**INCREASING THE BENEFIT-COST RATIO FOR MICHIGAN’S ECONOMIC DEVELOPMENT POLICIES**

**March 2, 2023 testimony by Tim Bartik (Senior Economist, Upjohn Institute) before the**

**Economic and Community Development Committee, Michigan State Senate  
(Based in part on Bartik 2022a, Bartik 2022b, and Bartik 2019)**

Chair McMorrow and Members of the Committee: Thank you for inviting me to testify today.

My presentation today is on how to make Michigan’s economic development policies more effective by either lowering their costs, or increasing their benefits.

But, to begin with, I think you will find it helpful for me to define what I mean by “economic development” for a state, and what I mean by “state economic development policies”.

By “economic development of a state economy”, I mean improvements in per capita earnings of a state’s original residents.

So defined, “state economic development” is affected by EVERYTHING a state does – every tax policy, every spending program, every state regulation. Every state policy is in some broad sense a “state economic development policy”, because it potentially affects per capita earnings of the state’s residents.

But such a broad definition of state economic development policies is not particularly useful. Instead, a narrower definition is that “state economic development policies” are policies that provide some type of “customized assistance” to individual businesses or persons, with the main goal of boosting per capita earnings of a state’s residents.

Now, one possible policy stance to take is that the state shouldn’t try to provide any such customized assistance to individual businesses or persons, but should instead simply seek to have good overall policies towards taxes, public services, and regulations.

But I think that particular policy stance is too rigid, and overlooks opportunities to significantly improve per capita earnings at affordable costs. Such opportunities exist because some businesses and persons may be easier to have their decisions and behavior changed via various customized assistance programs, and the decisions and behavior of some businesses and persons may have higher economic and social spillovers on the state economy. Uniform one-size-fits-all policies overlook such opportunities for extra economic development benefits.   
  
When adopting economic development policies of customized assistance to businesses, the goal is to cost-effectively create new job opportunities and increase state residents’ per capita earnings. It is therefore working on the “labor demand side” of the state economy, but doing so in a way that links up with the labor supply side.

When providing customized assistance to individual state residents, the goal is to enhance the overall quantity and quality of labor supply in a state, but to do so in a way that grows overall jobs and/or raises wages.

Considering first customized assistance to businesses, the largest amount of funds historically has gone to various business tax incentives and other cash assistance for economic development, both in Michigan and nationally.

The main points to realize about business tax incentives are two-fold: (1) handing out cash to attract businesses is relatively expensive per job created, but (2) even at high costs, cash incentives can potentially pay off for states, because creating jobs can be very valuable.

Why are business tax incentives relatively expensive per job created? Largely because most of the jobs would have been created anyway. That is, either (1) without the incentives, the same firm would have chosen that site, or (2) even if that firm wouldn’t have chosen that site, some other firm would have chosen that site.

More specifically, over 75% of the time, the jobs would have been created anyway. Given the average size of incentive programs in the U.S., for typical projects – not the selected few mega-projects that get the headlines, but the “usual incentive deal” offered most assisted firms -- the cost per direct job actually induced by the incentive is about $500,000.

But the benefits per job created are large too. Empirical estimates that the benefits of job creation can range up to $2 million per job created. Benefits can also be zero per job created, so the policy details matter.   
  
The effects can be so great because increases in local job creation can increase employment to population ratios -- employment rates -- not only in the short-run, but in the long-run. Employment rates increase in the long-run because the added short-run job experience increases a person’s job skills, improves their self-confidence and reputation with employers, and reduces social problems such as substance abuse, crime, and family break-ups. These higher employment rates in turn increase earnings per capita, both directly, by people working more, but also indirectly, by pushing up real wage rates with greater productivity.   
  
In addition, since state and local tax revenues tend to increase with employment, and public service needs tend to increase with population, driving up employment rates tends to increase state and local tax revenues relative to required public spending to maintain public service quality. This excess of extra revenue over required extra public spending is a type of “fiscal benefit”. These fiscal benefits are smaller in size than the higher earnings benefits from higher employment rates. On average, the higher earnings per capita benefits will be over four times the fiscal benefits (Bartik 2022a, 2019). However, for some projects, the fiscal benefits can be significant, and should not be overlooked.   
  
