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PSIWORLD 2011

## The influence of the psychological factors upon the entrepreneurial tendency in crisis environments

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### Abstract

We aim to determine whether the relationship of psychological factors and environmental factors affecting the entrepreneurial tendency change, due to perceptions of negative economic environment/economic crisis. The study focuses on the way in which perceptions of economic crisis and scarcity of money affects the entrepreneurial tendency of young people. We selected 152 students with Internal Locus of Control/ILC (using Rotter's Locus of Control Scale), and they were involved in four experimental scenarios. The exposure of young people with ILC in crisis conditions significantly affects their entrepreneurial tendency, while the intensity of scarcity of money has an insignificant effect.

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*Keywords:* Entrepreneurial tendency, Rotter's Locus of Control Scale, Economic Crisis

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### 1. Introduction

Most theoretical approaches regard entrepreneurship as an activity reserved for a small number of people with certain characteristics. The constructionist approach particularly tends to characterize the entrepreneur by their masculinity, high capacity to lead, in fact a kind of social hero. (Ben Hafaïedh, 2006). Entrepreneurial initiative is influenced by ethnicity (Aldrich & Waldinger, 1990) and gender, the source and nature of challenge for entrepreneurship being different for men and women (Brush, the Bruin and Welter, 2009). Entrepreneurs seem to be rather overoptimistic (Lowe & Ziedonis, 2006) and more willing to take risks, differing from other economic agents in terms of cognitive (bias and heuristics, for example) or personality factors (Brusenitz and Barney, 1997).

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In this context, economic psychology studies aim to identify psychological factors or characteristics that allow the identification of entrepreneurial tendency/potential, upon which the entrepreneurial initiative could be predicted. Studies such as Gilard (1982) and Bygrave (1993) evidenced the capacity of Rotter's Locus of Control Scale RLCS (Rotter, 1966) to predict the involvement in entrepreneurial activities. Studies such as those of Perry (1990) and Kaufmann & Walsh (1995) show that people who have Internal Locus of Control ILC, namely those that scored higher than 13 on RLCS, are more likely to be tempted to engage in entrepreneurial activities than those with external locus of control. Also, a person with internal locus of control is more likely to believe that environmental influences, such as the economy can be influenced rather than passively accepted (Ward, 1993). Moreover, a correlation is believed to exist between entrepreneurs and the possession of an internal locus of control (Sapp and Harrod 1993).

People with ILC seem to be more able to integrate and interpret positively the social and organizational environment, in which entrepreneurial initiative is expected to happen. Therefore, we assume that they will be less influenced by the persistence of negative information about the economic, institutional, organizational environment, where they are expected to take an investment risk. Assuming that their tendency is to be overoptimistic and use cognitive and heuristic bias is more pronounced than that of people with external locus of control, we expect people with ILC to maintain their tendency to engage in entrepreneurial activities even if they are under the pressure of negative information about the status of social interactions in their environment.

In this context, the research focuses on the psychological factors that are influencing or predicting this entrepreneurial tendency and the manner in which external/environmental factors interact with psychological factors in regard to entrepreneurial tendency, in the case of young people with ILC.

## 2. Method, design and results

In the pre-experimental phase, Rotter's Locus of Control Scale had been applied and 152 students were selected with scores higher than 13 (Internal Locus of Control). They were distributed at random into experimental groups, who were exposed to the 4 experimental scenarios. The influence of the two factors (factor 1/F1 Source of Money, with two levels – Borrowed\_Money vs. Lottery\_Won\_Money and factor 2/F2 Percibed Economic Environment, with two levels – Crisis vs. NonCrisis) onto Dependent Variable/DV (Invested\_Sum, ratio scale variable) were measured. For statistical analysis they have been validated and used 118 subjects' protocols.

