



*Asesorías y Tutorías para la Investigación Científica en la Educación Puig-Salabarría S.C.
José María Pino Suárez 400-2 esq a Lerdo de Tejada, Toluca, Estado de México. 7223898475*

RFC: ATI120618V12

Revista Dilemas Contemporáneos: Educación, Política y Valores.

<http://www.dilemascontemporaneoseduccionpoliticayvalores.com/>

Año: VI

Número: Edición Especial

Artículo no.:75

Período: Marzo, 2019.

TÍTULO: Aplicación del método de Dimatel para identificar factores efectivos en una organización inteligente (estudio de caso en una organización de seguridad social).

AUTORES:

1. Taher Pazireh.
2. Gholamreza Rahimi.
3. FarhadNejad Irani.
4. Nader Bohlouli.

RESUMEN: En esta investigación se ha intentado identificar factores potenciales en organizaciones inteligentes que se refieren a estudios similares y opiniones de expertos e identificar la estructura jerárquica de los factores y las relaciones de afectar y afectar y, en última instancia, extraer los factores importantes que influyen en las organizaciones inteligentes. Los resultados de la investigación mostraron que, desde el punto de vista de los expertos, entre los 15 criterios, el aprendizaje y la inteligencia de la organización es de suma importancia en una selección influyente. También se observó que el criterio de identificación de necesidades, con el mayor número de columnas, era el criterio más efectivo y el criterio de aprendizaje de la organización.

PALABRAS CLAVES: organización inteligente, organización de seguridad social, método Dimatel, toma de decisiones multivariada

TITLE: Application of Dimatel Method to identify effective factors in smart organization (Case Study in Social Security Organization).

AUTHORS:

1. Taher Pazireh.
2. Gholamreza Rahimi.
3. FarhadNejad Irani.
4. Nader Bohlouli.

ABSTRACT: In this research it has been tried to identify potential factors in smart organizations referring to similar studies and experts' opinions and identify the hierarchical structure of the factors and relationships of affecting and being affected and ultimately extract the important factors influencing smart organizations. The results of the research showed that, from expert's point of view, among the 15 criteria, the organization's learning and intelligence is of highest importance in an influential selection. It was also observed that the criterion of identifying needs, with the highest number of columns, was the most effective criterion and the criterion of the organization's learning.

KEY WORDS: smart organization, social security organization, Dimatel method, multivariate decision-making.

INTRODUCTION.

Nowadays, the old methods of managing organizations are not responsive to the rapid changes of the environment. Management methods used in today's organizations have been transformed from traditional methods and have caused all organization members to participate in current affairs. These changes have led to the emergence of new types of organizations, such as virtual organizations, horizontal organizations, and so on, which are known as Knowledge-Based Organizations.

Smart organization is a modified pattern for organizations and a new way of rethinking the organization in the age of knowledge. In today's world, creating a smart organization is one of the undeniable requirements for most knowledge-based organizations. Because by doing so they will be able to increase their capabilities through acquisition and analysis of information as well as increasing knowledge and awareness. It is in the light of this knowledge and smartness that the full picture of the current and future condition of the competitions plays a role in the progress of managers. It helps them to make better decisions.

In today's turbulent environments, the success and strength of knowledge-based organizations depends on the intellectual capacity of their employees, and one of the biggest challenges that these organizations face is how they should create a new generation of smart organizations that are specifically designed for the age of knowledge (Bagherian et al. 2016).

Rapid changes, increase in dependence and globalization are the environmental features that today's organizations face. Modern organizations need to be adapted to an environment whose complexity, incontinency and uncertainty is increasing (Waldman et al., 2001). Under these conditions, organizations must have a proper level of complexity, flexibility, the power of the reasonable reaction, the ability to discover opportunities and reducing risk in a highly competitive environment, so that they can keep up with existing conditions and maintain themselves (Gotcheva et al., 2012).

Successful organizations need to manage something beyond capital and work forces in a competitive environment. Witty managers know very well that they should pay attention to the other agents and assets that exist in the organization (Bock, 1998). Both managers and organizations must accept that the philosophy of work has changed, and that being alive does not anymore entail achieving condition of constant profitability and that they should seek competition and its tools. Therefore, smart action is an integral part of increasing the ability to compete and survive (Waldman, et. al. 2001).

