Country-based comparison analysis using fsQCA investigating entrepreneurial attitudes and activity☆

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ABSTRACT

This study undertakes a cross-country comparison of the relationship between entrepreneurship attitudes and high and low entrepreneurial activity. The analysis employs fuzzy-set Qualitative Comparative Analysis. The data set comes from the Global Entrepreneurship Monitor 2011 survey, four country-level entrepreneurial attitudes and perceptions variables considered against Total Early-Stage Entrepreneurial Activity from a sample of 54 countries. This study provides comprehensive understanding of variations between individual countries at different levels of economic development and groups of countries in their level of opportunity and necessity-related entrepreneurial activity.

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1. Introduction

Globally, small and medium enterprises (SMEs) support innovation-focused economies, thus creating innovation, employment, and economic growth (Ács, Brooksbank, O'Gorman, & Terjesen, 2012). Policymakers in developed economies therefore focus on firms seeking to grow (Ács et al., 2012).

Individuals undertake entrepreneurship for two reasons: To exploit potential opportunity or out of necessity (Ács, Arenius, Hay, & Minniti, 2005; Tominc & Rebernik, 2007). Ács, Bosma, and Sternberg (2008) and Wennekers, Van Stel, Thurik, and Reynolds (2005) also identify entrepreneurship having a U-shaped relationship with economic development.

In developing factor-driven economies (particularly necessity-based economies), entrepreneurship activity tends to be high but falls as economies enter the efficiency (manufacturing-dominated) phase; however, entrepreneurship activity rises again during the services, innovation-driven phase. Ács, Desai, and Hessels (2008) suggest that the U-shaped framework may be unsuitable for policymaking. Van Stel, Carree, and Thurik (2005) argue that entrepreneurship plays differing roles in countries at different economic development stages, thus different combinations of factors may affect entrepreneurship.

The Global Entrepreneurship Monitor (GEM) survey is useful to research entrepreneurial activity and entrepreneurial attitudes and perceptions (EAaPs) in various country settings (Ács et al., 2012; Ul Haq, Usman, Hussain, & Anjam, 2014). GEM uses the total early-stage entrepreneurial activity (TEA) measure, which the GEM defines as people actively involved in nascent entrepreneurship (i.e., business start-up), plus the business stage directly after start-up (i.e., between 3 and 42 months old) in owning/managing a new firm (Bosma, Wennekers, & Amorós, 2012), as a percentage of the adult (i.e., 18–64 years old) population (Wennekers et al., 2005).

UK's Department for Business Innovation and Skills (2013) relates TEA's importance to the enterprise culture and small businesses necessary for strong business growth. This focus suggests a need for research using TEA to group countries by economic-development stage while simultaneously comparing drivers of entrepreneurship for policy-making.

Conjunctional causation, that is, that combinations of various causal conditions rather than one condition alone cause the outcome (Woodside, 2013), is also relevant for this study. This analysis draws on fuzzy-set Qualitative Comparative Analysis (fsQCA), a set-theoretic technique for causal-oriented investigation (Ragin, 2000, 2008). As a development on the original QCA (Ragin, 1987), fsQCA is increasingly popular across social sciences and business research, including country (Cheng, Chang, & Li, 2013), cross-

cultural (Greckhamer, 2011), and corporate (Ganter & Hecker, 2014) levels.

This study considers four condition variables against TEA by using the GEM (2013) data set (Bosma et al., 2012) on a fsQCA analysis of TEA across a 54-country sample, reflecting EAaPs in these countries.

After this introductory section, Section 2 explains the EAaP measures. Section 3 presents the method and pre-processing necessary for fsQCA. Section 4 includes the technical and graphical explanation of the fsQCA analyses. Section 5 offers the interpretation of results, and Section 6 presents conclusions the results and the use of fsQCA.

2. Entrepreneurial attitudes and perception (EAaPs) measures

This section outlines the four condition variables that measure EAaPs: Perceived opportunities, perceived capabilities, fear of failure, and entrepreneurial intention.

2.1. Perceived opportunities (Prcvd_Opps)

Entrepreneurship research increasingly considers the concept of opportunities (see Reynolds, Bygrave, Autio, Cox, & Hay, 2003) as the most distinctive, fundamental characteristic of entrepreneurship (Arenius & Minniti, 2005) because inadequate entrepreneurial-activity levels result in deficient opportunities within existing businesses (Krueger, 2000).

