

Social Measurements and GEM

- from ideas to data collection instruments

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Part I

- Defining and Measuring Concepts
- 13:30 ~ 15:00

Defining Entrepreneurship by GEM

- GEM defines people who are entrepreneurially active as adults in the process of setting up a business they will (partially) own and/or currently owning and managing an operating young business.

Entrepreneurship is the key concept of GEM project.

From concepts to numbers: operationalization

- 1) Issues to deal with
- **Dimensions** — a concept may have many dimensions (or categories)
 - - many conditions for entrepreneurship
- 2) Many kinds of instruments (indices)
- Survey to individuals
- Survey to experts
- Existing data — existing information to form indices

Concept Types: observed vs. latent

Index Types: objective vs. subjective

- Observed index: # of start-ups
- Latent concepts: intent to start
- capability to start
- Respect for entrepreneurs
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- Subjective index: perception
- Concept: Receptiveness to innovation

Measuring Entrepreneurship by GEM

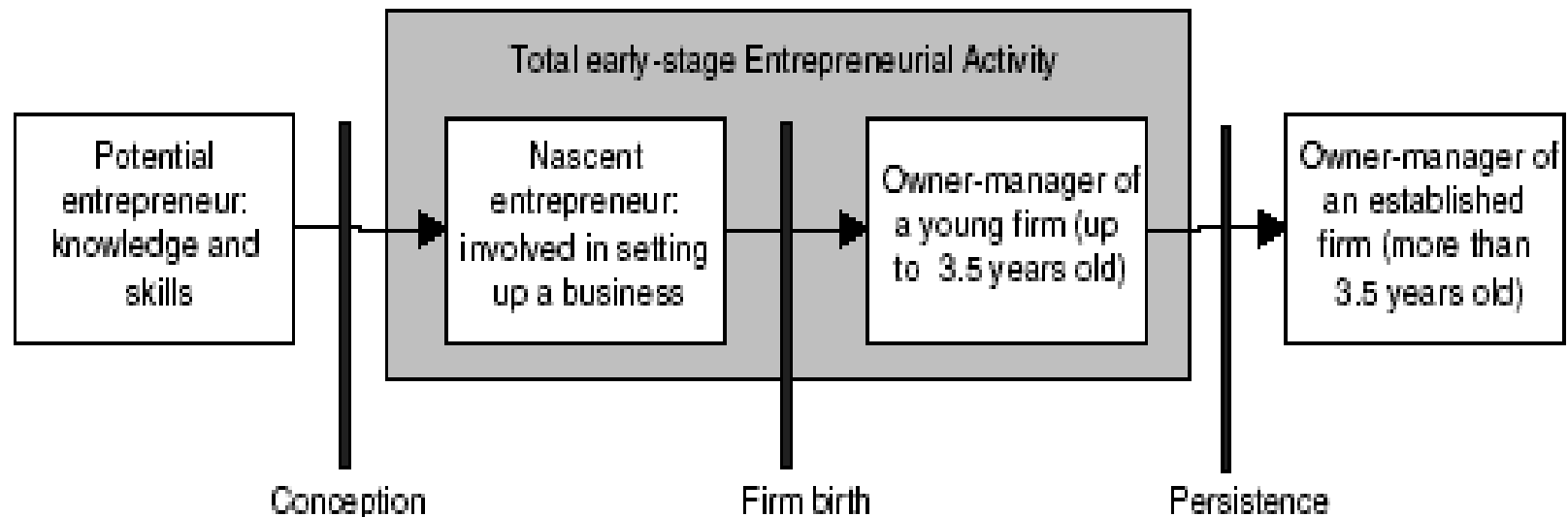


Figure 2. The entrepreneurial process and GEM operational definitions.

