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AUTHORS: Boratay UYSAL,Semra GÜNEY

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# Entrepreneurial Intentions of Turkish Business Students: An Exploration Using Shapero's Model

Boratay UYSAL\* & Semra GÜNEY\*\*

## Abstract

*In today's globalized economy, the entrepreneurship phenomenon paves the way for economic and social developments. Hence, entrepreneurial activities has become a matter that is greatly sought-after, both in the academic sense and on sectoral basis. At this juncture, the future of entrepreneurial growth relies greatly on business students therefore it's crucial to understand their intentions, yet such understanding has not been questioned before in a Turkish setting using the Shapero's model. This paper investigates the entrepreneurial intentions of Turkish business students, and examines the influence of components from Shapero's model on their intentions to become entrepreneurs. So as to measure these, self-administrated questionnaires were distributed to 103 business students at major universities in Ankara and Istanbul. The findings indicated that, in accordance with global trends, most of the students have an enthusiastic approach towards entrepreneurship.*

**Keywords:** Entrepreneurial Intention, Entrepreneurship, Business Students, Shapero's Model, Turkey

## Türk İşletme Öğrencilerinin Girişimcilik Niyetleri: Shapero'nun Modeli Kullanılarak Yapılan Bir Araştırma

## Özet

*Günümüz küresel ekonomisinde, girişimcilik olgusu ekonomik ve sosyal kalkınmanın önünü açmaktadır. Bu sebeple, girişimcilik faaliyetleri hem akademik bağlamda hem de sektörel düzeyde oldukça rağbet gören bir konu haline gelmiştir. Bu noktada, girişimciliğe dayalı büyümenin geleceği, geniş ölçüde, işletme öğrencilerine bağlı olmakla birlikte bu öğrencilerin girişimcilik niyetlerini anlayabilmek kritik önem taşımaktadır fakat Türk öğrencilerin bu niyetleri daha önce Türkiye özelinde ve Shapero'nun Modeli kullanılarak sorgulanmamıştır. Bu makalede, Türk işletme öğrencilerinin girişimcilik niyetleri ve Shapero'nun Modeli'ndeki öğelerin bu niyetler üzerindeki etkileri araştırılmıştır. Bu niyetlerin*

\* Graduate Student, Department of Business Administration, METU boratay.uyisal@metu.edu.tr

\*\* Prof. Dr., Department of Business Administration, Hacettepe University semguney@hacettepe.edu.tr

*ölçümlenebilmesi için Ankara ve İstanbul'daki başlıca üniversitelerde öğretim gören 103 işletme öğrencisine uygulanan anket sonucunda elde edilen veriler, küresel yönelimler paralelinde, öğrencilerin çoğunun girişimciliğe karşı hevesli bir yaklaşımı olduğunu göstermiştir.*

**Anahtar Kelimeler:** Girişimcilik Niyeti, Girişimcilik, İşletme Öğrencileri, Shapero'nun Modeli, Türkiye

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## 1. INTRODUCTION

Entrepreneurship is a subject that has been vastly researched in many different aspects due to its importance in social and economic development. By and large, entrepreneurship can be defined as a source of innovation and change, and as such spurs improvements in productivity and economic competitiveness<sup>1</sup>. From this point forth, entrepreneurial ventures generate wealth for a country and thus, create more employment options and higher earnings, this cascading effect not only contributes to a higher national income, it also creates a society full of individuals who are able to think outside of the box and are less dependent on obsolete systems.

Turkey, with its diversified industrial base and considerable talent pool, raise well around 100.000 business graduates a year and offers an exceptional platform for young entrepreneurs.<sup>2</sup> However, only 2.2 million of working population of 27.6 million pursue entrepreneurship as their career path in Turkey; this means that there is a potential that is not being used up to its absolute point.

In the academic field, there have been many studies that focus on the entrepreneurship phenomenon, particularly in terms of intention and how it is perceived in given settings. In this sense, over the years, many academicians have studied on entrepreneurial intentions within Turkish context. To name but a few, one recent research by Gurbuz and Akyol analysed 324 students from discrepant faculties of a state university in Turkey to measure the role of demographic variables, contextual features and factors of Theory of Planned Behaviour on entrepreneurial intentions of young educated public in Turkey<sup>3</sup>. Following this study, Talas, Celik, and Oral's research examined 638 undergraduate students from 17 different faculties and found out that the type of faculty, the monthly earning and the high school type are important variables in predicting entrepreneurial inten-

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1 Unctad, 'Entrepreneurship and Economic Development: The Empretec Showcase', <[http://unctad.org/en/Docs/webiteteb20043\\_en.pdf](http://unctad.org/en/Docs/webiteteb20043_en.pdf)>, accessed 15 August 2015.

