Psychological Interventions for Effective Entrepreneurial Mindsets

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Invited Address

Mount Kenya 18-5-2015

Outline

1) Action perspective in entrepreneurship
2) Training from an action perspective
3) Training for non-entrepreneurs (BA students) to develop an entrepreneurial mindset and higher start-up rates
4) Training for entrepreneurial success

The action-characteristics-model of entrepreneurship - modified

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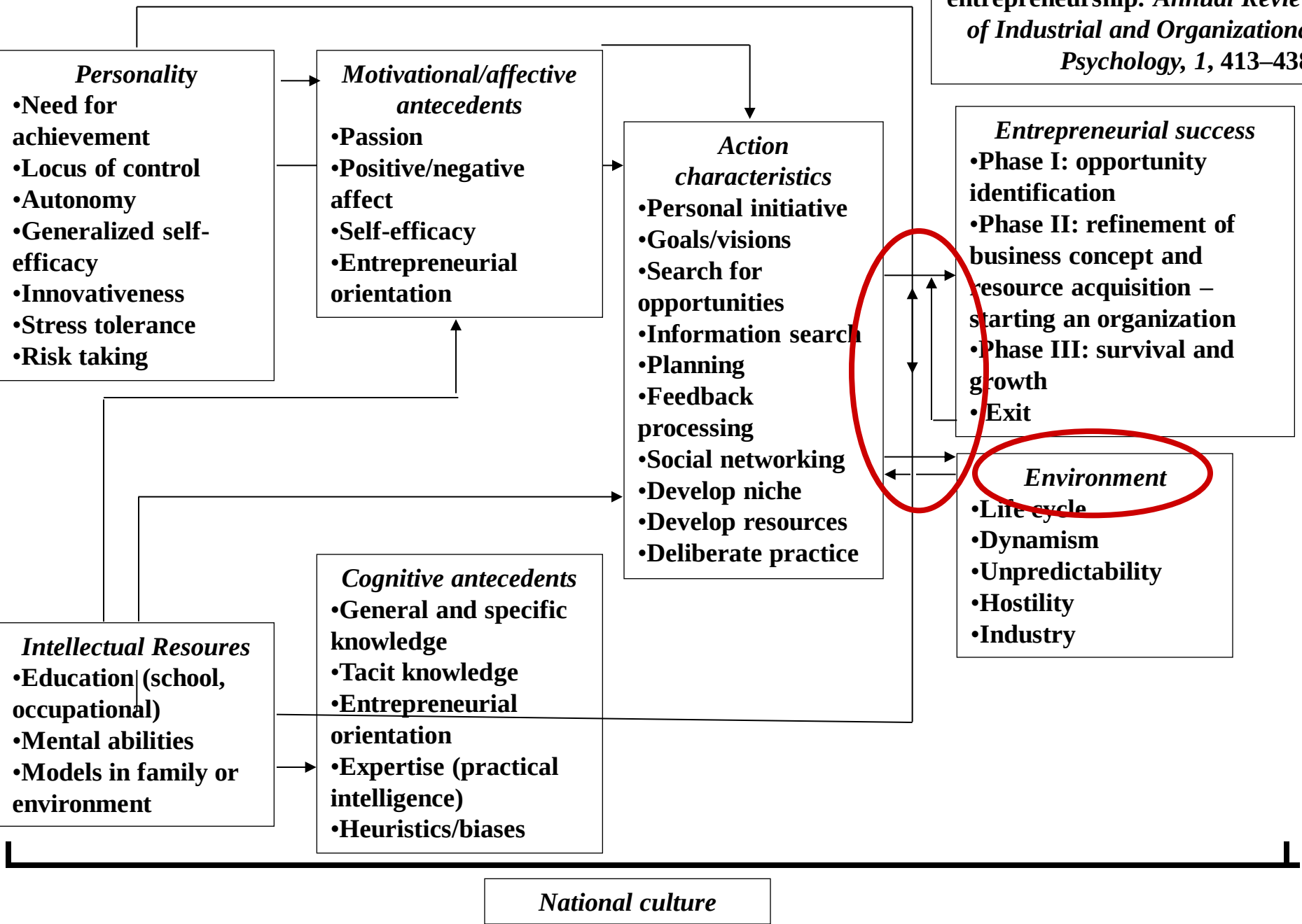

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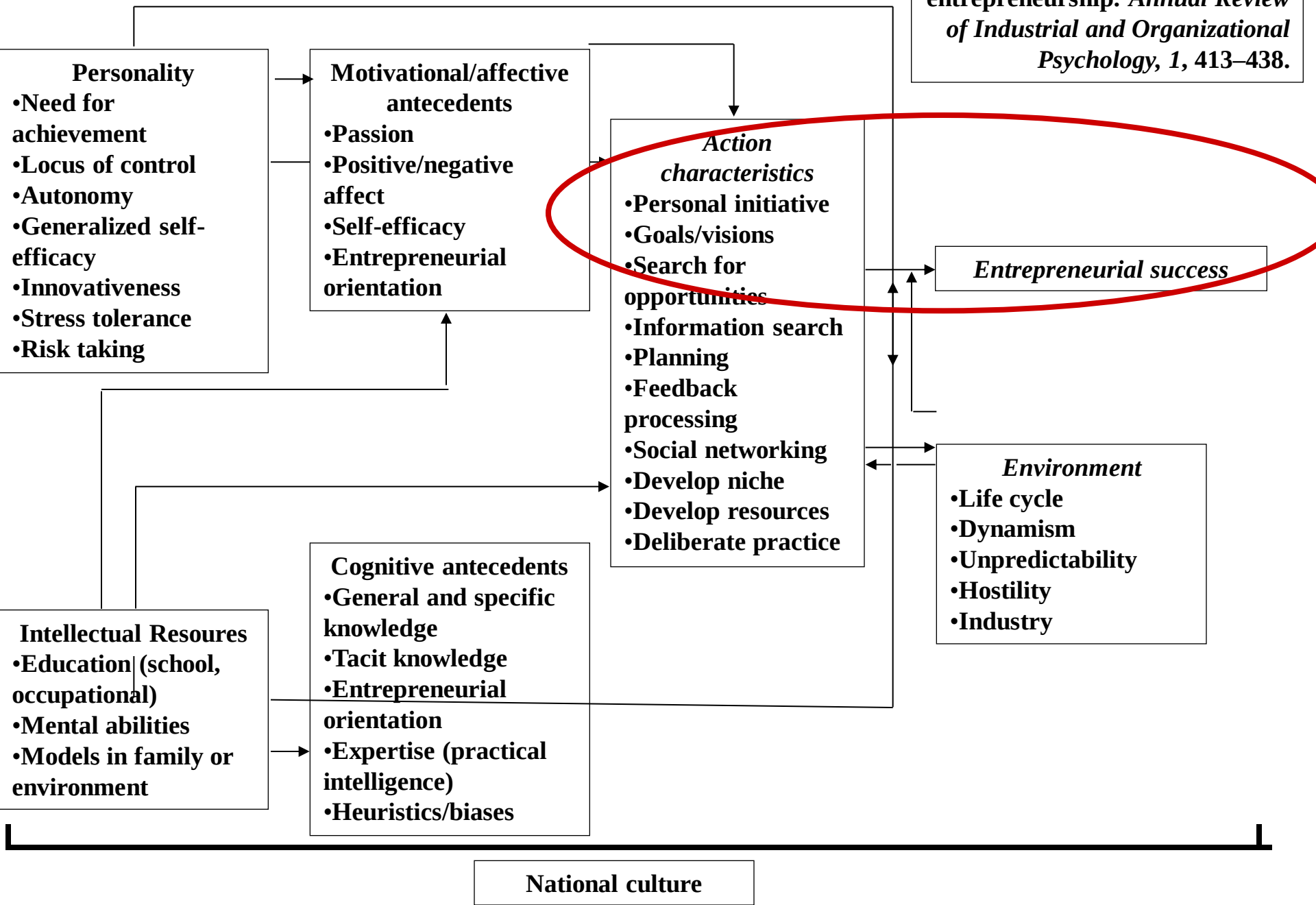


