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Impact of Socio Economic, Demographic and Psychological Factors on Risk Taking Behavior: A Case Study of Punjab

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Abstract
Recent studies have suggested that socioeconomic, psychological and demographic factors play an important role for risk taking behavior. These suggestions raise the question that whether all of these variables have positive or negative impact on risk taking behavior. So, this study aims to estimate the impact of these factors on risk taking behavior. Primary data is collected from 642 households of three cities in Punjab as these three cities are representative of Punjab, Pakistan. During economic decision-making, risk-taking behavior is affected by many variables. The results show that variables like Age, head of family, education level, committee system, trust and optimism have significant negative effect on risk taking behavior of households. While influence of others, financial literacy, and impulsivity, location, and stress have significant positive impact on risk taking behavior. Other variables such as gender, marital status, family system, and do not have significant effects on risk taking behavior. The results of this study may help in devising economic and social policies for the improvement of economic decision making. This study would pave ways for the policy makers as how to create strategies to grow economies by thinking and taking microeconomic factors into account like risk taking behavior.

Keywords: Decision making, Demographic, Psychological, Punjab, Risk taking behavior, Socioeconomic

1. Introduction

Scarcity is defined as having less than you feel you need. Scarcity has an effect on cognitive functions which in turn affects the economic decision making of the persons. Economic decision making is about how people make decision under uncertainty and how they make intertemporal choices including the effects of circumstances (Deck & Jahedi, 2015). Study of economic decision making is important as it is one of the determinants of a person's economic circumstances (Cappelen et al., 2013). Risk taking is one of the components of economic decision-making. The behavior of a person could be defined as the denotable and obvious action performed by a person (Jaccard & Blanton, 2005). Every action has a denotable beginning and ending in typical environment (Jaccard & Blanton, 2005). Risk-taking behavior is complex and intricate marvel which has gained significant attention from various researchers across different disciplines, including economics, sociology and psychology. Understanding the factors which could influence a person's propensity to take risk is important for both theoretical reasons. Risk and uncertainty are major factors in nearly all critical economic decisions. To comprehend economic behavior, one must first grasp individual risk preferences, since people differ in how they approach risk and uncertainty in their decisions. These variations are sometimes referred to as variations in risk attitude (Reynaud & Couture, 2012). It has numbers of implications in reality. People make choices in all spheres of life and all of these choices have some effects on the wealth and distribution of income in the society. Risk preferences always play an important role in a great variety of economic decisions (Verschoor et al., 2016). Study of risk behavior has its implications in health care policies, compensation schemes and regulation of financial markets (Cappelen et al., 2013). Risk is one of the aspects of uncertainty and have been of great interest for decision scientists. Risk is the choice between an option that is less likely but potentially more rewarding and latter is less rewarding but more likely to happen (Apicella et al., 2015). The study of decision making involving economic risk is great talk of each field. Study of risk behavior is important as it has effect on the distribution of income and wealth in society. (Cappelen et al., 2013). Risky decisions are important as they help to have risky investments and these investments help the adoption of new technology and economic growth (Verschoor et al., 2016). Sometime people are more risk averse because of many reasons. Risk aversion is defined as the phenomenon of preferring a sure bet (Tversky and Kahneman, 1981). Risk taking and risk aversion is always important in terms of real time reward. Reward from risky investments usually comes in the form of higher return on investment. Also, these investments bring some other risk averse investors to the line of decision making(Verschoor et al., 2016). Risk choice experiments are crucial as risk choice behavior in experiments is linked with the risky choice behavior in real life (Verschoor et al., 2016). In crucial moments for employees and the government, faulty risk assessment or excessive exposure may lead to moral injury and stress (Javaid et al., 2024). A rational person would be indifferent between the options who have the same expected or average value (Tversky and Kahneman, 1981). Responsible leadership may affect decision making process and experiences (Jabeen et al., 2024). Political leaders has influencing power to change way of action and swift functionality (Ramzan et al., 2023).

People who have high cognitive abilities are more risk tolerant and more patient. They also absorb less effects on decision tasks (Deck & Jahedi, 2015). Reports show that there is difference in risk taking tasks of men and women as women are more risk averse and men are more risk takers as they allocate more money to risky tasks and this difference is statistically significant (Ertac & Gurdal, 2012). Media sensitisation affects perception and behaviour as well and people have become conscious of risk taking steps (Iqbal et al., 2024). Stress would have an important impact on risk taking behavior, due to this stress checking tests were conducted back in date when the banking crisis of 2007 occurred (Luu & Vo, 2021).

The history of Punjab distances from primeval civilizations. Indus valley to several invasions by empires like Aryana, Greeks and Mughals revolved the culture and heritage of Punjab. Punjab saw a period of Mughal rule after the Muhammad bin Qasim acquaint with Islam. Mughal rule was followed by Sikh's Empire and then British capture. During the partition in 1947, Punjab was divided into Pakistani and Indian regions. Today Punjab remain pivotal in Pakistan. Punjab is known for its industry, agriculture and widespread economy (*Punjab | History, Culture & Economy | Britannica*, 2024).