2 Burak Kılanç, 'Her Sene 100 Bin İşletmeci Yetiştiriyor', <<http://basin-arsiv.metu.edu.tr/2013-12-16/107398>>, accessed 15/08/2015

3 Gulruh Gurbuz and Sinem Aykol, 'Entrepreneurial Intentions of Young Educated Public in Turkey', *Journal of Global Strategic Management*, 4/1 (2008), 47-56.

tion of students<sup>4</sup>. However, the previous academic researches within Turkish context have not focused on business students using Shapero's Model of Entrepreneurial Intentions yet. At this point, in order to effectuate an optimized and different perspective to literature, this paper aims to understand the entrepreneurial intentions of Turkish business students and how their intentions are affected by the components of Shapero's Model of Entrepreneurial Intentions.

## 2. LITERATURE REVIEW

The earliest theories which were conducted to explain why some people become entrepreneurs were based on personality characteristics. In McClelland's *The Achieving Society*, it was argued that people seek to excel and accomplish in their lives to satisfy their needs of achievement<sup>5</sup>. Thus, entrepreneurship emerges as a way of being responsible for tasks, reaching goals, taking moderate risks and receiving feedbacks which are attracted by high need for achievement (nAch) individuals. In literature, Kristiansen and Indarti's work on Indonesian and Norwegians students is one of the many other studies which supported the notion that high nAch has a positive impact entrepreneurial intention.<sup>6</sup> Moreover, several other theories like internal-external locus of control and the risk taking theory have been introduced for the enlightenment of entrepreneurial behaviour.<sup>7</sup>

Over the years, some researches have also focused on the influence of demographic factors on the choice of entrepreneurship as a career path. Shinnar, Giacomini, and Janssen discovered that men and women have dissimilar perception of barriers on entrepreneurial careers and gender differences have a notable impact on the decision to choose entrepreneurship<sup>8</sup>. Likewise, Koellinger, Minniti, and Schade, in their research on gender differences in entrepreneurial propensity, presented that different cognitive

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4 Emrah Talaş, Ali Kemal Çelik, and Ibrahim Orkun Oral, 'The Influence of Demographic Factors on Entrepreneurial Intention among Undergraduate Students as a Career Choice: The Case of a Turkish University', *American International Journal of Contemporary Research*, 3/12 (2013), 22-31.

5 David. C. McClelland, *Achieving Society* (Simon and Schuster, 1967).

6 Stein Kristiansen and Nurul Indarti, 'Entrepreneurial Intention among Indonesian and Norwegian Students', *Journal of Enterprising Culture*, 12/1 (2004), 55-78.

7 Jahangir Alan and Mohammad Akter Hossan, 'Linking between Franchising Networks for Entrepreneurship and Economical Development-Looking for a New Model', *EMNet-Conference on Economics and Management of Franchising Networks* (Vienna, Austria, 2003), 26-28.

8 Rachel S. Shinnar, Olivier Giacomini, and Frank Janssen, 'Entrepreneurial Perceptions and Intentions: The Role of Gender and Culture', *Entrepreneurship Theory and Practice*, 36/3 (2012), 465-93.

processes and perceptions of women and men are an important insight to explicate the gender gap in entrepreneurial activity<sup>9</sup>. Alternatively, Kolvareid and Moen found a high correlation between academic education and positive entrepreneurial perceptions and high entrepreneurial intentions<sup>10</sup>. A similar relationship was also demonstrated by Peterman and Kennedy at their research on Australian school students.<sup>11</sup>

Furthermore, Chlosta, Patzelt, Klein, and Dormann in their evaluation of 461 graduates from eight German universities observed that parental role models have a significant influence on their children's perception of the entrepreneurship phenomenon<sup>12</sup>. Correlated with the findings from German graduates, Gurel, Altinay, and Daniele's study with 409 tourism students in the UK and Turkey found a statistical correlation between the entrepreneurial intention of tourism students and their family background whether they are coming from a family of entrepreneurs or not.<sup>13</sup>

