

# ASSOCIATION OF DEMOGRAPHIC AND BEHAVIORAL CHARACTERISTICS ON FINANCIAL DECISION MAKING

Sana Shahid \*, Basheer Ahmad \*, Munib Badar \*\*

\* Department of Management Sciences, Iqra University Islamabad, Pakistan

\*\* Corresponding author. Department of Management Sciences, Iqra University Islamabad, Pakistan



## Abstract

### How to cite this paper:

Shahid, S., Ahmad, B., & Badar, M. (2017). Association of demographic and behavioral characteristics on financial decision making. *Corporate Governance and Sustainability Review*, 1(2), 20-29.

<http://doi.org/10.22495/cgsvr1i2p3>

Copyright © 2017 The Authors

This work is licensed under the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0). <http://creativecommons.org/licenses/by-nc/4.0/>

ISSN Online: 2519-898X  
ISSN Print: 2519-8971

Received: 18.04.2017  
Accepted: 19.09.2017

JEL Classification: D81, C3, J16  
DOI: 10.22495/cgsvr1i2p3

Managerial Risk acceptance criteria are affected by several factors. The study focuses on demographic and behavioral factors that plays their role in altering their decision making process. Questionnaires were distributed for collecting response of different professionals holding managerial positions encompassing Demographic Factors i.e. gender, age, marital Status and education, Behavioral factors i.e. Excessive Optimism, Over Confidence and Emotional Intelligence on risk perception. Reliability of the questionnaire is assessed through Cron Bach Alpha and to evaluate technical aspects of all variables, Linear regression and General Linear Univariate model are used. It is found that the variables including both, behavioral and demographic aspects are significantly associated with risk acceptance.

**Keywords:** Gender, Marital Status, Education Level, Excessive Optimism, Overconfidence, Emotional Intelligence, Linear Regression, General Linear Univariate Model, Cron Bach Alpha

## 1. INTRODUCTION

Decision-making is one of the basic responsibilities that everyone has to perform in his or her daily life. Decision taken by a person, not only affect him /her self only, but every decision has its implications either directly or indirectly on the lives of people associated with the decision maker. Some decisions are personal in nature while some taken at professional level. Decisions made at professional level have critical importance as future of a particular firm, and number of people operating under it may affect directly. Therefore, decision making ability of a person, performing duties of manager, must be flawless. It is very difficult for managers to achieve such level of perfection without adequate level of experience, Skill, knowledge and expertise of the pertinent field.

Whenever a discussion of risk association with a particular decision is undergone, the whole decision making process becomes crucial for every stakeholder. By the term risk, only financial risk is not meant, but every chance of uncertainty associated with each decision is also taken into account. However whenever financial risk of a project is observed, the responsibility of a manager increases manifold. It is because their decision of accepting or rejecting a project decides not only the future of the firm but also the employers and other

stakeholders who get affected directly from such decisions. Such decisions are pretentious by the personal level of risk acceptance of the managers (Elton *et al.*, 2003).

Risk is concerned as one of the most important variable that molds an individual's choice of acceptance or rejection of any alternative or making decision. Importance of risk is un-negligible as shown by its position in "Decision Theory" and by its presence in managerial ideology. Risk is most commonly defined as possible deviation from expected outcome. Generally, it is associated with chances of gain or loss, associated with a particular alternative (Pratt & John, 1964). Risk is normally evaluated against expected return. The relationship between risk and return proves with positive trend in traditional corporate finance.

This aim of the study is to earmark various factors, affecting risk acceptance of managers, particularly related to their personality. While considering all the important personality traits that have strong influence on risk acceptance level of managers. It incorporates several demographic and psychological variables. The contribution of this is to highlight all those factors hardly been studied in the form of model before. Furthermore, emotional intelligence has rarely been considered in reference to risk acceptance. This particular gap is tried to be get filled by the presented study.

After the introduction the rest of the study is organized as follows, section 2 covers literature review, section 3 provides explanation of selected variables and describes methodology different components of econometric tests while section 4 comprises of results and discussion and the last section the section 5 gives an overall conclusion.

## 2. LITERATURE REVIEW

Usually all theories holds the view that decision maker prefers less risk keeping other factors (e-g expected return) constant. Similarly, decision makers prefer large return keeping other factors (e-g risk) constant (Lindley, 1973). Extensive research shows that decision makers are normally risk averse in nature, they usually prefer to take project with normal risk and even if they had to bear risk, they demand really higher returns as compensation of bearing risk (Pratt & John, 1964; Sharpe, 1964; Lintner, 1965). Risk propensity of a person has strong impact on decision-making (Kogan & Wallach, 1964; Maccrimmon *et al.*, 1986; Jaggia & Thosar, 2000). Most of the time people relate negative outcomes with risk instead of associating any variability (Levinthal *et al.*, 1981). So many previous studies and researches have conducted in this scenario. Risk aversion was compared with profit maximization (Taylor, 1986). Sometimes, it is considering in the light of brand loyalty and trust (Matzler *et al.*, 2008). Some researchers have associated with psychological factors (Zaniboni *et al.*, 2010). Individual's attitude, towards risk is also influenced by his/her knowledge and skills (Dean, 2010). Research is evident that people's decisions are largely affected by their risk perception (Elton *et al.*, 2003). Most of the time people associate risk with variability in possible outcomes of their decisions (Eeckhoudt, *et al.*, 2005).

Gender is one of the most important demographic factors, which has its impact on every individual in most of the decision both personal and professional. It is derived from research that females are more risk avoiders than males as they are more careful and receptive for losses as compared to gains (Harrtell E., 2007). It is quite evident from the literature that due to natural in built differences regarding behavior, females make profit and loss estimation differently than the males (Duda *et al.*, 2006; Olsen and Cox, 2001). Women are found to opt make risk avoiding options even with low rewards, than men (Sylvia *et al.*, 2010). Recent corporate finance literature clearly shows that companies' corporate governance and financial performance is affected to a certain and obvious level by the gender especially at executive and directorial level (Carter *et al.*, 2003; Erhardt *et al.*, 2003; Farrell & Hersch, 2005; Rose, 2007; Campbell & Vera, 2008; Adams & Ferreira, 2009). Furthermore, while observing psychological factors and management literature, it has been observed that gender differences do influence as far as risk aversion and conservatism is concerned (Powell & Ausic, 1997; Koplos & Bernasek, 1998; Byrnes *et al.*, 1999; Schobest, 2006). It is also noticed that gender of firm's executive, effects financial reporting as well. It observed that firm with female CFOs go for income decreasing financials accruals and chose more conservative financial reporting techniques (Peni & Vahamaa, 2010). Along

with other logics, research suggests that biological differences between males and females are also a reason of women's more risk averseness than men (Zuckerman, 1994; Witt, 1994). Some of socio-culture reason also affects gender difference in taking the risk preferences i.e. men are more risk takers than women (Felton *et al.*, 2003). Not only during job female professionals take less risky decisions, but also go for less beneficent but confirmed choices for their pension funds and other retirement benefits (Watson & Naughton, 2007). Due to such risk averse behavior female workers remain less beneficent than men. They not only choose low risk low reward retirement policy but usually get retired earlier, which ultimately results in weaker financial position as compared to men (Watson & Naughton, 2007). Literature survey is not the only tool used to find out the impact of gender differences towards risk acceptance attitude. Some brain storming sessions have also been conducted from the relevant environment. For this purpose, various interviews were conducted from female professionals associated with different professions followed by the interviews of male workers working in similar professions and positions. The results found were quite familiar with literary evidences. In fact, in Pakistani society, association of gender differences is more evident than any other society due to its cultural and religious peculiarities. Here women are risk averse not only because of their own natural and psychological contexts, but by virtue of cultural and religious boundaries.

