

## Decision-Making Styles and Personality Traits

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### **Abstract**

*The objective of this study is to examine the relations decision-making styles and personality traits among a group of university students. The study group consists of 312 participants who are students of the public university. Our study was based on voluntary participation. 57% of participants were female and 43% participants were male. The mean age was  $21.09 \pm 1.79$  (mean $\pm$ SD) years. 76% of participations said that they are responsible for the events that happen to them. Results showed that the rational style and intuitive style were significantly associated with four of personality traits, except neuroticism. The dependent style had a positive relation with agreeableness and neuroticism. The avoidant style had negative relation with extraversion, conscientiousness, and openness. The spontaneous style had a negative relation with agreeableness and conscientiousness, positive relation with and neuroticism. Female had significantly higher scores on agreeableness and neuroticism personality traits as compared to men. Regression analysis showed that extraversion personality had a positive effect on spontaneous decision-making style. Agreeableness personality had a positive effect on intuitive and dependent decision-making style. Conscientiousness personality had a positive effect on rational, negative effect on avoidant and spontaneous decision-making style. Neurotic personality had a positive effect on intuitive, dependent and spontaneous decision-making style. Openness personality had a positive effect on rational decision-making style.*

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**Key Words:** Decision making, decision-making style, personality traits, big five

**JEL Classification:** C 4, C 10, M 00

## **1. Introduction**

Decision making plays an important role in the life of people. Scott and Bruce (1995, p.280) reviewed the literature and reported two earlier definitions of decision-making style: a habitual pattern individuals use in decision-making (Driver, 1979), and individuals' characteristic mode of perceiving and responding to decision-making tasks (Harren, 1979) (Spicer and Sadler-Smith, 2005; Thunholm, 2004; Thunholm, 2008; Avsec, 2012). Decision-making style is called a situation which includes the approach, reaction, and action of the individual who is about to make a decision (Phillips, Paziienza, & Ferrin, 1984 as cited in Deniz, 2011). There are five different decision making styles. According to Scott and Bruce, individuals generally have different levels of all five styles, although one style is usually dominant (Allwood and Salo, 2012).

A rational decision-making style is characterized by the comprehensive search for information, inventory of alternatives and logical evaluation of alternatives. In another word, rational decision-making style is ascribed by use of reasoning and logical and structured approaches to decision making. An intuitive decision-making style is characterized by attention to details in the flow of information rather than systematic search for and processing of information and a tendency to rely on premonitions and feelings. That is, decision-making style is defined by dependence upon hunches, feelings, impressions instinct experience and gut feelings. The dependent decision-making style is characterized by getting direction and support of others before making a decision. In a different word, a dependent style is defined by a search for advice and guidance from others before making important decisions. Avoidant decision-making style is defined by withdrawing, postponing, moving back and negating the decision scenarios. That is, an avoidant style is characterized by attempts to avoid decision making whenever possible. Spontaneous decision-making style is characterized by making rapid, quick, impulsive and prone to making "snap" or "spur of the moment" decisions. A spontaneous style is characterized by a feeling of immediacy and a desire to come through the decision-making process as quickly as possible (Scott and Bruce, 1995; Spicer and Sadler-Smith, 2005; Thunholm 2004; Rehman and Waheed, 2012).

Personality traits can be conceptualized as a set of stable individual differences in people's motivational reactions to circumscribed classes of environment stimuli. There are different models of personality traits in a field of psychology. The five-factor model often labeled Big Five is widely accepted and popular model for embodying individual differences in personality (Denissen and Penke, 2008; Bakker et al., 2006; Wang, 2014). The Big Five Model, most human personality differences can be summarized in five dimensions: Extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience.

Extraversion is characterized by a tendency to be self-confident, dominant, active, and excitement seeking. Extraverts show positive emotions, higher frequency and intensity of personal interactions, and a higher need for stimulation (Bakker et al., 2006). In addition, Extraversion describes the extent to which individuals are assertive, active, enthusiastic, talkative, warm, energetic and dominant (Costa and McCrea, 1992).

Agreeableness is characterized by cooperation (trusting of others and caring) and likeableness (good-natured, cheerful and gentle). Agreeableness involves pleasant and satisfying relationships with others (Organ and Lingl, 1995 as cited in Bui, 2017). Agreeable individuals tend to exhibit and are more likely to experience happiness because they extremely love to have close interrelationships and those who are higher in this trait will have higher life satisfaction also (McCrae and Costa, 1991 as cited in Therasa and Vijayabanu, 2015).

