Entrepreneurship Study and Its Impact on Students’ Intention to Start Up: A Sample Case Study of Students Belonging to Two Universities of Tunisia

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Abstract

The present paper examines the impact of entrepreneurship education on students’ intention to start up business. Using a sample of young Tunisian students from both Sfax and Sousse (these are two towns in Tunisia) universities, we propose to determine the significant factors influencing their entrepreneurial intention. Our econometric results have revealed that the composite variables, i.e., the student’s internal and external socio-cultural background, the students’ profile in terms of their theoretical and practical knowledge in new business start-up and the students’ characteristics (age and, above all, educational level), are the most determining variables affecting students’ intention to engage in business start-ups. The gender variable has no significant effect on entrepreneurial behavior.

Keywords: Entrepreneurial intention, new business start-up, Logistic regression.

1. Introduction

Nowadays, entrepreneurship has become a major engine for economic growth and a big challenge to several countries. Apart from being a trigger for job creation and economic growth, it has greatly contributed to satisfying the need for achievement among individuals with creative tendency and risk taking propensity. It may also raise the interest of individuals, seeking self-satisfaction opportunities, in engaging in entrepreneurial activities. However, these intentions are not often concretized to real projects because constraints can emerge or the person’s preferences change (Van Gelderen et al., 2015). Thus, the entrepreneurship spirit is at the heart of modern management debates. In this way, Fayoll and Linan (2014) argued that the research on entrepreneurial intention must be rethought due to the importance of the start-up activities on employment and economic growth.

Today, the spread of entrepreneurship training constitutes one of the main start-up support systems in Tunisia. By and large, the Tunisian education system has set a double objective regarding this issue: stimulating the entrepreneurial mindset of students, and, to a lower extent, monitoring those who want to pursue an entrepreneurial career path. In fact, entrepreneurship is a process requiring certain aptitudes, most of which can be acquired through adequate entrepreneurship programs and training.

Thus, school constitutes the convenient place to enhance students’ entrepreneurial skills and potential for business start-up (Bouchard and Gasse, 1989). In the same line, Leibstein (1989) asserts that entrepreneurial training could contribute to increasing the number of entrepreneurs. While most universities in the developed countries have been offering a course on entrepreneurship since 1987, entrepreneurship has become a major focus in Tunisia only in recent years. Yet, there has been a noticeable development in the teaching and training in entrepreneurship. Tunisian universities, schools and institutes have established entrepreneurship courses to establish entrepreneurship culture through training. Today, the spread of entrepreneurship training represents one of the major start-up support systems in Tunisia.

The present paper attempts to answer the following question: To what extent do entrepreneurship courses influence the students’ entrepreneurial intention to start-up? In other words, we seek to highlight the determining factors of entrepreneurial action on the basis of a sample composed of students enrolled in the universities of Sfax and Sousse.

This paper is organized as follows: The first section reviews the theoretical framework related to the impact of entrepreneurship course on the students’ intention to start a business. The second section presents the proposed theoretical model of entrepreneurial intention. The last section concludes and paves the way for further research.
1.1. Entrepreneurial intention: Theoretical framework

Intentions are defined as the motivational factors influencing someone’s behavior and are indicators about the individual’s willingness intensity or about the effort which he intends to make to accomplish a certain behavior (Drnovsek et al. 2005).

The entrepreneurial intention is one of the predictors of entrepreneurial propensity (Gasse, 1989). For Davidsson (1995), entrepreneurial intention is essentially determined by the entrepreneur’s personal belief. For Crant (1996), it is defined by the individual’s judgments about the probability of owning his own business. Learned (1992) asserts that the interaction of psychological traits as well as professional and entrepreneurial experience causes entrepreneurial intention.

Most of the studies on entrepreneurial intention are based on Ajzen’s Theory of Planned Behavior (1991). This theory provides a practical theoretical model that is applicable to intentional behavior given that it excludes external variables as immediate determinants of behavior (Emin, 2003). According to Ajzen’s Theory of Planned Behavior, intention is the outcome of three conceptual deterministic factors, namely:

- The attitude toward the behavior: It designates the individual’s favorable or unfavorable evaluation about the behavior (Ajzen, 1991). This variable represents the attractiveness of the proposed behavior (Emin et al., 2005).
- The perceived social rule: It corresponds to the individual’s perception of social pressure from relatives, family and friends, and what they think about his decision to start up a business (Tounès, 2003; Fayolle et al., 2006).
- The perceived behavioral control: It refers to the perceived ease or difficulty to perform a certain behavior. Among other things, it refers to the perception a person has about the personal feasibility of the behavior in question (Emin et al., 2005).

