

**ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF ARTS AND
SOCIAL SCIENCES**

**THE RELATIONSHIP BETWEEN ENTREPRENEURIAL
CHARACTERISTICS AND ENTREPRENEURIAL INTENTION**

M.Sc. THESIS

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Management M.Sc. Program

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**GİRİŞİMCİ KİŞİLİK ÖZELLİKLERİNİN
GİRİŞİMCİLİK NİYETİ ÜZERİNE ETKİSİ**

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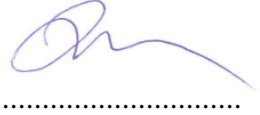
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To my mother and father,



FOREWORD

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ABBREVIATIONS

ANOVA	: Analysis of Variance
AT	: Tolerance of Ambiguity
SPSS	: Statistical Package for the Social Sciences
nAut	: Need for Autonomy
nAch	: Need for Achievement
LOC	: Locus of Control





SYMBOLS

α : Cronbach's alpha





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THE RELATIONSHIP BETWEEN ENTREPRENEURIAL CHARACTERISTICS AND ENTREPRENEURIAL INTENTION

SUMMARY

In today's complex globalized business environment where innovation in terms of markets and products is increasingly vital for survival of economies, entrepreneurship is a unique resource which should be the focal point. Not only vast majority of the innovation comes from newly founded firms, but also start-ups lift economies by decreasing unemployment, diversifying available products and services, increasing efficiency of the markets and attracting investments. In other words, entrepreneurs are the long sought key solutions for stagnated economies which are ineffectively tried to be revived by fiscal and monetary policies.

While the benefits of entrepreneurship for the social and economic welfare are well understood, the same thing cannot be said for the decision-making processes, personality characteristics, thought processes of the individuals behind these companies. Who, where and when becomes an entrepreneur is yet to be clarified and structured in academic literature considering multitude of possible environmental, personality, contingency and cultural factors.

The main purpose of this study is to determine whether selected personality traits; need for achievement, tolerance for ambiguity, innovativeness, locus of control, risk-taking propensity, self-confidence, need for autonomy, which are frequently emphasized in the literature, influence entrepreneurial tendencies and have predictive power for entrepreneurial intention of people. In addition to this aim, prevalence and variability of entrepreneurial intention and entrepreneurial characteristics according to demographic variables - age, gender, marital status- and two other variables; entrepreneurship training background and entrepreneurs in the family, are tested. Factor and reliability analyses forced us to remove self-confidence, locus of control, tolerance for ambiguity from the study. Multivariate Regression, T-test, ANOVA and correlation analyses were applied to the rest of the data with using SPSS. Result of statistical analyzes indicated; all of the sample showed high entrepreneurial characteristics and high entrepreneurial intention. Significant relationship found between personality characteristics of innovativeness, risk-taking propensity, need for autonomy and entrepreneurial intention. Need for achievement failed to explain entrepreneurial intention. Males displayed higher entrepreneurial intent than females. People who had entrepreneurial course during their careers also appeared to have higher entrepreneurial intention, risk-taking propensity and innovativeness than who hadn't. Risk-taking propensity came out to decrease with age. And lastly, singles demonstrated higher risk-taking propensity than married. Suggestions and implications for the results are discussed in conclusion.



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ÖZET

Piyasalar ve ürünler açısından inovasyonunun ekonomilerin rekabet edebilir olması için giderek daha fazla önem kazandığı günümüzün karmaşık, küreselleşmiş iş ortamında girişimcilik, odak noktası yapılması gereken benzersiz bir kaynaktır. Inovasyonun büyük çoğunluğunun yeni kurulan firmalardan gelmesine ek olarak, aynı zamanda işsizliği azaltan, mevcut ürün ve hizmetleri çeşitlendiren, verimliliği artıran ve yeni yatırımları çeken ölçeklenebilir girişimci firmalar, ekonomilerde kaldıraç görevi görmektedir. Diğer bir deyişle girişimciler, mali ve parasal politikalar tarafından etkisiz bir şekilde yeniden canlandırılmaya çalışılan durgun ekonomiler için uzun zamandır aranan kilit çözümlerdir.

Girişimciliğin sosyal ve ekonomik refah için sağladığı faydalar iyi anlaşılmışken, bu şirketlerin arkasındaki kişilerin karar verme süreçleri, kişilik özellikleri ve düşünce süreçleri için aynı şey söylenemez. Bir kişinin nasıl, nerede ve ne zaman girişimci olmaya karar verdiği çevresel, kişilik, durumsal ve kültürel faktörleri dikkate alarak akademik literatürde sistematik olarak açıklığa henüz kavuşturulmamıştır .

Bu çalışmanın temel amacı, literatürde sıklıkla vurgulanan belirli kişilik özelliklerinden seçilen değişkenler olan başarı ihtiyacı, belirsizliğe tolerans, yenilikçilik, kontrol odağı, risk alma eğilimi, kendine güven ve özerkliğe duyulan ihtiyacın insanların girişimcilik niyetini etkileyip etkilemediğini belirlemektir. Bu amaca ek olarak, demografik değişkenlere -yaş, cinsiyet, medeni durum - ve diğer iki değişkene ; kişinin kariyerinde girişimcilik ile ilgili bir eğitim alıp almamış olması ve kişinin ailesinde girişimci olup olmamasına göre girişimcilik niyeti ve girişimci kişilik özelliklerinin değişkenliği ve yaygınlığı test edilmiştir . Faktör ve güvenilirlik analizlerinden çıkan sonuçlar, kendine güven, kontrol odağı ve belirsizliğe toleransın çalışmadan kaldırılmasını zorunlu kılmıştır. Verilerin kalanına SPSS programı kullanılarak çok değişkenli regresyon, T testi, ANOVA ve korelasyon analizleri uygulanmıştır. İstatistiksel analiz sonuçlarına göre; tüm örneklemin yüksek girişimci kişilik özellikleri ve yüksek girişimcilik niyeti gösterdiği ortaya çıkmıştır. Yenilikçilik, risk alma eğilimi ve özerklik ihtiyacı ile girişimcilik niyeti arasında anlamlı ilişki bulunmuştur. Başarıya olan ihtiyaç girişimcilik niyetini açıklayamamıştır. Erkeklerin , kadınlardan daha yüksek girişimcilik niyeti sergilediği görülmüştür. Kariyerleri sırasında girişimcilik dersi almış olan kişilerin, daha yüksek girişimcilik niyetine, risk alma eğilimine ve yenilikçiliğe sahip oldukları görülmüştür. Risk alma eğiliminin yaşla birlikte azalmaktadır. Son olarak, bekarlar evli olanlardan daha yüksek risk alma eğilimi göstermiştir. Sonuçlara üretilen öneriler, son bölümde tartışılmıştır.



1. INTRODUCTION

Partly due to appealing success of entrepreneurially found start-ups, partly because being suggested as an answer for stagnated economies of 21st century, entrepreneurship is and anticipated to be a relevant and popular topic in academic research. It's especially important to be capable of recognizing entrepreneurial potential and determine antecedents of entrepreneurial behavior for stimulating of, or policy making purposes about, this valuable intangible asset.

Different approaches used in academia to explain individuals' orientation to become self-employed as entrepreneurs. It is possible to distinguish and mention two different major schools of thought; contingency models and traits approach (Littunen, 2000). Contingency thinking tries to explain individuals' choices and behaviors with the help of situational factors. Traits theory however is directed to individuals' personality features for answers, which are relatively stable across time. This thesis focuses on investigating personality characteristics as possible predictors or explanations for entrepreneurial intention of people, in addition it considers variability of these inclinations according to demographic and other factors.

After a long hiatus, interest in research about entrepreneurial characteristics of the individual sparked again in the last decades (Cassis & Minoglou, 2005). Formerly, authors concluded that there is no significant relationship between personality and entrepreneurial behavior therefore future research is unnecessary and should be avoided (Brockhaus & Horwitz, 1986; Gartner, 1989; Low & MacMillan, 1988; Rauch & Frese, 2007). However, after a period, research in personality traits continued and consequently recent meta-analyses found evidence that they have impact in entrepreneurial intention. Additionally, it is revealed that entrepreneurs differ from non-entrepreneurs in characteristics at least in some traits (such as risk propensity) and in some extent (Stewart Jr & Roth, 2001, 2004; Zhao & Seibert, 2006). Therefore, personality traits is still a relevant domain in entrepreneurship research. Although, there is no well-defined conclusion in the literature and results are controversial (Rauch & Frese, 2007). Due to inconsistencies and technical

errors in research designs and interpretations, new researches such as this study are required. Figure 1.1 graphically illustrates traits and factors included in this thesis.



