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Willingness to take risk and entrepreneurial intention of university students: An empirical study comparing private and state universities

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Abstract

Besides its benefits for many organizations, entrepreneurship is regarded as an important phenomenon for many studies. As a result of these studies, it is argued that entrepreneurial personality factors are insufficient to have reliable and generalizable outcomes, thus attention is reverted to intentional processes. Also risk taking willingness is believed to be distinguishing factor for entrepreneurial features. In line with literature the purpose of this study is to measure the effect of willingness to take risk on entrepreneurial intentions and compare state and private university students. 207 state and 214 private university students are analyzed and results revealed some differences between two groups and partial effect of willingness to take risk on entrepreneurial intension

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Keywords: Entrepreneurial intension, Willingness to take risk, State University, Private University

1. Introduction

In Turkey SMEs composed more than 95% of all businesses. Additionally, approximately %97 of those businesses are owned by individuals and families. Thus entrepreneurship has a strategic effect on Turkish economy. In recent years, fostering entrepreneurial spirit, meaning motivation to pursue entrepreneurial activities, has become a topic of highest priority in business life due to turbulent and dramatic change in external organizational environments (Brazeal and

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Herbert, 1999; Lüthje and Franke, 2003). Opportunity identification in this process is intentional and accordingly, individual entrepreneurial intention merits attention in entrepreneurship research (Gartner, Shaver, Gatewood and Katz, 1994; Kritiansen and Indarti, 2004). Although behavior can result from unconscious and unintended antecedents, what is of interest here is a conscious and intended act (Bird, 1988). According to Crant entrepreneurial intentions are central to the entrepreneurial process because entrepreneurship occurs over time, thus entrepreneurial intentions might be viewed as the first step in an evolving, long term process (Crant, 1996). However, there is an implicit assumption in much of the research that entrepreneurial intentions, the desires of the individual entrepreneur, lead to entrepreneurial outcomes so the entrepreneurial process can also be viewed as the interaction between entrepreneurial intentions and entrepreneurial outcomes over time. The deterministic view considers entrepreneurial outcomes to be a function of the relationship between the organization and the environment. In this case individual intentions are incidental rather than fundamental to organizational outcomes. In contrast, the voluntaristic perspective places primacy on entrepreneurial intentions in which the capabilities and motivation of the individual deliver entrepreneurial outcomes. (Jenkins and Johnson, 1997).

Until now, several empirical studies have examined the entrepreneurial intention among some of which consider university students as a source of future entrepreneurs. Their attitude and knowledge of entrepreneurship are likely to shape their inclination to start their own businesses in the future (Wang and Wong, 2004). Based upon this rationale, our main concern is to analyze the internal factors determining entrepreneurial intentions of individuals. In the literature family background, gender, age, education and past entrepreneurial experiences have been found to be related to entrepreneurial intentions (Crant, 1996; Kolvereid, 1996). However we are concerned with university students' willingness to take risks in this entrepreneurial process. More specifically, the present study attempts to examine risk taking propensity among students of state universities as compared with students of privately held universities. This work substantially expands our understanding of what drives the entrepreneurial intention. Moreover, "why" of entrepreneurship rather than the "when" is investigated by looking at the internal motivations of individuals rather than only focusing on the external inducements of the economic environment (Douglas and Shepherd, 2002). Because entrepreneurial orientations incline more to face uncertainty thus there is often some amount of risk involved in entrepreneurship process; hence, the higher the tendency to calculate risks, higher the entrepreneurial intentions should be (Sagie and Elizur, 1999). Thus, the present survey investigates the antecedents that may explain why differences of entrepreneurial intentions evolve across student populations (Lüthje and Franke, 2003). In this context, our main focus is on the impact of personality traits and attitudes on students' intention towards entrepreneurship, while attention is also be paid to demographic factors, individual background and contextual elements. This study evolves around several following research questions: "Do students' intentions differ because of difference in their risk propensity? Does a person's attitudes towards risk affect his/her entrepreneurial intentions? (Douglas and Shepherd, 2002); How to cultivate entrepreneurial intention among university students? ; Is there any direct or indirect relationship between personality factors and entrepreneurial intentions?" Hence, our main objective is to identify whether there is a significant relationship between students' willingness to take risks and their entrepreneurial intentions and then reasons for different entrepreneurial intentions and risk taking propensity between the groups of students from private and state universities (Kritiansen and Indarti, 2004).