Conscientiousness is characterized by being hardworking, persistent, neat, well-organized, orderliness, responsibility, dependability and goal-oriented (Costa and McCrae, 1992 as cited in Camps et al. 2016). Costa, McCrae, and Dye (1991) and McCrae and Costa (1986) have associated conscientiousness with self-discipline, achievement striving, dutifulness, and competence. The conscientious individual's persistency and self-discipline will probably also cause him or her to finish tasks and to accomplish things (Bakker et al. 2006). Conscientious people have the tendency to be goal-directed and motivated (Costa and McCrae, 1992 as cited in Rahaman, 2014).

Neuroticism is characterized by upsetability and is the polar opposite of emotional stability. People who are high in neuroticism are insecure, anxious and are more susceptible to stress than their low-neurotic counterparts (Costa and McCrae, 1992 as cited in Camps et al., 2016). They experience higher levels of negative affect, get easily irritated by others, and are more likely to turn to inappropriate coping responses, such as interpersonal hostility (Camps et al. 2016). Also, neuroticism embodies the degree to which one is self-pitying, tense, touchy, unstable, worrying, and anxious. Opposite to Extraversion, an individual high in neuroticism is prone to get affected by negative events. They tend to exhibit traits like fear, anger, depression, easily inclined to stress, not able to control impulses (Therasa and Vijayabanu, 2015). A highly neurotic individual tends to experience negative emotions such as anxiety, depression, impulsiveness, nervousness and tend to underestimate their own performance. On the contrary, less neurotic individuals tend to exhibit confident and composed behavior (Berglund et al., 2015; Bakker et al. 2006).

Openness to experience is characterized by a tendency to have an active imagination, an intellectual curiosity as well as the willingness to consider new ideas and try new things (Costa and McCrae, 1992 as cited in Camps et al., 2016). In addition, openness to experience is defined by originality, curiosity, and ingenuity. Openness to Experience refers to an

individual's desire to be cultivated and to undergo new experiences. Individuals who are more open are usually creative, imaginative, curious, impulsive, and insightful. Individuals who are less open tend to be narrow-minded (Berglund et al., 2015)

Personality traits have a strong impact on decision-making styles. There are many studies about personality traits and decision-making styles with different sample groups. Our sample group in this study was university students. So, in the literature, we found same sample group and same variables.

## **2. Literature Review**

Riaz and Batool (2012) studied about personality traits and decision-making styles for university students. They used General Decision-Making Style Questionnaire (GDMSQ) developed by Scott and Bruce (1995) and Mini-Marker Personality Inventory (MMPI) developed by McCrae and Costa (1990) scales. They found that Personality types contributed 15.4% to 28.1% variance in decision-making styles.

Rahaman (2014) studied the relationship personality traits and decision-making styles for university students. He used Big Five Inventory (BFI) developed by John and Srivastava (1999) and Melbourne Decision Making Questionnaire (MDMQ) developed by Mann et al. (1997).

Bajwa et al. (2016) used Big Five Inventory (BFI) developed by John and Srivastava (1999) and Decision-making style inventory developed by Scott and Bruce (1995) in their study. They found that conscientiousness personality trait leads to rational decision-making style among students.

Narooi and Karazee (2015) had studied about personality traits, decision-making styles, and attitude to life for university students. They used Big-Five Personality Traits Questionnaire developed by McCray and Kotsa (1985) and Decision-Making Styles Questionnaire consists of 23 items. They found significant relationships between personality traits and decision-making styles.

Juanchich et al. (2016) had studied about Cognitive Reflection Test (CRT), the Big Five personality traits and decision-making styles. They used Decision Styles Questionnaire developed by Leykin and DeRubeis (2010) and International Personality Item Pool Big-Five. They found that CRT shared a limited variance with personality and decision-making styles.

Mehdi et al. (2014) examined the predictive relationship between personality traits and Decision making towards advertising among consumers' student in Malaysia. They used Big Five Personality developed by Saucier (1994) and Five-Phase decision making Questionnaire is revised by Khorvash, Khairudin and Omar (2009) in Malaysia. They found that the decision making was correlated significantly and positively with conscientiousness and emotional stability toward advertising.

Franken and Muris (2005) studied among decision-making styles, personality traits (i.e. impulsivity and sensitivity to punishment and reward) and decision-making quality. Adolescent Decision Making Questionnaire (ADMQ) proposed by Tuinstra, van Sonderen, Groothoff, van den Heuvel, & Post (2000) and personality traits (BIS/BAS and impulsivity) proposed by Carver & White, 1994; Gray (1987).

