



Region of Western Greece

Essays on Regional Entrepreneurship and Development (2018), pp.000-000

ENTREPRENEURS' PERCEPTIONS ABOUT THE DETERMINANTS OF THEIR COMPANY'S PERFORMANCE AND INNOVATIVE BEHAVIOR

Konstantinos Z. Vasileiou

Department of Business Administration, (Patra), TEI of Western Greece,
Entrepreneurship & Digital Innovation LAB - E.D.I. LAB
vasileiou@teiwest.gr

ABSTRACT

There is a growing interest around the world for the role of entrepreneurship in addressing a series of important societal issues concerning growth, societal progress through innovation, employment generation and social empowerment. Moreover, the assumption and successful implementation of innovative ventures are crucial for any company to develop and maintain a competitive advantage. Greek entrepreneurs' perceptions regarding the determinants of their business performance and innovative behaviour were investigated by a questionnaire survey. The entrepreneurs' majority states to be relatively satisfied with their business performance (i.e. profitability, growth, market share) when compared with the industry average. Among the key determinants of firm performance emerged to be the company's ability to collaborate smoothly with suppliers and its extensive focus on innovation, its export activities and the submission of a business plan to an investment incentives' program. The respondents, on average, alleged to have achieved three of the five stated innovative actions during the last three years, and around two-thirds of them claimed to have their business operations reorganized and their production process improved. The most innovative entrepreneurs appeared to better handle the lack of funds for new investments and are more probable to pursue the improvement of their competitive position by expanding into new markets and increasing their product range, as well as, to submit of a business plan to an investment incentives' program. Results indicate that the investment incentives' programs could constitute a valuable tool for small businesses to assume and successfully implement innovative ventures to strive in the increasingly competitive environment.

Keywords: entrepreneurship, performance, innovative behaviour, determinants, perceptions

ΑΝΤΙΑΛΗΨΕΙΣ ΕΠΙΧΕΙΡΗΜΑΤΙΩΝ ΓΙΑ ΤΟΥΣ ΠΡΟΣΔΙΟΡΙΣΤΙΚΟΥΣ ΠΑΡΑΓΟΝΤΕΣ ΤΗΣ ΑΠΟΔΟΣΗΣ ΤΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ ΤΟΥΣ ΚΑΙ ΤΗΣ ΕΠΙΤΕΥΞΗΣ ΚΑΙΝΟΤΟΜΩΝ ΔΡΑΣΕΩΝ

Κωνσταντίνος Ζ. Βασιλείου
ΤΕΙ Δυτικής Ελλάδας

ΠΕΡΙΛΗΨΗ

Η εργασία εξετάζει τον ρόλο που παίζει το κοινωνικό κεφάλαιο στην περιφερειακή επιχειρηματικότητα για τον κλάδο των υπηρεσιών. Η μεταβλητή του κοινωνικού κεφαλαίου που χρησιμοποιείται κατασκευάστηκε μέσω μίας εφαρμογής της Διερευνητικής Ανάλυσης Παραγόντων (Exploratory Factor Analysis). Επίσης εξετάζει ξεχωριστά το αποτέλεσμα των περιφερειακών τιμών τόσο της κοινωνικής εμπιστοσύνης όσο και των κοινωνικών δικτύων για την περιφερειακή επιχειρηματικότητα. Τα αποτελέσματα από την χρήση σταθερών επιδράσεων (fixed effects) δείχνουν τα οφέλη του περιφερειακού κοινωνικού κεφαλαίου για την περιφερειακή επιχειρηματικότητα. Επιπλέον, τόσο η περιφερειακή κοινωνική εμπιστοσύνη όσο και τα περιφερειακά κοινωνικά δίκτυα επηρεάζουν θετικά τους περιφερειακούς ρυθμούς εισόδων των νέων επιχειρήσεων. Από τις άλλες μεταβλητές ελέγχου, η ανεργία και η διάχυση της γνώσης μέσα στον κλάδο των υπηρεσιών οδηγούν σε μία αύξηση των ρυθμών εισόδων νέων επιχειρήσεων, ενώ το ανθρώπινο κεφάλαιο και η διάχυση της γνώσης μεταξύ όλων των κλάδων της οικονομίας έχουν μία αρνητική επίδραση στις εισόδους των νέων επιχειρήσεων. Με τη σειρά της, η μεγέθυνση του ΑΕΠ έχει ένα μη στατιστικά σημαντικό αποτέλεσμα στην περιφερειακή επιχειρηματικότητα στις υπηρεσίες. Οι εφαρμογές της πολιτικής που συζητούνται στην εργασία δίνουν έμφαση στην ανάγκη να ενδυναμωθεί το ποσό του κοινωνικού κεφαλαίου στις περιφέρειες.

1. INTRODUCTION

The importance of entrepreneurship is globally growing, as there is almost consensus on its significant impact on various important societal issues such as societal progress through innovation, employment generation and social empowerment (Xheneti et al., 2012; World Economic Forum, 2009). This may be attributed, inter alia, to the dramatic reduction of job opportunities in the traditional public sector around the world (Apergis et al., 2011) and the less attractive working conditions offered by the mostly large companies compared to the past (Schwarz, 2009; Lüthje and Franke, 2003). Moreover, a great part of the workforce may consider entrepreneurship as the only promising solution for employment, especially in societies where unemployment (or part-time employment) rates are rather high, such as in Greece with the unemployment rate being steadily above 20% during the last five years (EL.STAT., 2017).

van Praag et al. (2007) found that there is a high positive relationship between entrepreneurial activity and economic outcomes, which explains the various incentives continuously offered around the world, especially, to young and well-educated people to implement innovative entrepreneurial activities.

There is almost unanimity worldwide that the assumption and successful implementation of innovative ventures are fundamental for any company to obtain and sustain a competitive advantage (Siccote et al., 2012; Sarri et al., 2012; Baregheh et al., 2012). Indeed, the research mainstream around the world purports that there is a strong positive relationship between innovative behaviour and high company performance (Hull et al., 2008; Spanjol et al., 2011; Lin et al., 2007; Calantone et al., 2002). It could be supported that nowadays companies are forced to secure continuous innovative achievements to adjust to a rapidly changing business environment, characterized by an ever-increasing product and technological change, deregulation, global competition, demographic changes and political instability (Sarri et al., 2010).

In this light, this study aims to contribute to the existing knowledge on the entrepreneurs' perceptions regarding the determinants of their company's performance and their innovative behaviour. Thus, the next section deals with the literature review concerning the factors affecting the successful assumption and implementation of innovative entrepreneurial activities, followed by the description of the methodology employed. Subsequently, the results derived from data analyses are presented and finally, the study conclusions, recommendations and limitations are reported.

2. FACTORS AFFECTING SUCCESSFUL INNOVATIVE ENTREPRENEURSHIP

2.1 Determinants of firm performance

Given the great importance of entrepreneurship a significant number of studies and surveys, even recently, has been conducted in Greece (Sahinidis et al., 2013, Chletsos, 2008; Sotiropoulos, 2008; Petrakis, 2008; Sarri et al., 2010; IOBE, 2017; 2016; 2015; 2014; 2012). Sahinidis et al. (2013) studied entrepreneurs' and self-employed individuals' intentions to start a new venture and they found that there is a strong relationship between the personal attraction and entrepreneurial intention, as well as between perceived behavioural control or self-efficacy and entrepreneurial intention. IOBE (2017) conducts since 2003 the annual survey on entrepreneurship in Greece. The report for the period 2016-2017, concludes that innovation is reduced, entrepreneurship due to necessity is kept high, retail ventures are expanding, and there is still insufficient mobilization of people from higher education levels in entrepreneurship. However, the positive developments during the examined period

include, inter alia, the more intense use of new technologies, the reinforcement of entrepreneurship of opportunity, and the intensification of extroversion.

