Local Entrepreneurship Ecosystem and Economic Development

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Outline

1. Kauffman Index of Entrepreneurial Activities

2. Concept of entrepreneurship ecosystem

3. Recommendations for Encouraging Entrepreneurial Growth and Economic Development
Importance of Entrepreneurship

- Young companies generate nearly all net new jobs
Who is Employed by Young Firms

**Education**
- Young Firms:
  - Less than High School: 9.9%
  - High School or Equivalent: 25.2%
  - Some College or Associates Degree: 25.9%
  - Bachelor's Degree or Higher: 39.0%
- All Firms:
  - Less than High School: 8.5%
  - High School or Equivalent: 35.7%
  - Some College or Associates Degree: 28.9%
  - Bachelor's Degree or Higher: 26.9%

**Gender**
- Young Firms: 50.0% Male, 50.0% Female
- All Firms: 48.5% Male, 51.5% Female
Who is Employed by Young Firms

Race and Ethnicity

- White (Non-Hispanic): 85.1%
- Black (Non-Hispanic): 3.6%
- Asian (Non-Hispanic): 4.6%
- Hispanic: 5.2%
- Other (Non-Hispanic): 1.5%

Age Group

- 24 and Younger: 10.4%
- 25 to 34: 20.0%
- 35 to 44: 28.5%
- 45 to 54: 20.4%
- 55 to 64: 16.4%
- 64 and Older: 12.8%
1. Kauffman Index

- Focus on outputs (entrepreneurial activities)
  - Not inputs, such as venture capital $, R&D, skilled labor

- Different dimensions of entrepreneurship exist

- To provide tools to assess, not to race up the ranking

- 3 types of indices
  1) Startup
  2) Mainstreet
  3) Growth
<table>
<thead>
<tr>
<th>Startup Activity</th>
<th>Main Street Entrepreneurship</th>
<th>Growth Entrepreneurship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rate of New Entrepreneurs</strong></td>
<td><strong>Rate of Business Owners</strong></td>
<td><strong>Rate of Startup Growth</strong></td>
</tr>
<tr>
<td>The percentage of adults transitioning into entrepreneurship at a given point in time</td>
<td>The total number of business owners in a location at a given point in time</td>
<td>The average growth of a cohort of new startups in their first five years</td>
</tr>
<tr>
<td><strong>Opportunity Share of New Entrepreneurs</strong></td>
<td><strong>Share of Scaleups</strong></td>
<td></td>
</tr>
<tr>
<td>The percentage of new entrepreneurs driven primarily by “opportunity” vs. “necessity”</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Startup Density</strong></td>
<td><strong>Established Small Business Density</strong></td>
<td><strong>High-Growth Company Density</strong></td>
</tr>
<tr>
<td>The number of new employer businesses normalized by population</td>
<td>The number of businesses older than five years with less than fifty employees normalized by population</td>
<td>The number of fast-growing companies with at least $2 million dollars in annual revenue normalized by business population</td>
</tr>
</tbody>
</table>
1.1 Startup Index

1) Rate of new entrepreneurs
2) Opportunity share of entrepreneurs
3) Startup density

WI = 50/50
Source: BDS for Firm Data, and BEA for Population Data
1.2 Main Street Index

- Index of small business activity
  1) Rate of adults owning businesses
  2) Rate of small employer

\[ WI = \frac{6}{25} \]
1.3 Growth Index

1) Rate of startup growth - 53.5%
2) Share of scale-ups - 1.40%
3) Density of high-growth company - 37.9

WI = 23/25
Other Cautions about Kauffman Index

• Only at the state level
  o High variation within a state, by metropolitan areas
• Only aggregate statistics
  o No sectoral or other breakdown
• Recent changes & dynamics may not be reflected
• Only a set of tools to assess
• You decide which data is useful and how best to use it
  o But not necessarily picking the most convenient index
• See also Conroy & Deller (2015), UW Agr Economics
• Also Stern & Guzman (2016), MIT Sloan School
Net Job Creation by Firm Age Madison

Source: BDS
http://www.census.gov/ces/dataproducts/bds/data_firm.html

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Madison Startup Growth Rate and Startup Density

