

Bringing Jobs to People: How Federal Policy Can Target Job Creation for Economically Distressed Areas

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NOTE: This discussion paper is a proposal from the author. As emphasized in The Hamilton Project's original strategy paper, the Project was designed in part to provide a forum for leading thinkers across the nation to put forward innovative and potentially important economic policy ideas that share the Project's broad goals of promoting economic growth, broad-based participation in growth, and economic security. The authors are invited to express their own ideas in discussion papers, whether or not the Project's staff or advisory council agrees with the specific proposals. This discussion paper is offered in that spirit.

BROOKINGS

Abstract

This paper proposes three solutions to bring jobs to distressed areas: customized job training programs for businesses and employees, advice and consulting services through the Manufacturing Extension Partnership program, and a package of grants for local services and tax breaks through a reformed and revitalized Empowerment Zone program. Built on evidence from regional economics research, these policies provide investments and incentives that increase employment and productivity in distressed areas. These programs, directed largely to small- and medium- sized enterprises, can have large effects on worker productivity and business competitiveness, encouraging sustained employment and rising wages. Because these programs offer investments in workers, firms, and local services, they provide a higher return on government spending and are more cost effective than programs that focus on incentives alone.

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Chapter 1: Introduction

Slow job growth in a local labor market takes a significant toll on its residents. Good jobs become scarcer and job hunters must search longer to find them. Prolonged unemployment erodes job skills and worker self-confidence, which hurts long-run earnings. Research suggests that for each 1 percent reduction in the number of jobs in a distressed area, the long-term employment-to-population ratio falls by 0.2 percent while wages fall by 0.2 percent, which adds up to a 0.4 percent loss of earnings per resident (Bartik 1991).

The development of effective job-growth programs is an important part of any economic strategy for economically distressed communities. If successful, such efforts will attract new employers and expand the job base; even long-term unemployed workers will have more luck finding jobs. Other

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workers will secure better jobs, improving their job experience, skills, self-confidence, and reputation with employers. Local residents will benefit from higher earnings over time, even as new people move in.

CRITERIA FOR JOB-GROWTH STRATEGIES

Feasible and effective job-growth strategies to turn around distressed areas must meet several criteria. The most important criterion is that job-growth strategies increase local productivity. An effective job growth strategy that raises productivity will reduce business costs by more than a dollar for each dollar of program costs. Reducing the costs of achieving job growth for distressed areas increases the strategy's feasibility. Increased productivity may also provide

a more sustainable basis for an area's economic prosperity. Increases in productivity also have clear and direct national benefits by contributing to higher national output per capita, which, in the long run, will increase real national per capita incomes.

As I will explore, evidence shows that a variety of services to small- and medium-sized enterprises (SMEs) can efficiently increase productivity. Those services include customized job training and manufacturing extension services. In contrast, tax or cash subsidies have less local bang for the buck than do services that efficiently raise business productivity. A tax or cash subsidy strategy also yields less clear-cut national benefits. Redistributing job growth to distressed areas is likely to have national benefits, but it is more difficult to quantify them. A cost-effective strategy is adequately targeted at areas facing

true long-run distress rather than being evenly spread throughout the nation. The strategy will have to be adaptable to help distressed areas whose industrial mix and problems may be quite diverse.

Since 2000, geographic areas with a manufacturing specialization have tended to have weaker economic performance. The Great Recession changed all that, though, roaring through many areas with nonmanufacturing economies and suffocating other local business and industry. For example, the collapse in housing hurt many areas in the previously fast-growing Mountain West, where many jobs involved new-home construction.

A successful strategy aimed at distressed areas will have to tackle problems at different geographic scales. For example, to be truly effective, programs to help residents in troubled city neighborhoods must focus on how to improve the overall metropolitan area economy as well as how to bring more jobs to the neighborhood (Bartik 1991, 2001; Ihlanfeldt 1992; Quigley and Raphael 2007; Raphael 1998; Wolman, Hill, Blumenthal, and Furdell 2008).

JOB CREATION PROPOSALS

This paper proposes three specific solutions to help distressed areas within a broader framework of how to target and evaluate the efficacy of the proposals.¹ All three programs provide services to help increase distressed areas' productivity, and all are backed by the best evidence of effectiveness from thirty years of regional economics research. Each solution addresses a different aspect of the problems of distressed areas and allows for considerable state and local flexibility. The solutions are adaptable to diverse individual business problems in distressed areas. To briefly sum up, these solutions are as follows:

- 1. Customized job training programs:** Provide federal matching grants for targeted activities of state government-run customized training grant programs. Most state governments currently run customized training programs designed to the business's specifications, and aimed at encouraging local job growth. Federal matching grants would only be available for customized training for SMEs that might have more difficulty financing up-front costs such as training, and would be available only in distressed areas. The targeted grants for customized training can have large effects per dollar of spending, and can boost national productivity as well as the economy of distressed areas.
- 2. Manufacturing Extension Partnership (MEP) services:** Expand and geographically target services for manufacturers through the MEP. MEP centers and offices provide advice to help smaller manufacturers improve their competitiveness. Half of the proposed MEP expansion would be tightly targeted at distressed areas, providing an economic edge for these areas to encourage job growth.
- 3. Reform and revitalize Empowerment Zones:** Provide targeted tax breaks and public service grants through a renewed Empowerment Zone program. The renewed program would be similar to the original program, enacted in 1993, in targeting communities or groupings of neighborhoods with high poverty and unemployment.

As with the original program, the renewed Empowerment Zone program would provide targeted areas with both employment tax credits for business and extra public services. The current Empowerment Zone program has changed over time to rely almost solely on tax breaks, and the evidence suggests that a program that also uses public services to help distressed neighborhoods is more cost-effective. Phasing out the current, less-effective program would partially finance the restored and expanded program.²

These complementary proposals address different aspects of the competitive problems facing economically distressed areas. The customized job training grants increase labor productivity in SMEs. An expanded MEP program provides particular assistance to small- and medium-sized manufacturers. These manufacturers' competitiveness problems go beyond a need for better-trained workers, the focus of customized job training. A renewal and expansion of the Empowerment Zone program targets the particular problems of distressed neighborhoods within distressed local labor markets. Although customized job training and an expanded MEP may help the overall local labor market, these improvements may not sufficiently reach all neighborhoods. Empowerment Zones address that gap.

These programs must be targeted narrowly and objectively at distressed areas to maximize impact and efficiency. Good targeting must encompass both the labor market problems of the surrounding metropolitan area and the distress of particular neighborhoods. Targeting should be based on objective indicators, such as changes in employment-to-population ratios, which reflect long-run labor market problems and weak labor demand. The targeting must be flexible enough to deal with the diversity of governmental and economic structures across American states. Better targeting helps ensure that we are targeting areas with long-term problems, and not areas that would quickly bounce back when the broader economy recovers.

Finally, to ensure that these programs continue to be effective, an ongoing program of rigorous evaluation and transparency should be implemented as these programs are rolled out.