Nowadays, universities are close to the business life especially university-industry collaboration has moved too many platforms. Therefore, it is very important to examine the risk and intension level of students who are future entrepreneurs and to reveal how entrepreneurship education contribute to their future carrier. So these topics are the main objective of this research. In the study, at first, we will discuss the concepts of intension and willingness to take risk and second define some basic concepts related with our theoretical framework; finally, our analyses and findings will be discussed

2. Literature Review And Hypotheses

Entrepreneurship refers to the process starting from the idea generation to the product or the service realization to the risk management (Bamber, Owens, Davies and Suleman, 2002). Although the literature lacks a precise definition of entrepreneurship, there has been a consensus on some aspects of it; namely the process of uncovering and developing an opportunity to create value through innovation and the seizing of that opportunity without regards to either the resources or position of the entrepreneur in a new or existing company (Antoncic and Hisrich, 2001; 2003). In defining entrepreneurship, Schumpeter takes a more specific view on it. He believes that the essence of

entrepreneurship is innovation and that carrying out of new combinations is called “enterprise”; the individuals whose function is to carry them out are called “entrepreneurs” so he has described an entrepreneur as “an innovator”. In this way, Schumpeter has made two concepts, entrepreneurship and innovation, almost inseparable. What he has understood by new combinations which cause discontinuity is the introduction of a new good, a new method of production, an opening of a new market, a conquest of new sources of raw materials or half- manufactured goods, and carrying out the new organization of any industry. Thus, entrepreneurship exists only when new combinations are actually carried out (Stevenson and Jarillo, 1990; Neely and Hii, 1998; Sharma and Chrisman; 1999; Bamber et al, 2002; Antoncic and Hisrich, 2003).

The personality approach to explain entrepreneurial tendencies has a long tradition in entrepreneurship research, a tradition which can be traced back to McClelland's work in the 1950s. Douglas and Shepherd (2002) found that the intention to be self-employed is stronger for those with more positive attitudes to risk and to independence. That is, the higher the individual's tolerance for risk, and the stronger is their preference for decision-making autonomy, the stronger is their intention to be self-employed (Douglas and Shepherd, 2002). Risk reflects the degree of uncertainty and potential loss associated with the outcomes which may follow from a given behavior or a set of behaviors (Forlani and Mullins, 2000). Entrepreneurs' propensity to take risk may also be related to risk perception. While estimating the riskiness of the situation, the decision-maker forms some beliefs about future outcomes. His/her perceived riskiness of the situation is based on his/her experience. One should distinguish between experience in those environments where the decision-maker believes he/she has no control over the outcomes, and those environments where he/she thinks he/she has at least some control over the outcomes (Macko and Tyszka, 2009).

In contrast to stated positive relationship between willingness to take risk and intention, in the literature, some findings support either having no significant relation or indirect relation between personality factors and entrepreneurial intentions. In our study different than other studies. Willigness to take risk factor has divided to 3 sub-dimension. Thus, these sub-dimensions are named as *Being a risk lover*, *Living risk free* and *Avoidance from risk*. The items of these sub-dimensions can be shown in *Table 1*. According to the findings in the literature, following hypotheses are developed and will be tested in university environment;

H₁: Willingness to take risk has positive effects on entrepreneurial intentions of individuals.

H_{1a}: Being a risk lover has positive effects on entrepreneurial intentions of individuals.

H_{1b}: Living risk free has negative effects on entrepreneurial intentions of individuals.

H_{1c}: Avoidance from risk has negative effects on entrepreneurial intentions of individuals.

Due to increasing number of entrepreneurship courses lectured in higher education and partnership efforts made between industry and universities, “entrepreneurship” concept has raised awareness among students. Today's students will be the future entrepreneurs, for their initiatives, it is important to note their intentions and risk willingness towards opportunity recognition. In this context, following hypotheses are constructed as follows:

H₂: There is a significant difference between state and private university students' willingness to take risks.

H₃: There is a significant difference between state and private university students' entrepreneurial intentions.

3. Methodology

3.1. Measures and research instrument

A multi item questionnaire is used in this study to measure “entrepreneurial intention” and “willingness to take risk”. To measure entrepreneurial intention a scale developed by Linan and Chen (2009) is used and to measure willingness to take risk Hisrich and Peters' (1995) most used and current scale is adapted to and customized for university students. Both instruments are translated and back translated and measured on a five point interval scale. Besides, some demographic questions such as gender, entrepreneurship course etc. are asked.

3.2. Sampling and data collection

Survey method was used to collect the data in this study. Sample universities are selected among the universities

which have entrepreneurship course that supported by KOSGEB (Republic of Turkey SMEs Development Organization). Students were chosen from Faculty of Economics and Administrative Sciences and Faculty of Management. Finally, a database established from 421 respondents' questionnaires. 49.2 % of the students are enrolled to a state university, whereas 50.8 % are enrolled to a private university. 44.4 % of the students were female and 55.5 % were male. From these students, 27.4 % of them has taken an entrepreneurship course and 72.6 % has not.