However, literature has shown predicting entrepreneurial behaviour by modelling demographic or personality characteristics only to an extent which holds insufficient explanatory power.<sup>14</sup> Therefore, the central emphasis of researches on the choice of entrepreneurship shifted from personality characteristics and demographic factors to entrepreneurial intentions. As a basis, it was brought forward that entrepreneurial intentions are significant when defining entrepreneurship as it is argued that identifying opportunities while on the verge of starting a business is an intentional practice.<sup>15</sup> However, there has not been any mutually agreed definition of what an entrepreneurial intention is. Hence, in this paper, entrepreneurial intention is used as a mental orientation such as desire, wish and hope influencing the choice of entrepreneurship.<sup>16</sup>

9 Philipp Koellinger, Maria Minniti, and Christian Schade, 'Gender Differences in Entrepreneurial Propensity', *Oxford bulletin of economics and statistics*, 75/2 (2013), 213-34.

10 Lars Kolvareid and Øystein Moen, 'Entrepreneurship among Business Graduates: Does a Major in Entrepreneurship Make a Difference?', *Journal of European industrial training*, 21/4 (1997), 154-60.

11 Nicole E. Peterman and Jessica Kennedy, 'Enterprise Education: Influencing Students' Perceptions of Entrepreneurship', *Entrepreneurship theory and practice*, 28/2 (2003), 129-44.

12 Simone Chlosta et al., 'Parental Role Models and the Decision to Become Self-Employed: The Moderating Effect of Personality', *Small Business Economics*, 38/1 (2012), 121-38.

13 Eda Gurel, Levent Altinay, and Roberto Daniele, 'Tourism Students' Entrepreneurial Intentions', *Annals of Tourism Research*, 37/3 (2010), 646-69.

14 Edgar Izquierdo and Marc Buelens, 'Competing Models of Entrepreneurial Intentions: The Influence of Entrepreneurial Self-Efficacy and Attitudes', *International Journal of Entrepreneurship and Small Business*, 13/1 (2011), 75-91.

15 Norris F. Krueger, Michael D. Reilly, and Alan L. Carsrud, 'Competing Models of Entrepreneurial Intentions', *Journal of Business Venturing* 15/5 (2000), 411-32.

16 Zhengxia Peng, Genshu Lu, and Hui Kang, 'Entrepreneurial Intentions and Its Influencing Factors: A Survey of the University Students in Xi'an China', *Creative Education*, 3/08 (2013), 95-100

In literature, two of the most commonly accepted and researched theories of entrepreneurial intentions are Ajzen's Theory of Planned Behaviour (TPB)<sup>17</sup> and Shapero's Model of Entrepreneurial Intentions<sup>18</sup>.

In Theory of Planned Behaviour, Ajzen portrays behaviour as a result of three components which are associated with behavioural intentions and perceived behavioural control.<sup>19</sup> Attitude is the first influencing factor identified by Ajzen, who defined it as a personal evaluation of the possible consequences of behaviour, including entrepreneurial behaviour, regardless of it being positive or negative. The second factor is defined as a subjective norm which represents the level of social pressure concerning the acceptability of entrepreneurial behaviour; this social pressure can rise from important relatives, parents, friends, colleagues and so forth. The third and final factor identified is perceived behavioural control (PBC) which is the perception of an individual's ability to carry out an entrepreneurial attempt. Literature review has shown strong theoretical and empirical support for Ajzen's Theory of Planned Behaviour in numerous contexts. To mention but a few, Tkachev and Kolvereid's research on 512 Russian students from numerous universities in St. Petersburg indicated that attitude, subjective norm, and perceived behavioural control form entrepreneurial intentions.<sup>20</sup> In furtherance, Marco van Gelderen and his colleagues' study on 1225 business administration students from four different universities supported the usefulness of Theory of Planned Behaviour on the elucidation of entrepreneurial intentions.<sup>21</sup>

On the other hand, Shapero argues that the process of forming entrepreneurial intentions are multifaceted. In his model of entrepreneurial intentions, there are also three components that are identified as the factors which influence entrepreneurial intention, these are: perceived desirability, perceived feasibility, and propensity to act. In this model, perceived desirability represents the attractiveness of a particular entrepreneurial activity, and perceived feasibility stands for one's feelings towards their

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17 Icek Ajzen, 'The Theory of Planned Behaviour', *Organizational Behaviour and Human Decisions Processes*, 50.2 (1991), 179-211.

