

## **Gender, Business Education, Family Background and Personal Traits; a Multi Dimensional Analysis of Their Affects on Entrepreneurial Propensity: Findings from Turkey**

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### **Abstract**

*This study aims to reveal the effects of personality traits such as proactivity, internal locus of control, and the need for achievement as well as gender, business education, and family entrepreneurship, if any, on an individual's propensity to entrepreneurship, and the power of these effects. Carried out on 175 business administration students in Turkey, Ankara, the study has found that personality traits do increase entrepreneurial intentions, which are affected more by internal locus of control than any other factor, but that gender, family business, and business education make no difference on an individual's propensity to entrepreneurship.*

**Keywords:** Entrepreneurship, Entrepreneurship Propensity, Proactivity, Need for Achievement, Internal Locus of Control, Personality Traits.

### **1. INTRODUCTION**

In our days, individuals' welfare is correlated to how much their needs are satisfied by the goods and services that they buy. In this respect, these goods and services going up in quality but down in price are the most significant factor facilitating individuals' lives. The principal means to this end is the establishment of economic competition and allowing it to flourish. From this perspective, entrepreneurship is the most important brick in the continuation of competition.

Through the risks they take, the desire they feel to satisfy individuals' needs, and their courage, entrepreneurs put forward new products, processes, and systems, and thus ensure the continuation of competition. In this context, entrepreneurship is defined as the process of creating new and different things of value by putting in time and effort, considering the financial, psychological, and social risks involved, and aiming for material and individual gains (Hisrich 1986). Entrepreneurship is not only an individual act but it also covers the acts of groups and institutions (Shapiro 1982). Entrepreneurship involves planned moves and aims to impact individuals' environment (Bird 1988). Many researchers hold that entrepreneurial behavior rests on a high level of an individual's internal locus of control (Shapiro 1975; Brockhaus 1982; Perry 1990), proactive characteristics (Bateman 1993; White 1959; Langer 1983), and an increased need to succeed (McClelland 1961; Liles 1974). Besides these, the effects of education, gender, and family profession on entrepreneurial behavior have been studied by a number of scholars (Gomolka 1977; Thorne and Ball 1981; Collins and Moore 1970).

This study looks at internal locus of control, proactive personality, and the need for achievement, which are among the factors descriptively mentioned in earlier studies, in terms of their impact on entrepreneurial propensity as a holistic research model in behaviorist theory. It also looks at the relations between entrepreneurial intents and business education, family professions, and gender. The concept of ensuring economic development through entrepreneurs in Turkey and the historical development of entrepreneurship increase the significance of research in this field. Considering the nomadic lifestyle and frequent moving in Turkish national history, one can easily claim attributes of risk-taking, adaptation, and entrepreneurship.

However, when commercial activities were frowned upon in the Ottoman times, this field was off limits to Turks and the learning of the culture of entrepreneurship was delayed. Within this framework, it is believed that research from Turkey should also contribute to studies on entrepreneurship, which are still aiming for recognition in international literature.

## **2. THEORETICAL CONTEXT**

### **2.1. Entrepreneurship**

There are several entrepreneurship's definitions. Entrepreneurship is "the process of creating something different with value by devoting the necessary time and effort, assuming the accompanying financial, psychological, and social risks, and receiving the resulting reward of monetary and personal satisfaction" (Hisrich 1986, 89; Shane and Venkataraman 2000). According to Academy of Management entrepreneurship is "the creation and management of new businesses, small businesses, and family businesses" (Coulter 2003, 4). The entrepreneurship is the pursuit of an opportunity irrespective of existing resources and entrepreneurs perceive themselves as pursuing such opportunities (Stevenson, Roberts and Grousbeck 1989).

The group, organization, or community possesses some potential for entrepreneurial activity. The environment has the potential for increasing entrepreneurial activity. As Shapero (1982), environment has social and cultural support, information and tacit knowledge as well as tangible resources. At this point it is an obligation to put forth the distinction between entrepreneur and small business owner. Because an organization is small does not automatically make it entrepreneurial (Coulter 2003). Carland and his friends posited that small business owners and entrepreneurs are not the same. They proposed that entrepreneurship can be distinguished from small business ownership by a venture strategy oriented toward growth an innovation and entrepreneurs are characterized by different personality traits and behavioral preferences (Carland, Carland, Hoy and Boulton 1988), and entrepreneurial venture can be defined by the strategic behavior of the organizations. Vesper (1980) supported five categories of behavior which are;

- (1) Introduction of new goods
- (2) Introduction of new method of production
- (3) Opening of new markets
- (4) Opening of new sources of supply
- (5) Industrial reorganization

These criteria represent evidence of innovative strategies and emphasize the behavior of a firm consistent with its own best interest (Carland et al. 1984). Small business venture and small business owner; A small business venture is independently owned and operated and does not engaged in any new marketing or innovative practices. A small business owner establishes and manages a business for the principle purpose of furthering personal goals. The business must be the primary sources of income, and will consume the majority of one's time and resources and is perceived as an extension of the personality of himself by the owner.

