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A SCIENTIFIC APPROACH TO ENTREPRENEURIAL DECISION-MAKING

Evidence from two randomized control trials

IGL Conference

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Basic entrepreneurial decision

$$- K + E(V \mid \textit{knowledge, signals})$$



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What does a scientific approach do?

Yields more precise predictions of $E(V)$

How does it work?

Develop and test theories like scientists



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Example (bad odds)

<u>Expect</u>	<i>Uninformed decision-maker</i>	<i>Truth (bad odds)</i>	« <i>Scientist</i> »
<i>Negative → No Go</i>	50%	80%	70%
<i>Positive → Go</i>	50%	20%	30%

— **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)

<u>Expect</u>	<i>Uninformed decision-maker</i>	<i>Truth (good odds)</i>	« <i>Scientist</i> »
<i>Negative</i> → <i>No Go</i>	50%	20%	30%
<i>Positive</i> → <i>Go</i>	50%	80%	70%

— **Uninformed:** 30% of the times says no when should say yes (*false negative*)

— **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 → exit/pivot **LESS**
- Entrepreneurial idea likely unprofitable (*bad odds*):
 - Scientific approach → 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 → 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	TREATMENT
<p><i>1° STEP (PREPARATION TO CUSTOMER INTERVIEWS)</i></p> <ol style="list-style-type: none"> 1. Business model configuration 2. Customer segmentation 3. Interviews <p><i>2° STEP (PREPARATION TO MINIMUM VIABLE PRODUCT EXPERIMENTATION)</i></p> <ol style="list-style-type: none"> 1. Definition of Value proposition 2. Key Startup Metrics (AARRR) 3. MVP <p><i>3° STEP (PREPARATION TO THE CONCIERGE EXPERIMENTATION)</i></p> <ol style="list-style-type: none"> 1. The importance of prototyping 2. Real examples of concierge 3. Concierge or prototype 	<p><i>1° STEP (PREPARATION TO CUSTOMER INTERVIEWS)</i></p> <ol style="list-style-type: none"> 1. Business model configuration 2. Customer segmentation 3. Interviews <p><i>2° STEP (PREPARATION TO MINIMUM VIABLE PRODUCT EXPERIMENTATION)</i></p> <ol style="list-style-type: none"> 1. Definition of Value proposition 2. Key Startup Metrics (AARRR) 3. MVP <p><i>3° STEP (PREPARATION TO THE CONCIERGE EXPERIMENTATION)</i></p> <ol style="list-style-type: none"> 1. The importance of prototyping 2. Real examples of concierge 3. Concierge or prototype
<p>Standard approach followed by entrepreneurs</p>	<p>AT EACH STEP</p> <p>Hypothesis definition: CLEAR & FALSIFIABLE</p> <p>Validation: IDENTIFICATION, POTENTIAL BIASES, <i>e.g. ethnographic interviews, A/B tests</i></p> <p>Data driven decision making: clear thresholds are defined for falsification and experimental results drive decision making</p>

First RCT



First RCT – Findings

116 firms, 16 data points over 14 months

	TREATMENT	CONTROL
— Exits	24	20
— Pivots	26	12
— # start-ups that pivot ≥ 2	7	1

After pivot → more likely to see that customers send expressions of interest (ACQUISITION) or try the product (ACTIVATION)

Treated start-ups earn more revenue

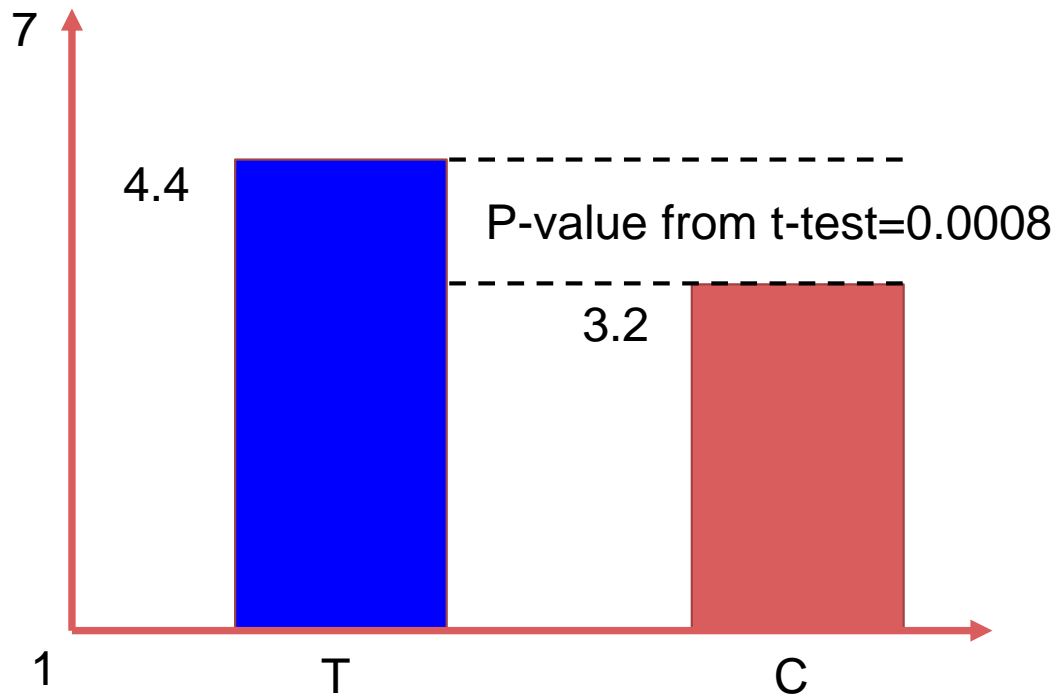


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First RCT

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?



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*



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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