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Future Entrepreneur's Profile

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RESUMO/ABSTRACT

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Given that entrepreneurship plays a key role in the development of a country's economy, governments should stimulate entrepreneurial orientation, particularly among youngsters in their formative years; schools must play a pertinent role in the promotion and support of these capacities. Indeed, the European Commission advises that schools foster such skills.

In this context, we apply a frame to screen school populations in the Azores Islands, Portugal, for prospects of entrepreneurship and to study the profiles of those who noticeably show entrepreneurial orientations.

Knowing the ideal combination of personality traits that foretell young entrepreneurs, schools can develop the syllabuses that are best aimed at promoting entrepreneurship and increasing the capacities of those who prove to be entrepreneurially oriented.

This work leads to the following main findings: first, that one quarter of all senior students in high school in the Azores Islands bears prospects for entrepreneurship and, second, this same group shows a well-defined psychological profile that may vary depending on one's willingness to expend effort.

JEL classification: M13

Key words: Entrepreneurship; Entrepreneurial Prospects; Entrepreneurial Orientation; Personality Traits

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FUTURE ENTREPRENEUR'S PROFILE

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Abstract

Given that entrepreneurship plays a key role in the development of a country's economy, governments should stimulate entrepreneurial orientation, particularly among youngsters in their formative years; schools must play a pertinent role in the promotion and support of these capacities. Indeed, the European Commission advises that schools foster such skills.

In this context, we apply a frame to screen school populations in the Azores Islands, Portugal, for prospects of entrepreneurship and to study the profiles of those who noticeably show entrepreneurial orientations.

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Introduction

The objectives of this paper include analyzing the prospects of entrepreneurs. Our aim is to identify a group of characteristics that define the profile of a potential entrepreneur.

The relevance of this study is justified by the fact that, despite being a problem vastly discussed in society, there exists a gap in the literature relatively to the study of characteristics that foretell the entrepreneurial prospects of an individual. An appropriate definition of the entrepreneur's profile will allow us to identify a priori which individuals present prospects of entrepreneurship and, occasionally, to focus programs on promotion of entrepreneurship in these individuals, increasing their capacities in a more efficient way.

Educational systems should be used as an instrument for the promotion of entrepreneurship as an alternative to being an employee. A student's last years in school are decisive for the construction of his/her aspirations and objectives for the future (Frank, et Al., 2005).

Rodrigues (1997) and Etzkowitz (2000) argue that entrepreneurial positioning should be confirmed mainly by universities. Universities should facilitate entrepreneurship, not only producing, but also transferring technologies to the market, managing in the most efficient way the efficacy of its basic systems: research, education and the development of new technologies.

On the other hand, Gasse (1985) recommends that entrepreneurial potential be identified and evaluated in high school, during the phase of development of an individual wherein the possibility of a future career as independent worker is still an option. During the last years in elementary and high schools, we notice a growing attention of the literature relative to the development of entrepreneurship (Donckels, 1991).

Accordingly, the object of this study resonates with the opinion of Kourilsky and Walstad (2000) when the authors infer that young people should be prepared as soon as possible for the new realities that are presented at the beginning of this century.

The prospect of entrepreneurship, as an object of study, can be directed to analysis of a combination of characteristics, including interest in entrepreneurship (e.g., interest in activities related to the work of a businessperson, as in reading business periodicals), entrepreneurial abilities (e.g., characteristics related to the work of an entrepreneur, as in the capacity to argue) and entrepreneur personality (e.g., leadership). The combination of these traits can be defined as entrepreneurial orientation.

The propensity of an individual to make an effort, or the capacity to work, is another variable that is fundamental for the foretelling of an individual's entrepreneurial potential. Schmitt-Rodermund and Vondracek (2002) conclude that adolescents with an elevated level of business orientation and that, at the same time, expect to make a large effort in the achievement of an objective, have greater prospects of becoming an entrepreneur in the future.

