

---

## **UNIVERSITIES AS SUPPLIERS OF ENTREPRENEURSHIP EDUCATION SERVICES. THE CASES OF THE UNIVERSITY OF SEVILLE AND THE ACADEMY OF ECONOMIC STUDIES IN BUCHAREST**

**Isidoro Romero<sup>1\*</sup>, Raluca Mariana Petrescu<sup>2</sup> and Alina Elena Balalia (Iosif)<sup>3</sup>**

<sup>1)</sup> *University of Seville, Seville, Spain*

<sup>2)3)</sup> *Academy of Economic Studies, Bucharest, Romania*

---

### **Abstract**

The paper advocates the role of universities in the knowledge-based economy as suppliers of entrepreneurship education in order to stimulate the emergence of entrepreneurs among their graduates. The paper presents the University of Seville (US) in Spain and the Academy of Economic Studies (AES) in Bucharest, Romania as two case studies. The first part of the paper describes and compares the offer of entrepreneurship education in both universities. This analysis reveals the increasing interest in introducing and promoting entrepreneurship education since the implementation of the Bologna educational process started. The second part of the paper investigates the entrepreneurial intentions among graduates at both academic institutions. This empirical research is based on two surveys carried out among 93 graduates of the US and 98 graduates of the AES in 2010. Following the hypotheses of Ajzen's Theory of Planned Behaviour, Personal Attitudes towards starting-up and Perceived Behavioural Control -self-efficacy perception- are studied as primary antecedents of the entrepreneurial intention. The analysis reveals the existence of higher entrepreneurial intentions for the AES. This seems to be due to more positive personal attitudes towards entrepreneurship for the graduates at the AES, whereas no significant differences in self-efficacy can be appreciated.

**Keywords:** entrepreneurial intention, entrepreneurship education, university, entrepreneurship supply, entrepreneurial culture, knowledge-based economy

**JEL classification:** L26, I23

---

### **Introduction**

In knowledge-based economies, characterized by continuous technological innovations and the development of the information society and the globalization process, entrepreneurship has emerged as a driving force of economic growth, structural change and job creation (Audretsch, Keilbach and Lehmann, 2006; Volkmann et al., 2009). In the light of the new

---

\* Corresponding author, **Isidoro Romero** - isidoro@us.es

scenario, governments and international agencies have aimed at fostering entrepreneurship as part of their policy proposals (OECD, 1998; European Commission, 2003).

Entrepreneurship can be conceived as the result of a market process leading up to an equilibrium between the supply and the demand for the entrepreneurial factor. Thus, Casson (1995) postulates that the demand for entrepreneurship determines the entrepreneurial roles that are needed to be filled, whereas the supply of entrepreneurs is related to the availability of suitable candidates to fill these roles. On the demand side, the strategic role of innovation and the structural transformations associated with the knowledge-based economy imply a substantial increase in the social demand for capable entrepreneurs. On the supply side, the cultural characteristics and educational systems in different societies are highly relevant factors influencing the potential offer of entrepreneurs.

In this context, the role of education in society is changing and needs to be adapted to the new social requirements. The knowledge-based economy is transforming the coordinates of the 'old' economy, focusing more on the continuous development of people (Plumb and Zamfir, 2009) and on their entrepreneurial capabilities (Audretsch and Thurik, 2000). Furthermore, the quality of higher education has become increasingly important for regional, national and global economic and social development (Rosca et al., 2008). In this knowledge-based economy, the social demand for graduates displaying entrepreneurial attitudes is increasing and universities have to assume a crucial role as suppliers of potential entrepreneurs (Volkman et al., 2009). Thus, the entrepreneurship education oriented to stimulating entrepreneurial skills and values among the students is receiving more and more attention in developed societies (European Commission, 2004, 2008; OECD, 2008).

When pursuing this objective, universities are conditioned by the prevalent culture in each region and/or nation. Some societies are characterized by certain cultural values, such as economic ambition and preference for self-employment, desire for independence, which can facilitate the extension of the entrepreneurial activity. In contrast, other societies show a cultural atmosphere characterized by a negative social perception of the entrepreneurs/capitalists, a low interest for self-employment or the prevalence of some values which can act as obstacles for entrepreneurship (Uhlener et al., 2007; Aoyama, 2009). Consequently, it is interesting to compare the results of universities trying to foster entrepreneurial intentions in different cultural contexts.

In this respect, Bucharest and Seville represent two illustrative cases of societies which could be facing some cultural obstacles when trying to boost entrepreneurship. On the one hand, the entrepreneurial culture in Romania could still be negatively influenced by the long communist period. On the other hand, Seville, located in Andalusia, a comparatively less-developed region in the south of Spain, has been traditionally characterized by a poor entrepreneurial culture, especially when compared with other regions in the north of Spain, such as the Basque Country or Catalonia.

In this paper, we study and compare the situation and results of the entrepreneurship education in two institutions: the US and the AES in Bucharest. The paper is structured into three main parts. The first part puts forward some theoretical considerations about entrepreneurship education and entrepreneurial intentions. The second part describes the offer of entrepreneurship education at the US and the AES, while the third part is devoted to an empirical research of the entrepreneurial intentions of graduates based on surveys

carried out at the two universities in 2010. The paper ends up with some final considerations.