As far as risk perception is concerned, research shows that risk acceptance of an individual, decreases with age because of reduction in investment horizon and increase in risk aversion (Samuelson, 1991; Cocco *et al.*, 2005). Older professionals are found more risk averse than their younger counterparts (Bakshi *et al.*, Chen, 1994; Campbell & Viceira, 2002). The relationship between age and risk tolerance were for the very first time studied in by Wallach and Kogan, and with research it was proved that younger show different attitude towards risk acceptance than elders (Kogan & Wallach, 1964; McInish, 1982; Morin & Suarez, 1983). Afterwards, most of the research has proved negative relationship between risk acceptance and age (Bajtelsmit *et al.*, 1999). Young people are naturally more risk takers than older people (Quadrel *et al.*, 1993). With the increase in age, people become more defensive. Old people are more concerned about their vulnerability towards risk than young individuals (Steinberg, 2007). This attitude becomes more crucial when loss is observed in any decision, even if its chance of occurrence is relatively low. Young managers are psychologically strong and enthusiastic and want to take challenging decisions. Old people are more concerned about their vulnerability towards risk than young individuals (Steinberg, 2007). When it comes to investment decision, younger people are found to be more interested in making investments in risky assets (McInish, 1982; Veld C. & Veld Y., 2008; Frijns, 2008; Hallahan, 2003). Whereas, older people show higher level of risk aversion than younger people (Bakshi & Chen, 1994; Morin & Suarez, 1983; Grable, 2000; Hallahan, 2003) Simply saying, there exists a negative relationship between age and risk taking (Chen & Chun, 2011; Jaggia & Thosar, 2000).

Marital status is the demographic variable on which very little research is being done. Especially in case of risk acceptance very little research evidences are found on this particular variable. However, marital status is presumed to affect risk acceptance however the nature of relationship is still not clear enough (Chou *et al.*, 2010). One point of view is that unmarried person are more risk taker than married as they have less responsibilities than married, so with less pressures one mind they are more comfortable with risky chances. Furthermore, unmarried people are less vulnerable to social risk i.e. potential loss of esteem; they go for more risky decision (Roszkowski *et al.*, 1993). However, other viewpoint presents total contradictory findings. It is also proved in research that married people go for more risky decisions as compare to unmarried people. It is because due to practical experience, married person's ability to absorb unexpected outcomes or simply saying risk acceptance is far greater than unmarried individuals (Grable, 2000; Grable & Lytton, 1999). Although findings regarding nature of relationship between marital status and risk acceptance is not clear but research has proved that people with different marital status deals quite differently with financial information and issues (Hallahan, 2003). Singles are found to be more risk takers than married people (Baker H & Haslem, 1974; Roszkowski *et al.*, 1993). Similarly, unmarried individuals are found involved in more risky decisions than married people (Iqbal Mahmood *et al.*, 2011). As single individuals are more enthusiastic in nature and willing to take chances, so when comes to professional decision making, single managers are more risk takers than married managers (Hallahan, 2003). Similarly, risk acceptance of singles has proved higher than married decision maker, through research (Veld C. & Veld Y., 2008). Married decision makers are found to be least interested in portfolio choices and are less risk tolerant (Chou *et al.*, 2010). Individual's decisions are get affected by their marital status (Mahmood *et al.*, 2011) After getting married people's exposure, their attitude towards life, their preference everything get changed with presence in responsibilities and all these factor do affect decision making as well (Yao & Human, 2005; Chen & Chun, 2011).

Education level of an individual is found to be an important factor in analyzing his/her risk acceptance. Education is one of the most important factors that play a critical role in enhancing a person's personality. As people move on to higher level of education, their exposure becomes vast and their experience, skills, knowledge get enriched (Baker & Haslem, 1974; Haliassos & Bertaut, 1995). Higher education level not only help individual in taking decision at personal level, but also its performance increases manifold when its implications are studied at professional level. Managers with higher level of education show different decision making their counterparts with lower level of education (Riley *et al.*, 1992). People's higher level of risk acceptance is positively correlated with higher education (Chen & Chun, 2011). With increase in education, people's skill, knowledge and capabilities also increase. These enhanced capabilities allow people (managers) to better evaluate different projects and increase their

acceptance of risk (Shaw, 1996; Schooley & Worden, 2001). Research shows that managers with higher education level exhibits more risk tolerance (Baker & Haslem, 1974). It is proved through literary evidences that decision makers with higher level of education go for more risky decisions while decision makers whose education level is low usually exhibit more risk averse attitude (Grable, 2000; Veld & Veld Y., 2008).

"The glass is half full" & "The glass is half empty", is the phrase critically known to judge one's general attitude towards expectation of good or bad i.e. optimistic or pessimistic behavior. According to some of the researchers, optimistic person usually show better work performance than pessimistic people do (Begley *et al.*, 2000; Xanthopoulou *et al.*, 2007). Furthermore, optimistic people enjoy better social relationships (Sumi, 2009). Better social relationships definitely help in generating long-term brand loyalty. Nevertheless, everything remains good to some extent and extreme of anything is dangerous. Similarly, when an individual goes unnecessarily over optimistic, he/she is highly criticized for closing his/her eyes from reality and expecting the best from the situation. In addition, such over optimistic professionals remain unable to closely analyze all alternatives while making decision, and those decisions turn out disastrous for organizations (James *et al.*, 2011). Especially when Manager getting over optimistic take unnecessary risk and do not examine all the options carefully, such decisions could create financial losses for the organizations (James *et al.*, 2011). Over optimistic entrepreneurs mistakenly take their useless initiative as useful step & afterward investors have to face the music because of adverse selection by management of Company. There exists a strong difference between optimism and opportunism as optimism involves an unconscious bias, which affects the evaluation of any project or invention. This particular bias may lead to a wrong decision and involvement of unnecessary risk (Dushnitsky, 2010).

