Petroleum
Business
Review

Identify and Prioritize the Individual Value System and Decision-Making Styles and Examine their Relationship

Khashayar Pourmohammadshahini[a*] and Mokhtar Ranjbar[b]

[a] *Ph.D Candidate, Governmental Management, Islamic Azad University, Central Branch of Tehran, Tehran, Iran, Email: kh.shahini@pseez.ir*

[b] *Deputy of Research and Technology -Islamic Azad University - Lamerd Branch, Lamard, Iran, Email: ranjbarmokhta@yahoo.com*

ARTICLE INFO

Keywords:

Decision-making styles

Individual value

South Pars zone

Iran's oil industry

Received: 1 April 2020
Revised: 28 April 2020
Accepted: 20 May 2020

ABSTRACT

The present research seeks to assess the relationship between the Individual value system and decision-making styles. The statistical population (190 people) consists of Pars Special Economic Energy Zone (PSEEZ) Organization managers who were assessed using the Census Method. The Myers and Myers cognitive demographic and value systems questionnaire and Scott and Bruce's decision-making questionnaire were used with a response rate of 90%. Data was analyzed with the SPSS and Smart Planning softwares. It was found that the dominant Individual value system is success-oriented, followed respectively by system-oriented, realistic, tribal, community-oriented, and autocentric.Also, the dominant decision-making style in the statistical population is rational, followed by intuitive, dependent, avoidant, and spontaneous decision-making styles respectively. It was also concluded that success-oriented and tribal value systems had the most significant relationship with decision-making styles and the community-oriented value system the least. Only the individual variables of race (ethnicity) and field of study had a significant relationship with the Individual value system. The other personal and organizational variables had no significant relationship with the Individual value system. Creating motivation and a sense of employee participation in the future of the organization is proposed as the most important way of improving the value system of the statistical population so that the tendency to make spontaneous decisions can lean more towards making rational decisions to the same extent. Investigating the relationship between decision-making styles is another effective topic in improving these in an organization and is thus recommended to other researchers in the field.

1. Introduction

Pars Special Economic Energy Zone (PSEEZ) Organization was inaugurated in 1996 to exploit the South Pars gas field. A significant number of experienced managers in the oil industry have retired over the course of these 24 years while no clear plans have been put in place to record their value system as the dominant influence on their thinking and decision-making styles. Identifying the decision-making styles of the managers of this region is important because here is the largest and most sensitive gathering of the country's industries, which is also extremely sensitive and unusual in terms of security, and decision-making in this situation with decision-making in normal conditions. It is very different. Therefore, identifying managers' decision-making styles is important to recognize and transfer them

* Corresponding author

to the next generation of managers. In fact, assuming that South Pars will be faced with a management crisis in the future, it is necessary to assess the Individual value system of its current managers, which has a direct impact on how they perform their duties and in particular on their decision-making styles, in order to use the results to train future managers. During several meetings with experts and elites in the human resources management of the Pars Special Zone Organization, it was determined that the composition of the region's human resources, especially the managers there, is rapidly aging. On the other hand, with the studies conducted and also citing inquiries from the research and technology management of the Pars Special Zone Organization, no research on the decision-making styles of managers in this region as the main managerial task and also no study of managers' Individual value system as a background The minds of the managers and their executive actions have not been done either.

In fact, decision-making styles and what makes thinking and choosing decisions (Individual value) are unknown among the managers of the organization.

2. Research Literature

J Rothwell (2010) states that researching organizational values refers to a group of values that guide the behavior, actions, and thoughts of employees and managers of an organization, form the basis of decision-makings, and act as value judgments. In his research, Eril Lee (2018) shows how extensive and stable values turn into significant predictors of behavior at different levels of the organization. In their research result, Eldor et al (2019) announced that that there are many areas of cooperation for exploring values which are traditionally rooted in social psychology and cultural interactions. Guy Rocher (2000) defined norms and values as a way of being or acting recognized as ideals by a person or group, with desirable behavior(s) attributed to it. According to Williams (1999), values are a criterion for judging or recognizing issues. In a research, Dabaghi (2017) views the human resources of an organization as its real asset playing a key infrastructural role in its success. Based on the opinions of experts in the field of sociology and human resource management, individual and organizational values can be categorized into different styles, which are presented in Table 1.

Table 1. Classification of value systems - gathered by researches.

No	Value system	Classification
1	The 10-item Schwartz Theory of Basic Values	Tradition, hedonism, stimulation, benevolence, universalism, security, self-direction, achievements, conformity, power
2	The 6-item Allport-Vernon-Lindzey Study of Values	Social, economic, religious, political, theoretical, aesthetic
3	Morris Triple Value System	The imprint period, the modeling period, the socialization period
4	The 13-item Kluckhohn and Strodtbeck's Values Orientation Theory	Known and unknown values, monotheism and pluralism, good and mutable, individualism and collectivism, self and others, independence and dependence, active and passive, disciplined and undisciplined, physical and mental, tense and relax, present and future, quality and quantity, specific and general
5	Rokeach Value Survey	Definitive and practical values
6	Talbi value system	Normative and moral values
7	Frondizi value system	Thematic and non-thematic values
8	The 8-item Graves value system	Reactive, traditional, behavioural, selfless, materialistic, social, existential, experimental

No	Value system	Classification
9	The 6-item Allport value system	Scientific knowledge values, political (power and domination), aesthetics (art), economic (money and wealth), social (fame and popularity), religious
10	Myers value system	Reactive, tribal, autocentric, system-oriented, success-oriented, community-oriented,

Myers and Myers (1974) have introduced a 7-item value system based on Graves' classification, including reactive, tribal, autocentric, system-oriented, success-oriented, community-oriented, and realistic, and designed eight variables of six indicators each. As the reactive value system is observed in children and individuals with brain damage and mental disorders while it is not observed in the employees of an organization, this was eliminated and only six value systems were examined. This classification was evaluated many times by Ali in the Middle East and previously by Amirshahi (1995) among Iranian managers, and after consulting with the elites and describing the organization under study, the best classification of the intellectual value system for this study was identified. Therefore, the operational framework of this research in the field of value system, which is the main variable of the research, is based on the 7-item classification of Myers and Myers (1974).

The decision-making style is the other variable in the research. Deciding on one option from a set of alternatives is part of the management process at any level in any organization. Alvani (1992) defined decision-making as choosing an option among various other options. Different people have different decision-making styles indicating their perception and response to their decision-making task (Denholm, 2004). Thus, in can be concluded that in addition to organizational and environmental factors affecting the decision-making styles of managers, their personal traits and differences, especially the value system dominating their thinking, prompts them to behave differently in different situations with different decision-making methods.