Nowadays, companies are exposed to internal and external forces, and they must show proper reactions to the complexity of the environment. The reason behind the success of today's companies in this turbulent and competitive environment is their ability to use and take advantage of the intra-organizational and inter-organizational capacities. Albrecht believes that the existence of smart people, smart teams and ultimately smart organization are the main factors contributing to the success of a company or business (Albrecht, 2002).

A smart organization must synchronize the processes and members of the organizations with advanced technology and address the needs of the customers within a relatively short time. A smart, secure, fundamental, value-based organization increases the involvement of its members in organizational processes and acts based on perceived tools and practices, and seeks to improve its internal aspects in order to react reasonably to the environment.

A smart organization must regularly interconnect work processes and the various aspects of the organization and, in practice, use these processes and aspects to increase synergy in the organization. Schwaninger believes that a smart organization is capable of adapting to the environment and manage its complexity. Various intellectuals in their management literature, have sought to discover smart organization as an entity and phenomenon and have described the characteristics of this form of organization as an ideal model.

The goal has been to identify the results and consequences of making use of smart organization, however, processes, internal factors and aspects that direct organization towards a smart organization are often marginalized. According to David, achieving strategic goals requires attention to the internal and external aspects of the organization (David, 2003). In the literature of management, the answer to the question that what internal aspects of an organization necessary to the formation of a smart organization are is still vague. So, the main question of the research is to determine and prioritize the extent to which aspects effect smart organizations.

DEVELOPMENT.

Methodology.

The method of this research is Dimatel method, a multi-criteria decision-making technique. The Dimatel method was introduced by Fontella and Gabos in 1976. This technique, which is a type of decision-making method based on paired comparisons, was first introduced at the Geneva Research Center. This method was then used to solve complex issues such as famine, energy, environmental protection, etc. Dimetal method is one of the tools of decision-making based on graph theory that enables us to plan and solve problems in such a way that it may be possible to draw a map of multi-criteria network relationships in a cause and effect group to better understand the causal relationships. This methodology may confirm the interrelationship between variables, criteria or limit the relationships in a developmental and systematic process. The final product of the Dimatel process is to provide an image based on graphs that can divide the involved factors into cause and effect groups and turn their relationship to a comprehensible structural model (Asghar Pour, 2010).

The statistical population of this study consists of all experts and managers who have expertise in this regard. In the process of field investigations and expert meetings, 12 management experts with the following expertise have been referred to:

- Relevant Technical knowledge at least at the master's level
- Work experience over 10 years in management position
- Having specialized articles in the field of management

The statistical sample of most studies based on Dimetal method is 10-12 selected experts (Moradi et al. 2013). It should be noted that in this process the most important factor is the quality of experts' opinion. In the present study, a questionnaire was sent to 18 management experts to and they were requested to send them to other management experts, if possible. Ultimately, 12 responses were received that were adequate, based on the number specified for the Dimatel method.

In this study, Dimatel method was used to show the internal reflection of the major criteria. This methodology was first used in the Human Sciences Program BM for a project implemented at the Geneva Research Center (GRC). Dimetal methodology is mainly used to study the complex global issues and to make use of the judgment of experts in scientific, political, economic, and social fields. Research findings

Table 1. Mean and Standard Variation of Demographical characteristics

Number of experts	Average age	Standard deviation	Average work experience
12	35.12	7.26	15.41

According to the above table, the number of experts is 12 people with a mean age of 35.12 with a standard deviation of 7.26 and a mean work experience of 15.41. 4 of the respondents had Ph.D. degrees, 6 of them were Ph.D. students and 2 had M.A. degrees. Respondents were all experienced people in management. In addition, demographic information indicates that the statistical population of this study was proper and eligible for accountability. As a result, the findings, as far as sociological characteristics are concerned, have the essential qualitative characteristic, including in terms of the internal validity of the research.

Research Implementation Process.

Step one: Elements constituting the system were not identified (elements are those 15 specified criteria derived from citation studies and interviews).

Step Two: Ask the experts for the intensity of ultimate relationships of the elements. This intensity, in the form of scoring, will be as follows. Then calculate the median or geometric mean of the scores for both existing elements.