• Madison’s Rate of Startup Growth – 72%
• Madison’s Share of Scaleups – 2.27%
• The average employment size in Madison startups grew 94.8% from 2008 to 2013.
2. Concept of Entrepreneurship Ecosystem

- Regional variation of entrepreneurship rates
- What do places with high rates have?
- Conventional elements of entrepreneurship ecosystem

1) Finance / risk capital
2) Incubators/Accelerators
3) Talent / skilled labor
4) University & research
5) Core customers
6) Support organizations & social capital
Domains of the Entrepreneurship Ecosystem

Leadership
- Unequivocal support
- Social legitimacy
- Open door for advocate
- Entrepreneurship strategy
- Urgency, crisis and challenge

Government
- Institutions
  - e.g. Investment, support
- Financial support
  - e.g. for R&D, jump start funds
- Regulatory framework
  - Incentives
  - e.g. Tax benefits

Research institutes
- Venture-friendly legislation
  - e.g. Bankruptcy, contract
  - enforcement, property rights, and labor

Financial Capital
- Micro-loans
- Angel investors, friends and family
- Zero-stage venture capital

Venture capital funds
- Private equity
- Public capital markets
- Debt

Success Stories
- Visible successes
- Wealth generation for founders
- International reputation

Societal norms
- Tolerance of risk, mistakes, failure
- Innovation, creativity, experimentation
- Social status of entrepreneur
- Wealth creation
- Ambition, drive, hunger

Early Customers
- Early adopters for proof-of-concept
- Expertise in productizing
- Reference customer
- First reviews
- Distribution channels

Networks
- Entrepreneur’s networks
- Diaspora networks
- Multinational corporations

Labor
- Skilled and unskilled
- Serial entrepreneurs
- Later generation family

Educational Institutions
- General degrees (professional and academic)
- Specific entrepreneurship training

Infrastructure
- Telecommunications
- Transportation & logistics
- Energy
- Zones, incubation centers, clusters

Human Capital

Policy

Markets

Entrepreneurship

Culture

Finance

Supports

Support professions
- Legal
- Accounting
- Investment bankers
- Technical experts, advisors

Non-Government Institutions
- Entrepreneurship promotion in non-profits
- Business plan contests
- Conferences
- Entrepreneur-friendly associations

Questions to Consider

• Does injecting a missing element help?
  o Such as establishing venture funds or incubators

• Should all ecosystems look alike?
  o The model after Silicon Valley?
Myth Element 1: Lack of Finance?

• Often the number one challenge for an entrepreneur

• Fate of VC-invested firms (Puri and Zarutskie 2012)
  o 33% acquired, 16% go public, 40% fail, 11% continue w/ no return

• 80% of VCs unable to return 3% return/yr (Bradley 2012)

• High-growth Inc firms:
  o 6.5% VC, 7.7% angels vs. 67% savings, 14% bootstrapping, etc.

• Do they (entrepreneurs) really need VC investment?
• VC induce growth, or firm growth induce VC invt?
• Is that high failure rate acceptable for public sector?
## Venture Capital Data

<table>
<thead>
<tr>
<th>City</th>
<th># of Deals 2014</th>
<th># of Deals 2015</th>
<th>Total # of Deals</th>
<th>Investment ($ mil) 2014</th>
<th>Investment ($ mil) 2015</th>
<th>Total Investment ($ mil)</th>
<th>Pop (K)</th>
<th>#/Pop</th>
<th>$/Pop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madison</td>
<td>17</td>
<td>16</td>
<td>39</td>
<td>43.0</td>
<td>75.5</td>
<td>122.1</td>
<td>627</td>
<td>62.2</td>
<td>194.8</td>
</tr>
<tr>
<td>Milwaukee</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>7.4</td>
<td>2.3</td>
<td>11.6</td>
<td>1,572</td>
<td>3.2</td>
<td>7.4</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>35</td>
<td>23</td>
<td>81</td>
<td>331.7</td>
<td>316.1</td>
<td>849.5</td>
<td>3,280</td>
<td>24.7</td>
<td>259.0</td>
</tr>
<tr>
<td>Chicago</td>
<td>86</td>
<td>71</td>
<td>210</td>
<td>954.4</td>
<td>880.2</td>
<td>2,206.3</td>
<td>9,730</td>
<td>21.6</td>
<td>226.8</td>
</tr>
</tbody>
</table>