In a research called "5 Key Decision-Making Techniques", Matt Gavin proposes that managers go through the five steps of framing the decision, engaging with the process, establishing a strong team approach, and creating a psychologically safe environment. Radwan El Othman et al (2020) studied personality traits, emotional quotients, and decision-making styles and observed that the extraversion personality was associated with a lower rational decision-making style in their statistical population, while the agreeableness and conscientiousness personality was associated with a higher rational decision-making style. In a research carried out in South Pars by Razavi & Mohammadi-Tajrishi (2018), it was concluded that for each organizational and project activity, decisions need to be made to find alternative resources.The classification of decision-making styles or methods provided by experts in the field is presented in Table 2 below. After a thorough review of the types of decision-making styles and interviews with elites and human resource managers, it was found that the five styles of Scott and Bruce are the most comprehensive classification of decision-making styles for the statistical population of this study. Especially since this method was previously used in another similar study in the National Iranian Oil Company. So far, the identification and prioritization of the individual value system and decision-making styles have been studied separately, but the simultaneous research on both variables in Iran has been done only by Amirshahi (1995). He has proved the results of the research of Flowers (1975), Ali (1988 and 1982), Ali & alshkhsh (1991) and Ali, Azim & Krishnan (1995) on Iranian managers and concluded that managers have a composite value system and managers Myers and Myers (1974) have different tendencies towards each of the value systems considered. Amirshahi (1995) in her research simultaneously evaluated the decision-making styles of Iranian managers in the manner of Vroom and yetton (1975). PourMohammad-Shahini (2011) also repeated Amirshahi's research with the statistical population of managers of Ahvaz Pipe Mill Company and compared his results with Amirshahi's results.

Table 2. Classified decision-making styles – gathered by researchers.

No	Decision-making style	Decision-making maxims
1	Scott and Bruce's General Decision-Making Style Inventory	Rational, avoidant, spontaneous, intuitive, dependent
2	Robbins, Rowe, and Mason Decision Style Model	Ordering based, analytical, perceptual, behavioral
3	The Vroom-Yetton Decision Model	Autocratic Type 1 (AI), Autocratic Type 2 (AII), Consultative Type 1 (CI), Consultative Type 2 (CII), Group-based Type 2 (GII)

3. Research Models and Variables

According to what was said, the main variable in the research is the intellectual value system and the dependent variable is the decision-making style. The operational framework of the research for the value system, which is the main variable, is based on the 7-item Myers and Myers (1974) classification method. The operational framework of the research for decision-making styles, which is the dependent variable, is based on Scott and Bruce's (1995) General Decision-Making Style comprising five styles or methods of decision-making. With this explanation, the conceptual model of the research is presented in Figure 1.

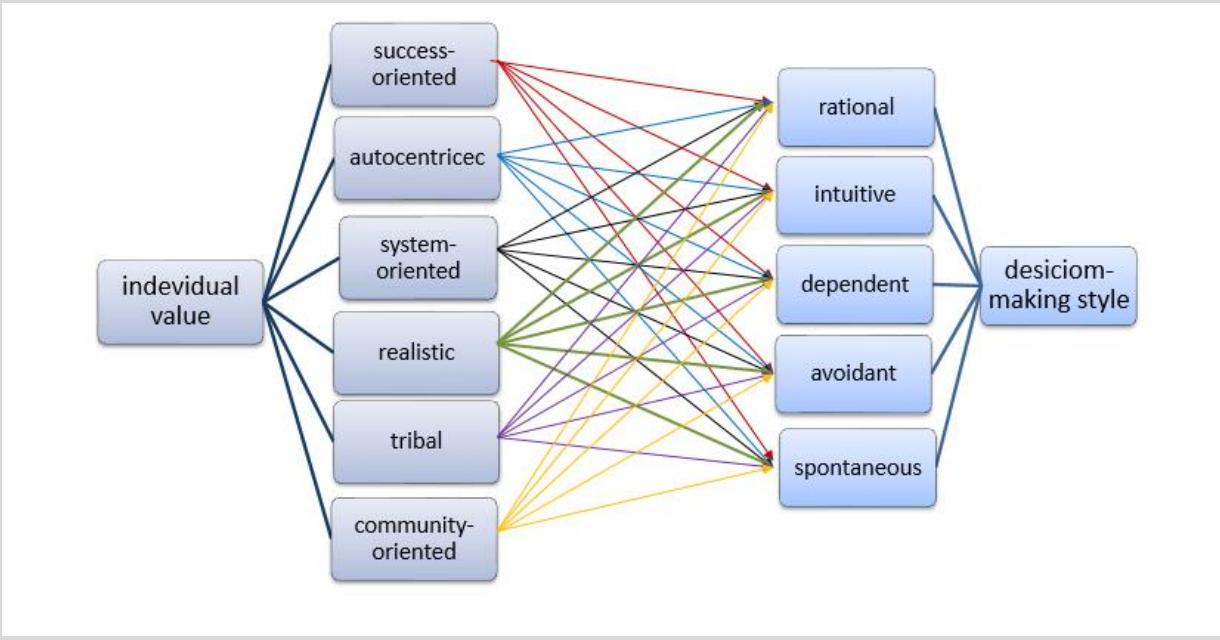


Figure 1. Research conceptual model.

4. Research Questions and Hypotheses

Q1: What is the dominant value system in the target statistical population?

Q2: What is the dominant decision-making method in the target statistical population?

H1: There is a significant relationship between the value system of the statistical population and their decision-making style.

H2: There is a significant relationship between personal and organizational variables with the value system of the statistical population.

5. Methodology

The purpose of this study is Identify and prioritize the Individual value system and decision-making styles and examine their relationship. It is a survey and qualitative research in which a questionnaire was used as a data collection instrument aiming to clarify the relationship

between the two variables. The statistical sample was drawn from a pool of directors, deputies, managers, advisors, and supervisors of Pars Special Economic Energy Zone (PSEEZ) Organization and included 190 participants and Questionnaires were collected at a rate of 90%

To achieve comprehensive, reliable results, the questionnaire was distributed by Census Method and the entire statistical population was assessed The present research is a descriptive study based on recognizing the behavior of people from their personal perspective. The questionnaire has two parts. The first part, designed by Myers and Myers (1974) with 8 items, is for collecting demographic data and understanding personal value systems. Each item consists of six randomly arranged phrases each of which are designed to consider and measure one dimension of the value system. The 8 items include loyalty to the workplace, the boss, money, profits, nature of work, freedom at work, large companies, and work regulations. The questionnaire was initially used by Flowers (1975) and Professor Abbas J Ali has used it in five countries in the Middle East. It has also been used twice in Iran by Amirshahi (1994). The second part of the questionnaire is for identifying decision priorities. It is designed by Scott and Bruce (1995) and consists of five decision-making styles or methods. It contains 25 questions and respondents have been asked to comment on how they reached their decision. Five questions have been designed for each of Scott and Bruce's 5-item decision-making style and randomly distributed in the questionnaire.