Chapter 2: Evidence on Place-Based Policies

Research evaluating state, local, and federal government incentives for distressed areas suggests that policies that invest in a business's workers and productivity and provide better neighborhood services offer the greatest promise of sustained employment and wage growth. Such policies also provide national benefits by generating productivity improvements greater than their costs; these policies, thus, can increase national income. These national productivity improvements supplement any social, labor market, and fiscal benefits generated by encouraging job growth in economically distressed areas. Finally, the evidence suggests that these productivity improvements for businesses in distressed areas ultimately increase those areas' employment. When local productivity rises, less labor is needed to produce the same output. But the empirical evidence suggests that the effects of lower local costs and the boost to an area's business output are large enough that the net effect of local productivity improvements is to increase area employment.³

One way to boost productivity in a geographic area's businesses is to invest in training or consulting services to smaller businesses. Smaller businesses may lack sufficient knowledge and financing to take full advantage of all profitable opportunities for productivity improvements, or may fear that investments in training will be lost if workers leave for other businesses (Batt and Osterman 1993).

Among government programs to provide training and information services to smaller businesses, customized job training programs and MEP programs have the best evidence of effectiveness. (There is some evidence of effectiveness for other programs, such as small business development centers and business incubators, but this evidence is not as strong. See Bartik 2004.)

State governments currently spend about \$600 million to \$800 million per year for customized training programs for business (Duscha and Graves 2006; Hollenbeck 2008), which support the training of about 1 million workers each year. Unlike in federal job training programs that are targeted to unemployed workers, in customized training programs the business is the client, and businesses are provided with training customized to their needs and their workers.

Research suggests that well-run customized training programs can induce new business activity. Research by Hoyt, Jepsen, and Troske (2008) examines Kentucky's customized job training program, which they find is ten to twenty-five times as effective in encouraging county employment growth as are business tax incentives. Research by Holzer, Block, Cheatham, and Knott (1993) examines Michigan's customized training grant program to small manufacturers, finding that the training sufficiently reduced business "scrapage rates"—the rate at which manufacturing output had to be scrapped because it did not meet quality standards—to more than cover program costs within one year. Holzer and colleagues' results use a relatively small sample of firms (71 to 107 firms, depending on the specification), and are not statistically significant in all specifications.⁴ However, even their conservative estimates show sizable benefits that exceed the programs' modest costs.

MEP programs currently spend about \$274 million annually, with \$110 million of this funding provided by the federal government through the MEP program of the National Institute of Standards and Technology in the U.S. Department of Commerce (Stone & Associates and the Center for Regional Economic Competitiveness 2010, p. 26). These funds support sixty regional centers with about 370 local offices, which work intensively with about 7,000 mostly small manufacturers every year. The MEP program provides information and advice for businesses dealing with issues related to technology; the productivity and efficiency of the production process; product quality; business planning; increased sales in current markets and identification of new markets; product innovation and development; human resource issues such as employee recruitment, training, and retention; management of relationships with business partners, customers, and suppliers; financing; and export to global markets. Research suggests that MEP clients benefit from increases in productivity, reduced costs, higher output, and greater employment. Jarmin (1999) finds that MEP usage increased productivity in assisted companies by 3.4 percent to 16 percent over a five-year period. Other estimates by Jarmin (1998) suggest somewhat lower effects on productivity, perhaps as low as 1 percent.^{5,6} Although Jarmin's estimated productivity effects are not always statistically significant, the magnitudes of the estimates suggest economically important effects.

Business productivity can also be improved by boosting public services in distressed neighborhoods. A good example is the original Empowerment Zone program, enacted in 1993, which provided each of eleven Zones with two competitive advantages: employment tax credits for Zone employers that employed Zone residents and Zone block grants for public services that amounted to an average of more than \$100 per resident per year for the ten-year duration of the program. Later rounds of the Empowerment Zone program (and a similar program, Renewal Communities) reduced or eliminated the public services and retained the business tax breaks.

Research evidence from the original 1993 Empowerment Zone program shows that the program boosted jobs and productivity significantly. Busso, Gregory, and Kline (2010) find that employment in Zones increased by 15 percent by the year 2000. Employment increased somewhat more for Zone residents (16 percent) than for nearby nonresidents (13 percent), most likely because the employment tax credit provides a 20 percent tax credit for the first \$15,000 of wages paid by Zone businesses to Zone residents. However, the fact that the differential is so slight suggests, as Busso and colleagues point out, “wage credits are unlikely to be the only source of increased labor demand in the Zones.” They conclude that the Zone public services must have increased Zone productivity. The Zones also appear to be associated with an increase in wages of non-Zone residents living in the

Zone (although this increase is statistically insignificant), which suggests an increase in productivity of at least 3 percent due to the Zone designation.

The original model of federal Empowerment Zones is proven to work. But the evidence on the revised model that relies on tax breaks is less compelling. While we have no studies of the current federal Empowerment Zone program or its Renewal Communities cousin, we do have extensive research on state enterprise zone programs, which are similar in that they rely almost exclusively on business tax breaks. The weight of this research evidence suggests that state enterprise zones are not effective (Elvery 2009; Greenbaum and Landers 2009; Lynch and Zax 2010; Neumark and Kolko 2010; Peters and Fisher 2002). Most programs studied, particularly in studies with better comparison groups, did not find evidence of improved labor market outcomes.⁷

Business tax breaks by themselves simply may not be enough to turn around the communities and neighborhoods selected as Zones. These neighborhoods have deep problems and may need additional public services to improve the Zones’ business climate, public safety, amenities, and labor force quality. However, this does not mean that business tax breaks are unnecessary. There may be some synergy between extra public services and business tax breaks, in which the two together are more effective than either separately.

TABLE 1
Summary of Research Evidence

Proposal	Evidence
Customized Training	<p>Hoyt and colleagues (2008) find that a 10 percent increase in training incentives per county is associated with an increase in county employment of about seven jobs. Source: Table 2 in Hoyt et al. (2008).</p> <p>Holzer and colleagues (1993) find that state customized training grants produce a contemporaneous reduction in business scrap rates of 13 to 38 percent. Source: Table 4 in Holzer et al. (1993).</p>
MEP	<p>Jarmin (1998, 1999) finds that MEP usage increased productivity in assisted companies by 1 percent to 16 percent over a five-year period. Source: Tables 2, 6, and 7 in Jarmin (1999), and Table 7 in Jarmin (1998).</p>
Empowerment Zone Restart	<p>Busso and colleagues (2010) find that employment in the original federal Empowerment Zones, which included both business tax breaks and enhanced public services, increased by 15 percent over the program period. Source: Table 5 in Busso et al. (2010). Wages of nonresident commuters increased by 3 percent, which they interpret as a productivity effect.</p> <p>Research on state enterprise zones, which exclusively rely on business tax breaks, suggests that they are not very effective (Elvery 2009; Greenbaum and Landers 2009; Lynch and Zax 2010; Neumark and Kolko 2010; Peters and Fisher 2002).</p> <p>The conflicting outcomes of state and federal Zone programs suggest that business tax breaks by themselves are insufficient to increase employment in distressed neighborhoods. Additional public services are necessary.</p>

Chapter 3: Recommendations

This section offers my recommendations for how to deploy these programs on the ground. For each proposal, I provide specific program services and delivery details and explain the targeting and financing. The details, based on the considerable research by me and by others, explore the separate strengths of each proposal. Some of this research is highlighted in Table 1.