4. Findings

4.1. Measurement validation

To assess the reliability and validity of the measures, Confirmatory Factor Analysis (CFA) was applied to all multi-item scales. Chi-square test statistics are usually quite sensitive to sample size (Hair et al. 2010; Hoyle, 1995). Therefore other fit indices are developed. In this study, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Tucker-Lewis Fit Index (TLI), and Root Mean Square Error Approximation (RMSEA) are considered. There is no standard for acceptable fit indices, but the rules of thumb are values greater than .90 for GFI and CFI, values greater than .85 for AGFI, and values of .08 and less for RMSEA (Hair et al. 2010). The results indicated an acceptable fit ($\chi^2(48, N=421) = 202.31; p=.00; GFI=.92; AGFI=.87; CFI=.93; NFI=.91; TLI=.90; RMSEA=.08$).

We then employed procedures to check for convergent validity and discriminant validity. All factor loadings were relatively high and significant, providing evidence for convergent validity (Bagozzi and Yi 1988). Construct reliabilities of .71, .62, .54, and .91 indicated high internal consistency of the dimensions (Hair et al. 2010). Average variance extracted (AVE) values, which reflect the overall amount of variance accounted for by the latent constructs, are somewhat below the .45 threshold (Fornell and Larcker 1981) for willingness to take risk dimensions. However the Fornell and Larcker (1981) criterion and Anderson and Gerbing (1988) procedures supported both the convergent and discriminant validity consequently the distinctness of the constructs. All the mentioned findings are given in Table 1.

4.2. Path analysis

The scales have been found to be both reliable and valid and in order to test the H_1 , path analysis was performed. As can be seen from Table 2, path analysis model is found to fit the data ($\chi^2(48, N=421) = 202.31; p=.00; GFI=.92; AGFI=.87; CFI=.93; NFI=.91; TLI=.90; RMSEA=.08$). However, among the three dimensions of willingness to take risk, only one dimension "being a risk lover" is found to be significantly affecting entrepreneurial intentions of students ($\beta = .53, p=.00$).

H_{1a} : Being a risk lover has positive effects on entrepreneurial intentions (supported)

H_{1b} : Living risk free has negative effects on entrepreneurial intentions (not supported)

H_{1c} : Avoidance from risk has negative effects on entrepreneurial intentions (not supported)

H_1 : Willingness to take risk has positive effects on entrepreneurial intentions (partially supported)

In this sense, although H_1 is partially supported, since the construct which truly represents the willingness to take risk, being a risk lover has positive effects on entrepreneurial intentions, it satisfies our expectations.

Table 1. Constructs' Reliability and Validity

Constructs	Factor Loadings	t value
Willingness to take risks: Risk lover (CR=.71, AVE=.45)		
There were times when I did take risk in the last six months.	.49	a
I like trying new food, new places and totally new experiences.	.79	8.55 ***
If I frightened of something, I will try to conquer the fear.	.70	8.41 ***
Willingness to take risks: Risk Free (CR=.62, AVE=.45)		
I have never gone a blind date.	.61	a
I have (never) intentionally travelled an unfamiliar route.	.72	5.99 ***
Willingness to take risks: Risk avoidance (CR=.54, AVE=.37)		

I need to know the answer before I will ask the question.	.68	<i>a</i>
I need to know that's been done already before I am willing to try it.	.54	4.97 ***

Entrepreneurial Intention (CR=.91, AVE=.67)

My professional goal is to become an entrepreneur.	.61	<i>a</i>
I will make every effort to start and run my own firm.	.81	13.39 ***
I am determined to create a firm in the future.	.88	14.01 ***
I have very seriously thought of starting a firm.	.85	13.72 ***
I have the firm intention to start a firm someday.	.90	14.18 ***

$\chi^2(48, N=421)=202.31; p=.00; GFI=.92; AGFI=.87; CFI=.93; NFI=.91; TLI=.90; RMSEA=.08$

Note: CR=Construct Reliability; AVE= Average Variance Extracted; *a*= scale item fixed to 1; **p*=.05; ** *p*=.01; *** *p*=.001
 GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; CFI= Comparative Fit Index; NFI= Normed Fit Index;
 TLI=Tucker-Lewis Fit Index; RMSEA= Root Mean Square Error of Approximation

Table 2. Path analysis results: influence of willingness to take risks on entrepreneurial intentions

Path	β	t value
Risk Free → Entrepreneurial Intention	.06	.60
Risk Avoidance → Entrepreneurial Intention	-.11	-1.03
Risk Lover → Entrepreneurial Intention	.53	4.50 ***