Over confidence is a sort of bias that enforces an individual to overestimate his/her capabilities and simply saying regard himself/herself above average. Over confident investors over estimate accuracy of their evaluations and underestimate, the risk associated with their decision and go for biased decisions (Odean & Terrance, 1999). It is also argued that decision makers or investors who are over confident about their skills and relevant knowledge go for more risky decisions (Graham, 2009). Furthermore, people are found to be over confident in their decision-making by depending much on their own capabilities and knowledge (Russo & Schoemaker, 1992). Mostly corporate executives and management students are particularly affected by this self-serving bias (Larwood & Whittaker, 1977). Usually, over confident decision makers associate higher chances of success with their decisions, they attribute success with their own actions and strategies and consider failure due to bad luck (Miller & Ross 1975; Feather & Simon, 1971). Normally managers are prone to this self-serving or over confidence bias (Moore, 1977). As they overestimate the accuracy and reliability of their information (Alpert & Raiffa, 1982; Fischhoff, 1977). This over confidence bias leads managers towards

risky decision-making. As research has proved that people who perceive themselves above average or who are over confident also over estimate their competencies (Graham, 2009). In addition, people or managers, who over estimate their competency may be due to skill and knowledge, are more inclined towards risky decisions (Heath & Tversky, 1991).

“Emotional Intelligence” means individuals’ ability to control not only one’s own emotions but also to utilize other people’s emotions according to one’s own requirements which helps an individual in generating favorable results. Implications of this variable become even more important when it deals with manager. “Peter Salovey, John Mayer in 1990” explored the concept of emotional intelligence i.e. assessment of an individual in perspective of his/her emotions for the very first time (Salovey & Mayer, 1990). Up until now, Salovey, Mayer and Caruso are the research leaders for that particular topic. Primarily they introduced emotional intelligence as ability to study individual’s emotions additionally the thoughts of other persons (Mayer *et al.*, 1999). Then an important assessment tool named “Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) was introduced. It incorporates four dimensions i) Perceiving Emotions, ii) Facilitating Emotions, iii) Understanding Emotions, iv) Managing emotions (Mayer *et al.*, 2002).

Research shows that immediate reaction towards a particular situation effects decision maker to go for rapid decision making along with crude assessments of behavioral factors (Zajonc R. , 1980; 1984a; 1984b). These emotional reactions provide a mechanism to redirect cognitive decision-making process especially in case of high priority concerns e.g. danger (Armony *et al.*, 1995; 1997). Similarly research on a particular topic of anxiety reveals, that emotional reaction in a risky situation enforce decision maker to diverge from cognitive evaluation of risk intensity (Ness & Klaas, 1994; Simon, 1967). This divergence from cognitive evaluation due to emotions, lead decision makers towards irrational decisions and negatively affect individuals’ ability to resolve situation (Rolls, 1999). Impact of emotions along with other beside factors has been already been studied (Loewenstein, 1996; 1999). Various studies have explored the impact of emotion and moods on people’s decision-making (Isen & Patrick, 1983; Schwarz & Clore, 1983). As research has found that people in good moods go for optimistic observations & take risky decisions while in bad moods go pessimistic and show more risk averse behavior (Bower, 1981; 1991; Kavanagh & Bower, 1985). When people got emotional due to various reasons, they exhibit different risk acceptance (Mayer & Hanson, 1995; Wright & Bower , 1992). Many researchers have also found that emotions play a positive role in decision-making (Davidson *et al.*, 2000; Rahman *et al.*, 2001). Managers can get better results while using their own emotions along with the emotions of their subordinates (Ashworth & Humphrey, 1995; Loewenstein & Lerner, 2003). Here the important point is that, these emotions must be controlled and used in positive manner (LeDoux, 1996). Research shows that people with emotional dysfunction perform below standards than people (Rogers *et al.*, 1999; Frijda, 1986). While the decision makers having control on their emotions, perform much better (Bechara *et al.*, 1997; Dolan, 2002).

Although an extensive research has been conducted on influence of emotions on decision-making and risk assessment but risk acceptance has never been studied in reference with emotional intelligence. This particular gap is tried to get packed by the presented research.

On the basis of above literature review we derived the following statements for further putting into hypotheses testing to conclude the results of different demographic and behavioral aspects on risk acceptance.

### Hypothesis Statements

**H1:** Male managers illustrate higher risk acceptance than female managers.

**H2:** Age is negatively correlated with risk acceptance.

**H3:** Single managers exhibit higher risk acceptance than married managers.

**H4:** Education demonstrates positive relationship with risk acceptance.

**H5:** Excessive optimism has direct positive relationship with risk acceptance.

**H6:** Overconfidence is positively correlated with risk acceptance of managers.

**H7:** Emotional Intelligence exhibits positive relationship with risk acceptance

## 3. METHODOLOGY

Extensive literature review is conducted for this study. This includes research articles, Previews, view points, web search, books and other tools. Along with literary evidences, questionnaire is used as a main data gathering tool for empirical assessment of the model. For this purpose 250 questionnaires were distributed for data gleaning through different professionals holding managerial positions at their respective organizations. For this purpose managers of private, profit earning firms are selected and their responses are collected. Furthermore convenient base sampling technique is used as firms from Lahore and Islamabad.

As far as questionnaire is considered, it is divided into three major parts. First part is comprised of “Demographic Factors” in which four demographic factors are analyzed including Gender, Age, Marital Status and Education. The second part of the questionnaire contains 5 questions regarding “Risk Perception” of managers, who are respondents of the research. The third part includes 5 questions for each of the three behavioral factors i.e. Excessive Optimism, Over Confidence and Emotional Intelligence. Moreover, to check reliability of the questionnaire, Cron Bach Alpha is applied on first 30 questionnaires for pilot testing to evaluate technical aspects of all variables and after favorable results, further data collection is performed. The entire data collected is analyzed with linear regression and general linear univariate model.

## 4. DATA ANALYSIS

### 4.1. Linear regression

Regression Analysis is used to analyze the relationship between dependent and independent

variables, to check either there is any association positive or negative that shows by independent variables on dependent variable. Basic terminology used is X predicts Y where X is representing as

independent variables while Y is representing as dependent variable so independent variables are said predictors.

