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“Eds & Meds” and Metropolitan Economic Development

Traditionally, regional economists and most local economic developers have ignored higher education and medical services, “eds and meds,” because these service industries are viewed as non-export-base activities¹. Because these service industries are thought to be non-export-base activities, public policies that encourage the expansion of some higher educational and medical service providers have been thought to reduce employment at other service providers.

Despite this traditional view, some local economic developers have begun to include higher educational and medical service providers in their economic development strategies. For example, Grand Rapids, Michigan, recently devoted considerable resources to induce Michigan State University to relocate its medical school to Grand Rapids. Are such policies mistaken?

In this article, we summarize our recent research that gives a more positive view of economic development policies to promote the expansion of higher educational and medical service providers. Higher education and medical service providers can provide an export-base stimulus to a local economy. In addition, higher education and medical service providers can promote local economic development in other ways, including improving the skills of the local workforce and increasing local wage

standards. We are able to quantify some of these effects as increases in average earnings for the original local residents.

Export-Base Effects

The extent to which an industry is an export-base industry is crucial to evaluating the local effects of policies that encourage expansion of specific employers in that industry. Export-base activities induce the spending of additional dollars in a local economy. They do so either by increasing spending by outside residents or businesses on local goods and services (e.g., increasing “exports” outside the local area), or by encouraging local residents or businesses to forgo purchases of outside goods and services (e.g., “import substitution” for goods and services “imported” from outside the local area). If public policies encourage the expansion of “export-base” activities, they increase spending on local goods and services. This increased demand will have multiplier effects on local suppliers to these export-base activities, and on local businesses that provide goods and services to workers in export-base activities. In contrast, public policies that encourage the expansion of “non-export-base” activities do not increase net spending on local goods and services. The expansion of some “non-export-base” organizations will come at the expense of reduced spending at other,

similar “non-export-base” organizations.

Contrary to how higher education and medical service providers have traditionally been viewed by economic developers and regional economists, we estimate that a considerable proportion—perhaps 75 percent—of the average higher educational institution’s activity in a local economy is export-base. Although the export-base percentage is lower for medical service providers, at 15–30 percent, the medical services sector is so large (9 percent of national employment) that its export-base effects may be significant.

To calculate the net local effects of policies that induce the expansion of educational and medical institutions, we assume that this expansion will encourage export-base expansion by the percentages that are typical for higher education and medical service providers. We use regional econometric models to estimate that the “multiplier” effects of these expansions will be between 1 and 2, that is, each additional dollar spent on these export-based activities will induce less than one additional dollar of spending elsewhere in the local economy. We allow for some negative local economic effects from the increased local taxes required to finance an expansion of educational and medical service institutions, although most revenue for these industries comes from service fees or the federal and state government. Finally, we use studies of local labor markets to estimate how an expansion of local employment growth will affect earnings of local residents.

Based on these estimates and simulations, we conclude that, due to export-base effects, expansions of educational service providers typically will increase local residents’ average earnings by about one-fifth of the increase in the educational institution’s annual budget. Medical service provider expansions have export-base effects that increase local earnings by one-twentieth to one-tenth of the increase in the institution’s annual budget.

Improving Local Human Capital

Expansions of educational and medical service providers may also positively affect the local economy by

improving the quality of the local labor force. Increases in the local supply of productive workers will encourage local business development.

We were unable to find research that provides reliable estimates of the positive effects of local medical service providers on the quality of the local labor force. However, it is possible with available research to estimate how expansions in local educational service providers will stimulate the local economy by improving labor force quality.

Our estimates of how higher education institutions affect the local labor force reflect research on the migration of college graduates and the labor demand and supply of college graduates. Only a portion of any increase in local production of college graduates will result in a net increase in college graduates in the local labor force. First, some graduates will move out. Second, with more local college graduates, wages and employment rates for that group will be depressed. While this will attract employers, it will also encourage out-migration and discourage in-migration of college graduates.