This study draws on Bosma et al.'s (2012) definition of perception of entrepreneurial opportunities: The percentage of individuals believing that opportunities to undertake business start-up in the area they reside exist. Perceived opportunity can also drive opportunity entrepreneurship, generating higher economic growth than necessity-driven enterprises (Ács, 2006).

2.2. Perceived capabilities (Prcvd_Caps)

McGee, Peterson, Mueller, and Sequeira (2009) identify an established academic literature that classifies the business capabilities effective entrepreneurs require. Ács, Desai, and Hessels (2008) posit that people's perceptions of their environment and themselves drives them into, or away from, entrepreneurship. In this study, perceived capabilities reflect the percentage of entrepreneurial individuals believing they have the necessary competencies (i.e., skills, knowledge, and experience) for business start-up (Bosma et al., 2012). Perceived capability also differentiates independent entrepreneurs from entrepreneurial employees (Nyström, 2012).

2.3. Fear of failure (Fr_of_Flr)

Fear of entrepreneurship failure prevents individuals from undertaking business start-up (Vaillant & Lafuente, 2007) because many individuals are risk adverse (Arenius & Minniti, 2005). USA entrepreneurs tend to accept business failure, which they consider a positive experience because business failure enhances entrepreneurial knowledge and competency (Vaillant & Lafuente, 2007). Ul Haq et al. (2014) find no relationship between fear of failure and entrepreneurship in China and Pakistan. However, significant social stigma regarding business failure remains in Europe (European Commission, 2004).

Bosma and Levie (2009) demonstrate that in factor-driven and efficiency-driven countries, those entrepreneurs with highest fear of failure rates also have the lowest intention rates. Japan and Malaysia are exceptions where fear of failure prevents people from identifying most opportunities. This study utilizes the GEM definition (Bosma et al., 2012) of business failure.

2.4. Entrepreneurial intention (Entrp_Intnt)

Entrepreneurial intentions are the expectation of individuals to start a business (Bosma et al., 2012). Autio, Keeley, Klofsten, Parker, and Hay (2001) identify several entrepreneurial intent drivers from planned behavior theory. Entrepreneurial intent can be personally and socially (including culturally) driven, and measures an economy's favorability towards (necessity and opportunity-driven) entrepreneurship. This study uses the GEM definition, which refers to individuals (excluding those individuals already participating in entrepreneurial activity) intending to start a business within the next three years.

This discussion identifies four EAaPs-related condition variables that may potentially affect TEA. Underlying national, cultural, and economic development-level characteristics may affect these variables. A need exists, therefore, for a method able to examine the potential effects of the combinations of these factors upon entrepreneurial activity in different national economies.

3. Data, method, and data pre-processing

3.1. Data

The data comes from the GEM (2013) survey in Bosma et al. (2012) (see Table 1).

Table 1 presents the definitions of the EAaPs and TEA outcome variables. This study identified 54 countries with full data available. GEM divides these countries into factor-driven economies, efficiency-driven economies, and innovation-driven economies (see Xavier, Kelley, Kew, Herrington, & Vorderwülbecke, 2012), building on the World Economic Forum's (WEF) *Global Competitiveness Report* (WEF, 2011), which identifies three economic development phases depending on gross domestic product per capita and share of exports comprising primary goods.

In the factor-driven phase, heavy reliance on (unskilled) labor and natural resources (i.e., agriculture and extraction) is dominant. In the efficiency-driven phase, industrialization, economies of scale, and capital-intensive large organizations are more dominant. In the final, innovation-driven phase, businesses are more knowledge-intensive, and the service sector expands.

Jones, MacPherson, and Jayawarna (2014) identify that countries can be at the same stage of economic development with significantly different entrepreneurial activity levels. This study also evaluates how this categorization of countries contrasts with the groupings that the fsQCA identifies.

Table 1
Definitions of variables used in analysis.

Variable	Description
Perceived opportunities (Prcvd_Opps)	Percentage of 18–64 age group who see good opportunities to start a firm in the area where they live.
Perceived capabilities (Prcvd_Caps)	Percentage of 18–64 age group who believe they have the necessary skills and knowledge to start a business.
Fear of failure (Fr_of_Flr)	Percentage of 18–64 age group with positive perceived opportunities who indicate that fear of failure would prevent them from setting up a business.
Entrepreneurial intention (Entrp_Intnt)	Percentage of 18–64 age group (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years.
Total Early-Stage Entrepreneurship Activity (TEA)	Percentage of 18–64 age group who are either a nascent entrepreneur or owner-manager of a new business (as defined above).