GEM Measuring Conditions for Entrepreneurial Development

- Entrepreneurial factor conditions
 - Finance: KI07A01-A06
 - Government policy: KI07B01-B07
 - Government programs: KI07C01-C06
 - Education: KI07D01-D05
 - Technology transfer: KI07E01-E05
 - Business services: KI07F01-F05
 - Market openness: KI07G01-G06
 - Physical infrastructure: KI07H01-H05
 - Social and cultural norms: KI07I01-I06
 - Entrepreneurial capacity and opportunity (K01-L05)
 - Respect for entrepreneurs: KI07M01-05
 - IPR protection: KI07N01-N05
 - Women entrepreneurship: KI07P01-05
 - Support for high-growth firms: KI07Q01-05
 - Receptiveness to innovation: KI07R01-05

Levels of Measurement

- Nominal – Gender (male, female)
 - Ordinal – Degree (Bachelor, Master, Doctor)
 - Interval – Fahrenheit temperature
 - Ratio – income
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- Measurement levels of variables determine how data is analyzed.

Levels of Measurements for GEM Data

- Expert Interviews – ordinal
- Entrepreneurial Activities – ratio
- Total early-stage Entrepreneurial Activity

Measurement Quality

- Reliability
- good reliability means, if applied repeatedly to the same subject, the measure will yield the same result each time.
- Validity
- good validity means the measure adequately reflects the concept being measured.

Measurement Quality of GEM Measurements

- Good Validity
- Good Reliability

SPSS can conduct reliability analysis and produce Alpha index.

Part II

- The GEM instruments
 - - creating indices and producing numbers
- 15:20 ~ 17:00