18 Albert Shapero and Lisa Sokol, 'The Social Dimensions of Entrepreneurship', *Encyclopedia of entrepreneurship*, (1982), 72-90

19 Mark Conner and Christopher J. Armitage, 'Extending the Theory of Planned Behavior: A Review and Avenues for Further Research', *Journal of applied social psychology*, 28 (1998), 1429-64.

20 Alexei Tkachev and Lars Kolvereid, 'Self-Employment Intentions among Russian Students', *Entrepreneurship & Regional Development*, 11/3 (1999), 269-80.

21 Marco Van Gelderen et al., 'Explaining Entrepreneurial Intentions by Means of the Theory of Planned Behaviour', *Career Development International*, 13/6 (2008), 538-59.

capabilities of starting a business. Finally, the last factor, potential entrepreneurs' propensity to act, in other words their dispositions to act on their decisions, accredits the ultimate entrepreneurial intention.<sup>22</sup> In other words, Shapero's model assumes that entrepreneurial undertakings require the potential for entrepreneurial activity to exist before a displacement, something either positive or negative that disturbs the inertia, and a propensity to act after the displacement.<sup>23</sup> By so, resulting behaviour also needs to have a threshold level of creditability against other alternatives, in entrepreneurial context against paid employment. In literature, several meta-analyses on entrepreneurial intentions included Shapero's Model of Entrepreneurial Intentions. In Krueger and his colleagues' study in 2000, it was found that Shapero's model predicts students' intentions to become self-employed considerably better than TPB even though both of the models have significant explanatory powers.<sup>24</sup> Throughout the years, Shapero's Model of Entrepreneurial Intentions has been implemented for explaining entrepreneurial intention in only a few environments. John Karanja Ngugi and his colleagues applied Shapero's Model to explain entrepreneurial intentions of Kenyan university students in 2012 and found a strong correlation between entrepreneurship courses, which foster perceived desirability and perceived feasibility, and the intention of self-employment.<sup>25</sup> The parallel results have been found in Rita Klapper and Catherine Leger-Jarniou's research at three different French higher education institutions in 2006.<sup>26</sup>

### 3. RESEARCH

On the grounds of the literature review above, this research was conducted to analyse the entrepreneurial intentions of Turkish Business students with respect to the components of Shapero's Model of Entrepreneurial Intentions. Therefore, a general prospective has been plotted based on the

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22 Muhammad Amsal. S., Dileep Kumar M., and Subramaniam Sri Ramalu, 'Categorizing and Fixing Variables on Entrepreneurial Intention through Qualitative Research', *Asian Social Science*, 10/19 (2014), 45-58.

23 Norris F. Krueger, Michael D. Reilly, and Alan L. Carsrud, 'Competing Models of Entrepreneurial Intentions', 15.5, (2000b), 411-32.

24 Ibid.

25 John Karanja Ngugi et al., 'Application of Shapero's Model in Explaining Entrepreneurial Intentions among University Students in Kenya', *International journal of business and social research*, 2/4 (2012).

26 Rita Klapper and Catherine Leger-Jarniou, 'Entrepreneurship Intention among French Grande École and University Students: An Application of Shapero's Model', *Industry and Higher Education*, 20/2 (2006), 97-100.

literature and the conclusions drawn from the model itself and thereafter, the following hypotheses are developed.

**Hypothesis 1:** *There is a positive impact of Perceived Desirability on Turkish Business Students' entrepreneurial intentions.*

**Hypothesis 2:** *There is a positive impact of Perceived Feasibility on Turkish Business Students' entrepreneurial intentions.*

**Hypothesis 3:** *There is a positive impact of Propensity to Act on Turkish Business Students' entrepreneurial intentions.*

In the hypotheses developed, the entrepreneurial intention of Turkish Business Students represents the dependent variable while the components of Shapero's Model of Entrepreneurial Intentions; perceived desirability, perceived feasibility and propensity to act; represent the independent variables. These independent variables were tested to measure their impact on the levels of entrepreneurial intentions.

