higher earnings per capita. The model used here will consider such costs and benefits both from a local perspective and a national perspective. The local perspective generates such questions as these: how many jobs at what cost does this program create in this state or metro area? How do such jobs affect state or metro area earnings per capita? The national perspective generates such questions as these: how many jobs at what cost does this program create on net in the nation? How do such jobs affect national earnings per capita? The two perspectives differ because jobs and earnings created in one local area may come at the expense of other local areas.

As will be explored in the empirical section, the evidence suggests that customized services to firms, compared to financial subsidies for firms, are not only more effective from a local perspective, but from a national perspective, in increasing earnings per capita. From a national perspective, boosting productivity, which customized services can do, is more economically efficient than simply providing financial subsidies that alter business location patterns. In addition, combining services with cash subsidies, rather than cash subsidies alone, to redevelop distressed neighborhoods, or to encourage hiring of the disadvantaged, is more effective in boosting earnings per capita not only from a local perspective but also from a national perspective.



Overcoming the real barriers to employing the disadvantaged, or to utilizing distressed land, enlarges both local and national economic output.

### **A Logic Model for Effects of Economic Development Incentives**

This chapter now turns to outlining a “logic model” for how economic development incentives for firms affect earnings per capita. The model begins by considering effects for local earnings per capita, before going on to consider national earnings per capita.

Earnings per capita is the focus because it is the most important benefit of local job growth. For example, one study found that increases in earnings per capita from local job growth were at least four times the annual equivalent value of increases in land values, and at least five times the increase in fiscal benefits for state and local governments (Bartik 2005).<sup>1</sup>

What factors alter the “bang for the buck” of incentives in boosting earnings per capita? Figure 9.1 outlines a logic model for how incentives increase earnings per capita, identifying leakages that reduce the bang for the buck, and multipliers that increase it.

The first leakage is that only some proportion of the incentives actually changes firms’ behavior. Economic developers may claim that tax incentives are costless because no tax revenue would have been created without the new plant. But this claim assumes that 100 percent of the incented business activity is due to the incentive, which is false.

A second leakage occurs if the incented business does change its behavior, but this business activity directly substitutes for some other business activity. For example, if the incented business was attracted by a vacant site or available labor, this site or labor might have attracted some other firm.

A third leakage occurs if the incentive goes to a locally oriented firm selling to a local market. If so, then the expansion of the incented business reduces local markets available to other local firms, thereby reducing their activity. In contrast, if incentives go to businesses that are “export-base”—businesses that sell their goods and services outside the local area—then the incented business brings new money into the metro economy.

One multiplier effect is the traditional Keynesian multiplier at the local level. The incented business will use local suppliers, increasing their jobs. The workers in both the incented business and local suppliers will spend some

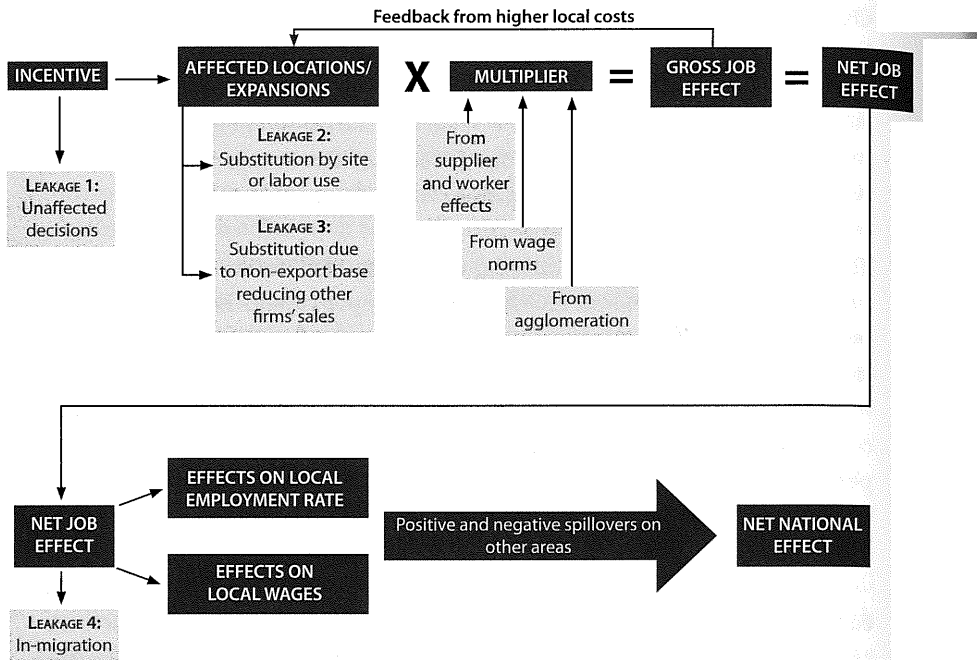


Figure 9.1. This logic model illustrates how economic development policies affect earnings per capita.