Entrepreneurial venture and entrepreneur; An entrepreneurial venture is characterized by innovative strategic practices and its principle goals are profitability and growth. An entrepreneur establishes and manages a business for the principle purpose of profit and growth and characterized by innovative behavior (Carland et al. 1984). Entrepreneurship represents planned, intentional behavior. The intention literature suggest two notions; first, intentions serve to focus to decision makers' attention on a target behavior and this behavior is admitted the only one influencing that behavior (Bird 1988). Second, key attitudes that predict intentions like as social norms, perceived behavioral control, and self efficacy are perception based (Ajzen 1991; Bandura 1986). Therefore, they are learnt and learnable and vary across both individuals and situations (Krueger and Brazeal 1994).

Beside the behavioral approach personal approach to identifying entrepreneurial tendencies consist of the direct measurement of personality traits or motivational tendencies processed by entrepreneurs it began in the 1950s with the work of David McClelland and his followers. They joined the effort to find the traits that would distinguish entrepreneurs from others. Their research generally followed common personality paradigms and explored such need for achievement (McClelland 1961; McClelland and Winter 1969; Hornaday and Abboud 1971; Hornaday and Bunker 1970), locus of control (Brockhaus 1980; Hull, Bosley and Udell 1980; Liles 1974; Durand 1975), proactive trait of personality (Bateman and Crant 1993; White 1959; Langer 1983). A sampling of entrepreneurial traits appearing in the literature is displayed in Table 1.

**Insert table 1 about here**

In this study, proactive personality, locus of control and need for achievement of personality traits of entrepreneurs are taken as the dimensions of analyze.

## **2.2. Proactive Personality**

Bateman and Crant (1993) discussed the proactive component of organizational behavior and introduced a measure of the "proactive personality". This measure of a personal disposition toward proactive behavior is intended to identify differences among people in the extent to which they take action to influence their environments.

Person, environment, and behavior influence one another (Bandura 1986); there is a dynamic interaction among them (Magnusson and Endler 1977). In the psychology and organizational behavior literatures interactionism accepts that behavior is both internally and externally controlled, and situations are the function of persons as vice versa (Bowers 1973; Schneider 1983). According this though, it is accepted that people are not passive against the environmental forces (Buss 1987, 1220). They influence their own environment in 4 ways: (1) people has a intention of alter, and change their interpersonal environment called manipulation, (Buss 1987; Buss et al. 1987), (2) people show reaction against the behavior of the others, called evocation, (Buss 1987; Scarr and McCartney 1983) (3) people perceive, construe, their environments called cognitive . This is the essentials of proactive behavior. The proactive dimension of behavior has its resources in the people's needs to manipulate and control the environment (White 1959; Langer 1983)

In the organization's studies DeCaharms (1968) accepts people as self determined resources of their behavior, Graen (1976) sees people active rather than passive in role making, and Bell and Staw (1990), Weick (1979) accept that people can change their environment. Proactivity is used in relations with workers Hirschman (1970), Brief and Aldag (1981), in groups in organizations; proactively behaving groups are influencing outside groups with which they are interdependent (Ancona 1987); in organization theory border units as marketing unit is aimed at proactively managing external environments (Zeithaml and Zeithaml 1984) and in strategy making in organizations, prospectors try proactively find opportunities, manage treats and try to react and change their environments (Miles and Snow 1978). People having proactive personality are not much affected by their environment contrary try to change, search for opportunities; avoid the treats by reacting on them. They show initiative, take action, struggle with the problems until they solve or act on them. People who are not proactive passively adapt to their environment, shaped by it, show little initiative.

The relation between entrepreneurship and proactive personality is discussed in the literature. In the light of interactionist theory and the behavioral attitudes, it can be envisaged that proactive personalities may have more entrepreneurial intents. Shapero and Sokol (1982) determined a tendency toward action and initiative in the social dimensions of entrepreneurial activities and in their works, Krueger and Brazeal together (1994) found an intent to act on entrepreneurial intentions and potential.