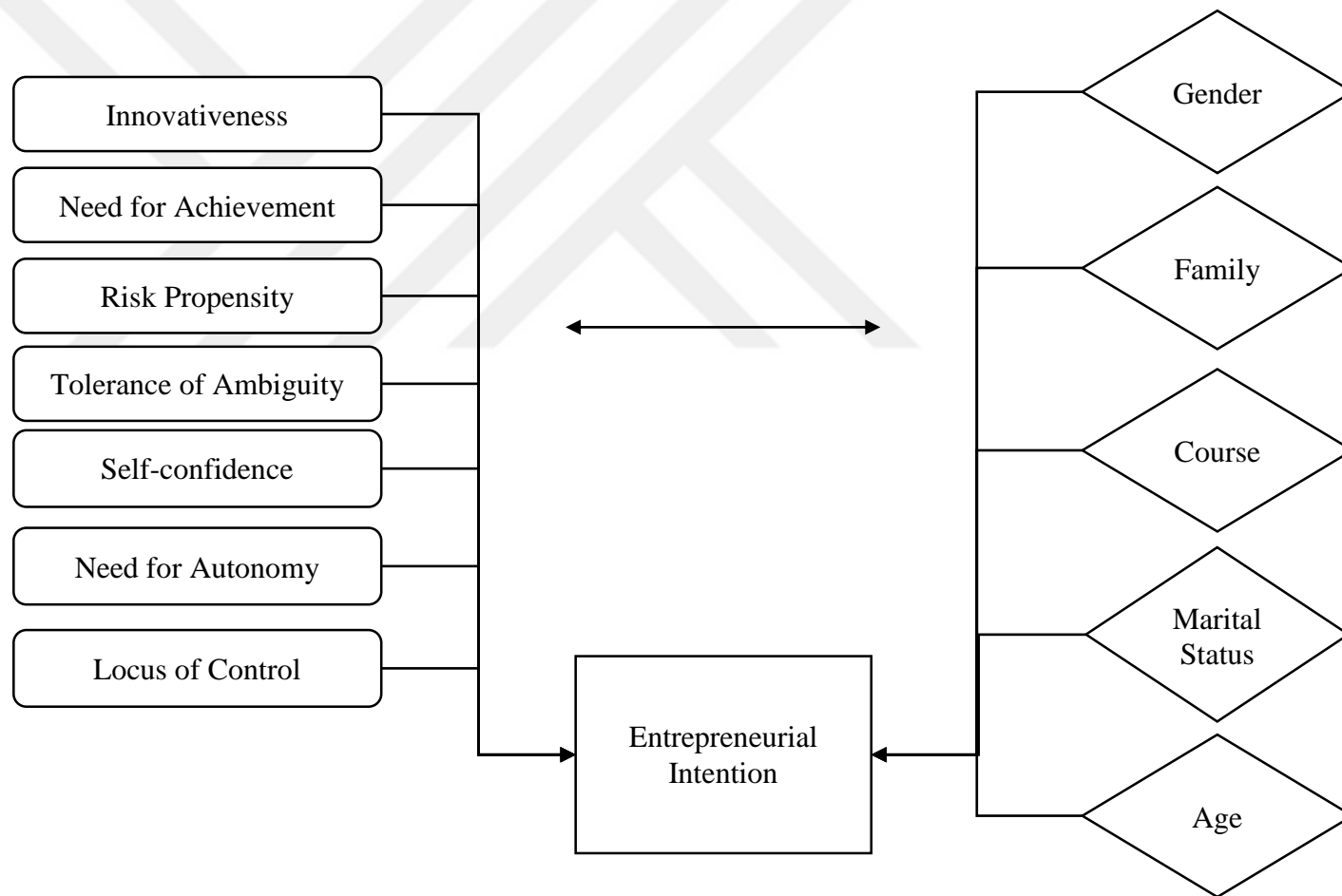


Figure 1.1 : Research Design



2. LITERATURE REVIEW, THEORETICAL FRAMEWORK AND HYPOTHESES

2.1. Entrepreneurship Concept and the Entrepreneur

Although not only economists researched the phenomenon; sociologists, psychologists, historians, anthropologists and many others also contributed the field for centuries, entrepreneurship first studied and explored extensively in the field of economics. The word entrepreneur was featured for the first time in 1700's, in a work written by economist Cantillon (1755) (as cited in Hébert, 1981). John Stuart Mill later popularized the term with his use in English literature in the 19th century. Schumpeter (1909) has put forward a different viewpoint outside the model developed by neoclassical economists and has laid the foundations for the economic theory of today's entrepreneurship. For J. Schumpeter (1934), the most important social and economic contribution of the entrepreneur is to support "creative destruction" through innovation. According to this theory, entrepreneurs are the individuals who challenge status quo by innovation and disrupt current progressions of markets, products and processes. Their solutions substitute present ones because of better performance or fit for customer needs.

Due to abstract nature of the concept, it is difficult to do a concise and complete definition of the entrepreneurship and therefore the number of them are innumerable. Morris (1998) found that, more than 77 definitions made in academic literature even in a five-year period. Table 2.1 illustrates definitions and characteristics attributed to entrepreneurs during different points of time.

Table 2.1. : Development of Entrepreneurship Theory and Entrepreneur Concept. Source : Hisrich and Peters (1992)

17th century: Assumed as the risk taker of profit (or loss) who does engagement with the government at a fixed price
1725: Richard Cantillon - a person who takes risk in addition /or supplying capital
1797: Beaudeau - risk taker, planner, supervisor, organizer and the owner.
1803: Jean Baptise Say- distinguished entrepreneurial profits from the capital gainings.
1876: Francis Walker, made a distinction between those who make profit from funding, who make from managerial skills
1934: Joseph Schumpeter - Entrepreneur is an innovator and develops untested technology.
1961: David McClelland - Entrepreneur is energetic and moderately risk-taker.
1964: Peter Drucker - Entrepreneur maximizes opportunities.
1975: Albert Shapero - Entrepreneur takes initiative, organizes socio-economic mechanisms and acknowledges the mistakes and errors.
1980: Karl Vesper – entrepreneurs evaluated by economists, psychologists, business people and politicians differently
1983: Gifford Pinchot - An intrapreneur is an entrepreneur in an organization that is already established.
1985: Robert Hisrich-Entrepreneurship, with spending necessary time and effort, undertaking the financial, physical and social risks, is the process of creating a different value for monetary awards and personal satisfaction

One particular point that deserves attention is that authors and researchers distinguished between owners -capital providers- and entrepreneurs. In the following years, distinction between plain managers and entrepreneurs also was made clear. However, many characteristics can be shared between these three occupancies, namely, entrepreneurs can reside in management of a company, at the same time, and usually, they may have significant stake at the firm. Figure 2.1 below, emphasizes commonly found characteristics in managers and entrepreneurs.

Table 2.2: Comparison of attitudes of managers and entrepreneurs
Source: (Morris, Kuratko, & Covin, 2010)

Entrepreneur	Manager
• Visionary	• Planner
• Creator	• Organizer
• Innovator	• Director
• Calculated risk taker	• Staffer
• Thinker	• Motivator
• Implementor of new ideas	• Budgeter
• Change agent	• Evaluator
• Resource Leverager	• Supervisor
• Opportunity Seeker	• Coordinator

In contrast to managers entrepreneurs think ahead, they do not just follow current trends, they don't just try to handle present tasks, but they are also able to see opportunities in the market and they continuously imagine how to exploit them. They know markets are not static and they consider how to act upon the changes. They focus on improvements to gain or sustain competitive advantage. In previous studies it is found that entrepreneurs are more advanced at opportunity search and recognition than managers (e.g. Baron, 2006; Gilad, Kaish, & Ronen, 1988).

2.2. Entrepreneurial Intention

The concept of intention is defined by Bird (1988) as a focus in the mind, a state of creation-continuation and selection of a goal; the interest of the person in a way to move toward purpose or achieve something. It is seen as a precursor step for actual behavior such as entrepreneurial behavior, since entrepreneurial action is not a result of a random impulse but is a type of planned behavior (Ajzen, 1991; Fayolle & Gailly, 2005). It is justified to base entrepreneurship research on intention.