So, for example, studies have shown that the pioneering state economic development program, Mississippi’s “Balance Agriculture with Industry” program that began in 1936, had very long-run effects (Freedman 2017). Counties that attracted manufacturing plants under this program had higher labor force participation rates at least through 1980, and maybe beyond, even after some of the original plants had closed down. The higher labor force participation rates in the short-run increased job skills and family health enough to even have intergenerational effects.

As another example, during World War II the federal government paid to construct new manufacturing plants at interior U.S. sites, and then sold the plants off to the private sector after the War. Places that experienced such plant location decisions had higher earnings per capita through the 1980s, and these effects also occurred among the children of the original workers (Garin and Rothbaum, 2020).   
  
But in both these cases, we should remember two important points: the jobs created were relatively well-paying jobs compared to local standards, with modest skill requirements; and the areas that gained the plants were relatively depressed at the time the plants were located. If these two factors are not in place, the benefits will be much less. I will come back to this point later.

So, how can we reduce these costs per job created, and make sure we maximize the benefits? First, on the costs side, we can make sure that before devoting a large amount of resources to business tax incentives, we first fully exploit opportunities to create jobs more cheaply via customized business services. These include infrastructure programs to develop sites for business location and expansion, customized job training programs to help supply high-quality labor, and manufacturing extension programs and other programs that provide business advice. These programs can create jobs at one-fifth to one-third the job creation costs per dollar of business tax incentives (Bartik 2022a, 2019).

Why are these programs cheaper per job created? Because they provide business inputs that are absolutely crucial to business success that are sometimes challenging for businesses to obtain on their own. Getting the right site zoned and approved can be hard for businesses to do on their own, especially given the stringency of common U.S. land regulations. Getting the right labor is perhaps the most important factor in determining the success of business expansions. And business advice is relatively cheap to provide, yet if it is high-quality, can have large effects.   
  
I well recall when I first started working on state economic development policies, in Tennessee back in the 1980s, I talked to a firm that had received a generous tax incentive package from the state of Tennessee. I asked them what role the tax incentives had played. The head of the company told me the incentives were nice, but that the really key factor was that this particular Tennessee city happened to have an empty factory that suited their needs, with good access to workers, suppliers, and markets. The need to get into production quickly at a good site dominated all other location factors.   
  
Or, as another example, small manufacturers that bend metal or mold plastic for auto parts in Michigan may in some cases be able to further expand if they can diversity their markets to include medical equipment. But pivoting from the auto supply market to the health care industry is by no means easy for a smaller manufacturer to do, given the many differences between these two markets. But with the right business advice, as has for example happened with manufacturing extension programs in Grand Rapids, smaller manufacturers can be successfully helped to diversity.

Now, one might suppose that this means that we shouldn’t have business tax incentives, and instead just fund infrastructure, customized job training, and business advice programs. But business tax incentives do have the advantage that they can be easily scaled up. In contrast, these types of customized services have some limitations about their feasible scale. At some point, there are enough business sites and incubators for all types of business. At some point, training programs have trained all the workers who need training for the firms you are attracting. At some point, there is plenty of business advice for small business.

So, I think the lesson is: Michigan should make sure it fully funds infrastructure that supports business development, customized training for new business openings, and business advice programs for smaller businesses, and avoid cutting back these programs to pay for tax incentives. Once we have fully funded these cost-effective customized business services, then we can consider utilizing the remainder of our economic development budget for tax incentives and other cash assistance.

Second, on the costs side, we should recognize that businesses heavily discount the future. The available evidence suggests that in making business location and expansion decisions, businesses overwhelmingly focus on the profitability of the first five years or at most 10 years of the business facility’s life. What happens after that is far less important.  
  
Therefore, business tax incentives beyond 5 years, or certainly beyond 10 years, are all costs with few benefits, as these incentives do not do much to induce business location or expansion decisions – but, down the road, paying for these incentives hurts the state’s economy by forcing up taxes or reducing public services.