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Punjab province of Pakistan has been divided into three area. The upper Punjab, central Punjab, lower Punjab. Upper Punjab is also called northern Punjab while lower Punjab is also known as central Punjab. (Chaudhry, 2009). The study area chosen was Multan, Faisalabad and Rawalpindi as representative cities of all of regions in Punjab.

Research question is how do socioeconomic factors, demographic factors, and psychological factors affect the risk-taking behavior in economic decision making? Research objective to investigate how socioeconomic, demographic and psychological factors affect the risk-taking behavior in economic decision making of households.

2. Literature Review

A Vast literature onto studies to find the impact of various socioeconomic, phycological and demographic variable on risk taking behavior were conducted. Carvalho et al., (2016) studied the effect of financial resources on economic decision making by analyzing the behavior of US households before and after they receive pay. These households are low-income households. They collected the data to measure the cognitive abilities, risk behavior and intertemporal choices and find out that people are more biased towards present for monetary rewards. One of the important findings is that there were no effects on risk taking behavior before and after payday. Payne et al., (2017) studied the effect of income inequality on decision making of a particular group of participants through conducting an experimental study. This study is comprised of three experiment to find out the effect of income equality on economic decision making. The number of participants in this study were 811. The findings are that with the increase in income inequality, participants are ready to take more of risk to achieve higher goals. Deck & Jahedi, (2015) conducted two experiment to analyze the effect of cognitive load on economic decision making, economic decision making including economic tasks like choices involving risks, choices involving intertemporal substitutions, math problems, choices regarding healthy and unhealthy snacks and anchoring effects. The findings of this study are worthy as it helps there is negative impact of cognitive load on math solving task. Math solving task is an indication of numeracy in this task. Moreover, the cognitive load causes more risk averse behavior.

Gender, age and marital status has important impact on risk taking behavior as Powell & Ansic, (1997) examined the role of gender in determining the risk-taking behavior and other decision strategies. The study was conducted in computerized lab experiments. Important finding of this study was that female are less risk taker in spite of all the familiarity of the task. Female are less able financial managers as compared to male. Ertac & Gurdal, (2012) studied the difference in risk taking behavior of men and women in certain circumstance. The risk taking is on the behalf of a group of persons and both men and women behaved differently in this regard. They had noticed apparently large difference in the decision making of men and women for the groups as fraction of women is much lower that man while making decisions for group. An astonishing finding is that women who take risk for groups and who would not be same while taking risk for themselves. In other words, there is no difference in the decision making of women as for themselves. Findings about the men indicate that men would take more risk for their groups. Reniers et al., (2016) Studied the influence of characteristics of personality and gender on adolescents' perception of risk- and risk-taking behavior. They studied that males perceive the risk less risky and took more risk. Mentally males are less affected by the negative outcome of a decision as women. Important finding of this study is that age is directly related to the impulsiveness, behavioral inhibition and risk perception. All of these factors like age, impulsiveness, social anxiety, sensitivity to reward and risk perception were directly related to the risk-taking behavior. Dickason & Ferreira, (2019) studied the effect of marital status and gender on investors risk tolerance levels. Results of this study show that unmarried man are more risk takers as compared to married man. Female investors are less risk tolerant as compare to males. Female investors who are not married are more risk tolerant as compare to married and no longer married investors. Sadoul et al., (2022) studied the effect of attitude of persons on risk taking behavior. Bolder persons are more risk takers and shyer individuals are risk averse. Fatima et al., (2024) found in a systematic review solution to the aspects of finances, health issues and other relevant issues with mobility. Remote work can be more engaging for some employees. It also helps grow economy with cost effective strategies. Ali et al., (2024) explored that work life balance maintenance leads to effective outcomes and resolved conflicts. Javaid et al., (2023a) further noticed that employee better quality of life and mindful state reduces stress.

