

STRATEGIES FOR ECONOMIC DEVELOPMENT PARTNERSHIPS WITH INSTITUTIONS OF HIGHER LEARNING

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The Challenge:

A community that desires long-term economic growth can help to secure a positive competitive stature if its current and future businesses have both a reliable supply of skilled labor and access to innovative, creative product development possibilities. In this respect, institutions of higher learning which are located in the community can be good assets for economic growth and be of great service to the business community. However, if there is little coordination or communication between the institutes and the economic actors in the community, the necessary partnership will not develop. This tool discusses ways to make such partnerships productive.

Institutions of Higher Learning as Partners in Economic Growth

Municipalities can accelerate their economic development through partnerships with institutions of higher learning. A number of studies have shown a strong relationship between proximity to institutions of higher learning and economic growth (Susman, 1990; Anders, 1992; Benneworth and Charles, 2004). We define institutions of higher learning as any post-secondary school or research institute. There are four main ways that institutions of higher learning contribute to growth:

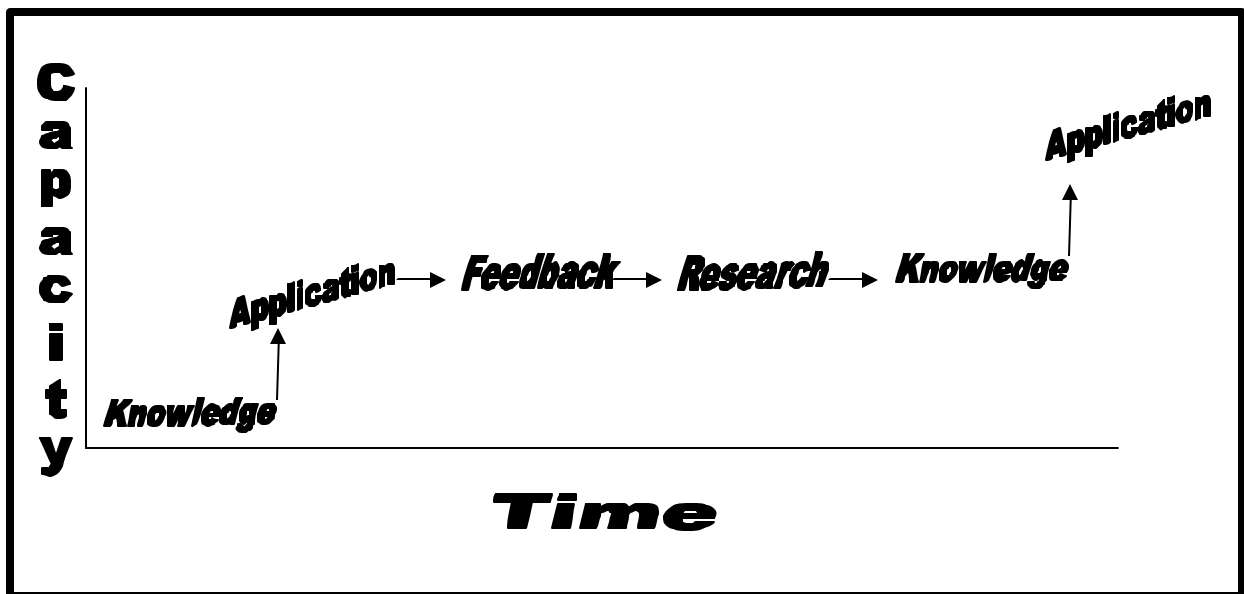
- Workforce development
- Direct and indirect employment
- Cultural and amenity development
- Technology transfer

All institutions of higher education have as their core mission the training of young adults. This basic function helps the local economy by providing a more skilled workforce, which attracts employers and helps existing businesses. An institution of higher learning also has its own payroll (faculty, staff) and therefore creates jobs in that manner as well. Expenditures by employees help create jobs for others in the community (retail stores, services). Another benefit that communities gain from higher learning institutions is that they employ highly

trained people. These highly trained people and their families contribute to the cultural life of the community, making the area more attractive to other well-educated people, making it easier for firms to attract and retain technical and managerial staff.

