

ESSAY: A BLUEPRINT FOR THE NETWORKED PUBLIC  
ENTREPRENEURIAL UNIVERSITY

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*Roundtable Series on Entrepreneurship, Innovation,  
and Public Policy*<sup>2</sup>

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<sup>2</sup> The Silicon Flatirons Roundtable Series on Entrepreneurship, Innovation, and Public Policy sponsored is by Brad Feld, Managing Director of the Foundry Group. Over a dozen Silicon Flatirons Roundtable Reports—on topics including private equity, internet governance, cloud computer, angel investing, and many more—can be found at <http://www.siliconflatirons.org/publications.php?id=report>. Roundtable and Summit discussions further Silicon Flatirons' goal of elevating the debate around technology policy issues.

*A Blueprint for a Networked Public Entrepreneurial University* posits that it is critical for public universities to understand determinants that separate a thriving entrepreneurial university system from a failing one.

Toward this end, this essay proposes two contributions. One, in order to better perceive the determinants of what separates adaptive and successful university entrepreneurial scenes, the conception of the *public entrepreneurial university* should focus upon interactions within a networked system. Two, if determinants of successful university startup scenes are understood in a networked way, meaningful measures of entrepreneurship network efforts at public universities are sorely needed. This essay proceeds in three parts. First, the essay links scholarship on entrepreneurial networks to conceptions of a public entrepreneurial university. Second, the essay details formidable problems facing any effort to measure public entrepreneurial university networks. And third, the essay sketches a proposal for how entrepreneurial networks might nonetheless be analyzed.

The essential argument is that public entrepreneurial universities<sup>3</sup> should be understood and evaluated as a networked system of interactive parts. Viewing disaggregated entrepreneurial activities in isolation cultivates a parochial view that fails to apprehend key determinants of the potential impact of a public entrepreneurial university. Our call for a networked system approach builds upon the work of economic geographers, sociologists, and others who advanced understanding about the relationship between location and innovation. Scholars ranging from Alfred Marshall to Michael Porter explain why concentrations of entrepreneurs result in agglomeration economies which advantage individual startups that collocate within those geographic areas. Further work by scholars such as Anno Saxenian and Richard Florida explain why certain locations enjoy successful industrial adaptation over time, while other locations struggle to adapt. This line of scholarship, including the work of Maryann Feldman and Ted Zoller, examines the “anatomy of social capital” as it correlates to the “vibrancy of local entrepreneurial economies.”<sup>4</sup> Indeed, Feldman and Zoller suggest that the structure of social capital networks may be more important than aggregate measures in explaining regional advantage.

Our first claim is that many of the advantages that attend densely networked entrepreneurial communities similarly operate to advantage densely networked university entrepreneurship efforts. Yet while academics have provided a useful set of tools to understand the dynamics of regional industrial adaptation and innovation, conceptions of university entrepreneurship too rarely integrate these insights into prescriptions for how to conceive of and measure campus-related entrepreneurial endeavors. For example, entrepreneurship rankings by popular magazines and on-line publications focus upon snapshots such as business school reputations and empirical measurements such as number of startups launched by students and whether entrepreneurial majors or minors are offered

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<sup>3</sup> We focus specifically on *public* universities to refer to institutions that share most if not all of the following characteristics: (1) a comprehensive institution with significant outreach, research, and teaching functions, (2) a size of university population which make it difficult for all faculty to know one another, (3) constraints and sensitivity related to public funding of higher education, and (4) some notion that the university should contribute to state and region-specific economic development efforts.

<sup>4</sup> See Maryann Feldman and Ted Zoller, *Dealmakers in Place: Social Capital Connections in Regional Entrepreneurial Economies* (Regional Studies, Vol 46, pp. 23-37, January 2012).

on campus.<sup>5</sup> Meanwhile, academic scholarship on the entrepreneurial university tends to prioritize either the university's role in commercialization and economic development or, alternately, entrepreneurship education.<sup>6</sup> Few conceptions focus upon social capital and networked interactions across a university's outreach, scholarship, and teaching functions. Laudably, a recent report from the Kauffman Foundation, *Entrepreneurship Education Comes of Age on Campus*, highlights the importance of campus and community networks. The report underscores the value of university entrepreneurship "melding with the community" through mentorship networks, investor discovery, and other interaction that "blurs the town-gown, academy-community distinction."<sup>7</sup> Yet the report stops short of calling for serious measurements of social capital and networked interactions as a proxy for effective entrepreneurial universities.