Actions in Entrepreneurship

Mindset:

Set the mind for action

At first sight trivial, when examined in some detail, quite interesting

Frese, M. (2009). Towards a psychology of entrepreneurship: An action theory perspective. *Foundations and Trends in Entrepreneurship, 5*, 435–494.

Active Mindset = Personal Initiative

- Self-starting
- Pro-active (future oriented)
- Overcoming barriers
- Changing the environment

The Opposite of Personal Initiative Is the **Reactive Approach:**

- Does what one is told
- Is oriented towards now, not future
- Stops when difficulties arise
- Reacts to environment

Meaning of Self-Starting

- Self-starting is different from the “normal” or obvious approaches (social comparison approach)
- Doing the obvious → self-starting is low
- If an entrepreneur takes up an innovation that is “in the air”, that they see others do or talk about, it is not self-starting

Meaning of Pro-Active

- Scanning for opportunities and problems that may appear in the future
- Preparing now for dealing with future problems and exploiting future opportunities

Meaning of Overcoming Barriers

- Protecting one's goals and adapting one's plans to overcome problems on the way towards the goal
- Actively dealing with problems instead of giving up
- Dealing with own anxieties and frustrations – self-regulation

Empirical Research: Personal Initiative has been shown to be related to better performance on several levels:

1) **Personal Initiative of Owner and Entrepreneurial Success**
2) **Personal intiative of the employees leads to higher employee performance**
3) **Personal intiative of the employees leads to higher firm success**

Relationship Between Personal Initiative and Entrepreneurial Success in Uganda (Correlation)

	r with Success
Initiative	.42**

Replicated several times

(Koop, S., De Reu, T., & Frese, M. (2000). Sociodemographic factors, entrepreneurial orientation, personal initiative, and environmental problems in Uganda. In M. Frese (Ed.), *Success and failure of microbusiness owners in Africa: A psychological approach* (pp. 55-76). Westport, Ct.: Quorum.
Replicated e.g., in Utsch, A., & Rauch, A. (2000). Innovativeness and initiative as mediators between achievement orientation and venture performance. *European Journal of Work and Organizational Psychology, 9*, 45-62.)

Relationship Between Employee Personal Initiative and Employee Performance (Meta-Analysis of 6-20 Studies; Corrected Correlation)

Correlation of Personal Initiative with Individual Performance

Corrected meta-analytic correlations: .20 ** to .26**

(Tornau, K., & Frese, M. (2013). Construct clean-up in proactivity research: A meta-analysis on the nomological net of work-related proactivity concepts and their incremental validities. *Applied Psychology: An International Review, 62*, 44–96. Performance measured by objective performance, e.g., sales or performance evaluation by supervisor)

Personal Initiative of Employees (as Organizational Culture/Climate) Causes Changes in Entrepreneurial Success (small to mid-sized firms in Germany)

Baer, M. & Frese, M. (2003) Innovation is not enough: Climates for initiative and psychological safety,process innovations, and firm performance; Journal of Organizational Behavior, 24, 45-68

Company Level: Climate for Initiative Items

- People in our company actively attack problems.
- Whenever something goes wrong, people in our company search for a solution immediately.
- Whenever there is a chance to get actively involved, people in our company take it.
- People in our company take initiative immediately – more often than in other companies.
- People in our company use opportunities quickly in order to attain goals.

Climate for Initiative and Return on Assets of Medium-Sized German Firms

Holding constant Process Innovativeness, Size, and Industry codes, prior Return on Assets → predicting future Return on Assets:

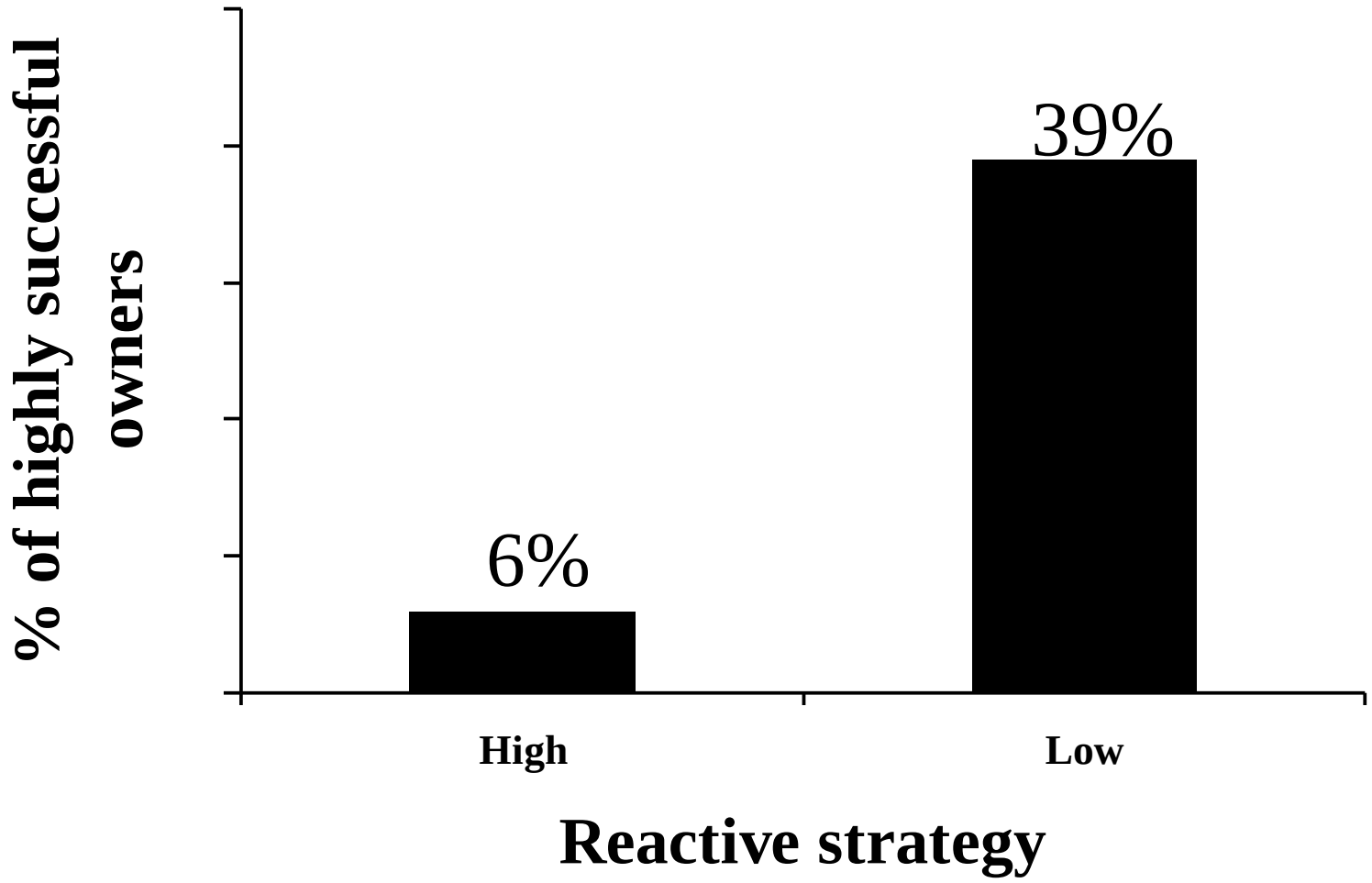
$\Delta \underline{R}$ $.30^{**}$

Baer, M. & Frese, M. (2003) Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance; Journal of Organizational Behavior, 24, 45-68

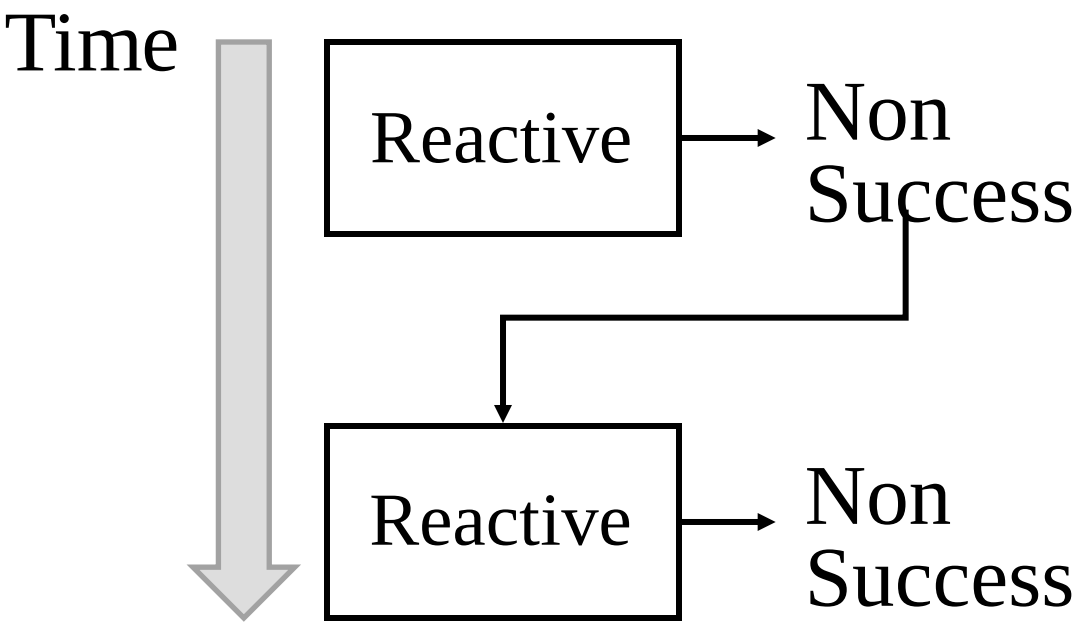
The Opposite of Personal Initiative: Reactive Action Strategy of Business Owner

- Little active preplanning
- Low level of personal initiative
- Low level of active search for opportunities
- Strong amount of mimicking others
- Often rather helpless: I do what others do as well

Reactive Strategy in South Africa



Reactive Approach and Entrepreneurial Failures: Vicious Cycle (Spiral) (Netherlands and Zimbabwe)



Van Gelderen, Frese, Thurik (2000) Strategies, uncertainty and Performance of small business startups. Small Business Economics, 15, 165-181. Zimbabwe data not yet published

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Facets of Action Training (Action Regulation Theory)