Two broad principles apply to all these proposals: appropriate targeting and rigorous reevaluation. Tightly targeting these programs based on objective economic criteria increases effectiveness and national benefits. Defining distressed areas narrowly is essential if these programs are to have the resources to meet the grave challenges facing distressed areas. Furthermore, tight targeting helps to increase national benefits by relocating job growth to where it has greater benefits—

...targeting these programs based on objective economic criteria increases effectiveness and national benefits...

among high-unemployment areas and lower-income groups. Encouraging job growth in underutilized distressed areas also can help to alleviate the burden on crowded roads and other means of transport in areas where jobs are plentiful.

To be cost effective, the targeting of distressed areas should be based on objective economic criteria that measure whether an area's residents have suffered from long-term lack of labor demand. For example, targeting could be based on the most recently observed ten-year change in an area's earnings per capita, which reflects both changes in employment-to-population ratios and wage rates due to job growth trends.⁸ Targeting of distressed areas should occur at two geographic levels of aggregation: in the local labor market, such as the metropolitan area, and in smaller areas, like neighborhoods. Research shows that the labor market outcomes of disadvantaged groups depend on job growth in the broader metropolitan area as well as in the neighborhood

(Bartik 1991, 2001; Ihlanfeldt 1992; Quigley and Raphael 2007; Raphael 1998; Wolman et al. 2008). For the three programs recommended here, the customized job training grants and the MEP program expansion would be targeted at distressed local labor market areas comprising 20 percent of the U.S. population. The restored Empowerment Zone program would be targeted at high-poverty neighborhoods comprising 2 percent of the U.S. population.

Rigorous evaluation and transparency in reporting also ensure program efficiency. Each of these proposals should be implemented in ways that allow for ready and rigorous evaluation. This requires that states and localities report eligibility criteria for awarding program participation and collect data on assisted and unassisted businesses in distressed and nondistressed areas in each state, including employment, output, productivity, and other aspects of the business before and after the program. With such data, and with information on how distressed areas were selected, it would be possible to measure program effects on such important variables as local employment and productivity.⁹

Evaluation can shed light on what program approaches work best and should allow for separate evaluations of each state's programs, delineating the more successful states. Separate evaluation of each state's programs would allow for the identification of successful program designs and practices. States would serve as "laboratories of democracy," resulting in continuous improvement in program quality. Rigorous evaluation of a national rollout of these three programs is essential to confirm the approaches are working, and to learn more about what program approaches work best in what contexts.¹⁰

CUSTOMIZED TRAINING PROGRAMS FOR SMES IN ECONOMICALLY DISTRESSED AREAS

Expanding federal support for customized training programs is a proven way to increase productivity and employment of SMEs. Increased training allocated through objective criteria

has the potential to provide a strong incentive for “export-based” businesses—those that sell primarily outside the local area—to expand operations within distressed communities.

Specific program services and delivery details. The program would provide grants to states to expand their current customized training programs in designated distressed areas. In turn, these state programs would provide grants to small, export-based businesses for customized training. The customized training programs would view the assisted business as the client and cater to the business’s needs.¹¹ Since the goal is business-centric and not worker-centric, this program differs from most federal job training programs.

The focus on export-based businesses would yield multiplier effects on employment and output expansion (Bartik 1991; Moretti 2010). This occurs when the export-based businesses expand and invest in the local community. (In contrast, if the customized training was provided to a non-export-based business, an expansion might reduce sales and employment at competing local businesses.)

The assisted businesses would be expected to pay for half the cost of the customized training. This cost sharing helps ensure that the training is actually useful from the business’s perspective. The grants would only go to pay for actual training, not for salaries. Paying salaries has proven to be expensive in running state customized training programs. (For example, Iowa’s customized job training programs, which allow such wage subsidies, spends fifteen times the national average per

...federal support for customized training programs is a proven way to increase productivity and employment...

trainee, at \$8,904 versus \$608 per trainee (Duscha and Graves 2006.) Most training grants would be in the range of \$250 to \$1,500 per trainee. (With the required business match, total training costs per trainee would be double that number.) Eligible businesses would have fewer than 500 employees. Export-based businesses would be culled from a federal list of industries with out-of-area customers.

Targeting and financing. Objective criteria are required for identifying distressed areas and for targeting funds. The federal government would set criteria for how states could define distressed areas, within which each state would have some flexibility subject to federal oversight and approval.

The federal match rate for financing would vary across states, based on each state’s economic distress, with a match-rate range of 25 percent to 75 percent. Further targeting would be achieved by limiting the percentage of each state eligible for the program, from 10 percent of the population for the least-distressed states to 30 percent for the most-distressed states. The maximum grant per state would be designed so that similar customized training funds per capita would be provided to all distressed areas. With these parameters, the federal government in an “average state” would match 50 percent of state-program costs for customized training in distressed areas, which would be 20 percent of the state’s population.

EXPANSION AND GREATER TARGETING OF THE CURRENT FEDERAL MEP PROGRAM.

As research has shown, MEP advice can improve productivity and profitability at client firms. The low-cost advice to smaller manufacturers assists the businesses that may need advice the most, and yet that may have the most difficulty finding and paying for reliable advice. The targeted improvement of manufacturing productivity in distressed areas gives those manufacturers a competitive advantage, which allows them to sustain and expand output. Because MEP is targeted at manufacturers, which generally are export-based businesses, the expansion of local manufacturing output and employment can lead to multiplier effects—employment expansions in local manufacturing suppliers and retailers.

Specific program services and delivery details. MEP should be expanded to serve more manufacturers. The federal share of MEP costs should be increased to ensure that more states and firms enroll. This program builds on a proposal developed by a consultant to the National Institute of Standards and Technology (Stone & Associates and colleagues 2010).¹²

According to this study, MEP annually provides in-depth assistance to about 5 percent of manufacturers with between 20 and 499 employees. An expanded program could reach 30,000 manufacturers, or about 20 percent of the manufacturers in the 20- to 499-employee size category.

Expanded federal funding also would allow the MEP to reduce its current cost sharing, which requires that for every \$1 in federal funding, each center must come up with \$2 in funding from state and local governments or private funds, such as fee revenue. Reducing the cost-sharing requirement from two-to-one to one-to-one could encourage MEP centers to deliver new services and serve new clients.