wages on locally produced goods and services. These multiplier effects depend on the incited business’s local supplier network, which is more extensive in larger metro areas. Multiplier effects will also be larger if workers in incited businesses or suppliers are paid more. Multiplier effects are larger if more consumption goods are produced locally, which is higher in larger metropolitan areas.

Another multiplier is wage norm effects if the business pays wages above or below normal wages for workers of that skill level. Evidence suggests that when the local industry mix shifts to high-wage industries, local wages go up by about twice what would be expected based on direct effects (Bartik 1993).

Another type of multiplier is “agglomeration economies” due to either greater overall local activity or a larger industry cluster. Agglomeration effects are cost savings associated with higher industry concentrations of employment or greater urban size. These agglomeration economies may be based on having thicker markets for workers and suppliers, which allow economies

of scale that make it easier locally to access more specialized suppliers and workers. Agglomeration economies may also be due to sharing of innovative ideas within or across metro industries. Agglomeration economies exist (Moretti 2010; Greenstone et al. 2010), but it is unknown whether they are subject to threshold effects. Therefore, it is unclear whether adding a specific firm to a metro area will add to agglomeration economies, which is what is relevant in evaluating incentive impacts. Overall multipliers, including agglomeration economies, may be greater for high-tech industries (Moretti 2010).

A negative feedback effect occurs due to greater local business activity pushing up local prices and wages. These increased local costs will reduce the attractiveness of the area for other business expansions. These negative feedback effects depend in part on how elastically the area supplies housing, which will depend on state and local housing regulations (Glaeser, Gyourko, and Saks 2006).

A labor market leakage is that only a portion of the net new jobs created will increase the local employment rate. An increase in local jobs must in the end result in a combination of some reduction in local unemployment, some increase in local labor force participation, and some increase in local population. Even if some of a new or expanding firm's hires are already employed, such hires create local vacancies. The chain of vacancies must ultimately result in either increases in local employment rates or the local population to match the increased local employment. The percentage increase in local employment must be approximately equal to the sum of the percentage increase in the local employment rate plus the percentage increase in the local population:<sup>2</sup>

$$\text{(Eq. 1)} \quad \% \text{ change in } E \approx \% \text{ change in } (E/P) + \% \text{ change in } P.$$

In this equation,  $E$  is employment, and  $P$  is population.

In the short run, 40 to 80 percent of all jobs go to local residents, and the remainder go to persons who otherwise would have lived elsewhere. In the longer run, the percentage of new jobs that go to local residents is only 20 percent, under normal labor market conditions (Bartik 1991, 2015).

The persistence of local employment rate effects must reflect some enduring changes in local workers' productivity in response to short-run labor demand increases. One plausible explanation is the better skills due to short-run job experience (Phelps 1972; Bartik 2015).

Earnings effects are augmented by increases in local wages. The increase in local wages will be related to how much labor supply responds to the increase in local demand.

How labor demand shocks affect local employment rates and wages will depend on who gets the jobs in the short run (Persky et al. 2004). Who gets the jobs will depend on how well the newly created jobs match local skills. Who is hired also depends on institutional details, such as whether incented businesses work with workforce agencies to hire local residents.

An additional issue is what proportion of earnings increases go to workers at the bottom of the income distribution. The evidence suggests that local growth shocks are modestly progressive: the percentage change in earnings is greater for low-income groups, but not the dollar change in earnings. The earnings effects of local labor demand increases are distributed as follows: for every dollar in increased earnings of the lowest-income quintile, about \$2 goes to the middle-income quintile, and \$3 goes to the highest-income quintile (Bartik 2011). But earnings effects as a percent of income for the lowest-income quintile are about twice those of the middle-income quintile, and about five times the percentage effects for the highest-income quintile.

All of these effects are for a metropolitan area. From a national perspective, when jobs expand in one metropolitan area, this reduces markets for firms in other metro areas. This zero-sum game aspect of local development is reduced if the policy does not simply induce job growth, but also increases productivity, which enlarges the national economic pie. Productivity is enhanced when firms use resources more productively than they otherwise would be used, which may occur due to better worker skills or firm information, or by firms utilizing land and labor that otherwise would be underutilized.