Abdullah et al. (2009) concluded that the facilitators to company's performance include advancement drive, achievement oriented, commitment, decision-making ability, managing risk, tenacity, networking, and optimism, while the main constraints to entrepreneurship consist of the inability to compete, lack of competency and capital, customer-related problems, employee-related problems, unfavourable economic conditions, bureaucracy, supplier discrimination, and negative community attitudes. Xheneti and Bartlett (2012) revealed the influential role of institutional factors on business growth and they also found that skills and knowledge acquired during a transition, such as business-orientated qualifications and business-related skills and knowledge, are amongst the most important enablers of a successful enterprise.

Chletsos (2008) investigated the youth entrepreneurship in the Region of Epirus (Greece) and he found that only one-third of companies had applied for public funding for their investment plans. He also found that a great share of company owners deemed that they need specialized staff to become more competitive, as well as to enter into new markets and to cooperate more with their supply chain partners.

2.2 Determinants of entrepreneurial innovative behaviour

Despite the significant role of innovation in the successful operation of contemporary companies, there is no a consensus on its definition. However, almost everybody considers that innovation represents something new (Grønhaug and Kaufmann, 1988). Most researchers regard innovativeness as the enterprise's disposition to engage in and support new ideas and create new processes (Wiklund et al., 2005). There are two main streams of innovation, namely the product and the process innovation (Nybak et al., 2008; Kubeczko et al., 2006). Kubeczko et al. (2006) define product innovation as the successful changes in the output of an enterprise or organization, while process innovation refers to either technological innovations or change in the organization.

Sarri et al. (2010) investigated the importance of entrepreneur training regarding creativity and innovation and they concluded that entrepreneurs and managers of SMEs (Small & Medium-sized Enterprises) acknowledge the significance of creativity and innovation, considering their high positive relationship and their impact on the development of their business. Their study also revealed that the most important obstacles that companies encounter concern financial resources, experience, time, infrastructure and not risk-averse. IOBE's (2017) annual survey on entrepreneurship in Greece for 2016-17 mentioned that around 60% of the entrepreneurs state that none of their potential customers could consider their products/services as new and innovative, whereas only 15.6% of them support the

contrary, namely that all their customers consider their products/services as new and innovative.

Sarri et al. (2010) concluded that Greek entrepreneurs are convinced that entrepreneurship creativity and innovation are positively correlated and play an influential role in company's performance. Although, the entrepreneurs acknowledge the necessity of enhancement efforts in creativity and innovation training and creativity and innovation tools, they report that the main obstacles in participating in such training programs are the lack of financial resources and the time availability. Romero et al. (2012) explored the determinants of innovative behaviour in small Spanish businesses and they concluded that the self-employed who are moved by a sound intrinsic motivation have a higher probability of introducing innovations, contrary to those that assumed entrepreneurship as an alternative to escape from unemployment that were found to be less innovative than the rest. Moreover, they mentioned that education, in terms of general or specific business education programs, is a key driving force for the self-employed innovative behaviour.

3. APPROACH

3.1 Method

A primary research design was adopted to fulfil the aim and objectives of this study. Initially, a draft questionnaire was constructed to explore the entrepreneurs' perceptions regarding the determinants of their company's performance and their innovative behaviour. This questionnaire emerged from both the findings of the literature review and the semi-structured in-depth interviews with five entrepreneurs and two academics with business administration expertise. Next, the draft questionnaire was pretested by 10 company owners to detect and eliminate weaknesses in functionality and comprehensibility.

The questionnaire was composed of eleven sections, with the first five sections exploring the determinants of enterprise performance, the next five sections investigating the drivers of innovative performance and the last section dealing with the socio-demographic characteristics of entrepreneurs and their enterprises (Chaston et al., 2012; Petrakis, 2008; Sarri et al., 2010; Romero et al., 2012).

Specifically, the first four sections concerned the factors influencing the enterprise performance, and in particular, the factors constraining entrepreneurship (Abdullah et al., 2009; Chletsos, 2008; Petrakis, 2008; Xheneti et al., 2012; Okpara, 2012), the factors facilitating entrepreneurship (Abdullah et al., 2009; Chletsos, 2008; IOBE, 2017; 2014; 2012; Sarri et al., 2010), the actions to improve the company's competitive position (Abdullah et al., 2009; Chletsos, 2008; Petrakis, 2008; Romero et al., 2012), and the incentives for entrepreneurship (Romero et al., 2012; IOBE, 2017; 2015; 2014; 2012). The fifth section involved the participants' self-assessment

for their enterprise performance by three statements (Abdullah et al., 2009; Nybak et al., 2008). A five-point Likert Scale was used for all sections, requesting the respondents to state their level of agreement or disagreement with the statement from strongly disagree (1) to strongly agree (5), while (2) was appointed to rather disagree, (3) to neither agree nor disagree and (4) to rather agree.

The next four sections referred to the drivers of innovative performance and particularly, the factors constraining the achievement of innovative actions (Darroch, 2005; Sarri et al., 2010; Petrakis, 2008), the factors facilitating the achievement of innovative actions (Sarri et al., 2010; de Jong et al., 2006; Romero et al., 2012; Chaston et al., 2012), the expected results of innovative actions (Petrakis, 2008), and the sources of information for innovative actions (de Jong et al., 2006; Romero et al., 2012; Petrakis, 2008; Baregheh et al., 2012; Moica et al., 2012). The abovementioned five-point Likert Scale of agreement-disagreement was employed for the first three sections, while a five-point scale of significance ranging from not at all (1) to extremely (5) significant ((2): a little, (3): rather and (4): very) was utilized for the last section. Finally, the entrepreneurs self-assessed their innovative performance by reporting whether their enterprise has achieved or not each of the five proposed innovations (Nybak, 2008; IOBE 2014) during the last three years.

Statistical analyses include descriptive statics, correlation analysis, while multiple regression analysis was performed by the statistical package AMOS.

3.2 Sample of the study

The questionnaire was completed through a face-to face interview by the company owners or top managers at their offices. The survey lasted almost 2 months from January to March 2014. A convenience sample of 140 businesses, among the most innovative and competitive, from the four Regional Units of the Epirus Region (Greece) was selected (Table 1). The main stratification criteria were the Regional Unit where the enterprise is located, the sector involved, the company size and the share of exports to total sales. The last criterion was selected, as it is generally deemed that export companies tend to be more innovative and competitive than the rest of their sector, given the additional obstacles they usually must overcome.

The average age of the participants is much lower than of the actual population of entrepreneurs (EL.STAT., 2011). Moreover, the portion of corporations in the sample is almost more than twice compared to the actual population of companies. The size of the sampled enterprises, in terms of the number of employees, is clearly greater than the whole population, as the share of the very small businesses in the sample is only 76%, against 97% of the whole population. Moreover, the educational level of participants is rather high, as the percentage of the tertiary education graduates is more than double of the population. 25% of companies in the sample are engaged in export activities, compared to the estimated 2% of Greek companies. Finally, a

quarter of respondents reported that their enterprises apply a quality assurance system.