Table 2. Likert Scale.

No effects	Extremely Low effect	Low effect	High effect	Extremely High effect
0	1	2-3-4	4-5-6	6-7-8-9

Formation of the direct relation Matrix (M): When we use the perspectives of a number of people, we use the simple average of the comments and create M.

Step three: Normalizing Direct Relation Matrices.

In order to normalize the data, in this stage, all the invert matrices are multiplied by the inverse of the sum of the value of soni.

Normalize Direct Relation Matrix $N = K * M$:

In order to calculate k in this formula, first, the sums of all rows and columns are calculated. k is the inverse of the largest number of rows and columns.

$$k = \frac{1}{\max \sum_{j=1}^n a_{ij}}$$

Step Four: Calculating the Total Relation Matrix

The following equation is used to calculate the total relation matrix: I is the identity matrix and H is the average opinion of experts.

$$T = N \times (I - N)^{-1}$$

Step Five: Creating a causal chart and calculating the threshold value and obtaining the diagram.

- The sum of the elements of each row (D) for each factor indicates its effect on other system factors.
(the level of the effectiveness of variables)

								the envi ron men t								
Applicati on of knowled ge	2	2	2	2	2	2	2	2	2	2	2	9	9	2	2	44
Creating and sharing knowled ge	4	4	4	4	4	9	9	2	9	2	2	9	9	2	2	75
Being a learner organiza tion	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	135
Compre hensive intelligen ce	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	135
Innovati ve and creative	9	9	2	2	4	9	9	2	9	2	2	9	9	2	2	81
Variabili ty	2	2	2	2	2	2	2	2	2	2	2	9	9	2	2	44
Applicati on of New technolo gy	9	3	2	2	2	2	3	2	3	2	2	9	9	2	2	54
Communi cation and interacti on with the environ ment	9	9	2	2	9	9	9	6	9	2	9	9	9	2	9	104
Organiz ation Emotion al Manage ment	9	2	2	2	2	9	3	2	3	2	2	9	9	2	2	60
Manage ment	9	9	2	2	9	9	9	9	9	8	9	9	9	9	9	120

Innovative and creative	0.07	0.07	0.01	0.01	0.03	0.07	0.07	0.01	0.07	0.01	0.01	0.07	0.07	0.01	0.01
Variability	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07	0.07	0.01	0.01
Application of New technology	0.07	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.01	0.07	0.07	0.01	0.01
Communication and interaction with the environment	0.07	0.07	0.01	0.01	0.07	0.07	0.07	0.04	0.07	0.01	0.07	0.07	0.07	0.01	0.07
Organization on Emotional Management	0.07	0.01	0.01	0.01	0.01	0.07	0.02	0.01	0.02	0.01	0.01	0.07	0.07	0.01	0.01
Management and organization	0.07	0.07	0.01	0.01	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.07
Strategic Perspective	0.07	0.07	0.01	0.01	0.07	0.07	0.07	0.01	0.07	0.01	0.04	0.07	0.07	0.01	0.04
Identify needs	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Foresight	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Teamwork and team	0.07	0.07	0.01	0.01	0.07	0.07	0.07	0.07	0.07	0.01	0.07	0.07	0.07	0.05	0.07
Organizational structure and culture	0.07	0.07	0.01	0.01	0.07	0.07	0.07	0.01	0.07	0.01	0.04	0.07	0.07	0.01	0.04

In this step we multiply alpha in direct relation matrix.

Table 5: Intensity matrix (inverse)

Reverse matrix	Applicat ion of knowl edge	Crea ting and shar ing know ledge	Bein g a lear ner orga niza tion	Co mpr ehen sive intel lige nce	Inno vati ve and crea tive	Vari abili ty	App licat ion of New tech nolo gy	Co mm unic atio n and inter acti on with the envi ron men t	Org aniz atio n Emo tion al Man age men t	Man age men t and orga niza tion	Strat egic Pers pect ive	Iden tify need s	Fore sigh t	Tea mw ork and tea m	Org aniz atio nal stru ctur e and cult ure
-----------------------	-------------------------------------	---	--	---	---	---------------------	--	---	---	---	--------------------------------------	---------------------------	-------------------	-------------------------------------	---