### **1. Entrepreneurship education and entrepreneurial intention**

The theoretical foundations of this paper lie on two specific topics within the entrepreneurship literature, namely entrepreneurship education and entrepreneurial intention.

#### *Entrepreneurship education*

According to Drucker (1986), “most of what you hear about entrepreneurship is all wrong. It’s not magic; it’s not mysterious; and it has nothing to do with genes. It’s a discipline and, like any discipline, it can be learned”. However, entrepreneurship education is a relatively recent phenomenon. Only in the last decades has the number of initiatives in Europe in the field of entrepreneurship education steadily grown.

The majority of the studies advocate the positive influence of entrepreneurship education in upgrading the perceptions of students regarding entrepreneurship and their entrepreneurial skills (Peterman and Kennedy, 2003; Souitaris, Zerbinati and Al-Laham, 2007; von Graevenitz, Harhoff, and Weber, 2010; Dragusin, 2010). However, there is no unanimous agreement in this respect, and some works doubt about the effect of entrepreneurship education –or even appreciate a negative impact (Oosterbeek, van Praag and Ijsselstein, 2010).

Originally, entrepreneurship education was designed to teach students how to start a venture (Dragusin, 2010), strengthening their entrepreneurial skills and capabilities. In the current context, this approach is not sufficient anymore. Entrepreneurship education should be also oriented towards changing personal attitudes in order to prepare students to face a dynamic, rapidly changing entrepreneurial and global environment. In this respect, the European Commission defends an integral approach for entrepreneurship education at the higher education level. According to this, the primary purpose of entrepreneurship education should be to develop entrepreneurial capacities, but also, to instil entrepreneurial mindsets (European Commission, 2008). In order to achieve this, the World Economic Forum laid out a series of approaches and success factors for entrepreneurship education: developing leadership and life skills, embedding entrepreneurship in education, taking a cross-disciplinary approach, utilizing interactive pedagogy, and leveraging technology (Volkman et al., 2009).

#### *Entrepreneurial intention*

Even though starting up a new venture represents mainly an individual’s personal decision, most research in entrepreneurship has concentrated on analysing the firm-creation process once the decision to create it has already been taken. On the contrary, the internal process that leads people to taking the decision to create a venture has not captured so much attention. Nonetheless, since the 90s a series of scientific papers has stressed the importance of including cognitive variables along with economic, managerial, psychological and sociological aspects when studying the entrepreneurial decision (Shaver and Scott, 1991; Baron, 2004; Liñán and Chen, 2009). In this sense, the Green Paper “Entrepreneurship in Europe” (European Commission, 2003) raised a major issue regarding this subject: How to

improve people's inclination towards developing new entrepreneurial initiatives? Approaching entrepreneurship as an attitude, the Green Paper broadens the range of possible policy actions, going beyond the mere elimination of barriers that obstruct business creation. Since the decision to become an entrepreneur is plausible to be considered as voluntary and conscious, it seems reasonable to analyse how that decision is taken. In this sense, the entrepreneurial intention would be a foregoing and defining element towards performing entrepreneurial behaviours (Kolvereid, 1996).

To date, many research works have been conducted on entrepreneurial intention, based on different theoretical models, such as the Entrepreneurial Event Model (Shapero and Sokol, 1982), the interactional Model of Implementing Entrepreneurial Ideas (Bird, 1988), and the Maximization of the Expected Utility (Douglas and Shepherd, 2002). However, the Theory of Planned Behaviour (TPB) (Ajzen, 1991) is the most frequently used theoretical framework in recent studies on entrepreneurial intention (Kolvereid and Isaksen, 2006; Krueger, 2007; Moriano, Palací and Morales, 2007, Liñán and Chen, 2009; Liñán, Urbano and Guerrero, 2011).

According to the TPB, entrepreneurial intention is shaped by three motivational factors, or antecedents, influencing the individual's behaviour (Ajzen, 1991):

- Personal attitude toward start-up (PA). This represents the individual's positive or negative personal valuation about being an entrepreneur.
- Subjective norm (SN): This measures the perceived social pressure to become -or not to become- an entrepreneur. In particular, it would refer to the perception that "reference people" (family, friends, etc.) would approve the decision to start-up a business, or not.
- Perceived behavioural control (PBC): This is the perception of the ease or difficulty of becoming an entrepreneur. It is a similar concept to self-efficacy (SE) (Bandura, 1997), that is, people's belief about their capabilities to organize and execute courses of action required to attain certain levels of performance - in this context, to successfully start-up a business.

## **2. Entrepreneurship education at the University of Seville and the Academy of Economic Studies in Bucharest**

This section briefly describes the offer of entrepreneurship education at the US and the AES. In this respect, courses, seminars or other educational initiatives related to general business administration are not considered, but only those which specifically aim at increasing the entrepreneurial intentions of the attendants. The educational offer at undergraduate and master level both before and after the Bologna process is considered in this study.

