

**Entrepreneurial Intentions of Young Women in the Arab World: Socio-cultural and Educational Barriers**

*Peer-reviewed version forthcoming in International Journal of Entrepreneurial Behaviour and Research*

Salime Mehtap (PhD)\*

*Department of Business Administration  
Princess Sumaya University for Technology,  
Amman, Jordan*

*Email: [salime.mehtap@gmail.com](mailto:salime.mehtap@gmail.com)*

Massimiliano M. Pellegrini (PhD)

*Department of Management and Law,  
University of Rome 'Tor Vergata',  
Rome, Italy*

*Email: [dr.massimiliano.pellegrini@gmail.com](mailto:dr.massimiliano.pellegrini@gmail.com)*

Andrea Caputo (PhD)

*Lincoln International Business School,  
University of Lincoln,  
Lincoln, United Kingdom*

*Email: [dr.andreacaputo@gmail.com](mailto:dr.andreacaputo@gmail.com)*

Dianne H.B. Welsh (PhD)

*Bryan School of Business & Economics,  
University of North Carolina at Greensboro  
Greensboro, NC, USA*

*Email: [dhwelsh@uncg.edu](mailto:dhwelsh@uncg.edu)*

(\*): Corresponding author.

### *Abstract*

**Purpose:** Female entrepreneurship is a growing segment in the context of developing countries and has the potential to become a driving force for economic development. However, research suggests that females are less inclined towards entrepreneurship when compared to their male counterparts. This fact is related to a complex mix of causes such as the belief that entrepreneurship is a male domain, certain conditions within the economic and social environment and a general lack of confidence with regards to succeeding in such activities. Barriers to female entrepreneurship are prevalent in the patriarchal Arab World. This study aims to measure the perceptions of female Jordanian business students with regards to the socio-cultural barriers to entrepreneurship. It also looks at the conduciveness of the education they are receiving in terms of new venture creation.

**Design/methodology:** A sample of two hundred fifty-four female business students from two universities in Jordan were asked to evaluate various factors within the entrepreneurial ecosystem, including the business education they are currently receiving. A factor analysis has been performed to show which relevant elements may prevent young women from engaging with entrepreneurial activities. Yet, a comparison of perceptions about the educational system has been also presented to understand how a supportive educational environment may affect the previous analysis.

**Findings:** The results indicated that a strong supportive education system to some extent may reduce the perception of potential barriers for entrepreneurship but the overall impact can be limited. Conversely, an educational system lacking a supportive environment and concrete

initiatives can deeply affect and worsen the fears of engaging in entrepreneurship amongst female students.

**Originality/value:** The role of women in the Arab World is quite marked and the reluctance of women to take a more decisive engagement in entrepreneurship may be reinforced by conservative, societal traditions. A supportive education system has the potential to act as a catalyst to encourage active female participation in the entrepreneurial domain, thus helping to spur economic development in the region

**Keywords:** Female Entrepreneurship, Arab Women, Gender Barriers, Education, Entrepreneurial Intentions, Developing Country, Middle-East.

## **Introduction**

Progress in the education of Arab females has been impressive, with females constituting more than half of the university graduates in the Arab World (Majcher-Teleon and Slimene, 2009). Unfortunately, despite years of investment in education, the Arab female labor force participation rates are still the lowest in the world (Barcucci and Mryyan, 2014; ILO, 2014). Females are constrained in their choice of career by external factors which are mainly in the form of family and societal pressures stemming from the patriarchal and tribal traditions of Arab society (Sidani, 2005).

In a region where youth constitute nearly 60 percent of the population, finding suitable employment has become a major challenge. This challenge is even tougher for females. Employment challenges in the region have been attributed to economic instability, socio-cultural norms and taboos, broken promises in the aftermath of the Arab Spring and a lack of diligent public policy. Higher education systems that are based on rote memorization and which fail to equip graduates with the necessary skills to succeed in the real world have also contributed to the current situation. Many graduates pin their hopes on securing a job in the already overcrowded public sector, only to be disappointed in the transition process from education to employment. As the regional unemployment figures steadily rise, so do feelings of despair amongst its youth and specifically amongst the young female population. However, entrepreneurship could be the key to labor empowerment in a region where neither the government nor the private sector is able to create enough jobs to meet the ever increasing demand (GEM, 2014). Entrepreneurship would allow young women to take charge of their future, allowing them to become self-actualized individuals who are job creators rather than job seekers (Al-Dajani and Marlow, 2013).

Research suggests that females are less inclined towards entrepreneurship than their male counterparts (Diaz-Garcia and Jimenez-Moreno, 2010; Mueller and Dato-on, 2010; Wilson *et al.*, 2007). This has been attributed to a number of complex reasons. Among the reasons is the belief that entrepreneurship is a male domain, certain conditions within the economic and social environment favor males, lack of training and education and a general lack of confidence with regards to succeeding (Davidson *et al.*, 2013; Pathak *et al.*, 2013). Recent scholarly interest in female entrepreneurship has also spurred a number of related studies in the Middle East, with most studies concentrating on the identification of entrepreneurial characteristics and the challenges faced (Al-Dajani and Marlow, 2010; Caputo *et al.*, 2016b; Goby and Eroglu, 2011; Hattab, 2012; Itani *et al.*, 2011, Jamali, 2009; Mehtap 2014b; Welsh *et al.*, 2014b). Research has found that female entrepreneurs in the conservative and patriarchal societies of the Arab World face more challenges and barriers than their male counterparts (Al Dajani and Marlow, 2010; Al Gharaibeh 2011; Caputo *et al.*, 2015; Hattab, 2012; Jamali 2009; Verme, 2014). Krueger (2007) states that there is a paucity of research focusing on the antecedents or factors that encourage or inhibit entrepreneurial intentions among females. This is also the case in the Arab world. Studying for a business degree is popular among Arab females, yet the link between entrepreneurial intentions and business education has been neglected. Intentions form the basis of behaviors, and a well-rounded education that focuses on market-related skills can equip individuals with the necessary tools to start their own business and accumulate the necessary business acumen needed to survive and flourish in today's global economy (Rialti *et al.*, 2016). Despite some controversy about the need for entrepreneurship education (for an extended review please see Nabi *et al.*, 2016), a sound business education still has the potential to nurture entrepreneurial intentions amongst university students (Liñán, 2008; Kakouris, 2016).

Jordan was chosen as a context of analysis for this study for a number of reasons. First, Jordan has a highly-educated, dynamic, and young population who is facing increasing levels of unemployment and overcrowding in the public sector, where traditionally the majority of the workforce has been employed. Second, following the boom in the IT sector, the development of entrepreneurial activity is at the top of the national agenda and highly supported by the ruling Hashemite Royal Family (Caputo *et al.*, 2016a; Caputo *et al.*, 2016b). Multiple stakeholders believe that entrepreneurial activity can provide a solution to the unemployment problem in Jordan, a country lacking in natural resources and one that relies heavily on its human capital for economic development. Third, there is a rising level of interest in improving the status of women in the country and encouraging them to play an active role in economic development. It is well-known that women play a pivotal role in elevating the well-being of their families, particularly that of their children, and if allowed to actively participate in the workforce, they can contribute to the overall economic development of a country. Additionally, the paucity of research pertaining to female entrepreneurship in Arab countries (Caputo *et al.*, 2016b; Chamlou *et al.*, 2008; De Vita *et al.*, 2014; Raven, *et al.*, 2001; Welsh *et al.*, 2001; Welsh *et al.*, 2014) and Jordan in particular, with its growing prominence among Arabic speaking countries, warrants further investigation.

This study gauges the perceptions of female business students regarding socio-cultural barriers to entrepreneurship in Jordan. At the same time, the study investigates the role of the higher education system by looking at how female business students perceive the education they are receiving in terms of preparing them for a future in entrepreneurial endeavors.

The contributions of this research are at least twofold. First, Jordan is an interesting context in which to measure female entrepreneurial intentions and the potential barriers to

entrepreneurship. Jordan is a predominantly Muslim, patriarchal, and tribal society. The number of females pursuing higher education is high compared to other Arab States. Yet due to certain socio-cultural norms, female labor force participation rates are low (Ahmad and Xavier, 2011; Al-Sadi *et al.*, 2013; Chamlou *et al.*, 2008), resulting in a loss of national productivity. Jordan is also one of the few stable countries in a region torn by war. However, the steady influx of refugees from neighboring countries have overburdened the infrastructure and public services and exacerbated the already high unemployment levels (Barcucci and Mryyan, 2014). Therefore, there is an urgent need to encourage entrepreneurial attitude and increase the entrepreneurial skill set of the population, especially females by understanding the barriers and entrepreneurship education needed. Secondly, the paper provides evidence that can be utilized in shaping public policies targeting the educational system and the inclusion of entrepreneurial courses within the curriculum offered. This research to some extent strengthens the idea that a supportive education system can promote entrepreneurship, especially in terms of changing the popular appeal of such activities. Even more interesting is the effect of a negative perception of the education received that can really reduce the inclinations of female students in pursuing an entrepreneurial career, thus putting at risk an entire generation of potential female entrepreneurs.

This paper proceeds as follows. First, a literature review on entrepreneurial intentions in the context of female entrepreneurship and the impact of entrepreneurial education is presented. The paper proceeds with the methodology, results, implication of the findings, and avenues for future research.

## **Entrepreneurial intention and female entrepreneurship**

Entrepreneurial activities are on the rise globally, with many governments taking deliberate action to encourage and increase the formation of start-ups and new ventures (GEM, 2009, 2014). This increased attention to entrepreneurship is due to a wealth of evidence that indicates that entrepreneurial activities are directly correlated with the creation of wealth and an increase in Gross Domestic Product (GDP).