### **Empirical Evidence**

This section considers empirical evidence for financial subsidies and customized services, before considering the special issues of hiring incentives and neighborhood incentives.

To focus ideas, the preceding section can be summarized by some simplified equations for the annual costs and benefits per job created by an eco-

conomic development policy. Because the total additional jobs created in some geographic area will equal the jobs directly created by the policy, times the multiplier effect of those jobs, the cost per additional job will go up with a higher cost per directly induced job, and will go down with a higher multiplier:

$$\begin{aligned} \text{(Eq. 2) } \text{Costs/additional job} &= \text{Costs/ (directly-induced job*multiplier)} \\ &= (\text{Costs per directly-induced job}) \text{ times} \\ &\quad (1/\text{multiplier}). \end{aligned}$$

The benefits for the residents of some geographic area of creating jobs will go up with higher earnings of those jobs. The benefits will also go up with a higher fraction  $k$  of those jobs' earnings that benefit the residents of that geographic area, either by increasing the employment rates of local residents, or increasing their real wages:

$$\text{(Eq. 3) } \text{Benefits per additional job} = (\text{fraction } k) \text{ times (average earnings per additional job).}$$

In these equations, all elements are affected by the factors discussed in the preceding section.<sup>3</sup> What does the empirical evidence show?

### Financial Subsidies

For tax incentives, the empirical evidence suggests that from a state and local perspective, net benefits are closely balanced, and sensitive to plausible variations in effectiveness and multipliers. Net national benefits are unlikely.

Empirical findings for tax incentives are based on how state and local business activity responds to state and local business taxes. Economists describe this sensitivity by the "elasticity" of state and local business activity with respect to state and local taxes, where "elasticity" is defined as the ratio of the percentage change in local business activity to the percentage change in state and local business taxes. We would expect this ratio to be negative, as we would expect lower (higher) business taxes to induce more (less) local business activity. This research literature suggests a long-run elasticity of state and local business activity with respect to state and local business taxes of somewhere between  $-0.05$  and  $-0.6$ , with a central value of  $-0.2$  (Bartik 1991;

Wasylenko 1997). This central value of  $-0.2$  means that if all state and local business taxes were reduced by 10 percent, we would expect that an area's business activity would in the long run increase by 2 percent. Direct evidence on incentives is consistent with this estimated sensitivity to costs (Bartik and Hollenbeck 2012; Moretti and Wilson 2014).

At a  $-0.2$  elasticity, the incentive costs per induced job would be \$30,000/year. This is the annual cost to induce one additional local job.<sup>4</sup> This incentive cost can be expressed as the probability that a typical incentive package, which averages \$1,300 annually per job, would tip a location decision. This typical package would tip the location decisions of 4.3 percent of all jobs provided incentives. If the cost of inducing a new job is \$30,000, then an incentive package of \$1,300 annually, to be equally cost-effective, will induce only  $1,300/30,000 = 4.3$  percent of all incented decisions.<sup>5</sup> Without incentives, at least nineteen of twenty firms would have chosen the same location.

But because the research is consistent with a range of elasticities, there is also a large range of incentive costs. If the elasticity of business activity with respect to costs is only  $-0.05$ , then the incentive costs per directly induced job would be \$121,000 annually per job and the typical incentive package would only tip 1.1 percent of all jobs incented. At a  $-0.6$  elasticity, the annual costs per directly induced job would be only \$10,000 and the typical incentive package would tip 13 percent of all location decisions.

These costs per directly incented job must be combined with net multiplier effects, as shown above in equation (2). For example, if one-third of the jobs go to export-base jobs, and the multiplier for export-base jobs is two, the net multiplier is 0.67. As equation (2) shows, the cost per net additional job is equal to the cost per directly induced job, divided by the multiplier. With a net multiplier of 0.67, the cost per net additional job will be 150 percent of the costs per directly induced job.