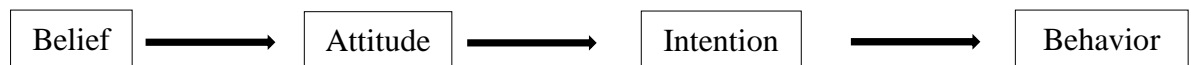


Figure 2.1: Relation of belief, attitude, intention and behaviour
Source: Fishbein and Aizen (1975)

Entrepreneurship researches demonstrated that entrepreneurial intention is a relevant, important and popular construct for the field and appears to be so in the future. Part of the reason is, it is convenient to do research about intention that exists within individuals'

mind for a period unlike actual action which is not easy to observe every time such as at the time of academic study. Additionally, when exploring why some people became entrepreneurs while others not, considered factors such as some personality characteristics can change overtime and possibly developed and learned after initiation of the startup (Hansemark, 1998, 2003; Miron & McClelland, 1979). For this reason, it is reasonable to gauge predictability of these variables on entrepreneurial decision with the intention before the actual action.

For the sake of understanding entrepreneurial intention better, antecedents and drivers should be investigated and discussed. In short, factors that have potential to affect the intention of entrepreneurship can be listed as demographic factors, personality characteristics and environmental factors (Franco, Haase, & Lautenschläger, 2010).

Demographic factors such as income level, gender, age, education, marital status, vocation, religion, size of the family, birth place can have moderating or enabling roles for the person in their entrepreneurial intentions or behaviors. Similarly, environmental factors such as economic, social, legal and technological advancements can play significant role for the individuals in their decisions about starting up a company. Examples include the incentive policies of the governments, growth trends of local and/or global economies, availability of the financial institutions which can meet the demand for funds, the inflation rate, tax applications, the legal infrastructure affecting business establishments etc. Some situational factors can push individuals to become entrepreneurs (DeCarlo & Lyons, 1980). Conversely even if a person has entrepreneurial intentions and attitudes the social milieu which this individual resides may block or discourage the person from taking action. Finally, psychological & personality characteristics have a role in people's entrepreneurial intention. This topic investigated in the following sections extensively.

2.3. Entrepreneurial Characteristics and Personality

Personality can be described as a feature of an individual that defines the belonging person in terms of attitudes, talents, style, external appearance, fit of its surroundings, behavior etc. The term can be used in very diverse meanings in daily context, so a single definition cannot cover all the aspects. Personality has been researched in field of psychology for

many years. Researchers and psychologists investigated people in order to figure out why people are different from each other, why people react differently to similar situations, why some people are happier and why some people are more successful. Similarly, for the business context psychological characteristics are explored to provide explanations for such questions e.g. who becomes an entrepreneur and why do people become entrepreneur because it's believed that entrepreneurs inherently act, behave and think differently than ordinary people.

Certain personality traits are proposed to be associated with entrepreneurial behavior and attracted researchers' attention. Achievement motivation, risk taking-tolerance, innovativeness, tolerance for ambiguity, locus of control and need for autonomy, which are included in this study, are just few of the psychological characteristics linked to entrepreneurial intentions and frequently emphasized in literature. Yet there are more besides these which are also examined, such as neuroticism, openness to experience, need for affiliation, need for dominance etc. Most focused psychological characteristics associated with entrepreneurship research are: propensity to take risks, self-confidence, need for achievement, tolerance for ambiguity, locus of control and innovativeness (Dinis, do Paco, Ferreira, Raposo, & Gouveia Rodrigues, 2013). Table 2.2 displays extensive list of traits researched in academia.

Table 2.3: List of traits studied in entrepreneurship literature (Rauch & Frese, 2007)		
Need for achievement	Flexibility	Conformity
Internal locus of control	Protestant work ethic	Future orientation
Risk-taking propensity	Optimism	Aggressiveness
Innovativeness	Rigidity	Passion for work
Need for autonomy	Self-confidence	Norm orientation
Stress tolerance	Proactive personality	Originality
Self-efficacy	Self-esteem	Benevolence
Need for dominance	Goal orientation	Conservatism
Tolerance for ambiguity	Tenacity	Neuroticism
Sobriety	Higher order need	Expedience
Type-A behavior	Creativity	Forthrightness
Practicality	Enthusiasm	Shyness

Openness to experience	Need for affiliation	Tough-mindedness
Extraversion	Skepticism	Trustworthy
Emotional stability	Self-reliance	Endurance
Conscientiousness	Dogmatism	Discipline
Delay of gratification	Impulsiveness	Humility

2.3.1. Need for achievement

Achieving success for an individual can be defined as reaching a definite target in a specific context which has a personal or and subsequently feeling satisfied and fulfilled. As the target is personal it changes from person to person, when he/she finishes a difficult task, reaches comfort, earns a contest, has received high marks from exams, or overcomes complicated situation; an individual can think about achievement. For this reason, it can be said that achieving success does not have universal objective criteria for everyone. In the end, not everyone equally appreciates results, and consequently not everyone defines outcomes as success or achievements (Ford, 1992). Nonetheless, relatively high need for achievement and desire to reach personal targets are associated with high job performance, which is an objective benchmark, via direct and indirect relations (Baruch, O'Creevy, Hind, & Vigoda-Gadot, 2004).

People with high need for achievement tend to strive to be better than others. They don't avoid competitive environments, on the contrary they see these settings as opportunities to be superior than others. Thus, these people tend to get bored in monotonous and easy tasks and prefer more challenging employment alternatives. They are likely to set more difficult goals (Phillips & Gully, 1997).

According to McClelland, Atkinson, Clark, and Lowell (1953) the high need for achievement plays a key role and leads person to select entrepreneurial career as a profession. For them, a strong need to achieve leads people to set numerous goals, solve difficulties by themselves and therefore these people find their way in entrepreneurship.

Entrepreneurs encounter many difficulties and obstacles in the course and that is very difficult to withstand in psychological manner. Therefore, need to achieve is essential for them to continue. People with need to achieve can take responsibility of difficult task as

managing a new company requires regularly. Several meta-analyses about personality of entrepreneurs found that entrepreneurs are different in achievement motive than managers (Collins, Hanges, & Locke, 2004; Stewart Jr & Roth, 2004; Zhao & Seibert, 2006). Based on the previous literature we propose that

H1: Need for achievement increases entrepreneurial intention.

2.3.2. Tolerance for ambiguity

The definitions and attributes associated with the ambiguity in the literature according to R. W. Norton (1975) are multidimensionality, incompleteness, division, probabilistic, non-structural, lack of information, inconsistency, contradiction and incoherence. Crigger (1996) defines ambiguity as a cognitive condition resulting from the inability to explain and define meaning of events in a person's life. Tolerance for ambiguity (AT) can be described as an individual's ability to cope with this dire, uncomfortable situation.

The concept first originated by Frenkel- Brunswik (1949) and in the field of psychology. It is described as a unidimensional scale, people either have low or high tolerance for ambiguity. Individuals' reaction to ambiguity varies greatly. People with low tolerance experience remarkable stress, indecision and difficulty when facing ambiguity while highly tolerant people can even enjoy the same situation (Furnham & Ribchester, 1995). For Hofstede (2003) people's inclination towards ambiguity also varies across cultures. In some cultures, with less tolerance for ambiguity, well-defined structured organizations and relations are favored. In these cultures, there is fear for uncertainty and people even can take excessive precautions to avoid it.

In many areas of life people face ambiguities. Marriage, career selection, choosing a place to live and similarly all major life events include uncertainties and put pressures on individuals. Particularly necessity to make decisions about future can be frustrating because future includes lots of doubts. Humans naturally perform poor in uncertain environments, and ambiguity is a major factor of stress (De Berker et al., 2016). However, business climate requires people to act and decide when there is incomplete information and uncertain outcomes. Notably, in a newly founded firm, ambiguities are abundant and decision makers need to move without seeing complete picture. Where and how to find a sustainable capital? Who to employ? How to decide target markets and customers? How

to position against the competitors? These questions often need to be dealt without adequate time and information.

Business life incorporates a variety of uncertainties; political, economical and other environmental dynamics are frequently changing, leaving managers in rough situations. Entrepreneurs will need high tolerance for ambiguity in order to make sound decisions and not abandon the business during turbulent times. In previous researches entrepreneurs found to be better in tolerating ambiguity (Schere, 1982; Sexton & Bowman, 1985). Our second hypothesis is accordingly:

H2: Tolerance of ambiguity increases entrepreneurial intention.