Several elements can help or hinder entrepreneurship, such as external conditions at the micro and macro-level, as well as internal conditions that are related to the individual.

At the macro-level many elements have been found to provide a favorable environment for entrepreneurship, such as a liberal market structure and dynamics (Boccardelli and Magnusson, 2006; Van Stel *et al.*, 2007); easy access to financing (Carter *et al.*, 2007; Itani, *et al.*, 2011; Kim *et al.*, 2006; Kwong *et al.*, 2012; Sandhu *et al.*, 2011; Welsh *et al.*, 2014a; Welsh *et al.*, 2014b; Welsh *et al.*, 2014c); a favorable government policy in terms of taxation, funding programs, and a reduction in bureaucratic procedures related to starting a business (Ahmad and Xavier, 2011; Carter *et al.*, 2003; Goby and Erogul, 2011; Minniti, 2008); and political and economic stability (Lerner, 2010; Movahedi and Yaghoubi-Farani, 2012; Taylor and Plummer, 2003). Conversely, a lack of these elements may create barriers for the development of entrepreneurship. Likewise, various cultural and societal aspects, such as widespread views of entrepreneurship and on the role of entrepreneurs in the society can promote or limit entrepreneurial activities (Baughn *et al.*, 2006; Baughn and Neupert, 2003; Davidson *et al.*, 2010; Gupta *et al.*, 2009; Shinnar *et al.*, 2012). For example, in Light and Dana's (2013), study on a remote Alaskan region, belonging to a particular ethnic group was found to be a disadvantage in term of engaging in entrepreneurial activities, despite having almost the same conditions and resources as other ethnic groups.

The immediate environment of the entrepreneur, such as family, community, and business context, is considered to be an external condition at the micro-level and may represent another element that can encourage or discourage the level of engagement with such activities (Mueller and Thomas, 2001; Pruett *et al.*, 2009). A supportive environment in terms of access to business information (Ettl and Welter, 2010; Sandhu *et al.*, 2011), networking opportunities (Ahmad and Xavier, 2011; Al-Alak and Al-Haddad, 2010; Caputo *et al.*, 2016b; De Vita *et al.*, 2014; Goby and Erogul, 2011; Rialti *et al.*, 2016), as well as support from family and friends (Goby and Erogul, 2011; Haase and Lautenschläger, 2010; Pruett *et al.*, 2009 ) have been found to stimulate entrepreneurship.

Finally, internal conditions, in terms of experience, personal traits, and aspirations, complete the picture about factors that could potentially facilitate entrepreneurship (Krueger and Brazeal, 1994; Krueger *et al.*, 2000) and within this, access to formal education and training is a crucial element (Dabić *et al.*, 2012; Dickson *et al.*, 2008; Lüthje and Franke, 2002; Packham *et al.*, 2010; Pruett, 2012). Personal factors, such as aversion to risk, fear of failure, aversion to stress, and hard work are also common barriers faced by aspiring entrepreneurs (Taormina and Lao, 2007; Wang and Wong, 2004; Welsh *et al.*, 2014a; Welsh *et al.*, 2014b; Welsh *et al.*, 2014c; Yordanova and Alexandrova-Boshnakova, 2011). As a matter of fact, a “fear of failure” has been cited as the top reason given worldwide for not starting a business (Sandhu *et al.*, 2011).

All the previous elements can be considered as “antecedents” to entrepreneurship and so affect the potential sphere of the subject. For this reason, the literature refers to them as antecedents of entrepreneurial intentions. Intentions, despite not being actual behaviors, are one of the best predictors of the entrepreneurial activities since this event is rare and difficult to measure. One of the most cited models used to explain such intention is Ajzen’s (1991) Theory

of Planned Behavior (Nabi *et al.*, 2010). This model is based on three factors-social norms, attitudes and perceived control. Social norms refer to the perceived acceptance or aversion toward a specific behavior in the immediate environment of a person. Later, this factor evolves to include the influences that the subject perceives to be present in the cultural and social context at-large (Sesen, 2013).

Attitudes are personal judgements and evaluations in relation to a certain action. This element is often considered in terms of desirability or the appeal of outcomes that result from a certain action (Shapero and Sokol, 1982). Entrepreneurship in this case can be perceived as something particularly appealing and either internal and external conditions (at both micro and macro levels) can play a significant role in shaping these psychological perceptions (Mueller and Thomas, 2001).

The final element is related to the self-confidence of the individual in performing a task or a behavior. This element is closely related to, if not completely overlapping, with the concept of self-efficacy developed by Bandura (1997). Thus, entrepreneurial intention can be undermined by an individual that is less confident, or considers to have no power to control specific tasks necessary to perform such an action. This element would be related to the internal conditions of an individual that are discussed previously in the paper. A strong “gender” effect is also present in the discussion of entrepreneurial intentions. Studies have found that young adult females tend to show less propensity toward entrepreneurial activities than males (Díaz-García and Jiménez-Moreno, 2010; Mueller and Dato-on, 2010; Wilson *et al.*, 2007). As a result, most of the countries surveyed by the Global Entrepreneurship Monitor (GEM) have male entrepreneurs outnumbering their female counter-parts (GEM, 2014).

Each of the three elements previously discussed can potentially reduce female propensity to engage in entrepreneurial activities. In relation to social norms, Baughn *et al.* (2006) drew attention to the importance of country-specific, socio-cultural contexts for entrepreneurship. The authors explain how stereotypes, gender role ideologies, and social acceptability of entrepreneurship as a career choice are highly influential in the development of entrepreneurship. In addition, in most of the Arab world, women still need to receive approval from a proxy male member of the family in order to launch a business (Al-Dajani and Marlow, 2010). In this kind of “surroundings,” it is not surprising that females may consider it less socially acceptable to pursue an entrepreneurial career.

Entrepreneurship is predominantly perceived as an achievement-oriented, masculine endeavor (Díaz-García and Jiménez-Moreno, 2010; Marlow and McAdam, 2013; Sweida and Reichard, 2013). Therefore, the common stereotypical view of women being subservient to men clashes with the inherent nature of entrepreneurship and the propensity towards launching an entrepreneurial firm may be seen as an impairing factor for a woman. For this reason and even unconsciously, the evaluation of the desirability of such an activity may be reduced in favor of more gender stereotype-aligned activities. In the Arab World, gender stereotypes are socially reinforced and a woman’s first responsibility is to be committed to her husband, household, and children (Abdalla, 1996; El-Rahmony, 2002).

Finally, females show less self-efficacy than their male-counterparts (Díaz-García and Jiménez-Moreno, 2010; Wilson *et al.*, 2007). Again, this can be related to gender stereotypes. If an activity is considered male-oriented, then women will perceive a lack of such traits and skills necessary to perform that activity (Sweida and Reichard, 2013). For this reason, scholars have called for major attention to be paid to gender biases worldwide, including those in education

and especially at the primary levels (Mueller and Dato-on, 2010). In response to this call, our study addresses the following research question:

RQ1: Which personal and socio-cultural (micro and macro level) factors are perceived to be potential barriers to female entrepreneurial activity in Jordan?

### **Education and Entrepreneurship**

The role and effect of education, including training, on entrepreneurial activities has been a major topic of discussion in the last decade (i.e., Dabić *et al.*, 2012; Dickson *et al.*, 2008; Fayolle *et al.*, 2006; Kakouris, 2016; Mehtap, 2014b). The term “Entrepreneurial Education” refers to a holistic approach to empowering and developing entrepreneurs. This is advocated in place of traditional schooling on the basics of how to run a business. Topics include creativity, opportunity recognition and exploitation, with the ultimate aim is to foster social development (Sánchez, 2011).

The United States is recognized as pioneers in the field of Entrepreneurship Education. Entrepreneurial Education has been part of the curricula of US higher education institutions since the 1950s and has adapted to meet the emerging needs of nascent entrepreneurs (Wilson, 2008). Scholarly efforts on the importance of formal education as a prerequisite to entrepreneurial initiatives has forged two schools of thought. The first school argues that education improves creativity and provides the necessary skills and mind-set to recognize and exploit business opportunities (Dickson *et al.*, 2008; Gürel *et al.*, 2010; Lüthje and Franke, 2004). However, scholars also criticize entrepreneurial education for being redundantly focused on entrepreneurial processes, such as opportunity recognition and marketing strategies, rather than on skills and attributes needed for success (Gürel *et al.*, 2010). Conversely, the second school argues how formal education constrains the entrepreneurial spirit by placing too much emphasis on

conforming, which is seen as a restricting factor in terms of creativity and innovation, making individuals more risk averse and less tolerant of ambiguity (Gibb, 2002).

Despite the ongoing debate and conflicting views, formal entrepreneurial education was found to be a determinant in the choice of entrepreneurship as a career option (Henderson and Robertson, 2000) and there have been calls for worldwide reforms aimed at embedding entrepreneurship education into existing systems (Gibb, 2002). More recently, university graduates between the ages of 25–34 years were also found to show the highest inclination towards starting their own business (Liñán *et al.*, 2011). The potential of universities to have a significant impact on entrepreneurial intentions of nascent entrepreneurs is undeniable and highly supported in the literature (Cheng *et al.*, 2009; Dabić *et al.*, 2012; Packham *et al.*, 2010; Schwarz *et al.*, 2009). Formal education in entrepreneurship is seen, by both researchers and lawmakers, as a mean of encouraging innovation, risk taking, creativity, and critical thinking skills that will lead to job creation and sustainable economic growth (Borožan and Dabić, 2008; European Commission, 2010, Rialti *et al.*, 2016). As a consequence, there is a stronger focus on the process of new venture creation within entrepreneurship education and creating graduates with a global mindset and skillset who are job creators rather than job seekers (Mehtap, 2014a).