### 3.1. Data Collection

The data that are used to carry out this study were collected via self-administered questionnaires in May 2015. The questionnaires were formulated in English and the formulated questionnaires were distributed and collected at several English medium classes in universities with the permissions of instructors. The theoretical context required to formulate the questions were adapted from Lepoutre and his colleagues' work on entrepreneurship education<sup>27</sup>. The questionnaire consisted of 4 parts and a total of 23 items which were adapted from both Krueger's entrepreneurial intention and SEE questionnaires<sup>28</sup> and Burger's desirability of control scale<sup>29</sup>. The first part of the questionnaire measured the demographic data and consisted of age, gender and education related questions followed by one main question regarding entrepreneurial intention. The remaining parts were designed to enable a measurement of, perceived desirability, perceived feasibility and propensity to act, as stated in Shapero's Model of Entrepreneurial Intentions. Each of these 3 parts consisted of 6 items that

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27 Jan Lepoutre et al., *A New Approach to Testing the Effects of Entrepreneurship Education among Secondary School Pupils* (Entrepreneurship, Growth and Economic Development; Cheltenham, UK: Edward Elgar Publishing, 2010).

28 Norris F. Krueger, 'The Impact of Prior Entrepreneurial Exposure on Perceptions of New Venture Feasibility and Desirability', *Entrepreneurship theory and practice*, 18/1 (1993), 5-21.

29 Jerry M. Burger, 'Desire for Control and Achievement-Related Behaviors', *Journal of Personality and Social Psychology*, 48/6 (1985), 1520-33.



were to be measured on a 5 point scale ranging from Strongly Agree to Strongly Disagree. (*For the details of the survey see Appendix section.*)

The study sample consists of 103 business administration students from notable schools in Istanbul and Ankara, the two largest cities of Turkey. (*For the names of the universities see Appendix section.*) These two cities represent a diverse collection of students due to the fact that students from all around Turkey come to these cities to attend university. This study sample consists of largely final year students and represents students from various backgrounds and this diversity will help to distinguish the factors that are most effective in determining the students' intentions about becoming an entrepreneur.

### 3.2. Study Findings and Analysis

#### 3.2.1. Demographic analysis of study sample

*Table 1.1: Demographic Distribution of Study Sample*

Demographic distribution	Frequency	Percent
<b>Gender</b>		
Female	56	54.4
Male	47	45.6
Total	103	
<b>Class</b>		
First Year	5	4.9
Second Year	11	10.7
Third Year	14	13.6
Final Year	73	70.9
Total	103	
<b>Age</b>		
18 to 22	35	34.0
23 to 27	63	61.2
28 to 32	4	3.9
32 or older	1	1
Total	103	
<b>Occupation</b>		
Student	58	56.3
Student, working part-time	36	35
Student, working full-time	9	8.7
Total	103	

With respect to table 1.1, out of the total 103 students who were surveyed, 54.4 percent were female and males accounted for 45.6 percent. Considering that the majority of business students in Turkey are female, this sample proves to be representative. Furthermore, there is a higher frequency of final year students when compared to the other years. This distribution is due to the fact that students often tend to start planning for their future as they get closer to their final years. The majority of the students were around the age of 22-27, with a frequency of 61.1 percent. This distribution is normal because 23-27 is the age where students usually start planning for their future or when they are at a transition point from university to the business life. Accordingly, 56.3 percent of the students that were surveyed were not employed. This poses a representative sample because students who are not yet employed have a high chance to think of a new career path which may include entrepreneurship.

### 3.2.2. Descriptive analysis of independent variables

**Table 2.1:** Descriptive Analysis of Perceived Desirability Dimension

Perceived Desirability	Strongly Agree	Agree	Neutral	Dis-agree	Strongly Disagree	Mean	StDev.
Item 1	18	36	32	15	2	3.52	.98
Item 2	24	48	22	6	3	3.82	.95
Item 3	42	43	11	6	1	4.16	.90
Item 4	22	49	21	8	3	3.77	.97
Item 5	20	50	25	7	1	3.79	.87
Item 6	12	49	36	6	0	3.65	.76

With respect to Table 2.1 above which shows the results of the descriptive analysis of perceived desirability dimension, the first item 'The best way for me to follow my passion and feel fully fulfilled is through pursuing entrepreneurship' indicated by a mean of 3.52 and standard deviation of 0.98. Then again, item number three which states: 'If I had the necessary resources and the opportunity, I would like to start my own firm' received the highest score of strongly agree and mean which is 4.16 with a standard deviation of 0.90. This goes to show that students feel that having sufficient resources is the key to start a new business, and they feel that this lack of resource is the main factor that is holding them back. The total average mean of perceived desirability received the mean of 3.78. With all these

in mind, in brief, it can be said that Turkish business students perceive entrepreneurship as a rather desirable path.