Table 1. Sample characteristics (% of respondents, N=140)

Respondent					
Sex		Age		Education	
Male	68.57	18-24	6.4	MSc/PhD	10.7
Female	31.43	25-34	31.4	University/ College	45.0
		35-44	29.3	High School	22.9
		45-54	17.1	Secondary School	21.4
		55-64	15.7		
Company					
Legal status		Sector		Exports (% of total sales)	
Sole proprietorship	64.3	Primary	15.7	0	75.00
General partnership	15.7	Manufacturing	22.1	0.01% - 5%	14.29
Limited partnership	3.6	Commerce	32.9	5% - 10%	6.43
Ltd.	4.3	Services	20.0	11% - 25%	2.86
S.A.	8.6	Tourism	9.3	26% - 50%	0.71
Other	3.6			> 50%	0.71
Quality Assurance System		No of employees		Regional Unit	
Yes	26.43	1-9	75.7	Ioannina	42.9
No	73.57	10-49	21.4	Preveza	21.4
Applied for Subsidized Investment Plan		50-249	2.1	Arta	19.3
Yes	45.7	>250	0.7	Thesprotia	16.4
No	54.3				

4. RESULTS

4.1 Factors determining company's performance

The entrepreneurs that participated in the survey seem not to be very pleased with the profitability, the market share and the growth of their business, even though the sample is rather representative of the most competitive enterprises (Table 2). Consequently, the Company's Performance Index (C.P.I.), calculated by the mean of the entrepreneurs' responses to the three statements concerning their company's performance, reflect their moderate satisfaction, which may be due to the rather unfavorable economic situation they face.

Table 2. *Company's performance assessment*

Compared with the industry average the company...	Mean	Std. dev.
... is more profitable	3.50	0.89
... has a greater market share	3.16	1.09
... is growing more rapidly	3.38	1.02
Company's Performance Index (C.P.I.)	3.35	0.86

The survey revealed that entrepreneurs consider that financial factors and the general unprecedented difficult economic situation, that has affected the entire Greek economy, are the most significant reasons that constrain their business performance (Table 3). More specifically, they mention that the problem of liquidity in the market, the lack of funds for new investment and the difficulty in securing loans are the key obstacles to running their business, which was largely expected. Indeed, the mean value for these factors ranged from 4.07 to 4.36. However, in addition, to the major difficulties of the economic macro-environment to be resolved, the vast majority of participants consider that the "State" is also not helping in their survival effort, as both the bureaucracy of subsidized investment programs and the bureaucracy of Public Services pose more hurdles to them. Regarding the problems of the microenvironment, the lack of collaborative suppliers and the shortage of qualified staff are, generally, not considered to significantly impede entrepreneurship, given that the mean value of the relative questions were 3.29 and 3.16, respectively.

Correlation analysis revealed that the more successful enterprises were those that managed to better cope with the lack of funds for new investment, the difficulty in obtaining loans and generally, the economic crisis, while the rest of the constraining factors had no significant impact on company's performance.

Table 3. *Factors constraining entrepreneurship*

	Mean	Std. dev.	C.P.I. ^a
Q1.1: The lack of funds for new investment	4.07	0.93	-0.173*
Q1.2: The bureaucracy of the Subsidized Investment Programs	3.86	0.93	-0.023
Q1.3: The problem of liquidity in the market	4.37	0.78	-0.076
Q1.4: The difficulty in obtaining loans	4.19	0.91	-0.150*
Q1.5: Generally, the economic crisis	4.26	1.03	-0.208**
Q1.6: The bureaucracy of Public Services	3.89	0.88	-0.046
Q1.7: The lack of collaborative suppliers	3.29	1.20	0.046
Q1.8: The shortage of qualified staff	3.16	1.36	0.041

a. Kendall's tau b Correlation (*. significant 0.05 level, **. 0.01 level)

The company's ability to produce better products for customers comparing to their competitors and the company's ability to effectively communicate with customers about their needs, capturing its effectiveness, are considered more important factors in comparison with the efficiency, namely the company's ability to produce similar products at lower cost compared to competitors (Table 4). However, the participants mentioned that both the employees' qualifications and skills and the harmonious collaboration with their suppliers are more important factors than the businessman's skills in decision making and risk management. In particular, the mean values for the statements regarding the employees' qualifications and skills and the harmonious collaboration with their suppliers were 4.11 and 3.98, respectively. Although, the businessman's skills in decision making and risk management were considered the least important factors facilitating the company's development, yet the mean value of answers ranged from 3.78 to 3.92. Company's ability to collaborate smoothly with suppliers was the only facilitating factor to have a significant positive effect on company's performance, indicating that the supply chain integration could provide valuable solutions to Greek enterprises.

Table 4. Factors facilitating entrepreneurship

	Mean	Std. dev.	C.P.I.^a
Q2.1: Entrepreneur's ability in decision making	3.92	0.95	0.013
Q2.2: Entrepreneur's ability in risk management	3.78	0.93	0.004
Q2.3: Company's ability to effectively communicate with customers about their needs	4.06	1.01	0.023
Q2.4: Company's ability to collaborate smoothly with suppliers	3.98	0.98	0.153*
Q2.5: Qualifications and skills of employees	4.11	0.93	0.014
Q2.6: Company's ability to produce similar products with its competitors at a lower cost	4.03	1.05	0.088
Q2.7: Company's ability to produce better products than its competitors	4.26	0.86	0.102

a. Kendall's tau b Correlation (*. significant 0.05 level, **. 0.01 level)

In line with the above, the entrepreneurs considered that the priority measures to improve their company's competitive position are a) improving their products' quality, b) improving the marketing communication with customers, c) greater focus on innovation and d) improving staff training (Table 5), with mean values ranging from 4.04 to 4.15. Expansion into new markets and investing in new technologies follow next, with the mean value of responses to the relevant statements being close to "4" (rather agree). The reduction of production costs, the utilization of subsidized investment programs and improving relations with suppliers follow next in terms of the prioritization of actions that could improve the company's competitive position.

The action from which entrepreneurs have the least expectations for improving their company's competitive position is the reduction of their profit margins, with mean value “3” (Neither agree nor disagree). Not surprisingly, the greater focus on innovation, investing in new technologies and the utilization of subsidized investment programs were the actions that influence more significantly the company’s competitive position. Moreover, entrepreneurs’ inclination to improving staff training and improving marketing communication with customers have also a significant effect on company’s performance.

Table 5. Actions to improve company’s competitive position

	Mean	Std. dev.	C.P.I.^a
Q3.1: Improving marketing communication with customers	4.09	0.82	0,141*
Q3.2: Expansion into new markets	3.96	0.94	0,115
Q3.3: Utilization of subsidized investment programs	3.74	1.04	0,162*
Q3.4: Reduction of production costs	3.82	1.00	0,044
Q3.5: Investing in new technologies	3.93	1.01	0,176**
Q3.6: Greater focus on innovation	4.08	0.86	0,225**
Q3.7: Improving relations with suppliers	3.68	0.93	0,062
Q3.8: Reduction of profit margins	3.09	1.08	0,113
Q3.9: Improving product quality	4.15	0.77	0,023
Q3.10: Improving staff training	4.04	0.89	0,163*

a. Kendall’s tau b Correlation (*. significant 0.05 level, **. 0.01 level)

The main incentives for assuming entrepreneurial activities were the better use of skills and knowledge, and the achievement of higher income compared with an employee. Less significant incentives for entrepreneurial activity seem to be a) the fact that is the only available option for employment, b) the achievement of greater social status and c) the adjustable hours and working conditions, where the mean ranged between 3.37 and 3.53. The better use of skills and knowledge, the achievement of higher income compared with an employee, and the achievement of greater social status have a significant positive result on the company’s performance. Therefore, entrepreneurs’ self-confidence seems to play a significant influential role in the success of their endeavors.