The statistical sample was drawn from a pool of directors, deputies, managers, advisors, and supervisors of Pars Special Economic Energy Zone (PSEEZ) Organization and included 190 participants. To achieve comprehensive, reliable results, the questionnaire was distributed by Census Method and the entire statistical population was assessed.

One of the most basic and significant statistical assessments in the questionnaire is to obtain the validity and reliability of the test, and a method for assessing reliability is to calculate Cronbach's alpha coefficient.

Obtained Cronbach's alpha coefficients for the variables have been shown in the following table. Considering that the values are greater than 0.70, the questionnaire has an acceptable reliability. The obtained coefficients are shown in Table 3.

Table 3. Cronbach's alpha test for questionnaire internal consistency.

No	Cronbach's alpha test for questionnaire internal consistency on the importance of factors	
1	Question	Does the questionnaire have a reliable consistency scale?
2	Questionnaire	Cronbach's alpha coefficient
3	Value system	0.865
4	Decision-making method	0.967
5	Results	As Cronbach's alpha coefficient is greater than 0.70, it can be concluded that he null hypothesis is confirmed. This means that the reliability of the distributed questionnaire is good.

Regarding the validity of the measurement tool, as mentioned, the questionnaires used by well-known experts in the relevant fields have been designed and have been used many times internationally for different statistical communities, and in this regard, in addition to a complete study of the literature. And previous researches, considering the workplace of the statistical community, questionnaires and implementation methods, were repeatedly discussed and consulted with experts, specialists and academic and regional elites. The validity of the value system questionnaire has already been confirmed by Amirshahi (1994) and Jacob et al. (2003) have also calculated and confirmed the validity of the successor questionnaire. Scott and Bruce have already calculated and validated their own questionnaire (decision styles) internationally.

The collected data were prepared through a questionnaire before any kind of analysis. After collecting the data, they were processed and analyzed using statistical methods to determine the results of the data. The reliability index, convergent validity, divergent validity, Cronbach's alpha, combined reliability and

factor loading coefficients, combined reliability (CR), inferential statistics methods, and the Friedman nonparametric test were the statistical methods used. Data was analyzed with the SPSS and Smart Planning softwares.

6. Findings

One of the most basic and significant statistical studies in a questionnaire is obtaining the validity and reliability of the test. One way to assess reliability is to calculate Cronbach's alpha coefficient. Table 3 shows Cronbach's alpha coefficients obtained for the variables. As the coefficient value is greater than 0.70, it can be said that the questionnaires have acceptable reliability.

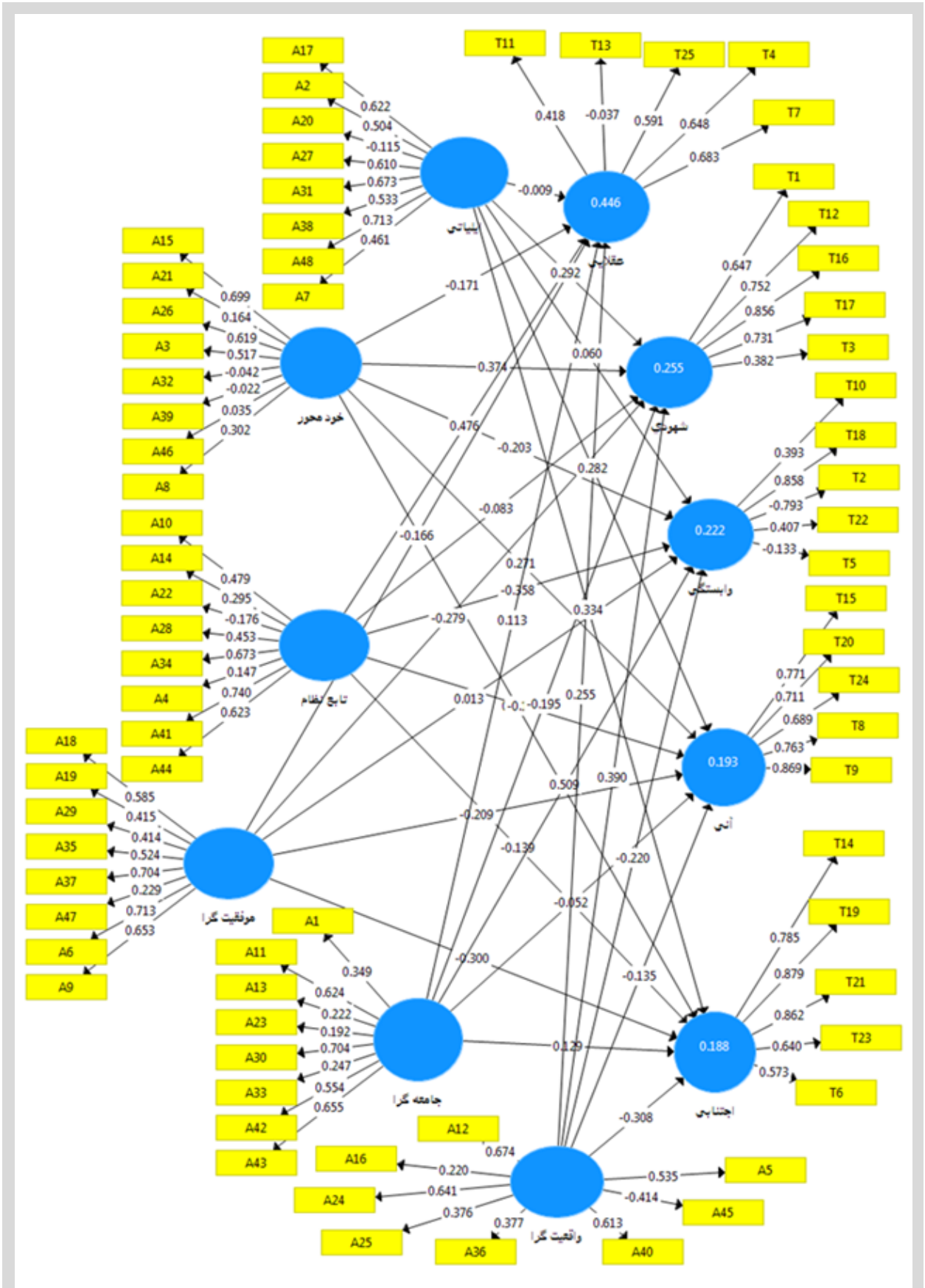
As models measure the relationship between the indicators (observed variables) of a structure (hidden variable) and that structure, the research model was studied in three stages. The external model of the research was examined in the first stage. The internal model was examined in the second stage, and the general research model was examined in the third stage. Model fit was measured with three indicators: reliability index, convergent validity, and divergent validity. The reliability index was measured with three indicators: Cronbach's alpha, combined reliability, and factor loading coefficients. Each variable was examined to analyze factor loading related to the measured indices. Values must be greater than 0.7, but values within the 0.4-0.7 range are also acceptable. A cut-off value of 0.4 is used (Hataminasab, 2017). Factor loadings over 0.4 are desirable and anything below this cut-off must be eliminated. Figure 2 shows the models of factor loading of each index before and after eliminating coefficients < 0.4. These are respectively Model 1 (Model 1 after eliminating factor loadings < 0.4), Model 2 (Model 2 after eliminating factor loadings < 0.4), Model 3 (Model 3 after eliminating factor loadings < 0.4), Model 4 (Model 4 after eliminating factor loadings < 0.4).