Stress and other psychological variables have significant impact on risk taking behavior. Many studies in past were conducted to analyze the effect of these variables on risk taking behavior. Rod et al., (2009) Studied stress and its effects on risk taking of male and female. Data was collected through questioner and to determine stress question were asked like sensation of stress nervousness, impatience, anxiety and sleeplessness. Intensity of stress is calculated through different categorial questions. Individuals with high levels of stress are more risk takers in the sense that they are less likely to quit smoking, the become physically inactive and less likely to stop drinking. Women were more likely to gain weight due to stress. Both men and women are more likely to risk takers while under stress. Khan & Javaid, (2023) focused on diversity and mutual support. Usually getting out of comfort zone and taking decisions is hard. With practice and exposure it becomes manageable. Porcelli & Delgado, (2009)studied the impact of acute stress on risk taking of individuals keeping in view the biases involved in risk taking behavior. This study found that acute stress cause changes in economic decision making through changes in risk taking behavior. An important finding of this study is that due to increase in stress there is an increase in reflection effect. Reflection effect is defined as the increase in bias as people take more risk in case of loss and take lesser risk in case of expected gains. According to Broman-Fulks et al., (2014) anxiety sensitivity is related to the risk-taking behavior. This is because anxiety sensitivity increases the feared sensation. They conducted two studies to determine the relationship between anxiety sensitivity and risky decision making. Data was collected through questioner on 268 students of undergraduate classes. Result show negative relationship between anxiety and gambling behavior of participants. Luu & Vo, (2021) analyzed the impact of stress on risk taking behavior of banks. The reason for this study is the crisis of 2007 and 2008. Considering all other factors and moral hazards, stress was considered one of the important factors in huge amount of risk taking of banks. This extraordinary risk-taking behavior of banks helped them to encounter huge disaster.

Cultural factors has influence on risk taking behavior of persons as Kloep et al., (2009) studied the reason for perceived motives for risk taking in Turkish and Welsh samples of young people. The finding about the motives indicate that these motives are very minimal and depends upon the societal differences. Welsh adolescents are more risk takers as compare to the Turkish. The cross-culture differences are based on the availability of resources

Ayinde, (2008) studied the effect of socioeconomic factors on the risk-taking behavior of farming As there is positive relationship found between risk behavior and their access to extension to services, disposable income, membership of cooperative society and amount of capital. Risk coefficient is negatively related to the household's size, portion of cropped land, off farm income, membership of cooperation society and risk averseness. Bhandari & Kundu, (2014) studied the impact of age of individual, number of earning family members and household debt, education, income, number of dependents and number of shocks on willingness to take risk. Some of these variables has positive impact like education, income, number of dependents and number of shocks. Other variables like age, number of earning family members and household debt has negative impact on willingness to take risk. The results of this study have very important implication for designing financial products in fund management industry and delivering all of these services in rural markets. Gumus & Dayıoglu, (2015) studied the impact of demographic, social and economic factors on risk taking of investors in Borsa Istanbul. The study showed some important results all of these factors have important and significant effect on risk perception and risk taking of investors. Age has negative impact on risk-taking behavior. The for this is that with the age people near to retirement want to enjoy free time rather preferring rise in income so they take less risk. Javaid et al., (2023b) analyzed in a systematic review that Pakistani employees has certain stressors affecting their performance and wellbeing. Financial literacy is also important determinant of risk-taking behavior. This is the reason that many studies were conducted as Bayar et al., (2020) studied the impact of demographic factors and financial literacy on the financial risk tolerance of staff at Usak University. The results of this study indicate that age, education, gender, income levels and financial literacy has significant effect on risk tolerance.

N. Mahdzan & Tabiani, (2013)studied the impact of financial literacy and demographic factors on risk taking behavior of participants. They divided financial literacy into two categories. Advanced financial literacy and basic literacy. Advanced literacy consists of knowledge about stock market, units trust, and bonds. Basic literacy consists of knowledge about interest rate, inflation and risk diversification. Financial literacy was scored between 0 and1. They measured risk taking behavior on scale from 1 to 4. Andarsari & Ningtyas, (2019) studied the impact of financial literacy on the financial behavior. They concluded that financial literacy is important and has significant effect on financial behavior. Literate people prefer savings, budgeting, controlling expenses, planning pension fund, participating in stock market and management of debt. Kannadas & Sengupta, (2023) Studied the impact of financial literacy on financial behavior. The study was conducted on married working women.

Verschoor et al., (2016) studied the link between observed risk preferences in experiments reflect the actual risk preferences in daily life. Sample as chosen from rural region of eastern Uganda. They concluded that risk preferences determined through the economic experiments are same as that of real-life risk preferences. Korkmaz et al., (2021)studied the relation between risk preferences and risk behavior. Data from China household finance survey was collected. Financial literacy is an important factor to reduce the difference between risk preferences and risk-taking behavior. Financial literacy is an important factor that reduces the risk-taking behavior.

3. Data collection and Methodology

A self-administered questioner was developed to collect data on all of the dependent and independent variables. To measure risk taking behavior respondents were asked question in questioner following **(Frederick, 2005).** More than 700 questioners were filled by the participants. Participants were households' heads and selected as sample from Punjab. Three cities were chosen as representative cities for three regions of Punjab. Punjab province of Pakistan has been divided into three area. The upper Punjab, central Punjab, lower Punjab. Upper Punjab is also called northern Punjab while lower Punjab is also known as central Punjab. (Chaudhry, 2009). From Punjab south Multan is been selected, from Punjab central region Faisalabad is selected and from Punjab uppers region Rawalpindi is selected.