**Table 2.2:** *Descriptive Analysis of Perceived Feasibility Dimension*

Perceived Feasibility	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	StDev.
Item 1	7	27	38	28	3	3.07	.96
Item 2	7	41	35	19	1	3.33	.89
Item 3	13	41	35	13	1	3.5	.91
Item 4	9	52	29	12	1	3.55	.85
Item 5	8	56	28	11	0	3.59	.78
Item 6	8	35	33	24	3	3.2	.98

Table 2.2 above shows the means, standard deviations, frequency of the answers of the questions measuring the level of perceived feasibility of the Turkish business students. Item number one 'I am well equipped to start my own firm' which measures the degree of readiness to start a firm scored the lowest mean which is 3.07 with a standard deviation of 0.96. Although this is still a relatively positive mean, it still points out the fact that not all students feel they have the needed resources or equipment to start a firm. The third item 'If I were to start my own firm, I would probably succeed' indicated by a mean of 3.5 and standard deviation of 0.91. This implies that students are relatively confident in their abilities to succeed. On the other hand, the last item 'It would not be a difficult task for me to launch a new firm and keep it working' indicated by a mean of 3.2 with a standard deviation of 0.98 which points out that that not all students feel confident about the process of business creation. The total average mean of perceived feasibility items is 3.37 which implies that students have a relatively positive perception towards the feasibility of starting their own business.

**Table 2.3:** *Descriptive Analysis of Propensity to Act Dimension*

Propensity to Act	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	StDev.
Item 1	22	53	20	7	1	3.86	.86
Item 2	23	66	9	4	1	4.03	.74
Item 3	49	43	10	0	1	4.35	.74
Item 4	21	51	26	4	1	3.85	.82
Item 5	35	51	14	3	0	4.15	.76
Item 6	29	42	24	8	0	3.89	.90

The last independent variable, propensity to act, was measured with six items and the results of the descriptive analysis are presented at table 2.3. The first item 'I would rather may my own mistake than to take orders from someone else' averaged 3.86 with a standard deviation of 0.86. This implies that the sense of autonomy is very important to the students. Item three which states 'I enjoy making my own decisions' received the highest mean of 4.35 with a standard deviation of 0.74 which means that the students are independent thinkers and have the necessary intuition to become entrepreneurs. The total average mean of propensity to act is 4.02 which stands for the fact that students are ready to act upon their choices and perceptions.

### 3.2.3. Descriptive analysis of dependent variable

**Table 3.1:** Descriptive Analysis of Entrepreneurial Intention

Entrepreneurial Intention	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	StDev.
Item 1	25	38	26	12	2	3.7	1.02

The dependent variable, entrepreneurial intention, was measured with one item and the results of the descriptive analysis are presented at the table 3.1. The item one 'The possibility that I will start my own business is very high' scored a mean of 3.7 with a standard deviation of 1.02. This indicates that students are genuinely positive with their intentions towards entrepreneurship and that they are portraying a non-hesitant approach.

### 3.2.4. Scale Validity and Reliability Analysis

Before examining the relationships among the components of Shapero's Model and entrepreneurial intention, all items were examined with alpha reliability analysis. As shown in table 4.1, reliability coefficient for the independent variables ranged from 0.82 to 0.85 and overall scale reliability was 0.899 which are all over 0.7 as recommend by Nunnally<sup>30</sup> and indicates a high internal consistency.

<sup>30</sup> Jum Nunnally, *Psychometric Methods* (1978).

**Table 4.1:** Alpha Reliability Analysis

Variables	# of Items	Cronbach $\alpha$
1.Entrepreneurial Intention	1	-
2.Perceived Desirability	6	.842
3.Perceived Feasibility	6	.853
4.Propriensity to Act	6	.823

Within the exploratory factor analysis, KMO and Bartlett's test results were examined and the results showed that the data was suitable for PCA. According to the applied PCA shown in below, all the independent variables are separated to their estimated components without cross-loading and all these variables have a factor load over 0.5.