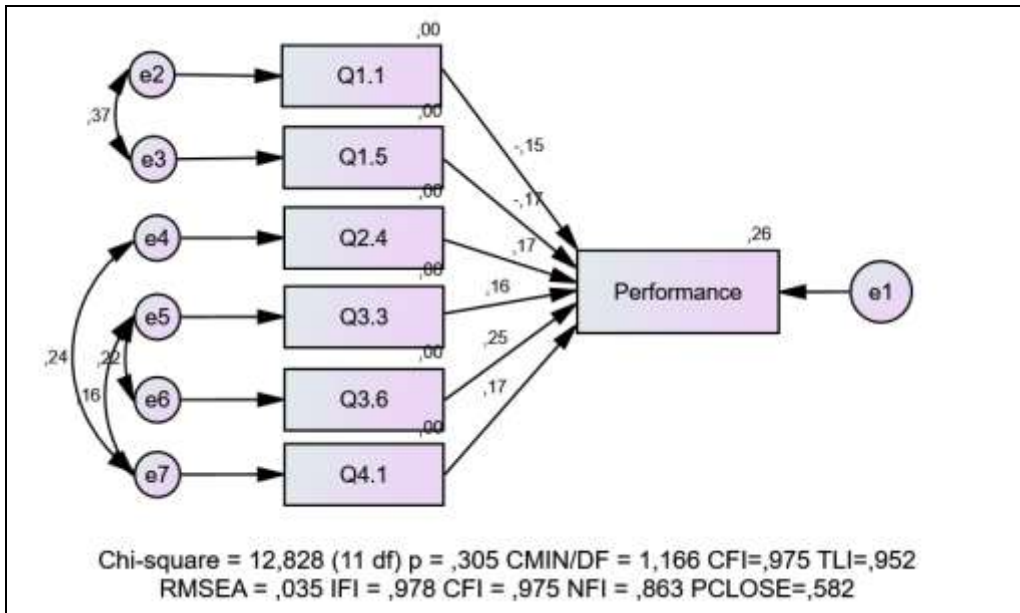
Table 6. Incentives for entrepreneurship

	Mean	Std. dev.	C.P.I.^a
Q4.1: Achieving higher income compared with an employee	3.92	1.11	0.156*
Q4.2: Better use of skills and knowledge	4.02	0.97	0.188**
Q4.3: Achieving greater social status	3.40	1.18	0.149*
Q4.4: Adjustable hours and working conditions	3.37	1.11	0.011
Q4.5: It is the only available option for employment	3.53	1.21	0.051

a. Kendall's tau b Correlation (*. significant 0.05 level, **. 0.01 level)

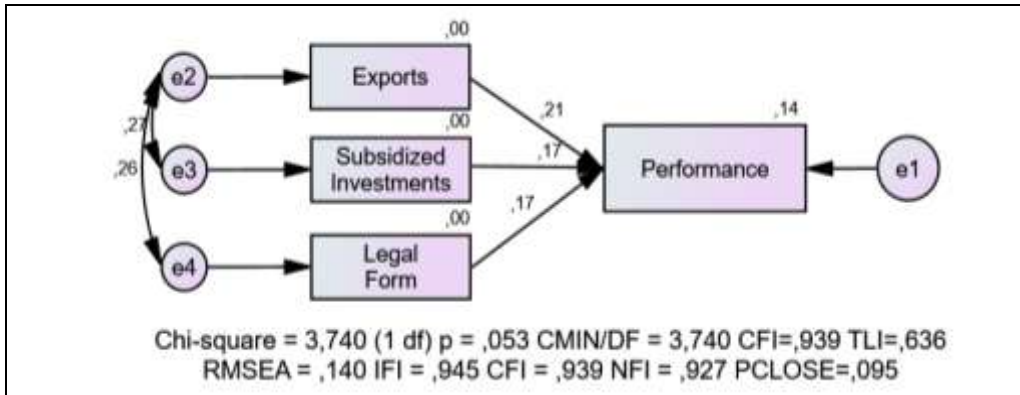
Multiple regression analysis revealed that six of the selected factors mentioned above influenced statistically significantly the company's performance (Figure 1). Model fit indices show that the SEM (structural equation modeling) model is good fit, given that the accepted values are 2.0 – 5.0 for CMIN/DF, ≥ 0.05 for p, ≥ 0.95 for IFI, NFI, TLI and CFI, ≤ 0.08 for RMSEA and ≥ 0.05 for PCLOSE (Hooper et al., 2008; Schreiber et al., 2006). More specifically, entrepreneurs' greater focus on innovation played the most positive influential role for company's success, while the lack of funds for new investment and the economic crisis, in general, present a significant negative relationship with performance. Company's ability to collaborate smoothly with suppliers, the utilization of subsidized investment programs and achieving higher income compared with an employee were also included in the key driving forces for successful entrepreneurship.

Figure 1. Factors affecting company's performance



The company's characteristics that have a significant impact on company's performance include the percentage of exports to total sales, the application for a subsidized investment plan and the legal status (Figure 2). More precisely, corporations' owners (e.g. Ltd., S.A.) with a high export orientation that submitted an investment plan for public funding self-assessed their performance, clearly, higher than their counterparts. Not surprisingly, these company characteristics display considerable interaction among them.

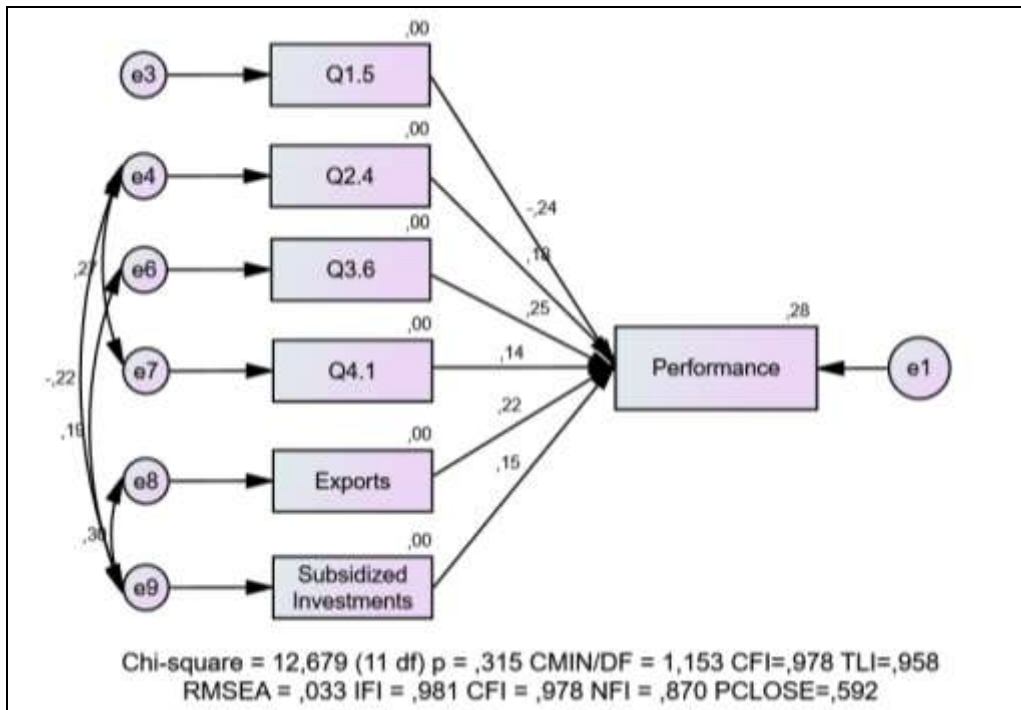
Figure 2. Entrepreneurs' and company's characteristics affecting performance



Finally, a multiple regression analysis investigated the key driving forces for company performance by examining the combined impact of the abovementioned

factors and company characteristics. The results indicate that the key driving forces for successful entrepreneurship are the greater focus on innovation, the ability to face, in general, the economic crisis and the export orientation. Moreover, the company's ability to collaborate smoothly with suppliers, the entrepreneur's incentive of achieving higher income compared with an employee and the submission of an investment plan for public funding also contribute to the company's performance.