Founded in 1505, the US is currently one of the most important suppliers of higher educational services in Spain, with a student body of over 50,000 and 33 university centres (Schools and Faculties of the US and Associated Centres), among which two are specialized in the economics and business field, namely the Faculty of Economics and Business Sciences and the Faculty of Tourism and Finance (previously named School of

Business Studies). In order to make a proper comparison with the AES, only these two Faculties at the US will be studied in this paper.<sup>1</sup>

At the Faculty of Economics and Business Sciences, the implementation of *the Bologna process* posed the introduction of the following entrepreneurship subjects:

- “Business Creation” is studied as a compulsory subject for all students in the 4<sup>th</sup> year enrolled in the following undergraduate programmes: “Business Administration and Management”, “Market Research and Marketing”, “Economics” and “Business Administration, Management and Law”.
- During the 4<sup>th</sup> year, the students enrolled in the “Business Administration and Management” programme or in the “Market Research and Marketing” programme have to choose between following a traineeship or developing and presenting a business plan.
- An optional subject, “The Economics of the Entrepreneurial Factor”, is studied in the “Economics and Development” master programme.

At the Faculty of Tourism and Finance (School of Business Sciences), two entrepreneurship-oriented subjects could be found *before the Bologna process*: “Business Creation” -studied in the 3<sup>rd</sup> year as an optional subject within the “Business Administration” programme- and “The Creation of Tourism Organization” -studied as an optional subject in the 3<sup>rd</sup> year of the “Tourism” programme.

*After the Bologna process*, at undergraduate level, the following subjects can be pointed out:

- Students enrolled in the “Tourism” programme study “The Creation of Tourism Business” in the 3<sup>rd</sup> year as a compulsory subject.
- During the 4<sup>th</sup> year, students enrolled in the “Finance and Accountability” programme study “Business Creation” as a compulsory subject.
- Students have to choose within the 4<sup>th</sup> year in the “Finance and Accountability” programme between following a traineeship and developing a business plan.

The previous description is focused on the officially-recognized programmes. However, diverse activities and courses are also offered which can be classified within the entrepreneurship education category. In this respect, we can highlight the Master on Entrepreneurship Development offered by the Lifelong Learning Centre or the activities (seminars, conferences, research initiatives, etc.) promoted by the Bancaja Chair for Young Entrepreneurs at the US.

The AES in Bucharest represents one of the most prestigious institutions of higher economic and public administration education in Romania. The AES started offering economic educational services in 1913, nowadays being composed of 11 faculties, all of them with an economic background, but focused on different specializations<sup>2</sup>.

---

<sup>1</sup> In these two Faculties, the first generation of students in the new graduate and master programmes - according to the Bologna scheme - began their studies, respectively, in the 2009-2010 and the 2008-2009 academic years. At the US, before the Bologna process, the first and second cycle programmes lasted, respectively, 3 years (at the School of Business Studies) and 5 years (at the Faculty of Economics and Business Sciences). After the Bologna process, the graduate programmes’ duration is 4 years and the master programmes last 1 year.

<sup>2</sup> Before the Bologna process, the undergraduate programmes in the AES were of 4 years, while the master programmes were of one and a half years. After the Bologna process, the undergraduate programmes became of 3 years, while the master programmes are of 2 years. The 2005-2006

Entrepreneurship -as a discipline- was introduced in the educational offer of the AES for the undergraduate level *after the Bologna process*, respectively in the 2005-2006 academic year. In this sense, two entrepreneurship-related subjects are studied at the AES: “Entrepreneurial Culture” and “Entrepreneurship in Commerce, Tourism and Services”.

- “Entrepreneurial Culture” is a compulsory subject for the students enrolled in the 1<sup>st</sup> year at the Faculty of Business Administration (in Foreign Languages) and an optional subject in the 2<sup>nd</sup> year for the students of the Faculty of Marketing.

- “Entrepreneurship in Commerce, Tourism and Services” is a compulsory subject for the students in the 2<sup>nd</sup> year in the Faculty of Commerce, and an optional subject for the students of the Faculty of Economic Cybernetics, Statistics and Informatics.

In addition to these, at the AES, among other initiatives, a series of activities related to entrepreneurship has been developed. For instance, special lectures by entrepreneurs who talk about their personal experiences, the elaboration in 2008 by the Faculty of Commerce of a “Catalogue of student entrepreneurs in the Faculty of Commerce” or the “START! Business” programme led by Junior Achievement Romania.

As a conclusion, it can be appreciated that the two universities analysed are making significant efforts towards introducing and promoting entrepreneurship-related subjects after the implementation of the reforms within the Bologna process. Thus, the offer of entrepreneurship education in both universities is mainly concentrated at the undergraduate level. In this respect, it could be interesting to strengthen the efforts oriented to developing the entrepreneurial mindsets among students and enhance their entrepreneurial spirit at master level just when they are going to finish their studies.

### **3. Exploring the entrepreneurial intentions of graduates**

This section aims at investigating and comparing the entrepreneurial intentions of graduates in the two institutions considered: the US and the AES. This empirical analysis is based on two surveys carried out among 191 graduates, 93 of them at the US and 98 at the AES. At the US, the survey was carried out during the first semester of 2010, while at the AES, it was done during the last semester of 2010. Databases of graduates were obtained from the US and AES, including contact information. Graduates were asked to collaborate with this study by e-mail. They were encouraged to answer the on-line questionnaire designed for the aims of this research (21% response rate).