Psychological attributes are considered the most reliable traits to foretell whether or not an individual will pursue an entrepreneurial career (Stewart et Al., 1999). There is some empirical evidence based in a questionnaire related to the characteristics of personality, which is carried out by King (1985) that shows that differences between entrepreneurs and employees exist. In fact, several psychologists admit that personal attributes of an individual do not change over time, which is why his/her individual characteristics contribute to a good estimate for his/her future business success (Muller, 1999).

From the several personality guidelines associated with an entrepreneur, motivation in reaching one's objectives is firmly established as an important entrepreneurial characteristic. This orientation expresses one's motivation and his/her ability as a potential business founder to search for more efficient solutions than those that are offered in his/her current economic environment (McClelland, 1961; Begley and Boyd, 1987; and Lumkin and Dess, 1996).

Entrepreneurial individuals attribute the responsibility of what is happening to them to themselves or to external factors. Individuals with a *locus* on internal control believe that are capable of molding their future through their own actions. Rotter (1966) and Furnham (1986) assume that individuals with an internal control *locus* have better chances of succeeding as entrepreneurs than individuals who have an external control *locus*. Gasse (1985) confirms that entrepreneurs have stronger internal control *loci* than the remaining population in general.

Short levels of risk aversion are also good indicators of success in entrepreneurial activities (McClelland, 1966). Risk lovers will invest resources in projects where the consequences of the failure can be elevated (Miller and Friesen, 1978).

Other characteristics of personality that perform a fundamental role in entrepreneurship and are studied in this paper are the self-efficacy trait (Begley and Boyd, 1987) as well as four of the so-called "big-five" personality traits (neuroticism, the fifth line of personality, is not used in this study because it does not fit with the objective, in agreement with the opinion of Schmitt-Rodermund and Vondracek, 2002), which are conscientiousness, openness to new experiences, extroversion and agreeableness (Costa and McCrae, 1985). Kourilsky (1980) and Robinson et. al. (1991) highlight innovation and creativity as important variables that define the entrepreneurial profile.

Scott and Twomey (1988) define a series of factors, such as parental influence and professional experience, as explanatory variables for one's career aspirations. Family examples are of great influence and young people who initiate their own businesses will likely come from families where the parents are also entrepreneurs (Cromie, Callaghan and Jansen, 1992; Harrison and Hart, 1992; Blackburn and Curran, 1993).

If the social environment of an adolescent is favorable to entrepreneurship and if an individual has some previous positive experiences in an "adventure" business, then it is probable that he or she will become an entrepreneur in the future (Henderson and Robertson, 2000).

However, the positive and direct relationship that exists between an entrepreneur in the family and the future prospect of entrepreneurship is not observed in all of the studies that are carried out about this subject. For example, Schmitt-Rodermund and Vondracek (2002) introduce the variable predisposition in their work, as a predominant factor in the influence that the family has or does not have in an adolescent's choice of a career. The

authors conclude that being a member of an entrepreneurial family may lead to short levels of business orientation for the group of adolescents with a lower predisposition to make some effort. Probably, the authors observe, these individuals' parents work hard toward success for their businesses and it becomes clear to the adolescent that being an entrepreneur requires a lot of effort and investment, something he/she is not willing to do.

The remainder of this paper is organized as follows. In Section 2, we present the methodology and hypotheses that are used to evaluate the entrepreneur orientation and provide guidelines for personality traits of the potential entrepreneur. In Section 3, we provide corresponding empirical results and parallel entrepreneurship rationale. In Section 4, we offer some concluding remarks.

Methodology

The present work is based on two research hypotheses.

Hypothesis (H1): Entrepreneurial orientation and a willingness to expend effort allow us to predict with reasonable certainty the prospects of entrepreneurship.

H1 is based on the assumption that, as important as the entrepreneurial orientation of an individual, is it his/her willingness to expend effort that predicts his/her future entrepreneurial orientation. Individuals who are willing to work hard are more likely to pursue a profession that requires personal guidance and independent learning, or that of entrepreneurs.