Figure 3. Key driving forces for company performance



4.2 Factors determining entrepreneurial innovative behaviour

The entrepreneurial innovative behaviour was estimated by an index developed in this study, the Company's Innovation Scoreboard (C.I.S.). The C.I.S. was calculated by counting the number of the proposed innovative actions that the entrepreneur alleged his/her company achieved during the last three years. On average, the entrepreneurs claimed that they have attained three of the quoted innovative actions, however, the standard deviation is rather high indicating that there is high variance in the self-assessed innovative behaviour (Table 7). Around two-thirds of the respondents claimed that their companies realized a reorganization of their operation and a significant change in their production process. Rather interestingly, most of them also reported that the company's products/services are perceived by the customers as something significantly different, and both the way of cooperating with supply chain

partners and the way of selling products have changed significantly. Therefore, most businessmen believe that they adopted and successfully implemented innovative actions over the last three years, which explains their belief that only with innovative actions they will be able to face competition.

Table 7. Company's innovation scoreboard

During the last three years ...	Yes	No
... the production process has changed significantly	65.0%	35.0%
... the way of selling products has changed significantly	52.9%	47.1%
... the company has been reorganized	67.9%	32.1%
... the way of cooperating with supply chain partners has changed significantly	53.6%	46.4%
... customers perceive the company's products/services as something significantly different	57.1%	42.9%
	Mean	Std. dev.
Company's Innovation Scoreboard (C.I.S.)	2.97	1.60

The lack of financing for new investments was reckoned by entrepreneurs as the most important constraint for innovative actions and it was negatively correlated with the C.I.S (Table 8). This is in line with the results mentioned above, where the most successful businessmen supported that they are more able to obtain funding for investments and that they have a greater focus on innovation than their counterparts. The rest of the cited obstacles to innovative actions have not a significant effect on company's innovative behaviour, however, there was some variation in their perceived importance. Specifically, the high failure risk is considered as the next most important factor that hinder the achievement of innovative actions, followed by the lack of necessary infrastructure and the high cost of innovation. The difficulty of finding cooperative partners, the uncertainty of demand for innovative goods or services and the lack of information on customer needs, are considered to hinder the achievement of innovative actions to a rather moderate extent. The lack of skilled staff was estimated as the least significant constraint to innovative behaviour.

Table 8. *Factors constraining the achievement of innovative actions*

	Mean	Std. dev.	C.I.S.^a
Q6.1: Lack of financing for new investments	4.18	0.83	-0,168*
Q6.2: High risk of failure	4.06	0.98	-0,049
Q6.3: Lack of the necessary infrastructure	3.78	1.12	0,112
Q6.4: High cost of innovation	3.84	0.93	-0,04
Q6.5: Lack of skilled staff	3.16	1.36	-0,09
Q6.6: Difficulty of finding cooperative partners	3.44	1.15	-0,069
Q6.7: Uncertain demand for innovative goods or services	3.47	1.06	-0,118
Q6.8: Lack of information on customer needs	3.34	1.12	0,015

a. Kendall's tau b Correlation (*. significant 0.05 level, **. 0.01 level)

The most important facilitators of innovative behaviour are associated with the education of the business staff, namely the continuous staff training and the educational level of the decision makers (Table 9). On average, the respondents “rather” agree (mean value around 4.00) that both factors facilitate the achievement of innovative actions and that they have a significant positive impact on their innovative behaviour. This finding was not surprising since the adoption and successful implementation of innovative business activities presuppose a high level of knowledge, as well as the predisposition to continuous improvement and adjustment to the changes of the business environment. The rest of the examined factors were also considered as relatively important to the achievement of innovative actions, but with no significant correlation with the C.I.S.

Table 9. *Factors facilitating the achievement of innovative actions*

	Mean	Std. dev.	C.I.S.^a
Q7.1: Existence of the necessary infrastructure	3.68	1.11	0,046
Q7.2: Educational level of the decision makers	3.94	1.06	0,168*
Q7.3: Securing financing for new investments	3.78	1.05	0,136
Q7.4: Cooperation with other companies or suppliers seeking innovative actions	3.86	0.89	-0,03
Q7.5: Participation in exhibitions	3.83	0.97	0,134
Q7.6: Continuous staff training	4.05	0.98	0,165*
Q7.7: Intense competition in the industry	3.89	1.01	0,077
Q7.8: Entrepreneur's belief that only with innovative actions will be able to face competition	3.87	0.96	0,119

a. Kendall's tau b Correlation (*. significant 0.05 level, **. 0.01 level)

The respondents recognize that the successful implementation of innovative actions will play a very important role for ameliorating their company's competitive position, as the mean value for almost all statements was well above 4.00 (Table 10). Indeed, the entrepreneurs that rely on both entering into new markets and increasing the product/service range for improving their company's position appeared to have a significantly higher innovative behaviour. Additionally, the improved flexibility of production process was also positively correlated with the C.I.S. therefore, the entrepreneurs consider that the taking up and the successful implementation of innovative actions is a key factor for obtaining and maintaining competitive advantage and, consequently, to improve the efficiency of their businesses.

Table 10. *Actions to improve company's competitive position*

	Mean	Std. dev.	C.I.S.^a
Q8.1: Increased range of products or services	4.10	0.88	0.236**
Q8.2: Entering into new markets	4.16	0.93	0.312**
Q8.3: Increased in market share	4.31	0.81	0.13
Q8.4: Improved product or services quality	4.19	0.73	0.123
Q8.5: Improved flexibility of production process	3.97	0.82	0.174*
Q8.6: Reduced total cost per unit	4.06	0.96	0.081

a. Kendall's tau b Correlation (*. significant 0.05 level, **. 0.01 level)

The respondents consider that the most important source of information for innovative business activities is the conferences and the exhibitions (Table 11). The internal sources, the consultants, the customers and the suppliers, namely the supply chain network of the enterprise are the next most important sources of information on potential innovative actions, for which respondents tend to consider them very important, as the mean of answers ranges from 3.70 to 3.78. Next, in term of importance follow research institutes, journals and competitors, while higher education institutions (Universities and TEIs (Technological Educational Institutes)) and the Chambers of Commerce were deemed as the least important. Internal sources and scientific journals were the only sources of information with significant positive impact on innovative behaviour. However, it is rather disquieting that the entrepreneurs do not reckon that the Universities - TEI and the Chambers of Commerce could be important sources of information for innovative actions which may be attributed to the non-verification of the participants' expectations from these two institutions.