The questionnaire was structured into two parts. The first part referred to general information about the respondents (age, gender, current working status, etc.). Table no. 1 shows the composition of the sample regarding gender and age. It can be observed that the sample from the US is more balanced regarding the respondent’s gender. However, in the case of the AES, a wide majority of the respondents were females, which is representative of the whole population of students at the AES. Regarding the respondents’ age, the higher proportion of graduates over 25 years at the US in comparison with the AES can be noticed. This is partially explained by the absence of employment opportunities for the young

---

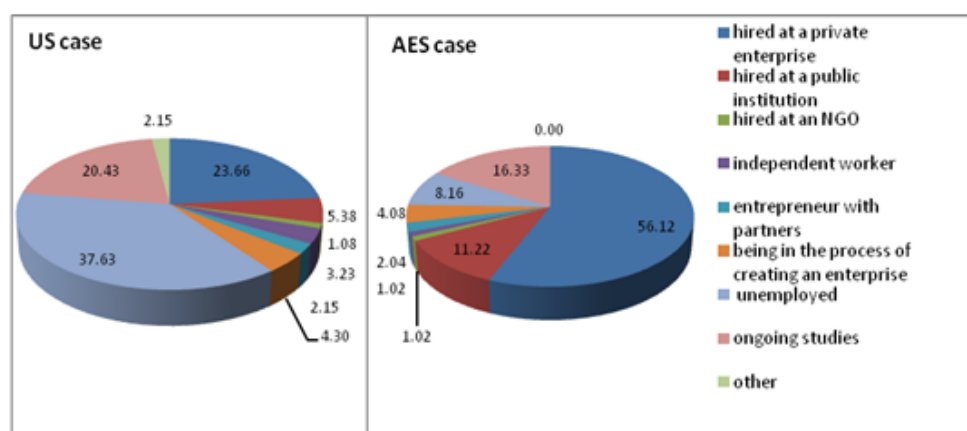
academic year represented for the AES the moment when the first Bologna generation for undergraduate programmes started working, in parallel with the last undergraduate generation of 4 years.

people in Spain that led many of them to continue their studies or, in some cases, to come back to the university after having lost their jobs.<sup>3</sup>

**Table no. 1: Sample's structure by respondents' gender and age (%)**

	Gender		Age (years)			
	Male	Female	21-25	26-30	31-35	over 36
US	47.31	52.69	48.39	35.48	11.83	4.30
AES	19.39	80.61	93.88	6.12	0.00	0.00
Total sample	32.98	67.02	71.73	20.42	5.76	2.09

Regarding the current working status, it can be observed that more than half (56.12%) of the respondents from the AES is working in the private sector. In contrast, in the case of the US, the highest percentage of the respondents (37.63%) suffers an unemployment situation. This is showing again the large overall unemployment rates in Spain and, more specifically, among young people. As can be seen also in Figure no. 1, the relevance of entrepreneurial activity among the graduates of the two universities is quite similar. Among the US respondents, 4.30% are in the process of creating a business in comparison with 4.08% in the AES case.



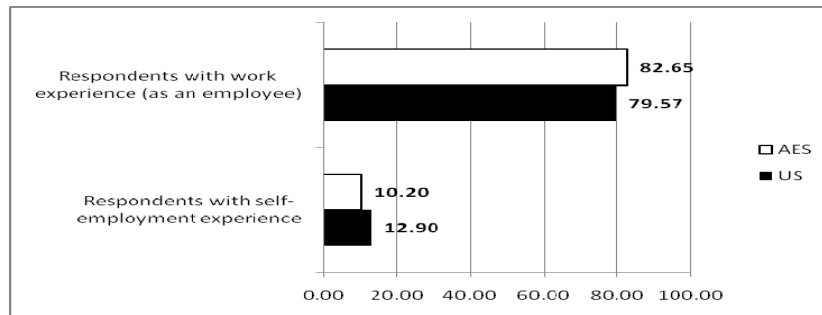
**Figure no. 1: Respondents grouping by current working status (%)**

The percentages regarding the graduates with work experience are quite similar for the two universities. In the case of the US, a higher percentage of the respondents have previous work experience -as self-employed- in comparison with the case of the AES. This is coherent with the higher average age of the respondents from the US (Figure no. 2).

The second part of the questionnaire refers to respondents' entrepreneurial intentions. Graduates were questioned about their intentions to follow different career options (Table no. 2), being asked to express their interest on a 7 level Likert scale (from 0-total unconcern up to 6-total concern). The most preferred career option among the US and AES graduates - in terms of the overall average- was working in a private institution, followed by becoming an entrepreneur. As can be seen in Table no. 2, the average score for the entrepreneurial intention is higher in the case of the AES, though this difference is not statistically-

<sup>3</sup> The unemployment rate in Andalusia – the region where the city and the province of Seville are located - in the last period of 2010 for people from 20 to 24 years was 44.65%.

significant when an ANOVA analysis is implemented. However, significant differences can be appreciated regarding working in a private company and working in the public administration. In this respect, graduates from the AES have a higher preference for private companies in comparison with graduates from the US and the opposite can be observed regarding the option for working in the public administration. This negative perception of the option for a career in the public sector among the Romanian graduates might be due to an association with the communist period.



**Figure no. 2: Respondents grouping by entrepreneurial experience (%)**

**Table no. 2: Respondents interest to follow different career options. Average scores and ANOVA analysis**

	Creating your own business (being entrepreneur)	Developing your professional career in a private enterprise	Working in public administration	Collaborating with an NGO
US	3.84	4.10	3.61	2.97
AES	4.24	4.60	1.43	2.90
F	2.722	5.285	63.648	0.063
Sig.	0.101	0.023 (**)	0.000 (***)	0.801

Note: (\*\*\*) Significance level of 0.01. (\*\*) Significance level of 0.05. (\*) Significance level of 0.10.

