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## **APPLICATION OF MULTIPLE CRITERIA DECISION MAKING IN THE RANKING OF PROVINCES, IRAN**

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### **ABSTRACT**

The purpose of this research is to rank Iran's provinces regarding socio-economic indexes; the research is done on the basis of multiple-criteria decision making models. The research was done on 32 provinces based on economic indexes during six periods (2008-2013). First, to determine the ranks of provinces 'Taxonomy' technique was used and the provinces were ranked based on their developing degrees. The results indicate that generally the provinces of the country had an improved process regarding economic status during these six periods. In 2008, Tehran province with development degree of 0.3575 was the most developed and Ilam province with the development degree of 0.8876 was the most undeveloped province of the country. In 2009, the development degree of Tehran province evidenced an increase of one percent, and the development degree of Ilam displayed an increase of 1.5 percent. In 2010, Tehran province was the most developed province and Qom province was the most undeveloped province in the country. In 2011, the development degree of most Iran's provinces had increased. In 2012, the Tehran development degree revealed an increase of 0.4 percent, and in 2013, the development degree of Tehran province had an increase of 3.1 percent while North and South Khorasan provinces are the most undeveloped provinces; therefore it seems necessary for programmers to pay specific attention to credit distributions in order to achieve increasing economic development in the country.

### **INTRODUCTION**

Proper decision making is considered as one of the primary elements in any organization's success. It is obvious that decision making is a management inseparable part, and of course it is considered as management's main duty. As Herbert Simon believes decision making is the main body of management; it is also possible to consider it equivalent as the management itself. Decision making is observed in all the organizational activities and management affairs such as defining organizational approaches, goals, organization's designation, selection and evaluation (Szidarovszky, 1986).

Nowadays, the issues which are presented to managers to be settled, even our daily problems have various dimensions, and they are solved by multi-variable formula. In other words, it's not possible any more to decide about a matter just by optimizing an individual variable. It seems quite normal that solving such complex problems is not simply possible especially when some of the variables are in contrast with each other; an increase in one of the items' positive effects may reduce other items' positive effects. Thus, 'Multiple Criteria Decision Making' (MCDM) is developed which helps solving the problems.

Multiple-indexes methods include various techniques in different decision making steps; a proper technique selection is guaranteed by the expert and skillful researcher. Although there are some classifications which are considered as guides of selection, it is not possible to determine certainly which technique is suitable for a special issue. Therefore, selection of a proper technique is greatly dependent to the type of data and the indexes.

#### ***Significance of Study***

This study presents a comprehensive evaluation of the done activities and clarifies each province's status; this is what is considered as the first aspect of significance. The primary idea of this research is that regarding the similar indexes, the provinces should be ranked based on socio-economic indexes.

Making use of the information which is related to the status of different areas, in long and short term planning plays an important role in the plan efficiency increase. If the areas' statuses are not determined, then defining goals and strategies would be of no use in bringing the spatial balance back to the country.

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Indeed, the results can also play role in short term programming (in other words, annual budget operation of the country).

Islamic Republic of Iran's current status in land width and weather variety makes it essential to pay more attention to the role of different areas. Ranking different provinces of the country according to indexes (agricultural, industry, services) can be a significant assistance in discovery of talent and capability of each area in short and long term, and prepares the situation for the crucial investment.

### **Statement of the Problem**

First, the most important criteria and indexes necessary for evaluating the provinces are studied, then applying these criteria and Taxonomy method, provinces are evaluated and each province status is determined, also it is determined in government development plans that to which provinces more budget should be allocated, and how much should be this budget to be proper for achieving a balanced development in the country.

### **Literature Review**

Multi-criteria decision making models are used in lots of researches as tools of information and data analysis. Plan and Budget Organization's Under Secretary for Informatics (1989) presented a model in order to determine priorities for reducing area differences. Differences among provinces and the current imbalance in distribution of facilities are studied in this model. This approach was applied here because it assists determination of homogenous groups and their classification regarding 55 indexes of Taxonomy methods. Results indicate that according to 50 indexes Markazi Province is considered as the ideal and Ilam and Kohkiluyeh va Boyer-Ahmad Province are known as the most deprived provinces.

Shafeeisabet (1999) investigated on efficiency of food industry by DEA and Taxonomy methods; their subcategories have been arranged according to international standard classification at the level of three and four-digit codes regarding identified economic indexes. In addition, Spearman's rank correlation coefficient was applied to test correlation between two employed methods.