## **2.2. Need for Achievement and Locus of Control**

Preferences for challenge, acceptance of personal responsibility for outcomes, and innovativeness are accepted qualities associated with high need for achievement are defining characteristics of successful initiators of new businesses in the work of McClelland (1961). Those characteristics are not only motivating individuals to initiative new ventures but also contribute to venture success (Hornaday and Aboud 1971). Several theorists have argued that some personal characteristics or traits define the entrepreneur and entrepreneurial behavior. Hisrich (1990) notes that the entrepreneurial behavior demonstrates initiative and creative thinking, and is able to organize social and economic mechanism to turn resources and situations to practical account, accepts risk and failure. McClelland (1961) offers similar traits to explain entrepreneurial behavior. These traits are high need for achievement, risk taking propensity, preference for energetic activity, and personal responsibility for success and failure. Brockhaus (1982) identify 3 attributes associated with entrepreneurial behavior: Need for achievement, risk taking propensity and internal locus of control.

Perceived control and its effects on human behavior's research in various situations have been studied in psychology and organizational field (Strickland 1989). Rotter (1990) contributed to development of locus of control studies. An individual perceives the results of an event as it is under his/her control and understanding according to Rotter (1990). An individual having internal locus of control has influence over outcomes by ability, effort or skills. An individual having external locus of control believes that his/her behaviors are under influence of outside forces (Rotter 1990). Locus of control construct has been one of the most studied psychological traits in entrepreneurship research. The relationship between entrepreneurial behavior and internal locus of control has a strong connection. Entrepreneurs as initiators take responsibility for their welfare and not depend on others (Perry 1990; McClelland 1961). According to Brockhaus (1982) and Brockhaus and Horowitz (1986), potential entrepreneurs have an internal locus of control orientation more than externals because risk and ability perception that effect results are important for a new venture decision.

Shapero (1975), Pandey and Tewary (1979) found high score between entrepreneurs and internal locus of control orientation. Most of empirical study's findings generally support that entrepreneurs are more internal than non-entrepreneurs. Also an internal locus of control orientation can be viewed as a prerequisite for action. Shapero (1982) and Krueger (1993) claimed that propensity to act is an essential element of the new venture initiation process.

### 3. RESEARCH OBJECTIVES, HYPOTHESES, AND MODEL

This study aims to reveal in what way and how much a proactive personality, the need for achievement, and internal locus of control affect an individual's inclinations to entrepreneurship. It also aims to determine whether business education has an impact on the formation and development of entrepreneurial behavior. It further researches into the effects of gender and family profession on potential young entrepreneurs' behavior. The objectives of the study are tested within the research model below.

#### Insert figure 1 about here

In the entrepreneurship literature many works tried to understand relation between entrepreneurship personality traits, entrepreneurship behavior and individual properties like gender, education, family background. The relation between proactive personality and entrepreneurship intention is investigated by Buss (1987), Buss, Gomes, Higgins and Lauterbach (1987), Scarr and McCartney (1983), Langer (1983). It is found that people having proactive personality has more entrepreneurial intent (Shapero 1982; Krueger 1993; Krueger and Brazeal 1994) determined proactive personality influence individual behavior toward to show entrepreneurial intention.

*Hypothesis 1: The extent to which people possess a proactive personality will be positively associated with entrepreneurial intentions and as well as the proactive personality level of an individual increases, the level of entrepreneurial intention increases.*

$$\text{Model 1: EI} = \beta_0 + \beta_1 \text{PP}$$

An internal individual believes the outcomes are affected by his/her ability, effort or skills and Hisrich (1990) entrepreneurial behavior exhibits initiative individual who has entrepreneurial intention try to organize and change their environment. This analogy is explained by the presence of need for achievement (McClelland 1961; Brockhaus 1982).

*Hypothesis 2: As well as the need for achievement level of an individual increases, the level of entrepreneurial intention increases.*

$$\text{Model 2: EI} = \beta_0 + \beta_1 \text{NA}$$

In psychology locus of control has been one of the most worked subject. The relation between internal locus of control and entrepreneurial intention has been put forward and the relation is found strong (Brockhaus and Horowitz 1986; Shapero 1975; Pandey and Tewary 1979).

*Hypothesis 3: As well as the locus of control level of an individual increases, the level of entrepreneurial intention increases.*

$$\text{Model 3: EI} = \beta_0 + \beta_1 \text{ILC}$$

After the investigation of the relations and their powers of locus of control, need for achievement and proactive personality over entrepreneurial intention we focused our attention to discover the level of explanatory relationship. That is, which factor has a powerful and strong relation on entrepreneurial intention?

$$\text{Model 4: EI} = \beta_0 + \beta_1 \text{PP} + \beta_2 \text{NA} + \beta_3 \text{ILC}$$

The personality traits, the effects of which are studied, are also studied in terms of their relations among each other. In other words, do those with a highly proactive personality also have higher internal locus of control or need for achievement? Do those with higher internal locus of control have a higher need for achievement? Or lower? The following assumption is made in this context.