$\chi^2(48, N=421)=202.31; p=.00; GFI=.92; AGFI=.87; CFI=.93; NFI=.91; TLI=.90; RMSEA=.08$

Note: CR=Construct Reliability; AVE= Average Variance Extracted; *a*= scale item fixed to 1; **p*=.05; ** *p*=.01; *** *p*=.001
 GFI=Goodness of Fit Index; AGFI=Adjusted Goodness of Fit Index; CFI= Comparative Fit Index; NFI= Normed Fit Index;
 TLI=Tucker-Lewis Fit Index; RMSEA= Root Mean Square Error of Approximation

4.3. Independent t Test Results: State vs Private Universities

In order to test the differences between the state and private university students' willingness to take risk and their entrepreneurial intentions, independent t tests were performed. As can be seen from Table 3, there is a significant difference between state and private universities in their students' risk avoidance behavior. Private university students are avoiding risk more than state university students (Mean_{private}=3.73; Mean_{state}=3.49), on the other hand there is no significant differences found between the state and private universities in students' loving risk and living risk free dimensions.

H₂: There is a significant difference between state and private university students' willingness to take risks (partially supported)

Table 3. Difference between state and private university students' willingness to take risks

		N	Mean	Std. Deviation	t value	df	p value
Being risk lover	State	207	3.86	.85	-1.75	419	.08
	Private	214	4.00	.84			
Risk free	State	207	2.55	1.28	.09	419	.93
	Private	214	2.54	1.24			
Avoidance from risk	State	207	3.49	.90	-2.72	419	.00**
	Private	214	3.73	.92			

* *p*<.05; ***p*<.01

Considering the entrepreneurial intentions of students studying in state and in private universities, private university students are more prone to be an entrepreneur than state university students (Mean_{private}=3.85; Mean_{state}=3.34). Results are shown in Table 4.

H₃: There is a significant difference between state and private university students' entrepreneurial intentions (supported)

Also to test if there is an effect of entrepreneurship courses in students' willingness to take risk and entrepreneurial intentions independent sample t-tests were conducted, however no significant differences were found between students who has taken the course and who has not.

Table 4. Difference between state and private university students' entrepreneurial intentions

		N	Mean	Std. Deviation	t value	df	p value
Entrepreneurial Intentions	State	207	3.34	1.04	-5.07	419	.00**
	Private	214	3.85	1.04			

* p<.05; **p<.01

5. Discussion and conclusion

The purpose of this study was to reveal the relationship between risk taking willingness and entrepreneurial intentions of state and private university students. As a result of the analyses, we found that being a risk lover has positive, moderate effect on entrepreneurial intentions. Even though only one dimension of willingness to take risk had an effect and our hypothesis was partially supported, since this dimension directly represents willingness to take risk, it satisfied our expectations. The other dimensions represent a neutral or negative behavior toward risk taking. Findings also showed entrepreneurial intention and risk taking willingness of university students varies in state and private universities. Results indicate that private university students have more entrepreneurial intention than others. This could be linked to the fact that students who have entrepreneurs in their immediate family are more prone to be an entrepreneur. In our study, there could be fewer entrepreneurs in immediate surroundings of state university students. Among the dimensions from willingness to take risk, risk-avoidance behavior is found to be less in state university students, this shows state university students are more risk taker than private university students but in the context of entrepreneurial intention, they remain behind from the private university counterparts. These findings reveal a state university student profile who are risk-taker but have no intention to be an entrepreneur. This could be a result of various socio-economic situations and the lack of entrepreneurs around them. Main reasons of this difference should be considered and investigated in the future studies. Given the importance of entrepreneurship increasing number of universities are adding entrepreneurship courses to their curriculum. Our sample universities also had this course in their curricula. Additionally, their entrepreneurial education is supported by KOSGEB (Republic of Turkey SMEs Development Organization). However, we could not find any significant effect of this courses on students' willingness to take risk and entrepreneurial intentions. In order to have an influence both on risk taking behaviors and entrepreneurial intentions, universities are required to have an active role more specifically in implementing educational, research and resource programs on entrepreneurship. In considering the generalizability of the findings, potential limitations should be addressed. This study was conducted in Istanbul, Turkey in two universities. Thus, further research in larger scale samples is needed before the generalizability of our findings. Entrepreneurship could be evolved under different social, cultural, political, and economic conditions, so only focusing on one of the personal traits such as willingness to take risks could be insufficient for predicting future behavior of students. This study could also be extended by doing on longitudinal basis in order to determine the conditions under which these intentions may be translated into entrepreneurial outcomes. One direction for future research would be to replicate the same study with other faculties both at the undergraduate and graduate level. Universities (state vs private) could also be analyzed according to their entrepreneurial orientation. Furthermore, it would be useful to examine the relative importance of risk taking propensity compared to other entrepreneurial personality traits.

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