But institutions of higher learning can contribute to local economic development in more subtle ways that vary somewhat by institutional type. This tool outlines strategies community leaders can use to engage their local institutions of higher learning in stimulating local growth. Growth generally benefits institutions of higher learning by making an area more attractive for students and faculty, and by creating jobs, enabling tuition payment, either by students who are taking the jobs, or by family members supporting students. If the institution is supported with public funds, it may also benefit from positive local publicity about its economic development efforts. When local economic development officials actively engage with their institutions of higher learning, it increases economic development capacity results. Figure 1 illustrates how the basic process can work. The institution starts with a basic level of knowledge that can be applied locally. As the knowledge is applied, there is feedback about additional needs. The feedback can inspire research, which leads to new knowledge. The new knowledge is applied, resulting in greater local capacity for economic development.

Figure 1. Engagement and Regional Economic Development Capacity



Institutions vary in their strengths, motivations, and operating procedures. It is important to consider these differences as part of engaging the institution in the local economic development process. This tool provides a taxonomy of

institutional types, and, for each type, outlines which economic development community partnerships might work. Examples from the United States are also provided.

Institutional Types

Though the precise nature of institutions of higher education may differ from country to country, there are recognizable international categories of higher learning institutions. Most communities have at least one if not more of the types of institutions listed below.

1. Vocational/Technical Schools. This type of institution is engaged primarily in short (two years or less) training programs to develop workers' technical skills. They typically do not draw students from very far away, and a major administrative concern is student numbers; a large proportion of the faculty may be part-time instructors with no long term job security, giving the institution a great deal of flexibility in terms of changing the mix of class offerings. Faculty at this kind of school seldom engage in research, but may assist in applying their skills for development of products.

2. Small Private Baccalaureate Schools. These institutions may draw students from a slightly larger region due to their reputation and small class sizes. Other small privates may have slightly lower standards than nearby baccalaureate schools, and provide a "second chance" for students who might not be accepted into government subsidized schools. A few schools in this category may offer a limited selection of fairly specialized degrees, but most offer only very popular courses of study such as biology, chemistry, math, languages, psychology, business, or economics (this list may differ from country to country and over time). Faculty are full time, paid less than their peers at large universities, and dedicated to their teaching. A few faculty members may engage in research activities.

3. Regional Public Universities. These are less selective institutions that offer a full range of popular baccalaureate degrees, and advanced degrees in a few areas, especially management and teaching. They are the low cost school of choice for many local students and a few students from elsewhere, and have high enrollments. Faculty are somewhat better paid than in the small private or vocational schools, and carry high teaching loads, but are expected to produce some research relevant to their chosen fields.

4. National Public Universities and Research Institutes. These are more selective institutions, offering a full range of baccalaureate and advanced degrees to very high numbers of students. They draw their student body from the home region, but a high proportion come from other areas as well. They are research-extensive, and offer attractive salaries to faculty to attract the best

researchers. Research faculty carry light teaching loads and are expected to produce high volumes of internationally recognized research. Researchers are internationally competitive for research funding, and so bring monetary resources into the region

5. National Private Universities. These institutions are highly selective, slightly smaller than National Public Universities, and draw almost all of their students from other regions. On average, faculty are paid about the same as National Public Universities, but the distribution is more skewed, with a few superstar faculty making much more than their peers, and many lower level faculty paid less than they would be paid at public institutions.

Approaching Partnerships with Institutions—How Should It Be Done?

If a community wishes to form a partnership with its higher learning institutions to work together to enhance the community's economic growth, the community leaders need to pay attention to the nature of the institutions within their community. Good partnerships can be formed if communities ask a mixture of assistance from their institutions commensurate to the character of the institutions.