**Table 4.2:** Principle Component Analysis

Items	Perceived Desirability	Perceived Feasibility	Propensity to Act
Desirability_Item1	.731		
Desirability_Item2	.751		
Desirability_Item3	.625		
Desirability_Item4	.707		
Desirability_Item5	.630		
Desirability_Item6	.755		
Feasibility_Item1		.653	
Feasibility_Item2		.835	
Feasibility_Item3		.701	
Feasibility_Item4		.733	
Feasibility_Item5		.747	
Feasibility_Item6		.655	
Propensity_Item1			.572
Propensity_Item2			.680
Propensity_Item3			.701
Propensity_Item4			.801
Propensity_Item5			.678
Propensity_Item6			.757

Rotation Method: Varimax with Kaiser Normalization. Loadings below .45 not shown. KMO: 0.836;  $p < .000$

### 3.2.5. Correlation Analysis

**Table 5.1: Pearson Correlation Coefficients**

Variables	1	2	3	4	S	K
1.Entrepreneurial Intention	1				-.470	-.438
2.Perceived Desirability	0.659**	1			-.466	-.007
3.Perceived Feasibility	0.481**	0.499**	1		-.184	-.528
4.Propriensity to Act	0.482**	0.466**	0.367**	1	-.578	-.433

\*\* : Correlation is significant at 0.01 level (2-tailed). S = Skewness; K = Kurtosis

Before the correlation analysis, skewness and kurtosis for both independent and dependent variables were measured. As presented at table 5.1, the values of skewness and kurtosis scored within the normal range.<sup>31</sup> Examination of Q-Q plot and histograms also supported the notion that there is not any significant deviation from normality. The values in table 4.1, correlation analysis, also show that the strongest relationship ( $r=0.659$ ) is between entrepreneurial intention and perceived desirability. The other independent variables perceived feasibility ( $r= 0.481$ ) and propensity to act ( $r= 0.482$ ) have a fairly strong relationship with the dependent variable. The strong association illustrated in the correlation analysis supports the notion that each of the independent factors which are perceived desirability, perceived feasibility and propensity to act are all strongly integrated and associated in enforcing intention.

### 3.2.6. Multiple regression analysis and hypothesis testing

**Table 6.1: Multiple Regression Analysis**

Independent Variables	Dependent Variable	Beta Coefficient	Sig.
1.Perceived Desirability	Entrepreneurial Intention	.484**	.000
2.Perceived Feasibility		.167**	.044
3.Propriensity to Act		.195**	.019

Adjusted R. Square=0.493 , F=32.134 \*\*  $p<0.05$

31 Barbara G. Tabachnick, Linda S. Fidell, and Steven J. Osterlind, *Using Multivariate Statistics* (5th edn.; New York: NY:Haper and Row, 2001).

With respect to the results of the multiple regression analysis presented at Table 5.1 above, each factor has a contribution but the highest is perceived desirability with a beta coefficient of 0.484. Moreover, all of the factors have a significant impact and the data is representative due to the p value being smaller than 0.05. Herewith, considering together with the correlation analysis, it shows that all dimensions have an individual impact on the level of entrepreneurial intention so all three hypotheses (*Hypothesis 1, Hypothesis 2, and Hypothesis 3*) are supported.

## DISCUSSION AND CONCLUSIONS

This research was set out to analyse the entrepreneurial perceptions and intentions of Turkish business students towards entrepreneurial undertakings. The use of Shapero's Model of Entrepreneurial Intentions formed the basic structure of the research and the three independent factors which were expected to influence intention were perceived desirability, perceived feasibility and propensity to act.

The results of correlation and multiple regression analysis enabled a chance to understand which factors have relationship with and contributed the most in determining entrepreneurial intention. With respect to the results of the correlation analysis, perceived desirability stand out as having the strongest relationship with entrepreneurial intention. This implicates that the desire and the inner motive to be an entrepreneur is a factor which affects students the most when intending to choose this career path. The other two independent factors, perceived feasibility and propensity to act, posed a moderately strong relationship with the dependent factor. The three independent factors and the dependent factor further investigated by multiple regression analysis which showed that entrepreneurial intentions of Turkish business students were significantly predicted by the independent variables of the model. This analysis also pointed out, analogous with the correlation analysis, that the perceived desirability factor has the strongest impact on students' entrepreneurial intention. It is therefore, concluded that Turkish students possess positive perceptions and dispositions towards entrepreneurship which in the end affect their intention positively, subsequently the three of the hypotheses are supported. From this point forth, this study has similar findings with local studies such as but not limited to Ballı's study in Çukurova region<sup>32</sup>