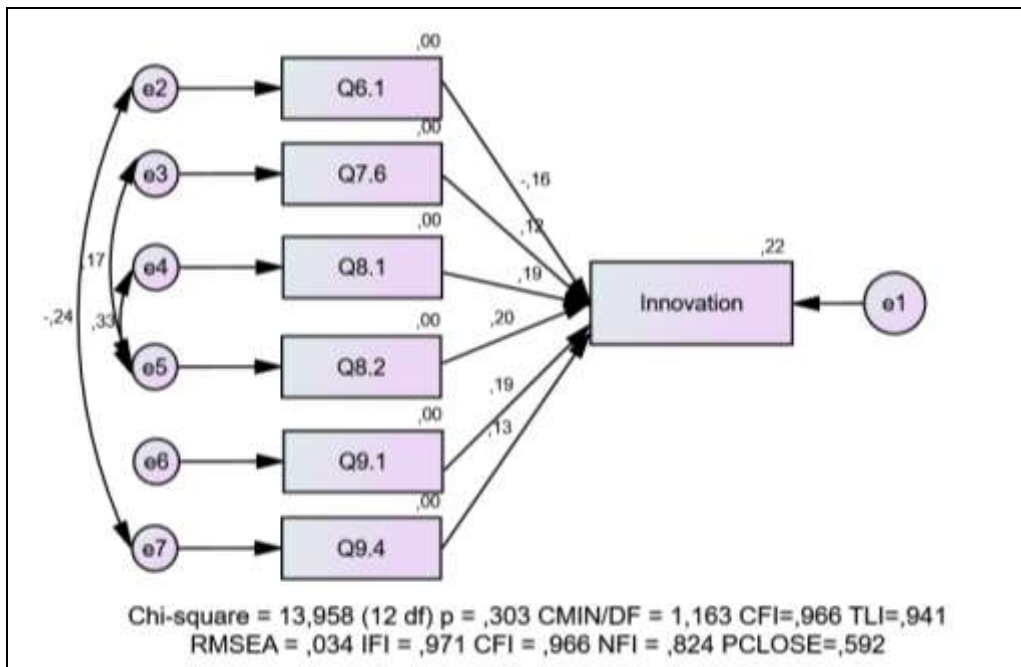
Table 11. Sources of information for innovative actions

	Mean	Std. dev.	C.I.S.^a
Q9.1: Internal sources	3.76	1.03	0.208*
Q9.2: Suppliers	3.70	1.05	0.011
Q9.3: Customers	3.78	1.11	0.096
Q9.4: Competitors	3.49	1.27	0.139
Q9.5: Consultants	3.78	1.15	0.144
Q9.6: Universities - TEI	3.34	1.24	0.017
Q9.7: Research Institutions	3.63	1.22	0.087
Q9.8: Conferences - Exhibitions	4.06	1.03	0.036
Q9.9: Scientific Journals	3.56	1.16	0.167*
Q9.10: Chamber of Commerce	3.26	1.22	0.132

a. Kendall's tau b Correlation (*. significant 0.05 level, **. 0.01 level)

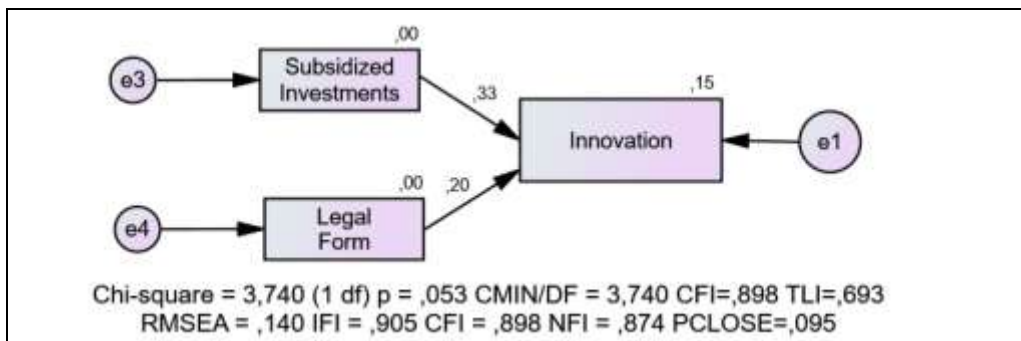
Multiple regression analysis revealed that six of the aforementioned factors affected the company's innovative performance (Figure 4). More specifically, the most important factors that influence company's ability to innovate was the entrepreneurs' vocation to entering into new markets and increasing the product/service range, as well as to capitalize on the internal sources of information for innovative actions. The lack of financing for new investments was negatively correlated with the C.I.S., whereas the continuous staff training and the utilization of the information from competitors have a positive significant impact on the company's innovative performance.

Figure 4. Factors affecting company's innovative behaviour



The company's characteristics that have a significant impact on the company's innovative behaviour include the application for a subsidized investment plan and the legal status (Figure 5). More precisely, corporations' owners (e.g. Ltd., S.A.) that submitted an investment plan for public funding self-assessed their innovative performance higher than their counterparts.

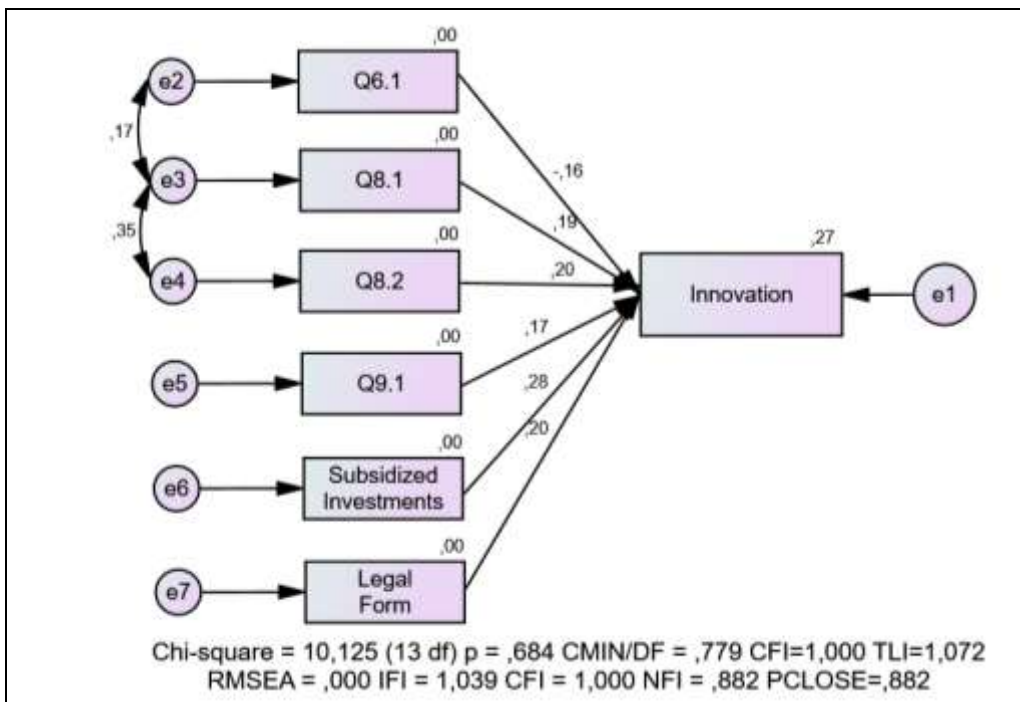
Figure 5. Entrepreneurs' and company's characteristics affecting innovative behaviour



The multiple regression analysis revealed that the most influential driving force for company's innovative behaviour was the positive disposition towards subsidized investment plan. Such companies benefit from the successful implementation of

investment plans, while at the same time the private funding may be less than 60% of the total expenditure and the entrepreneurs get better acquainted with the public services. The other driving forces involve the company's ability to secure financing for new investments, the entrepreneurs' vocation to enter into new markets, to increase the product/service range, as well as to capitalize on the internal sources of information for innovative actions. Moreover, not surprisingly, corporations were more probable to innovate.

Figure 6. Key driving forces for company's innovative behaviour



5. CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

This study revealed that the major determinants of company's performance are the greater focus on innovation, the ability to face, in general, the economic crisis and the export orientation. The rest driving forces for successful entrepreneurship include the company's ability to collaborate smoothly with suppliers, the entrepreneur's incentive of achieving higher income compared with an employee and the submission of an investment plan for public funding.