Applica tion of knowle dge	1.0 4	0.0 3	0.0 3	0.0 3	0.0 3	0.0 4	0.0 4	0.0 3	0.0 4	0.0 3	0.0 3	0.1	0.1	0.0 3	0.0 3
Creatin g and sharing knowle dge	0.0 7	1.0 6	0.0 5	0.0 5	0.0 6	0.1 1	0.1	0.0 4	0.1	0.0 4	0.0 4	0.1 2	0.1 2	0.0 4	0.0 4
Being a learner organiz ation	0.1 6	0.1 5	1.1 1	0.1 1	0.1 4	0.1 6	0.1 6	0.1 2	0.1 6	0.1 1	0.1 3	0.1 9	0.1 9	0.1 2	0.1 3
Compre hensive intellige nce	0.1 6	0.1 5	0.1 1	1.1 1	0.1 4	0.1 6	0.1 6	0.1 2	0.1 6	0.1 1	0.1 3	0.1 9	0.1 9	0.1 2	0.1 3
Innovat ive and creative	0.1 1	0.1	0.0 3	0.0 3	1.0 6	0.1 1	0.1	0.0 4	0.1	0.0 3	0.0 4	0.1 2	0.1 2	0.0 4	0.0 4
Variabi lity	0.0 4	0.0 3	0.0 3	0.0 3	0.0 3	1.0 4	0.0 4	0.0 3	0.0 4	0.0 3	0.0 3	0.1	0.1	0.0 3	0.0 3
Applica tion of New technol ogy	0.0 9	0.0 5	0.0 3	0.0 3	0.0 4	0.0 4	1.0 5	0.0 3	0.0 5	0.0 3	0.0 3	0.1	0.1	0.0 3	0.0 3
Commu nication and interact ion with the environ ment	0.1 3	0.1 2	0.0 4	0.0 4	0.1 1	0.1 3	0.1 2	1.0 7	0.1 2	0.0 4	0.1	0.1 5	0.1 5	0.0 4	0.1
Organiz ation Emotio nal Manage ment	0.1	0.0 4	0.0 3	0.0 3	0.0 4	0.0 9	0.0 5	0.0 3	1.0 5	0.0 3	0.0 3	0.1 1	0.1 1	0.0 3	0.0 3
Manage ment and organiz ation	0.1 5	0.1 3	0.0 5	0.0 5	0.1 3	0.1 4	0.1 4	0.1 1	0.1 4	1.0 9	0.1 2	0.1 7	0.1 7	0.1	0.1 2

Strategic Perspective	0.12	0.11	0.04	0.04	0.1	0.12	0.11	0.04	0.11	0.04	1.07	0.14	0.14	0.04	0.07
Identify needs	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	1.02	0.02	0.01	0.01
Foresight	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.02	1.02	0.01	0.01
Teamwork and team	0.14	0.13	0.04	0.04	0.12	0.14	0.13	0.0	0.13	0.04	0.11	0.16	0.16	1.08	0.11
Organizational structure and culture	0.12	0.11	0.04	0.04	0.1	0.12	0.11	0.04	0.11	0.04	0.07	0.14	0.14	0.04	1.07

This step calculates the possible intensity matrix of direct and indirect relationships that are obtained in the form of - reverse I-M

Table 6: Matrix of total relations or Intensity of direct and indirect relations

Total Relationship Matrix	Application of knowledge	Creating and sharing knowledge	Being a learner organization	Comprehensive intelligence	Innovative and creative	Variability	Application of New technology	Communication and interaction with the environment	Organization and Emotional Management	Management and organization	Strategic Perspective	Identify needs	Foresight	Teamwork and team	Organizational structure and culture	سطر R ی
Application of knowledge	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.04	0.03	0.03	0.1	0.1	0.03	0.03	0.6