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32 Erdinç Ballı and Ayşe İpek Koca Ballı, 'Üniversite Öğrencilerinin Bireysel Değerleri Ve Girişimcilik Eğilimleri', Çukurova Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 18.1 (2014)

and Naktiyok and Timuroglu's study with 234 students in Erzurum<sup>33</sup> in which they both observed high level of entrepreneurial intentions among the students. However, unlike the other studies conducted in Turkey, this study contributes the literature by revealing entrepreneurial intentions of students through the components of Shapero's Model of Entrepreneurial Intentions. The limitations that might be applied to this research stand out as the sample size and the scope of the questions in the questionnaire. In the event of a wider range of students from different regions of Turkey and a more complete questionnaire with more factors for dependent variable, outcomes with a greater predictive power might be possible.

The application of Shapero's Model of Entrepreneurial Intentions to Turkish business students and the related research findings can pave a way for further literature to have more extensive examinations of the entrepreneurial intention. On the other side, the factors which foster the entrepreneurial intentions of Turkish students should be carefully examined by educators and policy makers for the possible improvements in the area of entrepreneurship in Turkey. More importantly, it is suggested that the reasons and motives behind why these entrepreneurial intentions are not turning into actual behaviours, entrepreneurial activities, should be investigated in academic, industrial, and government settings.

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33 Atılhan Naktiyok and M. Kürşat Timuroğlu, 'Öğrencilerin Motivasyonel Değerlerinin Girişimcilik Niyetleri Üzerine Etkisi Ve Bir Uygulama', *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 23.3 (2009).



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## 6. APPENDIX

### 6.1. Survey Questions

#### 1. Are you?

- ☐ Male
- ☐ Female

#### 2. What is your age?

- ☐ 18- 22
- ☐ 23- 27
- ☐ 28- 32
- ☐ 32 or older

#### 3. Which class are you in?

- ☐ First Year
- ☐ Second Year
- ☐ Third Year
- ☐ Final Year

#### 4. What is your occupation?

- ☐ Student
- ☐ Student, Working Part Time
- ☐ Student, Working Full Time

#### 5. Indicate your level of agreement with the following sentences from 1 (strongly disagree) to 5 (strongly agree)

Question	1	2	3	4	5
The idea of starting my own business seems very fascinating.					

**6. Indicate your level of agreement with the following sentences from 1 (strongly disagree) to 5 (strongly agree)**

Questions	1	2	3	4	5
The best way for me to follow my passion and feel fully fulfilled is through pursuing entrepreneurship.					
The idea of starting my own business seems very fascinating.					
If I had the necessary resources and the opportunity, I would like to start my own firm.					
I consider entrepreneurship more prestigious than private or public employment.					
I associate entrepreneurship with advantages rather than disadvantages.					
I prefer entrepreneurship amongst various employment possibilities.					

**7. Indicate your level of agreement with the following sentences from 1 (strongly disagree) to 5 (strongly agree)**

Questions	1	2	3	4	5
I am well equipped to start my own firm.					
I know how to develop an entrepreneurial project.					
If I were to start my own firm, I would probably succeed.					
I can control the process of creating a new firm.					
I am aware of the necessary practical details needed to start a firm.					
It would not be a difficult task for me to launch a new firm and keep it working.					

**8. Indicate your level of agreement with the following sentences from 1 (strongly disagree) to 5 (strongly agree)**

Questions	1	2	3	4	5
I would rather make my own mistake than to take orders from someone else.					
I would rather have a great deal of responsibility.					
I enjoy making my own decisions.					
I feel that I am generally more capable of handling situations compared to others.					
When I am faced with a problem, I prefer to do something about it rather than sit by and let it continue.					
I always try to demonstrate a leadership role when I am in group projects.					

**9. Study Sample**

Universities (in alphabetical order)	
Ankara	Istanbul
Ankara University	Bogazici University
Bilkent University	Koc University
Hacettepe University	Sabanci University
Middle East Technical University	Yeditepe University