1) **Developing an action-oriented mental model - cognitive representation is based on ”rules of thumbs” (principles of actions)**
2) **Learning by doing: Active and exploratory approach to learning from action, BUT not blind and mindless action (science helps here to develop better mental models)**
3) **Cognitive apparatus is built for action; exercises have to be connected to principles of actions which can only be learnt, when connected to actions**
4) **Feedback: Both positive and negative feedback is provided by the trainer.**

Facets of Action Training – 2 –

5) Negative feedback is given in contrast to classical learning theory; negative feedback has a positive motivational and cognitive effect (understanding, how not to do certain things and being motivated that one still needs to improve skills)

6) Supporting transfer: Principles of actions can be adjusted to real life tasks. Connection to real life tasks is drawn continuously during the training (thinking about how principles can be used in everyday actions and by asking participants to say when they use the newly acquired skills; application contract

Facets of Action Training – 3 –

7) Necessity to routinize behavior: New skills developed during the training compete with old skills that have been routinized. Therefore, routinization of the new behavior needs to be encouraged both in the exercises and afterwards

Frese, M., Beimel, S., & Schoenborn, S. (2003). Action training for charismatic leadership: Two evaluation studies of a commercial training module on inspirational communication of a vision. *Personnel Psychology, 56*, 671-697

The Action Sequence

Frese, M., & Zapf, D. (1994). Action as the core of work psychology: A German approach. In H. C. Triandis, M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2 ed., Vol. 4, pp. 271-340). Palo Alto, CA: Consulting Psychologists Press

What does an active mindset mean for

- Setting goals
- Information search
- Planning
- Feedback development and processing

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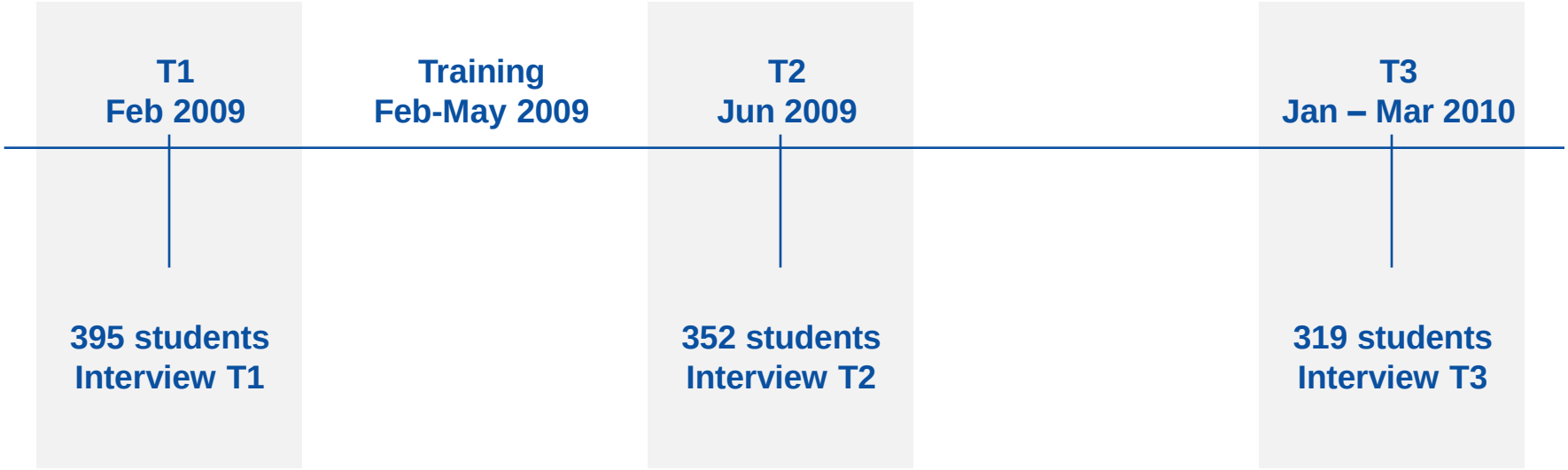
The STEP training concentrates on Action Knowledge (Principles of Action)
STEP= Student Training for Entrepreneurial Promotion

- Action Knowledge: Instructions for how-to-do things to be successful in entrepreneurship
- “Rules-of-thumb”, “heuristics”, or “know-how”
- Trainees are divided into groups to form start-up teams.
- In the start-up teams the trainees engage in the start-up process of a real venture.
- Teaching entrepreneurial skills requires an interdisciplinary approach from business science, entrepreneurship and psychology, including Personal Initiative

Entrepreneurial failure may happen but it can enhance future entrepreneurial success

- Ideas, projects, new products or whole businesses may fail – it's good if they fail in a safe environment
- The STEP training deals with how to overcome negative emotions after failure
- Failure can lead to learning under certain circumstances – most important to reduce the negative emotions
- "What can be learned from failures?" and "What can be made better next time?"

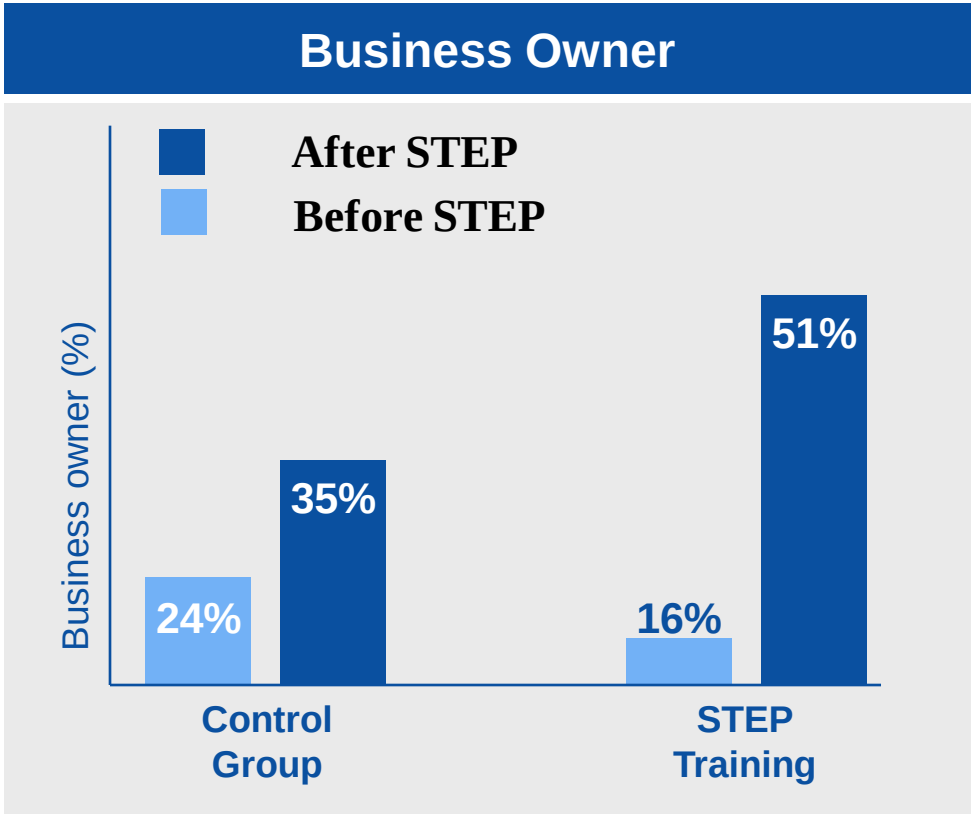
The study design to evaluate the STEP training