Creating and sharing knowledge	0.07	0.06	0.05	0.05	0.06	0.11	0.11	0.04	0.11	0.04	0.04	0.12	0.12	0.04	0.04	1.05
Being a learner organization	0.16	0.15	0.11	0.11	0.14	0.16	0.16	0.12	0.16	0.11	0.13	0.19	0.19	0.12	0.13	2.14
Comprehensive intelligence	0.16	0.15	0.11	0.11	0.14	0.16	0.16	0.12	0.16	0.11	0.13	0.19	0.19	0.12	0.13	2.14
Innovative and creative	0.11	0.11	0.03	0.03	0.06	0.11	0.11	0.04	0.11	0.03	0.04	0.12	0.12	0.04	0.04	1.09
Variability	0.04	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.04	0.03	0.03	0.11	0.11	0.03	0.03	0.6
Application of New technology	0.09	0.05	0.03	0.03	0.04	0.04	0.05	0.03	0.05	0.03	0.03	0.11	0.11	0.03	0.03	0.73
Communication and interaction with the environment	0.13	0.12	0.04	0.04	0.11	0.13	0.12	0.07	0.12	0.04	0.11	0.15	0.15	0.04	0.11	1.47
Organization Emotional Management	0.11	0.04	0.03	0.03	0.04	0.09	0.05	0.03	0.05	0.03	0.03	0.11	0.11	0.03	0.03	0.8
Management and organization	0.15	0.13	0.05	0.05	0.13	0.14	0.14	0.11	0.14	0.09	0.12	0.17	0.17	0.11	0.12	1.79
Strategic	0.12	0.11	0.04	0.04	0.11	0.12	0.11	0.04	0.11	0.04	0.07	0.14	0.14	0.04	0.07	1.27

Perspective																
Identify needs	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.24
Foresight	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.24
Teamwork and team	0.14	0.13	0.04	0.04	0.12	0.14	0.13	0.1	0.13	0.04	0.11	0.16	0.16	0.08	0.11	1.63
Organizational structure and culture	0.12	0.11	0.04	0.04	0.1	0.12	0.11	0.04	0.11	0.04	0.07	0.14	0.14	0.04	0.07	1.27
Application of knowledge	1.47	1.24	0.64	0.64	1.14	1.43	1.34	0.84	1.34	0.68	0.96	1.8	1.8	0.75	0.96	

In this step the relative intensity matrix of direct and indirect relationships (total relations) is calculated, which is inverse M (I-M).

Table 7: indirect relations intensity Matrix

Indirect intensity matrix	Ap plication of knowledge	Cre ating and sharing knowledge	Being a learner organization	Competitive intelligence	Innovative creative intelligence	Variability	Application of New technologies	Communication	Organization	Management	Strategic Perspective	Identify needs	Forecasting	Teamwork and team	Organizational structure and
----------------------------------	---------------------------	---------------------------------	------------------------------	--------------------------	----------------------------------	-------------	---------------------------------	---------------	--------------	------------	-----------------------	----------------	-------------	-------------------	------------------------------

		wle dge					log y	wit h the env iro nm ent	em						cult ure
Applica tion of knowle dge	0.0 2	0.0 2	0.0 1	0.0 1	0.0 2	0.0 2	0.0 2	0.0 1	0.0 2	0.0 1	0.0 2	0.0 3	0.0 3	0.0 1	0.0 2
Creatin g and sharing knowle dge	0.0 4	0.0 3	0.0 2	0.0 2	0.0 3	0.0 4	0.0 4	0.0 2	0.0 4	0.0 2	0.0 3	0.0 6	0.0 6	0.0 2	0.0 3
Being a learner organiz ation	0.1	0.0 8	0.0 4	0.0 4	0.0 8	0.1	0.0 9	0.0 6	0.0 9	0.0 5	0.0 6	0.1 2	0.1 2	0.0 5	0.0 6
Compre hensive intellige nce	0.1	0.0 8	0.0 4	0.0 4	0.0 8	0.1	0.0 9	0.0 6	0.0 9	0.0 5	0.0 6	0.1 2	0.1 2	0.0 5	0.0 6
Innovat ive and creative	0.0 4	0.0 3	0.0 2	0.0 2	0.0 3	0.0 4	0.0 4	0.0 2	0.0 4	0.0 2	0.0 3	0.0 6	0.0 6	0.0 2	0.0 3
Variabi lity	0.0 2	0.0 2	0.0 1	0.0 1	0.0 2	0.0 2	0.0 2	0.0 1	0.0 2	0.0 1	0.0 2	0.0 3	0.0 3	0.0 1	0.0 2
Applica tion of New	0.0 3	0.0 2	0.0 1	0.0 1	0.0 2	0.0 3	0.0 3	0.0 2	0.0 3	0.0 1	0.0 2	0.0 4	0.0 4	0.0 1	0.0 2

