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Gender matters in venture creation decision☆

Juan Aragon-Mendoza [a,*], Mario Raposo [b], Salvador Roig-Dobón [c,**]

[a] University of Valencia, Valencia, Spain
[b] Universidade da Beira Interior, Covilha, Portugal
[c] University of Valencia–IUDESCOOP, Valencia, Spain

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ABSTRACT

This study provides new evidences on the way men and women process the information in venture creation decision (VCD) and the differences that may arise when taking this decision. To reach this objective, this study carries out an experiment and identifies 120,536 people from twenty-five countries with different levels of development. The main finding indicates that although men and women process information differently, new generations of women begin to process information like men do, which might indicate that efforts in gender equality policies may be working but are not yet sufficient.

1. Introduction

Starting a business is a complex phenomenon that researchers study from multiple approaches and fields, thus generating multiple definitions (Ahmad & Seymour, 2008) and subcategories (Sharma & Chrisman, 1999) of the term *entrepreneurship*. Even so, entrepreneurship generally relates to starting or expanding a business.

Studies show that fewer women entrepreneurs exist in comparison to men, which limits women's contribution to job creation and innovation (Xavier, Kelley, Kew, Herrington, & Vorderwülbecke, 2013). Women's businesses tend to underperform in terms of revenues, profitableness, return on capital, employees, and survival in comparison to men's businesses (Klapper & Parker, 2011). Several studies examine the origins of these differences on an individual level (Krueger & Brazeal, 1994; Langowitz & Minniti, 2007) and on a national level (Autio, Pathak, & Wennberg, 2013; Busenitz, Gomez, & Spencer, 2000; De Clercq, Lim, & Oh, 2011; Hechavarria & Reynolds, 2009). Theorists recognize the importance of studying cognitive abilities because of the great potential in the field of entrepreneurship (Kuehn, 2008; Mitchell et al., 2007). Entrepreneurial cognition is an intermediary between institutions and the venture creation decision (VCD) (Lim, Morse, Mitchell, & Seawright, 2010; Mitchell, Smith, Seawright, & Morse, 2000). Differences in information processing may vary perceptions of extrinsic factors, such as identifying and evaluating opportunities (Berbegal-Mirabent, Ribeiro-Soriano, & Sánchez García, 2015; Guzmán-Cuevas, Cáceres-Carrasco, & Soriano, 2009; Lee, Ribeiro, Olson, & Roig, 2007; Mas-Verdú, Ribeiro-Soriano, & Roig-Tierno, 2015; Noguera, Alvarez, & Urbano, 2013), and perceptions of intrinsic elements such as assessing their own capabilities, especially in areas that men traditionally dominate (Curado, Henriques, & Bontis, 2011; Wilson, Kickul, & Marlino, 2007). This situation generates part of the disparity in rates of entrepreneurship between men and women.

This article seeks to provide new evidences in the way that men and women process the information in VCD, and the differences that may arise when taking this decision. To reach this objective, this article carries out an experimental study through which the research identifies 120,536 people from twenty-five countries with different levels of development.

The article consists of seven sections. After the introductory section, the second section presents the literature review. The third section presents the method that this study uses. The fourth section presents the results of the analysis. The fifth section offers a discussion on these results. The sixth section presents the conclusions of this research, and the seventh section offers the limitations of the research and various ideas for further research.

2. Literature review

The literature in the field of cognition begins with Neisser (1967), who defines cognition as all processes that transform, reduce, elaborate,

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* Correspondence to: J. Aragon-Mendoza, Av. Los Naranjos s/n, 46022, Valencia, Spain.
** Correspondence to: S. Roig-Dobón, University of Valencia–IUDESCOOP, Av. Los Naranjos s/n, 46022, Valencia, Spain.
E-mail addresses: amenjuan@alumni.uv.es (J. Aragon-Mendoza), Salvador.roig@uv.es (S. Roig-Dobón).

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store, recover, and use sensory information. Later, with the development of the theory of social cognition, person–environment interaction explains individual behavior. This theory considers that individuals exist within a configuration of forces that two sets of factors describe: one is the cognition/motivation and the other is the person in the situation (Fiske & Taylor, 1984). This differentiation results in a continuous and reciprocal interaction between these factors and any changes in the environment or personal factors, which will affect the individual behavior and vice versa.

During the last decade, the literature on this field develops considerably, focusing on the study of thinking and decision making and reviewing especially the cognitions that relate to entrepreneurial decisions (Mitchell et al., 2007). This progress generates various perspectives with common roots and that are complementary to an extent (Mitchell et al., 2007).

2.1. Entrepreneurial cognition

Research on entrepreneurial cognition focuses primarily on the way in which entrepreneurs think (Mitchell et al., 2007), that is, those knowledge structures that people use to make assessments, judgments, or decisions such as evaluating opportunities, starting a business, and the business' growth strategies (Busenitz et al., 2000; Mitchell et al., 2000). Entrepreneurial cognition explains individual behavior through the person–environment relationship (Mitchell et al., 2002).