The education systems in the countries that make up the Arab World offer some elements of commonality. Rote learning is usually the base of education systems. Classrooms are often overcrowded. Education takes place in an environment that does not encourage critical thinking and the ability to think out-of-the-box. The Arab World is made up of 22 countries and in 1953 had only 13 universities. According to the Association of Arab Universities, this number has grown to more than 500 in 2012. The sector is almost equally distributed between private and public institutions and employs around 250,000 faculty members. According to UNESCO, there

were more than seven million students enrolled in higher education institutions in the Arab World in 2007, a 30 per cent growth rate compared to 2000. Despite the increase in the number of institutions offering higher education, competition to secure a seat in a university is fierce and often getting into a university is a matter of life and death. Unfortunately, a majority of the education systems in the Arab World are not in tune with market needs and this creates a surplus of unemployable graduates with bleak hopes for the future (The World Bank, 2006). Fewer than 10 per cent of universities in the MENA region offer entrepreneurial courses. Only 17 universities in the region have centers for entrepreneurship and only five offer a major in entrepreneurship (WEF, 2011). In a region characterized by deep economic divides amongst Arab States, social tensions (e.g., the Arab Spring) and war and where youth make up the majority of the population, entrepreneurship becomes a necessity. By creating job opportunities, entrepreneurship contributes to the improvement of the economic conditions of a wide proportion of Arab citizens, and consequently enhances the status of women (Caputo *et al.*, 2016a; Caputo *et al.*, 2016b; Mehtap, 2014a). This major issue is addressed in the form of a second research question:

RQ2: How conducive is business education in shaping the entrepreneurial intentions of female university students in Jordan?

### **Background on the Hashemite Kingdom of Jordan**

The Hashemite Kingdom of Jordan is a developing country situated in the middle of strife and turmoil, yet is known for its stability and success in fostering entrepreneurship. Jordan is one of the very few countries in the Middle East (besides the Gulf nations), which is safe, stable, and

has a vibrant business environment. This is evident in the fact that it is home to multinational companies, Non-Governmental Organizations (NGOs) and United Nations (UN) agencies.

Jordan has an estimated population of around eight million people, of which more than half is under 24 years of age. In terms of demographic distribution, Jordan represents an interesting case. It is estimated that half of its population has Palestinian origins, moreover the country is host to more than 600,000 registered refugees from Syria and Iraq. As a consequence of historical events, Jordan has quite a heterogeneous population. Religiously, Sunni Muslims account for the majority of the population (92 per cent), various Christian denominations account for 6 per cent, and the rest are estimated to be *Shi'a* Muslims and *Druze*. From an ethnic perspective, the population is mostly Arab with Circassians and Chechens forming slightly more than 3 per cent of the population. The Jordanian society is collectivist, paternalistic, patriarchal, and tribal. Religion plays an important role in its governance. While the way Islam is practiced may vary from country to country, the Islamic religion has an important influence over societal norms, political systems, and everyday life. The Jordanian legal system is also based on the *Sharia* (religious) law.

Despite the high level of human capital, the country is poor in natural resources and heavily reliant on foreign aid and remittances from Jordanians living abroad. The services sector accounts for more than 70 per cent of GDP (The World Bank, 2015). Such a diverse and welcoming environment offers an interesting context of analysis for any researcher.

Women constitute a significant proportion of the population of Jordan, yet a variety of economic, social, and cultural factors largely inhibit their potential to make a significant contribution to the overall economic development of their country. The traditional viewpoint that women must be committed to their homes and children is still predominant within Arab societies

(Abdalla, 1996; El-Rahmony, 2002). Consequently, men are the principle breadwinners and solely responsible for providing for their wives and families. Jordanian society is no exception. Therefore, this predominant mindset explains why Arab women constitute only 25 per cent of workers in the Arab World, despite high levels of literacy (Barcucci and Mryyan, 2014; ILO, 2014). In some circles, Islam is also blamed for limiting the basic rights of women and for encouraging gender discrimination (Ahmad and Xavier, 2011; Al-Sadi *et al.*, 2013; Itani *et al.*, 2011). However, in reality and when interpreted in the correct context, Islam provides women with many economic and legal freedoms, including the power to own a business and manage their own finances independent of her husband. Islam also dictates that a woman is not required to make a contribution to the family income from her personal assets and business dealings. An excellent historical example of the economic freedom bestowed on Muslim women is Khadija, the wife of the prophet Mohammed (PBUH). Khadija was a prominent and wealthy businesswoman who employed the prophet on a commission basis. This allows us to argue that Islam is not a constraining factor for women's participation in economic activity; rather social customs and tribal traditions create barriers for women. Despite the high literacy rates amongst Jordanian women (Barcucci and Mryyan, 2014; Majcher-Teleon and Slimène, 2009), societal norms still encourage them to find a husband and start a family rather than focus on a career and economic empowerment (Hakki and Somach, 2012).

With a growing young and dynamic population, one of the main goals of the Jordanian government is to increase access to higher education and establish a knowledge-based society. Indeed, Jordan has seen increasing school enrollment rates over the previous century, which has resulted in a rapid rise in the literacy rate. In 1952, the literacy rate was 33 per cent and grew to 85 per cent in 1996. In 2009 it grew to 94 per cent, making the country one of the most literate in

the world. Jordan is the highest spender on education in the region, investing more than 20 per cent of its GDP. Around 230,000 students are currently enrolled in 10 public universities, 17 private universities, and 51 community colleges (TEMPUS, 2012). Yet, despite high literacy rates, the unemployment figure amongst youth (15-24 years of age) stands at nearly 30 per cent (Central Intelligence Agency, 2014). There is a strong belief that Jordan's human capital combined with entrepreneurial activity is a pathway to growth and prosperity, not only at home but in the greater region.

The boom in the ICT sector fueled the entrepreneurship movement in Jordan. Currently, the right combination of encouragement and protectionist measures is helping entrepreneurship to spread to other industries, in the hope of bringing prosperity to all sections of the population. In Jordan, fostering entrepreneurship is a priority set out in the national agenda (Caputo *et al.*, 2016b) and education is believed to significantly impact the creation of new business ventures (Galloway and Brown, 2002; Lüthje & Franke, 2002).

Female entrepreneurship in Jordan is a growing segment. The past decade has witnessed a steady increase in the number of Jordanian female entrepreneurs, allowing Jordan to become a good context for research. Hattab (2010) found that many Jordanian women are turning to entrepreneurship as a means of income generation and self-actualization. Yet despite the increasing numbers, Al-Dajani and Marlow (2010) found that female entrepreneurs in Jordan are still expected to pursue their business endeavors without compromising their main responsibilities as wives and mothers. In a recent analysis of 28 institutions that provide support for female entrepreneurs in Jordan, Caputo and colleagues (2016b) emphasized the importance of such supporting opportunities in order to nurture female entrepreneurship. The authors concluded that there is a need for a sound entrepreneurial ecosystem that is female-friendly and

called on the government to encourage entrepreneurship education and better dissemination of information and training. Mehtap (2014a) highlighted the importance of entrepreneurial education for the economic development of Jordan and provided a case example of how European university partnerships under the EU-TEMPUS framework were successful in developing both undergraduate and graduate courses in entrepreneurship in the Kingdom. Additionally, another recent study by Caputo *et al.*, (2016a) looked at the inclination of Jordanian business students to work for start-ups after graduation and found that entrepreneurial education and participation in various entrepreneurial events increases the willingness and commitment to work for start-ups. This study aims to contribute to the limited body of research focusing on entrepreneurship in the Jordanian context by answering the research questions concerning women entrepreneurs and the influence of the educational system on entrepreneurial propensity.

## **Method**

### *Survey development*

Based on models provided in the existing literature on entrepreneurial intentions (e.g. Lüthje and Franke, 2004; Shapero and Sokol, 1982) and considering the context of analysis (as in Kibler, 2012), a pool of 25 items that measure a number of possible antecedents for female entrepreneurial intentions, especially in terms of potential barriers and challenges were created. The questions were adapted to reflect the culture and business environment of Jordan. A seven point Likert scale was used. Every item within the scale was validated through a panel of regional experts in the field of entrepreneurship by using the Delphi method (Okoli and Pawlowski, 2004) to ensure content validity. Additionally, a pilot study was conducted with a limited number of participants who had similar characteristics to the sample used in this study

with no concerns raised. The questionnaire is composed of three sections: demographics, the environment and potential barriers to entrepreneurship, and the entrepreneurial education offered by the university. Reliability analysis for both scales yielded a reliability coefficient (Cronbach's Alpha) of 0.83 and 0.75 respectively.

### *Sample*

Respondents were 254 students recruited via network sampling by one of the investigators. This data collection technique entails individuals who, based on their contacts or snowball sampling, recruit respondents from their social network (Demerouti and Rispens, 2014). Paper-based questionnaires were distributed during lectures resulting in the collection of 130 questionnaires from the private university and 124 from the public university. Students are often used to study the phenomenon of entrepreneurship (Fayolle *et al.*, 2006; Liñán and Chen, 2009). Based on the proposed research questions and in line with previous research, university students were chosen as the focus of this study. Dabić and colleagues (2012) argue that “younger people are more willing to be self-employed”. The researchers also agree with this statement and believe that today's university students will be the next generation to face the challenge of labor market entry or be forced to seriously consider self-employment. The participants were all female business students drawn from two well-established universities in Amman, the capital of Jordan. While this may represent a limitation, it is due to the fact that more than half of the population is concentrated in the capital. Both universities have a history of excellence, their business schools are among the top in the country, and the medium of instruction is in English. The private university has a reputation for providing niche degree programs and its graduates are highly sought out by the industry. This university is also known for its focus on entrepreneurship and strong ties with the marketplace. The public university is one of the largest in Jordan, and is

known for its progressive leadership, successful graduates, and focus on highly trained human capital. Both universities have developed and embedded a compulsory course in entrepreneurship within their business curriculums, which provides a basis for comparison.