Based on this prior research, we estimate that a 50 percent increase in the size of higher educational service providers in a metropolitan area will increase the percentage of college graduates in that metro area by 1.63 percent of the population and increase overall local earnings by 0.55 percent. These estimated effects are long-run effects that only occur fully after about 40 years—time enough for one generation to complete their education.

Research and Information Spillover Effects on the Local Economy

Another way in which expansion of higher education and medical service industries may boost a local economy is if these industries produce more than services, and in particular, if these industries also produce research and information that are useful to local private sector businesses. Higher education and medical service providers may engage in new technology or product research that can be transferred to new or existing local business ventures.

Higher education faculty or students may have information on better production, marketing, or business planning that can be transferred to local businesses via consulting by hiring these faculty and students, or by faculty and students starting their own businesses. In addition to educating new students, community colleges may provide customized training to existing employees of local businesses. These research and information services of higher education and medical service providers are adjuncts to their primary purpose of providing services to students or patients. And, by increasing the productivity and innovation of the local business sector, these services may enable local businesses to gain greater market share or create new markets. Increases in local productivity and output may increase local earnings.

For medical service providers, little evidence is available on their research and information spillover effects on the local private sector. In contrast, for higher education institutions, there is considerable evidence. This research evidence, however, does not reach a consensus on the quantitative magnitude of higher education effects on local productivity and innovation. The research suggests that the magnitude of such effects depends on idiosyncratic features of the higher education institutions and the local economy.

One key qualitative finding is that research and information spillover effects of higher education do not occur solely because of technology transfer to business start-ups, but rather because of many ways in which university knowledge and expertise can help local businesses address problems. Because of these broad impacts of higher education institutions on local economies, many types of higher education institutions can affect local economic development, not just leading research universities. Community colleges can provide customized job training, and lower-ranked state universities can provide consulting advice to business.

Therefore, it may be that national or state economic development is not best promoted by concentrating resources on the leading research universities. One well-done study (Andersson, Quigley,

and Wilhelmsson 2006) suggests that Swedish government policy encouraging more decentralized research activity at newer universities may have increased Sweden's productivity.

Improving Local Standards of Wage Fairness

The labor market practices of higher education and health care institutions, or other large local employers, may influence beliefs in local labor markets about the fairness of employer practices. If a few large employers in a local economy choose "high road" labor market practices, with higher wages, more internal promotion, and lower employee turnover, other local employers may emulate them.

However, we find that higher education industries pay over 14 percent less than the average industry, controlling for many worker characteristics. On the other hand, medical service industries pay about 5 percent more than the average industry. These wage findings are not just due to average pay for professors and doctors, but also reflect wages for workers with Bachelor's or Associate's degrees.

The Bottom Line

We have sufficient research evidence to conclude that efforts to expand higher education or medical service industries should not be ignored by regional economists or local economic developers. We estimate that, on average, an economic development policy that would expand the higher education service sector by 1 percent of total local employment would increase average local earnings by 0.2 percent, compared to 0.1 percent for a similar-sized expansion in the medical services sector. Although such earnings effects may sound small, for the typical metropolitan area these amount to many millions of dollars. If the costs of inducing an expansion in higher education or medical services is sufficiently low, an economic development strategy that targets these industrial sectors may offer net benefits.

Note

1. In this article and in the research upon which it is based, "eds and meds" is defined as organizations and firms that provide educational and medical services to consumers (e.g., students, patients), such as universities, community colleges,

hospitals, and doctors' offices. Pharmaceutical companies, biotech research, textbook companies, or other suppliers of inputs to these educational or medical service providers are not included in our definition of "eds and meds."

Reference

Andersson, Roland, John Quigley, and Mats Wilhelmsson. 2006. "University Decentralization as Regional Policy: The Swedish Experiment." Berkeley Program on Housing and Urban Policy Working Paper Series 1022. Berkeley, CA: University of California, Berkeley Program on Housing and Urban Policy.

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