Data on independent variable like age, education, employment, gender, income, location, head of family, family system, influence, committee system, financial literacy, impulsiveness, stress and trust is collected through questioner. Different situations were provided to the participants to collect the response and measure their risk-taking behavior following (Frederick, 2005). PCA is used to categorize risk taking behavior (Reynaud & Couture, 2012). The principal component analysis method, which uses dimension reduction techniques to reduce multiple variables into a small number of principal components (i.e., variables), is a type of multiple analysis method to search comprehensive index in several indexes. It is also a kind of effective way to solve the problem of multi-target integrated evaluation. Principal component analysis is generally used to identify reduced-order variables and explain key components (Li & Zhang, 2011).

3.1. Model Specification and Analysis

Following model has been adopted for the analysis:

$$\text{Risk taking behaviour} = \beta_0 + \beta_1\text{Income} + \beta_2\text{Age} + \beta_3\text{Gender} + \beta_4\text{Education} + \beta_5\text{Employment} + \beta_6\,\text{Location} + \beta_7\,\text{Head of family} + \beta_8\text{Family system} + \beta_9\text{Influence} + \beta_{10}\text{Committee system} + \beta_{11}\text{Financial literacy} + \beta_{12}\,\text{Impulsivity} + \beta_{13}\text{Stress} + \beta_{14}\text{Trust} + \beta_{15}\text{Optimism} + \varepsilon_1$$

where ε_1 is the error term, α is a constant term, and βn are the coefficients that need to be estimated.

Multinomial logistic regression was applied since the dependent variable has three or more categories. Multinomial logistic regression analysis is the technique which is employed to examine the relation the relationship between independent and dependent variables when the dependent variable includes three or more categories. Therefore, multinomial logit regression is used following Bayar et al., (2020).

3.2. Multinomial Logit Regression Model

Multinomial logit model is also called baseline-category logit model. In MLS model there are k possible outcomes for this categorical dependent variable. For instance, Yi can be used to indicate a dependent variable having three alternative outcomes (categories), such as $Y = \{1,2,3\}$. Independent variables are predictors that affect the choice of result and can be continuous, binary, or categorical. For j = 1, 2,..., k, the model calculates the probability of each outcome, = y = j, as a function of the independent variables. The likelihood that observation i belongs to category j is as follows:

$$P(Yi = j) = (\frac{eXi\beta k}{\sum k = 1KeXi\beta k})$$

Where Xi is the vector of independent variables
βk is the vector of coefficients of category j
One of the categories is selected as the reference category in order to guarantee model identifiability. The reference category's coefficients are usually set to zero (β 1 = 0). Maximum likelihood estimation (MLE) is typically used to estimate the multinomial logit model's parameters.

3.3. Dependent variable

3.3.1. Risk taking behavior

It is dependent variable and impact of various independent variable is assessed in this study. Individuals who engage in risk-taking behavior take acts or make judgments based on the possibility of gaining or losing money. Individual differences in personality traits, psychological states, environmental circumstances, and situational events can all have an impact on this behavior. In financial contexts, it frequently has to do with how people approach making decisions about investments, purchasing insurance, and engaging in other economic activities with unpredictable results. Risk-taking behavior as the tendency of individuals to engage in behaviors that expose them to potential losses or gains, depending on the outcome of uncertain events (Weber et al., 2002).

3.4. Independent variables

3.4.1. Income (logY)

Income of households is measure through an open-ended question by asking monthly income of persons. Log form of income is included in the model to determine the effect on risk taking behavior

3.4.2. Age

Age is measured in numbers of years a person has. Three categories of age were formed, younger, adults and old age people. This variable is represented as (age_1).

3.4.3. Gender

Gender is measured as male and female while the variable is denoted by (Gender).

3.4.4. Location

Location of the respondent is measured as rural and urban whereas variable is denoted as (Location).

3.4.5. Marital status

It measured as married or unmarried and denoted by(m_stat).

3.4.6. Head of family

Persons were asked if they are head of the family or not. This variable is represented by (headoffamily).

3.4.7. Education

Education is measured as number of years a person studied. Three categories are formed in this variable and it is represented as (edu).

3.4.8. Employment

It is measured by asking respondents whether they have paid work or not. While the variable is represented by (emp).

3.4.9. Family system

respondents were asked about the family system in which they are living. Options include joint or nuclear family system. This variable is denoted by (fam_sys).

3.4.10. Influence

This variable is measured by asking the questions like whether the dictions of the person were affected by the others and who have more influence on their decisions. While the variable is represented by (influence).

3.4.11. Committee system

it is one of the cultural factors and most famous in rural areas of Punjab. This variable is measured by asking question to the respondents as if they have informal way of saving. The variable is represented by (committee).

