

ECONOMIC SCENE

A study finds benefits for localities that offer subsidies to attract companies.

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THE City of Indianapolis, it has been reported, is reeling after United Airlines closed a maintenance center last spring that cost the government \$320 million in subsidies. Do cities that offer generous subsidies to recruit businesses routinely get taken to the cleaners?

A new study finds that Indianapolis is the exception, not the rule. On average, the cities that win contests to lure new businesses to their area by offering tax breaks, low-cost land, infrastructure and other handouts seem to benefit from the arrangement.

The study was conducted by Michael Greenstone of M.I.T. and Enrico Moretti of U.C.L.A., two rising young stars in economics. What makes their study different, and unusually compelling, is that they looked at cities that won competitions for plants and carefully compared them with cities that made it to the final step of the selection process but just lost out.

When a large company considers opening a plant, it typically begins with dozens of possible cities and eventually narrows the list to two or three possible sites. It is impossible to know all the factors a company considers, and they differ from industry to industry. Professors Greenstone and Moretti argue that the runner-up cities provide the closest comparison for those selected - after all, they were almost picked by the company, which knew what it was seeking.

Other studies, by contrast, have just compared winning cities with all other cities in the country and tried to control statistically for differences among them, or they simply calculated the cost per job created by the public subsidy.

When Mercedes opened a plant in Vance, Ala., for example, it was widely reported that each job created cost \$165,000 of public money. The authors are particularly skeptical of this type of calculation because it ignores potential spillover benefits that arise from attracting prized plants. Moreover, rarely does anyone check back to see how many jobs were actually created.

To provide a better estimate, Professors Greenstone and Moretti used the corporate real estate journal *Site Selection* to find 82 companies that announced major openings from 1982 to 1993. The journal listed the counties that won these "million dollar plants," as well as the runner-up counties (one or two). The professors then compared the economic performance in the counties of the winning cities with that in the runner-up cities, looking both before and after the selections were announced.

Their results show that after the plant location decision was announced, the winning counties had faster payroll and job growth in that plant's industry than did the runner-up counties. For example, total payroll increased by \$100 million more in the winning counties, on average, in the six years after the announcement was made.

In other industries, however, there was not a detectable difference in job or payroll growth between the winning and losing counties.

In the eight years before the winning county was selected, the eventual winner and runner-up counties had about equal growth in employment and payrolls, both in the winning plant's industry and more generally. These findings tend to strengthen the interpretation that the improved performance after the plant started was indeed a result of the plant, rather than some continuing trend.

The economists also find that public expenditures increased in the winning counties in the years after their site was selected, compared with the rival counties. This finding runs counter to the frequent contention that subsidies used to attract businesses crowd out other public programs, like education spending.

Lastly, the researchers find that the average property value in the winning counties increased relative to that in the runner-up counties after the announcement, even though there was no difference in the trend in property value between the two sets of counties beforehand.

This finding is significant because economists believe that property values reflect the desirability of living in a particular location, encompassing the future job opportunities, physical amenities and tax liabilities. So the increase in property value implies that the benefits of winning the plant exceeded the cost of the subsidy the city incurred to attract it.

Still, Professors Greenstone and Moretti are cautious about whether cross-city bidding for million-dollar plants is in the nation's interest.

First, they worry about an "arms race" in which bidding for plants does not increase national output because the plants would have located somewhere in the country anyway. Second, they note that the cities may benefit because state governments chip in money.

Nonetheless, their results cast doubt on the possibility that in bidding for plants city officials use public funds to further their own personal ends at the expense of constituent welfare.

And one of their findings suggests that there are spillover benefits to other businesses and workers from attracting an industry leader: employment and payroll tended to grow in that industry in neighboring counties when a major plant moved next door.

Individual companies have no incentive to take into account benefits that spill over to others in choosing where to locate, but public officials do in formulating their bids.

It is unclear whether cities should expand the amount of bidding they do. The numbers are murky, but public subsidies to attract new companies probably account for around 3 percent of state and local government expenditures. On this scale, subsidies might be worthwhile, but the benefits might disappear on a larger scale.

At a minimum, though, the Greenstone-Moretti study indicates that it would not have been in the winning cities' interests to have unilaterally refrained from bidding for prized plants.