Before looking at the differences among the higher learning institutions and the type of opportunities for partnership each may offer, one universal principle should be emphasized. It is often the case that the local business community does not have a full inventory the resources offered by the institutions of higher learning, whether student capacity, curriculum or research capacity. And similarly, institutions of higher learning are often have incomplete information about the work and aspirations of a community's employers. The municipality can play a very positive role in bringing these two parts of the community together, and local economic development professionals should certainly do so through regular dialogue based on meetings and events such as job fairs, industrial conferences or technological roundtables. All of the suggestions in this tool are based on open and positive dialogue between business and institutions of higher learning.

What Works Best with Vocational/Technical Schools: These schools will rapidly adapt program offerings to meet local needs for technical skills. A community strategy to work with vocational/technical schools starts with canvassing employers to determine what skills they are consistently seeking in their employment searches. A proven method to elicit the skills gap inventory is to conduct a community-based business retention and expansion visitation program (see this tool kit). In this type of program, a leadership team recruits volunteers to meet with business owners or managers, and go through a pre-determined set of questions about possible business issues. The leadership team then reviews

completed questionnaires and determines whether (and how) to respond to various issues, either for individual businesses or the community as a whole. By involving administrators from the local vocational/technical school on the leadership team, appropriate training programs for workforce development can be identified.

A second way to engage vocational/technical schools is through their students. Businesses or other organizations can supply internship opportunities for students at various phases of their training. This can assist businesses through low cost labor, and also help them identify great workers as vacancies in permanent positions become available.

A third way to use vocational/technical schools is to help them make full use of space and equipment. If local businesses can operate the school's equipment during off-peak hours and seasons when few classes are in session, this can be an effective way to nurture small businesses that lack capital to buy costly equipment. This can be done in an *ad hoc* manner, or through a formalized **business incubator** program, in which small businesses relocate to unused office and production space in the school for a year or two until they are capable of renting or buying their own space. The basic notion of a business incubator is to aggregate several small businesses in the same physical space so they can learn from each other and support each other through the initial growth process.

What Works Best with Small Private Baccalaureate Schools : With small class sizes and ambitious students, faculty can often be called upon to develop appropriate class projects that meet community needs. Students in these "traditional" disciplines are hungry for applications of the theory they are studying. Communities that offer to cover out-of-pocket expenses for conducting projects will generally find a receptive audience. Successful projects help the institution show its relevance to prospective students. For example, economics or sociology students might be used to develop, implement, and analyze a visitors survey to determine how best to make the town more attractive to tourists and business travelers. Business students might help start-up firms analyze their business plans. Biology students might conduct an inventory of an area to make sure it is suitable for development. Art students might display their works in unused buildings in the community's business district, or organize an arts fair to increase traffic to local businesses.

What Works Best with Regional Public Universities: While some of the class project strategies mentioned above may work, it is generally more difficult due to the large class sizes of Regional Public Universities at the undergraduate level. A more fruitful strategy is to look for ways to complement the faculty need to conduct research. Many regional schools in the United States host business counseling services in their business and economics departments. These provide short-term technical assistance to small businesses in start-up or growth mode. While the vast majority of these businesses meet their needs by interacting with (non-faculty) counseling staff and business majors, a select few

outstrip the capacity of staff, and are referred to faculty. The faculty then uses these examples as case studies in publications and class lectures. The companies that grow out of these interactions often hire the graduates of the institution, and a few may ultimately even donate funds for projects to enhance the university. This type of two-tiered approach can be applied to other fields as well, such as medicine, where the staff (often known as clinical track faculty) serve as doctors for basic ailments with students assisting, while the researchers take on the more complex cases.

A second research-based strategy that some regional universities follow is to establish private-public research parks in the bio-physical sciences. The university provides the physical lab space, but projects in the space must involve a private partner, who provides funds for equipment, materials, and graduate students to conduct research of interest to local businesses. Typically this research involves improving manufacturing product or process for the company. The system can work because it helps faculty pay for their research projects, and companies reduce their development costs, making them more competitive.