My advice is to front-load the incentives, that is to make them last for no longer than five years, and certainly no more than 10 years. More upfront incentives, compared to long-term incentives, can cut incentive costs per job created by one-fourth (Bartik 2019)

Of course, one problem with upfront incentives, compared to long-term incentives, is that long-term incentives are typically tied to the jobs persisting, while upfront incentives will end up being a waste if the plant shuts down. The way to solve this dilemma is to include rigorous clawback provisions in incentives agreements, under which some agreed-upon portion of the upfront incentives is repaid if the jobs do not persist past an agreed-upon time period.

One interesting option to consider is how the state of Virginia handles incentives. For example, for Amazon Headquarters II, Virginia’s incentive deal is that each job created yields a cash incentive of around $22,000. That incentive immediately is reserved in an account, but Amazon will not receive that $22,000 per job for four years, and then only if the created job still exists as of four years later. So, this is easier than a clawback – Amazon is credited with the job creation right away, but is not actually paid unless the job persists.

On the benefit side, as I mentioned, everything depends on the jobs created actually boosting employment rates for the original residents of the state. This is not inevitable. If the jobs created are poor ones, or are jobs with credential requirements that the original residents cannot meet, or if there are plenty of jobs already available in the local labor market, then it is quite possible for the job creation not to increase the employment rate at all – all the jobs will simply go to in-migrants to the local economy.   
  
It should be understood that when jobs are created in a metro area, or some other multi-county area that approximates a local labor market, that ultimately the jobs created must either go to local residents who would otherwise not be employed, or to in-migrants. The direct impact when a business creates jobs is that the jobs are filled in THREE ways: already-employed local residents, non-employed local residents, and in-migrants. But when the job is filled by someone who is already employed locally, this creates a local job vacancy. This job vacancy will be filled in the same three ways. As one follows along this job vacancy chain, the chain is only terminated when the new jobs end up either increasing the local employment rate, or the local population – there is no other way to increase employment except to increase either the employment to population ratio or the population.

Most of the benefits of local job creation go to state residents who have less than a 4-year college degree. Four-year college graduates are more part of a national labor market, and are less affected by local job creation.   
  
For these state residents without a four-year degree, the available evidence (Bartik, 2022b) suggests that their employment rates and earnings per capita are most affected by so-called mid-wage occupations – jobs which pay relatively well compared to the credentials required. These mid-wage jobs include many jobs in manufacturing industries, but also include some administrative support occupations. High-wage occupation jobs are not a big help because most non-college graduates cannot access these jobs, and attracting them tends to push up local housing prices. Low-wage occupation jobs are not a big help because in many cases similar job opportunities are already readily available.

Of course, most industries contain a mix of high-wage occupations, mid-wage occupations, and low-wage occupations. In addition, the multiplier effects of direct job creation on other industries will to some extent affect all occupational types. But still, the evidence suggests that manufacturing jobs continue to offer more mid-wage occupations in the mix, and hence have much higher benefits than industries that are more low-wage (e.g., warehousing) or high-wage (e.g., software).

For example, for the Detroit local labor market, if we increase jobs by 1 percent overall, and all those new jobs are in warehousing, the estimated effect on local per capita earnings of non-college graduates is an increase of 0.4%. Warehousing has 54% of its jobs in low-wage occupations, 37 percent in mid-wage occupations, and 9 percent in high-wage occupations. In contrast, a 1 percent overall job increase in autos would boost per capita earnings over twice as much, at 0.9%. Autos has 17 percent of its jobs in low-wage occupations, 56 percent in mid-wage occupations, and 27 percent in high-wage occupations. Finally, if we boosted the Detroit area’s jobs by 1 percent by boosting software jobs, the estimated effect is to REDUCE real per capita earnings of non-college graduates by -0.1%. Software has only 1 percent of its jobs in low-wage occupations, 18 percent in mid-wage occupations, and 81 percent in high-wage occupations. More jobs in software would tend to attract more college graduate in-migrants, driving up local housing rents, which would tend to hurt many non-college-graduates’ real standard of living.

A second factor affecting the impact on state residents of job creation is where in the state the jobs are located. Local labor markets with low employment rates – many non-employed workers are available for work – will tend to have more jobs go to local residents. In contrast, in a local labor market with a high employment rate, most local residents are already employed, so new jobs will tend to ultimately go to in-migrants.   
  