*A Blueprint for a Public Entrepreneurial University* is Quixotic, however, for at least four reasons. One is the uniqueness problem. This arises from the observation that university entrepreneurial ecosystems, like regional scenes, are idiosyncratic, and strongly influenced by culture and historical accident. As a result, "no single approach [to entrepreneurship] works everywhere"<sup>8</sup> and widespread local variation between public university campuses resists universal recipes. More broadly, entrepreneurial systems are messy and unpredictable, often rejecting the best laid top-down plans for success.<sup>9</sup> Two is the measurement challenge. Specific to the ambition to measure the university as a networked system of interactive parts, there are a host of challenges, not the least of which is the classic concern that "knowledge flows are invisible" and "leave no paper trail by which they may be measured and tracked."<sup>10</sup> Problems of institutional competence also attend measurement. Universities do not typically engage in expansive longitudinal tracking of direct student outcomes<sup>11</sup> and, moreover, the time frame for observable outcomes can take decades. Three, while correlations may be shown between networks and outcomes, causation is very difficult to prove. And four, an underappreciated problem for measurement is that entrepreneurship in the university context has taken on at least three distinct meanings. In particular, *entrepreneurship* is an umbrella term which alternately refers to (i) activities of a company with a certain type of firm structure and outputs, (ii) a set of processes and methodologies that are used by companies and individuals, and (iii) an individual mindset marked by certain attributes. Which version – or versions – of entrepreneurship "count" as worthy of measurement is a topic on which consensus is lacking.

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<sup>5</sup> See, e.g., Entrepreneurship Rankings, US News & World Report, <http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/business-entrepreneurship> (rankings based upon surveys of business school deans and MBA directors) and See Entrepreneur.com, *Top Colleges for Entrepreneurship 2013* (September 18, 2013) (available at <http://www.entrepreneur.com/article/228405>).

<sup>6</sup> See generally Cynthia A. Kehoe & Thomas McGeary, *The Entrepreneurial University: A Select Annotated Bibliography*, Academy for Entrepreneurial Leadership (April 2008).

<sup>7</sup> *Entrepreneurship Education Comes of Age on Campus*, at p. 16-17 (Kauffman Foundation, August 2013).

<sup>8</sup> See *Entrepreneurship Education Comes of Age on Campus*, at p. 2 (Kauffman Foundation, August 2013).

<sup>9</sup> See Josh Lerner, *Boulevard of Broken Dreams* (2009 Princeton University Press).

<sup>10</sup> See David Audretsch and Maryann Feldman, citing Paul Krugman, in *Knowledge Spillovers and the Geography of Innovation* (2004), at p. 2718.

<sup>11</sup> *Id.* at 18.

Nonetheless, the project framed by this essay – albeit steeped in humility – is one that we believe is directionally correct and (probably) worth the effort. Our hypothesis is that, in order for public universities to excel as entrepreneurial entities, a broader and more integrated conception of the entrepreneurial university is needed. In particular, this essay's policy prescription is a public university must mindfully facilitate interactions within a networked system across three key dimensions set forth below. This panoramic vision for entrepreneurship sits across the primary functions of a public university—including public service, scholarship, innovation, and teaching—emphasizing the importance of the whole over its parts.

**(1) *The university as catalyst:*** public universities' outreach efforts must promote innovation by serving as a nerve center of their community's startup community and facilitating community-based impact.

**(2) *The university as teacher:*** public universities must recruit and train the next generation of entrepreneurial talent, resulting in favorable student-oriented outcomes. And

**(3) *The university as scholar and innovator:*** public universities must deepen scholarly understanding around entrepreneurship and innovation, support faculty and student entrepreneurial efforts, and where possible, promote commercialization of university technology. This dimension focuses on moving new knowledge from campus to the external population.

Critically, none of these core dimensions operate in isolation. As part of a complex system, parts of an entrepreneurial university should interact with other parts of the network. When functioning as a whole, these dimensions support each other and create a virtuous cycle that makes the whole greater than the sum of its parts. Snapshot measures that evaluate campus entrepreneurial efforts in isolation error insofar as they fail to apprehend the panoramic view of campus entrepreneurial interactions.

A second policy prescription in this essay, which flows from the networked system approach, is the need for better measurement techniques by which to evaluate the interactions between different portions of a public university's entrepreneurial network. Better measurements are needed to facilitate comparison of entrepreneurial efforts against peer institutions. Such comparison would engender productive competition amongst public universities and, moreover, accelerate information sharing concerning how to enhance a university's entrepreneurial environment.