When institutions attain the size of a large university, they begin to have other kinds of impacts on the community. The student body is large enough to create demand for cultural activities such as the performing arts and spectator sports—these create jobs. If the institution provides housing for its students, large conventions or other activities such as festivals can take advantage of unused dormitories and performance spaces in the off-season (typically summer).

What Works Best with National Public Universities and Research Institutes: The points made above with respect to regional public universities also apply to these more prestigious institutions. However there are also some major areas of difference. First, researchers capable of conducting internationally recognized research will be doing work that is patentable and may be worth licensing. Major institutions of this caliber should have an office of technology transfer with staff whose role is to market university innovations to corporations that can use the technology in production and marketing processes. A local economic development leader should be in touch with this staff to learn about these technologies, and connect them to businesses in the local area, increasing competitiveness of local firms. Second, researchers working at this level may recognize that a new innovation can develop into a new and highly profitable business. Local economic development leadership should stand ready to help these faculty members transition from researcher to business leader. In some cases, the university may set up barriers to faculty starting businesses; local economic development leadership should learn about university administration attitudes towards businesses spinning out of university research, and become advocates for business-oriented faculty if necessary. Because these universities are publicly funded, administrators can be brought in line with a more spin-off friendly attitude through the political process. Appropriately designed licensing, faculty leave-of-absence, and university equity policies can benefit both the university and the broader community. If there is a nationally funded research

institute in the region, an appropriate local economic development strategy is to work to make sure industries that might benefit from the Institute's research are either well represented on the Institute's advisory board, or that a community-based advisory board is formed for university/community relationships. Such coordination can help inform the Institute about emerging needs and connect research results to industrial application, thereby benefiting both the Institute (success story) and the industry (new products or reduced costs).

What Works Best with National Private Universities: Most of the points made above about national public universities are quite valid with respect to the national private universities. One difference, however, is that because private national universities are divorced from the political process, it is inappropriate to try to influence administrative attitudes towards business spin-offs or in general towards business partnership through political contacts. However, most large private universities have a few major donors. These donors typically understand business. If they are also located in the same region, local economic development leaders may be able to obtain a shift in university policy through conversations with donors.

In addition, the large private universities may be able to be more aggressive in certain areas. For example, if neighborhoods adjacent to the university are blighted, private universities are typically better-positioned to acquire and rehabilitate or raze properties than are public universities. Public universities engaged in these efforts are susceptible to complaints about use of taxpayer dollars for property speculation, or to political pressure from groups interested in maintaining the neighborhood's status quo, even when the status quo is a very unappealing area.

Example Success Stories

Kellogg Corporation. An entrepreneur named W. K. Kellogg was looking for ways to process corn into a breakfast cereal. Researchers from the publicly funded Michigan Agricultural College (now Michigan State University) helped him engineer a process, and "Kellogg's Corn Flakes" came to be marketed to nearly every country in the world. In gratitude, Kellogg established the W. K. Kellogg Foundation, which has provided millions of dollars in grants to Michigan State University, and also generously funded projects with many other universities, worldwide.

University of Pennsylvania. Located in the City of Philadelphia, this private university had a problem. The neighborhood near the university was becoming a haven for crime, which was impacting its ability to attract students and faculty. The university established a fund to buy and renovate once-stately homes in the neighborhood. Once renovated, the homes were sold to university employees with the stipulation that they had to be owner-occupied. This core of own-

occupied housing was sufficient to drive away criminal elements while maintaining viable affordable housing for long-term neighborhood residents.

Regional Economic Models, Incorporated. University of Amherst economics faculty member George Treyz focused on urban and regional economics. He began building models to predict the local economic impact of events such as a new manufacturing plant opening, and discovered a market for these kinds of predictions. His research at the university soon became dedicated to improving his modeling system, and he published many articles related to regional modeling. As his models improved, demand for the predictions grew. By the time Prof. Treyz retired, he had built a consulting firm with over twenty employees, many of whom travel the US helping communities understand how their communities might change in the future.