Hypothesis (H2): Individuals who have a greater willingness to expend effort will prove to have more entrepreneurial orientation if he/she comes from a family whose members are independent workers or entrepreneurs and if he/she shows some personality traits that are similar to current entrepreneurs, such as guidance by objectives, individual conscientiousness (i.e. students who take their work seriously), openness to new experiences and if he/she is an extrovert, not very friendly (disagreeable) and not averse to risk.

On the contrary, the expectations for individuals who are less likely to work toward a good entrepreneurial orientation will be greater if he/she has good levels of self-efficacy and if he/she shows a greater need for social recognition. For these individuals, we expect that having a family whose members are independent workers/entrepreneurs will lead to lower levels of entrepreneurial orientation. This is postulated because observing families who work hard for the success of their entrepreneurial activities, combined with a low capacity to expend effort, negatively influences one's entrepreneurial orientation.

Expectations are that personality traits and parental models stimulate one's interest in entrepreneurship and thus, promote an entrepreneurial perspective that should be examined on the basis of one's willingness to expend effort. This is because both individuals with a high willingness to work and those who have less willingness to work may demonstrate similar levels of entrepreneurial orientation. Nevertheless, we believe that an entrepreneurial orientation results from different reasons in each case. Ours are the same two hypotheses that are formulated and tested by Schmitt-Rodermund and Vondracek (2002).

In this study, we collect data through questionnaires given to students in their 12th year of schooling in the Azores Islands (Portugal). Although some authors have based their researches on students from other levels of education, particularly Schmitt-Rodermund and Vondracek (2002), who apply a questionnaire to pupils in the 10th year, we opt to conduct the present study with students of the 12th year because they are finalists in high school and we expect the vast majority to have plans for the future. Also, their personalities are better defined at this age, which is a key factor for the validity of the results. Accordingly, we distribute 1,827 questionnaires to high schools from which 906 questionnaires are returned, resulting in a response rate of 49.59%.

Empirical Analysis

We combine three behavioral variables to construct entrepreneurial orientation: entrepreneurial abilities, interest by entrepreneurial activities and entrepreneurial behavior (Schmitt-Rodermund and Vondracek, 2002). The abilities and the interests of the individuals under study are analyzed using 66 items wherein answers are given in a Likert scale (from 1 for "not capable" to 5 for "very well," in the questions referring to abilities and from 1 for "would not like" to 5 for "would like a lot," for questions that refer to interests).

The abilities and the interests of the individuals are grouped into 6 interest areas: realistic, research, artistic, social, business and conventional. Entrepreneurial orientation is calculated from 13 items wherein answers were given also in a Likert format (from 1

for "does not apply" to 5 for "applies entirely"). These variables are identified by Holland (1985) and subsequently used by Schmitt-Rodermund and Vondracek (2002).

In the present study, five items are used to measure the curiosity of students for new subjects. Students are asked to evaluate their curiosity on a five point scale (from 1 for "does not apply" until 5 for "applies entirely").

We use a German version (Schmitt-Rodermund and Vondracek, 2002) of the Jackson Personality Research (Stumpf et. al., 1985) questionnaire to determine the levels of orientation by objectives, risk aversion and need for social recognition. The adolescents for our study are asked to answer with "correct" or "false" relatively to 66 statements. We use 16 items to measure the orientation by objectives, risk aversion and the need for social recognition.

In the questionnaire, we also quantify the respondents' conscientiousness, openness to new experiences, extroversion, agreeableness and neuroticism. The so-called "big-five" traces of personality are measured by Schmitt-Rodermund and Vondracek (2002), using a German version (Ostendorf, 1990) of the questionnaires NEO-PI (Cost and McCrae, 1985; and Borkenau and Ostendorf, 1991). This questionnaire consists of 45 pairs of opposite adjectives; nine for each personality trait. Answers are arranged along a scale of six points between each pair of adjectives where the adolescent marks the box closer to the adjective that best expresses his/her opinion. Neuroticism is not used as a characteristic that relates to entrepreneurship in order to resemble the inquiry of Schmitt-Rodermund and Vondracek (2002).