- Randomized control group design: 197 students in training group and 198 students in control group (no training)
- Gold standard for evaluation of intervention

The STEP training creates entrepreneurs

"Are you currently the owner of a business?"



- **Increase in business owners with STEP training group: 219%.**
- **Compared to Control group: 45%.**

Repeated measures ANOVA: Interaction training * wave significant at $p < .01$; $Eta^2 = .04$.

The STEP training has a positive impact on all three factors crucial for venture creation

- **The STEP trainees identify** 22% more opportunities **to create and pursue a business than non-trainees.**
- **The STEP training increases** entrepreneurial confidence **significantly; trainees move up into** top 30% **of most confident trainees.**
- **The STEP training causes a** 37% increase **in** entrepreneurial activities **to start-up a business.**

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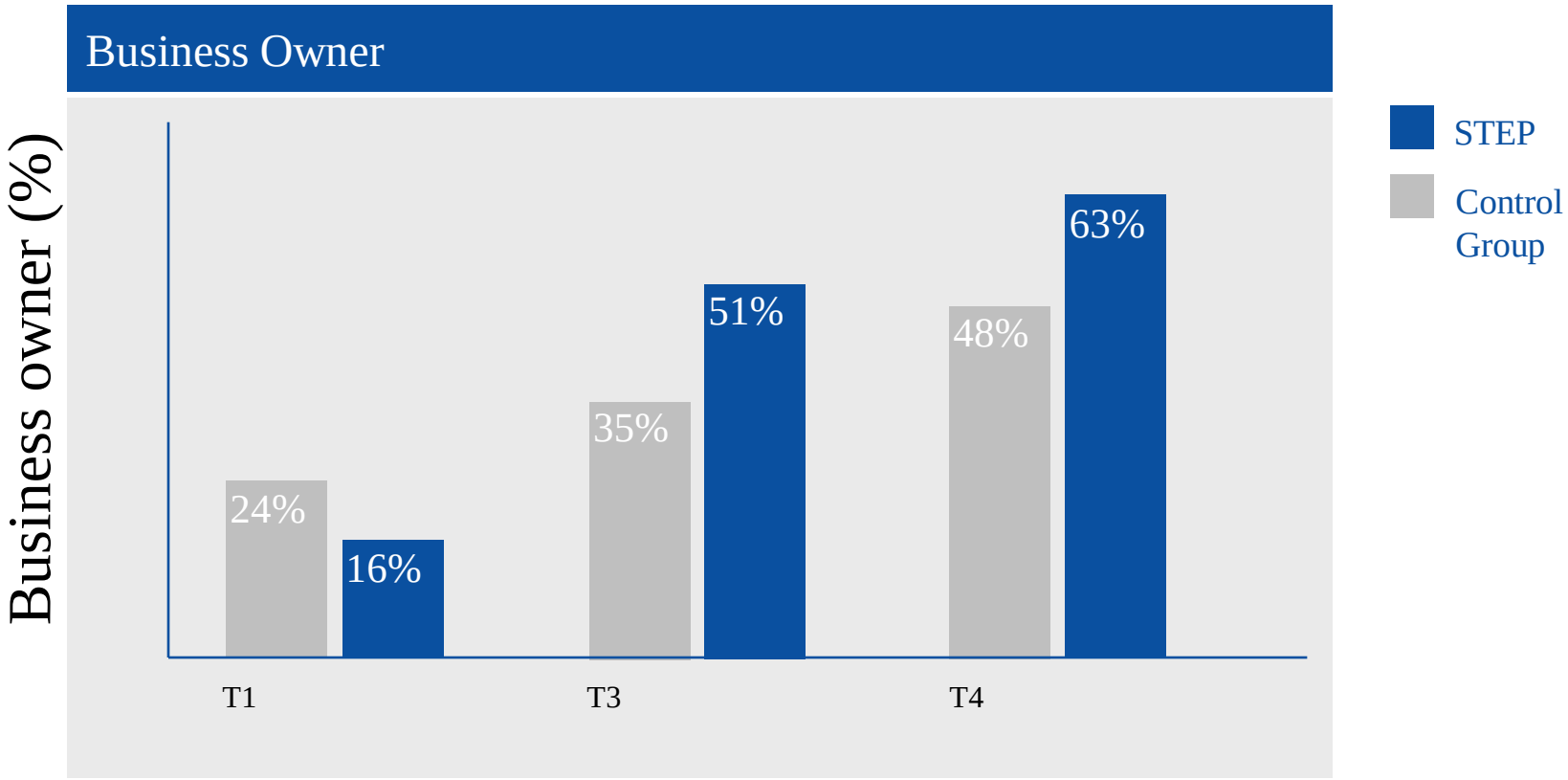
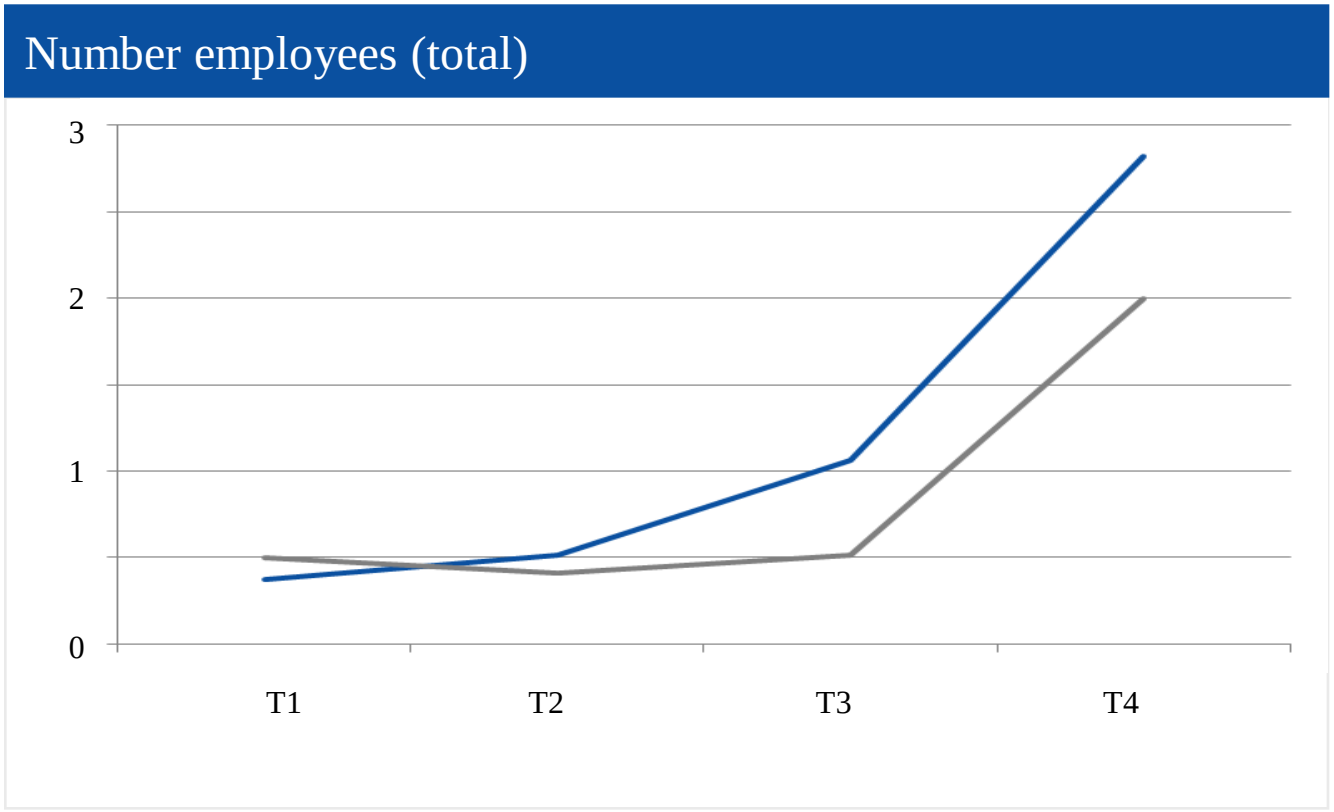