Nevertheless, given that intentions are a complex cognitive trait, this way to capture entrepreneurial intentions through a direct question is not necessarily the best option from a methodological point of view. For this reason, following Liñán and Chen (2009), graduates participating in this study were also asked about their level of intention (using a scale from 0-not at all to 6-total) regarding a series of statements related to the entrepreneurial activity. It can be observed in Table no. 3 that the AES respondents exhibit higher scores for all the statements with the unique exception of the third one. Nevertheless, this statement ('I have serious doubts that I'll start a business one day') is formulated in an inverse way in order to control for the respondents' accuracy when answering the questions. So, in this case the lower level of agreement with the statement is also showing higher entrepreneurial intentions of the AES graduates in comparison with the US ones (Table no. 3). In this case, the differences between the averages for the AES and the US are statistically-significant when carrying out an ANOVA analysis, for the first, third and fourth statements.

In order to further investigate the entrepreneurial intentions of the respondents, the Theory of Planned Behaviour (TPB) was used in this paper as a theoretical framework. As previously mentioned in Section 1, according to TPB, the entrepreneurial intention can be analysed as the result of three antecedents: Personal Attitude toward start-up (PA),



Perceived Behavioural Control (PBC) or Self-Efficacy perception (SE) and Subjective Norm (SN). However, SN was not included in this research. The reason for this exclusion is that, whereas the role of universities increasing students' PA and PBC/SE is highly relevant, their influence is not so direct in the case of SN. As mentioned before, SN measures the perceived social pressure from reference people to become -or not to become- an entrepreneur and these influences are external to high educational institutions.

**Table no. 3: Respondents' level of entrepreneurial intention.  
Average scores and ANOVA analysis**

	It is very feasible for me to start a business one day	I'm ready to do all the necessary efforts in order to become an entrepreneur	I have serious doubts that I'll start a business one day	I've decided to start a business in the future	My professional goal is to become an entrepreneur
US	3.75	3.78	2.86	3.44	3.29
AES	4.33	4.03	2.10	3.95	3.41
F	6.587 (**)	1.171	9.124 (***)	4.551 (**)	0.226
Sig.	0.011	0.280	0.003	0.034	0.635

Note: (\*\*\*) Significance level of 0.01. (\*\*) Significance level of 0.05. (\*) Significance level of 0.10.

In order to approach PA towards entrepreneurship, two components were differentiated: On the one hand, different aspects related to being an entrepreneur were put forward to the graduates interviewed in order to check to what extent they personally associated these issues with entrepreneurship. These characteristics were expressed through six statements: being an entrepreneur implies 'facing new challenges', 'creating jobs for other people', 'being creative and innovative', 'getting a high income', 'taking calculated risks' and 'being independent'. On the other hand, respondents were also asked to express their personal attraction to these different aspects in general in their lives. All these questions were presented as Likert-type scales with 7 items (higher values meaning more strong association/attraction). It is convenient to separate these two components for the following reason. Let's consider, for instance, the statement about 'high income'. If the respondents do not associate this characteristic with becoming an entrepreneur, they will not feel attracted by entrepreneurship for this reason, even if getting a high income is a primary objective in their lives. Furthermore, if they associate a high income with being an entrepreneur, but they are not especially motivated by getting a high income, they will not feel that entrepreneurship is an appealing professional career either. So, only the respondents with a high score in both answers will consider becoming an entrepreneur attractive because this allows reaching a high income.

Finally, the overall level of personal attraction towards entrepreneurship for each individual could be measured by the following expression which takes into account the different components of the PA:

$$PA_i = \frac{1}{6} \sum_{s=1}^6 a_i^s \quad (1)$$

$$\text{being } a_i^s = \frac{c_i^s \cdot d_i^s}{6} \quad s=1, \dots, 6 \quad (2)$$

where  $c_i^s$  stands for each respondent's degree of association between the  $s$  characteristic and entrepreneurship,  $d_i^s$  for the degree of desirability of the  $s$  characteristic and  $a_i^s$  for the component of the personal attitude towards entrepreneurship due to the feature expressed by statement  $s$  (taking the three variables' values from 0 to 6).  $PA_i$  denotes the personal attitude towards entrepreneurial activity for the  $i$  individual and is calculated as an average of the six  $a_i^s$  (higher values mean more positive PA).

PA averages for the two universities are shown in Table no. 4. Firstly, it seems to be that the graduates at the US and the AES have not exactly the same idea about what entrepreneurship implies. The average scores for  $c_i^s$  revealed the fact that, for the US graduates, starting a business implies mainly facing new challenges and being independent, whereas for the AES graduates, starting a business is primarily associated with creativity and innovation and, only after this, with facing new challenges and being independent. However, the most statistically-significant differences among the two institutions are those related to the questions about 'high incomes' and 'taking calculated risks'. In both cases, graduates at the AES more strongly associate these issues with being an entrepreneur in comparison with graduates at the US.