Mark (1998) studied AHP skills as one of the MCDM techniques for solving the problems derived from complexity and subjectivity of criteria in choosing advertising agency. In addition, he studied on the way that the effect of individual and group penetration which is related to this method can be omitted.

Romero *et al.*, (1990) made use of MCDM method in a study, and ranked 10 choices of irrigation technology. They evaluated these 10 choices according to 23 criteria by the use of compromise programming method in order to achieve 12 aims simultaneously. Finally, surface irrigation was introduced as the most appropriate. It was indicated that although linear programming can be used to identify the best technology, it is not selected because it just optimizes one item; thus making advantage of multi criteria decision making methods seems efficient.

### **Research Method**

#### *The Community of the Study*

31 provinces were studied.

#### **Research Time**

Research was done based on the information gathered in 6 periods in 2008, 2009, 2010, 2011, 2012 and 2013.

#### **Analysis Method**

Area features are analyzed and studied in order to identify potential and actual resources while apt areas' development facilities are defined; development pivots are determined, and financing is focused on the sections which have merits in order to achieve the most efficiency and economic growth; also depravity features of the area and social justice are brought into attention.

In order to extract research results by the use of multi criteria decision making models, provinces are investigated regarding socio-economic indexes; they are classified by Taxonomy technique.

#### **Multi Criteria Decision Making**

Multi criteria decision making includes all the items which must be determined among various or quite contradictory ones. Multiple criteria decision making models (MCDM) are divided to two types of

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decision making: Multiple Objective Decision making (MODM) and Multiple Attributes Decision making (MADM) (Edwards, 1997).

A group of techniques are called MADM; they are applied to arrange and select the best choice among available choices according to decision making indexes. MADM is able to optimize different goals with different measures; they are applied for designation.

**Numerical Taxonomic Analysis**

In the present study one of statistical methods named "Numerical Taxonomy" was used for ranking the provinces.

There are various taxonomic analysis steps as follows:

Step 1: Defining steps regarding the aim; also determining various indexes for index selections.

In this step n choices are identified which are evaluated by m indexes.

Step2: Creating matrix of data, average and standard deviation. i choice and j index are arranged in a table.

**Table 1: i Choice and j Index**

Index j \ choice i	1	2	.....	m
1	X <sub>11</sub>	X <sub>12</sub>	.....	X <sub>1m</sub>
2	X <sub>21</sub>			
		X <sub>nm</sub>		
N	X <sub>n1</sub>			
	$\bar{x}$	$\bar{x}$	$\bar{x}$	
	$\delta_j$	$\delta$	$\delta$	

X<sub>j</sub>: Average of indexes or any columns of the matrix

S<sub>j</sub>: Standard deviation of any columns of the matrix

Step3: Normalization of the resulted matrix.

In this step, standard data matrix is identified as below:

**Table 2: Standard Data Matrix**

j Index \ i Choice	1	2	.....	m
1	Z <sub>11</sub>	Z <sub>12</sub>	.....	Z <sub>1m</sub>
2	Z <sub>21</sub>	Z <sub>22</sub>	.....	Z <sub>2m</sub>
.	.	.	.	.
.	.	.	.	.
N	.	.	.	.
	Z <sub>n1</sub>	Z <sub>n2</sub>	.....	Z <sub>nm</sub>
Doj	DO <sub>1</sub>	DO <sub>2</sub>	.....	DO <sub>m</sub>

$$Z_{ij} = \frac{X_{ij} - X_j}{S_j}$$

The biggest number of each column is considered as DO<sub>j</sub> ideal digit.

Step4: determination of compound distance among choices

a and b are calculated by the below equation. Thus, this matrix is described.

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**Table 3: Compound Distance**

choices	1	2	.....	m	$d_r$
1	0	$d_{12}$	.....	$d_{1m}$	$d_r(1)$
2	$d_{21}$	0	.....	$d_{2m}$	$d_r(2)$
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
M	$d_{m1}$	$d_{m2}$	.....		$d_r(m)$
	$\delta_{r2}$	.....		$\delta_{rm}$	$\delta_{r1}$

$$D_{ab} = \sqrt{\sum_{j=1}^M (Z_{aj} - Z_{bj})^2}$$

Step5: Determination of shortest distance.

In this step, by calculating compound distance the least distance of any matrix row is determined.

Step6: Applying limitations on choices.