### *Statistical Procedure*

The first part of the study tested how female students perceive the Jordanian context in terms of starting a business. An exploratory factor analysis (EFA) was conducted on the perceived barriers to entrepreneurship in Jordan. The principal component method was used for the extraction of factors and their number was decided according the Kaiser rule (i.e., factors with Eigenvalues higher than 1), that contain enough explanatory power in terms of variance. Since the literature has demonstrated that the antecedents of entrepreneurial intentions are often correlated with each other (Liñán et. al, 2011; Wilson et. al, 2007), a technique of oblique rotation (*direct oblimin*) was adopted. As a control mechanism, factor analysis with an orthogonal rotation (*Varimax*) was performed. As a result of this, the number of factors and the associated questions have remained stable. Only the internal consistency has deteriorated and this is an indication of the correctness of the technique used. The score of the factors was calculated using the Andersen-Rubin method.

The first results of the EFA were not optimal; specifically one question showed cross-loading scores, and its variance was distributed to more than one factor but with limited percentages for both. For this reason, the analysis was repeated after removing the cross-loaded question (number 14). This time an eight factor solution with Eigenvalues higher than one and with clear cut-off points for each question (loading value around .50) was obtained. The portion of variance explained rose to 69 per cent (more than 4 points). A series of robust checks were run to assure

the validity of the technique; the Barlett's test for sphericity was significant (.0001), while the KMO's measures for testing the adequacy of data was .690. This is consistently higher than the minimum acceptance level of .60.

The Cronbach alpha scores for each factor were also checked. Despite the fact that some of the factors did not show an extremely high score for an exploratory study, the minimum threshold (.65) has been met: Attitude 1 (.786); Self-efficacy 1 (.703); Social Norms 1 (.811); Self-efficacy 2 (.813); Self-efficacy 3 (.724); Social Norms 2 (.732); Attitude 2 (.680); Attitude 3 (.659).

The results of the exploratory factor analysis are summarized in Table 1.

---

*...Table 1 about Here...*

---

The second part of the study aimed to measure the impact of education on the perception of barriers to entrepreneurship. Thus, the perceptions of female students regarding the university education received was analyzed. Again, an exploratory factor analysis was performed on the part of the questionnaire that is dedicated to gauging female students' evaluations of the education system. However this time, since there was no theoretical motivation to assume correlation between factors, a standard orthogonal rotation (*Varimax*) was carried out. Again, Kaiser's rule was used to decide the number of factors and the score was calculated through the Anderson-Rubin method.

The second EFA showed consistent results after the first attempt. The solution shows two factors with all univocal loadings that in total explained 60 per cent of the variance. Again robust checks were satisfying; the Barlett's test for sphericity was significant (.0001) and the KMO's

measures was good and above the threshold of acceptance (.785). Consistent indexes were obtained with respect to the Cronbach alpha of the two factors: Educational support (.798) Education lack (.755). In order to assess the impact of the education being received by the two groups of female students, these two factors were transformed into dummy variables. For the first factor, a value of zero was assigned to those students who were below the average, (i.e., low perceptions of the support offered by the educational system) and a value of one to those above the average (i.e., those with a strong perception of the support offered by the education system). For the second factor, the situation was overturned. The value of zero was assigned to those students below the average (i.e., low perception in terms of lack of the education system) and conversely one to those who have a strong perception of this lack. These transformed variables were used in order to run an ANOVA and to test if the perceptions of the barriers to starting a business differed amongst the two groups of female students.

## **Results**

This section presents the results of a total of 254 female business students who responded to the questionnaire. More than 80 per cent of the respondents were between 18-21 years of age and had attended private schooling prior to entering the university. Eighty-three per cent had graduated from the *Tawjihi* stream (national high school system) and 8 per cent had graduated from a school that follows the British IGCSE system. Thirty-eight per cent were enrolled in their third year of study and 27 per cent of the respondents were working and studying at the same time. Nearly 60 per cent of the respondents reported that they had at least one family member who was an entrepreneur. When asked to indicate the gender of the entrepreneur in the family, all of the respondents indicated a male. Despite this, respondents reported that they had first heard about entrepreneurship upon entering the university (43 per cent), while only 21 per cent

had heard about entrepreneurship in high school. Only 28 per cent had previously taken a course, workshop, or training session in entrepreneurship.

A quarter of the students indicated that they wanted to work for the private sector after graduation, and only 27 per cent indicated that they would like to set up their own business. Nearly 50 per cent of these students indicated that they hoped to open a business that would employ somewhere between 10 to 50 employees. Only 10 per cent of the students would like to run a large enterprise with over 250 employees. The most preferred sectors for starting a new business were services (47 per cent), followed by the IT sector (16 per cent).

#### *Analysis of potential barriers to starting a business in Jordan*

Students were asked to assess 25 factors that could be potential barriers to setting up a business in Jordan. Some of these factors were related to perceptions about their own entrepreneurial capabilities; others were related to government policy, social factors, and financial issues. In general terms, the highest barriers perceived by students were (in order of significance): the weak Jordanian economy ( $\mu= 5.09$ ), lack of access to financing ( $\mu= 5.05$ ), the fear of risk ( $\mu=4.87$ ), gender issues (male dominance  $\mu=4.82$ ), and difficulty balancing work and home life ( $\mu=4.72$ ). Barriers 1, 2 and 4 are related to the perceptions that female students have about their environment and barriers 3 and 5 are related to the personal capabilities of the individual.

Each of the eight factors that were extracted from the EFA were categorized according to the antecedents for entrepreneurial intentions as explained by the Theory of Planned Behavior (Ajzen, 1991). Table 2 shows how the factors correspond to the three types of antecedents of TPB: 1) Attitudes, which are composed of three factors; 2) Social Norms, which divide into two factors; and 3) Self-efficacy, which is composed of three factors.

---

*...Insert Table 2 about here...*

---

Table 3 and 4 presents the factor analysis performed and a description of the factors in relation to perceptions of the educational context.

---

*...Insert Table 3 about Here...*

---

---

*...Insert Table 4 about Here...*

---

After a transformation of these factors into dummy variables an ANOVA test was carried out to understand if the two groups of female students (i.e., those with a strong perception of support/lack and those with a low perception of support/lack in relation to the education received) really differ in terms of how they perceive barriers to starting a business in Jordan. The first test compares groups of female students with a strong perception of support offered by the education system with those with a low perception. As clearly depicted in Table 5, the barriers perceived by these two groups do not really differ; the only significant factors are those related to Attitude (with a level of significance of .01 for Attitude 1, and .04 for both Attitude 2 and 3).

---

*...Insert Table 5 about Here...*

---

This implies that a strong perception of the support provided by the education they are receiving at a university reinforces the positive judgments of female students regarding the appeal of entrepreneurship as a career choice. However, this effect is limited.

Alternatively, when a comparison was made between the group with a strong perception of lack in the education system and those with a low perception, many factors with significant differences were found. These are presented in Table 6.

---

...Insert Table 6 about Here...

---

Indeed, Attitude 1 and 3 (respectively .01 and .06), Social Norms (.01), and Self-efficacy 3 (.001) indicates clearly that an educational system perceived as lacking has a detrimental impact on the whole set of antecedents that determine entrepreneurial intentions.

## **Discussion**

### *Potential barriers and entrepreneurial intentions of female university students*

With regards to the first research question, a number of socio-cultural factors and personal characteristics have been identified by the respondents as potential barriers to entrepreneurship in Jordan. It is not surprising that the weak Jordanian economy was seen to be the highest barrier to entrepreneurship among females. While the World Bank classifies Jordan as an ‘upper- middle income’ country, it is still poor in natural resources and relies heavily on foreign debt and remittances. Unemployment figures stand around 30 per cent. Currently, Jordan is struggling with a massive influx of Syrian refugees, which are creating a serious strain on the health and education infrastructure of the country and the availability of housing and jobs.

Lack of financing and fear of risk are often cited in the literature as impediments to entrepreneurship (Sandhu *et al*, 2011; Welsh *et al*, 2014) and Jordanian females seem to share this perception. Like much of the Arab world, gender stereotypes in Jordan are reinforced by

society. Men are the breadwinners and a female's number one priority is her family and home. Therefore, it is not surprising that most participants feel that business life is dominated by men and that they would have trouble being accepted into the "boys club" and balancing work and private life if they were to open their own business.

According to the TPB (Ajzen, 1991) 'Attitudes' refer to personal attitudes towards the behavior (i.e., engaging in entrepreneurship). Here female students feel that the economic and social environment of Jordan is not conducive to such activities, particularly the economic status quo, and furthermore such activities lack in appeal. The category 'Social Norms' refers to judgement of the environment in terms of the planned behavior. It refers to the perceptions of what important people in the respondents' lives, such as family and friends, think about performing the behavior. In general females believe that they have the support of important social influences. Finally, Self-efficacy refers to the perceived ability to execute the targeted behavior. Here, the respondents show a lack of confidence in their personal skills and they feel that they will not be able to cope with the challenges associated with entrepreneurship, such as finding capital.

#### *Perceptions of university education and readiness for entrepreneurship*

In many countries, the traditional model of higher education fails to adapt its curricula to the needs of the labor market and particularly the needs of SMEs who form the backbone of most modern economies. This often translates into business schools churning out graduates that lack the enthusiasm for starting their own business and have no idea about how to apply their classroom skills to the real world. Yet, it is also true that students' willingness to start their own business mostly depends on their knowledge of entrepreneurship, competency in certain business and entrepreneurship skills, and the development of an entrepreneurial mind-set; factors that can

all be taught and nurtured within the right university environment. Autio *et al.* (2011) found that the image of entrepreneurs and encouragement from the university environment had an impact on university students' entrepreneurial convictions in different cultural contexts.