technology															
Communication and interaction with the environment	0.0 6	0.0 5	0.0 3	0.0 3	0.0 5	0.0 6	0.0 6	0.0 3	0.0 6	0.0 3	0.0 4	0.0 8	0.0 8	0.0 3	0.0 4
Organization Emotional Management	0.0 3	0.0 2	0.0 1	0.0 1	0.0 2	0.0 3	0.0 3	0.0 2	0.0 3	0.0 1	0.0 2	0.0 4	0.0 4	0.0 2	0.0 2
Management and organization	0.0 8	0.0 7	0.0 3	0.0 3	0.0 6	0.0 8	0.0 7	0.0 4	0.0 7	0.0 3	0.0 5	0.1	0.1	0.0 4	0.0 5
Strategic Perspective	0.0 5	0.0 4	0.0 2	0.0 2	0.0 4	0.0 5	0.0 5	0.0 3	0.0 5	0.0 2	0.0 3	0.0 7	0.0 7	0.0 2	0.0 3
Identify needs	0.0 1	0.0 1	0 0	0 0	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1
Foresight	0.0 1	0.0 1	0 0	0 0	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1	0.0 1
Teamwork and team	0.0 7	0.0 6	0.0 3	0.0 3	0.0 5	0.0 7	0.0 6	0.0 4	0.0 6	0.0 3	0.0 4	0.0 9	0.0 9	0.0 3	0.0 4
Organizational structure and culture	0.0 5	0.0 4	0.0 2	0.0 2	0.0 4	0.0 5	0.0 5	0.0 3	0.0 5	0.0 2	0.0 3	0.0 7	0.0 7	0.0 2	0.0 3

In this step, the relative intensity matrix is obtained from the indirect matrix which is inverse M^2

(I-M).

Research findings.

In the matrix T, which was introduced in this chapter, the row sum of the elements (R) and the column sum of the elements (J) and the sum (R + J) and the difference (R-J) were calculated. The highest total row (R) represents indicators that strongly influence other indicators. The maximum sum of the column (J) represents the order of the indicators that are influenced. The actual position of each index in the final hierarchy is determined by the columns (R + J) and (RJ), in which (R + J) represents the sum of the intensity of an indicator along the length of the axis, both in terms of penetrating and being penetrated. In other words, the maximum amount (R + J) in the system has the greatest effect and is the most being affected in the system. In the case of (R-J), which indicates the position of an index along the x-axis, it can be said that if (R-J) is positive, this position is definitely a penetrating one and, if negative, it definitely is influenced.

Table 8: Determining the Hierarchy.

Criterion name	R Value	J Value	R + J value	R-J value
Being a learner organization	2.1357	0.6359	2.7716	1.4997
Comprehensive intelligence	2.1357	0.6359	2.7716	1.4997
Management and organization	1.7898	0.6773	2.4671	1.1126
Teamwork and team	1.6269	0.7547	2.3816	0.8722
Communication and interaction with the environment	1.4746	0.835	2.3097	0.6396
Organizational structure and culture	1.267	0.9631	2.23	0.3039
Strategic Perspective	1.267	0.9631	2.23	0.3039
Innovative and creative	1.0888	1.1444	2.2332	-0.0555
Creating and sharing knowledge	1.0466	1.2411	2.2877	-0.1945
Organization Emotional Management	0.7952	1.3415	2.1367	-0.5462
Application of New technology	0.7273	1.3415	2.0687	-0.6142
Application of knowledge	0.6029	1.4666	2.0695	-0.8637
Variability	0.6029	1.4282	2.0311	-0.8253
Foresight	0.2373	1.8034	2.0407	-1.5661
Identify needs	0.2373	1.8034	2.0407	-1.5661

Using the findings of the research and the above table, it was determined that the criterion of organization's learning, with the highest total of lines, among other criteria, has the most effect on other elements, in the way of choosing the most effective inter-component of the smart organization, and identifying needs has the least effect on other elements.

