BOULEVARD OF BROKEN BEHAVIORS:
Socio-Psychological Mechanisms Of Entrepreneurship Policies

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Motivation

What do we know about institutions and entrepreneurship?

- Regulatory, cognitive and normative pillars. (Scott, 2014)
  - Absence of cognitive and normative sanctioning negative impact on entry and survival. (Hiatt et al., 2009; Tolbert et al., 2011)
  - Prior work examines influence on industries, rarely on organization-level regulatory outcomes (Dal Bó, 2006; Trumbull, 2012), seldom on individual behaviors.

- Influence type of entrepreneur. (Eberhart, Eesley & Eisenhardt, 2013; Hsu, Roberts & Eesley, 2007; Eesley, 2010)
  - Less work on regulatory institutions. (DiMaggio and Powell, 1983; Dobbin and Dowd, 1998; Scott, 2008a)
  - Very little work on influence on individual level social interaction.
Social Influence and Entrepreneurship

- Contextual influence on entrepreneurship
  - Workplace social influence. (Giannetti & Simonov, 2009; Gompers et al., 2005; Nanda & Sørensen, 2010; Stuart & Ding, 2006; Kacperczyk, 2012; Isakson, WP)
  - Yet, quasi-experimental design found that class sections w/former entrepreneurs were less likely to start businesses after graduation. (Malmendier and Lerner, 2013)

- Often measured at a regional or organizational level.
  - Yet, mechanisms are individual level, influencing access to opportunities

- Little work on behaviors.
- Almost no work on the role of the institutional environment.
Research Question

Can institutions alter entrepreneurial activity through socio-psychological mechanisms?

Can a planned intervention change entrepreneurs’ behaviors and beliefs by manipulating social influences?
Inspiration

Start-Up Chile

The Economist – October 2012
Beliefs and Behaviors

- **Entrepreneurial Self-Efficacy** (Chen, Greene & Crick, 1998; Forbes, 2005)
  - Higher audacity and persistence lead to higher performance.

- **Opportunity Discovery Behaviors** (Dyer, Gregersen & Christensen, 2008)
  - Path dependency between opportunity and performance.

- Relevant in early stage entrepreneurial processes (and for the policy).
What we test

1. Whether domestic entrepreneurs have more deficient individual-level characteristics.
   - Social differences (H1)

2. Whether the policy has an effect on the characteristics of domestic entrepreneurs.
   - Social influence (H2)

3. What kind of underlying mechanisms influence the treatment effect.
   - Social comparison (H3)
The Experiment

Analytic Strategy

- Regression Discontinuity Design. (Imbens & Lemieux, 2008)
  - Treated: Domestic entrepreneurs who were barely accepted into the program.
  - Control: Domestic entrepreneurs who were barely rejected from the program.
- Self-reported value assessment comparison.
- Interviews.

Treatment

- Participation in Start-Up Chile.

Data

- Pre- and post-treatment surveys. (Shadish, Cook & Campbell, 2002)
- Self-assessment survey of beliefs and behaviors.
- Relative change comparison using socially desirable responding as a baseline. (Paulhus, 2002; Hennig, Mullensiefen & Bargmann, 2010)
The Experiment
The Experiment

“I found Startup Chile to be interested in distracting entrepreneurs rather than allowing them get on with doing their own thing” [sic].
What we found \( (H1) \)

<table>
<thead>
<tr>
<th></th>
<th>ESE</th>
<th>ODB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Domestic</td>
<td>-0.462 *</td>
<td>-0.934 ***</td>
</tr>
<tr>
<td></td>
<td>(0.223)</td>
<td>(0.234)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.213</td>
<td>-0.400 ++</td>
</tr>
<tr>
<td></td>
<td>(0.268)</td>
<td>(0.275)</td>
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<tr>
<td>Education</td>
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<td></td>
<td>(0.087)</td>
<td>(0.097)</td>
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<tr>
<td>Age</td>
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<td>-0.009</td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.016)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.643 **</td>
<td>2.346 ***</td>
</tr>
<tr>
<td></td>
<td>(0.576)</td>
<td>(0.539)</td>
</tr>
</tbody>
</table>

Cohort Fixed Effects: Yes Yes

N: 140 117

adj. R-sq: 0.028 0.164

one-tailed tests: ++ p<.10  * p<.05 ** p<.001 *** p<.0001

\( H1: \) Domestic entrepreneurs who participate in Start-Up Chile have lower levels of ESE and ODB than foreign entrepreneurs.
What we found \((H^2)\)

**H2:** Domestic entrepreneurs who participate in Start-Up Chile will increase their entrepreneurial behaviors more than domestic entrepreneurs who do not participate in Start-Up Chile.
What we found \((H^2)\)