2.3.3. Innovativeness

Innovation is associated with the adoption and implementation of a new idea, product or process. In broader sense it can also exist in other organizational activities such as marketing and organizing (Gunday, Ulusoy, Kilic, & Alpkan, 2011), sales & distribution, financial practices etc.

Innovation and innovative behavior are evaluated by several perspectives. It can be analyzed at firm, national or individual level. It is one of the most recurred themes in entrepreneurship research and popularized by Schumpeter (1934). And in recent years, papers and studies published about creativity and innovativeness grew rapidly (Anderson, Potočník, & Zhou, 2014).

Of today's competitive, harsh, rapidly changing economic environment innovation is seen by researchers and industry veterans as a powerful and vital tool for companies' sustainability and performance (Axtell, Holman, & Wall, 2006; Orth & Volmer, 2017; Scott & Bruce, 1994; West, Hirst, Richter, & Shipton, 2004). Customer needs are constantly changing demanding producers to produce better functioning, better designed, more useful and fashionable products. Competition puts burden on price increases encouraging process innovation to cutback costs. New advancements outpace current technologies at a fast rate requiring R&D departments to generate new outputs continually. In short, market dynamics push companies to regularly innovate and respond any change in the environment; in other words, it should be adapted to the organization culture and be persistent.

It is essential to mention the difference between invention and innovation while describing innovation. An invention is the emergence of a new tool, device which has not existed before. This tool may turn into a successful product and used by masses or may be unprofitable or impractical for production and therefore postponed. However, innovation should include integration of new idea into a new product, process or service and successfully marketing in contrast to invention (Popadiuk & Choo, 2006).

Vast majority of innovation and newness comes from newly and/or entrepreneurially founded firms. Established large corporations while focusing on their concurrent products often fail to foresee new trends and developments in the market. Additionally, entrepreneurs need to put new and better performing products in order to compete settled firms. As a result, entrepreneurship cannot be separated from innovation.

For an individualistic point of view, innovative people try to overcome obstacles with new and untested ways. Comparing to ordinary, they are more inclined to take risk since their actions are not traditional. Different thinking processes can help them approach successfully to unsolved problems or create new products or even markets.

Studies about personality of entrepreneurs stated high innovativeness in entrepreneurially inclined people (Chye Koh, 1996; Johnson, 1990; Robinson, Stimpson, Huefner, & Hunt, 1991). This means that innovativeness as a personality trait can be one of the important drivers of individual inclination for entrepreneurship. Consequently, our third hypothesis is

H3: Innovativeness increases entrepreneurial intention.

2.3.4. Locus of control

Locus of control is a concept about people's perspective of events affecting their lives. If an individual is oriented to believe the successes, rewards, positive things or negativities and failures are the result of his/her own effort, it is said that the person has internal locus of control. Otherwise if a person believes results of the events in his/her life are due to bad luck, fate or because of the other people which are out of control, this person is said to have external locus of control. (Rotter, 1966)

A person's beliefs about the factors that affect their life can make a huge impact on their decisions and therefore accomplishments. External locus of control may lead to lack of motivation, lack of incentives to hard work and absence of action. These people are more prone to feelings like anger, sadness or helplessness (Prociuk, Breen, & Lussier, 1976). Contrarywise, internal locus can provide people with energy, self-confidence, positive mood to pursue targets, ability to focus their work. In summary, people gauge the value of their actions differently although they may perceive rewards such as money, fame, happiness similarly.

Locus of control and its effect on individuals' well-being, achievement and career choices is thoroughly examined in empirical studies. Internal locus of control found to be associated with positive attributes for instance academic high performance (Findley & Cooper, 1983; Nowicki & Strickland, 1973), reduced subjective job stress (Glazer, Stetz, & Izso, 2004), favorable social skills (Lefcourt, Martin, Fick, & Saleh, 1985) where external locus of control is associated with negative characteristics such as avoidance of responsibility (Powell & Rosén, 1999), inefficiency in career making decision (Taylor & Popma, 1990), academic procrastination (Carden, Bryant, & Moss, 2004) etc.

In the business context, internal locus of control can be a useful tool for managers and leaders for business performance via transformational leadership (Howell & Avolio, 1993). Internally inclined managers can push employee's performance in economic downturns, when there are lot of uncertainties. Furtherly, internal locus of control is beneficial for employees' job satisfaction and performance (Judge & Bono, 2001).

One other key discussion is whether people's orientation about the locus of control can be changed with intervention or self-effort. It's no question that if people who has external locus of control could change their perspective and perception about control, they can perform better and be happier. According to Nowicki (2016) people can try to realize their current role in the events and attempt to be more internal. Then internally inclined people may become more prone to rely on his or her future plans about assuming entrepreneurial risks by believing optimistically that the success is under his or her control

H4: Internal locus of control increases entrepreneurial intention.

2.3.5. Propensity to take risks

Risk can be defined as possibility to get damaged or harmed. Risk taking is a behavior where decision maker knows that possible outcomes may have potential to increase or decrease the utility of the person at varying degrees. An individual wishes things turn out to be desirable even he/she knows that possibility of unwanted outcomes is present. People differ in their risk attitude. Most people are risk averse, meaning they are unwilling to take risks and favor job security, choose less risky financial instruments, mostly obey the rules and laws in the society and like planned situations. On the contrary, some people are risk-taker and at the end of spectrum very few are risk-seeker. These people are less risk sensitive than risk averse people and often they engage in activities that may endanger social or financial stability of their self or of the people in their social circle. These people are more likely to do risky investments, stand against rules, or act spontaneous. Reckless risk taking and calculated risk taking should be differentiated, before talking about risk taking in business context. Entrepreneurs are risk-takers however risk taking in entrepreneurial manner does not mean taking thoughtless risks with activities done by pathological risk seekers such as drug abuse, extreme sports, pathological gambling that have serious health and/or other consequences. It means risking current standards of living (Brockhaus, 1980) in order to achieve more fame, wealth and personal satisfaction. Nevertheless, risk involved while taking entrepreneurial action also may have critical consequences such as severe financial debt/loss, low self-esteem or confidence, loss of social relations etc., especially if the company fails, but not necessarily.

Risk and risk-taking attitude is an important part of entrepreneurial behavior and research. Even though initial studies found no meaningful difference (Brockhaus & Horwitz, 1986; Chell, 1985; Perry, 1990) according to Norton and Moore (2006) risk taking ability is an important feature of entrepreneurs and entrepreneurs are taking more risks than non-entrepreneurs (Begley & Boyd, 1987; Stewart Jr, Watson, Carland, & Carland, 1999). They also argued that entrepreneurs were more at risk than managers, stating that entrepreneurs were faced with a more ambiguous environment, and that they were taking all the risks of starting a business while managers only take occasional risks in some managerial settings.

Nature of the entrepreneurship inherently involves major risks in early and later stages. An entrepreneur needs to bear important risks to his/her financial income, social recognition and even health when initiating a company. Quitting a routine paying job and starting a new company, requires high risk propensity. Both early pioneers e.g. Knight (1921), Marshall (1890), Cantillon (1755) and contemporary researchers (Herranz, Krasa, & Villamil, 2015; Kan & Tsai, 2006; Nieß & Biemann, 2014) agree that entrepreneurs are risk takers comparing to population. So, our related hypothesis is:

H5: Risk-taking propensity increases entrepreneurial intention.

2.3.6. Self-confidence and self-efficacy

Self-confidence is a subjective phenomenon that results from a positive self-evaluation of an individual. It is the belief of the self in his/her abilities and skills to be successful in a demanding context.

People may have high or low self-confidence and also it may change to some extent over time, as it is considered related to individuals' experiences in life such as perceived failures, disappointments or achievements, fulfillments and emotions associated with these experiences. As an illustration, a person may experience similar negative situations, again and again, consequently the person can become insecure, loses his self-confidence during the course. If, however, an individual can fulfill his expectations repeatedly, accompanying satisfactory feelings can boost his self-confidence.