Indeed, from the results it is possible to see that an educational system perceived as lacking has a detrimental impact on the whole set of antecedents that determine entrepreneurial intentions, thus providing an answer to the second research question. This fact, at the same time, reduces the appeal towards entrepreneurship as a career option, increases fears of the external surrounding environment, which is considered to be more and more hostile, impairs full personal development and undermines the confidence of students in their own skills and abilities (Mueller and Thomas, 2001).

## **Conclusions**

The finding of this study provides a useful insight into the nature of the entrepreneurial environment in Jordan as seen through the eyes of female business students. The study advances entrepreneurship research by addressing the call for more studies in a non-US, non-European context. It draws attention to the role of universities in developing countries in terms of providing a supportive environment in which self-confidence and business acumen can be developed and entrepreneurial intentions can be nurtured. The work also adds some insights to the existing literature on how entrepreneurial intentions vary across different cultural settings.

While education attainment is increasing across the region, more education is unfortunately becoming synonymous with more unemployment. This is predominantly due to the fact that education systems are far from the needs and realities of the private sector and graduates lack the necessary skills to be competitive in the dynamic business world. Coupled with this is gender and cultural stereotypes about the role of women in the Arab World and the stigma associated

with working women. In Jordan, female literacy rates and the number of female graduates are high. Yet, it is disappointing to note that female labor force participation rate remains at a low of 16 per cent (The World Bank, 2015). While this has been attributed to a number of socio-cultural and economic reasons, the major reason is that most Arab women tend to see their role in society as a traditional one of wife, housekeeper and mother— regardless of their level of education. Despite the setbacks, an increasing number of Jordanian women are starting and operating businesses from home, mainly with the support of technology and social media (Al-Dajani and Marlow, 2010). Running a home business allows these women to create a work-life balance which is more culturally acceptable.

How do the findings of this study translate into concrete steps that would motivate female students to pursue entrepreneurship as a viable career option? Furthermore, what lessons can other Arab and developing countries draw from this study? To answer this, some parallels may be drawn between the findings and Herzberg's Two Factor Theory (1960). While this theory is not directly tested in the present work, the researchers consider it particularly useful to discuss the finding in the light of the theoretical classifications stated by the theory. According to Herzberg, the adoption of a two-stage process is required in order to motivate people. The first stage involves the elimination of the causes of dissatisfaction or factors that may annoy or threaten people (called "hygiene factors"). Mitigating these factors may placate people and increase a feeling of security that is the basic step to then motivating them, even though this may not necessarily motivate them or enhance their performance. In relation to the results of this study, providing a supportive environment in the university that promotes an entrepreneurial mindset is the first step for female students to even consider entrepreneurship as one of the alternatives available to them (Mueller and Thomas, 2001). Curriculum would need to be revised

in order to incorporate skills that are highly demanded by the workplace and theoretical classes need to be replaced by those which have a more practical and hands-on approach (Kolb, 1984). The universities need to experiment with more innovative pedagogical approaches to the study of enterprise development and growth. University administration would also have to cultivate closer ties with the private sector, angel investors, and incubator facilities. The second stage entails addressing the factors that are important for the intrinsic motivation of female students (Fayolle *et al.*, 2006). These students need to be provided with opportunities for achievement, which could manifest itself as opportunities to develop business plans and try their hand at actually launching a business. Those who have been successful need to be acknowledged as well as their mentors and other supporting institutions. This would point to a need for successful marketing and PR campaigns. Further training and development opportunities outside of the classroom will help students to grow and to achieve their potential (Nabi *et al.*, 2016). Such an environment has the potential to be perceived as supportive and effective as shown by the results of this study. It also seems to be able to stimulate entrepreneurial intentions, even if only partially.

Motives are generally related to goals. For most students the intrinsic motivation of attending university is the pursuit of a degree, which very often means preparing to become an employee rather than self-employed. If a generation of youth that prefers to engage in entrepreneurial activity is desired, then an understanding of what motivates them is necessary. This should be coupled with an emphasis on the desirability and appeal of self-employment. In parallel, there is also a need to eliminate factors that cause dissatisfaction with the educational experience. While it may not guarantee that students will go down the path of self-employment,

it certainly does encourage it and provides the opportunity to channel entrepreneurial intentions into concrete action.

Curricula at Jordanian universities needs to be revised in line with global trends and with entrepreneurship blended in all courses across the curricula (Mehtap, 2014b; Welsh, 2014). Additionally, an emphasis on skills development and practical applications that compliment theoretical knowledge is also needed if universities are to serve as catalysts for start-ups in Jordan. For example, the adoption of a competence-based delivery model (Nabi *et al.*, 2016) seems to be a quite effective approach; such a model implies an interactionist /constructivist pedagogical paradigm and puts at the central stage an active problem-solving process in real-life situations where students are challenged to organize their resources for action. Universities can also promote entrepreneurship by hosting conferences and workshops in the subject, maintaining close ties with the business sector through mentoring and training programs, and by establishing on-campus business incubators. Stimulating entrepreneurial interest among students in these institutions is one way of nurturing entrepreneurial intentions and has the potential to curb the high levels of youth unemployment amongst Jordanians, in particular, young female graduates (Caputo *et al.*, 2016a). In order to overcome the barriers to female entrepreneurship, the Jordanian government can also contribute. For example, the Jordanian government could enact public policies that addresses these issues and encourages female entrepreneurial activity as a means of fostering economic and social development. Within this framework, the private sector and various government agencies need to be mobilized to create a new generation of entrepreneurially-minded youth, with access to finance, support networks, and business incentives. In particular, they need to harness the potential of underutilized, and highly educated

females. In order to do this, entrepreneurship education needs to be introduced at the high school level.

While the entrepreneurial gender gap is a global phenomenon, it must be realized that female entrepreneurs are vital for economic diversification and should no longer take a second seat to their male counterparts. The potential for female-owned firms to become an engine of growth and a tool for women's empowerment is great-but only if policy makers tackle the barriers, address social norms about working women, and correct the stigma associated with women running their own businesses. The education system needs to instill Jordanian females with a sense of self-motivation and confidence and create a mindset that says "I can do it". This has to be supported with a strong entrepreneurial ecosystem and by practical skills that truly reflect the needs of the marketplace. Only then will entrepreneurship be the way forward among youth and in particular, young females in Jordan.

Some research limitations must be acknowledged. First, the sample was comprised of female students from only two universities in Jordan and this limits the generalizability of the results. Future studies should concentrate on enlarging the sample to include female students from other universities in Amman and also other cities in Jordan. The entrepreneurial intentions of male students could also be examined and this would allow for a comparison between genders. Second, the sample was also limited to female students studying business. It would be interesting to investigate the entrepreneurial tendencies of students studying in other disciplines, particularly engineering, which is a very popular and prestigious field of study in Jordan for both males and females. Currently there is an over saturation of engineering graduates and the government has made repeated calls to high school students to avoid studying this discipline. Therefore, it is also

important to understand if engineers are equipped with the right skills to create business start-ups, instead of relying on the public and private sectors for employment.

**Acknowledgements:** Earlier versions of this research were presented at the MAC-EMMT 2014 conference in the Czech Republic, at the ICERI 2014 conference in Thailand, and at the GIKA 2016 conference in Valencia. The authors would like to thank the conference reviewers, participants and organizers for the useful comments that have helped to further develop this paper.

## References

- Abdalla, I.A. (1996). "Attitudes towards women in the Arabian Gulf region". *Women in Management Review*, Vol. 11 No. 1, pp. 29–39.
- Ahmad, S.Z. (2011). "Evidence of the characteristics of women entrepreneurs in the Kingdom of Saudi Arabia". *International Journal of Gender and Entrepreneurship*, Vol. 3 No. 2, pp. 123–143.
- Ahmad, S.Z., and Xavier, S.R. (2011). "Preliminary investigation of Yemeni women entrepreneurs: some challenges for development and barriers to success". *International Journal of Entrepreneurship and Small Business*, Vol. 13 No. 4, pp. 518–534.
- Ajzen, I. (1991). "The theory of planned behavior". *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp. 179–211.
- Ajzen, I. (2001). "Nature and operation of attitudes." *Annual Review of Psychology*, Vol. 52, pp. 27–58.
- Al Emam, D. (2014). "38% of Jordanian entrepreneurs are women". On-line document, available at: [https://www.zawya.com/story/38\\_of\\_Jordanian\\_entrepreneurs\\_are\\_women\\_insider-ZAWYA20140217042244/](https://www.zawya.com/story/38_of_Jordanian_entrepreneurs_are_women_insider-ZAWYA20140217042244/) (accessed 14 October 2015).
- Al Gharaibeh, F. (2011). "Women's Empowerment in Bahrain". *Journal of International Women*, Vol. 12 No. 3, pp. 96–113.
- Al-Alak, B., and Al-Haddad, F. (2010). "Effect of gender on the success of women entrepreneurs in Jordan". *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 1 No. 12, pp. 42–62.

Al-Dajani, H., and Marlow, S. (2010). "Impact of women's home-based enterprise on family dynamics: Evidence from Jordan". *International Small Business Journal*, Vol. 28 No. 5, pp. 470-486.

Al-Dajani, H., and Marlow, S. (2013). "Empowerment and entrepreneurship: a theoretical framework". *International Journal of Entrepreneurial Behaviour & Research*, Vol. 19 No.5, pp.503-524.

Al-Sadi, R., Belwal, R., and Al-Badi, R. (2013). "Woman entrepreneurship in the Al-Batinah region of Oman: An identification of the barriers". *Journal of International Women's Studies*, Vol. 12 No. 3, pp. 58–75.