3.4.12. Financial literacy

it is measured by asking different question related to financial intuition of the persons and represented by (flit)

3.4.13. Impulsivity

impulsivity is measured by asking the respondent as how they react on certain situations and the variable is represented by (act fast).

3.4.14. Stress

stress is a physiological factor and measured by asking different question related to work condition and thoughts of respondents about future and some economic variables. While the variable is denoted by ([stress)

3.4.15. Optimism

it is one of the psychological factors and it is measured by asking question as if a person thinks about the future or not. While the variable is denoted by (Optimistic).

4. Results and discussions

According to the model estimated results Age, head of family, education level, committee system, trust and optimism influenced Lower Risk-Taking behavior negatively, however influence of others, financial literacy, and impulsivity influenced the lower risk-taking behavior positively. Age, committee system, trust and optimism influenced moderate Risk-Taking behavior negatively, however location, employment influence of others, financial literacy, and stress influenced the higher risk-taking behavior positively. Table 1 shows the results.

Finding of the model are consistent with the theoretical grounds that age has negative impact on risk-taking behavior because with the increase in age a person's perception of risk increases and will take less risk. Another reason is that with the age people near to retirement want to enjoy free time rather preferring rise in income so they take less risk. The findings of this study are consistent

with the findings of Reniers et al.,(2016) and Gumus & Dayıoglu, (2015). It is perceived that if person is head of family, it is more likely that person would not be willing to take risk due to responsibilities of the others, more risk perception, family welfare, social norms, long term planning, stability, health and safety concerns. Findings of this study are consistent with the theoretical grounds and also with the masters Dohmen et al., (2011), Guiso et al.,(2018), Weber & Milliman, (1997), Hofstede, (2001). Theoretical relationship between risk taking and education level is that education enhance a person ability to perceive higher risks and person is not a risk taker. Finding of this study are consistent with the theory and also consistent with the findings of Frederick et al., (2002), Anderson & Mellor, (2008), Lusardi & Mitchell, (2007) and Guiso et al., (2018).The reason is that investment enhances the skills and knowledge which in turn increases the ability to take perceived risks. Another reason is that person has more access to information and socioeconomic factors are more suitable which may enhance the risk perception ability of persons and they would show less risky behavior. Committee system is informal way of savings and it is believed that a person who has been involved in informal saving, would probably take less risk. Findings of this study indicate that there exists negative correlation between risk-taking behavior and informal saving practices (committee system). These finding are also consistent with the finding of Hsu, (2012), Chen et al., (2024), Brochado & Mendes, (2021) and Landman & Mthombeni, (2021). The reason for this negative relationship includes the absence of institutional protection, restricted financial flexibility, the perception of risk, social and cultural influences, and restricted availability of financial education. All of these things work together to make people more cautious when making financial decisions since those who use informal savings strategies are more likely to put resource preservation ahead of taking on potentially dangerous undertakings. Theoretically it is considered perceived risk connected to particular actions or choices might be reduced through trust. People who trust others see less risk when they interact with them or their endeavors because they have faith that the other party will behave honorably and would take more risk. Findings of this study are consistent with the theoretical reasoning and with previous studies from Horak et al., (2020) and Guiso et al., (2008). The reason for this logical relationship is that high levels of trust in one's surroundings or social networks might make people feel less safe and supported, which lowers their incentive to take on more risk. As a result, people may sense a reduced need for risk behaviors. Optimism is the outlook how the person thinks about the future. Theoretically it is assumed that an optimist person would take more risk because of higher risk perception, passion of growth and more preference to positive thoughts. Findings of this study are consistent with theoretical basis and also with the finding of previous studies Weinstein, (1980). The reason for this relationship is that by enhancing overconfidence, emphasizing stability, favoring safer options, and changing risk perception, optimism can have a negative association with risk-taking behavior by making people less likely to take high-risk acts.