Deniz (2011) studied about attachment styles, decision self-esteem, decision-making styles and personality traits among university students. He used Adjective Based Personality Scale (ABPT) developed by Bacanlı et al. (2009) and The Melbourne Decision-Making Questionnaire developed by Mann, Burnett, Radford, and Ford (1997). The results showed that attachment styles are effective on decision self-esteem, decision-making styles, and personality traits.

Di Fabio et al. (2015) investigated about career decision-making difficulties and the Big Five personality factors among participants from three educational settings. They used the Italian version of the BFQ (Caprara, Barbaranelli, & Borgogni, 1993) and Career Decision-Making Difficulties Questionnaire (CDDQ).

There are many types of research the role of various personality dimensions in decision-making styles. As a result, personality traits have an important effect on the type of decision-making styles. For this reason, this study is based on contribution to the theory development in terms of the role of big five personality traits in decision making styles with Turkish sample. In this study, we used Decision Making Style Scale developed by Scott and Bruce (1995) and The Big Five Inventory (BIF) developed by John, Donahue, and Kentle (1991). From this point, our study is different from above studies.

### **3. Methodology**

#### **3.1 Research Questions**

The purpose of this study is to (1) find empirical evidence for gender differences in decision-making style and personality traits (2) to examine the relationship between personality traits and decision-making styles and (3) to examine the effect of personality traits on decision-making styles.

#### **3.2 Measures**

In this study we used two scales; the first one was the Decision-Making Style Scale (DMS). This scale developed by Scott and Bruce (1995). It measures five different DMSs: rational, intuitive, dependent, avoidant and spontaneous. The Turkish version and validation of the DMS were performed by Taşdelen (2002). This scale had 24 items. Dependent DMS subscale has got 4 items and the other subscales have got 5 items. All of the items are rated on a 5-point Likert scales ranging from strongly disagree to strongly agree.

The second one was The Big Five Inventory (BFI). The Big Five Inventory (BIF) was developed by John, Donahue, and Kentle (1991). Turkish validity and reliability studies were performed by Sumer (2005) and Alkan (2007). In this study, we used Alkan (2007)'s study. This Inventory is a self-report inventory designed to measure the Big Five dimensions. It is quite brief for a multidimensional personality inventory and consists of short phrases with relatively accessible vocabulary. Five personality traits measured were Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. High scores indicate that the personality dimension that is owned is high. There are 44 items on the scale and 16 items are reversed. Items are rated on a 5-point Likert scale.

### **3.3 Data and Analysis**

The study group consists of 312 participants who are students of the public university. Our study was based on voluntary participation.

Statistical analyses were performed by SPSS version 18.0. We used reliability analysis, student *t*-test, correlations and regression analysis for data analysis.

## **4. Results and Discussion**

Our study group consisted of 312 public university students. It was based on voluntary participation.

**Table 1: Distribution of Socio-Demographic Characteristics**

| <b>Variables</b>                               | <b>N</b> | <b>%</b> |
|--|----------|----------|
| Gender   |          |          |
| Female   | 177      | 57       |
| Male   | 135      | 43       |
| Total  | 312      | 100      |
| Responsible for the events that happen to them |          |          |
| I am   | 238      | 76       |
| The others                                     | 74       | 24       |
| Total  | 312      | 100      |

57% of participants in our study group were females and 43% percent were males. Their ages were between 18-24 with a mean age of 21.09±1.79 (mean±SD) years. 76% of participations said that they are responsible for the events that happen to them.

**Table 2: Means (M), Standard Deviations (SD) and C. Alpha Values**

| Scales                        | Dimensions        | Item | Mean  | S. Deviation | C. Alpha |
|-------------------------------|-------------------|------|-------|--------------|----------|
| <b>Decision-Making Styles</b> | Rational          | 5    | 19.78 | 4.03         | 0.86     |
|                               | Intuitive         | 5    | 19.07 | 3.72         | 0.78     |
|                               | Dependent         | 4    | 14.02 | 3.46         | 0.82     |
|                               | Avoidant          | 5    | 12.06 | 4.51         | 0.83     |
|                               | Spontaneous       | 5    | 14.04 | 4.33         | 0.80     |
| <b>Personality Traits</b>     | Extraversion      | 8    | 26.85 | 5.69         | 0.78     |
|                               | Agreeableness     | 9    | 33.22 | 5.40         | 0.66     |
|                               | Conscientiousness | 9    | 31.73 | 6.23         | 0.77     |
|                               | Neuroticism       | 8    | 25.48 | 5.71         | 0.75     |
|                               | Openness          | 10   | 35.82 | 6.22         | 0.76     |

Means, standard deviations, and C. Alpha values are reported in Table 2. Internal consistency coefficients were at or above .70, with the exception of Personality Traits – Agreeableness, which fell slightly short at .66. C. Alpha coefficients of all these scales were between 0.66-0.86. Therefore we accepted them reliable and used in statistical analyses.