According to Ajzen’s model (1991), personality traits and demographic elements, (gender, age, etc.) are believed to influence intentions in so far as they affect the individuals’ beliefs, i.e. their intent, to initiate a project. Maes et al. (2014) stressed on gender differences in entrepreneurial intentions. They also indicated that women are more motivated to lunch up their own project. Moreover, the venture creation in Latin America and in Finland has been the object of the theory of the Planned Behavior (Guzmán-Alfonso et al., 2012, Kautonen et al., 2013).

It would be of great avail, therefore, to examine the extent to which differences in the students’ demographic characteristics and theoretical background or training do influence their entrepreneurial inclination. Among other elements, it is particularly useful to identify whether following a special training course in entrepreneurship may have an effect on the entrepreneurial process. Hence, according to intention models stated previously, the study of students’ belief would certainly help determine their entrepreneurial desirability and feasibility, and, probably, their intention to start a new business.

For someone to follow an entrepreneurial career, he has to introduce either a strong psychological impulse in his life or a drastic change in his environment. Indeed, in shaping the entrepreneur personality, a set of factors do intervene such as social insecurity, negligence, an eviction of socioeconomic life, a crisis and dissatisfaction in the life or a drastic change in his environment.

1.1.1. Entrepreneurship at University: Training of Trainers

At Tunisian universities, Entrepreneurship mainly consists of specific training in pedagogic and technical aspects of entrepreneurship often confused with the teaching of Management pertaining disciplines. It consists in a different distinct special course adopting a participative pedagogy directed, in a first step, to developing the entrepreneurial spirit and to project creation in a second step.

Thus, since the academic year 2000-2001, either an obligatory module entitled “Entrepreneurship and Managerial Skills” or an optional one entitled “Business Start-up”, depending on the specialty of students, have been taught at faculties, high schools and business schools.

The objective of this compulsory education has been to raise awareness of students with entrepreneurship family background towards career alternative and self-employment. Ever since the 2006/2007 academic year within the LMD framework (License, Master and Doctorate), “Business Creation” module course has become a mandatory part of the curriculum at university level. It is a compulsory transversal unit taught across all disciplines. Hence, a professional Master's Degree in business start-up has been established at all universities. Research has highlighted the impact of entrepreneurship course at universities in Mahdia and Sousse such as the High Institute of Business Studies (IHEC) in Sousse, the High Management Institute in Sousse and the Faculty of Economics and Management Sciences in Mahdia as well as the Law, Economics and Political sciences in Sousse.
1.1.2. Entrepreneurship education: Impact and evaluation

Even though entrepreneurship education has undergone rapid development, some related issues need to be further investigated and clarified, namely, the evaluation of entrepreneurship programs and trainings (Bechard and al. 1998). The first studies dealing with the role of the educational system in developing entrepreneurship were initially suggested by Shapero and Sokol (1982). They investigated the effects of management trainings on new venture creation among American students. Research on the impact on entrepreneurial education on business creation process reached its peak during the 1990s.

The impact of entrepreneurship teaching and training has become an important focus area for countries that sought to foster their students’ entrepreneurial behavior through education. Yet, some problems have emerged as to what predictors to choose and how to measure them.

In addition, a wide range of entrepreneurial activities and training were developed in higher education institutions (Gartner and al. 1994). The purpose of such training sessions was to encourage everyone to launch his own business, but he should not expect immediate results. The simplest and the most evident indicators, though crucial, are not, generally, the most relevant. Evaluation should by no means be based solely on the number of firms set up by the trained people.

According to Kolvereid and Moen (1997); Tkachev and Kolvereid (1999); Fayolle (2002), education and training in the field of entrepreneurship do influence student’s present behavior as well as their intentions. Thus, while business creation act cannot be the sole criterion to evaluate the impact of entrepreneurial education, it is more pertinent to take into account those criteria related to entrepreneurial intention.