Repeated measures ANOVA: Interaction training * wave significant at $p < .01$, $Eta^2 = .04$ (T3) and $p < .01$, $Eta^2 = .04$ (T4).

The STEP training creates job creators

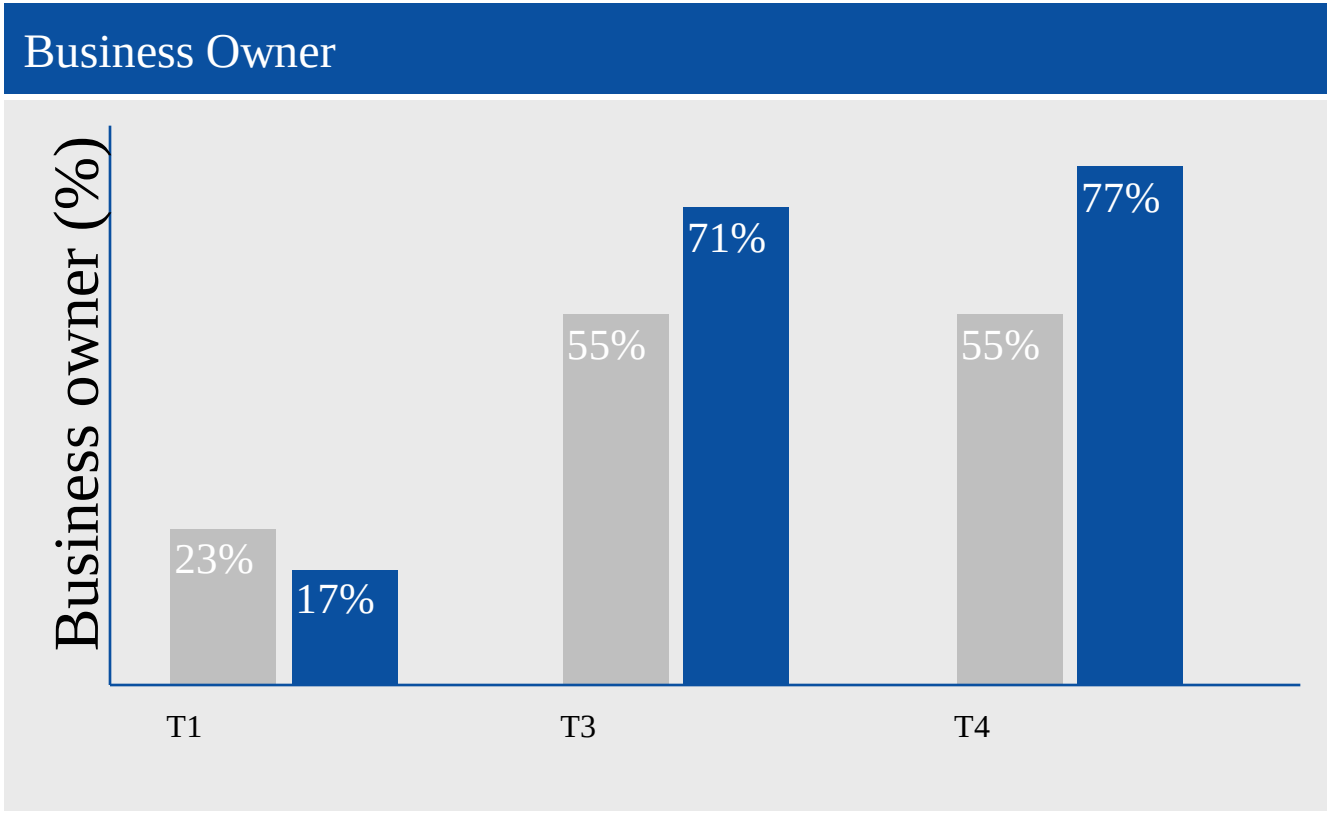
“How many full- / part-time employees do you have?”