Theoretically it is assumed that impulsive person would take more risk. Finding of this study proved that impulsivity in person would cause them to take more risk. Results are also consistent with previous studies Reniers et al., (2016) and Sadoul et al., (2022). Impulsive people frequently struggle to evaluate risks well, which causes them to overestimate the possible consequences of their actions and increase the amount of risk they take (Stanford et al., 2009). Impulsive people are more likely to participate in risky actions that give instant rewards because they tend to seek immediate gratification and are less likely to think through long-term repercussions (Kirby & Finch, 2010). Impulsive people may have trouble controlling their emotions, which makes it more likely that they may take risks and make rash judgments motivated more by feelings than by reason (Whiteside & Lynam, 2001). Theoretically it is assumed that a person would take more risk if living in urban area. Finding of this study are consistent with theoretical assumption. The reason for this positive relationship is that due to psychological factors, urban stress, availability of resources, support systems cultural norms and social influence (Feldman, 2001), (Evans, 2004) and (Glaeser & Gottlieb, 2006). The cross-culture differences are based on the availability of resources as in some countries drinking alcohol is illegal and could not be supported by the family. Another example is that skate board and motorbikes are not available to some people so risking the life is not possible. So, the risking taking behavior of youth is directly related to the society and culture of the country in which person lives(Kloep et al., 2009). Generally, an unemployed person is willing to take more risk as compared to an employed person. Findings of the model are not consistent with the theoretical grounds as employment is positively related to risk taking behavior. But previous studies proved that those who have more expertise in their profession, as well as knowledge in their field would get more risk because they perceive the situation of risk. So, profession is also one of the important determine of risk taking behavior(Gumus & Dayıoglu, 2015). According to theory, humans pick up behaviors from watching others. People are more likely to copy risk-taking behavior if they see their friends or peer groups doing it and reaping the rewards (such as success or social acceptance). Findings of this study are consistent with theoretical findings as well as the findings of research in past It makes sense to attribute the positive correlation between risk-taking behavior and the impact of others to social norms, peer pressure, and observational learning (Bandura, 1977). Risk-taking behavior can be influenced by peer pressure and the need for social acceptance (Steinberg, 2008). As people adopt the actions of their groups, social norms also come into play Last but not least, sharing responsibilities within a group can lessen individual accountability and

promote risk-taking even more (Darley & Latane, 1968). It is perceived that financial literacy has positive impact on risk-taking behavior. Findings of the study shows that risk taking behavior is positively affected by financial literacy. Also results of previous studies verified this relationship. This is because education helps to increase financial literacy and in turn the demand for financial products in different risk profiles and helps fostering of financial sector development(Bayar et al., 2020). It is perceived that stress is positively related to risk taking behavior because it can reduce the thinking power and taking decisions without any proper assessment. Findings of this study show consistency to the theoretical and on the grounds of previous. Result show negative relationship between anxiety and gambling behavior of participants. (Broman-Fulks et al., 2014). Individuals with high levels of stress are more risk takers in the sense that they are less likely to quit smoking, the become physically inactive and less likely to stop drinking. (Rod et al., 2009).

Table 1: Results of Multinomial Logit Model Estimation

	Lower Risk-taking behavior				Moderate Risk-taking behavior			
parameters	B	Std. Error	Sig.	Exp(B)	B	Std. Error	Sig.	Exp(B)
Intercept	2.847	1.627	0.08		0.095	1.653	0.954	
logY	-0.128	0.133	0.333	0.88	-0.062	0.134	0.643	0.94
[age_1=1.00]	-0.09	0.31	0.771	0.914	0.364	0.326	0.264	1.439
[age_1=2.00]	-0.818*	0.279	0.003	0.442	-0.491*	0.296	0.097	0.612
[age_1=3.00]	0b	.	.	.	0b	.	.	.
[Gender=1]	-0.047	0.277	0.865	0.954	0.32	0.292	0.274	1.377
[Gender=2]	0b	.	.	.	0b	.	.	.
[Location=1]	0.005	0.228	0.984	1.005	0.556*	0.243	0.022	1.743
[Location=2]	0b	.	.	.	0b	.	.	.
[m_stat=1.00]	-0.196	0.324	0.545	0.822	0.244	0.34	0.473	1.276
[m_stat=2.00]	0b	.	.	.	0b	.	.	.
[headoffamily=1]	-1.113*	0.329	0.001	0.329	-0.372	0.336	0.268	0.689
[headoffamily=2]	0b	.	.	.	0b	.	.	.
[edu=1.00]	-0.457	0.321	0.154	0.633	-0.317	0.339	0.35	0.729
[edu=2.00]	-0.701*	0.271	0.01	0.496	-0.267	0.281	0.34	0.765
[edu=3.00]	0b	.	.	.	0b	.	.	.
[emp=1.00]	-0.036	0.23	0.877	0.965	0.616*	0.247	0.013	1.851
[emp=2.00]	0b	.	.	.	0b	.	.	.
[fam_sys=1.00]	-0.436	0.277	0.115	0.647	-0.352	0.286	0.218	0.703
[fam_sys=2.00]	0b	.	.	.	0b	.	.	.
[influence=1]	0.747*	0.239	0.002	2.111	0.724*	0.248	0.004	2.063
[influence=2]	0b	.	.	.	0b	.	.	.
[commitee=1]	-0.967*	0.231	0	0.38	-1.167*	0.237	0	0.311
[commitee=2]	0b	.	.	.	0b	.	.	.
[flit=1.00]	0.734*	0.268	0.006	2.083	0.606*	0.276	0.028	1.834
[flit=2.00]	0b	.	.	.	0b	.	.	.
[act fast=1.00]	0.549*	0.233	0.018	1.732	0.337	0.237	0.155	1.4
[act_fast=2.00]	0b	.	.	.	0b	.	.	.
[stress=1.00]	0.251	0.377	0.504	1.286	1.104*	0.421	0.009	3.017
[stress=2.00]	0b	.	.	.	0b	.	.	.
[trust2=1.00]	-0.435	0.277	0.116	0.648	-0.561*	0.281	0.045	0.57
[trust2=2.00]	0b	.	.	.	0b	.	.	.
[Optimistic =1]	-0.174	0.414	0.674	0.84	-0.838*	0.4	0.036	0.433
[Pessimistic =2]	0b	.	.	.	0b	.	.	.