Source: PriceWaterhouse Coopers. Money Tree Reports
List of VC Funded Firms

<table>
<thead>
<tr>
<th>Company</th>
<th>Company Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madison Vaccines Inc</td>
<td>Biotechnology</td>
</tr>
<tr>
<td>Zurex Pharma Inc</td>
<td>Biotechnology</td>
</tr>
<tr>
<td>FluGen Inc</td>
<td>Biotechnology</td>
</tr>
<tr>
<td>Zurex Pharma Inc</td>
<td>Biotechnology</td>
</tr>
<tr>
<td>EatStreet Inc</td>
<td>Consumer Products and Services</td>
</tr>
<tr>
<td>Silatronix Inc</td>
<td>Electronics/Instrumentation</td>
</tr>
<tr>
<td>Semba Biosciences Inc</td>
<td>Electronics/Instrumentation</td>
</tr>
<tr>
<td>MoveIn Inc</td>
<td>Financial Services</td>
</tr>
<tr>
<td>Silatronix LLC</td>
<td>Industrial/Energy</td>
</tr>
<tr>
<td>Xolve Inc</td>
<td>Industrial/Energy</td>
</tr>
<tr>
<td>Drifty Co</td>
<td>IT Services</td>
</tr>
<tr>
<td>Murfie Inc</td>
<td>Media and Entertainment</td>
</tr>
<tr>
<td>Outdoor InSite LLC</td>
<td>Media and Entertainment</td>
</tr>
<tr>
<td>Swallow Solutions LLC</td>
<td>Medical Devices and Equipment</td>
</tr>
<tr>
<td>Healthmyne Inc</td>
<td>Medical Devices and Equipment</td>
</tr>
<tr>
<td>Neuwave Medical Inc</td>
<td>Medical Devices and Equipment</td>
</tr>
<tr>
<td>Rowheels Inc</td>
<td>Medical Devices and Equipment</td>
</tr>
<tr>
<td>Stealth Therapeutics Inc</td>
<td>Medical Devices and Equipment</td>
</tr>
<tr>
<td>Healthfinch Inc</td>
<td>Software</td>
</tr>
<tr>
<td>MLabs Inc</td>
<td>Software</td>
</tr>
<tr>
<td>100Health Inc</td>
<td>Software</td>
</tr>
<tr>
<td>Beekeeper Data Inc.</td>
<td>Software</td>
</tr>
<tr>
<td>DataBase Solutions Inc</td>
<td>Software</td>
</tr>
<tr>
<td>Healthfinch Inc</td>
<td>Software</td>
</tr>
<tr>
<td>PerBlue Inc</td>
<td>Software</td>
</tr>
<tr>
<td>Reciprocal Labs Corp</td>
<td>Software</td>
</tr>
<tr>
<td>Redox Inc</td>
<td>Software</td>
</tr>
<tr>
<td>Thalchemy Corp</td>
<td>Software</td>
</tr>
</tbody>
</table>
Myth Element 2: Incubators / Accelerators

• Failure of incubators (Amezcua 2010)
  o Likely prolonging dying firms
  o Providing business services by 1.8 staff?

• Accelerators?
  o Competitive application process
  o Pre-seed investment, with equity exchange
  o Create a cohort of entrepreneurs, and focus on teams
  o Connect to mentors

• No evaluation research yet
  o Outliers (Y-Combinator, TechStars)
  o What happens after being funded?
Myth Element 3: University

• Scientific research, NIH funding, etc.

  o Little connection b/w scientific discovery & commercialization (Motoyama et al. 2011)

  o Little connection with startup or high-growth firm ratios

  o But % college graduate is correlated (Motoyama & Bell-Masterson 2014; Motoyama & Mayer, forthcoming)
Ingredients vs. Recipe

• Great elements, but poor entrepreneurship result
  o Baltimore (Feldman 1994; Feldman & Desrochers 2003)
  o Cleveland (Fogarty and Sinha 1999)
  o Philadelphia, St. Louis, Albuquerque?