According to the study findings, the most important factor affecting the company's innovative behaviour was the entrepreneur's positive disposition towards subsidized investment plan. The benefits of successfully implementing subsidized investment

plans are not restricted merely to the public financial support, but they also comprise the entrepreneurs' familiarization with the public services. Additionally, other determinants to company's ability to achieve innovative actions concern the company's ability to secure financing for new investments, the entrepreneurs' vocation to enter into new markets, to increase the product/service range, as well as to capitalize on the internal sources of information for innovative actions. Furthermore, corporations were significantly more probable to innovate given that they are usually more competent to ensure the adequate financing of new investments.

The various subsidized investment programs could constitute a valuable tool for small businesses, but insofar the economic crisis is not addressed, especially in terms of supporting consumers/buyers' incomes and reducing the excessive contributions (of the very small and small) enterprises in public coffers, the effectiveness and efficiency of such programs is very low. Indeed, the utilization of these programs is often in practice very low, as a small fraction of the approved investment plans is implemented. It is, therefore, proposed to the State to take measures that have a direct impact on the purchasing behaviour of consumers and to reduce the excessive contributions (of the very small and small) enterprises in public coffers.

The education level of entrepreneurs and employees contributes significantly to undertaking and successfully implementing innovative actions. Therefore, the knowledge-intensive investment business plans should be treated favorably in terms of both being approved and included in the subsidized investment programs and ensuring funding by financial institutions. Special treatment should also be awarded to the innovative business ventures of young entrepreneurs, especially those of 30-45 years old, who combine a relevant experience with a relatively high educational level and the availability and strength for hard and tedious work, which are the prerequisites for the successful implementation of innovative ventures.

It is rather disappointing that the entrepreneurs do not believe that the Universities - TEIs and the Chambers of Commerce are important sources of information for innovative actions which may be attributed to the non-verification of the participants' expectations from these two institutions. However, the entrepreneurs consider the continuous training of personnel and the educational level of the decision makers as the most important factors that contribute to the successful implementation of innovative ventures. Therefore, the further strengthening of the role of higher education institutions and their cooperation with the local business community, including through the Chambers of Commerce, would contribute significantly to the development of the entrepreneurship with mutual benefits for both the businesses and the academic community.

The study findings are subject to a number of limitations, which are often common to similar studies. Exploring entrepreneurial attitudes always involve a self-assessment bias and particularly, when evaluating the business performance. Moreover, it was

difficult to find a large sample of entrepreneurs and to have them participate in a longitudinal study. Moreover, we should be cautious to generalize the findings of this survey, as the sample of entrepreneurs is rather representative of the most competitive and innovative companies.

ΠΕΡΙΛΗΨΗ

Υπάρχει ένα αυξανόμενο ενδιαφέρον σε όλο τον κόσμο για τον ρόλο της επιχειρηματικότητας στην αντιμετώπιση μιας σειράς σημαντικών κοινωνικών ζητημάτων που αφορούν την ανάπτυξη, την πρόοδο της κοινωνίας μέσω της καινοτομίας, τη δημιουργία θέσεων απασχόλησης και την κοινωνική χειραφέτηση. Επιπλέον, είναι ευρέως αποδεκτό ότι η ανάληψη και η επιτυχής εφαρμογή των καινοτόμων δράσεων είναι ζωτικής σημασίας για κάθε εταιρεία, προκειμένου να δημιουργήσει και να διατηρήσει κάποιο ανταγωνιστικό πλεονέκτημα. Οι αντιλήψεις των Ελλήνων επιχειρηματιών αναφορικά με τους προσδιοριστικούς παράγοντες της απόδοσης των επιχειρήσεων τους και της επίτευξης καινοτόμων δράσεων διερευνήθηκαν μέσω μιας πρωτογενούς έρευνας με ερωτηματολόγιο. Η πλειονότητα των επιχειρηματιών δήλωσε ότι είναι σχετικά ικανοποιημένη με την απόδοση των επιχειρήσεων που διαχειρίζεται σε σύγκριση με το μέσο όρο του κλάδου τους. Μεταξύ των κυρίων παραγόντων που επηρεάζουν θετικά την απόδοση των επιχειρήσεων αναδείχθηκαν η ικανότητα της επιχείρησης να συνεργάζεται αρμονικά με τους προμηθευτές της, η αυξημένη εστίαση στην καινοτομία, οι πωλήσεις στο εξωτερικό και η υποβολή επενδυτικού σχεδίου σε επιδοτούμενο πρόγραμμα. Οι συμμετέχοντες, κατά μέσο όρο, ισχυρίστηκαν ότι επέτυχαν τρεις από τις εξεταζόμενες καινοτόμες δράσεις κατά τη διάρκεια των τριών τελευταίων ετών και τα δύο τρίτα αυτών διατείνονταν ότι έχουν αναδιοργανώσει την επιχείρησή τους και ότι βελτιώθηκε η παραγωγική τους διαδικασία. Οι πιο καινοτόμες επιχειρήσεις φαίνεται ότι διαχειρίστηκαν καλύτερα την έλλειψη χρηματοδότησης νέων επενδύσεων και ότι είναι πιο πιθανόν να επιδιώξουν τη βελτίωση της ανταγωνιστικής τους κατάστασης μέσω της αύξησης της εισόδου σε νέες αγορές αύξησης της ποικιλίας των προϊόντων τους, καθώς και να υποβάλλουν επενδυτικό σχέδιο σε επιδοτούμενο πρόγραμμα. Συνεπώς, τα προγράμματα επιδότησης επενδυτικών σχεδίων μπορούν να αποτελέσουν ένα πολύτιμο βοήθημα για την επιτυχημένη υλοποίηση καινοτόμων δράσεων και την επιβίωση των μικρών επιχειρήσεων στο αυξανόμενο ανταγωνιστικό περιβάλλον.

Acknowledgments: The author would like to acknowledge the support of the Unit of Innovation and Entrepreneurship (UoIE) of the TEI of Epirus for this research under the project number OPS 304320 of the O.P. "Education and Lifelong Learning".

REFERENCES

- Abdullah, F., Hamali, J., Deen, A., Saban, G. and Abdurahman, A. (2009). Developing a framework of success of Bumiputera entrepreneurs. *Journal of Enterprising Communities: People and Places in the Global Economy*, 3 (1), 8-24.
- Apergis, N., and Fafaliou, I. 2014. The determinants of business start-ups in tertiary education: evidence for Greece through a panel data approach. *Journal of Economics and Finance*, 38, 287–301.
- Baregheh, A., Rowley, J., Sambrook, A. and Davies, D. (2012). Innovation in food sector SMEs. *Journal of Small Business and Enterprise Development*, 19 (2), 300-321.
- Calantone, R.J., Cavulsgil, S.T. and Zhao, Y. (2002). Learning orientation, firm innovation capability and firm performance. *Industrial Marketing Management*, 31, 515-524.
- Chaston, I., and Scott, G. (2012). Entrepreneurship and open innovation in an emerging economy. *Management Decision*, 50 (7), 1161-1177.
- Cletsos, M. (2008). Survey of Youth Entrepreneurship in the Region of Epirus. Youth Entrepreneurship Observatory. University of Ioannina. Ioannina. Χλέτσος, Μ. (2008). Έρευνα για την Νεανική Επιχειρηματικότητα στην Περιφέρεια της Ηπείρου. Παρατηρητήριο Νεανικής Επιχειρηματικότητας. Πανεπιστήμιο Ιωαννίνων. Ιωάννινα.
- Darroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of Knowledge Management*, 9 (3), 101-115.
- de Jong, J. and Marsili, O. (2006). The fruit flies of innovations: A taxonomy of innovative small firms. *Research Policy*, 35, 213–229.
- EL.STAT. (2011). Statistical Yearbook of Greece 2009 & 2010. Hellenic Statistical Authority.
- EL.STAT. (2017). Labour Force Survey – October 2017, Press Release. Hellenic Statistical Authority. 11th January 2017.
- Grønhaug, K. and Kaufman, G. (1988). Innovation: A Cross-Disciplinary Perspective. Norwegian University Press, 530 pp.
- Hooper, D., Coughlan, J. and Mullen, M. R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods*, 6 (1), 53 - 60, available online at www.ejbrm.com
- Hull, C. and Rotenberg, S. (2008). Firm performance: the interactions of corporate social performance with innovation industry differentiation. *Strategic Management Journal*, 29, 781-789.
- IOBE (2012). The Entrepreneurship in Greece 2010-2011. The small entrepreneurship in time of crisis. Global Entrepreneurship Monitor GEM. Foundation for Economic and Industrial Research. IOBE (2012). Η Επιχειρηματικότητα στην Ελλάδα 2010-2011. Η μικρή επιχειρηματικότητα σε περίοδο κρίσης. Παγκόσμιο Παρατηρητήριο Επιχειρηματικότητας GEM. Ίδρυμα Οικονομικών και Βιομηχανικών Ερευνών. Αθήνα.

