# Learning a Bayesian structure to model entrepreneurial intentions and attitudes towards business creation among Emirati students

Linda Smail

The Department of Mathematics and Statistics
Zayed University, Dubai
United Arab Emirates

The 9th Annual Bayesia Lab Conference

#### Introduction

- Most emerging economies are facing rapidly evolving pressures from today's global economy.
- Entrepreneurial activity is generally assumed to be a vital driver in strong economic growth through the prevalence of innovative environment.
- Promoting an entrepreneurial culture and supporting small and medium sized enterprise (SME) development is at the heart of any government strategy with the aim to become a competitive knowledge-based economy.

### Entrepreneurship

- According to the Global Entrepreneurship Monitor Report 2020, firms are increasingly valuing entrepreneurship skills among employees.
- In Australia, UK, and the UAE, more than 8% of employed adults are involved in entrepreneurial activities.
- About 39% of adults want to start a business in the next 3 years in the UAE.
- While 71% of adults consider it easy to start a business in the UAE, only 13.7% have entrepreneurial intentions and 35.1% declared facing the fear of failure if they had the opportunity to start a business.
- it is vital for a country's advancement to stimulate a culture of entrepreneurship at early ages through the educational systems.

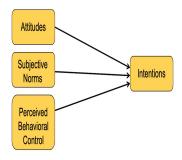
### **Entrepreneurial Intentions and attitudes**

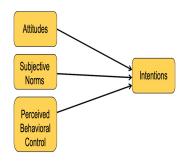
- Entrepreneurial intentions are key measures of potential entrepreneurs in a society indicating that if there are a lot of people intending to start a business in an economy.
- Entrepreneurial attitudes towards entrepreneurship refers to the extend to which people think there are good opportunities for starting a business.
- Intentions started from a cognitive process which serves to flow beliefs and perceptions into the intent to act, then it followed by the action itself.
- Understanding the antecedents of intentions increases our understanding of the intended behaviour

Shapero-Sokol model (1982).
 perceived desirability, perceived feasibility and the propensity to act

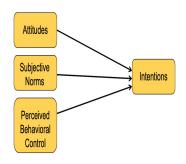
- Shapero-Sokol model (1982). perceived desirability, perceived feasibility and the propensity to act
- ② Theory of Planned Behaviour (TPB) developed by Icek Ajzen (1988). Attitudes, perceived behavioural control, and subjective norms.

Shapero's perceived desirability and perceived feasibility correspond to Ajzen's attitudes and perceived behavioural control, respectively

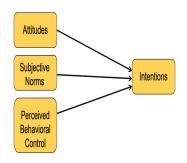




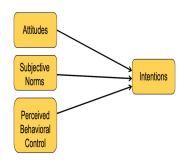
Perceived family support



- Perceived family support
- Role models



- Perceived family support
- Role models
- Obstacles



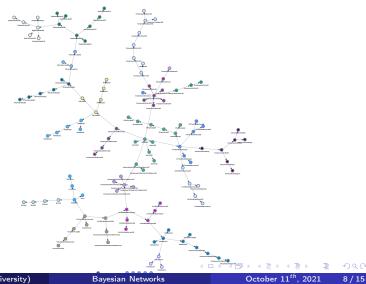
- Perceived family support
- Role models
- Obstacles
- University & Country opportunity feasibility

 A cross-sectional survey was conducted among a random sample of 324 university students aged between 17 and 35 years. 87% were females. The average age of participants was 23 years (SD=3).
 52.2% of the participants were from the Emirate of Dubai and 28.4% from Abu Dhabi.

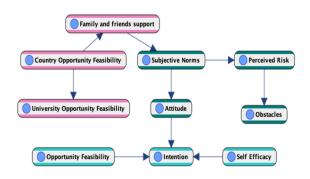
- A cross-sectional survey was conducted among a random sample of 324 university students aged between 17 and 35 years. 87% were females. The average age of participants was 23 years (SD=3). 52.2% of the participants were from the Emirate of Dubai and 28.4% from Abu Dhabi.
- General and socio-economic information, background information on Entrepreneurship such as how they learned about entrepreneurship, and previous activities on starting a business

- A cross-sectional survey was conducted among a random sample of 324 university students aged between 17 and 35 years. 87% were females. The average age of participants was 23 years (SD=3). 52.2% of the participants were from the Emirate of Dubai and 28.4% from Abu Dhabi.
- General and socio-economic information, background information on Entrepreneurship such as how they learned about entrepreneurship, and previous activities on starting a business
- Students perceptions of entrepreneurship and entrepreneurs, entrepreneurship effect on the individual and on the society, student's attitudes, entrepreneurial opportunities, entrepreneurial environment within the university, the UAE entrepreneurial environment, limitations of starting a new business, and entrepreneurial characteristics and behavior, interest in one's own enterprise, and entrepreneurial motives.

# Methodology



#### Results

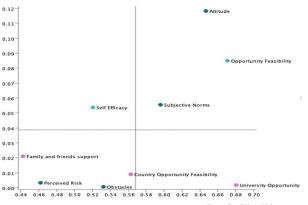


#### Results

- There is a 60.9% chance of a high intention given that attitude is very high, self-efficacy is within the average, and opportunity feasibility is high.
- When Self-Efficacy was set to 100%, intention target (above 3.57) increased from 23.6% to 39.9%.
- When attitude was set to the highest level, intentions increased from 23.6% to 43.4%
- When subjective-norms variable was set to the highest level, attitude increased sharply from 41.4% to 91.3% while intention increased from 23.6% to 40.5%.
- The MPE for intention to be above 3.57: attitude above 4. self-efficacy between 2.64 and 3.36, opportunity feasibility above 3.5, obstacles above 3.6, subjective-norms above 4.14, perceived risk above 3.25, country opportunity feasibility above 4.2, and strong family and friends support.

#### Results

#### Mutual Information with Intention



Normalized Mean Value

# **Discussion and Policy Implications**

- Our results are in agreement with the TPB which claims that entrepreneurial intention is the product of attitudes towards entrepreneurship, and subjective norms.
- The subjective-norms variable has a direct effect on attitudes and indirect effect on intentions through attitude as mediator which support the findings of Shapero and Sokol model.
- The family and friends' support variable plays an important role in entrepreneurial intentions.

# Discussion and Policy Implications

- Empowering youth with practical skills for preparing a business plan, running and financing a business, and being alert to business opportunities and new ideas are of great importance to advance entrepreneurial intentions.
- Increase the collaboration between universities and industry to increase students' exposure to business ideas and opportunities.
- Policy makers should recognize and encourage entrepreneurs for their contribution to the national economy and also to job creation.
- Involving families and friends in programs designed at universities and other entrepreneurial youth hubs.
- University opportunity feasibility is a direct answer to country opportunity feasibility.

#### Conclusion

- Bayesian networks are useful and needed for the development of new hypothesis related to factors that affect entrepreneurial intentions and attitudes, which can be tested in a predictive context.
- The BN outcomes can be used by professionals as a tool in proposing new policies such as the need for country support and other means of improving attitudes, individual self-efficacy, and more opportunity feasibility.
- The BN can be used to simulate the results of implementing such policies without the need of collecting new data.
- Some limitations: excluding other influential variables such as skills, motivations, entrepreneurship education, and other relevant environmental and economic factors.

#### Bayesian Networks: A new Era