Targeting and financing. Currently, MEP is not sufficiently directed to firms in distressed areas. For example, the data suggest that the most distressed 20 percent of the U.S. population lives in labor-market areas containing one-quarter of the country's manufacturing employment.¹³ If MEP benefits are distributed roughly according to manufacturing

The grant could be used for a wide variety of activities designed to improve the Zone's economic climate, such as enhanced police patrols, business incubators, job training, youth programs, or business loans.

employment, then per capita benefits that these most-distressed areas receive from MEP are about one-fourth higher than the U.S. average. My proposal—to increase the federal share to 75 percent for services in distressed areas—is significantly above the 33 percent federal share of the current MEP and the 50 percent proposed in the new report by Stone & Associates and colleagues.

As with the customized training program, the federal government would set criteria for how states could define distressed areas, within which states could have some flexibility subject to federal approval. The distressed areas under this expanded MEP program might differ from those under the customized training program—for example, the designation of MEP-distressed areas might include indicators of manufacturing activity as criteria for targeting.¹⁴

A RENEWAL AND EXPANSION OF THE EMPOWERMENT ZONE PROGRAM

The final proposal is to eliminate and replace current Empowerment Zone and Renewal Communities programs with renewed Empowerment Zones that combine tax incentives with public service block grants.

This restored and expanded program would increase the number of jobs in Zones and the productivity of Zone businesses. These Zone tax credits and public services would be widely available to all businesses expanding in the Zones. By modestly increasing funding for Empowerment Zones and by allowing existing Zone programs to expire, the renewed program could be expanded to support about 2 percent of the U.S. population.

Specific program services and delivery details. Local governments would apply to the federal government for specific subareas of 50,000 to 200,000 in population to be designated as Empowerment Zones. Businesses in selected Zones would

be eligible for employment tax credits for employing residents of Zones—20 percent of the first \$15,000 of wages paid to Zone residents. Also, each Zone would be provided with a public service block grant, available for a ten-year period after Zone designation. This public service block grant would equal roughly \$125 (in 2009 dollars) per year for each Zone resident, in keeping with the original program. The

grant could be used for a wide variety of activities designed to improve the Zone's economic climate, such as enhanced police patrols, business incubators, job training, youth programs, or business loans.

Targeting and financing. As with the original program, one level of targeting is provided by minimum Zone eligibility criteria. To be eligible, areas must demonstrate higher-than-average poverty rates and unemployment rates, and exhibit other indicators of economic distress. Additionally, local governments would have to present a convincing strategy for using the employment tax credits, public service block grants, and other state, local, and private resources to turn around the Zone's economic climate.

Chapter 4: Implementation Costs and Benefits of These Proposals

The costs and benefits of the three program proposals—customized job training, manufacturing extension services, and revitalized Empowerment Zones — offer further evidence for how to move forward. I attempt to quantify these proposals’ national productivity benefits and their job-creation benefits for distressed areas.

Table 2 provides conservative estimates of possible productivity benefits and estimates of the cost per new (or relocated) job. They are conservative because the evidence for these programs’ effectiveness arises from a few studies and sometimes from samples with limited numbers of firms. Adoption of these programs, even at a pilot scale, with the suggested evaluation components would provide considerably stronger evidence.

For customized job training and the MEP program, the best estimates are of productivity benefits. For customized training, I adopt the conservative assumption of using the lowest effects on productivity estimated in Holzer and colleagues (1993). I also assume these estimated productivity effects last for only one year. Under these assumptions, the productivity benefits

of customized training are 1.8 times program costs.¹⁵ For MEP, I adopt the conservative approach of using the lowest estimated productivity effects of the program found in Jarmin (1998, 1999), and assume that these productivity effects last for only one year. Under these assumptions, the productivity benefits of manufacturing extension are 2.1 times program costs.¹⁶

None of these estimates comes from randomized control trials, so cannot be considered “gold standard” evidence. Nevertheless, these estimates do come from good quasi-experimental studies, in which the unassisted businesses are likely to be quite similar to the assisted businesses. The productivity benefits imply that there are inefficiencies in the private market in how small businesses obtain information and training. These inefficiencies may be due to financing difficulties of smaller businesses, problems that these businesses have in evaluating the quality of available information and training, or concerns that these businesses have about losing workers they train.

For customized training and MEP, we do not have direct

TABLE 2
Estimates of Cost and Benefits of Three Proposals to Help Economically Distressed Areas

	Percentage effects on productivity	Ratio of productivity benefits to government costs	Government cost per new or relocated job
Federal matching grants for customized job training	0.5 percent	1.8	\$25,000
Expanded and targeted MEP	0.8 percent	2.1	\$8,500
Restarted and restored Empowerment Zones	3 percent	2.1	\$18,000

research evidence on these programs' effects on job creation in distressed areas. We do know that increases in a local area's productivity and the resulting reduction in business costs will raise local business output by increasing the area's competitiveness in the national and international marketplace, and hence raise the local business sector's market share. The available estimates from regional economics research suggest that this increase in local business output is likely to be sufficient to raise local employment, even though the same local output can be produced with less labor.

In Table 2, I present some back-of-the-envelope calculations on the government cost per new or relocated job. The basis of these calculations is from the regional economics literature's finding that a 1 percent increase in productivity (or 1 percent decrease in business costs) increases employment by 3 percent.¹⁷ Thus, the customized training and MEP programs are projected to increase employment of affected firms by 1.5 percent and 2.4 percent, respectively. (The average firm in these programs employed 66 and 358 workers, respectively.) The low estimated costs per new or relocated job of \$25,000 and \$8,500 demonstrate the cost effectiveness of programs that are able to increase productivity.

For the original design of Empowerment Zones, we have good research evidence on both local jobs created and productivity benefits. Based on Busso and colleagues (2010), Empowerment Zones in their original design had a federal governmental cost per job created in the Zones of \$17,763.¹⁸ Busso and colleagues use the estimated effects of Zones on the wages paid by Zone businesses to non-Zone workers to estimate the effects of the Zone block grants on the labor productivity of Zone businesses. This relies on the conservative assumption that increases in productivity will be completely captured in worker wages. A more realistic assumption is that only a portion of productivity increases will be reflected in increased worker wages. Busso and colleagues assume that these productivity effects last forever. I make the more conservative assumption that these productivity effects only last for the remaining five years of the Zones, and that they depreciate by about one-sixth each year. I also assume that the entire ten years of Zone costs are needed to reap these benefits. Under these conservative assumptions, the productivity effects of Empowerment Zones are 2.1 times the total costs of Empowerment Zones.¹⁹

The productivity benefits estimated in Table 2 represent benefits of these programs for the nation. This higher productivity will lead to higher national output per capita. This higher national output per capita will be reflected in some combination of higher wage rates, lower consumer prices, or higher profits.

In contrast, these costs per job created are for local jobs created in distressed areas. Many, or perhaps even all, of these jobs created in distressed areas could be jobs that might have been created in other areas. The effects of national job creation will be correspondingly lower, and perhaps even zero.