Altinay, L., (2008). "The relationship between an entrepreneur's culture and the entrepreneurial behaviour of the firm". *Journal of Small Business and Enterprise Development*, Vol. 15 No. 1, pp. 111–129.

Autio, E., George, G., and Alexy, O. (2011). "International entrepreneurship and capability development—qualitative evidence and future research directions". *Entrepreneurship Theory and Practice*, Vol. 35 No. 1, pp. 11–37.

Bandura, A. (1997). "Self-efficacy: The exercise of control". *Freeman, New York, NY*.

Barcucci, V., and Mryyan, N. (2014). "Labour market transitions of young women and men in Jordan". *International Labour Organisation, Geneva, Switzerland*.

Basu, A., and Virick, M. (2008). "Assessing entrepreneurial intentions amongst students: a comparative study". In *12<sup>th</sup> Annual Meeting of the National Collegiate Inventors and Innovators Alliance, Dallas, TX*.

Baughn, C., and Neupert, K. (2003). "Culture and national conditions facilitating entrepreneurial start-ups". *Journal of International Entrepreneurship*, Vol. 1 No. 3, pp. 313–330.

Baughn, C.C., Chua, B.L., and Neupert, K.E. (2006). "The normative context for women's participation in entrepreneurship: A multicountry study". *Entrepreneurship: Theory and Practice*, Vol. 30 No. 5, pp. 687–708.

Boccardelli, P., and Magnusson, M.G. (2006). "Dynamic Capabilities in Early-Phase Entrepreneurship". *Knowledge and Process Management*, Vol. 13 No. 3, pp. 162–174.

Borozan, Đ., and Dabić, M. (2008). "Entrepreneur's attitudes as a preference of future job vision: an empirical evaluation and implications for teaching". In *4<sup>th</sup> International Conference on Enterprise Odyssey: Tourism - Governance and Entrepreneurship*, Cavtat, Croatia.

Brush, C.G., Bruin, A. de., and Welter, F. (2009). "A gender-aware framework for women's entrepreneurship". *International Journal of Gender and Entrepreneurship*, Vol. 1 No. 1, pp. 8–24.

Bruton, G.D., Ketchen, D.J., and Ireland, R.D. (2013). "Entrepreneurship as a solution to poverty". *Journal of Business Venturing*, Vol. 28 No. 6, pp. 683–689.

Caputo, A., Lombardi, R., Akeel, F., Almallah, H., Dakkak, B., and Qubbaj, N. (2016a). "Youth employment in start-up ventures in Jordan: an exploratory study". *International Journal of Entrepreneurship and Small Business*. In press, retrievable at: <http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijesb>

Caputo, A., Mehtap, S., Pellegrini, M.M. and Al-Refai, R. (2016b). "Supporting opportunities for female entrepreneurs in Jordan". *International Journal of Entrepreneurship and Small Business*, Vol 27 No. 2-3, pp. 384–409.

Carr, J.C., and Sequeira, J.M. (2007). "Prior family business exposure as intergenerational influence and entrepreneurial intent: A Theory of Planned Behavior approach". *Journal of Business Research*, Vol. 60 No. 10, pp. 1090–1098.

Carter, N., Brush, C. and Greene, P.G. (2003). "Women entrepreneurs who break through to equity financing: The influence of human, social and financial capital". *Venture Capital*, Vol. 5 No. 1, pp. 1–28.

Carter, S., Anderson, S., and Shaw, E. (2001). "Women's Business Ownership: A Review of the Academic, Popular and Internet Literature". *Small Business Service Research Report RR002/01*, London.

Carter, S., Shaw, E., Lam, W., and Wilson, F. (2007). "Gender, entrepreneurship, and bank lending: The criteria and processes used by bank loan officers in assessing applications". *Entrepreneurship: Theory and Practice*, Vol. 31 No. 3, pp. 427–444.

Central Intelligence Agency (2014). "The World Factbook 2013-14". *Central Intelligence Agency, Washington, DC*.

Chamlou, N., Klapper, L., and Muzi, S. (2008). "The environment for women's entrepreneurship in the Middle East and North Africa". *World Bank Publications, Washington, DC*.

Cheng, M.Y., Chan, W.S., and Mahmood, A. (2009). "The effectiveness of entrepreneurship education in Malaysia", *Education + Training*, Vol. 51 No. 7, pp. 555–566.

Dabić, M., Daim, T., Bayraktaroglu, E., Novak, I., and Basic, M. (2012). "Exploring gender differences in attitudes of university students towards entrepreneurship: An international survey". *International Journal of Gender and Entrepreneurship*, Vol. 4 No. 3, pp. 316–336.

Davidson, M.J., Fielden, S.L., and Omar, A. (2010). "Black, Asian and Minority ethnic female business owners: Discrimination and social support". *International Journal of Entrepreneurial Behavior & Research*, Vol. 16 No. 1, pp.58-80.

De Vita, L., Mari, M., and Poggesi, S. (2014). "Women entrepreneurs in and from developing countries: Evidences from the literature". *European Management Journal*, Vol. 32 No. 3, pp. 451–460.

Demerouti, E., and Rispens, S. (2014). "Improving the image of student-recruited samples: A commentary", *Journal of Occupational and Organizational Psychology*, Vol. 87 No. 1, pp. 34–41.

Díaz-García, M.C., and Jiménez-Moreno, J. (2010). "Entrepreneurial intention: The role of gender". *International Entrepreneurship and Management Journal*, Vol. 6 No. 3, pp. 261–283.

Dickson, P.H., Solomon, G.T. and Weaver, K.M. (2008), "Entrepreneurial selection and success: does education matter?" *Journal of Small Business and Enterprise Development*, Vol. 15 No. 2, pp. 239–258.

El-Rahmony, S. (2002). "Women in the Arab world: From role conflict to effective participation". *Al-Mustaqbal Al-Arabi, the Arab Future*. Beirut: *Centre for Arab Unity Studies*, pp. 93–107.

Ettl, K., and Welter, F. (2010). "How female entrepreneurs learn and acquire (business-relevant) knowledge". *International Journal of Entrepreneurship and Small Business*, Vol. 10 No. 1, pp. 65–82.

European Commission (2010), *Entrepreneurship in the EU and beyond*. Flash EB Series #283, European Commission, Brussels, Belgium.

European Commission (2013), *Entrepreneurship 2020 action plan: Reigniting the entrepreneurial spirit in Europe*, COM (2012) 795 final, pp. 1–33.

Fayolle, A., Gailly, B., and Lassas-Clerc, N. (2006). “Assessing the impact of entrepreneurship education programmes: a new methodology”. *Journal of European Industrial Training*, Vol. 30 No. 9, pp. 701–720.

Franco, M., Haase, H., and Lautenschläger, A. (2010). “Students’ entrepreneurial intentions: an inter-regional comparison”. *Education+ Training*, Vol. 52 No. 4, pp. 260–275.

Franke, N., and Lüthje, C. (2003). “The ‘making’ of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT”. *R&D Management*, Vol. 33 No. 2, pp. 135–147.

Galloway, L. and Brown, W. (2002), “Entrepreneurship education at university: a driver in the creation of high growth firms?” *Education+ Training*, Vol. 44 No. 8/9, pp. 398–405.

GEM (2009), *Global Entrepreneurship Monitor*, GEM-MENA Regional Report 2009 (Middle East & North Africa), Kauffman Foundation, Kansas City, MO.

GEM (2012), *Global Entrepreneurship Monitor*, 2012 Women’s Report, Kauffman Foundation, Kansas City, MO.

GEM (2014), *Global Entrepreneurship Monitor*, 2014 Global Report, Kauffman Foundation, Kansas City, MO.

Gibb, A. (2002). "In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge". *International Journal of Management Reviews*, Vol. 4 No. 3, pp. 233–269.

Goby, V.P., and Erogul, M.S. (2011). "Female entrepreneurship in the United Arab Emirates: Legislative encouragements and cultural constraints". *Women's Studies International Forum*, Vol. 34 No. 4, pp. 329–334.

Gupta, V.K., Turban, D.B., Wasti, S.A., and Sikdar, A. (2009). "The Role of Gender Stereotypes in Perceptions of Entrepreneurs and Intentions to Become an Entrepreneur". *Entrepreneurship Theory and Practice*, Vol. 33 No. 2, pp. 397–417.

Gürel, E., Altınay, L. and Daniele, R. (2010). "Tourism students' entrepreneurial intentions". *Annals of Tourism Research*, Vol. 37 No. 3, pp. 646–669.

Hakki, H., and Somach, S. (2012), *Gender Analysis and Assessment*, United States Agency for International Development, Washington, DC.

Hattab, H. (2012), "Towards understanding female entrepreneurship in Middle Eastern and North African countries", *Education, Business and Society: Contemporary Middle Eastern Issues*, Vol. 5 No. 3, pp. 171–186.

Hattab, H.W. (2010). "The Effect of Environments' Dimensions on the Growth of Female Entrepreneurial Projects in Jordan". *Journal of Small Business & Entrepreneurship*, Vol. 23 No. 2, pp. 211–223.

Hechavarria, D.M., and Reynolds, P.D. (2009). "Cultural norms & business start-ups: The impact of national values on opportunity and necessity entrepreneurs". *International Entrepreneurship and Management Journal*, Vol. 5 No. 4, pp. 417–437.

Henderson, R., and Robertson, M. (2000). "Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career". *Career Development International*, Vol. 5 No. 6, pp. 279–287.

Herzberg, F. (1960). "The Motivation to Work". *Wiley, New York, NY*.

Hofstede, G.H. (1980). *Culture's Consequences: "International Differences in Work-related Values"*. Sage Publications, London, UK.

