

# The impact of entrepreneurship education on entrepreneurship skills and motivation

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# Introduction

- Entrepreneurship is believed to be essential for economic growth (Schumpeter 1911; Aghion & Howitt 1998)
- Entrepreneurship can possibly be raised through (entrepreneurship) education (EC 2006)
  - This assumes that entrepreneurship skills can be taught
- This study evaluates the Junior Achievement Young Enterprise students mini-company program (SMC)

# Structure of SMC

- Dominant entrepreneurship education program in secondary schools and colleges in US and Europe
- Effective in 40 countries; >2 mln participants (2005/6)
- Works with general population of students
- Small groups of students run a short-run business from setup to liquidation (1 schoolyear)
- Students sell stock, elect officers, produce and market products/services, keep records, conduct shareholders' meetings
- 5-10 hrs per week, managed by team of lecturers
- Lecturers are supported by staff of YE
- Mini-company is supported by 1-2 advisers from business world

# Objectives of SMC

- Understand what entrepreneurship is
- Students are assumed to gain self-confidence and motivation, become proactive, creative and learn how to work in a team
- Little is known about the programs impact on students' entrepreneurial competencies and intentions
- Until now success has been assessed through appreciation of parties involved

# Our study

- We evaluate the impact of the SMC program at a vocational college in the Netherlands
- Very comparable programs in (1) Business studies, (2) Management, (3) Personnel studies and (4) Retail management are offered in two different locations in the south of the country. Main difference is that SMC is offered in one location, but not (yet) in the other
- We compare difference in outcomes before and after the program between locations (difference-in-differences)
- This requires that assignment of students to locations is unrelated to presence of SMC program
  - we only use variation due to distance between parents' place of residence to two locations

# Variables

- We use a validated self-assessment test based on 114 items to measure entrepreneurial traits and skills
  - Traits: need for achievement, need for autonomy, need for power, social orientation, self efficacy, endurance, risk attitude
  - Skills: market awareness, creativity, flexibility
- We also measure entrepreneurial intentions (I expect to start up a new firm or to take over an existing firm within the next 15 years)
  - Intentions positively correlated with traits and skills
- Also ask background: gender, nationality, age, type of secondary school, parental education, parental entrepreneurial activity + distance

# Sample

- Baseline survey: September 2005
- Follow-up survey: July-September 2006
- Final sample: 104 treated students and 146 control students
  - net response rates: 47% and 43%
- (Almost) no pre-treatment differences between treated and controls
- (Almost) no differences between final sample and pre-attrition sample

# "Randomization"

- Relative distance has a substantial and very significant effect on choice of location.
  - This is unaffected by inclusion of control variables
- At the same time, distance has no effect on the baseline values of the outcome variables
- Hence, we can use distance as randomization device

# Treatment effects

	Treatment			Control			Effects	
	t=0	t=1	$\Delta$	t=0	t=1	$\Delta$	$\Delta\Delta$	$\Delta\Delta+IV$
Traits	6.03	6.04	0.02 (0.06)	6.06	6.20	0.14 (0.04)	-0.12 (0.07)	-0.08 (0.10)
Skills	5.91	5.80	-0.11 (0.07)	6.01	6.09	0.08 (0.06)	-0.19 (0.09)	-0.01 (0.12)
Intentions	3.52	3.14	-0.38 (0.13)	3.11	3.29	0.18 (0.11)	-0.55 (0.17)	-0.45 (0.23)

# Conclusion

- SMC program (in this school) does not have the intended effect
  - but no reasons to assume that this school is an exception
- Sharp contrast with earlier assessments based on appreciation of parties involved
- Explanation: more realistic perspective
- Drawbacks of program: compulsory participation, high time/effort relative to credit points, large groups (freeriding)
- More research: more evaluations needed, also of variation of the program (team size, mandatory, duration, credit points etc)