Fighting Cancer. Michigan State University medical researchers developed a drug that is effective at fighting cancer. The university technology transfer team sold the rights to manufacture the drug to a company, resulting in millions of dollars in royalties paid back to the university.

Community Design Team. Based out of West Virginia University's landscape architecture program, the community design team engages landscape architecture students and faculty, along with faculty from other disciplines and agency staff to make short term visits to communities anywhere in the State. The program gathers input from the local residents about the future of the community, and then creates a set of recommendations for physical improvements and strategies for success. Since 1996, thirty-two communities have benefited from the visits, and most have gone on to implement plans based on the recommendations. The university benefits from excellent press coverage during the events, practical experience for the students, and ideas for future research for faculty. For more details on the CDT, see Loveridge (2002).

Workforce Development. A local business retention and expansion program in Grafton, West Virginia revealed that a local greenhouse with thirty employees was about to go out of business. The reason? The company could not find workers capable of mixing fertilizers and other chemicals in the right proportions to aid the growth of plants. Over- and under-concentration of chemicals was resulting in thousands of dollars of lost investments. The local economic development authority made arrangements with a technical school in the area to provide specialized math training to the greenhouse workers. The company agreed to give workers a raise in pay if they successfully completed the training. As a result, workers were better paid, the local technical school gained tuition, and the business remained a viable contributor to the local economy.

Infrastructure. Many major research universities have established research parks that provide facilities for private sector start-ups that may make use of proximity to university research in some aspect of their operations. Park tenants may use the university's research, or employ its students. For example, the

University of Wisconsin-Madison's research park lists over one hundred for-profit and non-profit enterprises in its list of tenants. According to the Association of University Research Parks, in the US, research parks collectively employ over 350,000 people (www.aurp.net).

Cultural Event. The Commonwealth University of Virginia, a public institution located in Richmond, Virginia, hosts an annual French Film Festival in March. The event draws fans of French film making from the eastern United States to Richmond, injecting tourist dollars for the local economy. While technical schools are unlikely to provide this kind of community cultural event, other types of institutions of higher learning frequently sponsor cultural events.

Summary and Conclusions

Table 1 provides a quick summary of various economic development approaches and which types of institutions are most likely to engage in them. It should be clear that institutions of higher learning have much to offer the economic development process, but it should be stated that an engaged local institution of higher learning is not sufficient to have substantial impacts on its own. Institutional engagement must be complemented by a concerted effort of local economic development professionals and other community members interested in economic growth. This may mean creating conditions so that a cooperative project can be supplied with appropriate physical infrastructure, business financing, promotional activities and political dialog. And of course, well-thought out strategic community vision is a necessity if a community wishes to realize the full potential of a partnership between higher education institutions and businesses in order to further overall economic growth.

While this tool has provided some basic institutional types and the most common economic development strategies that can be employed in partnership with them, it is important to remember that each institution of higher learning has its own strengths, weaknesses, and idiosyncrasies. The most important thing a municipality can do is to enter into a pattern of frequent contact with university administrators. Through contact, dialog, and trust-building, common agendas can be established and executed. These exchanges can be both formal and informal, and it can be of distinct advantage to place representatives from both the higher learning institutions and business onto community committees and advisory boards dedicated to local economic development.

Table 1. Institutional Types and Common Local Economic Development Activities

	Vo-Tech	Small Private	Regional Public	National Public	National Private
Rapid response to worker skill shortage	X				
Facility sharing	X	X	X		
Business visitation program	X		X		
Internship program	X	X	X	X	X
Business counseling			X	X	X
Research park			X	X	X
Technology transfer office				X	X
Land redevelopment				X	X
Cultural events		X	X	X	X

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