**Table no. 4: Personal Attitudes towards entrepreneurship. Average scores and ANOVA analysis**

Degree of association with entrepreneurship						
	Facing new challenges (c <sup>1</sup> )	Jobs creation for other persons (c <sup>2</sup> )	Creativity and innovation (c <sup>3</sup> )	High incomes (c <sup>4</sup> )	Taking calculated risks (c <sup>5</sup> )	Being independent (one's own boss) (c <sup>6</sup> )
US	5.31	4.70	4.99	3.91	4.20	5.17
AES	5.19	4.66	5.27	4.93	4.82	5.17
F	0.72	0.04	3.47	37.46	11.74	0.00
Sig.	0.396	0.839	0.064 (*)	0.000 (***)	0.001 (***)	0.993
Desirability						
	Facing new challenges (d <sup>1</sup> )	Jobs creation for other persons (d <sup>2</sup> )	Creativity and innovation (d <sup>3</sup> )	High incomes (d <sup>4</sup> )	Taking calculated risks (d <sup>5</sup> )	Being independent (one's own boss) (d <sup>6</sup> )
US	4.56	4.47	4.77	4.58	3.90	4.98
AES	4.58	4.17	4.81	5.05	4.28	4.80
F	0.017	2.181	0.028	6.132	3.363	0.854
Sig.	0.896	0.141	0.867	0.014 (**)	0.068 (*)	0.357
Components of personal attraction towards entrepreneurship						
	Facing new challenges (a <sup>1</sup> )	Jobs creation for other persons (a <sup>2</sup> )	Creativity and innovation (a <sup>3</sup> )	High incomes (a <sup>4</sup> )	Taking calculated risks (a <sup>5</sup> )	Being independent (one's own boss) (a <sup>6</sup> )
US	4.07	3.60	4.09	3.11	2.74	4.42
AES	4.06	3.42	4.32	4.23	3.55	4.28
F	0.007	0.534	0.983	24.90	14.274	0.340
Sig.	0.933	0.466	0.323	0.000 (***)	0.000 (***)	0.561

Note: (\*\*\*) Significance level of 0.01. (\*\*) Significance level of 0.05. (\*) Significance level of 0.10.

It can also be observed in Table no. 4 that, graduates at the AES are considerably more attracted by high incomes than graduates from the US, this difference being highly statistically-significant. Furthermore, graduates at the US are not very prompt to take risks. In contrast, the graduates at the AES perceive the assumption of risks more positively, the

difference between the two universities being also statistically-significant. Finally, as an overall measure of the personal attraction towards entrepreneurship, the indicator  $PA_i$  shows an average of 3.67 for graduates at the US and 3.98 for graduates at the AES. This difference between the two universities is statistically-significant at a 0.05 level. So, graduates at the AES seem to be more motivated towards entrepreneurship than graduates at the US and the differences between the two populations are due mainly to the perception about 'high incomes' and 'taking risks' as desirable characteristics of being an entrepreneur.

On the other hand, specific efficacies and control beliefs could be also considered as antecedents of EI. In this respect, graduates were asked about their capacity to efficiently undertake six different entrepreneurial tasks or functions (Table no. 5). Answers were coded also using a Likert scale with 7 items (from 0-total inefficiency to 6-total efficiency). A simple overall indicator for the self-efficacy perception (SE) of each individual could be given by the average of the scores for the six questions as follows:

$$SE_i = \frac{1}{6} \sum_{s=1}^6 e_i^s \quad s=1, \dots, 6 \quad (3)$$

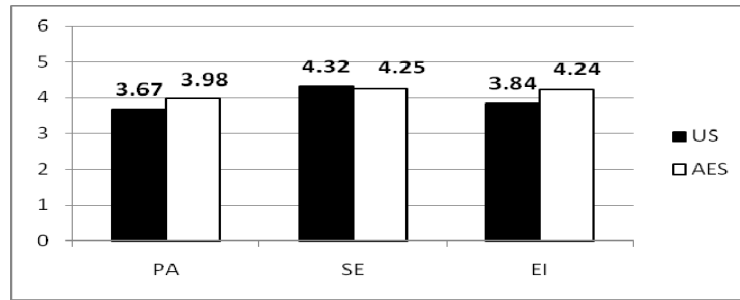
where  $e_i^s$  stands for the graduates' SE perception regarding the  $s$  task/function.

Average results for the two universities are presented in Table no. 5. The US and AES graduates, in general, consider themselves capable of starting up and developing a business, rating their efficacy regarding the six activities higher than 4 (as an average) at both universities. When comparing the US and the AES, no statistically-significant differences can be appreciated, though the US shows slightly higher average values for SE, due mainly to the first two activities considered, that is, 'establishing the business idea and enterprise strategy' and 'keeping the process of new business creation under control'. It is also noticeable that for both universities graduates feel that their main weaknesses are related to the fund-raising activities. Figure no. 3 summarises the main results obtained for PA, SE and EI.

**Table no. 5: Respondents perceptions of self-efficacy about starting up a business. Average scores and ANOVA analysis**

	Establishing business idea and enterprise strategy (e <sup>1</sup> )	Keeping the process of new business creation under control (e <sup>2</sup> )	Negotiating and maintaining favourable relations with potential investors or banks (e <sup>3</sup> )	Identifying opportunities on the market regarding new products and/or services (e <sup>4</sup> )	Communicating with key persons to obtain funds to start the business (e <sup>5</sup> )	Creating and developing a new business (e <sup>6</sup> )	SE
US	4.55	4.39	4.27	4.30	4.06	4.35	<b>4.32</b>
AES	4.32	4.15	4.34	4.28	4.13	4.28	<b>4.25</b>
F	1.797	2.122	0.140	0.024	0.131	0.216	0.277
Sig.	0.182	0.147	0.708	0.878	0.717	0.643	0.599

Note: (\*\*\*) Significance level of 0.01. (\*\*) Significance level of 0.05. (\*) Significance level of 0.10.