It is worth noting that the impact of entrepreneurship training on entrepreneurial intention is an under researched area. In fact, little research has been devoted to this area (Krueger and Brazeal (1994); Gorman and al. (1997); Krueger and al. (2000); Peterman and Kennedy (2003)).

At the conceptual level, the method proposed in this work to evaluate the impact of entrepreneurship trainings on students’ intention to start a business finds its roots in certain evaluation methods proposed and developed by some researchers. According to Souitaris and al. (2007), there exists "a commonly accepted idea or convention that entrepreneurship education does increase the intention to set up a company”. Bouchard and Gasse (1989) point out that the entrepreneurial intention has almost doubled among students after attending the training program.

Noel (2001) studied the impact of entrepreneurship course on developing the entrepreneurial intention and on “self-efficacy” perception. It was observed that all students have received a training program in entrepreneurship and got a diploma in Entrepreneurship Management or in another discipline. The results do confirm, at least partially, the hypotheses that graduate students in Entrepreneurship enjoy a higher propensity to implement their project conceptions, a higher level of intention along with a greater perception of "self-efficacy” than students belonging to two other groups.

In this respect, Souitaris et al. (2007) assessed the effect of entrepreneurship education and teaching on entrepreneurial attitudes (attraction, social norm and received capacity) as well as on the entrepreneurial intention of 250 students from London and Grenoble universities. The purpose of their study was to “test the impact of teaching entrepreneurship on attitudes (social standard, personal attitude and perceived capacity). They found that entrepreneurship courses helped further enhance these students’ intention to start up by promoting certain attitudes.

Similarly, Tounès (2006) examined the effect of entrepreneurship education on Master’s Degree students’ start up intention after completing certain trainings on entrepreneurship. His major finding corroborates the positive effect of entrepreneurship courses on students’ entrepreneurial intention.

Moreover, other researchers have sought to explain and demonstrate the relation between an entrepreneurship program and such characteristics as the need for achievement and internal locus of control (Hansmark, 1998) or «self-efficacy» perception (Eldrich et al., 2000). They have demonstrated the positive impact of training on improving such characteristics in the long run. In the same line, we consider using the students’ intention to start up as an indicator to evaluate the impact of entrepreneurship training.

1.1.3. The business project or idea

The existence of a business idea is a primary determinant entrepreneurial intention in the early stage of new business creation. In fact, students intending to start their own business have an entrepreneurial idea before shaping their project. In this context, Buryat (1993) asserts that entrepreneurial process become clear and identifiable only when being sufficiently engaged in the project. As for Douglas (1999), strong entrepreneurial intentions cannot be translated into reality without the existence of business creation opportunity and the necessary resources for its implementation. This analysis is in line with that of Van Gelderen et al (2015) who argues, as it has been already said, that all projects are not concretized due to the existence of constraints.

In their new business start-up model, Greenberger and Sexton (1988) have integrated “vision” variable to emphasize the existence of a mental "image" or a business idea in the the mind of those who intend to start up, and which would be later transformed into entrepreneurial intention. Kolvereid (1997), Naftziger et al. (1994) argue that the existence of a business idea is an important component in the process of business creation. Scott and Twomey (1988) assert that the validation of a business idea is undoubtedly the cornerstone of a training program aiming at giving assistance to potential entrepreneurs. The results of their transcontinental investigation dealing with 436
American, English and Irish students have revealed that more than half of the students aspiring to found their own business have a business idea. In fact, having a business idea has a considerable influence on the choice of entrepreneurial career path. In a more recent research, Raijman (2001) has shown that 90 % of the Mexican immigrants living in Little Village (United States), with entrepreneurial intention, do have a business idea.

Forming an entrepreneurial intention requires formulating an idea or a project, more or less structured, which would explain the students’ entrepreneurial attitudes. Detaining an idea or a project constitutes a necessary step in shaping the students’ entrepreneurial intention.