The confidence of the individual in himself and his abilities plays a key role in entrepreneurial, business context or personal success. Lack of confidence may inhibit individual's processes that could lead him to success even though the person possibly has required abilities and skills. Firstly, when starting companies, entrepreneurs need to acquire capital to finance operations, salaries, working capital etc. before the beginning of profitable sales. In order to do that they need to present their business plan, idea to investors like angel investors or venture capital firms. In these pitching sessions, investors' decision will be affected by entrepreneur's self-confidence either consciously or unconsciously. Not just because it is believed that self-confidence is one of the demanded properties in entrepreneurs (Timmons, 1978), but also high confidence eases persuasion subconsciously. In later stages of the company, an entrepreneur would still need self-

confidence e.g. he may need to act and decide speedily in though and ambiguous situations.

On the other hand, in extremes confidence can bring harm; over-confidence is commonly accused for defeats, losses and failures. Study done by Camerer and Lovallo (1999) proves high-failure rates observed in start-ups can partially explained by overconfidence of entrepreneurs. An overconfident entrepreneur has an inflated view about his abilities, skills where he thinks he is better than other entrants or already settled firms in average and therefore he has an opportunity to succeed in the market.

Self-efficacy is a strongly related phenomenon to self-confidence. Compared to self-confidence it is more narrowly defined as an individual's trust in his ability to perform a specific task or succeed in a specific situation (Bandura, 1977). As stated by Bénabou and Tirole (2002) a higher self-confidence enhances the motivation to act. If people believe they are capable of finishing or accomplishing a task they display a more confident approach, yet if people doubt their abilities they are more likely to give up. Accordingly, we propose that:

H6: Self-confidence is positively related to entrepreneurial intention.

2.3.7. Need for autonomy

Acting autonomous is possibility to freely behave without getting approval or order from someone. The need for autonomy is the desire to reach this state and to avoid any kind of limits in order to be independent and free.

Humans tend to prefer flexibility in their actions and choices (Zhang, 2007). This includes working conditions context. Individuals with high level of autonomy need prefer to work alone, control their own working speed, be free from orders and others. Excessive rules or procedures often bother them and lead them to autonomy-friendly jobs or positions. Starting up a new venture can be one of the remedies for these people.

When looking up definitions of entrepreneurship, it is seen that the concept of autonomy or autonomy is frequently mentioned. Although autonomy need is frequently linked with entrepreneurial orientation in firm-level analyses it can be also said to associated with individuals. Need for autonomy is highly correlated with entrepreneurs. For Watkins

(1976), need for autonomy is one of the primary reasons for entrepreneurs in their start-up action.

Similar to self-confidence, need for autonomy is also developed for the person from the experiences. In early years and adolescence, exposure to power, strict rules and control can advance individual need for the autonomy. If a girl for example is not allowed to choose how she can live, e.g., which dress she dresses, which food she eats, which activities she can do etc. she can develop a need to avoid restrictions. For some people these constraints can make them dependent to other people making them unable to decide their own. But for some others, these pressures can make them to desire independency in their life choices like career.

As previously explained in detail, need for autonomy is one of the identifying characteristics of entrepreneurs. Despite the substantial risks, entrepreneurship can deliver solid rewards such as wealth, recognition and autonomy (BarNir, Watson, & Hutchins, 2011). Subsequently, an entrepreneur may work harder in order not to work under a boss (Baum, Frese, & Baron, 2014).

Entrepreneurs found to have higher need for autonomy than non-entrepreneurs (Rauch & Frese, 2007). Therefore, we propose:

H7: Need for autonomy is positively related to entrepreneurial intention.

2.4. Demographics

2.4.1. Gender

Putting gender as a variable in entrepreneurial intention studies is quite common. (BarNir et al., 2011; Díaz-García & Jiménez-Moreno, 2010; Gupta, Turban, Wasti, & Sikdar, 2009; Haus, Steinmetz, Isidor, & Kabst, 2013; Shinnar, Giacomini, & Janssen, 2012; Wilson, Kickul, & Marlino, 2007) Roles associated with the genders in a society can influence peoples' career choices like whether to become an entrepreneur or not. In a given society women's economical freedom may not be very important comparing to other societies and different responsibilities can be assigned to them so that may influence their decisions. According to Eagly and Wood (1991) these society assignments causes women

and men to choose different career paths. Gupta et al. (2009) found that entrepreneurship is seen as masculine phenomena. Examinations in the literature revealed that risk taking, which is a kind of prerequisite for entrepreneurial behavior, is largely associated with men (Bajtelsmit & Bernasek, 1996; Grable, 2000; Slovic, 1966; Sung & Hanna, 1996). Most of the established entrepreneurs are males (Verheul, Uhlaner, & Thurik, 2005; Zhao, Seibert, & Hills, 2005) and entrepreneurial intention differs across genders (Buttner & Moore, 1997; Zhao et al., 2005). So, our eighth hypothesis is

H8a: Males have higher entrepreneurial intention than females

H8b: Males have higher entrepreneurial characteristics scores than females

2.4.2. Marital status

Married people cannot easily undertake similar risks which singles can take. Having responsibility against children and a partner, to cover living costs of the family may have greater importance than personal ambitions. Emphasis on financial security may inhibit desires about risky career choices like entrepreneurship. Analysis done by Cohn, Lewellen, Lease, and Schlarbaum (1975) showed married couples are more risk averse than singles, putting less risky assets in their portfolio. Several studies concluded risk tolerance is more prevalent in singles (Baker & Haslem, 1974; Grable, 2000; Lazzarone, 1996; Sung & Hanna, 1996). For that reason, we expect:

H9: Married people have lower risk propensity scores than singles

2.4.3. Age

Common understanding in literature states that younger people takes more risks than older ones. As people grow older realizing a risk may have devastating and long-term effects. An older adult may not have enough energy, time or motivation like a young one, to reconstruct disrupted career and financial security if a risk comes true, so he simply avoids risks. Many studies using different methodologies to assess risk taking habits of people

found that risk taking diminishes with age. (Kanodia, Bushman, & Dickhaut, 1989; Riley Jr & Chow, 1992; Vroom & Pahl, 1971). Therefore, our hypothesis is:

H10: Younger people have higher risk propensity than older ones.

2.5. Education and Relatives

2.5.1. Entrepreneurship course

Although whether individuals become entrepreneurs or born entrepreneurs is controversial, possibility of transforming potential entrepreneurs into real ones is intriguing. Increasingly, researchers and practitioners believe in the idea that entrepreneurs can be ‘made’ and entrepreneurship can be taught (Drucker, 1985; Gorman, Hanlon, & King, 1997; Kuratko, 2005; Neck & Greene, 2011). Consequently, many analyses found altering effects of entrepreneurship education on attendees’ perception and attitude about entrepreneurship. (Fayolle & Gailly, 2015; Oosterbeek, Van Praag, & Ijsselstein, 2010; Peterman & Kennedy, 2003; Tkachev & Kolvereid, 1999) Therefore, we expect different entrepreneurial intention in entrepreneurship education receivers:

H11a: People who had already taken entrepreneurship course have higher entrepreneurial intention than others.

H11b: People who had already taken entrepreneurship course have higher entrepreneurial characteristics scores than others.

2.5.2. Entrepreneurs in the family

In psychology role model is defined as the person whom an individual takes as an example for himself / herself. The person is often the mother, father, a popular artist or a famous public figure but not necessarily. The role model influences the person in many aspects like how to behave, how to dress, how to act etc. When there is lack of information in decision making processes, such as career path choosing, role models can be guides. A handful of studies linked role models with career making choices (Quimby & Santis, 2006) and entrepreneurial intention (BarNir et al., 2011). Accordingly, we suppose

H12 : People who have entrepreneurs in their family have higher entrepreneurial intention

3. RESEARCH METHOD, ANALYSES AND RESULTS

3.1. Sample and Data Collection

A single internet survey administrated to collect data. It was sent to vast number of email addresses related to engineering schools and alumni networks. Written questionnaires also distributed in Istanbul Technical University. Among the responds, 607 of them selected due to fullness and consistency. For the sampling, required precautions are undertaken in order to circumvent selection biases. As a result, we observed respondents are located across various parts of Turkey and also differentiating in demographics, age, gender, income, family size, education level, and background as expected.