In order to manipulate the F2, two short video films were used, each being 10 minutes in length. The first one contained a collage of TV news about the financial crisis, and the second presented a neutral subject, a documentary about animal life. In order to manipulate the F1, subjects received different written scenarios. For the "*Borrowed\_Money*" condition they were informed that a large bank in Romania was testing consumer options for the consumer-economy-investment triad and wanted to know how subjects would assign a sum of 300,000 lei (75,000 Eur. approximately), in case of this sum would be provided as soft loans without real estate collateral (redemption in 25 years if the amount was fully spent, monthly rate of 1,000 lei (about 250 Euros) + 1,000 lei monthly interest rate (annual rate was set preferentially at 4%). The subjects in the "*Lottery\_Won\_Money*" scenario were asked to assign the same amount in the savings-investment-consumption triad; in the event that they won that money in the lottery. For the amounts that subjects would choose to save, the same interest rate was used as in the previous scenario, the gross interest rate subsidy was 4% per year. In the experiment the hypothesis  $H_0$ : *The Source\_of\_Money (F1) and Percive\_Economic\_Environment (F2) influence the tendency of young people with Internal Locus of Control to engage in entrepreneurial activities* was tested. Our expectation, based on the supposedly reduced reactivity of subjects with Internal Locus of Control to the environmental pressures, was that exposure to the Crisis/NonCrisis condition will produce no significant effects, and

also we expect to observe a lower level of intention to engage in entrepreneurial activities in subjects that would use borrowed money from the bank.

Table 1: Estimates for F1 and F2 (DV *Invested Sum*)

F1: Source of Money	Mean	Std. Error	95% Confidence Interval		F2: Perceived Economic Environment	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound				Lower Bound	Upper Bound
Lottery	120.085,3	8.976,2	102.310,0	137.860,6	Crisis	104.196,4	9.909,4	84.573,0	123.819,8
Bank	139.838,2	9.497,3	121.030,9	158.645,5	NonCrisis	155.727,1	8.519,0	138.857,1	172.597,1

The experimental data has shown that exposure to the F1 *Crisis* scenario, produced the lowest intention of investment, while the maximum was recorded within the F2, *Borrowed\_Money* scenario, but without significant differences from Lottery scenario (Table 1).

An ANOVA analysis shows that the main effect F2 was significant,  $F(1,118)=15,550$ ,  $p<0,001$ ). The highest level of entrepreneurial tendency was noted within the Non-Crisis scenarios. The interaction effect was non-significant,  $[F(1,118)=2.797, p=0.097]$ , the main effect F1 was not significant,  $F(1,118)=2.285$ ,  $p=0.133$ .

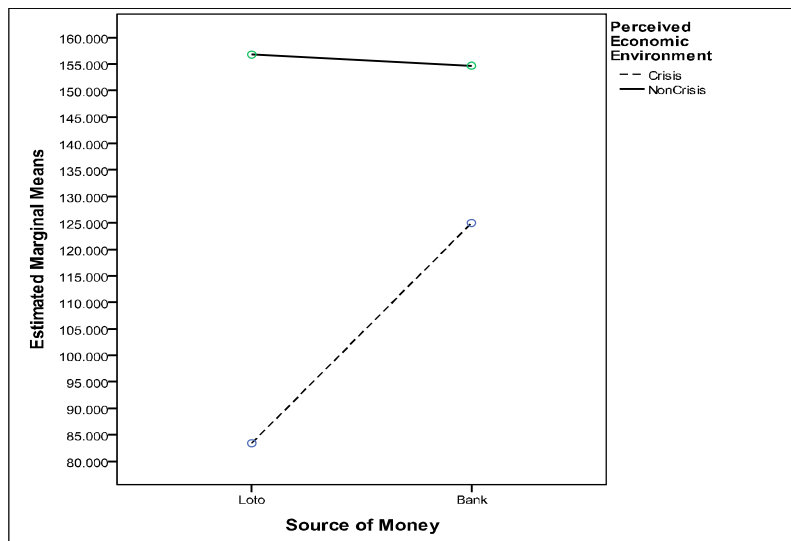


Figure 1: Estimated Marginal Means for Amount of Money to Invest

Besides the analysis of D.V. *Invested Sum*, field data was collected for all the subjects, on the preferred investment area and the area to avoid (the ranking list Agriculture, Construction, Commerce, Education, Property, Industrial Manufacturing, Health Services, Transportation) and the time in which they intended to start-up. (Unique choice of the following: 3 months, 6 months, 12 months, more than a year, do not know yet).