Benefits will depend on how well these jobs pay, what fraction of these jobs go to the unemployed and those out of the labor force, and the extent to which the jobs increase wages. Empirical estimates suggest that on average, a new job will yield long-run increases in earnings per capita of about 40 percent of the new job's earnings, half due to higher employment rates, and half due to higher real wages (Bartik 1991). If we assume that any leisure loss due to higher employment is offset by reduced stigma effects of unemployment (Bartik 2015), then all of the earnings increase due to higher employment

should be counted as benefits. If we adopt a local perspective, or a worker perspective, the increased earnings due to higher wages should also be counted as social benefits (most of the profit reduction due to higher wages will affect absentee owners of capital). If we count all earnings benefits as social benefits, and if new jobs had average gross compensation of \$50,000, then the social benefits of each new local job would be \$20,000.

Whether or not business tax incentives pay off depends critically on the elasticity of business location decisions, and the multiplier. If one assumes a high elasticity and high multiplier, then business tax incentives are frequently likely to pay off from a state and local perspective. With a more conservative elasticity and a low multiplier, business tax incentives are highly unlikely to pay off. If the elasticity is close to  $-0.2$ , with a modest multiplier, then incentive costs and benefits from a state and local perspective will be closely balanced. For example, with a multiplier of 1.5, costs of job creation will be around \$20,000 per job, and if the jobs pay around \$50,000 on average, the social benefit per job created will also be about \$20,000.

Empirical research on specific tax incentives finds wide variation in local benefit-cost ratios. For example, one study of a Michigan tax incentive program found that the program likely had high local benefits relative to costs, because it was tightly targeted on high-wage export-base businesses with extensive local supplier networks and high multipliers (Bartik and Erickcek 2014). A study of a state of Washington tax incentive program found that the program was less likely to pass a local benefit-cost test, because many incentives went to non-export base businesses or subsidized firm activities that would have occurred anyway (Bartik and Hollenbeck 2012).

From a national perspective, however, it is highly unlikely that discretionary tax incentives pay off, at least at times when macroeconomic authorities are managing the economy to maintain full employment. From a national perspective, the jobs created in this state or metropolitan area will be mostly offset by jobs destroyed in other areas.<sup>6</sup>

An exception might be incentives that encourage innovative high-tech industries, which might boost national productivity. But this depends on whether the incentives induce additional innovative activity, rather than simply relocations. Large effects on innovation might require larger government intervention than typical state and local tax incentives (Mazzucato 2013).

Another exception might be job creation incentives when national unemployment is high (Bartik and Bishop 2009). But such incentives are more

effective if deficit financed, and are more efficient if applied to all job creation, rather than job creation in firms chosen by local policy makers.

### Customized Services

For customized business services, the sparse evidence suggests that some types of services may be far more efficient than financial incentives. The evidence is strongest for customized job training and manufacturing extension services. A quasi-experimental study of firms with different access to customized job training suggests that such job training has productivity benefits that in just one year are about 1.8 times these programs' costs (Holzer et al. 1993; Bartik 2010). A quasi-experimental study of firms with different access to manufacturing extension services suggests that manufacturing extension has productivity benefits that in just one year are about 2.1 times program costs (Jarmin 1998, 1999; Bartik 2010).

The benefit/cost ratios for these services depend upon how long productivity effects persist. The Holzer et al. (1993) estimates suggest persistence, whereas Jarmin (1998) finds some depreciation. But even with considerable depreciation, these productivity benefits imply local employment effects that would be large compared to costs. Local employment effects would occur because higher productivity will lower local costs, increasing the attractiveness of local expansion. Suppose the productivity benefits of customized job training depreciate by 25 percent annually, that business location decisions have the cost sensitivity implied by a  $-0.2$  business tax elasticity, and that the social discount rate is 3 percent. (The social discount rate is the annual interest rate that helps translate between future annual flows of benefits or costs, measured in dollar terms, and today's dollars.) Then the annual equivalent cost per job created of customized job training would be \$1,600 per job created.<sup>7</sup> Under similar assumptions, the annual equivalent cost per job created of manufacturing extension would be \$1,300 per job created.

Other evidence finds slightly higher costs per job created for customized services, but still much lower costs than for business tax incentives. Hollenbeck (2008) uses surveys of firms to find that customized training grants induce one direct new job for every \$23,000 in one-time grants. Ehlen (2001) uses surveys of firms to find that manufacturing extension services induce one direct new job for every \$18,000 in services. Suppose the jobs created depreciate at the rate of 25 percent per year, and the social discount rate is



3 percent. Then the Hollenbeck survey implies an annual cost per job created of \$6,000 for customized job training, and the Ehlen survey implies an annual cost per job created of \$5,000 for manufacturing extension.<sup>8</sup> These costs are somewhat higher than the previous estimates, but much lower than the annual costs of \$20,000 per job created that might be found for business tax incentives.