It was also observed that the criterion of identifying needs, with the highest number of columns, was the most effective and the learning criterion of the organization, with the least number of columns, has the least degree of the effect on other elements in the research.

Ultimately, a criterion that has the highest weighting coefficient among other criteria and in other words, has the greatest effect on the whole system, is the organization's learning and comprehensive intelligence, the value of whose $R + J$ is 2.7716. In other words, the learning of the organization and the comprehensive intelligence, according to experts, is of the extremely important in an influential selection for smart organization from among 15 criteria.

Also, by observing the values of RJ , it is worth mentioning that innovative and creative criteria, creating and sharing knowledge, emotional management of the organization, application of modern technology, application of knowledge, variability, foresight, identification of needs, permeability elements in organization's learning, comprehensive intelligence, management and organization, teamwork, and interaction with the environment, organizational structure and culture, strategic perspective are elements that influence the system.

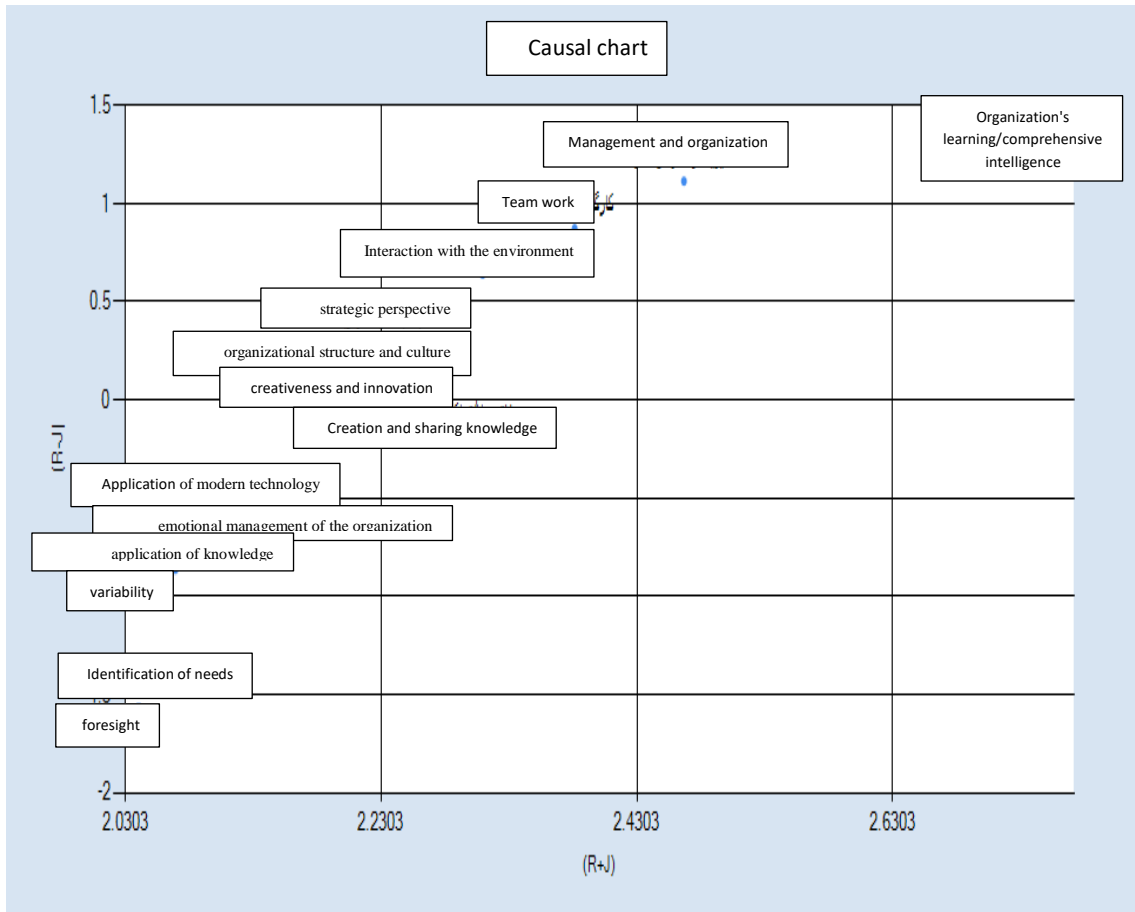


Chart 1: Causal chart and the relationship of the criteria using Dimatel method

CONCLUSIONS.