• Elements = Ingredients $\rightarrow$ Ecosystem?

Question:
• How can you mix ingredients?
The Biggest Challenge of Most Ecosystems

(Brasunas, interview, December 10, 2012)

• The typical problem with entrepreneurs in St. Louis five years ago was like this:
• “I do this business alone, and I don’t know other startups in town. I don’t know investors here, and there is only old money from big corporations in St. Louis, so I go to Silicon Valley to find an investor.”
• Then, if you talked to investors, they would say: “I don’t find any startups in St. Louis, and, in fact, there may not be any prospective startups here, so I go to Silicon Valley to find companies to invest.”
• So somehow, they might find each other in Silicon Valley, but not in St. Louis.
Alternative Strategy

- **Connect** entrepreneurs to:
  - Other entrepreneurs (peer and experienced)
  - Support organizations
  - Promote learning between entrepreneurs
  - Not theoretical information, but experimental knowledge, how-to

- **Increase** **Dynamism** by favoring incumbents less
  - Promote creative policies
  - Connect firms to customers instead of coaxing VC
  - Tap into underutilized sources of funding
    - Debt
    - CRA Credits
Increase Connections: Champion Entrepreneurship

PUBLIC SUPPORT OF ENTREPRENEURSHIP

OLD TOP-DOWN STRATEGY

NEW ENTREPRENEUR-CENTERED APPROACH

GOVERNMENT

INCUBATORS

VENTURE FUNDS

ENTREPRENEURS

Source: Ewing Marion Kauffman Foundation
Connectivity within Ecosystem
Increase Connections: 
Welcome Immigrants

• Immigrants are twice as likely to start a business.

• 24 of the top 50 venture-backed companies in America in 2011 had at least one foreign-born founder.

• Immigrants have started more than half of America’s startups valued at $1 billion or more.

• Cities are implementing formal welcoming strategies
  • Welcoming America and Mosaic
Increase Connections: Leverage Existing Assets

- Incubators:
  - A place to interact: Within incubated firms and outside
  - Events to recruit different kinds & stages of entrepreneurs
- University:
  - Connecting students and startup firms
  - Human transfer > Tech transfer
- Create a flow of entrepreneurs within a region
  - Are anchor companies helping?
  - Enforcement of non-competence, occupational licenses
- Create a flow of entrepreneurs + others
  - Between different groups of entrepreneurs
  - Between regions
Increase Dynamism: Rethinking Municipal (and State) Regulation

- Design-Thinking policies, not Scared-Lawyer laws
- Procurement reform
- Leverage technology as a means not an end
- Often regulations acts as competitive advantage for incumbent firms
- Learn from entrepreneurs

The operating system of the “City” must change to meet new challenges and demands
Increase Dynamism: Reconsider Tax Incentives

INCENTIVE SNAPSHOT
CORPORATE INCOME TAX CREDIT, REBATE, OR REDUCTION

- $0 or no information
- $540,000–$2,799,999
- $2,800,000–$14,999,999
- $15,000,000–$80,999,999
- $81,000,000–$429,999,999
- $430,000,000–$2,286,000,000

Source: The New York Times and Ewing Marion Kauffman Foundation
Takeaways

• Wisconsin in data
  o Fine in small businesses, but weak in startup and growth companies
  o But use this data only as a reference

• Entrepreneurship ecosystem
  o Not elements (ingredients), but connectivity (recipe)
  o Are you promoting connections & learning of entrepreneurs?
  o Are you increasing connectivity and dynamism?

• Avoid the “Ecosystem Trap” (Stangler)
  o Clearly define your goals, “more entrepreneurs” might be too broad
  o Refine the language, ecosystems are messy, fatal places – are you ok with that?
Entrepreneurship Policy Digest
www.kauffman.org/policydigest

Research and Reports
www.kauffman.org/what-we-do/research

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