**Table 1.** Dependent Variable: Risk Acceptance

| Model |                        | Coefficients <sup>a</sup>   |            |                           |        |      | Collinearity Statistics |       |
|-------|------------------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|-------|
|       |                        | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. | Tolerance               | VIF   |
|       |                        | B                           | Std. Error | Beta                      |        |      |                         |       |
| 1     | (Constant)             | -.406                       | .108       |                           | -3.768 | .000 |                         |       |
|       | Excessive Optimism     | .342                        | .032       | .432                      | 10.574 | .000 | .495                    | 2.020 |
|       | Over Confidence        | .261                        | .051       | .291                      | 5.104  | .000 | .255                    | 3.928 |
|       | Emotional Intelligence | .265                        | .044       | .287                      | 6.035  | .000 | .365                    | 2.743 |

<sup>a</sup> Dependent Variable: Risk Acceptance

Linear regression model is particularly helpful in checking the influence of one or more independent variables on dependent variable so this particular model is part of data analysis. As per requirement of “Linear Regression”, relationship found is described in following equation:

$$RA = -0.406 + 0.342 * EO + 0.261 * OC + 0.265 * EI$$

Where:

- RA is Risk Acceptance i.e. dependent variable
- EO is Excessive Optimism
- OC is Over Confidence
- EI is Emotional Intelligence

This particular equation is formulated while looking the betas of all of three independent variables. These betas actually reveal the association of each independent variable on Risk Acceptance i.e. dependent variable while keeping all other independent variables constant. While the value -0.406 is constant. According to equation predictor, Excessive Optimism possesses highest beta i.e. .342 it means this particular variable has the greatest influence on Risk Acceptance of managers followed

by Emotional Intelligence and Overconfidence respectively. Furthermore, value of R square of model is .797, which means this model has 79.7% influences on Risk Acceptance of managers in total while demographic factors have been kept constant until yet.

**4.2. General linear model**

General Linear Model is another statistical test used to cater the relationship between dependent and independent variables. In this study GLM Univariate analysis is used, which produces regression analysis along with analysis of variance for dependent variable i.e. Risk Acceptance by both independent variables i.e. demographic and psychographic variables. While running GLM univariate analysis independent variables (predictors) are specified as covariates. Respondents are more divided according to demographic factors so that nature of relationship can be further explained. With GLM, null hypothesis is tested regarding effects of other variables on the means of different groupings of dependent variables.

**Table 2.** Tests of Between-Subjects Effects

| Dependent Variable: Risk, Acceptance |                         |     |             |         |      |  |
|--------------------------------------|-------------------------|-----|-------------|---------|------|--|
| Source                               | Type III Sum of Squares | df  | Mean Square | F       | Sig. |  |
| Corrected Model                      | 184.595 <sup>a</sup>    | 10  | 18.460      | 199.960 | .000 |  |
| Intercept                            | .439                    | 1   | .439        | 4.760   | .030 |  |
| Gender                               | .512                    | 1   | .512        | 5.546   | .019 |  |
| Age                                  | 9.011                   | 3   | 3.004       | 32.535  | .000 |  |
| Marital-status                       | .413                    | 1   | .413        | 4.477   | .035 |  |
| Education                            | 3.689                   | 2   | 1.845       | 19.982  | .000 |  |
| Excessive-Optimism                   | 5.019                   | 1   | 5.019       | 54.367  | .000 |  |
| Overconfidence                       | .285                    | 1   | .285        | 3.088   | .080 |  |
| Emotional Intelligence               | 5.205                   | 1   | 5.205       | 56.386  | .000 |  |
| Error                                | 21.879                  | 237 | .092        |         |      |  |
| Total                                | 2157.520                | 248 |             |         |      |  |
| Corrected Total                      | 206.474                 | 247 |             |         |      |  |

<sup>a</sup> R Squared = .894 (Adjusted R Squared = .890)

In above mentioned table it is found that after including demographic variables in the analysis, R square value is further enhanced as it is now .894 which means model is 89.4% true. While analyzing the above table it is realized that all of demographic variables including Gender, Age, Marital Status and Education are significant. Sig value of gender is .019

< .05, sig value of age is .000 < .05, sig value of marital status is .035 < .05 and sig Value of education is .000 < .05. Similarly while analyzing psychographic variables, sig value of both Excessive Optimism and emotional Intelligence is .000 < .05 so these two variables are significant but sig value of

Overconfidence is  $.080 > .05$  so it is found insignificant so this particular variable is rejected.

**Table 3.** Parameter Estimates

| Dependent Variable: Risk Acceptance |                |            |        |      |                         |             |
|-------------------------------------|----------------|------------|--------|------|-------------------------|-------------|
| Parameter                           | B              | Std. Error | t      | Sig. | 95% Confidence Interval |             |
|                                     |                |            |        |      | Lower Bound             | Upper Bound |
| Intercept                           | .420           | .171       | 2.459  | .015 | .083                    | .756        |
| [gender=1.00]                       | -.154          | .065       | -2.355 | .019 | -.283                   | -.025       |
| [gender=2.00]                       | 0 <sup>a</sup> | .          | .      | .    | .                       | .           |
| [Age=1.00]                          | .495           | .136       | 3.641  | .000 | .227                    | .762        |
| [Age=2.00]                          | -.187          | .118       | -1.579 | .116 | -.420                   | .046        |
| [Age=3.00]                          | -.031          | .132       | -.232  | .817 | -.291                   | .230        |
| [Age=4.00]                          | 0 <sup>a</sup> | .          | .      | .    | .                       | .           |
| [Marital status=1.00]               | .144           | .068       | 2.116  | .035 | .010                    | .278        |
| [Marital status=2.00]               | 0 <sup>a</sup> | .          | .      | .    | .                       | .           |
| [Education=2.00]                    | .011           | .094       | .122   | .903 | -.174                   | .197        |
| [Education=3.00]                    | -.327          | .055       | -5.982 | .000 | -.435                   | -.219       |
| [Education=4.00]                    | 0 <sup>a</sup> | .          | .      | .    | .                       | .           |
| Excessive Optimism                  | .278           | .038       | 7.373  | .000 | .204                    | .353        |
| Over Confidence                     | .077           | .044       | 1.757  | .080 | -.009                   | .162        |
| Emotional Intelligence              | .301           | .040       | 7.509  | .000 | .222                    | .380        |

<sup>a</sup> This parameter is set to zero because it is redundant

Risk acceptance of gender 1 i.e. females is .154 less than that of gender 2 i.e. males. In terms of age, Risk acceptance of managers belong to category 1(20-30) is highest i.e. .495 followed by category 4, but interesting observation is that risk acceptance of category 2 and 3 is less than that of category 4 i.e. .187 and .31 lesser respectively. While for marital status singles i.e. marital status 1, exhibits .144 higher risk acceptances than married. Likewise, while discussing education risk acceptance of category 4 i.e. above masters, is observed highest followed by category 2 i.e. graduate is .011 lesser than category 4 i.e. above masters. Similarly risk acceptance of category 3 i.e. masters is .327 less than category 4 i.e. above masters After analyzing above mentioned table it is quite clear that beta of all of three behavioral variables is positive i.e. .278 for excessive optimism, .077 for over confidence, and .301 for emotional intelligence is positive. It indicates that all of three analyzed behavioral factor exhibits positive relationship with dependent variable i.e. risk acceptance whereas emotional intelligence has the strongest impact on risk acceptance followed by excessive optimism.

## 5. DISCUSSION OF RESULTS

While summarizing the whole results in single sentence it can be said that our model is accepted as whole and all the variables including both, behavioral i.e. Excessive Optimism, Overconfidence, Emotional Intelligence and demographic variables including Gender, Age, marital status and Education, are found significant as their sig values are .000. Our model is comprised of one dependent variable i.e. Risk Acceptance where as independent variables are placed under two categories which are demographic and psychographic variables. Demographic variables include Gender, Age, Marital Status and Education while behavioral variables include three variables Excessive Optimism, Overconfidence and Emotional Intelligence.