*Shows significant variables

Risk taking (high) is reference category.

References

Ali, A.A., Mahmood, K., Javaid, Z.K., & Athar, M. (2024). Conflict Resolution, Psychological Well-Being and Marital Satisfaction among Spouses of Working People. *Pakistan Journal of Law, Analysis and Wisdom*, 3(2), 183–191.

Anderson, L. R., & Mellor, J. M. (2008). Predicting health behaviors with an experimental measure of risk preference. *Journal of Health Economics, 27*(5), 1260-1274.

Andarsari, P. R., & Ningtyas, M. N. (2019). The role of financial literacy on financial behavior. *Journal of Accounting and Business Education, 4*(1), Article 1.

Apicella, C. L., Carré, J. M., & Dreber, A. (2015). Testosterone and Economic Risk Taking: A Review. *Adaptive Human Behavior and Physiology, 1*(3), 358-385.

Ayinde, O. (2008). Effect of Socio-Economic Factors on Risk Behaviour of Farming Households: An Empirical Evidence of Small-Scale Crop Producers in Kwara State, Nigeria. *Agric. J., 3*.

Bandura, A. (1977). *Self-efficacy: Toward a unifying theory of behavioral change*. *Psychological Review*, 84(2), 191-215.

Bayar, Y., Sezgin, H. F., Öztürk, Ö. F., & Şaşmaz, M. Ü. (2020). Financial Literacy and Financial Risk Tolerance of Individual Investors: Multinomial Logistic Regression Approach. *Sage Open, 10*(3), 2158244020945717.

Bhandari, A. K., & Kundu, A. (2014). Risk-taking Behaviour in Financial Decision Making: A Village-Level Study. In A. K. Bhandari & A. Kundu (Eds.), *Microfinance, Risk-taking Behaviour and Rural Livelihood* (pp. 15-33). Springer India.

Broman-Fulks, J. J., Urbaniak, A., Bondy, C. L., & Toomey, K. J. (2014). Anxiety sensitivity and risk-taking behavior. *Anxiety, Stress, & Coping, 27*(6), 619-632.

Cappelen, A. W., Konow, J., Sørensen, E. Ø., & Tungodden, B. (2013). Just Luck: An Experimental Study of Risk-Taking and Fairness. *American Economic Review, 103*(4), 1398-1413.

Carvalho, L. S., Meier, S., & Wang, S. W. (2016). Poverty and Economic Decision-Making: Evidence from Changes in Financial Resources at Payday. *American Economic Review, 106*(2), 260-284.