3.2. Scales

For the measurement of entrepreneurial intentions, scale developed by Linan and Chen (2009) which consists of 6 items is used. This scale is cross culturally validated and quite popular, being one of the two commonly used measurement tools for entrepreneurial intentions in researches. (Bae, Qian, Miao, & Fiet, 2014)

In order to measure tolerance of ambiguity, locus of control and self-confidence scale created by Chye Koh (1996) which is also used by himself in a similar study about entrepreneurial characteristics of MBA students in Hong Kong. Lastly for the other characteristics –need for autonomy, need for achievement, innovativeness, risk-taking propensity- questionnaire developed by Özer (2017) for her PhD thesis is used.

3.3. Analyses and Results

3.3.1. Factor analysis

Factor analysis is used to in order to find common latent theoretical structure variable underlying in sets of large number of variables (questions). Factor analysis, reported in the Table 1, produced five factors namely entrepreneurial intention, innovativeness, need for achievement, risk-taking, and need for autonomy. Every question except “My desire

to be independent in my work is very high.” has shown to evaluate the intended construct with 68.79 % of the variance explained. For this item, we took into consideration only it’s loading on need for autonomy. High Cronbach’s alphas ($\alpha=0,930$, $\alpha= 0,916$ $\alpha =0,884$, $\alpha=0,885$, $\alpha=0,820$) of the factors reassure internal consistency of the scales.

Table 3.1. Factor Analysis Results

Survey Items	Factors	Entrepreneurial Intention	Innovativeness	Need for Achievement	Risk taking	Need for Autonomy
I'm determined to create a firm in the future.		.875				
I will make every effort to start and run my own firm.		.859				
I've got the firm intention to start a firm someday.		.840				
My professional goal is becoming an entrepreneur.		.821				
I have very seriously thought in starting a firm.		.754				
I'm ready to make anything to be an entrepreneur.		.724				
I'm open to new ideas.			.810			
When I do things, I try new ways, new methods.			.801			
I like to try new things.			.789			
I see myself as innovative.			.748			
I can create spontaneous solutions to new problems.			.697			
I like to deal with unsolved problems.			.621			
My desire to be successful in my work is very high.				.823		
I master what I'm doing.				.791		
I'd like to do the best I can at the job.				.775		
I plunge into tasks with all my heart.				.748		
I give great importance to being more successful than others at the job				.686		
I aim to reach targets above certain standards.				.654		
My job strategy is taking high risks.					.833	
I generally do not avoid taking risks.					.832	
I don't avoid investments possibly with high returns just because they are risky.					.774	
I usually do not stop taking risks because of fear of making mistakes					.773	
I do not hesitate to take the risk, even if I cannot foresee the results of some investments clearly.					.724	
I prefer a risky job that gives premiums and profit shares to sales over a fixed salaried job that has a pay guarantee.					.619	
I set my work methods myself, without regard to others' considerations.						.760

I do not mind being different if I need to be independent.					.697
In my work assignments I try to be my own boss					.655
Instead of taking orders from others, I would like to make my own decisions about my work.					.592
My desire to be independent in my work is very high.		.401			.550
% of variance	15.957	15.631	14.250	14.139	8.819
Cronbach's α	0,930	0,916	0,884	0,885	0,820

Total variance explained: 68.79 %

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

3.3.2. Frequencies

Table 3.2. Frequencies of gender and marital status

		N	%
Gender	Male	499	82.2
	Female	108	17.8
	Total	607	100.0
Marital Status	Single	417	68.7
	Married	190	31.3
	Total	607	100.0

Table 3.3 Frequencies of course and family

		N	%
Entrepreneurship Course	Yes	198	32.6
	No	409	67.4
	Total	607	100
Entrepreneurs in the family	None	388	63.9
	First-degree relatives	175	28.8
	Second-degree	44	7.2
	Total	607	100

Table 3.4. Frequency intervals for age

		N	%
Age range	20-25	349	57.5
	26-30	101	16.6
	31-35	80	13.2
	36-40	56	9.2
	40+	21	3.5
	Total	607	100.0

Majority of the sample are single (68.7%) and males (82.2%). Only 32.6 % of the respondents appeared to have entrepreneurship course in their career. Again only 175 out of 607 participants reported that they have entrepreneurs in their core family. Sample mostly consists of people aged between 20-25 years (%57.5). In brief most (about two third) of our respondents seem to be young and single males which did not taken entrepreneurial courses and entrepreneur relatives in their family (as seen in Tables 1,2,3).

3.3.3. Means and standard deviations

Table 3.5. Means and standard deviations of the variables

Descriptive Statistics	N	Mean	Std. Deviation
Entrepreneurial Intention	607	3.4717	1.10657
Innovativeness	607	4.2098	.75733
Need for Achievement	607	4.3844	.66807
Risk Propensity	607	3.0780	.91910
Need for Autonomy	607	3.8626	.75721
Valid N (listwise)	607		

Means of the five-point Likert scale shows us individuals in the sample are inclined to all of the assessed entrepreneurial characteristics and entrepreneurial intention. Achievement motive of the sample is remarkably high with a mean of 4.3844 out of 5. Risk propensity came out to be has lowest average with 3.0780.

3.3.4. Correlation analysis

Table 3.6 Correlations of the variables

	Need for Achievement	Need for Autonomy	Innovativeness	Risk Propensity	Entrepreneurial Intention	Age
Need for Achievement	1					
Need for Autonomy	.510**	1				
Innovativeness	.630**	.618**	1			
Propensity to Take Risks	.275**	.384**	.384**	1		
Entrepreneurial Intention	.323**	.413**	.423**	.485**	1	
Age	.093*	.025	.061	-.135**	-.018	1

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis demonstrated all of the assessed entrepreneurial characteristics are positively related to each other and also to participants' entrepreneurial intention at $p < 0.01$. As hypothesized risk-taking propensity showed negative correlation with age ($r = -.135$) which also significant at $p < 0.01$. This means as age increases risk taking propensity decreases. Meanwhile another finding has come about age is the positive correlation with need for achievement at $p < 0.05$. This means as age increases need for achievement increases too.

3.3.5. Multivariate regression analysis

Table 3.7. Effects on Entrepreneurial Characteristics on Entrepreneurial Intention

Independent variables	Beta coefficients	T-values	Significance
(Constant)		-.119	.905
Innovativeness	.167**	3.398	.001
Need for Achievement	.043	.973	.331
Risk Propensity	.351**	9.429	.000
Need for Autonomy	.153**	3.435	.001
	R ² : 0,313	F: 70,18**	0,00

**significant at the 0.01 level.

Multivariate regression analysis exhibited on Table 3.3 revealed that innovativeness, risk propensity and need for autonomy factors are impacting positively on the dependent variable, confirming the following hypotheses: H1, H3, H4. However, the need for achievement's effect on entrepreneurial intention is found insignificant rejecting H2 as depicted on Table 5.

3.3.6. T-Tests

3.3.6.1. Gender

Table 3.8. Gender Statistics & T-Test

	Gender	N	Mean	Std. Deviation	t	Sig. (2-tailed)	Mean Difference
Entrepreneurial Intention	Male	499	3.5438	1.12951	3.479	0.001	0.40487
	Female	108	3.1389	.92796			
Need for Achievement	Male	499	4.3985	.68486	1.115	0.265	0.07902
	Female	108	4.3194	.58278			
Innovativeness	Male	499	4.2211	.77772	0.792	0.428	0.0637
	Female	108	4.1574	.65561			
Need for Autonomy	Male	499	3.8910	.75611	1.99	0.047	0.1595
	Female	108	3.7315	.75190			
Propensity to Take Risks	Male	499	3.0695	.95566	-0.49	0.624	-0.04781
	Female	108	3.1173	.72925			

Table demonstrates, with p value of 0.001 and t-value of 3.479, the mean scores of males' and females' entrepreneurial intentions are significantly different. Males reported higher entrepreneurial intention with the average of 3.54 over females' mean of 3.13 in 5-point Likert scale. As for entrepreneurial characteristics only need for autonomy indicated slightly significant difference between men and women in such a way that men's need for autonomy is a bit higher.



3.3.6.2. Marital status

Table 3.9. Marital Status Statistics

	Marital Status	N	Mean	Std. Deviation	t	Sig. (2-tailed)	Mean Difference
Entrepreneurial Intention	Single	417	3.4748	1.08762	0.102	0.919	0.00991
	Married	190	3.4649	1.14995			
Need for Achievement	Single	417	4.3305	.69841	-2.962	0.003	-0.1721
	Married	190	4.5026	.58052			
Innovativeness	Single	417	4.1851	.76302	-1.192	0.234	-0.07898
	Married	190	4.2640	.74379			
Need for Autonomy	Single	417	3.8312	.76742	-1.517	0.13	-0.1004
	Married	190	3.9316	.73157			
Propensity to Take Risks	Single	417	3.1479	.92593	2.791	0.005	0.22332
	Married	190	2.9246	.88716			

Mean risk-taking scores of singles came out to be higher than married participants as expected with $p < 0.005$ and t-value 2.791. Moreover, need of achievement scores of married people appeared to be higher than single ones with $p < 0.003$ and t-value -2.962.