**H1:** Male managers illustrate higher risk acceptance than female managers.

Starting with demographic factors, results regarding gender specification and accepted level of risk is analyzed, it is derived that males are found to be more risk taker than females. There can be number of reasons behind this observation, out of which some are discussed here. Gender is said to be the most important factor especially with reference to Pakistan. Along with other factors, culture also plays a significant role behind this particular variable. Woman especially in Pakistani environment is more defensive in nature while making decisions. Female manager go for the options with minimum risk involved. Furthermore, due to their sacrificing and compromising role in society, female managers make compromises on returns and thus chose low risk - low return options. In contrast, role of men is aggressive and dominating in nature. Male managers love to take challenges and possess the power of decision-making. Thus, they often take challenging decisions as compared to their counterparts of opposite gender. Therefore, the female manager's exhibit more risks averted behavior than male.

**H2:** Age is negatively correlated with risk acceptance.

Results of data analysis show that age is also an influencing factor that plays its role in molding people's attitude towards risk acceptance, as observation was derived while data analysis that risk acceptance is highest among the managers of age group 20-30. It is a general phenomenon; people's age grows; they become more defensive not only physically but also mentally. It is also comes true in case of managers. Furthermore, when managers got old age, their exposure is vast but they become more conscious for their jobs as their family responsibilities stops them to think creatively for any decision. They are more feared for losing their jobs. In addition, this demographic factor forces them to take risk averse decisions to make themselves sure that their job is save. However, an interesting observation is generated that risk acceptance of managers of age group 31-50 is much less than managers having 50 plus of age. It is maybe because people of such age group are in their



career building stage so they are more sensitive to their job security and avoid taking such decisions, which involve more risk, to avoid any possible negative influence to their job.

**H3:** Single managers exhibit higher risk acceptance than married managers

Whereas data analysis revealed that marital status is also an influential demographic variable expressing risk acceptance of managers. Single managers' level of risk acceptance is more than twice of the risk acceptance level of married managers. Risk acceptance should by single respondents is .144 higher than level of risk accepted by married. One of the possible reasons of such differences might be the increased responsibilities of married people in contrast to singles. This is because singles are more creative and willing to take risk as compare to married who are wedged in responsibilities of their families, which restrict them to think beyond imaginations.

**H4:** Education demonstrates positive relationship with risk acceptance

Results show that risk acceptance of managers' increases with increase in education level of managers. Managers with highest level of education i.e. above master's level possess highest risk acceptance while managers whom qualification is graduate exhibits risk averted attitude. As it is revealed through data analysis that risk acceptance of managers with highest education i.e. above masters exhibits highest risk acceptance which is .327 higher than managers who are masters. It is because education enhances critical judgment of a person manifold and allows them to think vast.

**H5 - H7:** Excessive optimism, Overconfidence and Emotional Intelligence all of three exhibit direct positive relationship with risk acceptance

Behavioral variable analysis is started with excessive optimism. After analyzing the data, it is found that beta of excessive optimism is positive i.e. 0.342 it indicates positive relationship between excessive optimism and risk acceptance. Managers whose responses are observed highly optimistic own higher risk acceptance and less optimistic managers, exhibit risk averse attitude. This particular bias enforces an individual to overestimate chances of positive outcomes underestimate the level of risk, which ultimately leads towards higher acceptance of risk. Similarly, beta of overconfidence is also positive i.e. 0.261 which also indicates positive relationship between overconfidence and risk acceptance so managers who are found overconfident show higher preference for risk and vice versa. Although, analysis of GLM shows that sig value of overconfidence was greater than  $.080 > .05$  but as it is under  $.10$  so it can be said that this variable is influencing dependent variable i.e. risk acceptance, even though it is insignificant according to GLM. Furthermore, managers who are emotionally

intelligent, exhibits higher preference for risk as beta of this variable is also positive i.e. 0.265. It means that if managers are strong enough to control their emotions and intelligent enough to mold people's emotions in his own way, he would be more confident for the success of the decisions taken by him. It would automatically increase his/her risk acceptance.

## 6. CONCLUSION

It is concluded that the variables including both, behavioral and demographic characteristics are found significantly associated with dependent variable i.e. Risk Acceptance. Results reveal that male managers possess higher risk acceptance than female managers. Males are exposed to greater risk than females. Cultural values of Pakistan that describes the society as male dominant and naturally male is found aggressive and dominant in nature make them to choose aggressive options. Age is negatively correlated with risk acceptance. As the people when get older decreases their risk appetite. It is mainly due to the social burden they have been carrying with passage of time mostly includes their family responsibilities and are afraid of losing jobs. Risk averted decisions make them to feel secure and safe. However in later age the risk acceptance is rejuvenated again as they have settled in their careers and has obtained desired level of experience to carry further risk.

Likewise the managers carrying families with them are found to be less risk oriented than those with single marital status. It is also observed that the literacy plays an important role as those managers achieved university degrees up to post graduate or above level are more exposed to risk relatively to those individuals were simply graduated or had under graduate degrees. On the behavioral or psychographic side, it is found that the emotions like optimism, overconfidence and emotional intelligence exhibits more risk acceptance. Managers whose responses are observed highly optimistic own higher degree of risk acceptance and less optimistic managers, exhibit risk averted attitude. Similarly overconfidence is also indicates positive relationship with risk acceptance so managers who are found overconfident shows higher preference of risk acceptance and vice versa. Furthermore, managers who are emotionally intelligent mean that if managers are strong enough to control their emotions and intelligent enough to mold people's emotions in their own way, would be more confident for the success of the decisions taken by them. It would automatically increase his/her risk acceptance.

This study paved the way for future researchers to bring further gravity in the area of research and used different other variables couldn't be grasped during the compilation of this study. This study guides managers to come out of the stereotyping while taking their decisions.