The scale with 20 items of Schwarzer (1986) is used in Schmitt-Rodermund and Vondracek (2002) to measure the level of self-efficacy. The answers are given in a Likert scale with five points, from 1 for "does not apply" to 5 for "applies entirely."

All variables are standardized in order to be included in the model as continuous variables.

Table 1 contains the frequencies and descriptive statistics for the variables "perspective of entrepreneurship" and "ability to work."

We can see that 27.8% of students who attend the 12th year of school in the Azores and respond to our survey have future prospects of entrepreneurship. That is, the percentage of respondents who have a strong probability of becoming entrepreneurs, in contrast to the other 16.7% who are not forecasted in any way as to their performance of any activity in the future related to entrepreneurship. The remaining 55.5% have some prospects of entrepreneurship.

[Insert Table 1]

To test the first hypothesis formulated, we perform a multiple linear regression for the entire sample with the variables entrepreneurial orientation and willingness to expend effort, and further analyze the interaction between the two, as independent variables, and the prospects of entrepreneurship, as dependent variables (the three variables are standardized in order to be inserted into the model as continuous variables). Table 2 shows the results.

The overall results are shown to be significant, mainly due to the contribution of the independent variable: entrepreneurial orientation. Contrary to what was observed by

Schmitt-Rodermund and Vondracek (2002), the variable “willingness to expend effort” is not significant, even when considered in conjunction with entrepreneurial orientation.

The Cronbach's alpha for the three items that are used for the construction of the variable “willingness to work” is 0.399, which is very similar to the value for 0.401 that is estimated by Schmitt-Rodermund and Vondracek (2002).

[Insert Table 2]

Another hypothesis states that certain factors of personality traits and family influence predict significantly one's entrepreneurial orientation, in a different way for the groups with more or less propensity to expend effort. A multiple linear regression model is implemented separately for those above and below the median of the “willingness to work” variable. Table 3 shows the results.

Contrary to what is observed by Schmitt-Rodermund and Vondracek (2002), the pattern of significant variables do not differ according to the individual's willingness to work. The only difference is in the variable “sociability,” since this personality trait is relevant only for the group of individuals who are unwilling to work. The relationship between this variable and guidance by objectives is negative, which confirms the expectation that an entrepreneur is a non-sociable individual, as supported by Fruyt and Mervielde (1997).

[Insert Table 3]

Nevertheless, there are several variables that are found to be significant for both groups. While there are only 36.7% of boys who responded to the survey that attend the 12th year of schooling in the Azores, they tend to show greater entrepreneurial orientations than the girls who responded to the survey. The same positive relationship is exhibited

by those individuals whose desire schooling. Relative to the traces of personality, individuals with greater entrepreneurial orientations are extrovert individuals, who take their work seriously (they are conscientious) and are self sufficient. Both groups also show high need for social recognition, which allows us to conclude that, regardless of one's willingness to expend effort being smaller or greater, the fact that entrepreneurship is a desirable behavior in society motivates individuals to seek opportunities to become a entrepreneur and hence, to gain social recognition. Furthermore, and contrary to what is expected, being a member of an entrepreneurial family and exhibiting entrepreneurial personality traits, such as openness to new experiences; guidance by objectives; and aversion to risk, are not significant in the ability to predict the entrepreneurial orientation for any of the groups under study.

Conclusions

There are two important conclusions to be drawn from this work. First, in contrast to what is expected, one's willingness to expend effort does not contribute to the forecast of his/her prospects for entrepreneurship. However, it is true that one's entrepreneurial orientation only explains, in part, his/her prospects for entrepreneurship.