According to Krueger and Brazeal (1994), the very act of searching information implies that the intention is highly strong, as one would engage into a process whereby he seeks to overcome obstacles related to business creation. Consequently, an idea or a project per se is not sufficient in the new business start-up process. Entrepreneurial intention requires actions which would either strengthen or weaken the individual’s choices. The latter are manifested by the search for information on the market, the product and the formalization of certain aspects of the business creation idea. These actions and tendencies or orientations help in perceiving and measuring the students’ entrepreneurial intention.

1.1.4. Subjective norms

According to Vallerand (1994), norms consist in generalized expectations regarding the behavior adopted during socialization process. They can be defined as rules of conduct imposed by society. Indeed, such norms constitute some social approval or disapproval models. The subjective norms in modern societies are primarily acquired via the family, school as well as the professional environment. Vallerand (1994), asserts that the subjective norm constitutes a close concept to that of social influence. It specifies the effect of the presence of others and their behavior as a source of influence on our behavior: “By and large, individuals try to conform to the standards of their group community and society”.

Gergen et al (1992) highlight ”the proximity” of both concepts. Social influence can lead individuals to change their behavior or attitudes according to the dominant schemas of the culture in which they are immersed. The social influence is a function of ”normative beliefs”. The latter are related to the perception of others about what we should do. Several studies show the importance of social influence phenomena on the individuals’ behavior. What concrete forms do these subjective norms take within the framework of our area of research?

At an initial stage, subjective norms can take the form of motivations. In fact, their theorization turns out to be achieved within a certain cultural framework of reference. According to Drillon (1995), motivation concerns the individual as a whole, along with the relationship he maintains with his environment. It is subject to two influential forms: an internal one as well as another resulting from the individual-environment interaction. It is certainly influenced, with varying degrees, by our values, needs, expectations and performances.

At a second stage, subjective norms influence the risk-taking propensity. A society or a social milieu that favors risk taking will definitely incite people towards entrepreneurial path.

Finally, subjective norms can also be triggered through the acquaintance of entrepreneurship models and the desire to imitate them. The fact of living in a given special cultural environment can lead an individual to act differently through observation of the behavior of others. According to Maissonneuve (1971), every member of a social group is influenced by collective models and respects certain explicit or implicit norms in compliance with what is expected from him.

2. Impact of entrepreneurship education on new business start-up: A sample case of students from the universities of Sfax and Sousse.

In this section, the focus of interest lies in determining the most significant variables affecting the students’ entrepreneurial intention. The sample was randomly selected from Sfax and Sousse universities. The variable ”intention to start up” is approximated through a polytomic-ordinate variable. We assume that the “intention to start up” is closely connected to a significant number of qualitative and quantitative variables. The first set of variables consists in the students’ willingness to start up as well as their socioeconomic environment, while the second set of variables is associated to age, potential financing capacity as well as the economic growth rate of the concerned country.

For the sake of highlighting these two categories of variables, we have undertaken, in a first step, to collect data on the basis of a questionnaire targeted to a sample composed of 300 students having received and completed their university education at the universities of Sfax and Sousse. In fact, the questions revolve essentially around the students’ profile, the socioeconomic environment in which they have lived, the nature of their parents’ profession as well as their socio-professional background.

Other questions pertain to their entrepreneurial activity. In other words, we seek to know whether the concerned students do have a theoretical knowledge in entrepreneurship, whether they have witnessed some project-creation experiences among their families, friends etc. Writing down the different questions has allowed us to identify 32 items. The variable to be explained consists in the students’ intention to create their own project and is noted Y. Thus, among the 33 items, some of which are strongly correlated (see annex), we propose to conduct some principal-
2.1. The model’s variables

2.1.1. The endogenous variable: Students’ intention to start their own project

Our model is designed to explain the intention of students from Sfax and Sousse Universities to launch their own projects. This variable takes three modalities which would lead us to give 2 should the concerned student who intend to create his own project, 1 if he is in the doubt zone, and in case he does not consider starting a project, he is allotted 0. The formulated questionnaire is randomly and directly handed out to the students in their respective institutions.