To measure the reliability of the external model, two indicators were used: combined reliability (CR) and Cronbach's alpha coefficient. The advantage of the combined reliability indicator as compared to Cronbach's alpha is that the construct validity is not calculated in absolute terms but according to the correlation of their structures with each other. A value of over 0.7 for each CR indicates an appropriate internal reliability for the measurement model. A value less than 0.6 indicates a lack of reliability (Nunnally, 1987). It must be noted that combined reliability in structural modeling is considered a better criterion than Cronbach's alpha, because in calculating Cronbach's alpha coefficient for each structure, all indices are calculated with equal importance. But in calculating the CR, indices with higher factor loading are more important (Davari & Rezazadeh, 2013). CR values for each model structure are shown in Table 4.

Table 4. Combined reliability (CR) values.

No	Variable	Combined reliability (CR)	No	Variable	Combined reliability (CR)
1	Tribal value system	0.793	7	Rational	0.687
2	Autocentric	0.685	8	Intuitive	0.837
3	System-oriented	0.747	9	Dependent	0.673
4	Success-oriented	0.778	10	Spontaneous	0.874
5	Community-oriented	0.742	11	Avoidant	0.870
6	Realistic	0.759			

Also, Cronbach's alpha coefficient reliability ranges from 0 to 1. Coefficient values greater than 0.7 show acceptable reliability (Cronbach, 1951). However, for variables with a small number of questions, Moss et al (1998) introduced the value of 0.6 as an acceptable cut-off. The estimated coefficient values for each factor are shown in Table 5.


A17
A2
A20
A27
A31
A38
A48
A7
0.622
0.504
-0.115
0.610
0.673
0.533
0.713
0.461
T11
T13
T25
T4
0.418
-0.037
0.591
0.648
T7
0.683
-0.009
0.446
T1
T12
T16
T17
T3
T10
T18
T2
T22
T5
T15
T20
T24
T8
T9
0.647
0.752
0.856
0.731
0.382
0.393
0.858
-0.793
0.407
-0.133
0.771
0.711
0.689
0.763
0.869
A15
A21
A26
A3
A32
A39
A46
A8
0.699
0.164
0.619
0.517
-0.042
-0.022
0.035
0.302
-0.171
0.292
0.060
0.374
0.476
0.255
A10
A14
A22
A28
A34
A4
A41
A44
0.479
0.295
-0.176
0.453
0.673
0.147
0.740
0.623
-0.203
0.282
-0.083
-0.166
0.271
-0.358
0.334
0.222
-0.279
0.113
0.013
0.255
0.509
0.390
0.193
A18
A19
A29
A35
A37
A47
A6
A9
0.585
0.415
0.414
0.524
0.704
0.229
0.713
0.653
-0.209
-0.139
-0.220
-0.052
A1
A11
A13
A23
A30
A33
A42
A43
0.349
0.624
0.222
0.192
0.704
0.247
0.554
0.655
-0.300
-0.135
0.129
0.188
0.785
0.879
0.862
0.640
0.573
T14
T19
T21
T23
T6
A12
A16
A24
A25
A36
A40
A5
A45
0.674
0.220
0.641
0.376
0.377
0.613
0.535
-0.414
-0.308
خود محور
تابع نظام
موفقیت گرا
جامعه گرا
واقعیت گرا
لیبیاتی
عقلایی
شهودی
وابستگی
آنی
اجتنابی