<table>
<thead>
<tr>
<th></th>
<th>ODBp ((1))</th>
<th>Qp ((2))</th>
<th>Op ((3))</th>
<th>Np ((4))</th>
<th>Ep ((5))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated</td>
<td>2.556 **</td>
<td>2.369 *</td>
<td>2.904 ***</td>
<td>3.339 **</td>
<td>1.612 ++</td>
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<tr>
<td>Assignment Variable</td>
<td>0.009 *</td>
<td>0.006 ++</td>
<td>0.011 ***</td>
<td>0.013 **</td>
<td>0.006 ++</td>
</tr>
<tr>
<td>Gender</td>
<td>-1.186 *</td>
<td>-0.974</td>
<td>-1.410 *</td>
<td>-0.580</td>
<td>-1.780 **</td>
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<tr>
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<td>0.572</td>
<td>0.265</td>
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<td>1.308 ++</td>
</tr>
<tr>
<td>N</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>adj. R-sq</td>
<td>0.178</td>
<td>0.110</td>
<td>0.344</td>
<td>0.161</td>
<td>0.172</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
one-tailed tests: ++ \(p<.1\)  * \(p<.05\)  ** \(p<.001\)  *** \(p<.0001\)

\(H^2\): Domestic entrepreneurs who participate in Start-Up Chile will increase their entrepreneurial behaviors more than domestic entrepreneurs who do not participate in Start-Up Chile.
What we found \((H^2)\)

Self-reported value assessment comparison.

<table>
<thead>
<tr>
<th></th>
<th>Total (157)</th>
<th>Foreign (45)</th>
<th>Domestic (42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning from peers</td>
<td>29%</td>
<td>16%</td>
<td>45%</td>
</tr>
<tr>
<td>Networking</td>
<td>45%</td>
<td>33%</td>
<td>38%</td>
</tr>
<tr>
<td>Capital</td>
<td>17%</td>
<td>24%</td>
<td>21%</td>
</tr>
</tbody>
</table>

\(H^2\): Domestic entrepreneurs who participate in Start-Up Chile will increase their entrepreneurial behaviors more than domestic entrepreneurs who do not participate in Start-Up Chile.
What we found (H3)

<table>
<thead>
<tr>
<th>ODB Change</th>
<th>ODB (1)</th>
<th>Q (2)</th>
<th>O (3)</th>
<th>E (4)</th>
<th>N (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESE</td>
<td>-0.422 ***</td>
<td>-0.499 ***</td>
<td>-0.447 ***</td>
<td>-0.308 ***</td>
<td>-0.435 ***</td>
</tr>
<tr>
<td></td>
<td>(0.077)</td>
<td>(0.081)</td>
<td>(0.080)</td>
<td>(0.083)</td>
<td>(0.095)</td>
</tr>
<tr>
<td>Founding Experience</td>
<td>0.141 *</td>
<td>0.147 **</td>
<td>0.056</td>
<td>0.166 *</td>
<td>0.193 *</td>
</tr>
<tr>
<td></td>
<td>(0.064)</td>
<td>(0.058)</td>
<td>(0.062)</td>
<td>(0.072)</td>
<td>(0.092)</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.534 *</td>
<td>-0.420 *</td>
<td>-0.625 *</td>
<td>-0.652 **</td>
<td>-0.440 *</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“Until now, I had excluded myself from attempting more audacious goals because I did not think I was as capable as US entrepreneurs.”

<table>
<thead>
<tr>
<th></th>
<th>ODB</th>
<th>Q</th>
<th>O</th>
<th>E</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.263</td>
<td>0.239</td>
<td>1.089</td>
<td>-0.600</td>
<td>0.325</td>
</tr>
<tr>
<td></td>
<td>(0.587)</td>
<td>(0.574)</td>
<td>(0.658)</td>
<td>(0.627)</td>
<td>(0.888)</td>
</tr>
<tr>
<td>N</td>
<td>136</td>
<td>136</td>
<td>136</td>
<td>136</td>
<td>136</td>
</tr>
<tr>
<td>adj. R-sq</td>
<td>0.224</td>
<td>0.256</td>
<td>0.212</td>
<td>0.170</td>
<td>0.145</td>
</tr>
</tbody>
</table>

Standard errors in parentheses
one-tailed tests: * p<.05 ** p<.001 *** p<.0001

H3: The lower an individual’s level of ESE, the greater the change in their ODB in a setting of high social interaction with peers who have higher levels of opportunity discovery behaviors.
Contributions

Theory
- Social learning and social comparison as a new mechanism for influencing entrepreneurial ecosystems.
- Social influences as altering behaviors before inducing action.

Empirical methods
- Use of RD for measuring behavioral and cognitive treatment effects.

Practice
- Better understanding of how and when socio-psychological mechanisms can be used to improve entrepreneurial ecosystems.
  - Recent policies that focus on mentoring (Startup America) and training (I-Corps).
- Less emphasis on whether to start. More on what to start.
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