*Hypothesis 4: Proactivity, internal locus of control and need for achievement behave in the same direction.*

#### 3.1. Other Individual Differences

Academic researches on entrepreneurship and entrepreneurial behavior include a wide range of subject. Age, gender, and education are investigated by Brockhaus and Horwitz (1986), Howell (1972); Collin and Moore (1970); education, age, and family background by Thorne and Ball (1981); Gomolka (1977).

*Hypothesis 5: Males will express higher entrepreneurial intentions than females.*

*Hypothesis 6: Subjects with a parent who is an entrepreneur will have higher entrepreneurial intentions than those whose parent is not an entrepreneur.*

*Hypothesis 7: Education will be positively associated with entrepreneurial intentions and the students are in higher grades of business education show more entrepreneurial intention than who are in lower grades.*

#### **4. METHOD**

The subjects of the study were the students of the Department of Business Administration of the Faculty of Economics and Administrative Sciences at Gazi University in Ankara. There are two basic reasons for the selection of business administration students for the research field:

- 1) Among the planned objectives of business education are the raising and developing of individuals' entrepreneurial characteristics and skills. To this end, it is assumed that the curricula of the Department of Business Administration include to a large extent courses designed specifically for this purpose.
- 2) A homogeneous research universe was formed of business administration students only. A homogenous universe is necessary to clearly see the difference in interaction and impact of such demographics as gender, education, and family profession on an individual's intent to entrepreneurship.

The research topic – the traces of the relation between personality traits and entrepreneurial intentions – is studied within the framework of a research model based upon the theoretical underpinnings of the subject.

##### **4.1. Sample and Procedure**

Gazi University, in the Turkish capital city of Ankara, is Turkey's largest university in terms of the number of students. At the Faculty of Economics and Administrative Sciences, with its seven basic departments, business administration education is completed in four years. The survey was administered on first, second, third, and fourth year students at the Department of Business Administration, Faculty of Economics and Administrative Sciences, at Gazi University. The number of participants is 175. The questionnaires were handed out to the students and any ambiguities were cleared up for more accurate responses. The data collected were analyzed with the correlation, regression, ANOVA, and t-tests of the SPSS 11 program for statistics.

##### **4.2. Measure**

The questionnaire used for data collection consists of five parts. In the first part, demographic information is gathered through 10 questions. In the second part, the 17 questions measuring proactive personality traits are borrowed from Bateman and Crant (1993, 112). In the third part, the 10 questions measuring the level of individuals' need for achievement are taken from Robbins (2001:489-493). The 10 questions measuring internal locus of control in part four are from Hisrich, Peters, and Shepherd (2005, 62). The questions in English were translated into Turkish, checked for meaning, and amended as necessary. The questionnaires were handed out to a total of 175 students from all years and any questions were answered. The Likert Scale was used in the questionnaire.

#### **5. RESULTS**

The explications and the results according to the study are presented below;

**Insert table 2 about here**

Table 2 shows the reliability test results of the questionnaire form used in the survey. Total reliability for the data collection tool is Cronbach's Alpha (Total) = 0,924, which is a very reliable level.

**Insert table 3 about here**

42% of the participants were female, 58% male with 98% between 19 and 25 years of age. 10 % of the participants were first-year, 13% second-year, 40% third-year, and 37% fourth-year students. Participation and distribution are sufficient for statistical analyses.

**Insert table 4 about here**

In Model 1, the effects of the independent variable (proactive personality) on the dependent variable (entrepreneurship) were analyzed and it was statistically proved that the more proactive an individual's personality is, the more inclined they are to entrepreneurship ( $p < 0.01$ ). An increase of one unit in proactivity means an increase of ( $\beta$ ) 0.734 in propensity to entrepreneurship. This finding corroborates Hypothesis H1 that a proactive personality which people possess will be positively associated with entrepreneurial intentions, which increase in line with proactivity in personality.

**Insert table 5 about here**

In Model 2, the effects of the need for achievement on entrepreneurship were studied. It was statistically proved that the greater the need for achievement is, the higher entrepreneurial intentions are ( $p < 0.01$ ). According to the results of the regression analysis, an increase of one unit in an individual's need for achievement means an increase of ( $\beta$ ) 1.224 in propensity to entrepreneurship. This is in support of Hypothesis H2 that the greater the need for achievement is, the greater the inclination towards entrepreneurship.

**Insert table 6 about here**

According to the results of Model 3, which looks at the impact of internal locus of control over entrepreneurial intentions, an increase of one unit in an individual's focus on control means an increase of ( $\beta$ ) 1.291 in propensity to entrepreneurship. This statistically proves Hypothesis H3 that more internal locus of control means more inclination towards entrepreneurship ( $p < 0.01$ ).