Yet, these jobs may persist in distressed areas. The available evidence indicates that shocks to labor demand in local areas tend to cause extremely persistent, perhaps even permanent, effects on local employment levels (Blanchard and Katz, 1992). From a local perspective, these costs per job created are not "costs per job-year" but costs of permanently raising these distressed areas' expected future employment by one job. This makes these programs quite attractive from a local perspective. Estimates indicate that the present value of the local increase in earnings from a permanent increase in local employment by one job is about \$500,000 (Bartik and Erickcek, 2010; Bartik forthcoming). This increase in earnings is caused by the persistent effects of local employment increases on local employment rates and occupational attainment. As discussed above, redistributing jobs to distressed areas may have net national benefits by helping low-income groups, reducing long-term unemployment, or reducing the need to build new infrastructure. In sum, even under conservative assumptions, these three programs yield productivity benefits for the nation that are much larger than costs. Even under these same conservative assumptions, the costs per job created for distressed areas are likely to be reasonable compared to the benefits.

Table 3 provides plausible federal costs and services of these three programs when operated at "full scale." These programs could be run at a smaller scale.

I estimate that a “saturation” level of customized training for small- and medium-sized export-based businesses in distressed areas would train 1.5 million workers annually. This would provide customized training for most new hires, as well as for incumbent workers in businesses facing competitive challenges.²⁰ These training numbers are of similar intensity to what states with the largest customized training programs accomplish.²¹

I assume that customized training grants average \$1,000 per trainee, which is within the range of typical state grants. The federal government would pay, on average, half these costs, with states paying the other half. The \$1,000 is half of the overall costs of training, with businesses matching the government grant. Based on these assumptions, the customized training program would have a \$750 million annual federal cost.

For manufacturing extension, the “full-scale” program is based on the proposal by Stone and colleagues (2010). That proposal expands MEP so that nationally it can assist 20 percent of small- and medium-sized manufacturers annually, rather than the 5 percent currently assisted annually. This report’s proposal tweaks the Stone and colleagues proposal by increasing the federal match for MEP to 75 percent in distressed areas. I assume that this increased federal match will target half the increased MEP services to distressed areas.²² Based on this assumption, MEP could annually assist 38 percent of small- and medium-sized manufacturers in

distressed areas.²³ Federal funding would rise from its current annual level of \$125 million to \$496 million, an increase of \$371 million.²⁴

The scale of the proposed Empowerment Zones would comprise 2 percent of the U.S. population, or about 6 million persons. This might allow for the designation of sixty to eighty Empowerment Zones. I assume that the employment tax credits and block grants per capita in real terms are the same as the original round of Empowerment Zones: \$125 per person per year in block grants, and \$114 per person per year in employment tax credits (both in 2009 dollars). The total gross costs of an Empowerment Zone program would be \$1.4 billion annually. The restarted Empowerment Zone program would replace the business tax breaks provided under the current Empowerment Zone program and the current Renewal Communities program. This replacement would save about \$612 million annually, offsetting a little less than half the cost of restarting the Empowerment Zone program.

In sum, even when these programs are run at “full-scale,” they are quite small when compared with the overall federal budget or major federal programs. For a relatively modest cost, federal policymakers can adopt policies that will help distressed areas and boost national productivity, while learning through evaluation about how to further improve these promising programs.

TABLE 3
Annual Federal Costs and Services Provided by These Three Distressed Area Job-Creation Programs, When Operated at Full Scale

Program	Annual Federal Costs	Services provided
Federal matching grants for customized job training	\$750 million	1.5 million annual trainees
Expanded and targeted MEP	\$371 million	23,000 additional manufacturers served annually
Restarted and restored Empowerment Zones	\$820 million (net cost after phasing out current Empowerment Zones and Renewal Communities)	Sixty to eighty Zones, with a population of about 6 million people.

Chapter 5: Responses to Common Objections

WHY NOT PUT MORE EMPHASIS ON SOLVING THE PROBLEMS OF DISTRESSED AREAS BY ENCOURAGING CLUSTERS OF HIGH-TECH OR OTHER BUSINESSES?

There is good evidence that industrial concentrations can boost productivity (Glaeser and Gottlieb 2008, 2009; Greenstone, Hornbeck, and Moretti 2010; Henderson 2003). This provides a rationale for subsidizing some increases in local industrial activity. However, we do not know enough about the specifics of such industrial cluster effects to reliably propose this for federal public policy.²⁵ For example, we do not know how the effects on a local industry’s productivity of adding one

For a relatively modest cost, federal policymakers can adopt policies that will help distressed areas and boost national productivity...

more business to the local industry varies with the size of the local industry cluster. We would need to know this to decide how to vary the optimal cluster subsidy across locations. Also, it is unclear what mix of policies would best promote cluster growth. Customized job training and manufacturing extension may help clusters more than devoting the equivalent dollar resources to business tax breaks.

It is not obvious that an optimal national policy toward industry clusters would help distressed areas. An optimal industrial cluster policy might promote local economic growth more in nondistressed areas than in distressed areas. For example, perhaps optimal industrial cluster policy would further encourage the automobile industry to move out of Michigan, to newer industrial clusters in less-distressed areas.

WHY NOT PROMOTE DISTRESSED AREAS BY HELPING THESE AREAS ATTRACT HIGHLY SKILLED LABOR FROM OUTSIDE?

Some argue that urban areas can encourage growth by attracting the “creative class” (Florida 2002). The implicit policy would be to develop an amenity and tax package attuned to the needs of this creative class. There are two problems with this strategy: First, we do not know what policy package can attract the creative class. The amenities that make the city of Chicago attractive to young urban professionals are not easily reproduced through public policy. Second, and

perhaps more important, it is not obvious that this policy can help the unemployed and underemployed in distressed local labor markets. Attracting the creative class can lead to growth. The new people attracted may well attract jobs to the local area in sufficient numbers that the added labor supply creates its own demand.

But it is unclear whether the resulting job creation will also benefit the original residents of the local labor market. How does attracting the creative class help the local unemployed?

WHAT IF THE FEDERAL GOVERNMENT IS UNABLE TO COME UP WITH THE POLITICAL WILL TO IMPLEMENT THIS CHEAPER PROGRAM TARGETED AT JOB CREATION IN DISTRESSED AREAS?

Even a relatively cost-effective program for creating jobs in distressed areas may not be politically feasible at the federal level because of political concerns about programs targeted unequally across states.

However, most of this policy package can be pursued at the state or local level. State governments can adopt larger customized training programs and MEP programs. They can target these programs to a greater extent on their own distressed areas. State governments can revise their enterprise zone programs to put more stress on public services than on tax breaks. If state governments do not act, distressed areas can use their own resources to support these programs. Considerable state and local resources already go into economic development programs, mostly in the form of tax breaks. Diverting some of these tax breaks to these more effective programs would enable them to be financed.

Federal support for this policy package has the advantage of not requiring distressed areas to pay all program costs. However, the policy package still has benefits greater than costs even if those costs are borne by distressed areas.

WHY NOT HAVE THE FEDERAL GOVERNMENT SAVE MONEY, AND FINANCE THIS PACKAGE FOR DISTRESSED AREAS BY FORCING STATE AND LOCAL GOVERNMENTS TO CUT BACK ON THE CURRENT ECONOMIC DEVELOPMENT SUBSIDY COMPETITION?