## REFERENCES

1. Adams, R., & Ferreira, D. (2009). Women in the boardroom & their impact on governance & performance. *Journal of Financial Economics*, 291-309. <https://doi.org/10.1016/j.jfineco.2008.10.007>

2. Alpert, M., & Raiffa, H. (1982). *Judgement under uncertainty: Heuristics and biases*. Cambridge University Press, 294-305.
3. Armony, J. L., Servan-Schreiber, D., Cohen, J. D., & LeDoux, J. E. (1995). An anatomically-constrained neural network model of fear conditioning. *Behavioral Neuroscience*, 246 - 256. <https://doi.org/10.1037/0735-7044.109.2.246>
4. Armony, J. L., Servan-Schreiber, D., Cohen, J. D., & LeDoux, J. E. (1997). Computational modeling of emotion: Explorations through the anatomy and physiology of fear conditioning. *Trends in Cognitive Sciences*, 28-34. [https://doi.org/10.1016/S1364-6613\(97\)01007-3](https://doi.org/10.1016/S1364-6613(97)01007-3)
5. Ashworth, B., & Humphrey, R. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, 97 - 125. <https://doi.org/10.1177/001872679504800201>
6. Bagwell, S. (1998). Women in control. *Australian Financial Review*, 33 - 49.
7. Bajtelsmit, V. L., Bernasek, A., & Jianakoplos, N. A. (1999). Gender differences in defined contribution pension schemes. *Financial Services Review*, 1 - 10. [https://doi.org/10.1016/S1057-0810\(99\)00030-X](https://doi.org/10.1016/S1057-0810(99)00030-X)
8. Baker, H., & Haslem, J. (1974). The impact of investor socioeconomic characteristics on risk and return preferences. *Journal of Business Research*, 469-76. [https://doi.org/10.1016/0148-2963\(74\)90032-0](https://doi.org/10.1016/0148-2963(74)90032-0)
9. Bakshi, G.S., & Chen, Z. (1994). Baby boom population aging, and capital markets. *Journal of Business*, 165-202. <https://doi.org/10.1086/296629>
10. Bechara, A., Damasio, H., Tranel, D., & Damasio, A.R. (1997). Deciding advantageously before knowing the advantageous strategy. *Science*, 1293 -1295. <https://doi.org/10.1126/science.275.5304.1293>
11. Begley, T.M., Lee, C., & Czajka, J.M. (2000). The relationships of type a behavior and optimism with job performance and blood pressure. *Journal of Business and Psychology*, 215 - 227. <https://doi.org/10.1023/A:1007782926730>
12. Bower, G. H. (1981). Mood and memory. *American Psychologist*, 129 - 148. <https://doi.org/10.1037/0003-066X.36.2.129>
13. Bower, G. H. (1991). Mood congruity of social judgment. In J. Forgas, *Emotion and social judgment*, 31 - 54. Oxford, England: Pergamon Press.
14. Byrnes, J., Miller, D., & Schafer, W. (1999). Gender differences in risk taking: a meta-analysis. *Psychological Bulletin*, 367 - 383. <https://doi.org/10.1037/0033-2909.125.3.367>
15. Campbell, & Viceira, L. M. (2002). *Strategic Allocation: Portfolio Choice for the Long-Term Investor*. New York, NY: Oxford University Press. <https://doi.org/10.1093/0198296940.001.0001>
16. Campbell, K., & Minguez-Vera, A. (2008). Gender diversity in the boardroom and firm financial performance. *Journal of Business Ethics*, 435 - 451. <https://doi.org/10.1007/s10551-007-9630-y>
17. Carter, D., Simkins, B., & Simpson, W. (2003). Corporate governance, board diversity, and firm value. *The Financial Review*, 33 - 53. <https://doi.org/10.1111/1540-6288.00034>
18. Chou, S.R., Huang, G.L., & Hsu, H.I. (2010). Investor attitude and behavior towards inherent risk and potential returns in financial products. *International Research Journal of Finance and Economics*, 16 - 30.
19. Cocco, J.F., Gomes, F.J., & Maenhout, P.J. (2005). Consumption and portfolio choice over the life cycle. *Review of Financial Studies*, 491-533. <https://doi.org/10.1093/rfs/hhi017>
20. Crowley, E. (1999). Social security reform: The great divide-privatizing system splits public by age, income and experience. *Wall Street Journal*.
21. Davidson, R.J., Jackson, D.C., & Kalin, N.H. (2000). Emotion, plasticity, context, and regulation: Perspectives from affective neuroscience. *Psychological Bulletin*, 890 - 909. <https://doi.org/10.1037/0033-2909.126.6.890>
22. Dean, D.H. (2010). A path model of perceived financial risk in casino blackjack. *Journal of young consumers*, 15 - 26.
23. Dolan, R. (2002). Emotion, cognition, and behavior. *Science*, 1191 - 1194. <https://doi.org/10.1126/science.1076358>
24. Dunstan, B. (2005). She who must be emulated. *Australian Financial Review*.
25. Eeckhoudt, L., Schlesinger, H., & Gollier, C. (2005). *Economic and financial decisions under risk*. Princeton: Princeton Univ. Press.
26. Elton, E.J., Gruber, M.J., Brown, S.J., & Goetzmann, W.N. (2003). *Modern Portfolio Theory and Investment Analysis*. (6th ed.). New York, USA: John Wiley & Sons.
27. Peni, E., & Sami Va`ha`maa. (2010). Female executives and earnings management. *Journal of Managerial Finance*, 629-645. <https://doi.org/10.1108/03074351011050343>
28. Erhardt, N., Werbel, J., & Shrader, C. (2003). 'Board of director diversity and firm financial performance. *Corporate Governance: An International Review*, 102 - 110. <https://doi.org/10.1111/1467-8683.00011>
29. Farrell, K., & Hersch, P. (2005). Additions to corporate boards: The effect of gender. *Journal of Corporate Finance*, 85 - 106. <https://doi.org/10.1016/j.jcorpfin.2003.12.001>
30. Feather, N.T., & Simon, J.G. (1971). Attribution of responsibility and valence of outcome in relation to initial confidence and success and failure of self and other. *Journal of Personality & Social Psychology*, 173 - 188. <https://doi.org/10.1037/h0030845>
31. Felton, J., Gibson, B., & Sanbonmatsu, D.M. (2003). Preference for Risk in Investing as a Function of Trait Optimism and Gender. *Journal of Behavioral Finance*, 33 - 40. [https://doi.org/10.1207/S15427579JPFM0401\\_05](https://doi.org/10.1207/S15427579JPFM0401_05)
32. Fischhoff, B., Slovic, P., & Lichtenstein, S. (1977). Knowing with certainty. *Journal of Experimental Psychology: Human Perception and Performance*, 552-564. <https://doi.org/10.1037/0096-1523.3.4.552>
33. Frijda, N. H. (1986). *The emotions*. Cambridge, England: Cambridge University Press.
34. Frijns, B. K. (2008). On the determinants of portfolio choice. *Journal of Economic Behavior and Organization*, 373-386. <https://doi.org/10.1016/j.jebo.2006.04.004>
35. Gary, D. (2010). Etrepreneurial optimism in the market for technological inventions. *Organization Science*, 150 - 167.
36. Grable, J.E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology*, 14(4), 625-630. <https://doi.org/10.1023/A:1022994314982>
37. Grable, J., & Lytton, R.H. (1999). Assessing financial risk tolerance: Do demographic, socioeconomic and attitudinal factors work?. *Journal of FRHD/FERM Divisions of AAFCS*.
38. Graham, J.R., Huang, H., & Harvey, C. (2009). Investor competence, trading frequency, and home