**Insert table 7 about here**

The effects of personality traits tackled one by one in previous models are studied all together in Model 4 and each one has been statistically proved to have a positive effect on propensity to entrepreneurship within the framework of the research model ( $p < 0.01$ ).

**Insert table 8 about here**

As Table 8 shows, the independent variables of a proactive personality, the need for achievement, and internal locus of control, whose effects on entrepreneurial intentions are studied in the research model, have a positive, direct, and statistically significant relation. The relation between the dependent and independent variables is, too, in the same way, as is shown by the regression analyses. The  $\beta$  coefficients of the independent variables have been found to be positive. These findings prove Hypothesis H4 that proactive characteristics, internal locus of control level, and the need for achievement move in the same direction.

### 5.1. Other Individual Differences

**Insert table 9 about here**

The One-Sample Kolmogorov-Smirnov Test is one that assesses the prerequisites for the T Tests. If the data distribution is not normal, the application of T Tests is not appropriate and the results are not reliable. For this reason, The One-Sample Kolmogorov-Smirnov Test was applied before testing the effects of the independent variables of gender, family profession, and education on entrepreneurial intentions, the test distribution was found to be normal, and the hypotheses were tested by means of the T Tests. If the test results are  $p > 0.05$  Hypothesis  $H_0$  is accepted; if they are  $p < 0.05$  then Hypothesis  $H_1$  is accepted. Accordingly,

For Hypothesis 5 it is proposed;

$H_0$ : Males will not express higher entrepreneurial intentions than females.

$H_1$ : Males will express higher entrepreneurial intentions than females.

**Insert table 10 about here**

As Independent Samples Test (T Test) results are  $p > 0.05$ , as shown in Table 10, Hypothesis  $H_1$  is rejected. Thus, it cannot be asserted that men are more entrepreneurial than women.

For Hypothesis 6 it is proposed;

$H_0$ : Subjects with a parent who is an entrepreneur will have not higher entrepreneurial intentions than those whose parents are not entrepreneurs.

$H_1$ : Subjects with a parent who is an entrepreneur will have higher entrepreneurial intentions than those whose parents are not entrepreneurs.

**Insert table 11 about here**

With the Independent Samples Test (T Test) results for Hypothesis 6 ( $p > 0.05$ ), it cannot be proved that individuals with entrepreneurial families are more entrepreneurial than those with less entrepreneurial families.

**Insert table 12 about here**

Hypothesis 7 studied the effects of business education on individuals' entrepreneurial intentions and, as shown by the One Way ANOVA test results, within the existing limitations business education, even at different levels, does not statistically affect the subjects' entrepreneurial intentions in a positive way ( $p > 0.05$ ).

## 6. DISCUSSION

The first basic objective of the research is to discover the effects, if any, of proactive personality, the need for achievement, and internal locus of control on entrepreneurial propensity, and their power and direction.

The research findings show that the more proactive an individual's personality is, the more entrepreneurial they are. This increase is in a positive direction. These findings are in line with those of other researchers such as Hirschman (1970), Brief and Aldag (1981), Shapero and Sokol (1985), Krueger (1993), and Krueger and Brazeal (1994). An increase of one unit in an individual's proactive personality signifies an increase of 0,734 units in entrepreneurial propensity.

Another outcome of the study is that the more an individual feels the need for achievement the more entrepreneurial they are. Brockhaus (1982); Hisrich (1990); McClelland (1961), found a positive relation between an individual's need for achievement and their entrepreneurial intents, which is also corroborated by the findings of this study. The power of this relation is found to be 1,224. In other words, an increase of one unit in an individual's need for achievement signifies an increase of 1,224 units in entrepreneurial propensity.

Individuals' entrepreneurial propensity increases in line with their internal focus of control. This finding is similar to those of Shapero (1975), Pandey and Tewary (1979) and Mueller and Thomas (2000). An increase of one unit in an individual's internal locus of control means an increase of 1,291 units in entrepreneurship.

The personality traits which are tackled separately in terms of their effect on entrepreneurship are also studied simultaneously within one model and each factor is found to have a positive impact on entrepreneurial propensity, in line with the results of the models studied one by one.

When the link between entrepreneurial propensity and gender, family profession, and business education is studied, no significant difference is observed on individual entrepreneurship. In other words, no entrepreneurial difference exists between men and women, those with entrepreneurial families and those without, and those with more business education and those with less. In the literature on entrepreneurship, there are studies corroborating the findings of this one.