**Table 3: Correlations between Decision-Making Styles and Personality Traits**

|                   | Rational | Intuitive | Dependent | Avoidant | Spontaneous | Extraversion | Agreeableness | Conscientiousness | Neuroticism |
|-------------------|----------|-----------|-----------|----------|-------------|--------------|---------------|-------------------|-------------|
| Intuitive         | .347**   |           |           |          |             |              |               |                   |             |
| Dependent         | .291**   | .191**    |           |          |             |              |               |                   |             |
| Avoidant          | -.371**  | -.236**   | .095      |          |             |              |               |                   |             |
| Spontaneous       | -.321**  | .023      | .013      | .393**   |             |              |               |                   |             |
| Extraversion      | .169**   | .130*     | -.060     | -.210**  | .014        |              |               |                   |             |
| Agreeableness     | .171**   | .153**    | .199**    | -.101    | -.137*      | .033         |               |                   |             |
| Conscientiousness | .355**   | .112*     | .026      | -.382**  | -.272**     | .336**       | .304**        |                   |             |
| Neuroticism       | -.073    | .100      | .239**    | .077     | .137*       | -.193**      | .044          | -.160**           |             |
| Openness          | .324**   | .131*     | .012      | -.217**  | -.050       | .430**       | .185**        | .385**            | -.002       |

\* p < 0.05; \*\* p < 0.01

The Pearson correlation coefficients in Table 3 show the statistical relationships between decision-making styles and personality traits. There is the highest positive correlation between Spontaneous and Avoidant ( $r=0.39$ ;  $p<0.01$ ) within decision-making styles. There is the highest positive correlation between Extraversion and Openness ( $r=0.43$ ;  $p<0.01$ ) within personality traits.

The Rational style and Intuitive style were significantly associated with four of personality traits, except Neuroticism. The Dependent style had a positive relation with Agreeableness and Neuroticism. The Avoidant style was a negative relation with Extraversion, Conscientiousness, and Openness. The Spontaneous style had a negative relation with Agreeableness and Conscientiousness, positive relation with and Neuroticism. There is the highest negative correlation between Avoidant and Conscientiousness ( $r=-0.38$ ;  $p<0.01$ ). There is the lowest correlation between Intuitive and Conscientiousness ( $r=0.11$ ;  $p<0.05$ ).

**Table 4: T-Test for Gender**

| Variables         | Sex               |                 | t      | p      |
|-------------------|-------------------|-----------------|--------|--------|
|                   | Female<br>(N=177) | Male<br>(N=135) |        |        |
| Rational          | 4.01±.72          | 3.88±.91        | 1.436  | .152   |
| Intuitive         | 3.95±.69          | 3.64±.77        | 3.704  | .000** |
| Dependent         | 3.57±.86          | 3.42±.87        | 1.574  | .116   |
| Avoidant          | 2.35±.86          | 2.50±.95        | -1.453 | .147   |
| Spontaneous       | 2.78±.82          | 2.84±.92        | -.616  | .539   |
| Extraversion      | 3.33±.72          | 3.38±.70        | -.644  | .520   |
| Agreeableness     | 3.84±.55          | 3.50±.62        | 5.059  | .000** |
| Conscientiousness | 3.57±.66          | 3.46±.73        | 1.438  | .152   |
| Neuroticism       | 3.31±.70          | 3.03±.70        | 3.460  | .001** |
| Openness          | 3.54±.62          | 3.64±.63        | -1.514 | .131   |

\*  $p < 0.05$ ; \*\*  $p < 0.01$

Results of gender differences in different decision-making styles and personality traits are shown in Table 4. There were meaningful differences in one out of five decision-making style characteristics and two personality traits. The females ( $M=3.95$ ) showed more Intuitive decision making capability than males ( $M=3.64$ ). The p-value showed a significant difference between both genders on intuitive decision-making style (Table 2). Also, the female had significantly higher scores on Agreeableness and Neuroticism personality traits as compared to men.