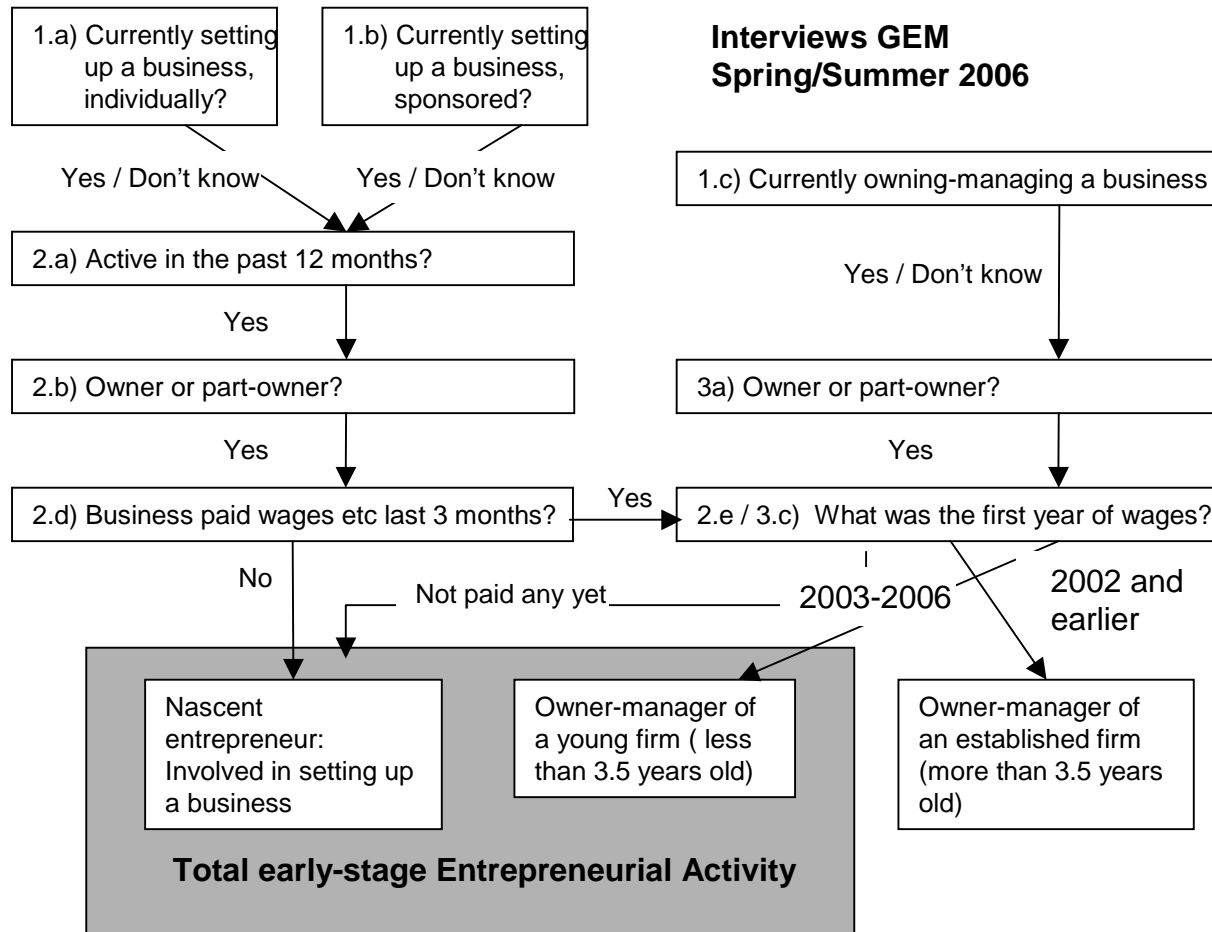
GEM APS Instrument 1

- GEM Adult Population Survey: Items related to individual involvement in entrepreneurial activity
- (1a) You are, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others
- (1b) You are, alone or with others, currently trying to start a new business or a new venture for your employer – an effort that is part of your normal work
- (1c) You are, alone or with others, currently the owner of a company you help manage, self-employed, or selling any goods or services to others
- (1d) You have, in the past three years, personally provided funds for a new business started by someone else, excluding any purchases of stocks or mutual funds
- (1e) You are, alone or with others, expecting to start a new business, including any type of self-employment, within the next three years
- (1f) You have, in the past 12 months, shut down, discontinued or quit a business you owned and managed, any form of self-employed, or selling goods or services to anyone. Do not count a business that was sold
- Source: GEM 2003.

GEM APS Instrument 2

- GEM Adult Population Survey: Items related to individuals identified as involved in the entrepreneurial process
- Nascent entrepreneurs (those who responded 'yes' to q 1a or q 1b)
 - (2a) Over the past twelve months have you done anything to help start a new business, such as looking for equipment or a location, organizing a start-up team, working on a business plan, beginning to save money, or any other activity that would help launch a business?
 - (2b) Will you personally own all, part, or none of this business?
 - (2c) How many people, including yourself, will both own and manage this new business?
 - (2d) Has the new business paid any salaries, wages, or payments in kind, including your own, for more than three months?
 - (2e) What was the first year the owners received wages, profits, or payments in kind?
- Owner-managers of existing firms (those who responded 'yes' to q 1c)
 - (3a) Do you personally own all, part, or none of this business?
 - (3b) How many people both own and manage this business?
 - (3c) What was the first year the owners received wages, profits, or payments in kind?
- Source: GEM 2003.

Screening TEA and TEA rates in GEM 2006



4 TEAs

TEA INDEX: Percentage of adults aged 18–64 setting up a business or owning–managing a young firm

TEA OPPORTUNITY: Percentage of adults aged 18–64, involved in TEA to pursuing perceived opportunities

TEA NECESSITY: Percentage of adults aged 18–64, involved in TEA reflecting necessity (lack of alternatives)

TEA INNOVATION POTENTIAL: Percentage of adults aged 18–64, involved in TEA and exhibiting market innovation potential

GEM APS Instrument 3

- GEM Adult Population Survey: Items related to individual attitudes and perceptions regarding entrepreneurial activity
- Group A
 - (1g) Do you know someone personally who started a business in the past 2 years?
 - (1h) In the next six months, will there be good opportunities for starting a business in the area where you live?
 - (1i) Do you have the knowledge, skill and experience required to start a business?
 - (1j) Would fear of failure prevent you from starting a business?
- Group B
 - (1k) In your country, most people would prefer that everyone had a similar standard of living
 - (1l) In your country, most people consider starting a new business a desirable career choice
 - (1m) In your country, those successful at starting a new business have a high level of status and respect
 - (1n) In your country, you will often see stories in the public media about successful new businesses
- Source: GEM 2003.

Some practical issues in defining and measuring concepts

- Latvia experience