



IMPROVING COGNITIVE SKILLS FOR ENTREPRENEURIAL PRODUCTIVITY AND GROWTH IN INDONESIA

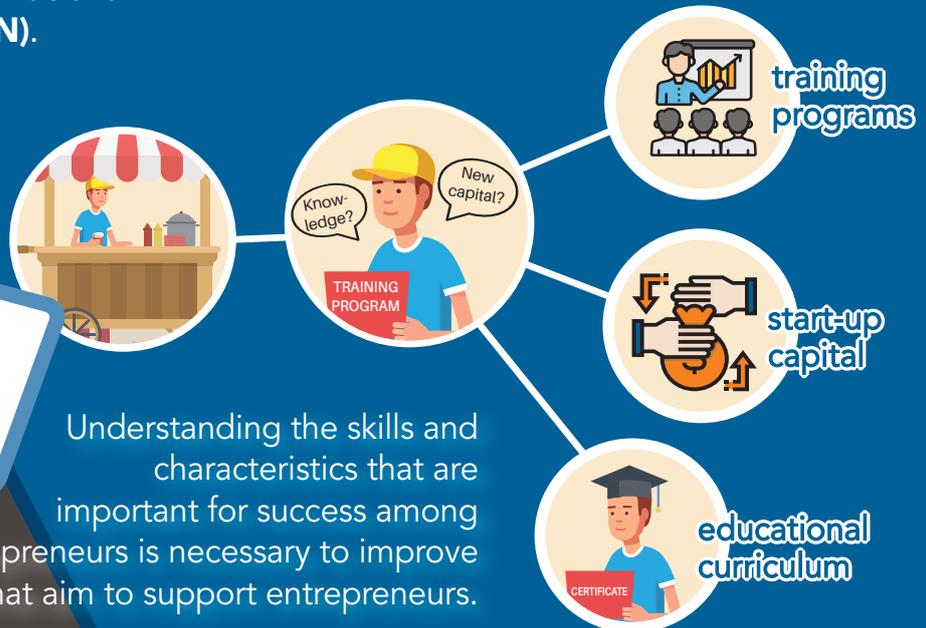
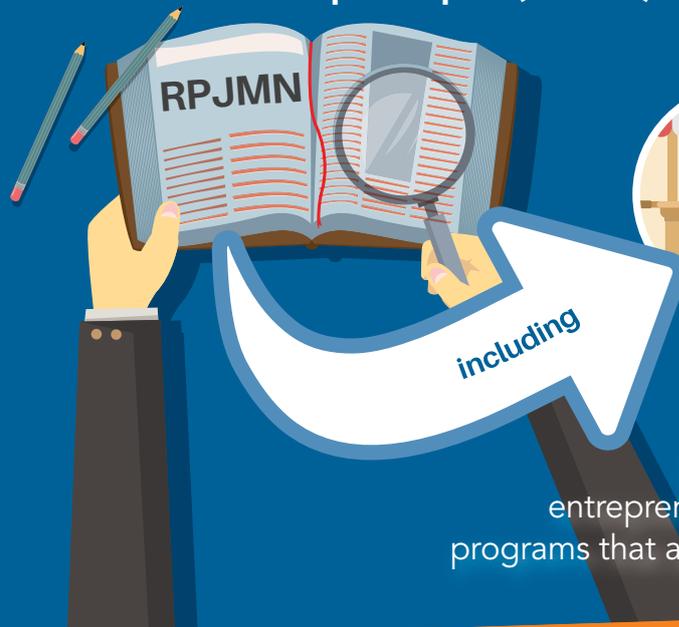
by Niken Kusumawardhani, Daniel Suryadarma, Luca Tiberti, and Veto Tyas Indrio

BACKGROUND

Indonesia's **60 million** small and medium enterprises (SMEs) contribute



Improving SMEs' competitiveness and productivity is a key element in the government's **national midterm development plan (RPJMN)**.



Understanding the skills and characteristics that are important for success among entrepreneurs is necessary to improve programs that aim to support entrepreneurs.

RESEARCH OBJECTIVE: Investigate the returns of two types of cognitive skills (fluid intelligence and crystallized intelligence) of Indonesian nonfarm household entrepreneurs on the performance of their businesses.

THE ANALYSIS

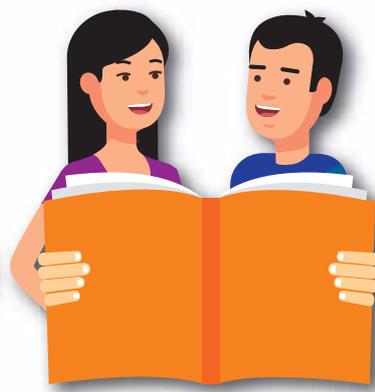
FLUID INTELLIGENCE

- Capacity to think logically and solve problems in novel situations
- Highly influenced by genetics and biological factors
- Measured by Raven's Progressive Matrices test (shape-matching test) from the IFLS*



CRYSTALLIZED INTELLIGENCE

- Ability to use skills, knowledge, and experience
- Acquired through education, experience, and interaction with an environment
- Measured by mathematics test score in IFLS*



*Indonesia Family Life Survey 2007 and 2014

KEY FINDINGS

- A one standard deviation increase in fluid intelligence leads to
 - ↑ **5.7%** increase in profit and
 - ↑ **7%** increase in business value.
- We do not find evidence that crystallized intelligence, once fluid intelligence and education attainment are controlled, has any effect on business performance.
- Increase in crystallized intelligence leads to higher profits only when an entrepreneur is engaged in the sector that is most appropriate given her or his skills.
- We find no evidence of entrepreneurs sorting into sectors based on intelligence or education, presumably due to labor market constraints.

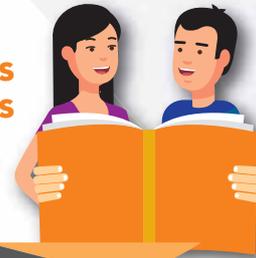
CONCLUSIONS

FLUID INTELLIGENCE



more useful

CRYSTALLIZED INTELLIGENCE



less advantageous

"Why does fluid intelligence matter more?"



POLICY MESSAGES

Indonesia needs to invest in improving long-term health outcomes.

in-utero care



environmental conditions



POLICY



policies to reduce existing constraints facing entrepreneurs



skills = sectors

improved skills-sector matching would help increase returns to skills