## **7. IMPLICATIONS**

The contributions of the present study are mainly in three fields:

### (1) Contributions to the field of entrepreneurship studies

The finding of this Turkish study – that a proactive personality, internal locus of control, and the need for achievement raise inclinations towards entrepreneurship is important in that it adds an international dimension to previous studies. In addition to these findings, the study also looks at the power of these three personality traits in raising entrepreneurial propensity. It has been found that internal locus of control is the most powerful in that respect and is followed by the need for achievement. This finding allows us to predict that raising internal locus of control, followed by the need for achievement, would yield more efficient results than a proactive personality would. Therefore, in the motivation of employees, work towards internal locus of control and the need for achievement should be prioritized and allocated enough resources in order to raise the efficiency of the organization. Gender, family profession, and a background in business education make no difference on entrepreneurship and this finding is a contribution to the ongoing debate in the literature.

### (2) Contributions to the field of business education

The finding that the amount of business education makes no difference on entrepreneurial intentions is quite thought-provoking and worthy of discussion. If more knowledge in business administration makes little difference, can this be attributed to the course programme, content or coverage, the teaching methods adopted, or individual characteristics of the lecturers? Is this a local finding limited to the sample universe? Or is it worthy of being generalized into a research topic? The present study is expected to encourage interest in and scientific curiosity about answers to such questions, which may have an influence on many processes from business education programmes to teaching methods.

### (3) Contributions to the world of business and management

The present study is expected to shed light on a wide range of issues, varying from the recruitment of employees, to activities intended to motivate them, to the allocation of resources, in the sectors and organizations where entrepreneurial propensity should be high.

## **8. CONCLUSION**

Carried out in Turkey, this study confirms that entrepreneurial propensity increases in line with a proactive personality, internal locus of control, and the need for achievement, internal locus of control being the most powerful variable. It also lays bare the need to consider course curricula, lecturers' characteristics, and teaching methods when researching into the effects of business education on entrepreneurial intentions.

## Tables and Figures

Table 1. Traits of Entrepreneurs

Date	Author(s)	Traits
1848	Mill	Risk bearing
1917	Weber	Source of formal authority
1934	Schumpeter	Innovation, initiative
1954	Sutton	Desire for responsibility
1959	Hartman	Source of formal authority
1959	White	Proactivity
1961	McClelland	Risk taking, need for achievement
1963	Dauids	Ambition; desire for independence; responsibility; self-confidence
1963	Dauids	Education, number of children
1964	Pickle	Drive/mental; human relations; communication ability; technical knowledge
1965	Schrage	Achievement motivation
1969	Wainer and Rubin	Achievement, power
1970	Collin and Moore	Parents occupation, education
1970	Hornaday and Bunker	Need for achievement, creativity, leadership, power
1971	Palmer	Risk measurement
1971	Hornaday & Aboud	Need for achievement; autonomy; aggression; power; recognition; innovative/independent
1972	Howell	Age, educational level, number of previous jobs
1973	Winter	Need for power
1974	Borland	Internal locus of control
1974	Liles	Need for achievement
1975	Durand	Achievement motivation, locus of control, training
1977	Gasse	Personal value orientation
1977	Gomolka	Age, sex, education, parents work
1978	Timmons	Drive/self-confidence; goal oriented moderated risk taker; internal locus of control; creativity/innovation
1979	DeCarlo and Lyons	Education, age, achievement
1980	Sexton	Energetic/ambitious; positive reaction to setbacks
1980	Brockhaus	Risk taking propensity
1980	Hull, Bosley and Udell	Locus of control, achievement, risk propensity, creativity
1980	Lachman	Age, education, father's occupation, achievement motivation, achievement orientation
1981	Welsh & White	Need to control; responsibility seeker; self-confidence/drive; challenge taker; moderate risk taker
1981	Cooper and Dunkelberg	Parents, age, education
1981	Mescon and Montanari	Achievement, locus of control,
1981	Thorne and Ball	Age, education, family background
1982	Dunkelberg & Cooper	Growth oriented; independence oriented; craftsman oriented
1982	Welsch and Young	Locus of control, risk taking, self esteem, openness to innovation
1983	Langer	Proactivity
1993	Bateman and Crant	Proactivity

Sources: Table 1 is adapted from; Gartner, W. B (1988). Who Is an Entrepreneur? Is the Wrong Question, *American Journal of Small Business*, Spring, 11-32 and Carland. J. W., Carland, J. A. C. Hoy, F. and Boulton. W. (1984), Differentiating Entrepreneurs from Small Business Owners: A Conceptualization *Academy of Management Review*. Vol. 9, No. 2. 354-359.