Second, we present a set of characteristics that, when observed in the personality of an individual, associates this individual with a high entrepreneurial orientation. Therefore, careful selection of participants in programs that promote entrepreneurship on the basis of this set of traits can increase the efficiency of such programs. Young students with the personality traits of entrepreneurs and adequate entrepreneurial orientation meet the conditions necessary to exercise a liberal activity.

This work leaves some ideas open for future research. We keep the questions of whether the sciences relate to the psychology to identify: the correct variables that capture entrepreneurial behavior; if personality traits associated with the prospects of entrepreneurship are indeed stable over time; if support measures (e.g., incubators) can create an impact on the personality traits of an individual; or whether only the methods used to attract potential entrepreneurs require improvement.

References

Begley, T., Boyd, D. (1987). Psychological characteristics associated with performance in entrepreneurial firms and smaller business. *Journal of Business Venturing*, 2, 79 – 93.

Blackburn, R., Curran, J. (1993). The future of small firm: attitudes of young people to entrepreneurship, *New Directions in Small Business Research*, Athenaeum Press, London.

Costa, P. T., McCrae, R. R. (1985). The NEO personality inventory manual. *New York: Academic Press*.

Cromie, S., Callaghan, I., Jansen, M. (1992). The entrepreneurial tendencies of managers: a research note. *British Journal of Management*, 3, 1 – 5.

De Fruyt, F. e Mervielde, I. (1997). The five-factor model of personality and Holland's RIASEC interest types. *Personality and Individual Differences*, 23, 87-103.

Donckels, R. (1991). Education and entrepreneurship experiences from secondary and university education in Belgium. *Journal of Small Business and Entrepreneurship*, 9, 1, 35-42.

Etzkowitz, Henry (2000). The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm. *Research Policy*, Amsterdam, 29, 313-330.

Frank, H., Korunka, C., Lueger, M., Mugler, J. (2005). Entrepreneurial orientation and education in Austrian secondary schools. *Journal of Small Business and Enterprise Development*, 12, 2, 259.

Furnham, A. (1986). Economic locus of control. *Human Relations*, 39, 29-43.

Gasse, Y. (1985). A strategy for the promotion and identification of potential entrepreneurs at the secondary level. *Frontiers in Entrepreneurship Research*, 538-554.

Harrison, R., Hart, M. (1992). The enterprise culture and regional economic development: some evidence from Northern Ireland. *Towards the Twenty First Century: The Challenge for Small Business*, Nadamal Press, Macclesfield.

Henderson, R., Robertson, M. (2000). Who Wants To Be an Entrepreneur? Young Adult attitudes to entrepreneurship as a career. *Career Development International*. Bradford: 200, 5, 6, 279.

King, A. (1985). Self-analysis and assessment of entrepreneurial potential. *Simulation & Games*, 16, 399 – 416.

Kourilsky, M. L. (1980). Predictors of entrepreneurship in a simulated economy. *The Journal of Creative Behavior*, 14(3), 175-199.

Kourilsky, M. L., Walstad, W. B. (2000). The E generation. *Dubuque: Kendall/Hunt*.

Lumkin, G., Dess, G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21, 135-172.

McClelland, D. (1961). The achieving society, *Van Norstand*, Princeton, N. Y..

McClelland, D. (1961) The achievement motive in Economic growth. *American Economic Review*, 51, 179 – 189.

McClelland, D. (1966) The achieving society. *Stuttgart: Kohlhammer*.

Miller, D., Friesen, P. H. (1978). Archetypes of strategy formulation. *Management Science*, 24, 921 – 933.

Muller, G. (1999). Persönlichkeit und selbständige Erwerbstätigkeit – Messung von Potenzialfaktoren und Analyse ihres Einflusses. *Wirtschaftspsychologie*, 6, 2-12.

Robinson, P. B., Stimpson, D. V., Huefner, J.C., Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice*, 15 (4), 13-31.