Michigan has great disparity in local employment rates. Some areas – many rural counties, Detroit and Wayne County, and Jackson – have very low employment rates, with less than 72 percent of “prime-age workers” – those ages 25-54 – having a job. Twenty-four percent of Michigan’s residents live in such highly distressed local labor markets.   
  
At the other extreme, about 38 percent of Michigan’s residents live in counties with a prime-age employment rate exceeding 80 percent. These counties stretch from the Detroit suburbs to the Ann Arbor area over to Grand Rapids and Kalamazoo. These counties are still short of true full employment, but overall have much better job availability.

The remainder of Michigan’s residents – about another 38 percent -- live in areas with prime-age employment rates between these two extremes, and are distressed, but not as much as the high distress counties.   
  
A difference between a 72 percent and an 80 percent prime-age employment rate may not seem like much. However, current models of how local labor markets work indicates that this employment rate differential makes a big difference in whether local residents benefit a lot from new jobs. When new jobs are created in the most highly distressed counties of Michigan, about 45 percent of these jobs will end up increasing local employment rates. In contrast, in the least distressed counties of Michigan, although new jobs drive up the employment rate some, only about 10 percent of the new jobs will drive up the employment rate, and the other 90 percent will go to in-migrants. The in-between counties have about 26% of new jobs going to raise the employment rate.   
  
These differentials will drive benefit-cost ratios for economic development programs. Other things equal, in the more distressed counties of Michigan, the benefits per job created will be about 4.5 times the benefits per job created in the least distressed counties.

Finally, the benefits of creating jobs can be increased by policies that strive to increase the proportion of jobs that go to non-employed or under-employed local residents, beyond what would happen without policy intervention. This is one advantage of programs such as customized job training. A well-run customized job training program may significantly increase the proportion of the jobs that go to local workers who otherwise would be unemployed or under-employed. Such a policy helps achieve the policy goal of targeting more of the job creation on the residents of the state that need jobs the most.   
  
Customized job training is a type of “carrot approach” to encouraging more local hiring – it makes it easier for businesses to hire the local non-employed, but does not require them to do so. One can instead use more “stick approaches”, which either explicitly impose local hiring requirements, or else impose the requirement that local residents be “considered” for local job openings. Such “stick approaches” are more common in booming areas of the United States, and in particular for controversial projects such as new sports stadiums.   
  
On the whole, I would argue that Michigan’s job growth is not booming enough for us to want to pursue the “stick approach” to increase local hiring. The carrot approach of customized job training, if run well, will simultaneously attract additional job growth, and encourage local hiring. This dual benefit seems more attractive, given Michigan’s economic situation.

Let me now turn to “economic development programs” that work more on the labor supply side, and try to expand employment by boosting the effective local labor supply of workers who might help expand the state’s employment. There are two categories of such programs I will discuss: Neighborhood Employment Hubs; programs to attract and retain young “creative class” college graduates. Both can be rationalized by their potentially great economic development spillovers.   
  
Neighborhood Employment Hubs are meant to deal with the problem of highly distressed neighborhoods. Even when an overall local labor market is doing OK, there will be many neighborhoods that will have low employment rates.   
  
Based on research by Raj Chetty and his colleagues at Harvard (Chetty et al. 2018), we know that such neighborhoods lead to very poor outcomes for children growing up in such neighborhoods. Low-employment-rate neighborhoods tend to be higher in crime and lower in school quality. In addition, the low employment rates mean that young people growing up in those neighborhoods have fewer employed adult role models and job contacts. About 10 percent of all Americans live in neighborhoods whose prime-age employment rate is 10 percentage points or more below the average for the surrounding local labor market.   
  
What distressed neighborhoods need is more job opportunities. However, this is not necessarily or even best brought about by directly creating jobs in these neighborhoods. Most Americans, even in distressed neighborhoods, do not work in the neighborhood they live in. And most jobs, including jobs in distressed neighborhoods, are not held by the residents of that neighborhood. A neighborhood is much too small to be a true local labor market (Bartik 2022a). Simply plopping more jobs down in a distressed neighborhood is an inefficient way to help the neighborhood’s residents to get jobs.   
  
