

Evaluating Spiritual Quotient of Personnel Using Rough Set Theory (Case Study: National Company of Torbate Heydarieh Oil Products Distribution)

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Abstract

Spiritual Quotient is adaptive and practical performance of spirituality in special occasions and everyday life. It seems that spiritual quotient goes beyond physical and cognitive relationships of person with environment and enters into the intuitive and transcendent scope of the person vision in their life. The main objective of the present study is to examine the employee spiritual quotient using the theory of Rough set. The statistical population included Torbate Heydarieh all employees of National Oil Products Distribution Company, 210 subjects, who were included in the census. The research tool was novel spiritual quotient questionnaire (2010). In this research, Rough Sets Theory (RST) was used in order to reduce the data and conclusion, that Decision table was formed after determining the maximum and minimum scores of respondents, then Decision table was standardized and consistent and inconsistent items were identified and then resolution matrix was formed. Results showed that if the ability to cope and deal with the problems are at low level, certainly spiritual quotient will be at low level in organization and when general thinking variable and belief dimension are at moderate level, then spiritual quotient will be at the intermediate level and if addressing ethics is at a high level in organization, certainly spiritual quotient of personnel will be at high level.

Keywords: Spiritual quotient, spirituality, Rough Sets, National Oil Products Distribution Company.

Introduction

Phenomenon of quotient is the most obvious action of mental faculties in human. Quotient is a concept that human has long been interested to research on its dimensions, evidences, features and its variants (Ghobari Banabet al, 2007). Despite efforts that have been done on studying quotient phenomenon, due to its complexity and the involved factors, experts have not achieved agreement on different dimensions of quotient and its precise definition (Samadi, 2006).

Quotient is divided into different varieties such as: Physical quotient (PQ), Quotient quotient (IQ), Emotional quotient (EQ) and Spiritual quotient (SQ). It is said today that, «IQ» and «EQ» cannot answer everything but human needs third factor that is called spiritual quotient (Cherian. 2004).

Among the different types of quotients, spiritual quotient is the most basic and main quotient. Spiritual quotient is the base of issues that we believe them; also, it is the base of beliefs, values and practices and life structure. Spiritual quotient provides human access to meaning and value and using them in the way of thinking and decision making, gives integrity to the human being and gives him integrity. Importance and necessity of spirituality and religion, especially spiritual quotient is felt in many different ways in a new era (Sohrabi, 2009). The general goal of this research is to analyze the level of spiritual quotient of Torbate Haydarih National Oil Products Distribution Company's personnel by Rough Set method (RST). In this study, two types of decision and conditional variables have been considered. In RST, conditional variables, based on the dimensions of spiritual quotient include self-awareness, ability to cope with the problems, addressing ethics, the general thinking and belief aspect and the decision variable is the level of organization personnel's spiritual quotient.

Spiritual quotient

Spiritual quotient is a combination of quotient and spirituality; Spiritual quotient is the ability to actually practice spirituality in life. A person who has a higher spiritual quotient, can easily use his spirituality and religious beliefs in various circumstances of life and cope with a crisis. This quotient has transcendent impact on the life of those who use it and develop (Farhangi et al, 2009).

Spiritual quotient is a quotient that puts our actions in a broad range of semantic texture, also, examines significance of a stage of our life compared with another stage (Zohar & Marshall, 2000). Spiritual quotient goes beyond physical and cognitive relationships of person with the environment and enters to intuitive and transcendent realm of person's outlook on life and this issue clarifies answer to questions such as: "Who am I?", "Why am I here?" and "What is important? So that the person can help himself and others with discovery of the hidden sources of love and joy that lies in chaotic and stressful everyday life (Ghobari Banab, 2007).

Spiritual quotient makes creative people; because it helps people to replace the rules and play with the boundaries; it gives us the ability to clean and select; it makes us full of compassion and understanding, and helps us to see the limitations (Farhangi et al, 2009). Spiritual quotient is related to inner life of mind and its relation to existence in the universe. Spiritual quotient means knowledge of spirituality as a field of existence or force of creative life of evolution. Spiritual quotient is inner consciousness, a profound awareness of the body, material, mental, and spirituality. Spiritual quotient is related to person, interpersonal relations and mental. Spiritual quotient is awareness from relationship with transcendent, each other, the earth and all beings (Abdollah Zadeh et al, 2009).

Spiritual quotient has at least five proficiencies and skills that includes part of the basic knowledge and results to behaviors and leads to compatibility with environment. These skills are as below: A) the capacity and ability to sublimate works (material and physical): means paying attention to the unity and integrity of the world, B) the ability to experience a high level of self-awareness, C) the ability to review and purify everyday experiences and activities in person's relationship with moral and religious senses, D) the ability to employ spiritual resources in solving life problems, E) the ability to do righteousness (forgiveness, dedication, and like) (Samadi, 2006)....

The concept of spiritual quotient involves a type of adaptation and problem solving behavior that includes the highest levels of growth in different cognitive, moral, emotional, interpersonal areas and helps people to coordinate with around phenomena and achieve internal and external integration. This quotient gives person a total view on life and all the experiences and events and enables him to reinterpret and reclassify his experience, knowledge and recognition of their capabilities.

Models of spiritual quotient

Many models have been proposed in the field of spiritual quotient, for example: Vegan model implies three components of spiritual quotient: A) the ability to find meaning based on a deep understanding of Existential issues; B) Awareness of multi-dimensional levels of consciousness and the ability to use it in solving the problem; C) Awareness of the interaction among organisms with each other and their interaction with ultra (non-material world) (Vaughan, 2003).

King (2008) has offered four-factor model of spiritual quotient; including: 1. Critical Existential Thinking 2 - Personal meaning production; 3 - Transcendental awareness; 4 - Conscious state expiation (king, 2008).

Also, based on the model Saghrvani (2009), people with high spiritual quotient enjoy balanced, proportionate and concurrence attention on the following factors: A) God (the source of creation), B) People (Surroundings) C) self. He called this model "3 - Kh¹" (Saghrvani, 2009).

According to Mac Mullen (2003), the values like courage, integrity, intuition and compassion are identified as components of the spiritual quotient.

Friedman and McDonald described the below components for their spiritual quotient model: A) focus on the end meaning B) awareness of multiple levels of Consciousness and their development c) belief in the sanctity and preciousness of life; d) Transcendence of self to a greater whole (Aghili Nezhad, 2010).

"Bruce Litchfield» (1999), specifies spiritual quotient features in his model: A) be aware of the differences b) wondering, a sense of sacredness c) wisdom, d) knowledge and foresight, R) being quiet in time of confusion and doubt.

Badee, et al (2010), in their effort for offering a universal model tried to be far from any cultural- social bias and religious orientation; thus, in their model, the norm presentation will be ignored. The 4-factor model, in addition to compatibility with cultural and social conditions of Iran, due to the universality, has applicability in any community. In other words, this model is not measured based on religious criteria, ie Muslims, Christians and etc. They are measurable based on all spiritual factors, components of this model include: The first

¹ - It is also mentioned in Islam: the right of Allah (God), the right of self, the right of People.

factor: "the general thinking and belief aspect", second factor: "the ability to cope and deal with problems," third factor "to deal with the good traits (good) ethics", fourth factor: "self-awareness and love and Interest» (Badee, 2011).

This model has advantages compared with foreign similar models, including: 1. the questionnaire of other models of spiritual quotient that is used by researchers is out of represents' mood, because of long questions and the possibility of filling whole questionnaire is very low, the respondent may not answer some questions or may leave filling questionnaire. One of the features of this model is to have a questionnaire with 42 questions. 2. The lack of Farsi equivalent for some words in foreign models, sometimes make vague some related questions; so that the respondent faces with the problem of not understanding the question concept, thus the accuracy of the results is questioned. For example, the second component of Amram spiritual quotient model is «Grace», that different meaning is inferred in Farsi, such as poise, grace and grace of God, that each of these meanings creates different deduction in mind. But Badee et al model, because of being an Iranian model, is free from these problems. In the current study Badee et al model is used.

The conceptual model

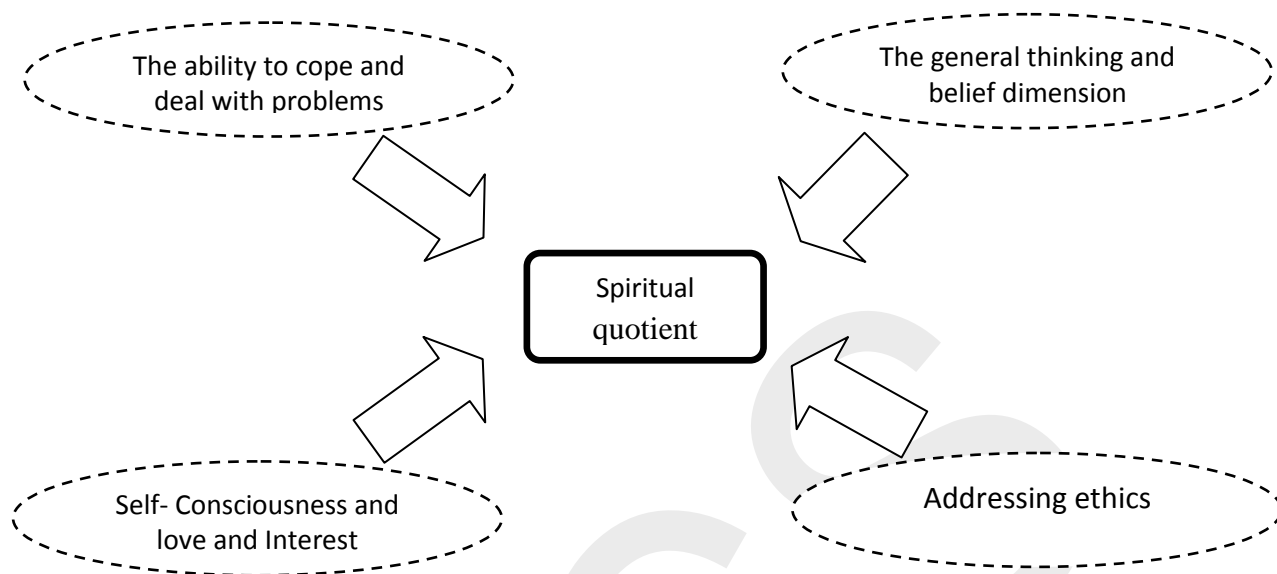


Figure 1: The Research general model

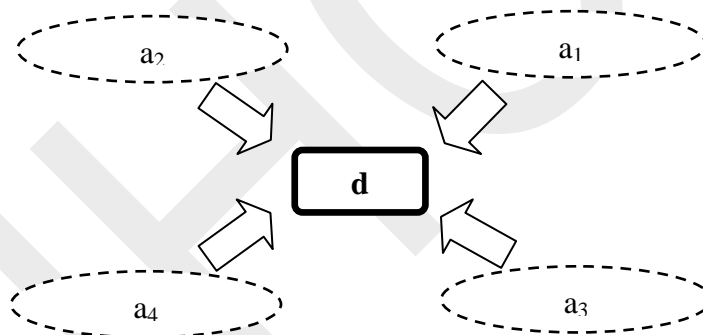


Diagram 1: The research general model according to the Decision table

Research Question

What level is Spiritual quotient of National Oil Products Distribution Company’s quotient?

Research Methodology

The present study is functional in terms of aim; and it is descriptive- correlation in terms of data collection and it is conducted by field- survey method. In this study, two types of decision variables and conditional variables are considered. In application of Rough Sets and specially setting information/ decision-making table, conditional variables based on Spiritual quotient aspects include "The general thinking and belief dimension", "ability to cope and deal with the problem", "dealing with ethics" and "self-consciousness and love and interest" and the decision variable is "spiritual quotient of personnel". Rough set theory was founded in early 1980 by Pro. Dislav Pavlak. This theory deals with the analysis of data table. Data can be obtained by measuring or by experts. The main purpose of Rough sets analysis is to obtain approximate concepts of obtained data. This method is a powerful mathematical tool for

reasoning in vague and non-certainty items that provides procedures for removing and reducing information, irrelevant knowledge or data base excess. Removing process of excess data is done without losing essential data of database. Due to reduced data, sets of tabloid and meaningful rules are obtained that simplifies decision-maker task. In fact we can say that Rough set, reducing data space and adopting key terms, performs a mapping from the raw data space and terms to syntactic and semantic space (semantics). Due to the explosive growth of information volumes, Rough set can play an effective role in decision-making backup systems (Ziarko 1993 quoted by Zare 2011). Rough theory has much points in common with Fuzzy sets, intuition theory, Boolean reasoning method and discriminant analysis. Rough set theory is considered as independent theory. Information that is used for performing Rough sets, is usually displayed as a flat table. Columns represent the features, rows represent objects and cells contain the features values for each object, this type of table is called information system or decision table. So in each decision table, features can be divided into two categories:

1. The decision features (D)
2. Position features or conditional features (C)

Accordingly, the decision table can be shown as $S = (U, T = C \cup D)$. In this equation, $D = \{\text{Result}\}$, $C = \{a_1, a_2, \dots, a_i, \dots, a_n\}$, $U = \{x_1, x_2, x_3, \dots, x_n\}$ are universal sets (Jarvinen, 2004).

Decision rules can be obtained at each row of decision table in the form of If..... then for example, if: $a_1 = 1, a_2 = 2, a_3 = 1, a_4 = 1$, then $d = 1$.

Accordingly, two types of rules are applicable in decision table:

1. Inconsistent Rule (conflicting): rules that have the same situation features but have different decision characteristics.
2. Consistent Rule (identical): rules that have the same situation features and decision characteristics.

Based on these two rules, we can write equivalence and situation classes, after forming resolution matrix, reduction set can be deduced.

The statistical population included Torbate Haydarieh all employees of National Oil Products Distribution Company, 210 subjects, who were included in the census. According to research aims, the best way to collect information is questionnaire. Two questionnaires were used in this research. Demographic characteristics questionnaire and Spiritual quotient questionnaire (Badie et al, 2010) consist of 42 items in 4 topics, that each items are coded based on five-item Likert scale as described in the following tables.

Table 1: Coding questions based on Likert 5 items scale

Strongly agree	Agree	No comment	Disagree	Completely disagree
5	4	3	2	1

Also questions associated with each of the spiritual quotient dimensions is described as below table.

Table 2: Number of spiritual quotient dimensions questions

Row	Spiritual quotient dimensions	All of related questions
1	The general thinking and belief dimension	42-11-17-34-38-29-22-23-15-12-28-39
2	The ability to cope and deal with problems	10-9-7-13-2-18-35-20-14-19-26-3-1-32-8
3	Addressing ethics	31-25-5-6-33-24-30-4
4	Self- Consciousness and love and Interest	16-37-40-36-21-41-27

Data analysis

In this research, Rough set theory is used in order to extract logical rules to understand the Spiritual quotient of National Oil Products Distribution Company's personnel. Since 42-items measure spiritual quotient and valuation is based on five-item Likert range, therefore, the minimum score of respondent is $\min = 42$ and the maximum score of respondent is $\max = 210$.

Based on:

If respondent score is 42 to 97, spiritual quotient is at low level, ie: $42 \leq X \leq 97$

If respondent score is 98 to 153, spiritual quotient is at intermediate level, ie: $98 \leq X \leq 153$

If respondent score is 154 to 210, spiritual quotient is at high level, ie: $154 \leq X \leq 210$

On the other hand, four aspects of Spiritual quotient according to the number of questions per component has minimum and maximum scores as described in the following table.

Table 3: Ratings of spiritual quotient components in Decision table

The maximum score	The minimum score	Number of items	Spiritual quotient and its dimensions	Components in Decision table	Row
60	12	12	The general thinking and belief dimension	a_1	1
75	15	15	The ability to cope and deal with problems	a_2	2
40	8	8	Addressing ethics	a_3	3
35	7	7	Self- Consciousness and love and Interest	a_4	4

According to Table 3, the range of each dimensions of spiritual quotient is expressed, respectively:

$$V(a_1) = \{12, 13, 14, \dots, 59, 60\}$$

$$V(a_2) = \{15, 16, 17, \dots, 74, 75\}$$

$$V(a_3) = \{8, 9, 10, \dots, 39, 40\}$$

$$V(a_4) = \{7, 8, 9, \dots, 34, 35\}$$

In other words, the general thinking component and belief aspect can have a score of 12 to 60 and the ability to cope and deal with problems component can have a score of 15 to 75,

addressing ethics component can have a score of 8 to 40 and self- consciousness, love and interest component can have a score of 7 to 35.

The next step is that, in the columns a1, a2, a3, a4 (situation feature) and in column d (decision feature) numbers are replaced with their codes, in other words, they are standardized (Wu et al, 2004). Thus, in Table 4, codes 1, 2, and 3 indicate low, medium and high levels, respectively.

Table 4: Standardization of spiritual quotient dimensions

Standards Code	up-and-down limit	The value of each dimension	spiritual quotient dimensions	Component Code
1	$12 \leq X \leq 28$	$12 \leq X \leq 60$	The general thinking and belief dimension	a ₁
2	$29 \leq X \leq 45$			
3	$46 \leq X \leq 60$			
1	$15 \leq X \leq 35$	$15 \leq X \leq 75$	The ability to deal with problems	a ₂
2	$36 \leq X \leq 55$			
3	$56 \leq X \leq 75$			
1	$8 \leq X \leq 18$	$8 \leq X \leq 40$	Ethics	a ₃
2	$19 \leq X \leq 30$			
3	$31 \leq X \leq 40$			
1	$7 \leq X \leq 16$	$7 \leq X \leq 35$	Self-Consciousness and Love	a ₄
2	$17 \leq X \leq 26$			
3	$27 \leq X \leq 35$			
1	$42 \leq X \leq 97$	$42 \leq X \leq 210$	Spiritual Quotient	d
2	$98 \leq X \leq 153$			
3	$154 \leq X \leq 210$			

At this stage, the Decision table is standardized and rewritten according to the table (4).

Table 5: Data / decisions making table using data classification

u	a ₁ = The general thinking	a ₂ = Dealing with problems	a ₃ = Ethics	a ₄ = Self- Consciousness	d= Spiritual Quotient	N Frequency
x1	1	1	1	1	1	12
x2	2	2	2	2	2	9
x3	1	2	1	2	1	5
x4	1	1	1	1	1	7
x14	1	1	1	2	1	3
x17	1	2	2	1	2	13
x23	1	1	2	2	1	1
x25	2	2	1	1	1	7
x31	2	2	1	2	2	13
x38	2	1	1	2	1	10
x58	3	3	3	3	3	9
x82	2	2	2	2	2	11
x83	2	2	3	2	3	8
x85	2	1	2	2	2	12
x87	3	2	3	3	3	1
x91	1	1	2	1	2	6
x92	2	1	1	1	1	5
x107	1	2	2	1	1	11
x123	1	1	2	1	1	4
x128	3	2	3	2	3	8
x129	2	2	1	2	1	2
x132	2	2	2	1	2	3
x150	2	2	2	1	1	5
x154	2	2	1	1	2	11
X157	2	2	1	3	2	18
x162	1	2	1	2	2	9
x172	2	3	3	3	3	7

Then, the consistent and inconsistent tables are created based on Table 5.

Table 6: Inconsistent Components of Decision table

u	a ₁ = The general thinking	a ₂ = Dealing with problems	a ₃ =Ethics	a ₄ =Self Consciousness	d=-Spiritual Quotient
x3	1	2	1	2	1
x162	1	2	1	2	2
x17	1	2	2	1	2
x107	1	2	2	1	1
x25	2	2	1	1	1
x154	2	2	1	1	2
x31	2	2	1	2	2
x129	2	2	1	2	1
x132	2	2	2	1	2

x150	2	2	2	1	1
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Table 7: Consistent Components of Decision table

u	a ₁ = The general thinking	a ₂ = Dealing with problems	a ₃ = Ethics	a ₄ = Self Consciousness	d= Spiritual Quotient
x1	1	1	1	1	1
x2	2	2	2	2	2
x4	1	1	1	1	1
x14	1	1	1	2	1
x23	1	1	2	2	1
x38	2	1	1	2	1
x58	3	3	3	3	3
x82	2	2	2	2	2
x83	2	2	2	2	3
x85	2	1	2	2	2
x87	3	3	3	2	3
x92	2	1	1	1	1
x123	1	1	2	1	1
x128	3	2	3	2	3
x157	2	2	2	3	2
x172	2	3	3	3	3

In decision tables, the consistent rules are considered (Kryszkiewicz, 1994), for this reason, components of Table 6 are set aside and in the next step, 16 respondents of Table 7 are considered, that in the below table, the level of spiritual quotient are classified. (Table 8)

Table 8: Ordered compatible table

u	a ₁	a ₂	a ₃	a ₄	d
x1	1	1	1	1	1
x4	1	1	1	1	1
x14	1	1	1	2	1
x23	1	1	2	2	1
x38	2	1	1	2	1
x92	2	1	1	1	1
x123	1	1	2	1	1
x2	2	2	2	2	2
x82	2	2	2	2	2
x85	2	1	2	2	2
X157	2	2	1	3	2
x58	3	3	3	3	3
x83	2	2	3	2	3
x87	3	3	3	2	3
x128	3	2	3	2	3
x172	2	3	3	3	3

The minimal sets of features

Since the decision variable (d) has above three conditions (low, medium and high), therefore, minimal sets can be made according to Table (8) so that respondents who rated score 1 to decision variable are in one set, the respondents who rated score 2 to spiritual quotient, are in one set, and respondents who rated score 3 to decision variable are in one set, the three created sets are called decision equivalence classes.

$$X_1 = \{x \in U | d = 1\} = \{x1, x4, x14, x23, x38, x92, x123\}$$

$$X_2 = \{x \in U | d = 2\} = \{x2, x82, x85, x157\}$$

$$X_3 = \{x \in U | d = 3\} = \{x58, x83, x87, x128, x172\}$$

Based on three sets of X1, X2 and X3 lower and upper approximations are obtained for each of three sets. It should be noted that A is defined as follows:

$$A = \{a_1, a_2, a_3, a_4\}$$

Table 9: Approximation of three sets X1, X2, X3

Set X ₁	Set X ₂	Set X ₃
$[x1]_A = [x4]_A = \{x1, x4\}$	$[x2]_A = [x82]_A = \{x2, x82\}$	$[x58]_A = \{x58\}$
$[x14]_A = \{x14\}$	$[x85]_A = [x85]_A$	$[x83]_A = \{x83\}$
$[x23]_A = \{x23\}$	$[x157]_A = \{x157\}$	$[x87]_A = \{x87\}$
$[x38]_A = \{x38\}$		$[x128]_A = \{x128\}$
$[x92]_A = \{x92\}$		$[x172]_A = \{x172\}$
$[x123]_A = \{x123\}$		

$$\underline{AX}_1 = \{x \in U | [x]_A \subseteq X_1\}$$

$$\underline{AX}_1 = \{x1, x14, x23, x33, x38, x92, x123\}$$

$$\underline{AX}_2 = \{x \in U | [x]_A \subseteq X_2\}$$

$$\underline{AX}_2 = \{x2, x85, x157\}$$

$$\underline{AX}_3 = \{x \in U | [x]_A \subseteq X_3\}$$

$$\underline{AX}_3 = \{x58, x83, x87, x128, x172\}$$

$$\overline{AX}_1 = \{x \in U | [x]_A \cap X_1 \neq \emptyset\}$$

$$\overline{AX}_1 = \{x1, x4, x14, x23, x33, x38, x92, x123\}$$

$$\overline{AX}_2 = \{x \in U | [x]_A \cap X_2 \neq \emptyset\}$$

$$\overline{AX}_2 = \{x2, x82, x85, x157\}$$

$$\overline{AX}_3 = \{x \in U | [x]_A \cap X_3 \neq \emptyset\}$$

$$\overline{AX}_3 = \{x85, x83, x87, x128, x172\}$$

Accuracy of Rough Sets can be set with the following terms:

$$\alpha_A(X) = \frac{|AX|}{|X|}$$

$$\alpha_A(X_2) = \frac{|AX_2|}{|X_2|} = \frac{3}{4}$$

$$\alpha_A(X_1) = \frac{|AX_1|}{|X_1|} = \frac{7}{8}$$

$$\alpha_A(X_3) = \frac{|AX_3|}{|X_3|} = \frac{5}{5}$$

Table 10: Resolution

Matrix

u	x1	x4	x14	x23	x38	x92	x123	x2	x82	x85	x157	x58	x83	x87	x128	x172
x1		λ	a4	a3,a4	a1,a4	a1	a3	a1,a2,a3,a4	a2,a3,a4	a1,a3,a4	a1,a2,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4
x4	λ		a4	a3,a4	a1,a4	a1	a3	a1,a2,a3,a4	a2,a3,a4	a1,a3,a4	a1,a2,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4
x14	a4	a4		a3,a4	a1	a1,a4	a3	a1,a2,a3	a1,a2,a3	a1,a3	a1,a2,a4	a1,a2,a3,a4	a1,a2,a3	a1,a2,a3	a1,a2,a3	a1,a2,a3,a4
x23	a3,a4	a3,a4	a3		a1,a3	a1,a3,a4	a4	a1,a2	a1,a2	a1	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3	a1,a2,a3	a1,a2,a3	a1,a2,a3,a4
x38	a1,a4	a1,a4	a1	a1,a3		a4	a1,a3,a4	a2,a3	a2,a3	a3	a2,a4	a1,a2,a3,a4	a2,a3	a1,a2,a3	a1,a2,a3	a1,a2,a3,a4
x92	a1	a1	a4	a1,a3,a4	a4		a1,a3	a2,a3,a4	a2,a3,a4	a3,a4	a2,a4	a1,a2,a3,a4	a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a2,a3,a4
x123	a3	a3	a3,a4	a4	a1,a3,a4	a1,a3		a1,a2,a4	a1,a2,a4	a1,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4
x2	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3	a1,a2	a2,a3	a2,a3,a4	a1,a2,a4		λ	a2	a3,a4	a1,a2,a3,a4	a3	a1,a2,a3	a1,a3	a2,a3,a4
x82	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3	a1,a2	a2,a3	a2,a3,a4	a1,a2,a4	λ		a2	a3,a4	a1,a2,a3,a4	a3	a1,a2,a3	a1,a3	a2,a3,a4
x85	a1,a3,a4	a1,a3,a4	a1,a3	a1	a3	a3,a4	a1,a4	a2	a2		a2,a3,a4	a1,a2,a3,a4	a2,a3	a1,a2,a3	a1,a2,a3	a2,a3,a4
x157	a1,a2,a4	a1,a2,a4	a1,a2,a4	a1,a2,a3,a4	a2,a4	a2,a4	a1,a2,a3,a4	a3,a4	a3,a4	a2,a3,a4		a1,a2,a3	a3,a4	a1,a2,a3,a4	a1,a3,a4	a2,a3
x58	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3		a1,a2,a4	a4	a2,a4	a1
x83	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3	a1,a2,a3	a2,a3	a2,a3,a4	a1,a2,a3,a4	a3	a3	a2,a3	a3,a4	a1,a2,a4		a1,a2	a1	a2,a4
x87	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3	a1,a2,a3	a1,a2,a3	a1,a2,a3,a4	a1,a2,a3,a4	a1,2,a3	a1,a2,a3	a1,a2,a3	a1,a2,a3,a4	a1,a2,a3	a1,a2		a2	a1,a4
x128	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3	a1,a2,a3	a1,a2,a3	a1,a2,a3,a4	a1,a2,a3,a4	a1,a3	a1,a3	a1,a2,a3	a1,a3,a4	a2,a4	a1	a2		a1,a2,a4
x172	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a1,a2,a3,a4	a2,a3,a4	a1,a2,a3,a4	a2,a3,a4	a2,a3,a4	a2,a3,a4	a2,a3	a1	a2,a4	a1,a4	a1,a2,a4	

Conclusions

1. According to set \overline{AX}_1 we can conclude that the respondents listed in this category are confident that the spiritual quotient in their organizations is at low level and spiritual quotient components in their organization are at low level. Also, according to \overline{AX}_1 set we can state that among the respondents mentioned in this category, there are those who argue that spiritual quotient is at low level in their organization and spiritual quotient components are likely at low and moderate level.

2. According to set \overline{AX}_2 we can state that the respondents listed in this category are confident that the spiritual quotient is at moderate level in their organizations and spiritual quotient

dimensions are at moderate level. On the other hand, according to $\bar{A}X_2$ set we can state that among the respondents mentioned in this category, there are those who argue that spiritual quotient is at moderate level in their organization and spiritual quotient components are likely at moderate level.

3. According to set $\underline{A}X_3$ we can state that the respondents listed in this category are confident that the spiritual quotient system of their organizations is at high level and spiritual quotient dimensions in their organization is at high level. On the other hand, according to $\bar{A}X_3$ set we can state that among the respondents mentioned in this category, there are those who argue that spiritual quotient is at high level in their organization and spiritual quotient components are likely at high level.

4. According to If rules, we can say that:

IF $a_1=1, a_2=1, a_3=1, a_4=1$ THEN Result=1
IF $a_1=1, a_2=1, a_3=1, a_4=1$ THEN Result=1
IF $a_1=1, a_2=1, a_3=1, a_4=2$ THEN Result=1
IF $a_1=2, a_2=2, a_3=1, a_4=1$ THEN Result=1
IF $a_1=2, a_2=1, a_3=1, a_4=2$ THEN Result=1
IF $a_1=2, a_2=1, a_3=1, a_4=1$ THEN Result=1
IF $a_1=1, a_2=1, a_3=2, a_4=1$ THEN Result=1
IF $a_1=2, a_2=2, a_3=2, a_4=2$ THEN Result=2
IF $a_1=2, a_2=2, a_3=2, a_4=2$ THEN Result=2
IF $a_1=2, a_2=1, a_3=2, a_4=2$ THEN Result=2
IF $a_1=2, a_2=2, a_3=1, a_4=2$ THEN Result=2
IF $a_1=3, a_2=3, a_3=3, a_4=2$ THEN Result=3
IF $a_1=2, a_2=2, a_3=3, a_4=2$ THEN Result=3
IF $a_1=3, a_2=3, a_3=3, a_4=3$ THEN Result=3
IF $a_1=3, a_2=2, a_3=3, a_4=2$ THEN Result=3
IF $a_1=2, a_2=3, a_3=3, a_4=3$ THEN Result=3

5. According to data reduction and the resolution matrix, we can have a description of $d = 1$ by constraint $a_5 = 1$ that is called value reductive.

IF $a_2=1$ THEN Result=1

So if the spiritual quotient components are at low level, then spiritual quotient level will be at low level in organization. Using a similar argument, we can summarize be the above sixteen rule as follows:

IF $a_1=2$ THEN Result=2

IF $a_3=3$ THEN Result=3

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