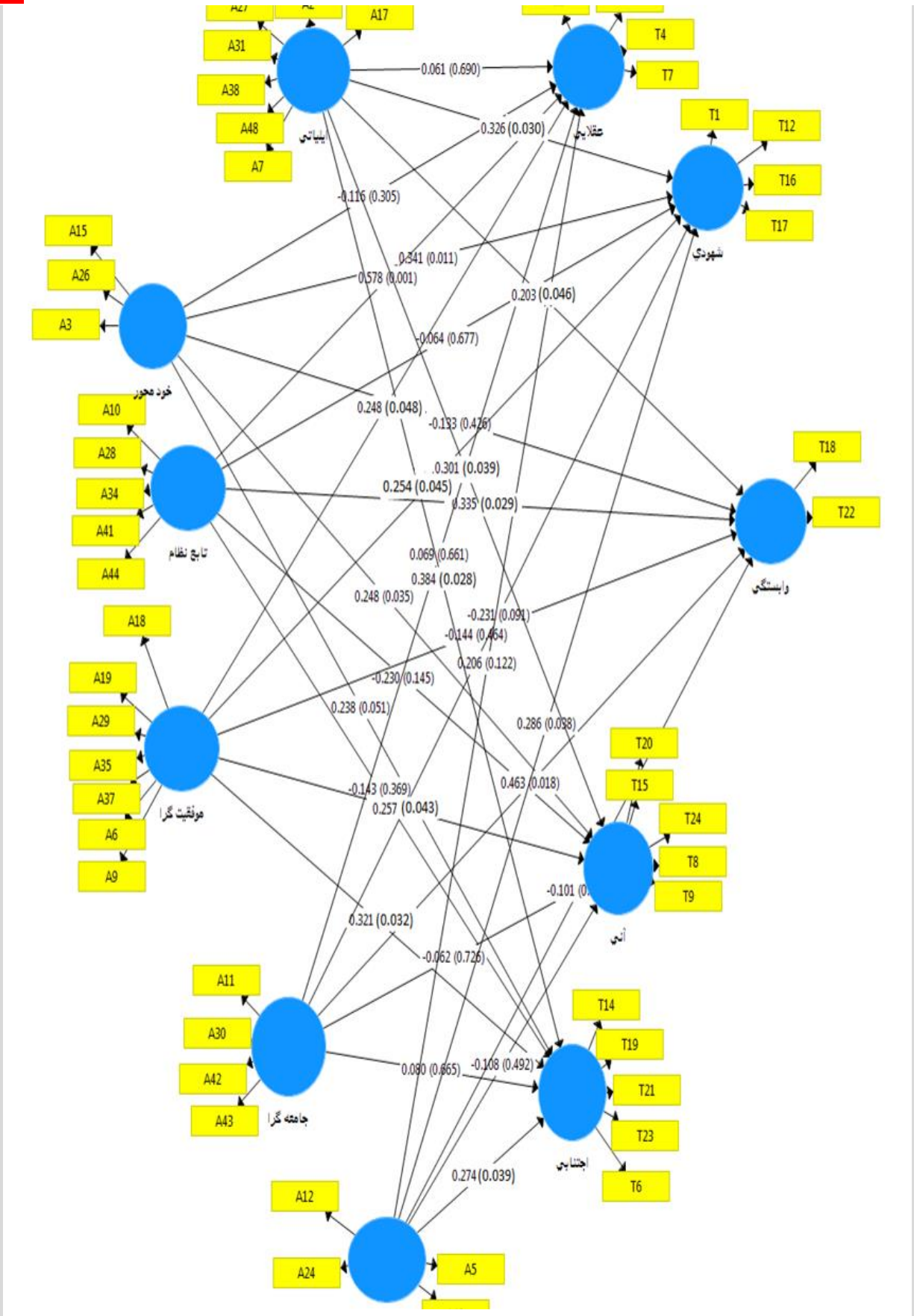


Figure 2. the models of Factor loading relationships of the indicators or questionnaire questions

Table 5. Cronbach's alpha coefficients for research variables.

No	Variable	Cronbach's alpha	No	Variable	Cronbach's alpha
1	Tribal value system	0.828	7	Rational	0.601
2	Autocentric	0.627	8	Intuitive	0.740
3	System-oriented	0.600	9	Dependent	0.623
4	Success-oriented	0.680	10	Spontaneous	0.828
5	Community-oriented	0.652	11	Avoidant	0.818
6	Realistic	0.680			

According to the table above, Cronbach's alpha coefficient for all intended structures is greater than 0.6, indicating an acceptable model reliability according to Moss et al (1988).

The second criterion for measuring model fit is convergent validity which examines the degree of correlation for each structure with its questions (indicators). The greater the correlation, the greater the fit. Fornell and Larker (1981) introduced the Average Variance Extracted (AVE) to assess convergent reliability with a cut-off value of 0.5. Magner et al (1996) considered a cut-off of 0.4 and above to be sufficient for the AVE. The coefficient value for each structure is shown in Table 6. The indicator value ranges from 0 to 1, with values higher than 0.4 being acceptable (Giffen, 2005).

Table 6. Mean values of Average variance extracted (AVE).

No	Variable	Average Variance Extracted (AVE)	No	Variable	Average Variance Extracted (AVE)
1	Tribal value system	0.579	7	Rational	0.451
2	Autocentric	0.424	8	Intuitive	0.564
3	System-oriented	0.401	9	Dependent	0.552
4	Success-oriented	0.400	10	Spontaneous	0.582
5	Community-oriented	0.420	11	Avoidant	0.579
6	Realistic	0.441			

To test the hypotheses, data was analyzed using the inferential statistics method. The path coefficient has been given in the following tables, indicating the relationship between two variables. According to the given p-value and comparison with the significance level.

Table 7. Hypotheses test results

No	Hypothesis	Path Coefficient	P-value	Results (5% error rate)
1	The tribal value system variable has a significant effect on the rational style.	0.061	0.687	Hypothesis rejected
2	The tribal value system variable has a significant effect on the intuitive style.	0.326	0.030 ***	Hypothesis accepted
3	The tribal value system variable has a significant effect on the dependent style.	0.203	0.046 ***	Hypothesis accepted
4	The tribal value system variable has a significant effect on the spontaneous style.	0.301	0.039 ***	Hypothesis accepted
5	The tribal value system variable has a significant effect on the avoidant style.	0.384	0.028 ***	Hypothesis accepted
6	The autocentric variable has a significant effect on the rational style.	-0.116	0.308	Hypothesis rejected
7	The autocentric variable has a significant effect on the intuitive style.	0.341	0.007 ***	Hypothesis accepted
8	The autocentric variable has a significant effect on the dependent style.	-0.133	0.446	Hypothesis rejected
9	The autocentric variable has a significant effect on the spontaneous style.	0.248	0.030 ***	Hypothesis accepted
10	The autocentric variable has a significant effect on the avoidant style.	0.238	0.046 ***	Hypothesis accepted
11	The autocentric variable has a significant effect on the rational style.	0.578	0.0001 ***	Hypothesis accepted
12	The system-oriented variable has a significant effect on the intuitive style.	-0.064	0.700	Hypothesis rejected
13	The system-oriented variable has a significant effect on the dependent style.	0.335	0.029 ***	Hypothesis accepted
14	The system-oriented variable has a significant effect on the spontaneous style.	-0.230	0.134	Hypothesis rejected
15	The system-oriented variable has a significant effect on the avoidant style.	-0.143	0.355	Hypothesis rejected
16	The success-oriented variable has a significant effect on the rational style.	0.248	0.048 ***	Hypothesis accepted
17	The success-oriented variable has a significant effect on the intuitive style.	0.254	0.045 ***	Hypothesis accepted