2.2. The model’s exogenous variables

The questionnaire content has enabled us to define 33 items considered as determining factors of the students’ intention to start up. In our model, these items are used either as composite variables or as explanatory variables, among which we mention: gender (x1), family status (x2), age (x3), profile of students’ parents, family and friends. Regarding new business start-up, a Student’s profile with relation to theoretical and practical knowledge in new business start-up, and existence of entrepreneurs whom he hopes to imitate constitutes a benchmark to imitate the compulsory pursuit of teaching courses in entrepreneurship or new business start-up engaged in an associative structure (all these composite variables are determined by the PAC), etc.

The objective of this part is to empirically test whether the various items taken separately or in a composite way do help explain correctly students’ intention to launch their own projects. The empirical data related to the endogenous variable as well as to the exogenous ones are the basis of a questionnaire addressed to a group of students belonging to Sfax and Sousse Universities.

To highlight our theoretical model, we undertake to determine the hypotheses of our study. The theoretical analyses presented in the previous sections along with the answers to our questionnaire have helped us formulate the hypotheses of this study. In fact, such an analysis reveals that the closeness of a student to an entrepreneurial environment where his parent or friends are entrepreneurs, the student’s profile in matters of entrepreneurial culture and the socioeconomic environment of the potential business (tax exemption, ease of financing, etc.) is of great importance for him to develop his intention to launch his project. In addition, the student’s characteristics such as (age, gender, educational level) are crucial for the success of the business.

2.3. Theoretical model hypotheses

The hypotheses are determined on the basis of deduction and induction analysis. Hence, our theoretical analysis and empirical investigations have helped us formulate the following hypotheses:

- **Hypothesis 1: The students’ gender, age and civil status have had a significant influence on their entrepreneurial intention.**
  This hypothesis assumes that students of a given age range and having a high level of education is likely to have an entrepreneurial idea. It explicitly states, confirms and stresses that the student attaining a certain age and having received a high educational level could well hold the idea to undertake. It is also assumed that a male student is more likely to have entrepreneurial ideas.

- **Hypothesis 2: The students’ internal (family) and external (university, friends) socio-cultural background significantly influence their entrepreneurial intention.**
  The student’s family environment, particularly parents, brothers and sisters, as well as the university environment affect his decision to start up or not. The student, whose parent is a businessman, has more chances to consider launching a project than his peers living in an environment where their parents are public-sector officers or employees. This hypothesis will be tested by applying the composite variable: level of knowledge of both management and business creation.

- **Hypothesis 3: The student’s profile regarding his theoretical and practical knowledge in business creation has an impact on his entrepreneurial intention.**
  The student’s theoretical and practical knowledge as acquired from university, as well as from certain components of civil society, can have a significant effect on his intention to found his own project. Indeed, a young student having acquired academic and professional knowledge would certainly have more chances to have business ideas related to commercial activities and business startup.

- **Hypothesis 4: The project implementation factor constitutes a stimulating element to boost students to start up.**
  The project implementation factors (i.e. knowledge of the target market, project-financing means, decision making, profit making, self-fulfillment, taking challenge), as well as those stimulating factors (obtaining
bank financing, attracting venture capitalists) have a positive impact on the students’ intention to set up a business.

3. Methodology and empirical-result presentation

For the purpose of testing the formulated hypotheses, a polytomous logistic regression has been considered with “the intention to start up” as an endogenous variable.

3.1. Data presentation

As mentioned before, we are interested in determining the variables serving to explain the entrepreneurial intention of students’ sample from the universities of Sfax and Sousse. It is worth reminding that this endogenous variable is of a polytomous type. As a result, our questionnaire has been drawn up while considering a number of questions related to the students’ characteristics, their internal and external environment profile, as well as their profile regarding theoretical and practical knowledge in matters of new business start-up and to the project implementation and fulfillment factors.

Thus, the questions in the questionnaire aim, in their entirety, at explaining, directly and/or indirectly, the students’ intention to launch projects. The number of directly contacted students makes a total of 200, with a very satisfactory response rate of about 80%, given the fact that the interviewees are asked to respond immediately. The first step taken in collecting and obtaining accurate data consists in formulating accurate questions while avoiding any indiscretion regarding the students’ private life.