Repeated measures ANOVA: Interaction training * wave significant at $p < .05$, $Eta^2 = .02$ (T3) and $p < .05$, $Eta^2 = .02$ (T4).

Results from Liberia: Effects are consistent and generalizable across countries

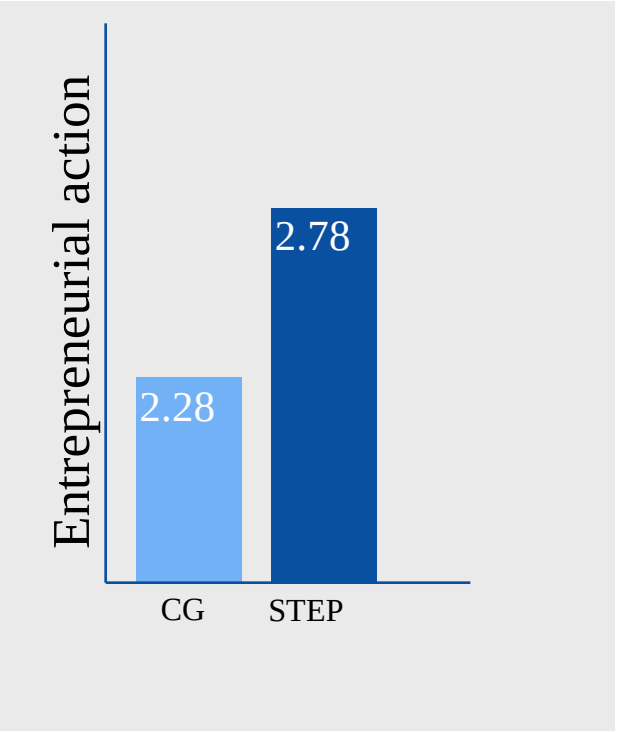
“Are you currently the owner of a business?”



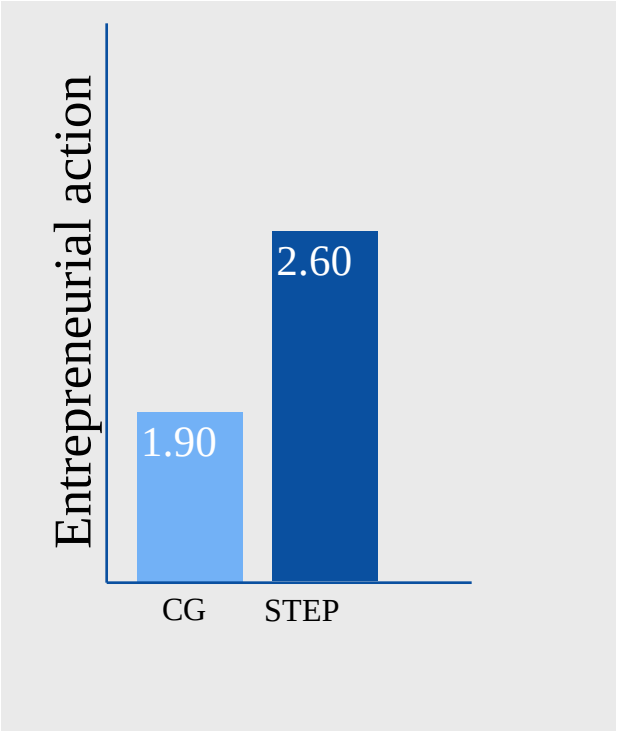
Repeated measures ANOVA: Interaction training * wave significant at $p < .05$, $Eta^2 = .03$ (T3) and $< .05$, $Eta^2 = .04$ (T4)

After 1 year, STEP trainees remain more entrepreneurially active; even as owners

Entrepreneurial Action at T4 (all participants)



Entrepreneurial Action at T4 (only business owners)



Control Group (CG)

STEP

T-tests at T4: $p < .10$ (all students); $p < .05$ (only business owners)