Dimatel method was used to investigate the effects of aspects for internal reflection among the major criteria in smart organization.

The statistical population of this study consists of all experts and managers who have expertise in this regard. In the process of field investigations and expert meetings, 12 management experts have been referred to. These experts had expertise like relevant technical knowledge at least at the master's level, work experience over 10 years in management position and having specialized articles in the field of management.

To this end, the number of experts is 12 people with a mean age of 35.12 with a standard deviation of 7.26 and a mean work experience of 15.41. 4 of the respondents had Ph.D. degrees, 6 of them were Ph.D. students and 2 had M.A. degrees.

According to the findings of the research, it was determined that the criterion of organization's learning, with the highest total of lines, among other criteria, has the most effect on other elements, in the way of choosing the most effective inter-component of the smart organization, and identifying needs has the least effect on other elements.

It was also observed that the criterion of identifying needs, with the highest number of columns, was the most effective criterion and the criterion of the organization's learning, with the least amount of the column, is the least affected criterion by other elements of the research.

Ultimately, a criterion that has the highest weighting coefficient among other criteria and in other words, has the greatest effect on the whole system, is the organization's learning and comprehensive intelligence, the value of whose $R + J$ is 2.7716. In other words, the learning of the organization and the comprehensive intelligence, according to experts, is of the extremely important in an influential selection for smart organization from among 15 criteria. Also, by observing the values of RJ , it is worth mentioning that innovative and creative criteria, creating and sharing knowledge, application of modern technology, application of knowledge, variability, foresight, identification of needs, permeability elements in organization's learning, comprehensive intelligence, management and organization, teamwork and strategic perspective are elements that influence the system.

BIBLIOGRAPHI REFERENCES.

1. Asghar Pour, M. (2010). Group decision making and game theory with the "Research in Operations" Attitude, Second Edition, Tehran: Tehran University Press.

2. Bagherian, A. Kasagari, B, Seifi, A. and Pashasadgan, A. (2016), Measurement of the Influence of Infrastructure Employee Company Profitability on Organizational Intelligence, Journal of Strategic Management Researches, Vol.2, No 60, pp. 158-141.
3. David, F. (2003), Strategic Management, Translation by Ali Parsaeen and Mohammad Arabi, Tehran, Office of Cultural Research.
4. Moradi, M. Shafie Sardasht, M, Rahmani, H. (2013). Application of Dimetel Method to Identify Effective Factors on Capital Stocktaking in the Purchase of Shares, Journal of Accounting and Auditing, Volume 20, Issue 2, pp. 87-108.
5. Albrecht. K. (2002), Organizational Intelligence & Knowledge Management, Executive and Spiritual Intelligence at the Workplace, Journal of Human Resources Management and Technology, Journal of Technological intelligence in Business, pp. 5-22.
6. Bock, f. (1998), The Intelligent Organization, Journal of Presim, vol.2, pp. 5-15.
7. Gotcheva, N. Watts, G. Oedewald, P. (2012), Developing smart and safe organizations: an Health Plan Insurers Using a Competitive Intelligence System, The TQM Magazine,
8. Waldman, D.A. Ramirez, G.G. House, R.J. and Puranam, P. (2001). Is there a leadership matter? Academy of Management Journal Vol. 44, No. 1

DATA OF THE AUTHORS.

1. Taher Pazireh. PhD Student of Management and Human Resources, Bonab Branch, Islamic Azad University, Bonab, Iran.

2. Gholamreza Rahimi. Assistant Professor of Governmental Management, Bonab Branch, Islamic Azad University, Bonab, Iran.

3. FarhadNejad Irani. Assistant Professor of Governmental Management, Bonab Branch, Islamic Azad University, Bonab, Iran.

4. Nader Bohlouli. Assistant Professor of Governmental Management, Bonab Branch, Islamic Azad University, Bonab, Iran.

RECIBIDO: 6 de febrero del 2019.

APROBADO: 19 de febrero del 2019.