Why might manufacturing extension and customized job training be more effective than business tax incentives? Manufacturing extension services are providing information to firms. Information is cheap to provide, yet can be quite valuable.

For customized job training, such services will mostly be used by firms that value such training, whereas any firm will want the cash from tax incentives. Hiring workers requires large up-front costs for screening and training, and new hires frequently do not work out. In small and medium-sized firms, “after six months on the job, more than one-quarter of new hires were producing less than 75 percent of what was anticipated when they were hired” (Bishop 1993: 336). A public program that screens and trains new hires to meet productivity standards will produce large immediate benefits. Community colleges have comparative advantages in providing training, which makes it plausible that the value of training will significantly exceed costs.

For both manufacturing extension and customized job training, the benefits for firms are front-loaded. Firms immediately benefit from savings on hiring costs and in productivity improvements. Because firms have large real discount rates in making decisions (a 12 percent annual rate estimated by L. Summers and Poterba 1994), and social discount rates are lower (a typical social discount rate ranges from 2 to 5 percent—Bartik 2011, Moore et al. 2004), there are social gains to providing benefits up front.<sup>9</sup>

A social benefit of customized training is that such training may encourage hiring of disadvantaged workers. To do so, customized training programs must seek such workers, and devote extra efforts to screen and train these workers up to job standards. Case studies suggest that some customized training programs are successful in involving disadvantaged workers (Batt and Osterman 1993). But there is little aggregate evidence on how the average customized training program affects who is hired.

From a national perspective, manufacturing extension and customized job training are more likely to increase overall national output than are tax incentives that only relocate economic activity. Customized services also lead

to relocation of economic activity, but this relocation allocates economic activity to more productive locations, which is efficient.

Other customized services also have some evidence of effectiveness. A randomized experiment found that entrepreneurship training increases business start-ups (Benus, Wood, and Grover 1994). Survey evidence of client firms, and before and after comparisons, indicate that firms that receive more intensive assistance from Small Business Development Centers (funded by the U.S. Small Business Administration, along with state and local governments) tend to be more successful (Chrisman et al. 2005; Chrisman 2002; Seo et al. 2012). Business incubators also have supportive evidence from client firm surveys, and before and after comparisons of client firms (Molnar et al. 1997; Amezcua et al. 2013).

The overall research evidence for customized business services is favorable but sparse. Much evidence is from surveys, or before and after comparisons. Only a few studies are quasi-experimental or experimental, which provide stronger evidence.

### Hiring Subsidies

Subsidies for hiring the disadvantaged that only provide tax credits or cash are ineffective. If workers advertise their eligibility to be subsidized as disadvantaged, they are less likely to be hired, because of stigma effects (Burtless 1985). Businesses are reluctant to use such subsidies to hire the disadvantaged. Many businesses do not bother to claim such subsidies, and if they do, claims are made after the hiring, for hiring that would have occurred anyway (Hamersma 2003, 2008).

A better design combines hiring subsidies with screening and job training that provides firms with more assurance that hires will meet skills standards. Such programs were run with some popularity with both businesses and social welfare groups in Minnesota in the 1980s, and as part of the stimulus package for welfare recipients during the current recession. For example, Minnesota's MEED program provided generous six-month wage subsidies for hiring the long-term unemployed for newly created jobs (Bartik 2001). However, rather than being run as a tax incentive, the program was run through local workforce agencies, which combined the wage subsidies with screening and training of eligible workers for interested businesses.

Although hiring subsidies combined with screening and training services is a promising design, it is lacking in strong evidence. Firms report in surveys that such programs affect both jobs created and who is hired (Rode 1988). Empirical evidence suggests that recent wage subsidy and screening programs for hiring TANF recipients increased earnings, but this evidence does not come from studies with a strong experimental or quasi-experimental design (Roder and Elliott 2013).

From a national perspective, if hiring subsidies lead to more employment for the hard-to-employ, these programs offer national benefits. By increasing the employability of a group that otherwise would be less productive, such programs enlarge the national economy. Hiring subsidies for the disadvantaged at one location may lead to fewer jobs in the short run for more advantaged workers at other locations, but the greater availability of employable labor should boost overall job creation.

#### Neighborhood Development Subsidies

For neighborhood development subsidies, the strongest evidence is for enterprise zones. The empirical evidence on state and local enterprise zones is mixed. Many studies indicate no significant effects (Elvery 2009; Greenbaum and Landers 2009; Neumark and Kolko 2010). Other studies suggest some significant effects (Ham et al. 2011; Freedman 2013).