3.2. Empirical results: Evidence from polytomous logistic regression

As mentioned earlier, our objective consists in determining the variables or items which significantly help explain the students’ intention to engage in an entrepreneurial activity. The conducted enquiry has allowed us to detect 32 items, which makes it impossible to introduce them entirely within the same and single equation given that the degree of freedom becomes low and leads to biased and inconsistent empirical results. To avoid such a technical problem, we used the ACP to look for composite variables among a certain number of correlated items, which would be used in our econometric specification.

The latter is expressed as follows:

\[ Y_i = \beta_1 Z_{i1} + \beta_2 Z_{i2} + \beta_3 Z_{i3} + \beta_4 Z_{i4} + \beta_5 Z_{i5} + \beta_6 Z_{i6} + U_i \]

This specification is estimated to verify the hypotheses H1, H2, H3, and H4. Using the Ordinary Least Square method, we have been led to obtain the following econometric results:

\[
Y_i = 1.84Z_{i1} + 0.95Z_{i2} + 0.415Z_{i3} + 1.219Z_{i4} + 0.914Z_{i5} + 0.929Z_{i6}
\]

\[(4.86)\quad (2.57)\quad (3.07)\quad (-1.18)\quad (2.30)\quad (2.26)\]

3.3. MacFadden Index \( R^2 = 0.52 \)

Where the endogenous variable takes 1 if the student i intends to start up and 0 if he is hesitant. The explanatory variables \( Z_1, Z_2, Z_3, Z_4, Z_5 \) and \( Z_6 \) express, respectively, the student’s internal and external socio-cultural background, the student’s profile in matters of new business start-up theoretical and practical knowledge, the projects implementation factors, the student’s gender and educational level. At the empirical level, the econometric results indicate that the above-cited exogenous variables have, in their entirety, had a significant effect on the endogenous one, except for the variable gender. At the operational level, one might well state that the student’s socio-cultural background, his knowledge in new business creation, the services provided by support-structures to promote new projects are all important factors affecting students’ decision with respect to maintaining their idea of launching their own projects.

4. Conclusion

Throughout the present research, the focus of interest has been centered on determining the major factors affecting the students’ intention to start-up a business through a sample made up of students belonging to the universities of Sfax and Sousse. The theoretical analysis has led us to conclude that entrepreneurial intention requires formulating an idea or a project which accounts for the students’ entrepreneurial attitudes. In fact, having a project idea is a central step in the process of shaping the students’ entrepreneurial intention. In this respect, several models related to entrepreneurial intention have been suggested, among which we can mention the models of Ajzen (1991), Bygrave (1989), Krueger et Carsrud (1993) as well as that of Shapero and Sokol (1982). The latter focuses on modeling entrepreneurial event by listing three factor groups, namely: factors associated with negative displacements (divorce,
dismissal, emigration), factors related to positive displacements (families, friends, consumers) and those connected with the intermediate displacements (leaving the army, prison, school etc).

In the empirical section, an attempt has been made to determine the significant variables affecting entrepreneurial intention among students. To this end, we have resorted to both the ACP and econometric logistic techniques. For the sake of determining the most significant variables, we have firstly proceeded with the ACP to obtain a set of composite variables composed of correlated items. The first variable obtained via ACP, called “student’s internal and external socio-cultural background”, combines 5 items.

As for the second variable, it is called “student’s profile with regard to his theoretical and practical knowledge of business creation” and combines eleven items. On applying a discrimination analysis, the econometric results have revealed that the composite variables, i.e., “the student’s internal and external socio-cultural environment” along with the “student’s profile with regard to his theoretical and practical knowledge of business creation” are the most significant variables of entrepreneurial intention among students.

This confirms the theoretical analyses relative to the importance of the student’s internal and external environment and its significant effects on his intention to launch his proper project. The student’s characteristics (age and, specially, educational level) seem to be significant variables in determining the entrepreneurial intention. The variable ‘gender’ has had no significant effect on the students’ intention to launch their own projects. In fact, if the student meets all the entrepreneurial requirements, gender turns out to have no empirical significance to influence the student’s intention to become an entrepreneur. Besides these variables, the items related to project implementation (i.e., advice, financing, market research) are major determinants of entrepreneurial intention. This study shows results that university teachers and all types of accompanying structures should play an influential role in developing entrepreneurial spirit.

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