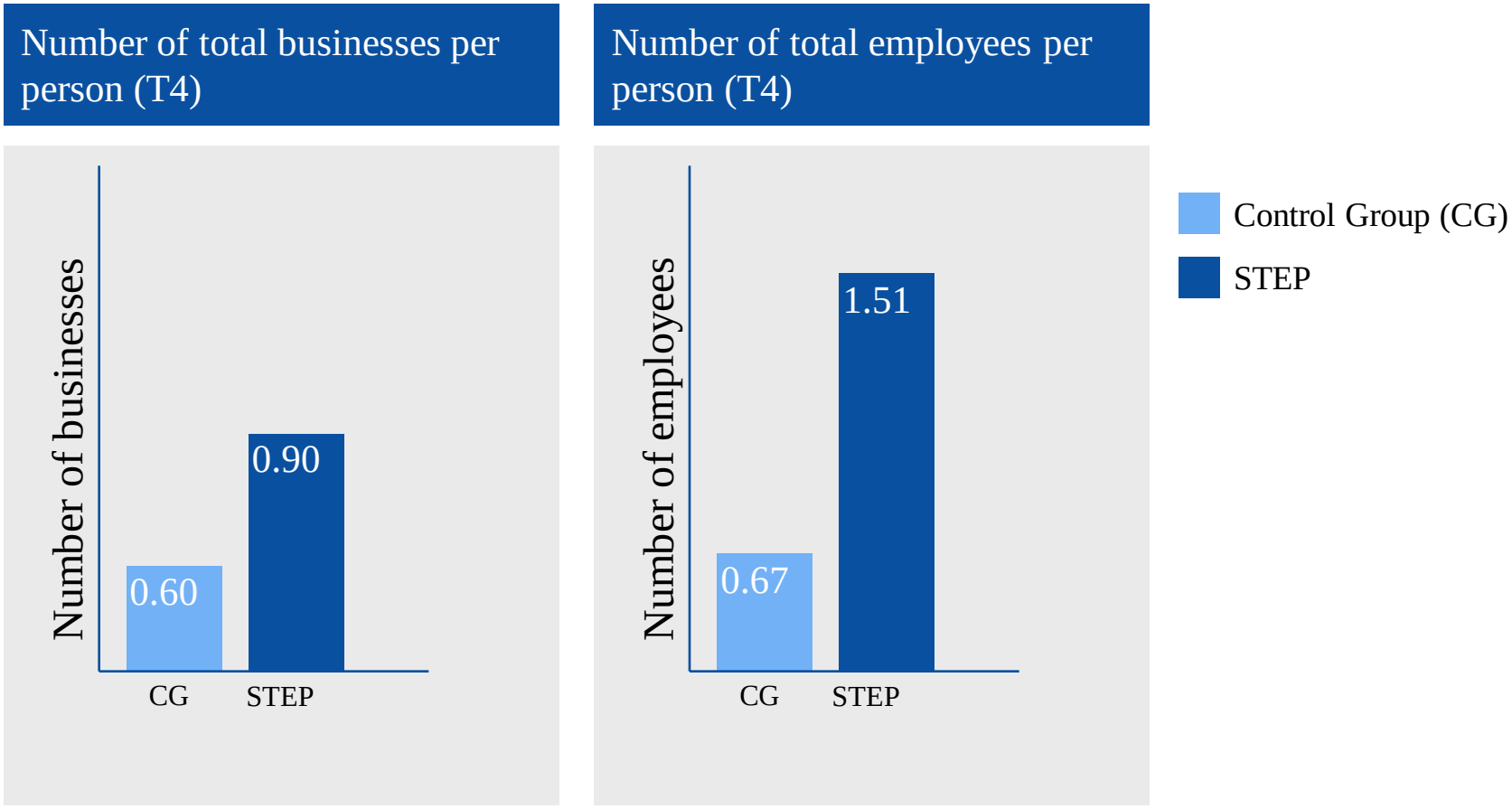
Continued entrepreneurial activity leads to portfolio entrepreneurship and more value

- STEP trainees run more businesses at the same time (portfolio entrepreneurship)
- STEP trainees generate more revenue and jobs across all their active businesses

	Control Group	STEP Training	
Number of firms per entrepreneur	1.05	1.19	sig.
Monthly revenue across businesses	242 USD	414 USD	Margin.sig.
# of employees per business owner	1.18	1.98	sig.

T-tests at T4: $p < .10$ (average monthly revenue); $p < .05$ (number of active businesses, number of employees)

After 1 year, STEP successfully boosts the total number of new ventures and new jobs



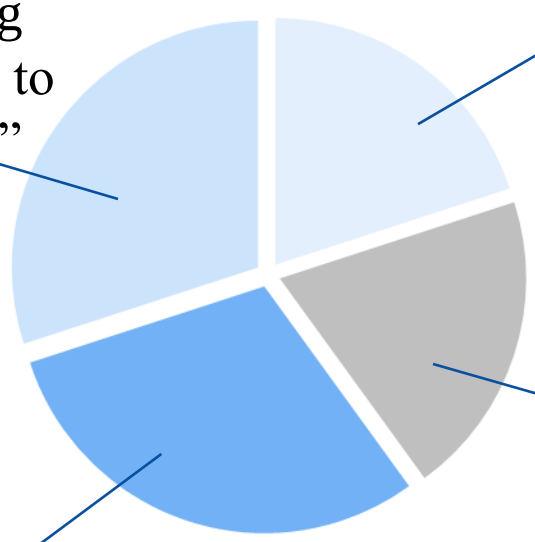
T-tests at T4: $p < .01$ (number of total businesses, number of total employees)

Key factors for start-up: confidence, identifying opportunities, action, planning

- What factors explain why some students start a business while others do not?

Entrepreneurial Planning
"What are you planning to do to start the business?"

Identifying Opportunities
"How many opportunities for creating a business have you identified / pursued in the last three months?"



Entrepreneurial Action
"So far, did you do anything to get the business up and running?"

Entrepreneurial Confidence
"How confident are you that you can [different entrepreneurial tasks] well?"

Number of Jobs Created as a Result of STEP Training (1 ½ years after training in Uganda)

- Per 100 STEP trainees 38 more jobs were created within 18 months than in 100 members of the control group

Countries for STEP Training

- **Uganda – about 4 different universities, one vocational trainings school**
- **Uganda high school (currently)**
- **Liberia**
- **Kenya**
- **Lesotho**
- **Tanzania**
- **Ruanda (currently)**
- **Philippines (currently)**

You tube success stories

- We also have some testimonials on the positive impact of STEP from students who have participated in the STEP trainings:
- https://www.youtube.com/watch?v=AiyF-R20ywQ
- https://www.youtube.com/watch?v=t9FFZF7X7RM

Potential Policy Implications

- Integrate the training into the schools and universities
- Integrate the training into other institutions
- Offer training whenever entrepreneurs are to receive micro-credits
- If there is government support for entrepreneurs (e.g., in Uganda for youth entrepreneurs), offer training as well
- Our training may be useful in combination with pure business trainings
- Check which investment has higher effects and utility: e.g., investments in developing entrepreurial networks
- Training reduces the effects of believing that one does not have enough financial resources for starting a company. Thus, it would be useful to combine our training when providing financial support

Policy Implications

- There is evidence that formal businesses only grow more than non-formal business, if the owners show a high degree of Personal initiative. Thus, it may pay off to offer training when entrepreneurs want to formalize their business (without making it mandatory because that would lead to more bureaucratic hurdles).
- In the context of unemployment, it may be useful to provide training to enhance the entrepreneurial mindset.

Literature

- Frese, M. (2009). Towards a psychology of entrepreneurship: An action theory perspective. *Foundations and Trends in Entrepreneurship*, *5*, 435–494
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