Rather, what neighborhood residents need are supports to better connect them with jobs throughout the local labor market. This includes information on job openings, job training, help in getting a reliable used car, help in finding reliable child care, and other such supports.  
  
My employer, the Upjohn Institute, in addition to supporting researchers such as myself, also supports an operations division that carries out workforce programs in the four-county area around Kalamazoo. With assistance from the Kellogg Foundation, the Upjohn Institute is running “Neighborhood Employment Hubs” in Battle Creek. These are located in distressed neighborhoods in trusted neighborhood institutions, such as neighborhood advocacy groups, churches, and subsidized housing projects.

The goal of these Neighborhood Employment Hubs is to link up neighborhood residents with better job opportunities throughout the local labor market. A critical feature of these Hubs is to provide 1-1 coaching and wrap around services to help individuals overcome the various barriers residents face in either looking for or retaining a job. I think this is a promising experiment that should be expanded to other neighborhoods in Michigan.   
  
If Neighborhood Employment Hubs work in helping more residents of distressed neighborhoods into jobs, it has broad social benefits. In addition to directly helping the neighborhood residents who obtain more or better jobs, such Hubs will help improve future prospects for the young people growing up in such neighborhoods. Furthermore, by expanding effective labor supply in Michigan, Neighborhood Employment Hubs can help increase Michigan’s sustainable employment level.   
  
The second type of “labor supply side” economic development program I will discuss are programs to attract and retain the so-called creative class, younger workers who have a high degree of education. The rationale for trying to do so is not to simply boost per capita income by attracting more high-income workers. Rather, the rationale is that there are spillover effects on local workers of attracting more highly educated workers.

Estimates suggest this spillover effect is close to two. For example, college educated workers earn about 140 percent more on average than non-college workers (Moretti 2012). So, if we boost the percentage of local workers with a college degree by 1 percent, we might expect average earnings to go up by about 1.4 percent-- 1 percentage point times 140 percent extra earnings for that 1 percent. The actual observed effect is to boost local earnings per capita by about 2.6 percent, almost twice as much as would be predicted due to the direct effects.   
  
Why this spillover effect? Part of it could be that economic production is a team effort – what employers can introduce in new technologies, for example, depends upon the skills of all workers at the business, not just a few. My wage might depend upon my co-worker being able to use new technologies. Part of it could be that college educated workers in some local economies, such as Silicon Valley, might steal ideas from each other, which boosts overall productivity. And part of it could be that college-educated workers might be more likely to start up new businesses, which boosts overall employment.   
  
Whatever the reason, research shows that attracting more highly-educated workers can have some spillover benefits. The question is how best to attract highly-educated workers in a cost-effective way. Some places are addressing this by programs to attract such workers, such as paying cash to attract remote workers (see the website <https://www.makemymove.com/> for a list of some such programs). But as of yet we do not have a rigorous benefit-cost analysis of this relatively high-cost policy option.   
  
One relatively low-cost option that deserves experimentation is the state helping to support internships by college students with local employers. The state of Michigan does not necessarily retain a high enough share of those college graduates who attend the state’s excellent universities. This percentage might be increased if graduates were helped or even subsidized to obtain internships at Michigan employers during college. At any event, this idea deserves experimentation to see if it can affect the proportion of college graduates in the state who stay in the state after graduation – and then we can see what happens to these graduates, and where they are employed. Some experimentation is already ongoing in this area, for example at Grand Valley State University (Balaskovitz 2023).

One of Kalamazoo’s little secrets that has helped the local economy is that we have a good liberal arts college, Kalamazoo College, which tends to attract its share of quirky college students, some of whom stay and contribute in various ways to the local economy. For example, most famously, Larry Bell, who started Bell’s Brewery, came from Illinois to Kalamazoo to attend K College, and then stayed in Kalamazoo to make beer. We need to consider if there are policies that the state could adopt that would help retain other college graduates in the state to contribute to our local economies.   
  