No	Hypothesis	Path Coefficient	P-value	Results (5% error rate)
18	The success-oriented variable has a significant effect on the dependent style.	-0.144	0.459	Hypothesis rejected
19	The success-oriented variable has a significant effect on the spontaneous style.	0.257	0.043 ***	Hypothesis accepted
20	The success-oriented variable has a significant effect on the avoidant style.	0.321	0.032 ***	Hypothesis accepted
21	The community-oriented variable has a significant effect on the rational style.	0.069	0.654	Hypothesis rejected
22	The community-oriented variable has a significant effect on the intuitive style.	-0.231	0.108	Hypothesis rejected
23	The community-oriented variable has a significant effect on the dependent style.	0.463	0.019 ***	Hypothesis accepted
24	The community-oriented variable has a significant effect on the spontaneous style.	-0.062	0.722	Hypothesis rejected
25	The community-oriented variable has a significant effect on the avoidant style.	0.080	0.652	Hypothesis rejected
26	The realistic variable has a significant effect on the rational style.	0.206	0.143	Hypothesis rejected
27	The realistic variable has a significant effect on the intuitive style.	0.286	0.035 ***	Hypothesis accepted
28	The realistic variable has a significant effect on the dependent style.	-0.101	0.590	Hypothesis rejected
29	The realistic variable has a significant effect on the spontaneous style.	-0.108	0.483	Hypothesis rejected
30	The realistic variable has a significant effect on the avoidant style.	0.274	0.039 ***	Hypothesis accepted

Table 8. Test results for ranking the values of system variables

No	Variable		Average Rank
1	Value Systems	Tribal value system	3.576
2		Autocentric	1.266
3		System-oriented	4.421
4		Success-oriented	4.611
5		Community-oriented	3.509

No	Variable			Average Rank	
6			Realistic	3.617	
7	No of samples	Chi-square statistic	Degrees of freedom	P-value	Results at 5% error rate
8	171	363.352		0.0001	The difference in items is significant

$\alpha = 0.05$, it is determined that if the p-value is less than $\alpha = 0.05$, this relationship is significant and it can be said that the hypothesis is acceptable.

The Friedman nonparametric test was used to rank the variable blocks. The results are shown in Tables 9 and 10. The Friedman test showed that the importance and rank of items in the value system variables are different from each other. Comparison of average rankings shows that the success-oriented style is the most important item for the respondents and the autocentric style is the least important item. The test also showed that the importance and rank of the said items in the decision-making style variable are different from each other. Comparison of average rankings shows that the rational style is the most important item for the respondents and the spontaneous style is the least important item.

Table 9. Test results for ranking decision-making styles.

No	Variable			Average Rank	
1	Decision-making styles		Rational style	4.450	
2			Intuitive	3.906	
3			Dependent	3.079	
4			Spontaneous	1.743	
5			Avoidant	1.822	
7	No of samples	Chi-square statistic	Degrees of freedom	P-value	Results at 5% error rate
8	171	427.737	4	0.0001	The difference in items is significant

Each personal and organizational variable was also studied using the four methods of Pillai's trace, Wilks' lambda, Hotelling's trace, and Roy's largest root to screen items for SIG level less than 0.05. Then, the chi-square test of independence assuming null hypothesis was used to compare personal and organizational variables against the dominant value system of each individual. Naturally in this test, assuming that the null hypothesis is rejected if the Asymptotic Significance (2-sided) is <0.05, the relationship between the value system and the relevant demographic characteristics can be understood. But, only the results for the relationship between race (ethnicity) and the value system, and the relationship between the field of study and the value system in which a positive and significant relationship was observed between personal variables and the intellectual value system are presented for brevity. It must be noted that no significant relationship was observed between other personal, organizational, and intellectual value system variables for individuals.

In examining the relationship between race (ethnicity) and the value system, the level of the ASYMP SIG (2-SIDED) null hypothesis in the chi-square test with 24 degrees of freedom is equal to 0.022 as shown in Table 10. Therefore, a significant relationship is observed between the two variables at the 5% level.

Table 10. Relationship between race (ethnicity) and value system.

No	Race * vs Crosstabulation	Value	df	Asymp Sig (2-sided)
1	Pearson Chi-Square	39.911[a]	24	.022
2	Likelihood Ratio	30.947	24	.155
3	Linear-by-Linear Association	.195	1	.659
4	N of Valid Cases	171		

Table 11 shows that the largest number of people (40) of Pars ethnicity have a success-oriented value system. Among the 19 people of Lor ethnicity, 4 have a tribal value system. No particular dominance was observed in other ethnicities.

Table 11. Frequency of the value system among ethnicities.

		Value system(VS)							
No	**Race**	**Non**	**Tribal**	**Autocentric**	**System-oriented**	**Success-oriented**	**Community-oriented**	**Realistic**	**Total**
1	Pars	32	14	0	24	40	9	11	32
2	Arab	2	0	0	1	1	1	0	2
3	Turk	3	1	2	3	3	0	1	3
4	Kurd	1	0	0	1	2	0	0	1
5	Lor	6	4	0	0	3	3	3	6
6	Total	44	19	2	29	49	13	15	44

Also, in investigating the relationship between the field of study and the value system, the level of the ASYMP SIG (2-SIDED) null hypothesis in the chi-square test with 36 degrees of freedom is equal to 0.021 as Shown in Table 12.

Table 12. Relationship between the field of study and the value system.

No	Race * vs Crosstabulation	Value	df	Asymp Sig (2-sided)
1	Pearson Chi-Square	55.345[a]	36	.021
2	Likelihood Ratio	39.710	36	.308
3	Linear-by-Linear Association	1.890	1	.169
4	N of Valid Cases	166		

Table 13 shows that Business Management has 6 people focused on the success-oriented system, Engineering has 24 people focused on the success-oriented system and 11 people focused on the system-oriented and realistic systems, and Management and

Humanities has 13 people focused on the system-oriented system; other cases are unclear.

Table 13. Frequency of the field of study in the value system.