- bias. *Management Science*, 1094-1106. <https://doi.org/10.1287/mnsc.1090.1009>
39. Haliassos, M., & Bertaut, C. (1995). Why do so few hold stocks? *Economic Journal*, 1110-29. <https://doi.org/10.2307/2235407>
  40. Hallahan, T. F. (2003). An exploratory investigation of the relation between risk tolerance scores and demographic characteristics. *Journal of Multinational Financial Management*, 483-502. [https://doi.org/10.1016/S1042-444X\(03\)00022-7](https://doi.org/10.1016/S1042-444X(03)00022-7)
  41. Heath, C., & Tversky, A. (1991). Preference and belief: Ambiguity and competence in choice and uncertainty. *Journal of Risk and Uncertainty*, 5 - 28. <https://doi.org/10.1007/BF00057884>
  42. Hinz, R.P., McCarthy, D.D., & Turner, J.A. (1997). Are women conservative investors? Gender differences in participant-directed pension investments. In o. m. m.s. gordon. *In Positioning Pensions for the Twenty-First Century*. Philadelphia, PA: University of Pennsylvania press.
  43. Iqbal, M., Habib, A., Khan, A. Z., & Anjum, M. (2011). Behavioral implications of investors for investments in the stock market. *European Journal of Social Sciences*.
  44. Isen, A.M., & Patrick, R. (1983). The effect of positive feelings on risk-taking: When the chips are down. *Organizational Behavior and Human Performance*, 194 - 202. [https://doi.org/10.1016/0030-5073\(83\)90120-4](https://doi.org/10.1016/0030-5073(83)90120-4)
  45. Jaggia, S., & Thosar, S. (2000). Risk aversion and the investment horizon: A new perspective on the time diversification debate. *Journal of Psychology and Financial Markets*, 211 - 215. [https://doi.org/10.1207/S15327760JPFM0134\\_6](https://doi.org/10.1207/S15327760JPFM0134_6)
  46. March, J.G. & Shapira, Z. (1987). Managerial perspectives on risk and risk taking. *Management Science*, 1404 - 1418. <https://doi.org/10.1287/mnsc.33.11.1404>
  47. Langabeer II, J.R., & DelliFraine, J. (2011). Does CEO optimism affect strategic process? *Management Research Review*, 857 - 868.
  48. Jianakoplos, N., & Bernasek, A. (1998). Are women more risk averse? *Economic Inquiry*, 620-30. <https://doi.org/10.1111/j.1465-7295.1998.tb01740.x>
  49. Watson, J., & McNaughton, M. (2007). Gender differences in risk aversion and expected retirement benefits. *Journal of Financial Analysts*, 52-62. <https://doi.org/10.2469/faj.v63.n4.4749>
  50. Kavanagh, D.J., & Bower, G.H. (1985). Mood and self-efficacy: Impact of joy and sadness on perceived capabilities. *Cognitive Therapy and Research*, 507-525. <https://doi.org/10.1007/BF01173005>
  51. Kogan, N., & Wallach, M. A. (1964). *Risk taking: A study in cognition and personality*. New York.
  52. Matzler, K., Grabner-Krauter, S., & Bidmon, S. (2008). Risk aversion and brand loyalty: brand trust and brand affect. *Journal of Product & Brand Management*, 154 - 162. <https://doi.org/10.1108/10610420810875070>
  53. Larwood, L., & Whittaker, W. (1977). Managerial myopia: Self-serving biases in organizational planning. *Journal of Applied Psychology*, 194 - 198. <https://doi.org/10.1037/0021-9010.62.2.194>
  54. LeDoux, J. (1996). *The emotional brain*. New York: Simon & Schuster.
  55. Levinthal, D., & March, J.G. (1981). A model of adaptive organizational search. *Journal of Economic Behavior and Organization*, 307 - 333. [https://doi.org/10.1016/0167-2681\(81\)90012-3](https://doi.org/10.1016/0167-2681(81)90012-3)
  56. Lindley, D. (1973). *Making Decisions*. London.
  57. Lintner, J. (1965). The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets. *Review of Economics and Statistics*, 13 - 37. <https://doi.org/10.2307/1924119>
  58. Loewenstein, G. (1996). Out of control: Visceral influences on behavior. *Organizational Behavior and Human Decision Processes*, 272 - 292. <https://doi.org/10.1006/obhd.1996.0028>
  59. Loewenstein, G. (1999). A visceral account of addiction. In J. E. Skog, *Getting hooked: Rationality and addiction* (pp. 235 - 264). Cambridge England: Cambridge University Press. <https://doi.org/10.1017/CBO9781139173223.010>
  60. Loewenstein, G., & Lerner, J. (2003). The role of emotion in decision making. In H. G. R.J. Davidson, *Handbook of affective science*, 619-642. Oxford, England: Oxford University Press.
  61. Maccrimmon, K. R., & Wehrung, D. A. (1986). *Taking Risks: The Management of Uncertainty*. New York: Free Press.
  62. Mayer, J.D., Caruso, D.R., & Salovey P. (1999). Emotional intelligence meets traditional standards for intelligence. 267-298. [https://doi.org/10.1016/S0160-2896\(99\)00016-1](https://doi.org/10.1016/S0160-2896(99)00016-1)
  63. Mayer, J.D., Caruso, D.R., & Salovey, P. (2002). *Mayer-Caruso-Salovey Emotional Intelligence Test*. Toronto: MHS.
  64. Mayer, J.D., & Hanson, E. (1995). Mood-congruent judgment over time. *Personality and Social Psychology Bulletin*, 237 - 244. <https://doi.org/10.1177/0146167295213005>
  65. McInish. (1982). Individual investors and risk taking. *Journal of Economic Psychology*, 125-136. [https://doi.org/10.1016/0167-4870\(82\)90030-7](https://doi.org/10.1016/0167-4870(82)90030-7)
  66. Miller, D. T., & Ross, M. (1975). Self-serving biases in the attribution of causality: fact or fiction?. *Psychological Bulletin*, 213-25. <https://doi.org/10.1037/h0076486>
  67. Millstein, S.G., & Halpern-Felsher, B.L. (2002). Judgments about risk and perceived vulnerability in adolescents and young adults. *Journal of Research on Adolescence*, 399- 422.
  68. Moore, P.G. (1977). The manager's struggle with uncertainty. *Journal of The Royal Statistical Society*, 129-165. <https://doi.org/10.2307/2344872>
  69. Morin, R.A., & Suarez, A.F. (1983). Risk aversion revisited. *The Journal of Finance*, 1201-1216. <https://doi.org/10.1111/j.1540-6261.1983.tb02291.x>
  70. Ness, R. M., & Klaas, R. (1994). Risk perception by patients with anxiety disorders. *Journal of Nervous and Mental Disease*, 466-470. <https://doi.org/10.1097/00005053-199408000-00008>
  71. Odean, & Terrance (1999). Do investors trade too much? *The American Economic Review*, 1279-1298.
  72. Olsen, R.A., & Cox, C.M. (2001). The influence of gender on the perception and response to investment risk: The case of professional investors. *Journal of Psychology and Financial Markets*, 29-36. [https://doi.org/10.1207/S15327760JPFM0201\\_3](https://doi.org/10.1207/S15327760JPFM0201_3)
  73. Powell, M., & Ansic, D. (1997). Gender differences in risk behaviour in financial decision making: An experimental analysis. *Journal of Economic Psychology*, 605 - 628. [https://doi.org/10.1016/S0167-4870\(97\)00026-3](https://doi.org/10.1016/S0167-4870(97)00026-3)
  74. Pratt, & John, W. (1964). Risk aversion in the small and in the large. *Econometrica*, 122-136. <https://doi.org/10.2307/1913738>
  75. Quadrel, M.J., Fishoff, B., & Davis, W. (1993). Adolescent (in)vulnerability. *American Psychologist*, 102-116. <https://doi.org/10.1037/0003-066X.48.2.102>