3.3.6.3. Entrepreneurship course

Table 3.10. Entrepreneurship Course Statistics

	Entrepreneurship Course	N	Mean	Std. Deviation	t	Sig. (2-tailed)	Mean Difference
Entrepreneurial Intention	Yes	198	3.6902	1.09722	3.415	0.001	0.3243
	No	409	3.3659	1.09683			
Need for Achievement	Yes	198	4.4428	.69693	1.499	0.134	0.08661
	No	409	4.3562	.65265			
Innovativeness	Yes	198	4.3005	.73366	2.059	0.04	0.13465
	No	409	4.1659	.76554			
Need for Autonomy	Yes	198	3.9333	.79797	1.603	0.109	0.10497
	No	409	3.8284	.73523			
Risk Propensity	Yes	198	3.3232	.89330	4.651	0.001	0.36398
	No	409	2.9593	.90889			

As predicted, respondents who had enrolled previously in an entrepreneurship course showed higher entrepreneurial intention with $p < 0.001$ and t-value of 3.415. Additionally, these people displayed higher risk-taking propensity with $p < 0.001$, t value of 4.651 and higher innovativeness with $p < 0.04$, t value of 2.059.

3.3.6.4. Entrepreneurs in the family

Table 3.11: Entrepreneurs in the family statistics

	Entrepreneurs in the family	N	Mean	Std. Deviation	t	Sig. (2-tailed)	Mean Difference
Entrepreneurial Intention	No	432	3.4016	1.12675	-2.462	.014	-.24314
	Yes	175	3.6448	1.03807			
Need for Achievement	No	432	4.3549	.69640	-1.710	.088	-.10220
	Yes	175	4.4571	.58796			
Need for Autonomy	No	432	3.8134	.77400	-2.525	.012	-.17057
	Yes	175	3.9840	.70154			
Innovativeness	No	432	4.1860	.76978	-1.218	.224	-.08261
	Yes	175	4.2686	.72446			
Propensity to Take Risks	No	432	3.0270	.92913	-2.153	.032	-.17680
	Yes	175	3.2038	.88393			

T-test revealed that people who have entrepreneurs among their close family members have significantly more entrepreneurial intention than people who don't have with $p < 0.14$, t value of -2.462. Moreover, our analysis showed these people have significantly higher need for autonomy ($p < 0.12$, t value of -2.525) and propensity to take risks ($p < 0.32$, t value of -2.153)



4. CONCLUSIONS AND RECOMMENDATIONS

4.1. Summary of the Findings

People in our sample self-reported very high levels of innovativeness and risk-taking propensity. Their two other entrepreneurial characteristics and their entrepreneurial orientations were rather at moderate to high levels. As for the hypotheses about the drivers of this intention, on one hand all the entrepreneurial characteristics were found positively correlated to the entrepreneurial orientation; but on the other hand, regression analysis revealed that the effect of the need for achievement was overshadowed by the other characteristics' stronger effects and then became non-significant. Therefore, innovativeness, need for autonomy, and risk-taking propensity are found positively impacting on the intention of becoming an entrepreneur. A plausible explanation why the need for achievement is not among these confirmed drivers may be that the satisfaction of this need is also possible even without starting a risky venture. An individual even with innovative ideas may still choose a secure professional career path where achievement means promotion not profit.

Our analysis emphasizes entrepreneurial intention and entrepreneurial characteristics can vary greatly according to demographic variables- age, gender, marital status- and other variables like exposure to entrepreneurial education and entrepreneur family members. Males displayed higher entrepreneurial intent than females. People who had entrepreneurial course during their careers also appeared to have higher entrepreneurial intention, risk-taking propensity and innovativeness than who hadn't. Risk-taking propensity came out to decrease with age. Singles displayed higher risk-taking propensity than married. Although even after categorizing into groups, all of the sample showed high entrepreneurial characteristics and high entrepreneurial intention. Following table summarizes the findings and status of the proposed hypotheses.

Table 4.1. Hypotheses' Acceptances or Rejections

Hypothesis Statements	Status
H1: Need for achievement is positively related to entrepreneurial intention	Rejected
H2: Entrepreneurially inclined people have higher tolerance of ambiguity.	-
H3: Innovativeness is positively related to entrepreneurial intention.	Accepted
H4: Entrepreneurially inclined people have internal locus of control.	-
H5: Risk-taking propensity is positively related to entrepreneurial intention.	Accepted
H6: Self-confidence is positively related to entrepreneurial intention.	-
H7: Need for autonomy is positively related to entrepreneurial intention.	Accepted
H8a: Males have higher entrepreneurial intention than females	Accepted
H8b: Males have higher entrepreneurial characteristics scores than females	Partially Accepted
H9: Married people have lower risk propensity scores than singles	Accepted
H10: Younger people have higher risk propensity than older ones	Accepted
H11a: People who had already taken entrepreneurship course have higher entrepreneurial intention than others.	Accepted
H11b: People who had already taken entrepreneurship course have higher entrepreneurial characteristics scores than others.	Partially Accepted
H12: People who have entrepreneurs in their family have higher entrepreneurial intention	Accepted

4.2. Managerial Implications

Policies of retention of intrapreneurs within the company or support for entrepreneurship & start-ups seems to be conflicting with each other. However uncovering drivers of entrepreneurial intention and characteristics may help both policies. In this concern according to our findings, promising candidates for entrepreneurship or intrapreneurship are those people who are young male (since their risk propensity, need for autonomy and entrepreneurial intention are higher) candidates who have entrepreneur relatives and have already taken entrepreneurship course. Specifically, for women (since their entrepreneurial intention is lower), married people and elderly people (since their need for achievement is higher but risk-taking propensity is lower) intrapreneurship may be a better career path. In today's global competitive environment, businesses face scarcity in talent.

Because of that, managing human resources effectively is a must for sustaining competitive edge. Managers should be conscious about their employees' orientations and characteristics and assign positions and tasks accordingly. Entrepreneurially oriented workers can both be assets and risks for the organization at the same time. They have possibility of quitting in improper times and burdening the company's work flow. Particularly for start-ups where every employee has a key role, turnovers can hurt company's strategies and outlook massively. On the other hand entrepreneurially minded people can foster innovation, calculated risk-taking, out of box thinking if directed properly. For these reasons, managers should be aware of their employee's both entrepreneurial characteristics and intentions. Intrapreneurs should be appreciated and compensated for their work and it is important to keep them motivated. Those managers who try to avoid any risk related to losing their entrepreneurial assets should establish such an intrapreneurial climate where various kinds of support (Bulut & Alpkan, 2006) and benefit are provided to the innovative, courageous and independent-minded skillful employees to keep them committed to the organization.

4.3. Limitations and Future Research Suggestions

Numerous factors can have an impact on people's choice of and orientation to entrepreneurship. These factors (e.g. income level, gender, age, education, marital status, culture, size of the family, environment, personality characteristics etc.) can have substantial effects on people's decision to become an entrepreneur or their intentions. In some other countries, demographic and other variables may not vary similarly. This survey is conducted only on Turkish participants in Turkey, where a national culture could have played a role. If it can be administrated in multiple different countries, languages and contexts, more precise conclusions would be achieved. The previously mentioned factors also may act like moderators, influencing people's decisions. Prospective researchers should count these aspects and consider longitudinal studies in order to overcome simultaneity bias or other methods for more direct and causal linkages.

This study tested the effects of only a limited number of entrepreneurial characteristics as possible predictors of the entrepreneurial intention. There are certainly several other well-established constructs or traits such as big five – neuroticism, extraversion-introversion, openness to experience, conscientiousness, agreeableness- among others which can be linked to entrepreneurial intentions.

Beside the survey method based on the self-reported evaluations of the respondents, other sources of information could be tried to use e.g. observations or experiments about their risk taking, autonomy or innovation inclinations. Additionally, survey is conducted on limited number of participants and there can be respondent bias as questionnaire is distributed via online form and all the questions were required to be answered.