Rodrigues, Leonel Cezar, Tontini, Gerson (1997). A universidade empreendedora: geração e transferência de tecnologia como factor agregador. *Revista de Negócios, Blumenau*, 2, 4, 37-49.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs* 80.

Schmitt-Rodermund, E., Vondracek, F. W. (2002). Occupational dreams, choices and aspirations: adolescents' entrepreneurial prospects and orientations. *Journal of Adolescence*, 25, 65-78.

Scott, M., Twomey, D. (1988). Long term supply of entrepreneurs: student career aspirations in relation to entrepreneurship. *Journal of Small Business Management* 36, 4.

Stewart, W.H., Watson, W.E., Carland, J.C., & Carland, J.W. (1999). A Proclivity for Entrepreneurship: A Comparison of Entrepreneurs, Small Business Owners and Corporate Managers. *The Journal of Business Venturing*, 14, 189-214.

Uwameiye, R., e Odion, P. M. (2006). A study of the level of awareness and attitude of vocational students towards entrepreneurship. *European Journal of Scientific Research*, 14, 2, 500-508

Table 1 Entrepreneurial prospects

	N° of cases	Choice	Percentage	Mean	Standard Deviation
Entrepreneurial prospects	568	0	16,7	1,11	0,66
		1	55,5		
		2	27,8		
	N° of cases	Minimum	Maximum	Mean	Standard Deviation
Interest by entrepreneurship*	829	11	55	31,94	10,33
Entrepreneur's ability*	827	11	55	33,52	10,18
Entrepreneur's behavior*	881	13	65	40,32	9,85
Curiosity by new subjects**	898	5	25	16,22	3,57
Additional courses in school**	857	7	21	13,50	2,47
Working hours in a week**	872	0	180	43,52	14,98

* Items used to measure entrepreneurial orientation

** Items used to measure willingness to expend effort

Table 2 Entrepreneurial prospects forecast

	Step	<i>B</i>	β	<i>p-value</i>
	I			
Age		-0,021	-0,020	0,633
Sex		-0,217	-0,103	0,013
Desired scholarship		0,135	0,161	0,000
N° of years in school /mother		0,090	0,121	0,029
N° of years in school /father		0,037	0,053	0,334
R		0,280		
R ²		0,078		
	II			
Entrepreneurial Orientation		0,081	0,215	0,000
Willingness to expend effort		0,040	0,075	0,127
Interaction		-0,005	-0,031	0,495
R		0,249		

R^2

0,062

Table 3 Entrepreneurial prospects forecast for the two groups

	Smaller working propensity			Larger working propensity		
	<i>B</i>	β	<i>p-value</i>	<i>B</i>	β	<i>p-value</i>
Age	-0,061	-0,025	0,645	-0,205	-0,089	0,096
Sex	-1,241	-0,244	0,000	-1,139	-0,218	0,000
Entrepreneur in the family	-0,330	-0,066	0,206	0,397	0,080	0,120
Desired Scholarship	0,273	0,136	0,024	0,228	0,117	0,040
Mother's Scholarship	0,033	0,018	0,828	0,107	0,057	0,368
Father's scholarship	-0,127	-0,067	0,395	-0,020	-0,012	0,854
Agreeableness	-0,064	-0,137	0,017	-0,041	-0,100	0,087
Extroversion	0,074	0,203	0,000	0,072	0,219	0,000
Openness to new experiences	0,010	0,019	0,746	-0,016	-0,033	0,581
Conscientiousness	0,079	0,179	0,005	0,071	0,167	0,008
Orientation by objectives	0,010	0,009	0,878	0,091	0,076	0,164
Risk aversion	-0,006	-0,007	0,905	-0,019	-0,024	0,658
Self-efficacy	0,084	0,295	0,000	0,058	0,227	0,000
Need for social recognition	0,100	0,105	0,045	0,125	0,139	0,006
R	0,554			0,557		
R ²	0,307			0,310		