Multiple regression analyses were applied to examine the effect of personality traits on decision-making styles. Table 5 shows the regression results for personality traits on decision making styles decision making styles.

**Table 5: Regression Analysis Predicting Decision-Making Styles**

| Independent Variables | Dependent Variables       |           |           |          |             |
|-----------------------|---------------------------|-----------|-----------|----------|-------------|
|                       | Standardized Coefficients |           |           |          |             |
|                       | Rational                  | Intuitive | Dependent | Avoidant | Spontaneous |
| Extraversion          | -.022                     | .119      | -.020     | -.069    | .127*       |
| Agreeableness         | .055                      | .124*     | .187**    | .015     | -.063       |
| Conscientiousness     | .252**                    | .038      | .021      | -.339**  | -.282**     |
| Neuroticism           | -.039                     | .124*     | .230**    | .009     | .120*       |
| Openness              | .226**                    | .042      | -.022     | -.059    | .016        |
| F                     | 12.64                     | 3.67      | 6.34      | 11.33    | 7.01        |
| R <sup>2</sup>        | 0.16**                    | 0.06**    | 0.09**    | 0.16**   | 0.10**      |

\* p < 0.05; \*\* p < 0.01

The F-statistics indicates the overall significance of the models at the 0.01 level. R<sup>2</sup> values show that five personality traits explained 26% of the change of rational decision-making style, 6% of the change of intuitive decision-making style, 9% of the change of dependent decision-making style, 16% of the change of avoidant decision-making style and 10% of the change of spontaneous decision-making style.

The results showed that extraversion personality had a positive effect on spontaneous ( $\beta = 0.13$ ) decision-making style. Agreeableness personality had a positive effect on intuitive ( $\beta = 0.12$ ) and dependent ( $\beta = 0.19$ ) decision making style. Conscientiousness personality had a positive effect on rational ( $\beta = 0.25$ ), negative effect on avoidant ( $\beta = -0.34$ ) and spontaneous ( $\beta = -0.28$ ) decision making style. Neurotic personality had a positive effect on intuitive ( $\beta = 0.12$ ), dependent ( $\beta = 0.23$ ) and spontaneous ( $\beta = 0.12$ ) decision making style. Openness personality had a positive effect on rational ( $\beta = 0.13$ ) decision-making style.

## 5. Conclusions and Recommendations

The purpose of the study was to find empirical evidence for gender differences of decision-making style and personality traits; to examine the relationship between personality traits and decision-making styles, and to examine the effect of personality traits on decision-making styles. The present findings supported the idea that leads to the effect of personality traits on decision-making styles.

We found that females showed more intuitive decision making capability than males. This result correlated with research of Bajwa et al. (2016). By the way, we found that females are more agreeable (Budaev, 1999; Costa et al. 2001; Schmitt et al. 2008; Weisberg et al. 2011) and more neuroticism than men (Costa et al. 2001).

We found relationships between decision-making styles and personality traits. Narooi and Karazee (2015), Wood (2012), Riaz et al. (2012) found that extraversion personality had a positive relation with rational and intuitive decision-making style. We found same results the

present study. There was a negative relationship between the extraversion personality and avoidant decision-making style. By the way, we found same results for openness to experience personality. There were positive significant correlations between rational, intuitive and dependent decision making with agreeableness personality, and negative significant correlations between spontaneous decisions making with agreeableness personality. Wood (2012) and Riaz et al. (2012) found same results, but Riaz et al. (2012) found except spontaneous decision-making style. There was a positive relationship between the conscientiousness and rational, intuitive decision-making styles, and negative relationship between the conscientiousness and avoidant, spontaneous (Ülgen et al. 2016; Wood, 2012; Juanchich, 2016). We found that positive significant correlations between dependent and spontaneous decision making with neuroticism personality. Ülgen et al. (2016) found same results as we had. But, Wood (2012), Riaz et al. (2012) found a positive relationship between dependent and neuroticism.

The results suggest that extraversion personality has a positive effect on dependent and spontaneous decision-making style. Conscientiousness personality has a positive effect on rational and intuitive decision-making style. Also, it has a negative effect on avoidant decision-making style. Neurotic personality has a negative effect on rational decision-making style and it has a positive effect on intuitive, avoidant and spontaneous decision-making style. These results were in line with the results of Ülgen et al. (2016), Riaz et al. (2012), Bajwa et al. (2016). As a result, the present findings indicated that personality plays an important role in decision-making style.

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