State and local governments currently devote an estimated \$20 billion to \$30 billion annually to discretionary economic development subsidies to individual businesses, mostly in the form of tax breaks (Bartik 2001). Even a modest cutback in these tax breaks would be sufficient to pay for the proposed package.

The European Union (EU) provides one possible model for federal regulation of state and local economic development incentives (Sinnaeve 2007). Under the EU, member nations

in general are not allowed to use economic development subsidies for individual businesses except under specified circumstances. Such subsidies are illegal unless they are (1) in EU-designated distressed areas, (2) targeted at small businesses or high-tech businesses, or (3) in the form of job training. If the U.S. federal government were to adopt the EU model of regulating state economic development subsidies, it would require that state governments use economic development subsidies in a manner similar to the policy package advocated in this paper.

One problem with EU-style regulation of incentives is that some economic models argue that the “bidding war” can be economically efficient. For example, it could be argued that state and local governments competing for jobs are attempting to subsidize new industrial locations to capture possible spillover benefits on the productivity of other nearby plants. If the state or local subsidy for each new plant were set just equal to these spillover benefits, then this competition would be economically efficient. However, state and local governments most likely cannot put into practice these spillover benefits to produce the economic efficiency.

A practical problem with the EU model in the United States is political feasibility. It seems highly unlikely that federal policymakers will restrict the freedom of state governments to pursue job growth through the state’s own resources. Both state governments and business groups are likely to lobby against any such regulation.

For example, in the recent DaimlerChrysler Corporation v. Charlotte Cuno case, a federal district court held some economic development incentives to be an improper interference in interstate commerce. This ruling was eventually overturned by the Supreme Court on the grounds

that the plaintiffs lacked standing. However, before the district court ruling was overturned, the National Association of Manufacturers, the National Governors Association, and the U.S. Conference of Mayors all had endorsed legislation under which Congress would overturn the Cuno decision and allow such incentives (Mazerov 2005).

Federal support for this policy package has the advantage of not requiring distressed areas to pay all program costs. However, the policy package still has benefits greater than costs even if those costs are borne by distressed areas.

Chapter 6: Conclusion

Residents of distressed areas benefit from stronger labor demand in their communities, which increases their chances of finding satisfying employment. Property owners and local businesses in distressed areas also benefit. Demand for their goods and services will go up, which increases their profits even as new competitors enter the local market. The growth in jobs likely increases local tax revenues faster than the increased public spending necessary for larger schools, better roads, and other public services. As a result, local fiscal authorities and voters have the luxury of deciding between better public services and lower tax rates. All local residents and businesses benefit from a healthier fiscal situation.

Some portion of the gain in distressed areas may come at the cost of lower growth in nondistressed areas. However, if these nondistressed areas were growing quickly, with low unemployment, these losses might be minimal, and some might even gain from reductions in congestion and overutilization of local infrastructure and resources. Some nondistressed areas might welcome some slight reduction in growth.

Most importantly, these proposals do not just redistribute economic activity. These policies promise to increase the overall productivity of U.S. businesses, workers, and manufacturers. If implemented successfully, the policy package laid forth will increase our nation's overall output per capita, which would be reflected in some combination of lower consumer prices, higher worker real wages, and higher business profits.

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Endnotes

1. I have explored the revitalization of older cities from a broader perspective in Bartik (2008). The solutions proposed there are consistent with this paper's proposals, which are more specific and focused on the "demand-side." I explore supply-side strategies such as early childhood programs in my forthcoming book (Bartik forthcoming).
 2. A renewed and restored Empowerment Zone program would be quite distinct from the Obama Administration's Promise Neighborhoods program. The Promise Neighborhoods program is focused on educational improvements, whereas the original Empowerment Zone program focused on turning the economy of the Zone around.
 3. This is discussed further in Endnote 17.
 4. In addition, some business survey results from Hollenbeck (2008) suggest that Massachusetts's customized training program increases jobs. Although many researchers tend to be skeptical of business survey results, there is no reason to think there is huge strategic bias in these surveys, since business respondents were not required to state that the training grants were effective in order to receive future assistance. Furthermore, the overall magnitude of Hollenbeck's results is consistent with the evidence from Hoyt and colleagues and Holzer and colleagues.
 5. The 1 percent results from Jarmin (1999) are for the contemporaneous effects of MEP compared to the same plant's productivity prior to the intervention. I take these results from Column 7 of Table 7 in Jarmin (1998), subtracting the 0.011 effect one year after MEP from the 0.03 effect one year prior to MEP to yield a 0.008 productivity effect of MEP.
 6. In addition, there are survey results of assisted businesses—for example, MEP (2010) that suggest strong results of MEP in increasing sales, reducing costs, and increasing employment. These survey results have been plugged into regional econometric models by Ehlen (2001). His results suggest that the overall effects of MEP on local employment are positive, with the increased sales and multiplier effects of those sales outweighing the labor cost-savings effects. These surveys are administered by a third party, and it is unclear why businesses responding to the survey would have any strong strategic reasons to bias their answers.
 7. Some very good studies have compared enterprise zones to non-zones with sophisticated corrections for selection bias, or sophisticated matching procedures, and come to different conclusions about their effects on labor market outcomes. For example, Papke (1994, for Indiana Empowerment Zones), O'Keefe (2004, for California Empowerment Zones), and Billings (2007, for Colorado Empowerment Zones) all find some evidence of positive labor market effects of Empowerment Zones. But equally good studies do not find significant positive labor market effects of Empowerment Zones, including Elvery (2009, for California and Florida Empowerment Zones), Bondonio and Engberg (2000, for five states), Bondonio and Greenbaum (2007, for nine states), Greenbaum and Engberg (2004, for six states), Rogers and Tao (2004, for Florida), and Lynch and Zax (2010, for Colorado).
- Three studies compare the performance of state enterprise zone areas with other areas that both qualified as enterprise zones and were at some point selected as potential enterprise zones by local governments. Boarnet and Bogart (1996, New Jersey) compare municipalities that included Empowerment Zones with municipalities that applied for an enterprise zone and were rejected. Peters and Fisher (2002, 13 states) only consider enterprise zone areas, and examine whether enterprise zone effects were correlated with how much the zone reduced the net business tax rate. Neumark and Kolko (2010, California) compare enterprise zones with areas that were later added to the enterprise zone. All three of these studies find no significant positive effects of enterprise zones on labor market outcomes.
- I put the greatest weight on the negative results from the three studies that compare enterprise zones with other areas identified by local governments as enterprise zone candidates. Under this interpretation of the research, the positive effects in some studies may be due to the difficulty in controlling for selection bias. Alternatively, perhaps these positive effects are due to special features of the state program in incentives offered or areas selected.
8. The change in earnings per capita would ideally be statistically adjusted to control for changes in the area's demographics so that the adjusted measure will better reflect changes in labor demand. The earnings per capita should reflect earnings measured on a place of residence basic (not place of work) so that the earnings measure in the numerator reflects the population in the denominator. Changes in earnings per capita is a good measure to use both at the state and the local level, since data on earnings per capita are available from the U.S. Bureau of Economic Analysis for all counties in the United States with only a sixteen-month time lag. Ten-year changes seem to reasonably reflect long-run problems with labor demand as well as more-recent economic problems. An earnings measure is more comprehensive in reflecting both employment to population ratios and wage rates, both of which are important in reflecting the labor market situation of an area's residents. Changes in per capita earnings is better than current unemployment rates, which suffers from at least three problems: the current unemployment rate may overemphasize short-run labor market problems, which are not appropriately targeted through long-run economic development programs; the unemployment rate is distorted when discouraged workers drop out of the labor force; the local unemployment rate is known to be influenced by local industrial mix, which affects worker turnover rates. Changes in earnings per capita or employment per capita is also better than changes in employment by itself because declines in employment may be driven by population declines rather than labor demand, and thus reflect labor supply problems that are not appropriately addressed by programs to boost labor demand.
 9. More specifically, because of the way the customized training programs and manufacturing extension programs are designed, each of these programs can be readily evaluated in each state by what econometricians label "regression discontinuity" models. For both customized training and manufacturing extension, businesses are far more likely to receive assistance if located in the portion of the state that is targeted as being economically distressed. However, business performance is likely to be similar across a geographic line from an area that just missed being targeted as distressed to an area that just made being targeted as distressed. Thus, we can model the selection of businesses into these two programs