ILO (2014). "Labour inspection, gender equality and non-discrimination in the Arab states: guide book". *International Labour Organisation, Geneva, Switzerland*.

Itani, H., Sidani, Y.M. and Baalbaki, I. (2011), "United Arab Emirates female entrepreneurs: motivations and frustrations". *Equality, Diversity and Inclusion: An International Journal*, Vol. 30 No. 5, pp. 409–424.

Jaén, I., and Liñán, F. (2013), "Work values in a changing economic environment: the role of entrepreneurial capital". *International Journal of Manpower*, Vol. 34 No. 8, pp. 939–960.

Jamali, D. (2009). "Constraints and opportunities facing women entrepreneurs in developing countries". *Gender in Management: An International Journal*, Vol. 24 No. 4, pp. 232–251.

Kakouris, A. (2016) "Exploring entrepreneurial conceptions, beliefs and intentions of Greek graduates". *International Journal of Entrepreneurial Behavior & Research*, Vol. 22 No. 1, pp.109-132.

Kibler, E. (2012). "Formation of entrepreneurial intentions in a regional context". *Entrepreneurship and Regional Development*, Vol. 25, No. 3-4, pp. 293–323.

Kim, P.H., Aldrich, H.E. and Keister, L.A. (2006). "Access (not) denied: The impact of financial, human, and cultural capital on entrepreneurial entry in the United States". *Small Business Economics*, Vol. 27 No.1, pp. 5–22.

Kolb, D.A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall, New Jersey, NJ.

Kristiansen, S., and Indarti, N. (2004). "Entrepreneurial intention among Indonesian and Norwegian students". *Journal of Enterprising Culture*, Vol. 12 No. 01, pp. 55–78.

Krueger, N.F. (2007). "What lies beneath? The experiential essence of entrepreneurial thinking", *Entrepreneurship Theory and Practice*, Vol. 31 No. 1, pp. 123–138.

Krueger, N.F. and Brazeal D.V. (1994). "Entrepreneurial potential and potential entrepreneurs". *Entrepreneurship Theory and Practice*, Vol. 19 No.3, pp. 91–104.

Krueger, N.F., Reilly M.D. and Carsrud A.L. (2000). "Competing models of entrepreneurial intentions". *Journal of Business Venturing*, Vol.15 No. 5, pp. 411–432.

Kwong, C., Jones- Evans, D., and Thompson, P. (2012). "Differences in perceptions of access to finance between potential male and female entrepreneurs: Evidence from the UK". *International Journal of Entrepreneurial Behavior & Research*, Vol. 18 No.1, pp.75-97.

Lee, S.H. and Wong, P.K. (2004), "An exploratory study of technopreneurial intentions: A career anchor perspective". *Journal of Business Venturing*, Vol. 19 No. 1, pp. 7–28.

Lee, S.M., Chang, D., and Lim, S. (2005), "Impact of Entrepreneurship Education: A Comparative Study of the U.S. and Korea". *International Entrepreneurship and Management Journal*, Vol. 1 No. 1, pp. 27–43.

Lerner, J. (2010). “The future of public efforts to boost entrepreneurship and venture capital”. *Small Business Economics*, Vol. 35 No. 3, pp. 255–264.

Light, I. and Dana, L. (2013). “Boundaries of social capital in entrepreneurship”. *Entrepreneurship Theory and Practice*, Vol. 37 No. 3, pp. 603–624.

Liñán, F. (2008). “Skill and value perceptions: How do they affect entrepreneurial intentions?” *International Entrepreneurship and Management Journal*, Vol. 4 No. 3, pp. 257–272.

Liñán, F., and Chen, Y.W. (2009). “Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions”. *Entrepreneurship: Theory and Practice*, Vol. 33 No. 3, pp. 593–617.

Liñán, F., Rodríguez-Cohard, J.C. and Rueda-Cantuche, J.M. (2011), “Factors affecting entrepreneurial intention levels: a role for education”. *International Entrepreneurship and Management Journal*, Vol. 7 No. 2, pp. 195–218.

Lüthje, C., and Franke, N. (2002), “Fostering entrepreneurship through university education and training: Lessons from Massachusetts Institute of Technology.” In *European Academy of Management 2<sup>nd</sup> Annual Conference on Innovative Research in Management, Stockholm*. pp. 9–11.

Lüthje, C. and Franke, N. (2004). “Entrepreneurial Intentions of Business Students: A Benchmarking Study”. *International Journal of Innovation and Technology Management*, Vol. 1 No. March, pp. 269–288.

Majcher-Teleon, A.M., and Slimène, O.B. (2009). “Women and Work in Jordan: A case study of tourism and ICT sectors”. *European Training Foundation, Turin, Italy*.

Marlow, S., and McAdam, M. (2013). "Gender and entrepreneurship: Advancing debate and challenging myths: exploring the mystery of the under-performing female entrepreneur". *International Journal of Entrepreneurial Behavior & Research*, Vol. 19 No. 1, pp.114-124.

Mehtap, S. (2014a). "An EU-Arab Partnership to Foster Entrepreneurship Education in the Middle East: The ASPIRE Program." In *4<sup>th</sup> International Conference on Education, Research and Innovation (ICERI)*. Bangkok, Thailand.

Mehtap, S. (2014b). "Barriers to Entrepreneurship in Jordan: What do female business students think?" In *3<sup>rd</sup> Multidisciplinary Academic Conference on Economics, Management, Marketing and Tourism (MAC-EMMT)*. Prague, Czech Republic.

Minniti, M. (2008). "The role of government policy on entrepreneurial activity: Productive, unproductive, or destructive?" *Entrepreneurship: Theory and Practice*, Vol. 32 No. 5, pp. 779–790.

Mostafa, M.M. (2005). "Attitudes towards women managers in the United Arab Emirates: The effects of patriarchy, age, and sex differences". *Journal of Managerial Psychology*, Vol. 20 No. 6, pp. 522–540.

Movahedi, R. and Yaghoubi-Farani, A. (2012), "Analysis of the barriers and limitations for the development of rural women's entrepreneurship". *International Journal of Entrepreneurship and Small Business*, Vol. 15 No. 4, pp. 469–487.

Mueller, S.L., and Dato-on, M.C. (2010). "A cross cultural study of gender-role orientation and entrepreneurial self-efficacy". *Entrepreneurship and Management Journal*, Vol. 9 No. 1, pp. 198–208.

Mueller, S.L., and Thomas, A.S. (2001). "Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness". *Journal of Business Venturing*, Vol. 16 No. 1, pp. 51–75.

Nabi, G., Holden, R. and Walmsley, A. (2010). "Entrepreneurial intentions among students: towards a re-focused research agenda". *Journal of Small Business and Enterprise Development*, Vol. 17 No. 4, pp. 537–551.

Nabi, G., Liñán, F., Krueger, N.F., Fayolle, A. and Walmsley, A. (2016). "The impact of entrepreneurship education in higher education: A systematic review and research agenda". *Academy of Management Learning & Education*, In press, doi:10.5465/amle.2015.0026.

Okoli, C., and Pawlowski, S.D. (2004). "The Delphi method as a research tool: an example, design considerations and applications". *Information & Management*, Vol. 42 No. 1, pp. 15–29.

Packham, G., Jones, P., Miller, C., Pickernell, D. and Thomas, B. (2010). "Attitudes towards entrepreneurship education: a comparative analysis". *Education + Training*, Vol. 52 No. 8/9, pp. 568–586.

Pathak, S., Goltz, S., and Buche, M.W. (2013). "Influences of gendered institutions on women's entry into entrepreneurship". *International Journal of Entrepreneurial Behaviour & Research*, Vol. 19 No.5, pp.478-502.

Pruett, M. (2012). "Entrepreneurship education: workshops and entrepreneurial intentions". *Journal of Education for Business*, Vol. 87 No. 2, pp. 94–101.

Pruett, M., Shinnar, R., Toney, B., Llopis, F., and Fox, J. (2009). "Explaining entrepreneurial intentions of university students: a cross-cultural study". *International Journal of Entrepreneurial Behavior & Research*, Vol. 15 No. 6, pp.571-594.

Ramadani, V., Dana, L., Ratten, V., and Tahiri, S. (2015). "The context of Islamic entrepreneurship and business: concept, principles and perspectives". *International Journal of Business and Globalisation*, Vol. 15 No. 3, pp. 244–261.

Rialti R., Pellegrini M.M., Caputo A., Dabić M. (2016). "Entrepreneurial education and internationalisation of firms in Transition Economies: A conceptual framework from the case of Croatia". *World Review of Entrepreneurship, Management and Sustainable Development*, In press, retrievable at: <http://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=wremsd>.

Sánchez, J.C. (2011). "University training for entrepreneurial competencies: Its impact on intention of venture creation". *International Entrepreneurship and Management Journal*, Vol. 7 No. 2, pp. 239–254.

Sandhu, M.S., Sidique, S.F., and Riaz, S. (2011). "Entrepreneurship barriers and entrepreneurial inclination among Malaysian postgraduate students". *International Journal of Entrepreneurial Behaviour & Research*, Vol. 17 No. 4, pp. 428–449.

Schwarz, E.J., Wdowiak, M.A., Almer-Jarz., D.A. and Breiteneker, R.J. (2009). "The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective". *Education + Training*, Vol. 51 No. 4, pp. 272–291.

Sesen, H. (2013). "Personality or environment? A comprehensive study on the entrepreneurial intentions of university students". *Education + Training*, Vol. 55 No. 7, pp. 624–640.

Shapero, A. and Sokol, L. (1982), "Social dimensions of entrepreneurship.", in C.A. Kent, D.L. Sexton & K.H. Vesper (Eds.) *Encyclopedia of Entrepreneurship*. Prentice Hall, Englewood Cliffs, NJ, pp. 72–90.

