

# Economic Development From Universities



## To Stimulate Economic Development from Universities, Governments Should Bolster Research and Infrastructure, not Fund Start-ups

By Michael Alvarez, Cohen\*

The most effective way that governments can leverage the potential of universities to drive economic development is for political leaders to focus resources on supporting great university research and building a robust entrepreneurial infrastructure. However, in pursuing economic stimulus, governments (and universities themselves) sometimes resort to funding companies spun-out of universities as well as sponsoring “translational research” conducted on campuses. Indeed, funding start-ups has the allure of fast results – i.e. the direct creation of companies and jobs; and sponsoring product development under the cloak of translational research has the appeal of being practical. But creating a government or university system for supporting start-ups and product development doesn’t leverage the time-proven ability of an entrepreneurial ecosystem to deftly evaluate, fund and grow companies. This ecosystem works best when an extensive pipeline of innovative research is coupled to an educated pool of entrepreneurs within a robust infrastructure of services. Government programs that seek to circumvent, instead of foster this ecosystem more often result in taxpayer money that is wasted on short-lived ventures that don’t create profitable products and spawn new industries.

Communities are increasingly looking to their regional governments and universities to implement programs that stimulate the local economy. This community expectation is especially vocal when regions are trying to overcome an economic downturn (e.g. the post dot-com bust), or stimulate a particularly promising industry (e.g. nano tech). In response to these heightened outcries, government leaders eagerly assemble a plan and the corresponding taxpayer-derived funding. Leveraging universities is frequently a key component of this solution. There are many approaches to leveraging universities to stimulate economic development, and these approaches can be characterized on continuum of direct to indirect methods.

On the direct side of the spectrum, the approaches include funding start-ups that want to commercialize university-developed technologies, providing facilities for these start-ups to locate while they incubate, and sponsoring grants to university personnel that want to pursue transla-

tional R&D – that attempts to evolve basic research across the chasm to proven technology.

On the indirect side of the continuum of approaches to getting university research to spur economic development, the alternatives include providing tax incentives for corporate R&D, streamlining university technology licensing, fostering the ecosystem of professionals that cater to start-up companies such as venture capitalists, attorneys, and accountants, as well as enhancing the infrastructure that entrepreneurial activities depend on such as efficient transportation, communications, energy and housing.

Not surprisingly, many government leaders are biased toward pursuing the direct approaches – and why not: in comparison to the indirect approaches, these direct methods are ostensibly faster acting and more cost-effective – and accordingly, they are more appealing to many voter constituents. These direct approaches can also assuage frustrated bureaucratic officials and unemployed workers that have developed a mindset that business can’t or won’t invest in promising technologies.

The problem with these direct approaches is that they rarely address the issues that typically impede economic development; and when they do address some of the economic issues, they do it in a clumsy, suboptimal manner when compared to how the indirect methods deal with these issues.

So what are the issues in getting university research to drive economic development? They rarely involve a lack of capital to fund technologies developed on campus; instead they are more commonly related to a dearth of (a) promising technologies, (b) entrepreneurs to transform these technologies into products, as well as (c) healthy companies and confident consumers to purchase the resulting products. This is especially the situation, when

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universities are located in capitalistic regions where capital flows freely.

Given these economic impediments, the ideal situation – and the solutions that governments should pursue are (a) enhancing the quality and quantity of research and education conducted at universities, (b) fostering a closely linked large pool of entrepreneurial technologists, financiers, attorneys, and business people, and (c) building an efficient infrastructure of transportation, communications, energy and housing. If a university is immersed in a critical mass of innovative ideas, great people and strong infrastructure, then entrepreneurialism organically flourishes.

Within this environment, entrepreneurial survival of the fittest prevails – in that entrepreneurial people find promising technologies; they form teams that start companies; good ideas and people get funded and they continued to get funded if they continue to show potential. Conversely, unpromising technologies and the corresponding start-ups don't get funding in this environment – and governments or universities shouldn't fund them. That's a poor use of money and people, and it ignores the power of the ecosystem to efficiently cull winners and losers.

Many examples of this ideal approach to leveraging universities to drive economic development can be found in the state of California, within the University of California, and at the Berkeley campus.

At the state level, a \$3 billion bond-funded initiative was passed to pursue stem cell research. The resulting California Institute of Regenerative Medicine is driving a huge amount of innovative research across the state's universities.

Within the University of California, four inter-campus institutes have been established to pursue promising technologies in a way that encourages industry collaboration as well as sponsorship. In these four institutes, faculty and students are working closely with researchers and business people from leading companies to pursue the development of biomedicines, information systems, and nano technology.

On the UC Berkeley campus, a series of clubs, forums and business plan competitions encourage science and engineering students to mingle with MBA and JD students as well as venture capitalists. As a result of these interactions, new technologies are identified and evaluated, business concepts are established, teams are formed, business plans are circulated, companies are launched, and product development is funded—many of which have resulted in entirely new market segments and industries.

These approaches exemplify that the best way for governments and universities to foster university-driven economic development is by bolstering research, mating it with educated entrepreneurs, and surrounding it in a healthy infrastructure. Creating this environment is much more effective than funding of start-ups and translational research with taxpayer money.

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