Deck, C., & Jahedi, S. (2015). The effect of cognitive load on economic decision making: A survey and new experiments. *European Economic Review, 78*, 97-119.
Dickason, Z., & Ferreira, S. (n.d.). Risk tolerance of South African investors: Marital status and gender. *Gender and Behaviour*. Retrieved April 15, 2024.
Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. (2011). Individual Risk Attitudes: Measurement, Determinants, and Behavioral Consequences. *Journal of the European Economic Association, 9*(3), 522-550.
Ertac, S., & Gurdal, M. Y. (2012). Deciding to decide: Gender, leadership and risk-taking in groups. *Journal of Economic Behavior & Organization, 83*(1), 24-30.
Fatima, H., Javaid, Z. K., Arshad, Z., Ashraf, M., & Batool, H. (2024). A Systematic Review on the Impact of Remote Work on Employee Engagement. *Bulletin of Business and Economics (BBE), 13*(2), 117-126.
Feldman, M. (2001). The Entrepreneurial Event Revisited: Firm Formation in a Regional Context. *Industrial and Corporate Change, 10*, 861-891.
Frederick, S. (2005). Cognitive Reflection and Decision Making. *Journal of Economic Perspectives, 19*(4), 25-42.
Frederick, S., Loewenstein, G., & O'Donoghue, T. (2002). Time Discounting and Time Preference: A Critical Review. *Journal of Economic Literature, 40*(2), 351-401.
Gumus, F. B., & Dayıoglu, Y. (2015). An Analysis on The Socio-Economic and Demographic Factors That Have an Effect on The Risk Taking Preferences of Personal Investors. *International Journal of Economics and Financial Issues, 5*(1), Article 1.
Iqbal, S., Kamran, M., & Javaid, Z.K. (2024). Impact of Television News Violence: A Critical Analysis of Sensitization Effects on Mental Well-Being of University Students. *Journal of Educational Psychology and Pedagogical Sciences*,
Jabeen, R., Mehmood, S., Ahmed, M., Ghani, T., Javaid, Z. K., & Popp, J. (2024). The Role of Green HRM on Environmental Performance: Mediating Role of Green Ambidexterity and Green Behavior and Moderating Role of Responsible Leadership. *Journal of Chinese Human Resources Management, 15*(2), 70-90.
Javaid, Z.K., Fatima, S., Sehar, & Sohail, M.F. (2024). Correlates and Dimensionality of Moral Injury in Combat Veterans around Globe: A Systematic Review. Pakistan *Journal of Law, Analysis and Wisdom, 3*(5), 93–129.
Javaid, Z. K., Mahmood, K., & Ali, A. A. (2023a). Mediating Role of Mindfulness between Quality of Life and Workplace Stress among Working Women. *Journal of Workplace Behavior, 4*(1), 68-80.
Javaid, Z. K., Khan, K., & Anjum, A. R. (2023b). Antecedents of Employee Wellbeing: Review of Organizations in Pakistan. *ESIC Market, 54*(3), e313-e313.
Kannadas, S., & Sengupta, M. (2023). Impact of Locus of Control on Financial Risk-Taking Behaviour: A Perception Study among Married Earning Women in India. Икономически Изследвания, 5, 143-159.
Khan, K., & Javaid, Z. K. (2023). Analyzing Employee Performance through Workforce Diversity Management: Role of Workforce Diversity Characteristics. *Foundation University Journal of Business & Economics, 8*(2), 85-101.
Kloep, M., Güney, N., Çok, F., & Simsek, Ö. F. (2009). Motives for risk-taking in adolescence: A cross-cultural study. *Journal of Adolescence, 32*(1), 135-151.
Korkmaz, A. G., Yin, Z., Yue, P., & Zhou, H. (2021). Does financial literacy alleviate risk attitude and risk behavior inconsistency? *International Review of Economics & Finance, 74*, 293-310.
Landman, M., & Mthombeni, M. (2021). Determining the potential of informal savings groups as a model for formal commitment saving devices. *South African Journal of Economic and Management Sciences, 24*(1), 1-12.
Li, Y., & Zhang, Q. (2011). The Application of Principal Component Analysis on Financial Analysis in Real Estate Listed Company. *Procedia Engineering, 15*, 4499-4503.
Lusardi, A., & Mitchell, O. S. (2007). Baby Boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of Monetary Economics, 54*(1), 205-224.
Luu, H. N., & Vo, X. V. (2021). The Impact of Supervisory Stress Tests on Bank Ex-Ante Risk-Taking Behaviour: Empirical Evidence from a Quasi-Natural Experiment. *International Review of Financial Analysis, 75*, 101586.
Mahdzan, N., & Tabiani, S. (2013). The Impact of Financial Literacy on Individual Saving: An Exploratory Study in the Malaysian Context. *Transformations in Business and Economics, 12*, 41-55.
Mamerow, L., Frey, R., & Mata, R. (2016). Risk taking across the life span: A comparison of self-report and behavioral measures of risk taking. *Psychology and Aging, 31*(7), 711-723.
Nicholson, N., Soane, E., Fenton-O'Creevy, M., & Willman, P. (2005). Personality and domain-specific risk taking. *Journal of Risk Research, 8*(2), 157-176.
Payne, B. K., Brown-Iannuzzi, J. L., & Hannay, J. W. (2017). Economic inequality increases risk taking. *Proceedings of the National Academy of Sciences, 114*(18), 4643-4648.
Porcelli, A. J., & Delgado, M. R. (2009). Acute stress modulates risk taking in financial decision making. *Psychological Science, 20*(3), 278-283.
Ramzan, M., Javaid, Z. K., & Khan, M. A. (2023). Psychological Discursiveness in Language Use of Imran Khan's Speech on National Issues. *Global Language Review, VIII* (II), 214-225.
Romer, D. (2010). Adolescent risk taking, impulsivity, and brain development: Implications for prevention. *Developmental Psychobiology: The Journal of the International Society for Developmental Psychobiology, 52*(3), 263-276.
Slovic, P. (1999). Trust, Emotion, Sex, Politics, and Science: Surveying the Risk-Assessment Battlefield. *Risk Analysis, 19*(4), 689-701.
Van Rooij, M. C. J., Lusardi, A., & Alessie, R. J. M. (2011). Financial Literacy and Stock Market Participation. *Journal of Financial Economics, 101*(2), 449-472.
Wang, M., Rieger, M. O., & Hens, T. (2016). How Time Preferences Differ: Evidence from 53 Countries. *Journal of Economic Psychology, 52*, 115-135.