and separate the effects of that selection from other nonprogram factors affecting business performance. The research suggests that regression discontinuity evaluation designs are a strong substitute for random assignment evaluation designs (Lee and Lemieux 2009).

The restored Empowerment Zone program requires an additional step in evaluation, as Empowerment Zones are proposed by local governments for federal designation. Thus, Empowerment Zones are selected by local governments for some reason. To control for this local selection, an evaluation design can compare census tracts in successful Empowerment Zone applicants to similar tracts in unsuccessful Empowerment Zone applicants. This is the evaluation design used by Busso and colleagues (2010).

10. One could also advocate for randomized control trials of these programs, but such experiments with individual businesses or neighborhoods seem implausible. An experiment randomly assigning some businesses to receive assistance and others to a control group is likely to be perceived as anticompetitive. Randomly assigning entire neighborhoods is also likely to be resisted. The quasi-experimental approaches to evaluation recommended here seem to be more feasible.
11. There are a number of other discussions of federal workforce policy that also recommend a greater emphasis on business as the client. A recent paper by Eberts and Erickcek (2010) proposes more emphasis on customized job training, in conjunction with the MEP as part of an effort to help metro economies affected by the decline of the Detroit 3.
12. Others also have proposed expanding MEP, including the Obama administration (Executive Office of the President 2009) and Helper (2008).
13. This assertion is based on calculations using the “economic areas” defined by the U.S. Bureau of Economic Analysis. These “BEA Areas” divide all U.S. counties into 179 “economic areas.” Out of 179 BEA areas, the twenty-two areas with the worst trends in employment to population ratios from 2000 to 2007 comprised about 20 percent of the U.S. population in 2007. These twenty-two areas, with 20 percent of the U.S. population, had 25 percent of U.S. manufacturing employment in 2007.
14. In cases where the distressed area definitions overlap, local MEP offices may usefully help coordinate customized training with other services to manufacturers.
15. For customized training, I rely on the results in Column 2 of Table 4 in Holzer and colleagues (1993), as well as their Table 1. Reductions in scrapage rates are valued at the price of output. From Holzer and colleagues’ paper, Table 1, the scrapage rate in the firms that did not receive training grants is 0.0409. Column 2 of Table 4 says that the log of the scrapage rate changed by -0.134 . This estimated effect is not statistically significant, but it is large enough to be economically important. This means that the scrapage rate changed from 0.0409 to 0.0358 in the first year. I conservatively assume that this scrapage rate reduction lasted for only one year. Average sales in the firms receiving training grants were \$5,555,824 (from Holzer and colleagues’ Table 1). Calculating the change in scrapage rates due to the program times average sales yields cost-savings of \$28,497 for that one year alone. According to Holzer and colleagues’ Table 1, the average training grant was \$15,607. Dividing the first year cost savings by the training grant yields the ratio of 1.8. These estimates are quite conservative because other specifications in the Holzer paper yield much larger reductions in scrapage rates, and also suggest that these reduced scrapage rates persist for more than one year.
16. These estimated productivity effects of MEP are based on Column 7 of Table 4 in Jarmin (1998), and Table 1 in Jarmin (1998), as well as on Table 1 in Jarmin (1999). Based on Column 7 of Table 4 of Jarmin (1998), the effects of MEP on the natural logarithm of total factor productivity is 0.011 the first year after MEP intervention, compared to an “effect” of 0.03 the first year before MEP intervention. The difference, which is an estimate of the productivity effect of MEP, is 0.008, or a little less than 1 percent. These estimates are not statistically significant, but they are economically important. According to Jarmin’s (1998) Table 1, the log of value added (in thousands of dollars) of MEP clients is 9.318. I then calculate what the value added is when we add in the MEP effects, and figure out the dollar difference in value due to MEP. This is \$89,451. I assume this MEP effect lasts for only one year. According to Jarmin’s (1998) Table 1, average MEP project costs are \$107,096, but this includes the firm’s investment costs, which are reported in Jarmin (1999), Table 1, to be \$63,787. This results in MEP program costs of \$43,309 per MEP project. Dividing MEP effects on TFP of \$89,451 by MEP program costs of \$43,309 yields a ratio of 2.1. These estimates are quite conservative because the other estimates in Jarmin (1998, 1999) yield much larger effects on productivity, and some of those effects suggest productivity effects that last at least several years.
17. The regional economics research suggests that a 1 percent increase in local productivity will raise local employment by 3 percent. This is derived from the literature on the sensitivity of local business activity to state and local business taxes. The existing evidence indicates that a 10 percent reduction in overall state and local business taxes induces only a 2 percent long-run increase in local business activity (Wasylenko 1997). According to the latest research, state and local business taxes were \$590 billion in 2009 (Ernst and Young 2010). This is a lot of money, but it is only about 5 percent of overall business costs. According to the Bureau of Economic Analysis, total private business GDP is about \$10.6 trillion. This is based on BEA Table 1.3.5, “Gross Value Added by Sector,” business value added from the third quarter of 2008 through the second quarter of 2009, to correspond to fiscal year 2009 for most states. These numbers imply that a government-induced 1 percent reduction in overall business costs will increase local business activity by about 4 percent. If this reduction is due to an increase in total factor productivity of 1 percent, then the productivity increase, holding output constant, will reduce employment by 1 percent, but the consequent 4 percent increase in output will result in a net increase in employment of 3 percent.
18. The six Round 1 Empowerment Zones were provided with ten-year block grants for public services worth \$600 million in nominal dollars. Busso and colleagues state that employment tax credits for these Zones were worth \$55 million per year, or \$550 million over the ten years. I adjust these figures to 2009 dollars, which yields a total of \$1.433 billion in resources over ten years. I use Busso and colleagues’ estimates that total Zone employment in 2000 (after the intervention) was 590,000, and their estimate from Table 4 that the Zones increased the natural log of employment by 0.147, to calculate that the six zones created 80,657 jobs.
19. Busso and colleagues estimate that earnings increase by \$660 million per year. They only observe this for one year. I assume that this effect continues at a reduced rate for only four more years. I assume that it depreciates for each of those four years by 17 percent per year. I further discount these depreciated effects at a 3 percent real discount rate. Busso and colleagues only look at the \$400 million expended by 2000 in Empowerment Zone public service block grants. But the block grants committed over the full ten years amount to \$600 million. In addition, Busso and colleagues report that Empowerment Zone wage tax credits through 2000 are \$200 million, with an annual cost in the last year of \$55 million. This figure in the last year might increase over time. I assume a ten-year cost for wage credits of \$550 million. The total costs of the Empowerment Zones are then calculated as \$1.150 billion. I use this amount undiscounted as my measure of program costs in the denominator. (Some discounting could be done, but we do not know the exact time pattern of the spending and credits; if we are calculating the present value as of the year 2000, some costs should be blown up and some discounted to reflect a 3 percent real discount rate.)