Effects are greater for one variant of the enterprise zone concept, the federal Empowerment Zone program (Busso, Gregory, and Kline 2013; Ham et al. 2011). The difference may be that Empowerment Zones combined subsidies for firms in designated neighborhoods with neighborhood services. These neighborhood services help the designated neighborhoods to overcome the barriers to redevelopment, which are not overcome through simply providing new or expanding firms with cash subsidies.

The Busso et al. evidence uses a quasi-experimental methodology, which compares Empowerment Zone grantees to rejected applicants and future successful applicants. Their methodology suggests that these Empowerment Zones created about 78,000 jobs at a cost of \$1.7 billion, or \$22,000 per job.<sup>10</sup> If we assume that the jobs created depreciate at 25 percent per year, and that the appropriate social discount rate is 3 percent, then the effective annual cost per permanent job equivalent would be \$6,200.<sup>11</sup>

Economic development subsidies also sometimes target brownfields with tax subsidies and cleanup, or target downtowns or other areas with special services through tax increment financing districts. Before and after comparisons suggest that such services are effective in spurring development in the targeted neighborhoods (De Sousa 2013; Weber 2013; Dye and Merriman 2003).

But what about the rest of the metro area? Nearby neighborhoods do not seem to suffer negative spillovers in most studies; some studies find positive spillovers (De Sousa 2013). However, beyond nearby neighborhoods, we might be concerned that subsidies to locally oriented businesses in target neighborhoods might reduce market shares of local businesses elsewhere in the metro area. Tax increment financing districts (TIFs) produce more favorable effects on overall area development if TIFs target industrial rather than commercial development (Dye and Merriman 2003). We might also expect that if neighborhood subsidies lead to usage of land that otherwise would be undeveloped, area output would be more likely to expand, due to expansion of the effective land supply. However, there is no good empirical evidence on this hypothesis.

From a national perspective, we would expect much of the increased activity in some communities to be offset by the loss of jobs in other communities, due to competition in the national market. However, if redeveloping distressed neighborhoods leads to greater use of land or labor that otherwise would be unemployed, these subsidies are more likely to expand overall national economic output.

### **Conclusion: Some Policy Recommendations**

Based on this discussion, what policy advice seems warranted? First, state and local governments should rely less on business tax incentives. These seem less effective than customized services, even from a state and local perspective.

One way to restrict tax incentives is to incorporate them into the state and local tax system. Discretionary tax incentives tend to gradually expand from their original targets. Governors and mayors find it difficult to “just say no.” In contrast, if a legislature incorporates an incentive into the tax code, this requires consideration of costs.

But state and local leaders are unlikely to accept this advice. Discretionary incentives allow political leaders to claim credit for new business. With

an optimistic interpretation of the research, discretionary tax incentives can be argued to pay off from a state and local perspective.

Because tax incentives lack a national payoff, they should be subject to federal regulation. One model is the incentive regulations of the European Union (Sinnaeve 2007). In the EU, business incentives are illegal except under special circumstances: EU-designated distressed regions, high-tech industries, small business, and job training.

For customized business services, no special restrictions are needed, as such incentives are more likely to pay off from both a local and national perspective. But we need more research on these services' effectiveness. This should include experiments randomly assigning businesses to be eligible for services, and quasi-experiments comparing businesses across location or size classes that trigger eligibility for services.

Incentives that target otherwise unemployed labor or land also need further experimentation. We should consider experiments that randomly assign distressed neighborhoods to special incentives and services, or randomly assign hiring incentives and screening and training services for the disadvantaged to both workers and firms.

For firm-specific incentives to be more cost-effective in broadening urban opportunities, we need to better target such policies. This requires rigorous research to see which combinations of cash and services will provide the most effective targeting.

The inefficiencies of many currently popular incentive programs also should encourage state and local policy makers to explore alternatives to incentives. For example, local labor supply policies, such as high-quality universal pre-K, can be viewed as a state or local economic development program. In the case of universal pre-K, empirical research suggests that the benefits in higher future local earnings per capita, per dollar of program cost, may be better than many tax incentive programs (Bartik 2011). Policy makers should enlarge their thinking about how best to promote local economic development. Wise local economic development policy will evaluate many types of programs for promoting broadly shared local growth.

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*Edited by*

Susan M. Wachter

*and*

Lei Ding

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