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APPENDICES

APPENDIX A: Questionnaire Form



APPENDIX A

Anket Formu

Değerli Katılımcı,

Size sunulan anket formu İstanbul Teknik Üniversitesi Sosyal Bilimler Enstitüsü İşletme Yüksek Lisans programında Prof. Dr. Lütüfihak Alpkan danışmanlığında hazırladığım **“Girişimci kişilik özelliklerinin girişimcilik niyeti üzerine etkisi”** isimli tez çalışmasının araştırma bölümünü meydana getirmektedir. Araştırma sonucunda sağlanan veriler tamamıyla bilimsel amaca hizmet edecek ve değerlendirmeye alınacaktır. Çalışmadan istenilen düzeyde bir başarının sağlanması, geçerli ve doğru sonuçlar elde edilebilmesi değerli katkılarınıza bağlıdır. Çalışmanın belirlenen amaçlara ulaşabilmesi, doğru ve geçerli sonuçlar verebilmesi adına hiçbir soru atlanmamalı ve düşüncenizi en iyi şekilde yansıtan seçenekler tercih edilmelidir. Tez çalışmamıza sağlayacağınız katkılardan ve zaman ayırmanızdan ötürü çok teşekkür eder, okul hayatınızda başarılar dileriz.

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1. Girişimcilik Niyeti Ölçeği

Anket formunun birinci bölümünde girişimcilik niyeti ile ilgili sorular yer almaktadır. Aşağıda yer alan 5’li ölçeği dikkate alarak görüşünüze en yakın seçeneğe (X) işareti koyarak belirtiniz.

	Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle katılıyorum
1. Girişimci olmak için her şeyi yapmaya hazırım.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Profesyonel hedefim bir girişimci olmak.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. İleride kendi firmamı kurmak ve işletmek için her türlü çabayı göstereceğim.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Gelecekte bir firma kurmaya kararlıyım.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Bir firmayı kurmayı çok ciddi düşünmüştüm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Bir gün bir firmayı kurmaya ciddi olarak niyetliyim.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Girişimci Kişilik Özellikleri Ölçeği

Anket formunun ikinci bölümünde ise kişilik özellikleri konusuna odaklanılacaktır. Aşağıda yer alan 5’li ölçeği dikkate alarak görüşünüze en yakın seçeneğe (X) işareti koyarak belirtiniz.

	Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle katılıyorum
1. Belirsizliğin olduğu durumlarda karar almayı ve önderlik yapmayı severim.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Çalışanların birbiri ile çakışan sorumlulukları olsa bile ben bundan pek rahatsızlık duymam.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Hassasiyetle takip edeceğim bir iş programımın olup olmaması benim için çok da önemli değil.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Düzensiz şartlarda çalışmaktan zevk alırım.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Bir işin “iyi iş” olması için neyin nasıl yapılacağını açık talimatlarla ifade edilmiş olması şart değildir.					
6. Benim için iş güvencesi olmazsa olmaz değildir.					
7. Yaptığım işe dört elle sarılırım.					
8. Yaptığım işte ustalaşırım.					
9. İşimde elimden gelenin en iyisini yapmak isterim.					
10. Yaptığım işlerde başarılı olma arzum çok yüksektir.					
11. Görevimde başkalarından daha başarılı olmaya çok önem veririm.					
12. Belli standartların üstündeki hedeflere ulaşmaya yönelmişimdir.					
13. Riski yüksek diye getirisi yüksek olabilecek yatırımlardan kaçmam.					
14. Genelde risk almaktan pek çekinmem.					
15. Benim iş stratejim yüksek risk almaktır.					
16. Genelde hata yapma korkusuyla risk almaktan geri durmam.					
17. Çalışma garantisi olan sabit maaşlı bir iş yerine satışlardan prim ve kâr payı veren riskli bir işi tercih ederim.					
18. Bazı yatırımların sonucunu net olarak öngöremesem de risk almaktan kaçınmam.					
19. İnsanların şanssızlıkları yaptıkları hatalardan kaynaklanır.					
20. İnsanların başlarına gelen mutsuzluklar kötü şanslarından kaynaklanmaz.					
21. Kendi çabalarımın ürünü değilse olayların sonuçları beni memnun etmez.					
22. Karar ve eylemlerimin olumlu ve olumsuz sonuçlarına razı olurum.					
23. Bir şeylerin olmasını beklemek ya da seyretmek yerine ben kendim bir şeyler yapmayı tercih ederim					
24. Başarının şansın ve kaderin bir sonucundan ziyade kişisel çabadan kaynaklandığına inanırım.					
25. Yaşamımdaki olayların sonuçlarını şans ve kötü kader değil ben etkilerim.					
26. Yenilikleri denemekten hoşlanırım.					
27. İşleri yaparken yeni yollar, yeni yöntemler denerim.					
28. Yeni problemlere doğaçlama çözümler üretirim.					
29. Yeni fikirlere açığım.					
30. Kendimi yenilikçi biri olarak görüyorum.					
31. Çözülmemiş problemlerle uğraşmayı severim.					
32. Çözumsuz korkularım ve zayıflıklarım yok.					
33. Başarabilme yeteneğim konusunda kendime güvenirim.					
34. Başkasının gözetimi olmadığı zamanlarda daha başarılı olurum					
35. Çoğunluğun görüşüne karşı kendi görüşümü savunmakta zorlanmam.					
36. Yeni ve test edilmemiş koşullarla baş etme konusunda becerikliyimdir.					
37. Param olmasa bile yetenekli, çalışkan ve hırslı olduğum için şirket kurabileceğimi düşünüyorum.					
38. Yaptığım işlerde bağımsız olma arzum çok yüksektir.					
39. Başkalarından emir almak yerine kendi işimle ilgili kararları kendim vermek isterim.					
40. Çalışma yöntemlerimi başkalarının düşüncelerini dikkate almaksızın kendim belirlerim.					
41. İşlerimi yaparken işin kontrolü elimde olsun isterim.					
42. Bağımsız olmak için gerekirse farklı olmaktan çekinmem.					

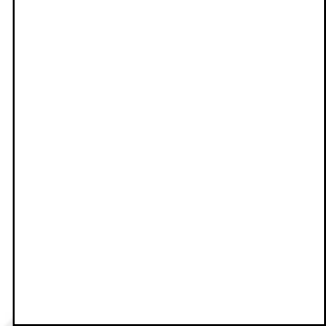
Kişisel Bilgiler

Aşağıda yer alan kişisel bilgilerinize yönelik soruları size uygun olan seçeneğe (X) işareti koymak suretiyle cevaplandırınız.

Doğum yılınız	:.....	
Cinsiyetiniz	<input type="checkbox"/> Erkek	<input type="checkbox"/> Kadın
Branş (Bölüm) / Sınıf	:.....	
Üniversite eğitiminiz süresince girişimcilik ile ilgili bir ders aldınız mı veya alıyor musunuz?	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Doğum yeriniz	:.....	
Şu an yaşadığınız yer?	:.....	
Şu an yaşadığınız yerde kaç yıldır yaşıyorsunuz?	:.....	
Hane halkı olarak ailenizin aylık gelir durumu nedir?	<input type="checkbox"/> 1500'e kadar. <input type="checkbox"/> 1500 'den 3000' e kadar. <input type="checkbox"/> 3000 'den 5000' e kadar. <input type="checkbox"/> 5000 'den fazla	
Hanenizdeki kişi sayısı	:.....	
Çalışıyor musunuz?	<input type="checkbox"/> Evet	<input type="checkbox"/> Hayır
Medeni durumunuz	<input type="checkbox"/> Evli	<input type="checkbox"/> Bekar
Ailenizde kendi işini kuran 1. derece yakınınız var mı? Varsa yakınlığınız?	<input type="checkbox"/> Evet (.....)	<input type="checkbox"/> Hayır

Anketimiz tamamlanmıştır. Çalışmamıza sağlamış olduğunuz değerli katkılarınızdan dolayı teşekkür ederiz.

CURRICULUM VITAE



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PUBLICATIONS, PRESENTATIONS AND PATENTS ON THE THESIS:

- Saral, H. C. and L. Alpan (2017). The Relationship Between Entrepreneurial Characteristics and Entrepreneurial Intention. *Ismc 2017:13th International Strategic Management Conference*.