76. Rahman, S., Sahakian, B.J., Rudolph, N.C., Rogers, R.D., & Robbins, T.W. (2001). Decision making and neuropsychiatry. *Trends in Cognitive Sciences*, 271-277. [https://doi.org/10.1016/S1364-6613\(00\)01650-8](https://doi.org/10.1016/S1364-6613(00)01650-8)
77. Riley Jr., W.B., & Victor C.K. (1992). Asset allocation and individual risk aversion. *Financial Analysts Journal*, 32-37. <https://doi.org/10.2469/faj.v48.n6.32>
78. Rogers, R.D. et al. (1999). Dissociable deficits in the decision-making cognition of chronic amphetamine abusers, opiate abusers, patients with focal damage to prefrontal cortex, and tryptophan-depleted normal volunteers: Evidence for monoaminergic mechanisms. *Neuropsychopharmacology*, 332-354. [https://doi.org/10.1016/S0893-133X\(98\)00091-8](https://doi.org/10.1016/S0893-133X(98)00091-8)
79. Rolls, E. T. (1999). *The brain and emotion*. New York: Oxford University Press.
80. Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review*, 404-413. <https://doi.org/10.1111/j.1467-8683.2007.00570.x>
81. Roszkowski, M. J., Snelbecker, G. E., & Leimberg, S. R. (1993). *The Tools and Techniques of Financial Planning* (4th ed.). (M. J. S. R. Leimberg, Ed.)
82. Russo, J.E., & Schoemaker, P.J.H. (1992). Managing overconfidence. *Sloan Management Review*, 7 - 17.
83. Salovey P. & Mayer J.D. (1990). Emotional Intelligence. *Imagination Cognition and Personality*, 9(3), 185-211. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>
84. Samuelson (1991). Long-run risk tolerance when equity returns are mean regressing: Pseudo paradoxes and vindication of businessman's risk. (W. N. W. Brainard, Ed.) *Money, Macroeconomics and Economic Policy*, 213-223.
85. Sara Zaniboni, Guido Sarchielli, Franco Fraccaroli. (2010). How are psychosocial factors related to retirement intentions. *International Journal of Manpower*, 271 - 285. <https://doi.org/10.1108/01437721011050576>
86. Zaniboni, S., Sarchielli, G., & Fraccaroli, F. (2010). How are psychosocial factors related to retirement intentions. *International Journal of Manpower*, 271-285. <https://doi.org/10.1108/01437721011050576>
87. Schooley, D. K., & Worden D. (2001). Risk aversion measures: Comparing attitudes and asset allocation. *Financial Services Review*, 87- 99.
88. Schwarz, N., & Clore, G.L. (1983). Mood, misattribution, and judgments of well-being: Information and directive functions of affective states. *Journal of Personality and Social Psychology*, 513-523. <https://doi.org/10.1037/0022-3514.45.3.513>
89. Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *Journal of Finance*, 425 - 442. <https://doi.org/10.2307/2977928>
90. Shaw, K. (1996). An empirical analysis of risk aversion and income growth. *Journal of Labour Economics*, 626-53. <https://doi.org/10.1086/209825>
91. Chen, S. H., & Tsai, C.H. (2011). Investment preference, risk perception, and portfolio choices under different socio-economic status: Some experimental evidences from individual investors.
92. Simon, H. A. (1967). Motivational and emotional controls of cognition. *Psychological Review*, 386 - 420. <https://doi.org/10.1037/h0024127>
93. Steinberg, L. (2007). Risk taking in adolescence: new perspectives from brain and behavioral science. *Current Directions in Psychological Science*, 55 - 94. <https://doi.org/10.1111/j.1467-8721.2007.00475.x>
94. Stout, H. (2005). Family matters-the new family portfolio manager: Mom-as more women take charge, wall street steps up pursuit; risk tolerance and gardening. *Wall Street Journal*.
95. Sumi, K. (2009). Correlation between optimism and social relationships. *Psychological Reports*, 938 - 940.
96. Sunden, A.E., & Surette, B.J. (1998). Gender differences in the allocation of assets in retirement savings plans. *American Economic Review*, 207-211.
97. Taylor, C.R. (1986). Risk aversion versus expected profit maximization with a progressive income tax. *American Journal of Agricultural Economics*, 137 - 148. <https://doi.org/10.2307/1241658>
98. Veld, C., & Veld-Merkoulova, Y. (2008). The risk perceptions of individual investors. *Journal of Economic Psychology*, 29, 226-252. <https://doi.org/10.1016/j.joep.2007.07.001>
99. Watson, J., & S. Robinson. (2003). Adjusting for risk in comparing the performances of male-and-female controlled SMEs. *Journal of Business Venturing*, 773 - 788. [https://doi.org/10.1016/S0883-9026\(02\)00128-3](https://doi.org/10.1016/S0883-9026(02)00128-3)
100. Wright, W.F., & Bower, G.H. (1992). Mood effects on subjective probability assessment. *Organizational Behavior & Human Decision Processes*, 276 - 291. [https://doi.org/10.1016/0749-5978\(92\)90039-A](https://doi.org/10.1016/0749-5978(92)90039-A)
101. Xanthopoulou, D., Baker, A.B., Demerouti, E., & Schaufeli, W.B. (2007). The role personal resources in the job demands-resources model. *International Journal of Stress Management*, 121 - 141. <https://doi.org/10.1037/1072-5245.14.2.121>
102. Yao, R., & Human S. D. (2005). The effect of gender and marital status on financial risk tolerance. *Journal of Personal Finance*, 66 - 85.
103. Zajonc, R.B. (1984b). On primacy of affect. *Approaches to emotion*, 259 - 270.
104. Zajonc, R.B. (1980). Feeling and thinking: Preferences need no inference. *American Psychologist*, 151-175. <https://doi.org/10.1037/0003-066X.35.2.151>
105. Zajonc, R. B. (1984a). The interaction of affect and cognition. *Approaches to emotion*, 239 - 246.