20. Total private nonfarm employment in 2009 was 108.4 million, according to the Current Employment Statistics program at the U.S. Bureau of Labor Statistics (BLS). According to 2007 data from the Small Business Administration (SBA, n.d.), about half of private employment is in firms of fewer than 500 employees. About 20 percent of employment will be in distressed areas. I assume that about 30 percent of employment in these small private businesses could be legitimately considered “export-based” by state and local governments. (In calculations done for a project for the state of Michigan, about 22 percent of U.S. employment was in industries that had location quotients that varied quite a bit across U.S. metropolitan areas [Bartik, Ericckek, and Huang 2007]. However, there are individual businesses within non-export-based industries that may be export based.) Finally, data from the Job Opportunities and Labor Turnover series from BLS suggest that the average annual hire rate from 2002 to 2009 was 45.3 percent. (U.S. Department of Labor 2010, Table 12). Multiplying these together, distressed areas will have about 1.5 million hires in small- and medium-sized export-based business in an average year. Not all those hires would necessarily receive customized training. On the other hand, we might provide customized training for existing workers in businesses that are facing competitive challenges.
21. Based on figures from Hollenbeck (2008), and state employment numbers from the BLS, the state with the largest customized training program relative to state employment is Mississippi, whose customized training program annually trains 13.4 percent of state employment. The next five most intense states (Ohio, Georgia, Nebraska, Pennsylvania, and Louisiana) annually provide customized training to between 2.3 percent and 3.3 percent of total employment in the state. The average percentage trained annually in these five states is 2.75 percent. If we apply Mississippi’s intensity to the total employment of distressed areas, we would have annual trainees in the program of 3.5 million. If we applied the next five state’s average training intensity to the total employment of distressed areas, we would have annual customized trainees of 720,000. The 1.5 million assumed in this report seems in the range of the intensity of at least some state programs.
22. It is difficult to know exactly how MEP offices and manufacturers will respond to the incentives offered by this greater federal match. The assumption made here seems reasonable, but there are no available data on how MEP centers and potential MEP clients will respond to variations in match rates.
23. If 25 percent of U.S. manufacturing is in distressed areas, then 1,750 manufacturers in distressed areas currently receive intensive MEP services (= 25 percent of MEP’s current 7,000 total). If 5 percent of small- and medium-sized manufacturers currently receive MEP services, then there are 35,000 small- and medium-sized manufacturers (employment of 20 to 499) in distressed areas. The proposed service expansion would increase the number of manufacturers nationally receiving intensive services by 23,000, from 7,000 to 30,000. If half this increase in services goes to distressed areas, the number of distressed area manufacturers receiving intensive services will increase by 11,500, from 1,750 to 13,250. The latter number, 13,250, is 38 percent of the assumed 35,000 small- and medium-sized manufacturers in distressed areas.
24. The calculation for this is as follows: I assume that the total program size expands from the level estimated for 2010 of \$311 million (using the FY 2009 ratios of total program spending to federal spending to project a total for FY 2010) to the \$875 million assumed in the Stone and colleagues report. They assumed that the new federal share under this scenario, which would lower the required match to 1-to-1, would be \$406 million out of the \$875 million total. I assume that of this incremental new program activity, half would be in economically distressed areas. Since the federal share in economically distressed areas would be 75 percent rather than 50 percent, I assume that of the increase of \$564 million from \$311 million to \$875 million, \$282 million would be in economically distressed areas. The 25 percent increase in the match would then have a cost of about \$70 million. But in addition, there would be an increase in the federal match for MEP activity that is already in distressed areas. I assume that of the estimated \$311 million in total MEP activity, 25 percent, or about \$78 million, is currently in distressed areas. An increase in the match rate for this \$78 million in services in distressed areas would have an additional cost of about \$20 million. Therefore, the total incremental costs of the increased federal match in distressed areas would be \$90 million (\$20 million in increased subsidies for the services that are currently being delivered to these areas and \$70 million on the incremental services that are assumed to go to distressed areas). I assume that the incremental \$90 million in federal costs under my modification reduces the state or local government and private fee cost share proportionately. Stone and colleagues assume under their proposal that the state government share is \$163 million and the private fee share is \$306 million. With increased federal cost sharing, I reduce the state government share to \$132 million and the private fee share to \$247 million. The state government share of \$132 million represents an increase from a projected \$75 million share for FY 2010 (blowing up the state government figure for FY 2009 by the increase in federal government spending from 2009 to 2010).
25. We have some tentative findings, but not enough, in my opinion, to form the basis for a national subsidy policy based on agglomeration economies. For example, Greenstone and colleagues (2010) find that a new plant’s effect on the total factor productivity of incumbent plants varies with different measures of links between the new plant and the incumbent plants. Presumably, such links could be calculated for an actual locality, which would yield an optimal local subsidy in terms of productivity. However, we lack sufficient data in this study to say how these agglomeration economy effects vary with the industry of the new plant, which might be very important. In addition, we lack sufficient data to say whether effects fade above some concentration of local industries, which might also be important. Henderson (2003) finds agglomeration effects that are greater for high-tech than for machinery industries, but it is not clear how these agglomeration effects would vary on the margin for more industry agglomeration in a county or across counties. Henderson (2003) finds that agglomeration economies depend more on independent plant counts, which might suggest increasing productivity through more aggressive antitrust policies. As Glaeser and Gottlieb (2008) argue, “the mere existence of agglomeration externalities does not indicate which places should be subsidized. Without a better understanding of nonlinearities in these externalities, any government spatial policy is as likely to reduce as to increase welfare” (p. 155).

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