The concept of perceived connections and alertness (Kirzner, 1979) refers to developing new ideas and the realization that some people seem particularly alert to new opportunities, reaching some unique conclusions about entrepreneurial opportunities (Mitchell et al., 2007). The cognitive frameworks that some individuals possess facilitate interconnecting different points relating to changes in the environment, market trends, and customer niches (Baron, 2006), thus allowing jumps in logic, which helps in identifying new opportunities (Busenitz & Arthurs, 2007).

The cognitive model of intentions (Krueger & Brazeal, 1994) argues that VCD is an option when person perceives VCD as desirable and feasible. In addition to these two perceptions, the person must have a predisposition to act (Shapero, 1984). These three elements make a person a potential entrepreneur. According to Shapero (1984) to make entrepreneurs take the decision of launching a business a trigger event that interrupts or shifts the inertia that guides human behavior is necessary.

The entrepreneurial expertise concept (Mitchell et al., 2000, 2002) argues that entrepreneurs develop cognitive scripts or unique knowledge structures that allow them to use the information in a better way than non-entrepreneurs (Mitchell et al., 2000). Cognitive scripts capture two critical steps for success or failure of planned behaviors (Leddo & Abelson, 1986): the entry (arrangements script) and doing (willingness and ability scripts).

2.2. Entrepreneurial cognitive scripts

Arrangement cognitive scripts refer to the individual knowledge of certain structures to achieve the necessary agreements and participate in business activity (Lim et al., 2010). These structures include possession and specific use of an idea that avoid the imitation of that idea, a single network of contacts usage and possession or access to specific resources to start a business (Mitchell et al., 2000).

Cognitive scripts of willingness show the business commitment of the entrepreneurs and their receptivity to the idea of starting a business. This script includes being careful in seeking new opportunities and being motivated to take advantage of an opportunity (Mitchell et al., 2000).

Entrepreneurial ability cognitive scripts are the skills, abilities, knowledge, norms, and attitudes that individuals need to start a business, for example, the ability to adjust to opportunities, business diagnosis, and knowledge of the risk situation (Mitchell et al., 2000, 2002).

The interaction between cognitive scripts of arrangements, scripts of willingness, and scripts of ability are essential in VCD, and the presence or absence of these scripts can either cause or prevent the decision to start a business, therefore,

H1. Entrepreneurial cognitive scripts affect the venture creation decision.

2.3. Gender, entrepreneurial cognitive scripts, and VCD

Brush (1990, 1992) observes that men and women in VCD differ very little with respect to demographic and psychological variables; the most considerable differences appear to exist in the goals and business management style. Additionally, several studies suggest that access to financial resources are particularly important for women (Demirguc-Kunt, Beck, & Honohan, 2008; Muravyev, Schafer, & Talavera, 2007) and that women are more sensitive to changes in economic cycles than men are (Noguera et al., 2013).

Entrepreneurial cognition is an intermediary between the institutions and the VCD (Lim et al., 2010; Mitchell et al., 2000). The fact that institutions affect unevenly men and women in concepts such as information processing, role, education, network, and financial resources access, among others (Baker, Gedajlovic, & Lubatkin, 2005; Morrisson & Jutting, 2005) explains in part the disparity in rates of entrepreneurship between men and women.

The institutions change perceptions of entrepreneurial opportunities for women and men (DeTienne & Chandler, 2007) and influence both the VCD and the opportunities available in the environment (Terrell & Troilo, 2010), causing that men and women have different motivations to launch a new venture.

H2. Women's entrepreneurial cognitive scripts affect the venture creation decision in different way than men's entrepreneurial cognitive scripts do.

H2a. Women's entrepreneurial cognitive scripts affect the venture creation decision.

H2b. Men's entrepreneurial cognitive scripts affect the venture creation decision.

3. Methods

3.1. Variables about cognitive scripts and VCD

The empirical work focuses on the analysis of the data coming from the *APS* of 2009 that the Global Entrepreneurship Monitor (GEM) provides (Bosma & Levie, 2009). The GEM is a worldwide study of entrepreneurship; researchers increasingly use GEM's data in comparative research of international entrepreneurship (Baughn, Chua, & Neupert, 2006; Bowen & De Clercq, 2008; McMullen, 2008). The main objective of GEM is to understand the relationship between entrepreneurship and national economic development by providing significantly rich, reliable, and valid data (Reynolds et al., 2005).

The initial sample of this study is of 120,536 cases from 25 countries. Fourteen of these countries are developed countries (innovators) who base their competitiveness (Schwab, 2009) on innovation (i.e., Germany, South Korea, Slovenia, Spain, Finland, France, Netherlands, Hong Kong, Italy, Japan, Norway, UK, Switzerland, USA). The remaining 11 countries are developing countries (optimizers) who base their competitiveness on the optimization and development of their productive systems (i.e., Argentina, Brazil, Chile, China, Colombia, Jordan, Malaysia, Romania, Russia, Serbia, and South Africa). The gender distribution is 53.45% women and 46.55% men, and entrepreneurs represent only 5.88% of the sample, showing higher