- IOBE (2014). The Entrepreneurship in Greece 2012-2013. Signs of recovery of small entrepreneurship. Global Entrepreneurship Monitor GEM. Foundation for Economic and Industrial Research. IOBE (2014). Η Επιχειρηματικότητα στην Ελλάδα 2012-2013. Ενδείξεις ανάκαμψης της μικρής επιχειρηματικότητας. Παγκόσμιο Παρατηρητήριο Επιχειρηματικότητας GEM. Ίδρυμα Οικονομικών και Βιομηχανικών Ερευνών. Αθήνα.
- IOBE (2015). The Entrepreneurship in Greece 2013-2014. The dynamics of youth entrepreneurship. Global Entrepreneurship Monitor GEM. Foundation for Economic and Industrial Research. IOBE (2015). Η Επιχειρηματικότητα στην Ελλάδα 2013-2014. Η δυναμική της νεανικής επιχειρηματικότητας. Παγκόσμιο Παρατηρητήριο Επιχειρηματικότητας GEM. Ίδρυμα Οικονομικών και Βιομηχανικών Ερευνών. Αθήνα.
- IOBE (2016). Entrepreneurship 2015-16: A critical turning point for the growth dynamics of the business system. Global Entrepreneurship Monitor GEM. Foundation for Economic and Industrial Research. IOBE (2016). Επιχειρηματικότητα 2015-16: Κρίσιμη καμπή για την αναπτυξιακή δυναμική του επιχειρηματικού συστήματος Παγκόσμιο Παρατηρητήριο Επιχειρηματικότητας GEM. Ίδρυμα Οικονομικών και Βιομηχανικών Ερευνών. Αθήνα.
- IOBE (2017). Entrepreneurship Annual Report 2016-2017: Youth entrepreneurship in recession. Global Entrepreneurship Monitor GEM. Foundation for Economic and Industrial Research. IOBE (2017). Ετήσια Έκθεση Επιχειρηματικότητας 2016-2017: Σε κάμψη η νέα επιχειρηματικότητα. Παγκόσμιο Παρατηρητήριο Επιχειρηματικότητας GEM. Ίδρυμα Οικονομικών και Βιομηχανικών Ερευνών. Αθήνα.
- Kubeczko, K., Rametsteiner, E. and Weiss, G. (2006). The role of sectoral and regional innovation systems in supporting innovations in forestry. *Forest Policy and Economics*, 8 (7), 704–715.
- Lin, Y-Y, and Chen, Y-C. (2007). Does innovation lead to performance? An empirical study of SMEs in Taiwan. *Management Research News*, 30 (2), 115-132.
- Lüthje, C. and Franke, N. (2003). The ‘making’ of an entrepreneur. Testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management*, 33 (2), 135-47.
- Moica, S., Socaciua, T. and Radulescu, E. (2012). Model innovation system for economical development using entrepreneurship education. *Procedia Economics and Finance*, 3, 521 – 526.
- Nybak, E. and Hansen, E. (2008). Entrepreneurial attitude, innovation and performance among Norwegian nature-based tourism enterprises. *Forest Policy and Economics*, 10, 473–479.
- Okpara, J. (2011). Factors constraining the growth and survival of SMEs in Nigeria Implications for poverty alleviation. *Management Research Review*, 34 (2), 156-171.

- Petrakis, E., (2008). Survey of Trends of Youth Entrepreneurship in the Region of Crete. Youth Entrepreneurship Observatory. University of Crete. Πετράκης, Ε. (2008). Έρευνα Τάσεων Νεανικής Επιχειρηματικότητας στην Περιφέρεια Κρήτης. Παρατηρητήριο Νεανικής Επιχειρηματικότητας. Πανεπιστήμιο Κρήτης.
- Romero, I. and Martínez-Román, J. (2012). Self-employment and innovation. Exploring the determinants of innovative behavior in small businesses. *Research Policy*, 41, 178– 189.
- Sahinidis, A. and Vassiliou, E. (2013). Intention to start a new business. Using the theory of planned behavior to predict the starting of a new venture by entrepreneurs and self-employed individuals. Proceedings of the 3rd International Conference: Quantitative and Qualitative Methodologies in the Economics and Administrative Sciences (Q.M.A.S. 2013) pp. 324-332
- Sarri, K., Bakouros, I. and Petridou, E. (2010). Entrepreneur training for creativity and innovation. *Journal of European Industrial Training*, 34 (3), 270-288.
- Schwarz, E., J., Wdowiak, M., A., Almer-Jarz, D., A., and Breitenecker, R., J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education + Training*, 51 (4), 272 – 291.
- Schreiber, J., Stage, K.F., King, J, Nora, A. and Barlow, E.A. (2006). Reporting Structural Equation Modeling and Confirmatory Factor Analysis Results: A Review. *The Journal of Educational Research*, 99 (6), 323-337.
- Sicotte, H., Drouin N. and Delerue H. (2012). Marketing and technology strategies for innovative performance. *International Journal of Managing Projects in Business*, 5 (2), 195-215.
- Sotiropoulos, I. (2008). Survey of Trends of Youth Entrepreneurship in the Region of Ionian Islands. Youth Entrepreneurship Observatory. TEI of Epirus. Σωτηρόπουλος, Ι. (2008). Έρευνα Τάσεων Νεανικής Επιχειρηματικότητας στην Περιφέρεια Ιονίων Νήσων. Παρατηρητήριο Νεανικής Επιχειρηματικότητας. TEI Ηπείρου.
- Spanjol, J., Qualls, W.J. and Rosa, J.A. (2011). How many and what kind? The role of strategic orientation in new product ideation. *Journal of Product Innovation Management*, 28 (2), 236-50.
- van Praag, C.M., and Versloot, P.H. (2007). What Is the Value of Entrepreneurship?, S Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor, August.
- Wiklund, J and Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20 (1), 71–91.
- World Economic Forum (2009). World Economic Forum Unlocking Entrepreneurial Capabilities to Meet the Global Challenges of the 21st Century – A Report of the Global Education Initiative. Educating the Next Wave of Entrepreneurs, April.

Xheneti, M. and Bartlett, W. (2012). Institutional constraints and SME growth in post-communist Albania. *Journal of Small Business and Enterprise Development*, 19 (4), 607-626.