A SCIENTIFIC APPROACH TO ENTREPRENEURIAL DECISION-MAKING

Evidence from two randomized control trials

IGL Conference

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Bocconi & CEPR

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Basic entrepreneurial decision

\[ - K + E(V \mid knowledge, signals) \]
What does a scientific approach do?

*Yields more precise predictions of $E(V)$*

How does it work?

*Develop and test theories like scientists*
**Example (bad odds)**

<table>
<thead>
<tr>
<th>Expect</th>
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<th>Truth (bad odds)</th>
<th>«Scientist»</th>
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<td>50%</td>
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— **Uninformed**: 30% of the times says **yes** when should say **no** *(false positive)*

— **Scientist**: 10% of the times says **yes** when should say **no**

— **Scientist** more likely to say **no** than uninformed: *exit or pivot more*
### Example (good odds)

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— **Scientist**: 10% of the times says **no** when should say **yes**

— **Scientist** more likely to say **yes** than uninformed: **exit or pivot less**
What do we expect?

— Entrepreneurial idea likely profitable (*good odds*):
  • Scientific approach $\rightarrow$ exit/pivot LESS

— Entrepreneurial idea likely unprofitable (*bad odds*):
  • Scientific approach $\rightarrow$ exit/pivot MORE

— What are we likely to observe?
  • 84.4% US start-ups fail within 7 years (Fairlie & Miranda, 2017 NBER WP 22428)
  • *Most likely bad odds*

— *Scientific approach $\rightarrow$ exit/pivot MORE*
Two RCTs

1st RCT
(2016)
- 116 start-ups
- 59 vs 57 Treatment vs Control

2nd RCT
(2017)
- 266 start-ups
- 133 vs 133 Treatment vs Control

- Start-ups recruited via call for application
- Both RCT: 8 training sessions (parallel classes) every other Saturday, clear separation T vs C
- Data collected at outset and over time for over 1 year (beyond training spell)
Training/Treatment: Heuristic vs Scientific

**CONTROL**

1° STEP (PREPARATION TO CUSTOMER INTERVIEWS)
- Business model configuration
- Customer segmentation
- Interviews

2° STEP (PREPARATION TO MINIMUM VIALBE PRODUCT EXPERIMENTATION)
- Definition of Value proposition
- Key Startup Metrics (AARRR)
- MVP

3° STEP (PREPARATION TO THE CONCIERGE EXPERIMENTATION)
- The importance of prototyping
- Real examples of concierge
- Concierge or prototype

Standard approach followed by entrepreneurs

**TREATMENT**

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AT EACH STEP

- **Hypothesis definition**: CLEAR & FALSIFIABLE
- **Validation**: IDENTIFICATION, POTENTIAL BIASES, e.g. ethnographic interviews, A/B tests
- **Data driven decision making**: clear thresholds are defined for falsification and experimental results drive decision making
First RCT
First RCT – Findings

116 firms, 16 data points over 14 months

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<tr>
<td>Exits</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Pivots</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td># start-ups that pivot ≥ 2</td>
<td>7</td>
<td>1</td>
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After pivot → more likely to see that customers send expressions of interest (ACQUISITION) or try the product (ACTIVATION)

Treated start-ups earn more revenue
First RCT

Given what you learnt in the course, if you launched a second startup, how confidently would you make drastic decisions such as abandoning your startup?

![Graph showing P-value from t-test=0.0008]
Second RCT (on going) – Findings

Significantly **more exits** in treatment group. Weaker effect on pivot

*Treatment group:* *more likely to respond that they made mistakes*
Conclusions

— A scientific approach enables start-ups to recognize false positives:
  • Fail faster (exits)
  • Pivot

— Our RCT corroborates these predictions

— Also: pivot (induced by scientific approach) → performance (acquisition, activation)

— Ongoing research:
  • Impact of theoretical frameworks
  • Monetary performance
  • Scale-up & replication of the RCT, refinement of the concept of «scientific approach» and its implications
THANK YOU