		Value system (VS)							
No	**Field of Study**	**Non**	**Tribal**	**Autocentric**	**System-oriented**	**Success-oriented**	**Community-oriented**	**Realistic**	**Total**
1	Business Management	4	3	1	2	6	3	0	19
2	Accounting	3	3	0	3	3	1	1	14
3	Engineering	14	9	0	11	24	6	11	75
4	Art	1	0	1	0	1	0	0	3
5	Economy	1	0	0	0	1	0	0	2
6	Management	13	4	0	11	8	2	2	40
7	Other	5	0	0	1	6	1	0	13
8	Total	41	19	2	28	49	13	14	166

7. Discussion, Conclusions and Suggestions

After confirmation of the validity and reliability of all questions, and main and dependent variables, in answering the first question of the research it was observed that the dominant Individual value system in the statistical population is success-oriented, followed respectively by the system-oriented, realistic, tribal, community-oriented, and autocentric value systems. In answering the second question of the research, it was observed that the dominant decision-making style is rational, followed respectively by the intuitive, dependent, avoidant, and spontaneous styles. To study the first hypothesis of the research titled "Investigating the relationship between value system variables and decision-making styles", it was concluded that there is a significant relationship between the value system and decision-making styles. The success-oriented and tribal value systems had the highest significant relationship with decision-making styles, and the community-oriented value system the lowest. However, the relationship did not equal zero and, therefore, the first hypothesis of the research was proved. In studying the second hypothesis of the research titled "The significant relationship between personal and organizational variables and the value system of the statistical population", it was observed that only the variables of race (ethnicity) and field of study have a significant relationship with the intellectual value system. Personal and organizational variables have no significant relationship with the intellectual value system.

Amirshahi (1994) has studied the value system of Iranian managers in two stages. In both stages, the system-oriented and community-oriented value systems have been identified as the top and the autocentric as the lowest intellectual value systems in the statistical population. In a research by Pour-Mohammad Shāhini (2011) on the statistical population of the managers of Ahvaz Pipe Mill Company, the realistic and success-oriented systems were identified at the top and the autocentric system at the bottom of the intellectual value system. Therefore, it can be concluded that the statistical population of this research is in a better position in the value system than the statistical population of Amirshahi's research even though it ranks lower in comparison in Pour-Mohammad Shāhini's research.

Also, in Pour-Mohammad Shāhini's (2011) research, there is a significant relationship between the Individual intellectual value system and the field of study, monthly income, participation in managerial seminars, level of education, and work experience in the present situation. But, as stated previously, only the two personal variables

of ethnicity and field of study have a significant relationship with the value system. In a research by Hadizadeh-Moghaddam and Tehrani (2008) on the statistical population of the managers of the National Iranian Oil Products Distribution Company (NIOPDC), the rational, spontaneous, avoidant, intuitive, and dependent decision-making styles ranked from highest to lowest respectively among the statistical population, while the rational, intuitive, dependent, avoidant, and spontaneous decision-making styles ranked from highest to lowest respectively which is said to be a more favorable position. From the results reached in the study, it can be concluded that the intended model for improving decision-making methods in the statistical population of the research with an approach to strengthening the intellectual value system, especially in the realistic and success-oriented variables, can be proposed. Creating motivation and a sense of employee participation in the future of the organization is proposed as the most important way of improving the value system of the statistical population so that the tendency to make spontaneous decisions can lean more towards making rational decisions to the same extent. Investigating the relationship between decision-making styles is another effective topic in improving these in an organization and is thus recommended to other researchers in the field.

8. References

Ali A.; Azim A.A. & Krishnan, K.S.; (1995). Expatriates and Host Country Nationals: Managerial Values and Decision Styles. Proceedings of Arab Management Group Conference. Bradford, England, July 4-7.

Ali, A. & Al-Shakhis, M; (1991). Changing Managerial Values in Saudi Arabia. Advances in International Comparative Management, Vol.6, P.81-102.

Ali, A. & Wahabi R.; (1995). Managerial Value Systems in Morocco. International Studies of Management and Organization. Vol. 25(3), P.87-97.

Ali, A.; (1982). An Empirical Investigation of Managerial Value Systems for Working in Iraq. Unpublished Doctoral thesis, West Virginia University

Amirshahi, MirAhammad; Mousavi, Shahrnaz & Tayyeb, Monir Alsadat; (2000). The Relationship between Culture and the Management of Human Resources, Tehran: Nakhl.

Amirshahi, Mirahmad; Milton-Smith, J. & Chatterjee S.; (1996). Public Sector Management Reform, the Case of Tehran Municipality, Iran. Proceedings of the 12th Academy of International Business: Southeast Asia Annual Meeting. Dunedin, New Zealand, June 17-20.

Amirshahi, Mirahmad;(1997). An empirical study of Managerial Value Systems and Decision-Making Styles Among the Managers in Iran, Doctoral thesis, Curtin University of Technology, Australia.

Arjomand-Kermani, Arash & Tirgar , Hedayat ; (2017) . Investigating the Correlation between Decision-Making Methods, Organizational Creativity and Information literacy in the Managers of Sarcheshmeh Copper Complex in Kerman, Bimonthly Journal of Applied Studies in Management and Development Sciences.

Barni, D.; Cavazza, N.; Russo, S.; Vieno, A. & Roccato M. ;(2020). Intergroup Contact and Prejudice toward Immigrants: A Multinational, multilevel test of the Moderating role of Individual Conservative Values and Cultural Embeddedness - International Journal of Intercultural Relations - Volume 75.

Cancer, S; (2020). BMC Psychology, Volume 8, Article Number: 11.

Corium, A. M.; (2015). Fuzzy Methods in Decision Making Process - A Particular Approach in Manufacturing Systems, IOP Conference Series: Materials Science and Engineering

Dabbaghi, Azadeh;(2017). Identification and Prioritization of the Organizational Capital Attributes in the Petroleum Industry in Iran Using Grey Systems Theory, Petroleum Business Review Journal, Volume 1, Issue 1, Pages 49-57.

Dreyer, R.S. ;(2014). Decision-Making, NIOC Central Library.

Ebrahimi, Morteza; Eliki, Fahimeh& Mahram. Abbas ;(2017). Investigating the Effects of Talent Identification Management on Organizational Succession Planning, Noor Specialized Magazine, 43.

Elliott, B.L; Samuel M.; McClure; Gene, A. & Brewer; (2020). Individual Differences in Value-Directed Remembering - Cognition, Volume 201.

Faraz, Maryam; (2016). Investigating the Effect of Succession Planning on Employee Performance

Based on Balanced Scorecard and the Mediating Role of Commitment Variability.

Fischer, R.; Johannes & Karl, A. ;(2020). The network Architecture of Individual Differences: Personality, Reward-Sensitivity, and Values - Personality and Individual Differences - Volume 160, 1.

Flowers V.S., Hughes C.R., Myers M.S. & Myers S.S.; (1975). Managerial Values for Working. An AMA Survey Report. (New York: AMACOM).

Gambetti, E. & Giusberti F.; (2019). Personality, Decision-Making Styles and Investments - Journal of Behavioral and Experimental Economics - Volume 80.

Gavin, M.; (2020). 5 Key Decision-Making Techniques for Managers, Harvard Business School Online.

Graves C.W.; (1970). Levels of Existence: An Open System Theory of Values. Journal of Humanistic Psychology. Vol. X (2), P.131-54.

Kamakura, W.A. & Novak, T.P.; (1992). Value-system segmentation: Exploring the Meaning of LOV (list of values). Journal of Consumer Research. Vol. 19(1), P.ll9-33.

Kharazmi, Amir-Ali; Beigi-Nasrabadi, Fatemeh& Johari, Leila (2016). Analytical study of the Gap between the Current Situation and the Optimal Situation for Implementing Succession Management Plans in Mashhad City Council, Noor Specialized Magazine, Issue 27.

Khendum, C.; Kallol K., Bagchi; Godwin J.; Udo; Peeter J. & Kirs ;(2019). The influence of Individual Values on Internet use: A Multinational Study - International Journal of Information Management - Volume 46.

Krau, E.; (1987). The crystallisation of Work Values in Adolescence: a Sociocultural Approach. Journal of Vocational Behavior. Vol. 30(2), P.103-23.

Lăzărescu, M.; (2015). Personality Variables in Decision-Making, Procedia - Social and Behavioral Sciences 187.

Liat, E.; Alyssa, F.; Westring, S.D. & Friedman ; (2019) - The Indirect Effect of Holistic Career Values on Work Engagement: A Longitudinal Study Spanning Two Decades, Applied Psychology: Health and Well-Being Volume 12, Issue 1 .

Linda N.; Douma; Ellen, U. & Danielle, R. M.; (2020). Decision-Making Styles in the Context of Colorectal.

Moradi Zaniany, Davood & Amirhosseini,Syed Ehsan ; (2016). Investigating the Relationship between the Process of Succession Planning and Organizational Maturity of Staff and Leadership Style of Managers in Kohgiluyeh and Boyer-Ahmad Province Gas Company Australian Journal of International Social Research, Volume: 02 Issue: 03 Pages: 1-13.

Mossop, C.; (1994). Value Assessment: key to Managing Careers. The Management Accounting Magazine. Vol. 68(2), P.33.

Murata, S.; Karana, H. & Cookson S. Semih; (2015). An Application for Measuring Performance Quality of Schools by Using the PROMETHEE Multi-Criteria Decision Making Method, Procedia - Social and Behavioral Sciences 195.

Myers, M.S. & Myers, S.S.; (1974). Toward Understanding the Changing Work Ethic. California Management Review. Vol. 16(3), P.7-19.

Norouzi, Nasrollah; Heidarpur, Elham & Sedaghat. Kobra; (2015). Hierarchy of Values Among Preschool Teachers in Dashtestan. 2nd National Conference on Science, Educational Technology, Social Studies and Psychology in Iran.

Ohmoto, Y.; Kataoka, M.; Nishida, T.; (2013). Extended Methods to Dynamically Estimate Emphasizing Points for Group Decision-Making and their Evaluation, Procedia - Social and Behavioral Sciences 97.

Pishehgar, Akram & Kaveh, Mohammad Amin; (2016). Investigating the Relationship between the Value System and Job Performance of Lorestan Social Security Organization Employees, 2nd International Conference on Management and Information Technology.

Pour-MohammadShāhini, khashayar; (2011). Assessing Correlation of Individual Values with Managers' Decision Making Styles, Ahwaz Pipe Mill Company: A Case Study - Farabi Institute of Higher Education Graduate School of Management.

Pourtaheri, Mahdi; Pashanejad, Mahdi& Ahmadi, Ehsan ;(2016). Evaluating the Validity of Multi-Criteria Decision-Making Methods in Determining

Appropriate Areas of Urban Development: Azarshahr Case Study, Noor Specialized Magazine, Issue 1, Vol. 20.

Radwan, E.; Rola, E.; Rabigh, H.; Sahar, O. & Souheil, H.; (2020). Personality Traits, Emotional Intelligence and Decision-Making Styles in Lebanese Universities Medical Students, BMC Psychology, Volume 8, Article Number: 46,2020.

Ralston, D.A.; Gustafson, D.J.; Cheung, F.M. & Terpstra, R.H.; (1993). Differences in Managerial Values: A Study of U.S., Hong Kong and PRC Managers. Journal of International Business Studies. Vol. 24(2), P.249-76.

Razavi, Seyyed Abdollah; Mohamadali, Tajrishi Iman; (2018). A Fuzzy Model for Measuring Organizational Strategy Alignment: A Case Study on South Pars Projects of Iran's Oil Industry, Petroleum Business Review Journal, Volume 2, Issue 3 - Serial Number 4, Pages 47-55.

Rokeach, M.; (1973). The Nature of Human Values. (New York: Free Press).

Sagiv l. & Schwartz S. H.; (2007). Cultural Values in organisations: Insights for Europe. European J. International Management, Vol. 1, No. 3. School of Business Administration, The Hebrew University of Jerusalem

Schwartz, S.H. & Belsky, W.; (1987). Toward a Universal Psychological Structure of Human Value. Journal of Personality and Social Psychology. Vol. 53(3), P.550-62.

Shafiei-Haghshenas, Lida; (2016). Succession Management and Succession Planning Models, 3rd International Conference on Management, Economy and Development, 3.

Sorooshian, Shahryar; (2018). Group Decision Making with Unbalanced-Expertise, Journal of Physics: Conf. Series 1028.

Tata, J.; (2011). National Cultural Values, Social Capital and Micro-Enterprise Success. Int. J. Business Environment, Vol. 3, No. 1, 2010, 95. School of Business Administration, Loyola University Chicago.

Valikhani, Mashallah; Hasehmi, Nadia & Nazeri, Mahmoud; (2014). Investigating the Relationship between Personal Value Systems and the Degree of Adherence to Ethical Behaviors in Organizations, 3rd Conference on Modern Management Sciences, 1151-2322.

Wahabi, R.; (1993). Values of Arab Executives: Case study of Morocco. Unpublished Ph.D. Dissertation, Union Institute, Cincinnati, OH.

Yaghoubi, Sajjad & Yaghoubi, Mojtaba ;(2016). The Relationship between Value Systems and the Capabilities and Quality of Life of Special Middle School Principals in the Four Educational Districts of Shiraz Department of Education, Rome, Italy, 3rd International Conference on New Findings in Human Resources.