Table 2. Reliability Statistics

		Cronbach's Alpha			N of Items
		0,924			57
Dimensio n	Question Number	Cronbach's Alpha	Dimensio n	Question Number	Cronbach's Alpha
Need For Achievement	Question 1	0,923	Internal Locus Of Control	Question 1	0,924
	Question 2	0,924		Question 2	0,925
	Question 3	0,923		Question 3	0,921
	Question 4	0,921		Question 4	0,922
	Question 5	0,922		Question 5	0,925
	Question 6	0,922		Question 6	0,924
	Question 7	0,921		Question 7	0,923
	Question 8	0,922		Question 8	0,923
	Question 9	0,921		Question 9	0,922
	Question 10	0,923		Question 10	0,925
Proactivity	Question 1	0,922	Entrepreneurial Intention	Question 1	0,922
	Question 2	0,923		Question 2	0,922
	Question 3	0,922		Question 3	0,922
	Question 4	0,922		Question 4	0,923
	Question 5	0,922		Question 5	0,925
	Question 6	0,922		Question 6	0,923
	Question 7	0,923		Question 7	0,923
	Question 8	0,922		Question 8	0,922
	Question 9	0,922		Question 9	0,921
	Question 10	0,922		Question 10	0,922
	Question 11	0,922		Question 11	0,922
	Question 12	0,921		Question 12	0,922
	Question 13	0,922		Question 13	0,922
	Question 14	0,922		Question 14	0,921
	Question 15	0,923		Question 15	0,922
	Question 16	0,923		Question 16	0,923
	Question 17	0,923		Question 17	0,923
			Question 18	0,923	
			Question 19	0,923	
			Question 20	0,922	

Table 3. Descriptive Statistics

Gender			Age		
	Frequency	Percent		Frequency	Percent
Female	74	42,3	19	17	9,7
Male	101	57,7	20	23	13,1
Total	175	100	21	36	20,6
			22	53	30,3
			23	26	14,9
			24	14	8
First Grade	18	10,3	25	3	1,7
Second Grade	22	12,6	27	2	1,1
Third Grade	69	39,4	38	1	0,6
Fourth Grade	66	37,7	Total	175	100
Total	175	100			

Table 4. The Affect of Proactivity on Entrepreneurship Intention

Model 1. $EI = \beta_0 + \beta_1 PP$										
		Unstandardized Coefficients		t	Sig. (p)	F	Sig. (p)	R <sup>2</sup>	Adjusted R <sup>2</sup>	Durbin-Watson
		$\beta$	Std. Error							
(Constant)	24,697	3,602	6,857	<b>0,000</b>	156,211	<b>0,000</b>	0,475	0,471	1,836	
Proactivity	0,734	0,059	12,498	<b>0,000</b>						

Dependent Variable: Entrepreneurship  
 Predictors: (Constant), Proactivity  
 Regression is significant at the 0.01 level

Table 5. The Affect of Need for Achievement on Entrepreneurship Intention

Model 2. $EI = \beta_0 + \beta_1 NA$										
		Unstandardized Coefficients		t	Sig. (p)	F	Sig. (p)	R <sup>2</sup>	Adjusted R <sup>2</sup>	Durbin-Watson
		$\beta$	Std. Error							
(Constant)	23,113	3,893	5,937	<b>0,000</b>	142,819	<b>0,000</b>	0,452	0,449	2,121	
Need for Achievement	1,224	0,102	11,951	<b>0,000</b>						

Dependent Variable: Entrepreneurship  
 Predictors: (Constant), Need for Achievement  
 Regression is significant at the 0.01 level

Table 6. The Affect of Internal Locus of Control on Entrepreneurship Intention

Model 3. $EI = \beta_0 + \beta_1 ILC$										
		Unstandardized Coefficients		t	Sig. (p)	F	Sig. (p)	R <sup>2</sup>	Adjusted R <sup>2</sup>	Durbin-Watson
		$\beta$	Std. Error							
(Constant)	29,264	5,385	5,435	<b>0,000</b>	55,364	<b>0,000</b>	0,242	0,238	1,963	
Internal Locus of Control	1,291	0,174	7,441	<b>0,000</b>						

Dependent Variable: Entrepreneurship  
 Predictors: (Constant), Internal Locus of Control  
 Regression is significant at the 0.01 level

Table 7. The Analysis of Multiple Effects of Personality Traits on Entrepreneurship Intention

Model 4. $EI = \beta_0 + \beta_1 PP + \beta_2 NA + \beta_3 ILC$											
	Unstandardized Coefficients		t	Sig. (p)	Collinearity Statistics		F	Sig. (p)	R <sup>2</sup>	Adjusted R <sup>2</sup>	Durbin-Watson
	$\beta$	Std. Error			For $\beta$	Std. Error					
Constant	13,685	4,475	3,058	<b>0,003</b>			68,04	<b>0,000</b>	0,544	0,536	1,909
Proactivity	0,421	0,083	5,050	<b>0,000</b>	0,435	2,298					
Need for Achievement	0,634	0,138	4,595	<b>0,000</b>	0,464	2,155					
Internal Locus of Control	0,484	0,146	3,321	<b>0,001</b>	0,634	1,577					