In this step, upper and lower limits are calculated by below equations.

$$O_r = \bar{d}_r \pm \Upsilon \delta_{dr}$$

$$O_{r(+)} = \bar{d}_r + \Upsilon \delta_d$$

$$O_{r(-)} = \bar{d}_r - \Upsilon \delta_{dr}$$



upper limitation  
lower limitation

step7: Determining pattern of choices (Cio).

In this step, the distance of any choices are calculated from the ideal ones, in other words choice pattern of choices are determined by the below equations:

$$Cio = \sqrt{\sum_{j=1}^M (Z_{ij} - D_{oj})^2}$$

Thus, a matrix is described as this table.

**Table 4: Description of a Matrix**

Index	$\sqrt{(z_{im} - D_{cm})^2} \quad \sqrt{(z_{12} - D_{cm})^2} \quad \sqrt{(z_{i1} - D_{o2})^2}$			$\sum_{j=1}^M \sqrt{(Z_{ij} - D_{oj})^2}$	Cio
choice					
1					
2	$a_1$	$b_1$	.....	$y_1$	
.	$a_2$	$b_2$	.....	$y_2$	
.					
.					
M					
	$a_m$	$b_m$		$y_m$	

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Step 8: Ranking the developing level of choices ( $F_i$ ).

If  $F_i$  is developing level of a choice, then:

$$F_i = \frac{C_{io}}{C_o}$$

$F_i$ : The level of developing of choices.

$C_{io}$ : Development pattern of a choice.

$C_o$ : Upper limit of development.

$$C_o = C_{io} + 2 C_{io}$$

Whatever  $F_i$  is closer to zero, it indicates more developments in the choice, and whatever it is closer to one, it indicates bad status. Taxonomy is done and ranking of the choices are clarified.

### **III. Ranking Indexes**

The indexes which were studied in this study include:

- Unemployment rate;
- Gross domestic product;
- Mining Value added;
- Industrial workplaces;
- Agriculture value added;
- Number of employed physicians;
- Number of beds in medical centers;
- Number of university students;
- Number of public libraries;
- Service section value added.

### **Data Analysis**

#### **Rankings Results**

A priority is presented for the studied provinces regarding development ranking and implementation of Taxonomy method during 1387 to 2013.

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**Table 5: Provinces' Ranking According to Development Level**

Province	2007		2008		2009		2010		2011		2012	
	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng
Azarbayj an Sharghi	0.6985	7	0.6872	7	0.6781	8	0.6692	8	0.7831	13	0.6692	7
Azarbayj an Gharbi	0.7719	11	0.8149	13	0.7562	11	0.7452	10	0.7321	10	0.7452	9
Ardabil	0.8431	23	0.8359	22	0.8291	24	0.8236	25	0.8437	28	0.8236	24
Isfahan	0.6464	3	0.6423	3	0.5781	2	0.5693	2	0.5507	2	0.5693	3
Ilam	0.8876	28	0.8721	28	0.8476	27	0.8529	28	0.8260	27	0.8529	26
Bushehr	0.8408	20	0.8364	23	0.8247	21	0.8082	18	0.8081	22	0.8082	21
Tehran	0.3573	1	0.3569	1	0.3512	1	0.3472	1	0.3426	1	0.3472	1
Charmah al o Bakhtiari	0.8563	25	0.8563	27	0.8324	25	0.8157	21	0.7858	14	0.8157	27
Khorasan Jonubi	-----	---	----	---	----	----	----	---	0.8625	29	----	29
Khorasan Razavi	0.5810	2	0.5802	2	0.6397	3	0.6272	3	0.6130	3	0.6272	4
Khorasan Shomali	-----	----	-----	----	-----	----	----	----	0.8672	30	---	30
Khuzest an	0.6786	5	0.6683	4	0.6517	4	0.6421	4	0.6357	4	0.6421	2
Zanjan	0.8398	18	0.8323	20	0.8234	20	0.8193	24	0.8096	24	0.8193	18
Semnan	0.8412	21	0.8337	21	0.8261	22	0.8175	23	0.7872	15	0.8175	20

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**Table 5: Provinces' Ranking According to Development Level (continuation of the above table)**