Shinnar, R.S., Giacomini, O., and Janssen, F. (2012). "Entrepreneurial perceptions and intentions: The role of gender and culture". *Entrepreneurship Theory and Practice*, Vol. 36 No. 3, pp. 465–493.

Sidani, Y. (2005). "Women, work, and Islam in Arab societies". *Women in Management Review*, Vol. 20 No. 7, pp. 498–512.

Sweida, G.L. and Reichard, R.J. (2013). "Gender stereotyping effects on entrepreneurial self-efficacy and high-growth entrepreneurial intention". *Journal of Small Business and Enterprise Development*, Vol. 20 No. 2, pp. 296–313.

Syed, J. (2008). "A context-specific perspective of equal employment opportunity in Islamic societies." *Asia Pacific Journal of Management*, Vol. 25 No. 1, pp. 135–151.

Taormina, R.J., and Lao, S.K.-M. (2007). "Measuring Chinese entrepreneurial motivation: Personality and environmental influences". *International Journal of Entrepreneurial Behaviour & Research*, Vol. 13 No. 4, pp. 200–221.

Taylor, M., and Plummer, P. (2003). "Promoting local economic growth: the role of entrepreneurship and human capital". *Education + Training*, Vol. 45 No. 8-9, pp. 558–563.

TEMPUS (2012). “Higher Education in Jordan”. *Education, Audiovisual, and Cultural Executive Agency (EACEA)*, Brussels, Belgium.

UNESCO (2009). “*Trends in global higher education: Tracking an Academic revolution*”. UNESCO, Paris.

Van Stel, A., Storey, D.J., and Thurik, R. (2007). “The effect of business regulations on nascent and young business entrepreneurship”. *Small Business Economics*, Vol. 28 No. 2-3, pp. 171–186.

Verme, P. (2014). “Economic development and female labor participation in the Middle East and North Africa: a test of the u-shape hypothesis”. *World Bank Policy Research Working Paper*, Vol. 1 No. 6927.

Wang, C.K., and Wong, P.K. (2004). “Entrepreneurial interest of university students in Singapore”. *Technovation*, Vol. 24 No. 2, pp. 163–172.

WEF (2011), *Accelerating Entrepreneurship in the Arab World*, on-line document, available at:[http://www3.weforum.org/docs/WEF\\_YGL\\_AcceleratingEntrepreneurshipArabWorld\\_Report\\_2011.pdf](http://www3.weforum.org/docs/WEF_YGL_AcceleratingEntrepreneurshipArabWorld_Report_2011.pdf) (accessed 14 October 2015).

Welsh, D.H.B. (2014). “Creative Cross-Disciplinary Entrepreneurship: A Practical Guide to Cross-Campus Programs” .*Palgrave-MacMillan, New York, NY*.

Welsh, D.H.B., Kim, G., Memili, E., and Kaciak, E. (2014a). “The influence of family moral support and personal problems on firm performance: the case of Korean women entrepreneurs”, *Journal of Developmental Entrepreneurship*, Vol. 19 No. 3, pp. 1450018-1450035.

Welsh, D.H.B., Memili, E., Kaciak, E., and Al Sadoon, A. (2014b). "Saudi women entrepreneurs: a growing economic segment". *Journal of Business Research*, Vol. 67 No. 5, pp. 758–762.

Welsh, D.H.B., Memili, E., Kaciak, E., and Ochi, M. (2014c). "Japanese women entrepreneurs: implications for family firms". *Journal of Small Business Management*, Vol. 52 No. 2, pp. 286-305.

Welsh, D.H.B., Raven, P., and Al-Bisher, F. (2001). "Franchise relations in the Gulf Region: the case of the elegant shoplifter." in I. Alon & D.H.B. Welsh (Eds.). *International franchising in emerging markets: China, India, and other Asian countries*, CCH, Inc., Chicago, IL, pp. 243–251.

The World Bank (2006). *The road not travelled: Education reform in the Middle East and North Africa*". Washington, DC.

The World Bank (2015). "Jordan Overview". *On-line document, available at: <http://www.worldbank.org/en/country/jordan/overview>* (accessed 14 October 2015).

Wilson, F., Kickul, J. and Marlino, D. (2007). "Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education". *Entrepreneurship Theory and Practice*, Vol. 31 No. 3, pp. 387–406.

Wilson, K. (2008). "Entrepreneurship Education in Europe." In *Entrepreneurship and Higher Education*. OECD, Paris, France.

Yordanova, D.I., and Alexandrova- Boshnakova, M.I. (2011). "Gender effects on risk-taking of entrepreneurs: evidence from Bulgaria". *International Journal of Entrepreneurial Behavior & Research*, Vol. 17 No.3, pp.272-295.

## List of Tables

Table 1 – Exploratory factor analysis of the barriers perceived by female students

	Attitude (1)	Self- efficacy (1)	Social Norms (1)	Self- efficacy (2)	Self- efficacy (2)	Social Norms (2)	Attitude (2)	Attitude (3)
b11	0,845							
b22	0,805							
b25	0,795							
b10	0,511							
b20		0,802						
b6		0,655						
b13		0,558						
b12		0,496						
b18			-0,864					
b21			-0,823					
b19				-0,88				
b3				-0,82				
b24				-0,808				
b1					0,754			
b4					0,719			
b2					0,655			
b23					0,498			
b8						-0,902		
b7						-0,875		
b9						-0,496		
b5							0,746	
b17							0,628	
b16								0,739
b15								0,728

Table 2 Description of the barriers

Questionnaire Items	Factors
10. I don't have networking skills and professional contacts needed to do business	Attitude 1 – Economic and social contexts are not suitable
11. The economy in Jordan is bad	
22. Jordanian business life is dominated by men	
25. The region is unstable, its best to keep your money and wait and see	
6. I don't have the necessary skills and capabilities	Self-efficacy 1 – Lack of confidence in personal skills
12. I am unable to recognise potential opportunities for doing business	
13. I know nothing about innovation/creativity	
20. To succeed you need someone with experience to mentor you	
18. Our society looks down on entrepreneurs	Social Norms 1 – General support for entrepreneurship (negative)
21. Copyright/intellectual property laws are not strong enough	
3. Lack of customers/clients for my business idea	Self-efficacy 2 – Lack of characteristics associated with an entrepreneur
19. You need to have a degree in business related subjects	
24. It is not culturally acceptable for women to be entrepreneurs	
1. Lack of money/capital	Self-efficacy 3 – Lack of confidence in managing challenges of entrepreneurship
2. Scared of the financial risk involved	
4. Lack of relevant technical know how/expertise	
23. It is hard to balance long work hours with private life	
7. My family would discourage me	Social Norms 2 – Close and business environment (negative)
8. My friends would discourage me	
9. The banks wouldn't give me credit	

5.	Rules and regulations in Jordan	Attitude 2 – Bureaucracy is against entrepreneurship (negative)
17.	Too much government bureaucracy	
15.	It's safer to work for someone else	Attitude 3 – Entrepreneurship is not appealing
16.	Someone else will copy my idea before I have a chance to establish myself	

Table 3 – Exploratory factor analysis of the educational context perceived by female students

	Educational support	Educational lack
Uni1	0,852	
Uni2	0,809	
Uni3	0,751	
Uni4	0,618	
Uni5	0,541	
Uni6		-0,838
Uni7		0,823

Table 4 – Description of the educational context

	Questionnaire Items	Factors
1.	The course work at this university prepares you well for self-employment	Educational support
2.	The creative atmosphere at this university inspires us to develop ideas for new businesses	
3.	The university actively promotes the process of founding a new company	

4.	The courses offered at this university, provide the social and leadership skills needed by entrepreneurs	
5.	This university has close ties to the private sector	
6.	If I wanted to start my own business, this university would support me	Education lack
7.	The courses at this university are too theoretical and need more practical applications	

Table 5 – Perceived educational support comparison

<b>Factor</b>	<b>T-test</b>	<b>Sig.</b>
<b>Attitude 1 – Economic and social contexts are not suitable</b>	2,352	,019*
<b>Self-efficacy 1 – Lack of confidence in personal skills</b>	,966	,335
<b>Social Norms 1 – General support for entrepreneurship</b>	1,308	,192
<b>Self-efficacy 2 – Lack of characteristics associated with an entrepreneur</b>	-,550	,583
<b>Self-efficacy 3 – Lack of confidence in managing challenges of entrepreneurship</b>	-1,149	,252
<b>Social Norms 2 – Close and financial environment</b>	-1,289	,199
<b>Attitude 2 – Bureaucracy is against entrepreneurship</b>	-2,016	,045*
<b>Attitude 3 – Entrepreneurship is not appealing</b>	-1,999	,047*

\* Sig < 0,05  
 \*\* Sig < 0,01  
 \*\*\* Sig ≤ 0,001

Table 6 – Perceived educational lack comparison

<b>Factor</b>	<b>T-test</b>	<b>Sig.</b>
<b>Attitude 1 – Economic and social contexts are not suitable</b>	2,373	,018*
<b>Self-efficacy 1 – Lack of confidence in personal skills</b>	1,092	,276
<b>Social Norms 1 – General support for entrepreneurship</b>	-2,562	,011*
<b>Self-efficacy 2 – Lack of characteristics associated with an entrepreneur</b>	,275	,784
<b>Self-efficacy 3 – Lack of confidence in managing challenges of entrepreneurship</b>	3,504	,001***
<b>Social Norms 2 – Close and financial environment</b>	1,371	,172
<b>Attitude 2 – Bureaucracy is against entrepreneurship</b>	-,865	,388
<b>Attitude 3 – Entrepreneurship is not appealing</b>	2,776	,006**

\* Sig < 0,05  
 \*\* Sig < 0,01  
 \*\*\* Sig ≤ 0,001