Dependent Variable: Entrepreneurship

Predictors: (Constant), Proactivity, Need for Achievement, and Internal Locus of Control

Regression is significant at the 0.01 level

Table 8. Correlations

		Entrepreneurial Intention	Proactivity	Need for Achievement	Internal Locus of Control
Entrepreneurship Intention	Pearson Correlation	1	0.689(**)	0.672(**)	0.492(**)
	Sig. (2-tailed)		0,000	0,000	0,000
Proactivity	Pearson Correlation		1	0.716(**)	0.578(**)
	Sig. (2-tailed)			0,000	0,000
Need for Achievement	Pearson Correlation			1	0.538(**)
	Sig. (2-tailed)				0,000
Internal Locus of Control	Pearson Correlation				1
	Sig. (2-tailed)				

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

Table 9. One-Sample Kolmogorov-Smirnov Test

	Entrepreneurship Intention
Kolmogorov-Smirnov Z	0,639
Asymp. Sig. (2-tailed)	<b>0,809</b>

Test distribution is Normal.

Table 10. T Test Result of Hypothesis 5

Males will express higher entrepreneurial intentions than females.

	Gender	N	Mean	Std. Error Mean	t	Sig. (p) (2-tailed)
Entrepreneurship Intention	Male	101	68,84	1,310	-0,029	<b>0,977</b>
	Female	74	68,78	1,495		

T Test Result is significant at the 0.01 level

Table 11. T Test Result of Hypothesis 6

Subjects with a parent who is an entrepreneur will have higher entrepreneurial intentions than those whose parent is not an entrepreneur.

	Family Background	N	Mean	Std. Error Mean	t	Sig.(p) (2-tailed)
Entrepreneurship Intention	Non Entrepreneurial Family	132	68,33	1,030	-0,875	<b>0,383</b>
	Entrepreneurial Family	43	70,33	2,462		

T Test Result is significant at the 0.01 level

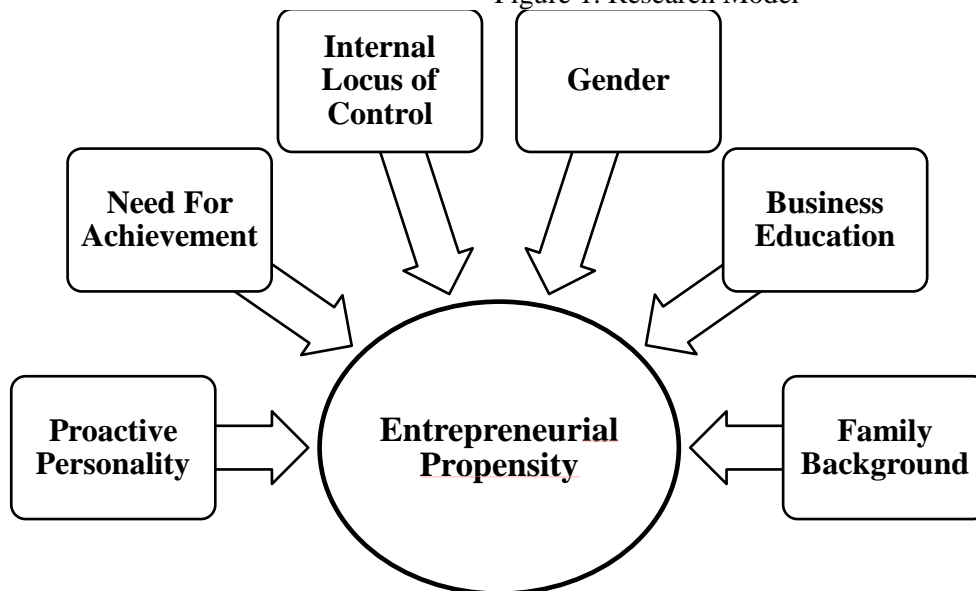
Table 12. One Way ANOVA Analysis Result of Hypothesis 7

Education will be positively associated with entrepreneurial intentions and the students are in higher grades of business education show more entrepreneurial intention than who are in lower grades.

		N	Mean	Std. Error	F	Sig.(p)
Entrepreneurship Intention	First Grade	18	70,83	4,228	0,421	<b>0,738</b>
	Second Grade	22	68,00	2,164		
	Third Grade	69	67,74	1,623		
	Fourth Grade	66	69,67	1,465		
	Total	175	68,82	0,983		

One Way ANOVA Result is significant at the 0.01 level

Figure 1. Research Model



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