Province	2007		2008		2009		2010		2011		2012	
	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng	Developm ent Level	Ranki ng
Sistan o Baluchest an	0.8426	22	0.8193	15	0.8166	17	0.8067	17	0.8238	26	0.8141	16
Fars	0.6701	4	0.6697	5	0.6543	5	0.6452	5	0.6536	7	0.6800	5
Ghazvin	0.8236	14	0.8302	19	0.8212	19	0.8137	19	0.8090	23	0.8305	19
Qom	0.8624	26	0.8421	25	0.8654	28	0.8350	27	0.8053	20	0.8492	28
Kordesta n	0.8462	24	0.8293	18	0.7543	10	0.8164	22	0.8147	25	0.8413	25
Kerman	0.6881	6	0.6701	6	0.6607	6	0.6672	7	0.6382	5	0.7256	6
Kermans hah	0.8340	16	0.8176	14	0.8083	14	0.8035	16	0.7964	18	0.8060	14
Kohkiluy e o Boyer Ahmad	0.8673	27	0.8632	26	0.8452	26	0.8329	26	0.7943	17	0.8329	22
Golestan	0.8344	17	0.8372	24	0.8273	23	0.8142	20	0.7925	16	0.8361	23
Gilan	0.7684	9	0.7551	9	0.7462	9	0.7349	9	0.7349	11	0.7910	10
Lorestan	0.8400	19	0.7811	12	0.8031	13	0.7632	12	0.8071	21	0.8069	15
Mazandar an	0.6998	8	0.6893	8	0.6752	7	0.6514	6	0.7209	9	0.7500	8
Markazi	0.7716	10	0.7657	11	0.7729	12	0.7471	11	0.7526	12	0.8041	12
Hormoza gan	0.8261	15	0.8267	16	0.8189	18	0.7924	13	0.8042	19	0.8175	17
Hamedan	0.8211	13	0.8275	17	0.8095	15	0.7981	15	0.6582	8	0.8041	13
Yazd	0.7938	12	0.7623	10	0.8142	16	0.7945	14	0.6421	6	0.7979	11

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**Table 6: Ranking of Provinces by Taxonomy Method**

	Province	Province Ranking in 2007	Province Ranking in 2008	Province Ranking in 2009	Province Ranking in 2010	Province Ranking in 2011	Province Ranking in 2012
1	Azarbayjan Sharghi	7	7	8	8	13	7
2	Azarbayjan Gharbi	11	13	11	10	10	9
3	Ardabil	23	22	24	25	28	24
4	Isfahan	3	3	2	2	2	24
5	Ilam	28	28	27	28	27	26
6	Bushehr	20	23	21	18	22	21
7	Tehran	1	1	1	1	1	1
8	Charmahal o Bakhtiari	25	27	25	21	14	27
9	Khorasan Jonubi	---	---	---	29	29	29
10	Khorasan Razavi	2	2	3	3	3	4
11	Khorasan Shomali	----	---	---	30	30	30
12	Khoozestan	5	4	4	4	4	2
13	Zanjan	18	20	20	24	24	18
14	Semnan	21	21	22	23	15	20
15	Sistan o Baluchestan	22	15	17	17	26	16
16	Fars	4	5	5	5	7	5
17	Ghazvin	14	19	19	19	23	19
18	Qom	26	25	28	27	20	28
19	Kordestan	24	18	10	22	25	25
20	Kerman	6	6	6	7	5	6
21	Kermanshah	16	14	14	16	18	14
22	Kohkiluye o Boyer Ahmad	27	26	26	26	17	22
23	Golestan	17	24	23	20	16	23
24	Gilan	9	9	9	9	11	10
25	Lorestan	19	12	13	12	21	15
26	Mazandaran	8	8	7	6	9	8
27	Markazi	10	11	12	1	12	12
28	Hormozagan Province	15	16	18	13	19	17
		<b>Province Ranking in 2007</b>	<b>Province Ranking in 2008</b>	<b>Province Ranking in 2009</b>	<b>Province Ranking in 2010</b>	<b>Province Ranking in 2011</b>	<b>Province Ranking in 2012</b>
29	Hamedan	13	17	15	15	8	13
30	Yazd	12	10	16	14	6	11



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**Rankings of Provinces Based on Development**

The main aims include regional planning, economic development, social justice and distribution of wealth and welfare among the society members. In order to achieve these goals in society, it seems necessary to prepare and edit various plans, also to implement them. On the other hand, in arranging and preparing a plan, obtaining knowledge about the current status of the regions seems essential.

Analysis of Regional features is done to identify actual and potential economic resources or to get acquaintance with development facilities in apt regions. Determining development pivots, financing on profitable areas to get the most efficiency and facilitating economic growth, paying attention to depravity features in regions and establishing social justice are brought in to attention. