Research article

A Comparative Analogy between Viewpoints and Opinions of Imam Ali (PBUH)[1] and New Science in Criteria and Indexes to Select and Appoint Managers by means of Hierarchical Model, Paired Comparisons Matrix and TOPSIS Method

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Abstract

The Islamic culture is rich of the best advanced management methods and styles. During a short time, the power and influence of this superior management made a modern and progressive society of a poor and unable society which was suffering from tribal and ethnical battles for worthless glories and affairs in the era of Holy Prophet and Imams (PBUT)[6], in such a manner that the new powerful society overcame the greatest empires in a short period of time and founded a magnificent civilization and government. It may be claimed that the best methods and orders to guide and govern humans are collected in the statements and manners of Holy Prophet and Imams (PBUT), and anybody enjoys a part of this precious amplitude. For this reason, many scientists in their valuable books such as Siasat-Nameh of KhajehNezamolmolk, Nasihatolmoluk of Ghazali, Ghabusnameh of Amir Onsorolma'ali, Char-Maghaleh of Nezami, Shahnameh of Ferdowsi and Golestan and Bustan of Sa'adihave been affected by these directions and borrowed them in their methods to guide humans and to govern countries.

This research paper is an applied essay for its goal and is a descriptive study, analytical and measuring style, for its method to collect data. To "define and compare criteria to select and appoint managers between opinion of

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Imam Ali and science of management", required information was collected through library study (taking notes of books about Koranic science, religion, management, databases and internet) and field study (by means of two professional questionnaires, one for skilled people in management and the other for skilled people in religion and Koranic science). SPSS software was used, at first, to analyze data, indexes and criteria in viewpoint of Imam Ali and also in modern management science to select and appoint managers in order to define the mean opinion of experts about any criterion, and then by means of hierarchical model and by designing paired comparisons matrix (in four stages of changing mental opinion of experts to quantitative amounts, unanimity of experts, forming paired comparisons matrix and calculating coefficients of paired comparisons matrix) verbal paired tables were changed to fuzzy paired tables, and at last, assessment and ranking of criteria were done by AHP-fuzzy technique.The results of criterion ranking by means of AHP-Fuzzy technique showed that the criteria of personal and professional capabilities, valued attributes and moral qualifications are in first to third positions. The result of ranking parameters by means of AHP-Fuzzy technique confirms that the parameters of decent dynasty, eloquence, good experience, liberality, accuracy, cheerfulness, discern and analysis ability, discipline, knowledge, moderation in anger and kindness, not flattering, power and ability, resistance against problems, prudency, kindness and compassion, justice, saving public properties, loyalty, fighting with cruel and supporting oppressed, concealment of others' faults and avoiding to find their faults, responsibility against the society, slogan blame, anger restrain, patience, learning from the past, virtue and piety, moderation in moralities, truthfulness, truth seeking, tranquility and dignity and return to the truth after awareness are in next positions after above-mentioned first three positions.

Ranking criteria and parameters to select and appoint managers in viewpoint of modern management by means of AHP-Fuzzy technique showed that the parameters of personal and professional capabilities, valued attributes and moral qualifications are in first to third positions, and ranking parameters by means of AHP-Fuzzy technique confirms that the parameters of relationships, experience and working background, education and professional courses, skills, physical abilities and health, personality, mental-intelligence capabilities, leadership, proud of helping people, decisiveness, establishing human relations as a tool for efficiency, knowledge, resistance against problems, prudency, kindness, justice and fairness, saving public properties, saving public properties, loyalty, fighting with cruel and supporting oppressed, concealment of others' faults and avoiding to find their faults, responsibility against the society, effort, consultation, self-confidence, philanthropy, removing social problems, endurance of opponents and acceptance of mistakes, mental capabilities – decision making, truthfulness, mental capabilities – creativity, responsibility, secrecy, constancy, patience, self-control, justice and reliance are in next positions. **Copyright © IJEBF, all rights reserved.**

Keywords: Selection and Appointment, Management, Viewpoints of Imam Ali (PBUH), New Science, Organization

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Introduction

Doubtlessly, the current world is the world of organizations and humans are the founders of these organizations. Humans enliven the body of organizations, move them forward and govern them. Without skillful human powers, organizations not only have no meaning, but also will not be managed. Even after technicalization of organizations and making them a great block of hardware, the role of human is completely obvious in existence of organizations as a vital factor. Therefore, human resources especially skillful managers are the most valuable resource for the organizations in 21 century because they form organizational decisions, resolve problems and elevate the organizations.

Today, organizations have faced competitional threats as the result of globalization. Human resource management has a significant rule to make organizations coordinated in the era of globalization. The systematic approach in organizations and dependency of resources force various sections of organizations confronting external challenges to act more powerful and effective. Naturally, the activity of powers and human resources and skilled managers is important and play a very significant rule for organizations.

The development of activities and duties of managers and also appropriate selection and appointment of managers in the area of human resource management, and continuous interaction between these activities and also necessity to have a coordinated planning for selection, appointment, professional, moral and valued featureprocesses, and also effective managing, improving, maintaining and applying skills – as the most important strategic resource for any organization – have made necessary to create information systems for human resources and to update the information of these systems in any great organization.

For this purpose, some indexes such as personal capability of managers and their professional abilities such as personal features and their authority may help the organization reach the goals and bring greater progress, meanwhile, we seek assistance from Islamic management among lectures, letters and advises of Imam Ali in Nahjol-Balagha and enjoy his great viewpoints about selection and appointment of the best managers. These efforts may be religious studies for followers of Imam Ali and may be effective for their mundane and heavenly affairs.

Study Literature (performed studies)

As, selection and appointment of the best managers is the foundation and wealth of organizations, researchers decided to compare the opinion of Imam Ali in Nahjol-Balagha about selection and appointment of managers with new management science, and assess their criteria and parameters. The result of study is assessed in details and followings are concluded:

1. MahmoodKhosravi (1999) in his study entitled: professional features and criteria to select and appoint human resources in Islamic management according to Nahjol-Balagha, concluded that it is recommended in Islamic traditions to pay special attention to scientific competency of people and their capabilities, and never those who are weak in scientific level and have not enough knowledge may be appointed because it will be the greatest treachery about Islamic nations. Imam Ali says in Nahjol-Balagha, section 172: "The worthiest people for rulership and incumbency are those who are the most capable people to perform measures and those who know more about the orders of God to understand issues".

2. MahmoodGhoochani(1995) in his study entitled: Government order about management, describes the pact of Imam Ali to Malik-Ashtar and argues about resistance against problems. He concluded that the manager and responsible of key positions should be strong and resistant against working pressures and problems and also ups and downs and should have a strong power.
   In this regard, Imam Ali says to Malik-Ashtar in his letter 53: "Select those members among your troops for key positions who are strong against problems and their bitter consequences, and big tragedies may not cause them to succumb. They should be those who will not affect by weakness and disability of others and will not be amphoteric due to weakness of others".

3. MasoudAhmadkhani (2000) in his study entitled: Modeling behavior of managers according to the letters of Imam Ali in Nahjol-Balagha, writes that one of the obvious qualifications of managers is that they are not unaware of personal and mental problems of their workers. Imam Ali says to Malik-Ashtar in his letter 53: "The requirements of managers should be provided adequately. This may let them improve themselves and be affluent to possess properties which are given protection to them. They will be disputed not to oppose with your orders or commit treason".

   In another part of his letter, Imam Ali says: "Keep in your heart the kindness toward people and never be bloodthirsty toward them".

   This study concludes that personal behavior and character of managers based on kindness and mercy should be put into operation for the organization and personal and mental problems of workers should be paid attention specially. The kindness toward workers may be in the heart of managers (authorities).

4. DelshadTehrani (1998) in his study entitled: The Government of Sun, political behavior and governing manner of Imam Ali, discusses about family competency of workers and managers and other family

purity based on which Imam Ali insists on selection and appointment of managers and propounds it as a scale beside other criteria. Imam advises Malik-Ashtar: "Select your commanders among those who are good-natured and have a pious family and good background".

5. NaserMakaremShirazi (1997) in his study entitled: Management and Command in Islam, describes selection criteria as following: a) Total coordination between qualification of job and characteristics of candidates being selected b) skills.

6. Arian Gholipour, Aliasghar Pour-Ezzat and AbbassNiknejad (2008) in their study entitled: The effects of consequences of Manson effect on selection and appointment of governmental managers, indicate that selection and appointment and employment of workers and managers is one of the important activities in all organizations and employers try to employ the best candidates in all organizational levels.

7. Hejazi (2010) in his study entitled: Criteria to select managers in viewpoint of Imam Ali, concludes that Imam Ali who is trained under Islamic school and was satisfied by inspiration of God and Holy Koran, insists on two qualifications of proficiency and commitment as two reasons for decline or continuance of governments. He says that Imam Ali believed in four cases in decline or continuance of governments: ignoring basic principles and rules, paying attention to lateral and minor affairs, preferring ignoble ones and keeping away worthy ones.

Table 1: Finding of studies

No	Name of researcher	Year of study	Title of study	Findings
1	Khosravi, Mahmood	1999	Professional criteria to select and appoint human powers in Islamic management according to Nahjol-Balagha	Professional qualifications and criteria are persisted in Islamic traditions. Scientific capability of people should be paid attention to select them.
2	Ghochani, Mahmood	1995	Governmental order about management, description of the letter of Imam Ali to Malik-Ashtar	The responsible of key positions should be strong against working pressures and ups and downs of work and should have a strong intentions
3	Ahmadkhani, Masoud	1998	Modeling the behavior of managers according to the letters of Imam Ali in Nahjol-Balagha	Manager should not be neglected about mental and personal problem of personnel and should be kind with them
4	DelshadTehrani	1998	The government of sun, political opinion and governmental manner of Imam Ali	Family purity of workers and managers and authorities should be paid attention and should be among general affairs
5	MakaremShirazi	1997	Management and leadership in Islam	Selection criteria are considered. Total coordination between qualifications of job and attributes of personnel, required skills and organizational needs, conceptual humanity and total coordination between the responsibility and position should be provided
6	Gholipour, Arian Aliasghar, Pour-Ezzat Nik-Nejad, Abbass	2008	The effects of consequences of Manson effect on selection and appointment of governmental managers	Selection and appointment of workers and managers are important manners of an organization. Lack of stable positions for managers is one of the main problems in our country. Self-interest of managers creates Manson effect in them. It is advised to avoid Manson effect while selecting managers.
7	Hejazi	2010	Criteria to select and appoint	Scientific, practical and moral merits

		managers in viewpoint of Imam Ali	and responsibility and proficiency are great qualifications of managers in a society which follows Imam Ali. Imam believes in four things to ruin a government: wasting basic principles, paying attention to minor affairs, prioritizing of the ignoble people and repelling merit people. Virtue and experience are other findings in management

Conclusion and Findings of the Background of Performed Studies:

The findings of the background of performed studies indicate that various factors are effective on selection and appointment of managers including: skills such as technical, human, conceptual and designing proficiencies and also lack of stable and steady management in governmental organizations. This is Manson Effect and those who suffer from managing egotism may not be selected and appointed.

It is from scientific and moral merits and Islamic amicable attributes that managers should not be neglectful from personal and mental problems of their workers and be kind about them.

In other findings of study literature, family purity of workers and managers may be considered and family purity and dignity is among general qualifications.

A Comparison between Viewpoints of Imam Ali and New Management Science:

Having a general look at the definition of attributes and qualifications of leadershipwhile behaving with inferior and superior levels in viewpoints of Imam Ali and western scientists of management, these points will be specified:

1- Although the effect of leadership is paid attention directly and indirectly in viewpoint of Imam Ali and other scientists of management, but the main point is the essence of leadership and management of people in these two groups. The influence and effect of manager and leader on people is primarily to reach organizational goals in viewpoint of scientists of management, in most of cases, these organizational goals include a specific group. But Imam Ali believes that leadership is a distinction for people and is also a heavy responsibility for leader. So, acceptance of leadership in viewpoint of Imam is not merely to accept governing people, but it is responsibility to assist people, to administer justice, to develop righteousness and to demand the rights of the oppressed. So, Imam supposed his acceptance of rulership was imperative not because Holy Prophet had selected him as his successor, but because of the agreement of God with wise and aware scientists.

2- Management scientists have passed the historical path from beginning to the current age according to leadership attributes to reach expedient qualifications, but Imam has described all aspects of many years' studies of managing affairs in his speeches and letters. This is obvious in the context of his letter and speeches. He has ordered his commanders differently and according to the various situations.

A Comparison between Manager (Leader) in Viewpoints of Imam Ali and Western Scientists

George Terrey (1960) explains that leadership is impressing people to motivate them to create job and interest in order to obtain group targets.Sa'atchi (1996) believes that leadership is the process to influence people to excite their voluntarily and eagerly efforts to fulfill organizational goals. Stoner and Vonckle (1985) explain that leadership is one of the duties of manager and is the process to influence and guide all activities related to tasks and job of groups. Schomerhorn and others (1997) say that leadership is a specific instance of personal influence of an individual on a group or another person which persuades them to do what the leader demands.

Having a look at the descriptions of leadership by scientists of management, following key concepts are distinguished:

1. Influencing people has an important role in leadership.
2. Defining a goal or joint goals is a pre-requirement for other leading activities.
3. Personal and group interactions between leader and other members are important factors.

It should be mentioned that leadership is a consequence of natural activities. Nobody can call himself as a leader without existence of a group. Leadership is an effort which an individual makes inside the group. Group and leader are interdependent and no one exists without the other.

Leader should be cordially interested to create a group spirit and to coordinate activities of group members. Leadership is essential for existence of group which may be performed by someone.

About the reality of rulership and leadership and the reason to accept rulership, Imam Ali says in his Sheghsheghieh speech: "I swear to whom who raised the seed amongst mass of soil and livened up fetus, if audiences had not attended and this final notice had not declared to me and if God had not made commitment with aware divine scientists to stand against oppression and defend the oppressed, unhesitatingly I would have left rulership. You know well that your world is worthless for me than mucus of the nose of a goat when it sneezes".

Attendance of audiences, final notice of assisters and commitment to God by divine scientists are three factors which Imam Ali expresses as the reasons to accept rulership. In this viewpoint there is no aim of authority, self-conceit and taking advantage. In fact, rulership is to accept a heavy responsibility in the opinion of Imam Ali as a certain duty for divine scientists.

Imam Ali compares the rulership with "rotten water" and "chocking bit". Rotten water and chocking bit not only shows that rulership is not a positive advantage, but also is a chocking bit for ruler due to heavy responsibility to accept ruling over a nation, and incompetence is also a chocking bit for a ruler, and pride and self-respect takes a ruler like a morass and kills him.

Therefore, when faith and religion are argued, a power may exist for revolution in order to destroy falseness and make ruler the truth, or the ruler may sit aside and give up to save religion until the truth appears out of falsehood.

Imam Ali believes that rulership and executive responsibility are the means for growth of people, performance of truth and development of religion which if be considered as the mere goal and if battles be started to take them, they will be like rotten water or chocking bit which not only does not relieve one's thirst, but also kills him.

Looking at the words of Imam Ali, some important and key points will be appeared about rulership:

1- In viewpoint of Imam Ali, it is necessary to have group and personal interaction between ruler and people.

2- Influencing people, in viewpoint of Imam Ali, is essential to raise people, to perform the truth, to develop religion and generally to guide the nation.

Study Questions

Main question: What are the criteria to select and appoint managers in viewpoints of Imam Ali and management science?

Sub-questions

1. What are the criteria to select and appoint managers in viewpoint of new management science?

2. What are the criteria to select and appoint managers in viewpoint of Nahjol-Balagha?
3. How is the ranking of criteria to select and appoint managers in viewpoint of management science?
4. How is the ranking of criteria to select and appoint managers in viewpoint of Nahjol-Balagha?
5. How is the comparison between selection and appointment of managers in viewpoints of management science and Nahjol-Balagha?

Study Methodology

Study Method

The value of any science depends on its methodology. Study method has various meanings in scientific contexts. These deductions sometimes cover each other and sometimes have connections. Study method and the type of method sometimes are mentioned as synonym phrases (Khaki, 1999).

This study is an applied study due to its goal and is a descriptive study in "measurement and descriptive" type based on its data collection method. Library method is used to collect data (taking notes of books about Koranic science, religion, management, databases and internet) and two professional questionnaires with five multiple choices in Lickert spectrum are used (one questionnaire for experts of management and the other for experts of Koranic and religious science).

Validityand Reliability Of questionnaire

In order to assess validity, the questions were designed by means of viewpoints and literature of study and also opinion of related authorities and were organized based on goals and theories of study. Ambiguous and unrelated questions were deleted according to improving ideas and suggestions of related experts and professors and the questionnaire was collected and was offered to repliers. After gathering questionnaires, the validity of all questions was calculated by means of Cronbach's Alpha Formula which is a statistical method to assess capability of measuring tool. The alpha for questionnaire of new management was defined as α_1 and for questionnaire of Nahjol-Balagha was defined as α_2.

Analytical Method of Data

Analysis is a way through which the entire research process is being guided from the level of problem selection to the level of access to goal.

In this study, the opinion of experts about related indexes and criteria of selection and appointment of managers is considered from the viewpoint of Imam Ali in Nahjol-Balagha and new management science. Then by SPSS software, the mean opinion of experts about each criterion was calculated separately and according to which, verbal paired tables were defined for each index. In next step, verbal paired tables changed to fuzzy paired tables and were assessed and ranked by means of AHP-Fuzzy technique.
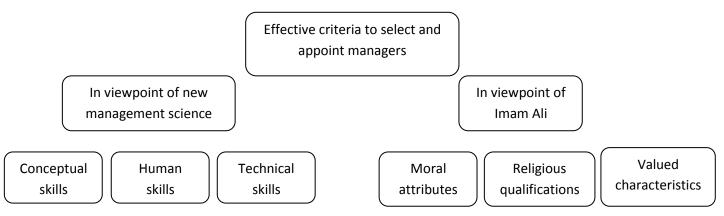
Conceptual Model of Study

The role of model is to represent agents and to define relationships in a system, process, existence, structure, opinion and so on. These items may be shown by various and different methods and models would be assessed from viewpoint of representation of agents and definition of relationships (Hariri: 53, 2004). The effective factors on selection and appointment of managers such as personal and professional characteristics of managers, valued attributes and moral and religious qualifications will be assessed and at last, will be used to employ the best managers according to designed model.

AHP-Fuzzy Technique according to analytical and developmental method

The fuzzy transcription of AHP technique includes some ambiguous situations or not well defined ones. Many AHP-Fuzzy methods are suggested by various people which are systematic approaches to make a choice by

means of the concept of fuzzy collection theory and analysis of hierarchical structure. In 2004 two Dutch researchers, Laarhorein and Padrycz, proposed a method for the process of fuzzy hierarchical analysis according to method of the least squares. A logarithm was established. High rate of calculations and complexity of stages were the reasons to reject their proposition. In 1996 another method entitled: "extent analysis method" (EA) was proposed by Chinese researcher, Chang. The numbers in this method are triangular fuzzy numbers (Momeni, 2006).

Effective criteria to select and appoint managers

In viewpoint of new management science

In viewpoint of Imam Ali

Conceptual skills

Human skills

Technical skills

Moral attributes

Religious qualifications

Valued characteristics

Conceptual model of study according to library of Mohaghegh, Islamic Azad University, Ghaemshahr Branch, November 10, 2010

The concepts and descriptions of AHP-Fuzzy according to EA method are as following:

If mathematical operation of two fuzzy numbers is $M_1=(I_1, m_1, v_1)$ and $M_2=(I_2, m_2, v_2)$, the representation of numbers is as following:

Figure 1: Representation of triangular numbers M_1, M_2

Following is their mathematical function:

$$M_1 + M_2 = (I_1 + I_2, m_1 + m_2, u_1 + m_c)$$
$$M_1 \times M_2 = (I_1.I_2, m_1.m_2, u_1.m_c)$$
$$M_1^{-1} = \left(\frac{1}{u_1}, \frac{1}{m_1}, \frac{1}{I_1} \right) \qquad M_2^{-1} = \left(\frac{1}{u_2}, \frac{1}{m_2}, \frac{1}{I_2} \right)$$

In EA method, the amount of s_i as a triangular number is calculated as following for each line of paired comparisons matrix:

$$S_i = \sum_{J=1}^{n} M_k \times \left[\sum_{i=1}^{m} \sum_{J=1}^{n} M_{ij} \right]^{-1}$$

Where, k is the number of line and i and j are options and indexes respectively. In EA method, the magnitude degree of SKs should be assessed toward each other after calculations. Generally, if M_1 and M_2 are two triangular fuzzy numbers, magnitude degree of M_1 on M_2 that is shown as $V(M_1 \geq M_2)$ will be defined as following:

$$V(M_1 \geq M_2) = 1 \qquad\qquad m_1 \geq m_2$$

$$V(M_1 \geq M_2) = hgt(M_1 \cap M_2)$$

Otherwise

$$hgt(M_1 \cap M_2) = \frac{V_1 - I_2}{(V_1 - I_2) + (m_2 - m_1)}$$

Magnitude degree of a triangular fuzzy number on k other triangular fuzzy numbers can be calculated by this equation:

$$V(M_1 \geq M_2 ... M_k) = V(M_1 > M_2), ... V(M_1 \geq M_k)$$

In EA method, calculation of the weight of indexes in paired comparisons matrix is as following:

$$W'(x_i) = Min\{V(S_i \geq S_k)\}, k = 1, 2, n, \quad k \neq j$$

So the vector of the weight of indexes is as following:

$$W' = [W'(C_1), W'(C_2) -, W'(C_n)]^T$$

Analysis of Statistics (data)

To assess the factors to select and appoint managers in viewpoint of Nahjol-Balagha, assessment indexes should be explained and prioritized. Whereas this assessment is performed by multiple and qualitative indexes and step by step, AHP (Analysis Hierarchical Process) is an appropriate method. Since most of managers prefer to declare their opinions in verbal words instead of using numbers, so a fuzzy frame of AHP is used to prioritize the factors of selection and appointment of managers in viewpoint of Nahjol-Balagha. EA method is the selected method to use AHP-Fuzzy technique in order to weight indexes and options (Chang, 2001).

To overcome lack of decisiveness in input parameters of the problem, decision is made in group. Thus, the viewpoints of experts and authorities are collected and the unanimity of their opinions is considered as the final decision for any specific case (Kahraman, 2003).

A) Forming Hierarchical Model: According to this model, at first the order of hierarchy of decision to prioritize selection and appointment of managers is drawn for viewpoint of Nahjol-Balagha. To form a hierarchical model, at first its three main levels should be defined. First level which is the higher level refers to the goal of decision making, namely ranking the importance of factors to select and appoint managers in viewpoint of Nahjol-Balagha. Indexes are the second level of hierarchical model which are also the criteria to comprise the goal. In current study, indexes are the criteria of personal and professional capabilities, valued attributes and behavioral qualifications to select and appoint managers. Options are the third level of hierarchical model. In fact, options are the destination of the goal of hierarchical model and the target response will be achieved through drawn options (from A1 to A30). Diagram 1 represents the hierarchical structure of model.

B) Designing Paired Comparisons Matrix

The aim of this stage is to define the weights of criteria and to rank them. The table of paired comparisons is prepared by means of hierarchical model of research (diagram number 1). At first step, the viewpoints of experts about the importance of indexes and options are collected as the words of natural languages and in framework of paired comparisons matrix and then are changed to fuzzy numbers according to common table of changes in EA method. At last, fuzzy average is calculated and the mean of priorities are coordinated as triangular fuzzy numbers in the shape of paired comparisons matrixes.

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┌─────────────────────────────────────┐
│   Selection and appointment of       │
│   managers in viewpoint of           │
│   Nahjol-Balagha                     │
└─────────────────────────────────────┘

┌──────────────────┐  ┌──────────────┐  ┌──────────────────┐
│  Personal and    │  │   Valued     │  │  Moral attributes │
│  professional    │  │ qualifications│  │                   │
│  attributes      │  │              │  │                   │
└──────────────────┘  └──────────────┘  └──────────────────┘

┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐
│ A28  │ │ A29  │ │ A30  │ │  A1  │ │  A2  │ │  A3  │
└──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘
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Diagram 1: Hierarchy order for decision making to prioritize the factors of selection and appointment of managers in viewpoint of Nahjol-Balagha

First step: Changing mental opinion of experts to quantitative amounts: In this step the opinion of experts about the importance of criteria toward each other and also the importance of options toward each other for any index is collected. In such these studies, the opinion of experts is mainly described in natural language words and taking expert opinions is, in fact, mentally. Whereas these words can be considered as verbal quantities and be described by fuzzy logic. Since triangular fuzzy numbers are used in developmental analysis method to show the level of priorities, so according to following common table, verbal variables (priorities of experts) turn to triangular fuzzy numbers:

Table 1: Changing verbal variables to triangular fuzzy numbers

Reversed triangular fuzzy number	Triangular fuzzy number	Verbal variable
$(1,1,1)$	$(1,1,1)$	Excellent
$\left(\dfrac{2}{3},1,2\right)$	$\left(\dfrac{1}{2},1,\dfrac{3}{2}\right)$	Much better
$\left(\dfrac{1}{2},\dfrac{2}{3},1\right)$	$\left(1,\dfrac{3}{2},2\right)$	Better
$\left(\dfrac{2}{5},\dfrac{1}{2},\dfrac{2}{3}\right)$	$\left(\dfrac{3}{2},2,\dfrac{5}{2}\right)$	Average
$\left(\dfrac{1}{3},\dfrac{2}{5},\dfrac{1}{2}\right)$	$\left(2,\dfrac{5}{2},3\right)$	Low
$\left(\dfrac{2}{7},\dfrac{1}{3},\dfrac{2}{5}\right)$	$\left(\dfrac{5}{2},3,\dfrac{7}{2}\right)$	Too low

Second step: Unanimity of viewpoints of experts: To define priorities in paired comparisons matrix, unanimity of viewpoints of experts is referred for selection and appointment of managers in viewpoint of Nahjol-Balagha, because analyzing complicated affairs requires the viewpoints of more experts. In making decision according to opinion of some experts, their ideas will be composed or coordinated to take final decision.

Making decision according to opinion of some experts is called "unanimity". Whereas the opinion of experts is explained in the words of natural languages and can be considered as verbal quantities and be described by fuzzy logic, the unanimity of their opinions can be obtained through fuzzy average (Momeni, 2005).

Due to triangular fuzzy numbers which are used to make the importance of selection and appointment of managers as fuzzy parameters in viewpoint of Nahjol-Balagha, unanimity of positive opinions of experts will be calculated based on following triangular average equation (the importance of opinions is considered equally).

Suppose n triangular numbers:

$$i = 1,...,n \ A_i = (a_1^{(i)}, a_M^{(i)}, a_2^{(i)})$$

Triangular average (A_{ave}) is calculated by adding up triangular numbers and dividing on a true number. The result is a triangular number which is shown in equation 1:

$$A_{ave} = \frac{A_1 + ... + A_n}{n} = \frac{(\sum_{i=1}^{n} a_1^{(i)}, \sum_{i=1}^{n} a_M^{(i)}, \sum_{i=1}^{n} a_2^{(i)})}{n}$$

$$A_{ave} = (m_1, m_M, m_2) = (\frac{1}{n}\sum_{i=1}^{n} a_1^{(i)}, \frac{1}{n}\sum_{i=1}^{n} a_M^{(i)}, \frac{1}{n}\sum_{i=1}^{n} a_2^{(i)}) \quad (1)$$

Third step: Forming paired comparisons matrix: Paired comparisons matrix for indexes toward each other and for options toward each index will be formed in this step by means of obtained fuzzy averages in previous step. In each matrix, any cell above the main diameter refers to the level of importance of parameters of row toward the parameters of column, and any cell below the main diameter refers to the level of importance of parameters of column toward the parameters of row and their value is reversed of cells above the main diameter. For example, table 2 represents a comparison between effective factors to select and appoint managers in viewpoint of Nahjol-Balagha:

Table 2: A specimen of paired comparisons matrix according to triple criteria of Nahjol-Balagha

Indexes	Personal and professional capabilities to select and appoint managers	Valued attributes to select and appoint managers	Mental qualifications to select and appoint managers
Personal and professional capabilities to select and appoint managers	$(1,1,1)$	$\left(\frac{3}{2}, 2, \frac{5}{2}\right)$	$\left(\frac{3}{2}, 2, \frac{5}{2}\right)$
Valued attributes to select and appoint managers	$\left(\frac{2}{5}, \frac{1}{2}, \frac{2}{3}\right)$	$(1,1,1)$	$\left(\frac{2}{3}, 1, 2\right)$
Mental qualifications to select and appoint managers	$\left(\frac{2}{5}, \frac{1}{2}, \frac{2}{3}\right)$	$\left(\frac{1}{2}, 1, \frac{3}{2}\right)$	$(1,1,1)$

The data in table 2 changed to triangular fuzzy numbers by means of table 1 and according to average replies to questionnaires in Lickert spectrum and their fuzzy average.

C) Calculation of coefficients for paired comparison matrixes: The weight of parameters will be calculated after formation of paired comparisons matrixes and data collection. For such this calculation, coefficients of each paired comparisons matrix and magnitude level of parameters should be calculated toward each other. According to EA method, coefficients of matrixes are calculated by following equation (Asgharpour, 2004):

$$S_K = \sum_{j=1}^{n} M_{KL} \times \left[\sum_{j=1}^{m} \sum_{j=1}^{n} M_{ij}\right]^{-1}$$

(2)

Where, k is the number of row and i and j are options and indexes, respectively.

For instance, for the table of criteria to select and appoint managers according to Nahjol-Balagha, the level of coefficients for paired comparison matrix – represented in table 2 – can be calculated as following:

Table 3: A calculation specimen of coefficients of triple criteria matrix of Nahjol-Balagha in current study (according to equation 2)

Criteria	$\sum_{J=1}^{N} M_{KL}$		$\sum_{J=1}^{M} \sum_{J=1}^{N} M_{IJ}$		S_K
Personal and professional capabilities to select and appoint managers	(4,5,6)		(0.072, 0.100,0.126)		(0.288, 0.500, 0.756)
Valued attributes to select and appoint managers	(2.067, 2.5, 3.667)	×	(0.072, 0.100,0.126)	=	(0.149, 0.250, 0.462)
Mental qualifications to select and appoint managers	(1.9, 2.5, 4.167)		(0.072, 0.100,0.126)		(0.137, 0.250, 0.525)

After calculation of SKs, the level of their magnitude should be obtained toward each other. Generally, if M1 and M2 are two triangular fuzzy numbers, magnitude level of M1 toward M2, shown as V(M1≥M2), will be defined as following:

$$V(M_1 \geq M_2) = 1 \qquad m_1 \geq m_2$$
$$V(M_1 \geq M_2) = hgt(M_1 \cap M_2) \qquad \text{otherwise:} \qquad (3)$$
$$hgt(M_1 \cap M_2) = \frac{u_1 - l_2}{(u_1 - l_2) + (m_2 - m_1)}$$

Magnitude level of a triangular fuzzy number from k other triangular fuzzy numbers will be calculated as following:

$$V(M_1 \geq M_2, ..., M_K) = V(M_1 \geq M_2), ..., V(M_1 \geq M_K)$$

(4)

for instance, the level of magnitude of triangular fuzzy number for table 2 in current study is calculable based on table 4 to define the criteria of personal and professional capabilities for selection and appointment of managers.

Table 4: A calculation specimen of magnitude of triangular fuzzy number for personal and professional capabilities to select and appoint managers toward other criteria (according to equation 3)

Magnitude level		=		=	
for personal and professional capabilities to select and appoint managers toward valued attributes to select and	$V(S_1 \geq S_2)$		$\dfrac{(0.756-0.149)}{(0.756-0.149) + (0.250-0.500)}$		1

appoint managers for personal and professional capabilities to select and appoint managers toward mental qualifications to select and appoint managers	$V(S_1 \geq S_3)$		$\dfrac{(0.756 - 0.137)}{(0.756 - 0.137) + (0.250 - 0.500)}$		1

Calculations in above table are performed for each criterion toward the others. At last, the least level of magnitude for each substructure is obtained toward the others as it is shown in table 5:

Table 5: A specimen of calculation of the least level of magnitude (according to equations 3 and 4)

Criterion of personal and professional capabilities to select and appoint managers toward other criteria	Min $V(S_1 \geq S_2, S_3)$	=	1.0000
Criterion of valued attributes to select and appoint managers toward other criteria	Min $V(S_2 \geq S_1, S_3)$		0.4063
Mental qualifications to select and appoint managers toward other criteria	Min $V(S_3 \geq S_1, S_2)$		0.4833

D) Calculation of the weight of indexes and options: After obtaining magnitude level, we follow these steps to calculate the weight of parameters in paired comparisons matrix:

$$W'(x_i) = \text{Min} \{V(S_i \geq S_k)\}, \quad K = 1, 2, ..., n \quad K \neq i \tag{5}$$

For example, the vector of W'(x_i) for matrix 2 in our study will be:

$$W'(x_i) = [1, 0.4063, 0.4833]$$

The parameters of above equation are extracted from table 5 which represents the least magnitude level.

So, the vector of the weight of parameters is as following:

$$W' = [W'(c_1), W'(c_2), ..., W'(c_n)]^T \tag{6}$$

Then, the vector of abnormal coefficients of fuzzy AHP will be changed to normal weights through following equation:

$$w_i = \frac{w'i}{\sum w'i} \tag{7}$$

At last, the total will be calculated ($\Sigma = 1.8896$) and the amount of w_i will be calculated by dividing each parameter on the total amount:

$$w_i = 0.5292, 0.2150, 0.2558]^T$$

Obtained parameters are those which are the ranking of effective criteria in table 6 to select and appoint managers in viewpoint of Nahjol-Balagha.

E) Ranking the importance of indexes and parameters: At last, the results of calculating the weight of three criteria of personal and professional capabilities to select and appoint managers, valued attributes to select and appoint managers and mental qualifications to select and appoint managers were merged with the results of the weight of 30 parameters related to effective criteria to select and appoint managers in viewpoint of Nahjol-Balagha (from A1 to A30) through geometrical average to achieve relative importance of parameters. Tables 6 and 7 show the result of above calculations according to the importance of parameters (options):

Table 6: Ranking effective criteria to select and appoint managers in viewpoint of Nahjol-Balagha

No	Criterion	Score	Priority
1	Personal and professional capabilities to select and appoint managers	0.5292	1
2	Valued attributes and qualifications to select and appoint managers	0.2150	3
3	Mental qualifications to select and appoint managers	0.2558	2

Above tables show that personal and professional capabilities to select and appoint managers are in first priority and valued attributes and mental qualifications are respectively in other priorities to select and appoint managers in viewpoint of Nahjol-Balagha.

To calculate table 7, for example for personal and professional capabilities to select and appoint managers, each figure in the column of primary weight of parameters of personal and professional capabilities to select and appoint managers should be multiplied in the weight of personal and professional capabilities to select and appoint managers which is 0.5292 according to table 7 to obtain the column of total grade of personal and professional capabilities to select and appoint managers. Such this process is performed for the columns of initial weight of valued attributes to select and appoint managers and initial weight of mental qualifications to select and appoint managers, namely each one is multiplied in the weight of its related criterion to obtain the column of total grade of personal and professional capabilities to select and appoint managers, total grade of valued attributes to select and appoint managers and total grade of mental qualifications to select and appoint managers.

Table 7: Ranking the parameters of selection and appointment of managers in viewpoint of Nahjol-Balagha according to triple criteria

Initial ranking of personal and professional capabilities to select and appoint managers	Initial ranking of valued attributes to select and appoint managers	Initial ranking of parameters of mental attributes to select and appoint managers		Weight of substructures		Total ranking of personal and professional capabilities to select and appoint managers	Total ranking of valued attributes to select and appoint managers	Total ranking of parameters of mental attributes to select and appoint managers
0.0753	0.1002	0.0964	×		=	0.0398	0.0215	0.0246
0.1432	0.0384	0.1150		0.05292		0.0758	0.0082	0.0294
0.2097	0.1148	0.0964		0.2150		0.1109	0.0247	0.0246
0.0694	0.0256	0.1367		0.2558		0.0367	0.0057	0.0349
0.0803	0.1821	0.1367				0.0425	0.0391	0.0349
0.0843	0.0025	0.0152				0.0446	0.0005	0.0039
0.1146	0.1383	0.1634				0.0606	0.0297	0.0418
0.0753	0.1002	0.0288				0.0398	0.0215	0.0073
0.0786	0.1821	0.1150		0.271		0.0416	0.0391	0.0294
0.0694	0.1148	0.0964				0.0367	0.0247	0.0246

At last, effective parameters and factors to select and appoint managers in viewpoint of Nahjol-Balagha are represented in table 8 with their scores and grades.

Table 8: Ranking priority of parameters to select and appoint managers in viewpoint of Nahjol-Balagha

Priority	Score	Criteria	No	Priority	Score	Criteria	No
12	0.0297	Justice	15	1	0.1109	decent dynasty	1
13	0.0294	saving public properties	16	2	0.0758	eloquence	2
13	0.0294	loyalty	17	3	0.0606	good experience	3
14	0.0247	fighting with cruel and supporting oppressed	18	4	0.0446	liberality	4
14	0.0247	concealment of others' faults and avoiding to find their faults	19	5	0.0425	accuracy	5
15	0.0246	responsibility against the society	20	6	0.0418	cheerfulness	6
15	0.0246	slogan blame	21	7	0.0416	discern and analysis ability	7
15	0.0246	anger restrain	22	8	0.0398	discipline	8
16	0.0215	patience	23	8	0.0398	knowledge	9
16	0.0215	learning from the past	24	9	0.0391	moderation in anger and kindness	10
17	0.0082	virtue and piety	25	9	0.0391	not flattering	11
18	0.0073	moderation in moralities	26	10	0.0367	power and ability	12
19	0.0057	Truthfulness and truth seeking	27	10	0.0367	resistance against problems	13
20	0.0039	tranquility and dignity	28	11	0.0349	prudency	14
21	0.0005	return to the truth after awareness	30	11	0.0349	kindness and compassion	15

According to table 8, decent dynasty, eloquence, good experience, liberality and accuracy are in first to fifth positions and virtue and piety, moderation in moralities, Truthfulness and truth seeking and return to the truth after awareness are in 25 to 21 positions.

Calculations and tables of criteria to select and appoint managers in viewpoint of new management are the same with tables and calculations of criteria in viewpoint of Nahjol-Balagha.

Table 9: Ranking effective factors on selection and appointment of managers in viewpoint of new management

No	Criterion	Score	Priority
1	Personal and professional capabilities to select and appoint managers	0.6142	1
2	Valued attributes and qualifications	0.2289	2
3	Mental qualifications to select and appoint managers	0.1569	3

Above table shows that "personal and professional capabilities to select and appoint managers" is in the first priority and "Valued attributes and qualifications" and "Mental qualifications to select and appoint managers" are respectively in other priorities to select and appoint managers in viewpoint of new management.

Table 10: Ranking of parameters to select and appoint managers in viewpoint of new management according to triple criteria

Initial weight of personal and professional capabilities to select and appoint	Initial weight of valued attributes to select and appoint	Initial weight of parameters of mental attributes to		Weight of substructures		Total ranking of personal and professional capabilities	Total ranking of valued attributes to select and appoint	Total ranking of parameters of mental attributes to select and appoint

managers	managers	select and appoint managers	×		=	to select and appoint managers	managers	managers
0.1397	0.1245	0.0780	×		=	0.0858	0.0285	0.0122
0.0721	0.0266	0.0703		0.6142		0.0443	0.0061	0.0103
0.0211	0.1108	0.1326		0.2289		0.0129	0.0253	0.0208
0.0187	0.1453	0.1326		0.1569		0.0114	0.0332	0.0208
0.0721	0.0296	0.0703				0.0443	0.0068	0.0103
0.1474	0.1108	0.0590				0.0905	0.0253	0.0092
0.1455	0.1108	0.2264				0.0893	0.0253	0.0355
0.1397	0.1063	0.0590				0.0858	0.0243	0.0092
0.1715	0.1108					0.1053	0.0253	0.0092
0.0721	0.1245	0.1129				0.0443	0.0285	0.0177

Table 11: Ranking of parameter priorities to select and appoint managers in viewpoint of new management

Priority	Score	Parameters	No	Priority	Score	Parameters	No
9	0.0253	Consultation	15	1	0.1053	Relations	1
10	0.0243	Self-confidence	16	2	0.0905	Experience- working background	2
11	0.0208	Philanthropy	17	3	0.0893	Education and professional courses	3
11	0.0208	Investigating social affairs	18	4	0.0858	Skills	4
12	0.0177	Enduring the opponents and accepting faults	19	4	0.0858	Physical power and health	5
13	0.0129	Mental capabilities- decision making	20	5	0.0443	Personality	6
14	0.0122	Truthfulness	21	5	0.0443	Mental capabilities- awareness	7
15	0.0114	Mental capabilities- creativity	22	5	0.0443	Leadership	8
16	0.0103	Responsibility	23	6	0.0355	Proud to solve the problem of people	9
16	0.0103	Faithfulness	24	7	0.0332	Execution of the law	10
17	0.0092	Stability	25	8	0.0285	Decisiveness	11
17	0.0092	Patience	26	8	0.0285	Creation of human relationship as an effective tool	12
17	0.0092	Self-control	27	9	0.0253	Knowledge	13
18	0.0068	Justice	28	9	0.0253	Effort	14
19	0.0061	Trusteeship	30	9	0.0253	Future anticipation	15

According to results of table 11, relations, working history, past function, education and professional courses are in first to third positions and self-control, justice and trusteeship are in 17 to 19 positions.

Conclusion

As it is mentioned before, AHP-Fuzzy technique is used to analyze collected data and information. Following is the result of this process:

1- Ranking criteria and parameters to select and appoint managers in viewpoint of Nahjol-Balagha by means of AHP-Fuzzy technique

1.1- Total ranking of criteria

The result of the ranking of parameters by means of AHP-Fuzzy technique showed that personal and professional capabilities, valued attributes and mental qualifications are respectively in first to third positions.

1.2- Total ranking of parameters

The result of ranking parameters by means of AHP-Fuzzy technique showed that the parameters of decent dynasty, eloquence, good experience, liberality, accuracy, cheerfulness, discern and analysis ability, discipline, knowledge, moderation in anger and kindness, not flattering, power and ability, resistance against problems, prudency, kindness and compassion, justice, saving public properties, loyalty, fighting with cruel and supporting oppressed, concealment of others' faults and avoiding to find their faults, responsibility against the society, slogan blame, anger restrain, patience, learning from the past, virtue and piety, moderation in moralities, truthfulness, truth seeking, tranquility and dignity and return to the truth after awareness are in next positions after above-mentioned first three positions.

2- Ranking criteria and parameters to appoint and select managers in viewpoint of new management by means of AHP-Fuzzy

2.1- Total ranking of criteria

The result of the ranking of parameters by means of AHP-Fuzzy technique showed that personal and professional capabilities, valued attributes and mental qualifications are respectively in first to third positions.

2.2- Total ranking of parameters

Ranking parameters by means of AHP-Fuzzy technique showed that the parameters of relationships, experience and working background, education and professional courses, skills, physical abilities and health, personality, mental-intelligence capabilities, leadership, proud of helping people, decisiveness, establishing human relations as a tool for efficiency, knowledge, resistance against problems, prudency, kindness, justice and fairness, saving public properties, saving public properties, loyalty, fighting with cruel and supporting oppressed, concealment of others' faults and avoiding to find their faults, responsibility against the society, effort, consultation, self-confidence, philanthropy, removing social problems, endurance of opponents and acceptance of mistakes, mental capabilities – decision making, truthfulness, mental capabilities – creativity, responsibility, secrecy, constancy, patience, self-control, justice and reliance are in next positions after three first positions.

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