The Year in Higher Education: An Economic Development Perspective

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The year in higher education: an economic-development perspective

Presented by David Hochman
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New York City, April 7, 2008

My approach

- The demands and needs of bargaining constituencies are affected by the expectations that society itself places on the institution
- In higher education, that set of demands is changing rapidly and fundamentally, increasingly involving the university as an economic actor

Some key trends, each with implications for those bargains

- The university is now indisputably the driver of national innovation strategy
- The university is now also fully appreciated by state government as a key economic driver
- There is convergence among various aspects of the economic-development mission
- The university – so far, especially the public university – has embraced both these roles
The university as the national innovation driver

- In most industrialized nations, total R&D (all sources, all stages) runs 1.5% to 2.5% of GDP
  - That was $340 billion in FY06 in the U.S. (NSF SEI 2008)
- A large share of economic growth is due to innovation, and a large share of that traces to the knowledge generated by basic science
  - But industry under-invests in basic science, fearing spillovers that can be captured by others
- So, everywhere, national governments fund basic science because no other actor will do so adequately
  - In the U.S. that was $36b (out of $94b in total federal R&D at all stages)

The feds pay for basic research; the university drives innovation

- That $36b in federal money is the majority of the $62b in basic R&D funded by all sources
- $22b or 62% of that $36b in federally funded basic R&D flows to universities
- Within the university sector, that $22b is 64% of the $34b raised from all sources for basic R&D
- National innovation policy and university budgets for basic science are co-dependents!
  - All expectations imposed by Bayh-Dole, COI regs, etc. take place in that context

Recent trends and predictions on the national scene

- We completed the NIH doubling period, but NIH is now flat, and the NSF doubling (the America COMPETES act of 2007) is not funded!
  - In the 1990s/2000s, adding space and recruiting fundable faculty led to growth
- Times are about to get tough.
  - All bargains made on the expectation of continued rapid growth in federal funds for basic science are at risk, raising importance of other actors
The university as a state-level economic actor

- In the end, the feds don’t care where innovation gets translated – only state/local jurisdictions do
- Since the 1980s at least, states have spent about $2 per year per capita extracting value
  - Investing in research that can attract federal R&D
  - Building facilities, funding recruitment
  - Promoting academic/industrial collaboration
  - Challenge grants, research parks, incubators
  - Financing commercialization of intellectual property
  - Pre-seed fund, angel funds, enhanced VC environment
- States also have expectations embodied in these funding bargains

States active in the biosciences, 2006

Recent trends and predictions at the state level

- Technology now has a place in every governor’s state-of-the-state or budget address
  - Every state has a ‘ted’ agency, many a separate higher ed investment initiative, and some a stem cell program
- Foundations like Kauffman are spotlighting the efficacy of the Bayh-Dole regime
  - We are seeing increased pushback on conventional royalty-maximizing strategies
- States once willing to invest in higher ed on the argument of capturing federal funds, now have to be offered different reasons
  - It’s the economy, stupid – at the state/local level!
Convergence among aspects of the economic-development mission

- Federal, state, and even philanthropic expectations are converging
- It is no longer sufficient to argue any one separately – they must be viewed as an interdependent whole
- The closer you get to the local level, the stronger the expectations, and the more wide-ranging the implications
  - In the knowledge age, we now accept that cities should thrive around universities, just as they used to around ports, waterways and natural resources
  - What impact is the university having on its locality, as an employer, purchaser, and innovation driver?

Even if politicians don’t understand R&D and innovation, they understand employment

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Source: New York State Department of Labor

Recent trends and predictions at the local level

- ‘Innovation zones’ or equivalents – the old enterprise zone idea plus knowledge content
- Huge S&T recruitments, bringing in universities after the fact
- Locally funded technology-commercialization programs
- Subtle shifts in community partnership/institutional districts to encompass substance and civic leadership’s ambitions for downtown
The university’s acceptance of these roles

- Once the university mission was traditionally tripartite
  - Over time, a few have explicitly added economic development
- Once the T2 mission was revenue maximization
  - Increasingly it includes spin-off formation and is tied to community-renewal ambitions
- Once the ‘market rules’ where those spin-offs go
  - Now every attempt is made to keep them local
- Once regional industry was seen as an employer of students and provider of unrestricted support
  - Now these companies are vectors for economic impact
- Once communities were seen as charity cases
  - Now they are seen as economic partners/demo sites

Recent events and predictions in the university space

- At NASULGC alone, the outreach/T2 commission (with an ag-extension heritage) was renamed ‘innovation, competitiveness and economic prosperity’
  - At AASCU, economic development made the top 10 policy issues affecting higher ed
  - In tough times, can the private institutions be far behind?
- A cottage industry has arisen of economic-impact studies
  - But it goes way beyond the ‘multipliers’
- Universities will place increased emphasis in their “asks” on commercialization infrastructure
  - E.g., endowed funds for pre-commercialization research and venture-formation

Just some impact studies I found...

Source: http://tbed.org

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Some questions for the near future that may have bargaining implications

- With generational change, will it be impossible to recruit faculty without providing them entrepreneurial outlets?
- Will pressure to provide “surrogate management” for early-stage spin-outs pose compensation challenges?
- Will pension funds serving faculty and staff be asked to play in regional pre-seed investment funds?