**Figure no. 3: Comparison between the US and AES: PA, SE and EI (average values)**

**Conclusions**

Universities have an important responsibility preparing students to face the new challenges of the knowledge economy. This implies providing citizens with an advanced education in the continuously-expansive frontiers of knowledge, but also equipping them with entrepreneurial values and attitudes. In the knowledge economy, creativity, innovation, risk assumption or leadership skills will be key competences for all citizens and not only for those involved in starting up or managing a business.

Universities in Europe are strengthening their educational offer according to these new requirements. The analysis of the situation of entrepreneurship education presented in this paper shows that the US and the AES in Bucharest are actively participating in these trends in parallel to the reforms within the Bologna process.

In addition, a study of the entrepreneurial intentions of graduates in both institutions has also been put forward in this paper. This analysis does not allow the observing of the results of the recent transformations in both Universities, but provides an interesting comparative picture about the situation in both institutions. The analysis shows that the intensity of entrepreneurial intentions in both universities is quite similar, though higher for the AES. This seems to be due to more positive personal attitudes towards entrepreneurship for the graduates at the AES, whereas no significant differences exist between these two institutions regarding the perception of self-efficacy in undertaking entrepreneurial tasks. In this respect, it could be convenient to make a stronger effort to transmit more positive attitudes towards entrepreneurship to the students at the US, specifically regarding the assumption of risk.

However, to evaluate the results of these efforts in the field of entrepreneurship education, it would be convenient to measure, in a continuous way, the effects on the graduates' entrepreneurial intentions, observing whether they (hopefully) increase (or possibly decrease) throughout their studies and how they change from one promotion to another. This paper proposes a theoretical and methodological framework to undertake this type of analysis based on the hypotheses of the Theory of Planned Action. This framework is also suitable for comparisons between institutions, being a useful tool for benchmarking.

In this paper, only the entrepreneurship-related educational offer has been considered - no other actions that 'entrepreneurial' universities can develop in order to support start-ups and spin-offs. In this respect, fund raising is definitively one of the main obstacles for young

people motivated to becoming entrepreneurs. As can be observed in this paper, especially in the case of graduates at the US, the difficulties to obtain financial resources to start-up are perceived as the main weakness when considering the possibility of creating a business. Universities could design actions with this in mind to deal with this difficulty through direct support, informing about the financial possibilities, or developing intermediating functions, among other alternatives.

### **Acknowledgements**

This article is a result of the projects: P08-SEJ-03542 the VIE project "Entrepreneurial Values and Intentions", POSDRU/6/1.5/S/11 "Doctoral Program and PhD Students in the education research and innovation triangle" and POSDRU/88/1.5/S/55287 "Doctoral Programme in Economics at European Knowledge Standards (DOESEC)". The VIE project is supported by the Department of Economy, Innovation and Science of the Regional Government of Andalusia. For further information about this project see Liñán et al. (2009). The POSDRU/6/1.5/S/11 project is co-funded by the European Social Fund through The Sectorial Operational Programme for Human Resources Development 2007-2013, coordinated by The Bucharest Academy of Economic Studies. The POSDRU/88/1.5/S/55287 is co-funded by the European Social Fund through The Sectorial Operational Programme for Human Resources Development 2007-2013, coordinated by The Bucharest Academy of Economic Studies in partnership with West University of Timisoara.

### **References**

1. Academia de Studii Economice din Bucuresti, 2010. *Academia de Studii Economice*. [online] Available at: <<http://www.ase.ro/>> [Accessed 16 January 2010].
2. Ajzen, I., 1991. The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), pp. 179-211.
3. Aoyama, Y., 2009. Entrepreneurship and Regional Culture: The Case of Hamamatsu and Kyoto, Japan. *Regional Studies*, 43(3), pp. 495-512.
4. Audretsch, D.B., Keilbach, M.C. and Lehmann, E., 2006. *Entrepreneurship and economic growth*. New York, Oxford: Oxford University Press.
5. Audretsch, D.B. and Thurik, A.R., 2000. Capitalism and democracy in the 21st century: from the managed to the entrepreneurial economy. *Journal of Evolutionary Economics*, 10(1), pp. 17-34.
6. Bandura, A., 1997. *Self-efficacy: The exercise of control*. New York: Freeman.
7. Baron, R.A., 2004. The cognitive perspective: a valuable tool for answering entrepreneurship's basic "why" questions. *Journal of Business Venturing*, 19(2), pp. 221-239.
8. Bird, B., 1988. Implementing entrepreneurial ideas: the case for intention. *Academy of Management Review*, 13(3), pp. 442-453.
9. Casson, M., 1995. *Entrepreneurship and business culture: studies in the economics of trust*. Aldershot, U.K: Edward Elgar.