This fits in with new research that shows that local colleges and universities – not just flagship state universities like the University of Michigan or Michigan State University, but regional public or private institutions – can have important effects on local residents. For example, recent research by Greg Howard at the University of Illinois, and his colleagues, has compared communities that in the late 19th and early 20th centuries competed to attract state “normal schools” – teaching colleges that later usually became regional public universities – versus communities that attracted what were then called “insane asylums”. At that time, both normal schools and asylums were considered highly desirable “catches” for a community, since they both generated similar numbers of local jobs. As it turns out, in today’s economy, communities that successfully attracted normal schools are doing better than those that successfully attracted asylums. The ”normal school” communities are more resilient to adverse economic shocks due to manufacturing job declines (Howard et al. 2021), and show greater upward mobility for children raised in such communities (Howard and Weinstein 2022).

In conclusion, economic development of a state economy can produce great benefits, by boosting per capita earnings. But economic development programs that target particular businesses, persons, and places can be very expensive if they are not well-designed. To make progress, we need to look at the research on how to best design these programs to reduce the cost per job created, and increase the benefits for a state’s residents in higher per capita earnings. Policies to do so include:

* Making sure we have adequate customized services for business, and are not only handing out cash via tax incentives;
* Making incentives more up-front, with clawbacks;
* Making sure job creation efforts target industries that include mid-wage occupations;
* Targeting economic development efforts more at distressed local labor markets;
* Encouraging local hiring through programs such as customized job training;
* Encouraging the spread of job opportunities to residents of distressed neighborhoods through Neighborhood Employment Hubs, which will also boost overall state employment;
* Experimenting with efforts to attract and retain more college graduates through support for internship programs with Michigan employers, which can create spillover earnings benefits for other state residents.

Thank you for listening to my testimony. I look forward to your questions.

**REFERENCES**

# Balaskovitz, Andy. 2023. “GVSU partners with private sector to tackle labor shortage”. February 12, 2023 article, *MiBiz*. <https://mibiz.com/sections/talent/gvsu-partners-with-private-sector-to-tackle-labor-shortage> .

Bartik, Timothy J. 2019. *Making Sense of Incentives: Taming Business Incentives to Promote Prosperity*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/9780880996693>

Bartik, Timothy J. 2022a. "How State Governments Can Target Job Opportunities to Distressed Places." Upjohn Institute Technical Report No. 22-044. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/tr22-044>

Bartik, Timothy J. 2022b. "Mismatch in Local Labor Markets: How Demand Shocks to Different Occupations Affect Less- or More-Educated Workers in Diverse Local Labor Markets." Upjohn Institute Technical Report No. 22-045. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/tr22-045>

Chetty, Raj, John N. Friedman, Nathaniel Hendren, Maggie R. Jones, and Sonya R. Porter. 2018.  *The opportunity atlas: Mapping the childhood roots of social mobility*. No. w25147. National Bureau of Economic Research.

Freedman, Matthew. 2017. "Persistence in industrial policy impacts: Evidence from Depression-era Mississippi." *Journal of Urban Economics* 102 (2017): 34-51.

Garin, Andrew, and Jonathan Rothbaum. 2020. "Was the Arsenal of Democracy an Engine of Mobility? Public Investment and the Roots of Mid-century Manufacturing Opportunity." Working paper, University of Illinois.

Howard, Greg, Russell Weinstein, and Yuhao Yang. 2021. “ Do Universities Improve Local Economic Resilience?”. IZA Discussion Paper No. 14422, Available at SSRN: <https://ssrn.com/abstract=3865447> or [http://dx.doi.org/10.2139/ssrn.3865447](https://dx.doi.org/10.2139/ssrn.3865447)

Howard, Greg and Russell Weinstein. 2022. "Workhorses of Opportunity: Regional Universities Increase Local Social Mobility.” IZA Discussion Paper No. 15622, Available at SSRN: <https://ssrn.com/abstract=4244417> or [http://dx.doi.org/10.2139/ssrn.4244417](https://dx.doi.org/10.2139/ssrn.4244417)

Moretti, Enrico.2012. *The New Geography Of Jobs*. New York: Houghton Mifflin Harcourt.