Identified as the most attractive areas were Commerce (15.6%), Property (14.8%), and Services (13.1%). The Economic field with the highest frequency of rejection was Agriculture (39.3%), followed

at long distance by Property (8.2%). Attractive areas also corresponded to areas that require the lowest initial investment amount for a start-up.

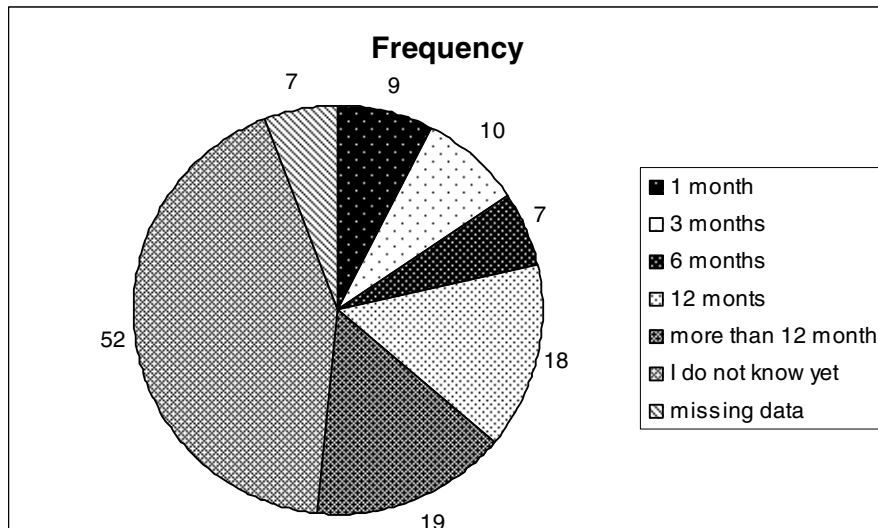


Figure 2: Time delay for Investments

Most of the subjects (73%) who declared their intention to invest different amounts of money would start-up in a timeframe of at least 12 months or more, this delay indicating rather a declarative intention to engage in entrepreneurial activities. Percentage of those who would invest in under six months is high (21.3%), probably a result of using pre-selected subjects according to a psychological factor such as Locus of Control.

### 3. Conclusion and Discussion

Our conclusion is that exposure of young people with ILC at crisis conditions significantly affects their entrepreneurial tendency, while the intensity of scarcity of money has an insignificant effect. Initial assumptions were thus invalidated. We expected that young people with ILC's perception about the domination of the economic crisis upon the external environment to produce an insignificant difference, subjects having presumed the ability to consider the external environment as controllable and adjustable. Average amounts potentially invested by the subjects exposed to the "Crisis" scenario was significantly lower than the average amounts potentially invested by the subjects exposed to the "NonCrisis" factor F2 ( $p < 0.001$ ). We also expected that young people would have a significantly higher tendency to invest the money won in the lottery, compared to those who would fund a possible investment with a bank credit at low cost and low risk (unsecured consumer credit). It is possible that for this variable to be affected by other confounded variables as loss aversion (for the condition *Lottery*) or similar. Further research is needed to verify the results' stability and the possible influence of hidden variables or moderator variables, especially as regards the factor F1 *Source\_of\_Money*.

Results obtained with pre-selected subjects having ILC shows that the negative pressure of external factors or the perception of an unfavourable environment affects the involvement in entrepreneurial activities of young people to a greater extent, then the availability and cost of necessary financial

resources. That is why we reassert the necessity of psychological intervention schemes for motivation and support of young people in connection with entrepreneurial behavior.

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