10. Douglas, E.J. and Shepherd, D.A., 2002. Self-Employment as a Career Choice: Attitudes, Entrepreneurial Intentions, and Utility Maximization. *Entrepreneurship Theory and Practice*, 26(3), pp. 81-90.
11. Dragusin, M., 2010. Students' entrepreneurial spirit enhancement – a challenge for higher education institutions: the case of Bucharest Academy of Economic Studies. *Review of Management and Economical Engineering*, 9(5).
12. Dragusin, M. and Balalia, A.E., 2010. Cooperation between SMEs and Higher education Institutions-effective tool for entrepreneurial education. *Studia Universitatis Babeş Bolyai -Negotia*, 55(1), pp. 87-98.
13. Drucker, P.F., 1986. *Innovation and Entrepreneurship. Practice and principles*. New York, NY: Harper & Row.
14. European Commission, 2008. *Entrepreneurship in higher education, especially within non-business studies. Final Report of the Expert Group*. [online] European Commission Directorate-General for Enterprise and Industry. Available at: <[http://www.emuni.si/Files/knjiznica/78\\_EC-Entrepreneurship-in-Higher-Education-2008.pdf](http://www.emuni.si/Files/knjiznica/78_EC-Entrepreneurship-in-Higher-Education-2008.pdf)> [Accessed 17 November 2010].
15. European Commission, 2004. *Helping to create an entrepreneurial culture A guide on good practices in promoting entrepreneurial attitudes and skills through education*. Luxembourg: Office for Official Publications of the European Communities.
16. European Commission, 2003. *Green Paper - Entrepreneurship in Europe*. Brussels: DG Enterprise, European Commission.
17. Krueger, N.F., Reilly, M.D. and Carsrud, A.L., 2000. Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), pp. 411-432.
18. Kolvereid, L. and Isaksen, E., 2006. New business start-up and subsequent entry into self-employment. *Journal of Business Venturing*, 21(6), pp. 866-885.
19. Kolvereid, L., 1996. Prediction of employment status choice intentions. *Entrepreneurship Theory and Practice*, 21(1), pp. 47-57.
20. Liñán, F., Urbano, D. and Guerrero, M., 2011. Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship and Regional Development*, 23(3-4), pp. 187-215.
21. Liñán, F. et al., 2009. *VIE Project: Cultural values and socioeconomic factors as determinants of entrepreneurial intentions*. [online] Available at: <<http://institucional.us.es/vie/documentos/resultados/VIEProject202009.pdf>> [Accessed 4 January 2011].
22. Liñán, F. and Chen, Y.W., 2009. Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3), pp. 593-617.
23. Moriano, J.A., Palací, F. J. and Morales, J. F., 2007. The Psychosocial Profile of the University Entrepreneur. *Psychology in Spain*, 11(1), pp. 72-84.
24. OECD, 2008. *Entrepreneurship and Higher education. Local Economic and Employment Development (LEED) Programme*. Paris: OECD.
25. OECD, 1998. *Fostering entrepreneurship*. Paris: Organisation for Economic Co-operation and Development.

26. Oosterbeek, H., van Praag, M. and Ijsselstein, A., 2010. The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54(3), pp. 442–454.
27. Peterman, N.E. and Kennedy, J., 2003. Enterprise Education: Influencing Students' Perceptions of Entrepreneurship. *Entrepreneurship Theory and Practice*, 28(2), pp.129-144.
28. Plumb, I. and Zamfir, A., 2009. Managing Service Quality within the Knowledge-Based Economy: Opportunities and Challenges. *Amfiteatru Economic*, XI(26), pp. 373-382.
29. Rosca, I.G. et al., 2008. Quality assurance systems in higher education. *Amfiteatru Economic*, X(Sp. Iss. 2), pp. 6-12.
30. Shapero, A. and Sokol, L., 1982. Social dimensions of entrepreneurship. In: C.A. Kent, D.L. Sexton and K. H. Vesper, eds. 1982. *Encyclopedia of entrepreneurship*. Englewood Cliffs, NJ: Prentice Hall, pp. 72-90.
31. Shaver, K.G. and Scott, L.R., 1991. Person, process, choice: the psychology of new venture creation. *Entrepreneurship Theory and Practice*, 16(2), pp.23-45.
32. Souitaris, V., Zerbini, S. and Al-Laham, A., 2007. Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), pp. 566–591.
33. Uhlaner, L. M. and Thurik, R., 2007. Post materialism influencing total entrepreneurial activity across nations. *Journal of Evolutionary Economics*, 17(2), pp. 161–185.
34. Universidad de Sevilla, 2010. *Universidad de Sevilla*. [online] Available at: <<http://www.us.es/>> [Accessed 22 November 2010].
35. Volkmann, C. et al., 2009. *Educating the Next Wave of Entrepreneurs. Unlocking entrepreneurial capabilities to meet the global challenges of the 21st Century. A Report of the Global Education Initiative*. [online] Cologne, Geneva: World Economic Forum. Available at: [http://www.gvpartners.com/web/pdf/WEF\\_EE\\_Full\\_Report.pdf](http://www.gvpartners.com/web/pdf/WEF_EE_Full_Report.pdf) [Accessed 18 November 2010].
36. von Graevenitz, G., Harhoff, D. and Weber, R., 2010. The effects of entrepreneurship education. *Journal of Economic Behavior & Organization*, 76(1), pp. 90–112.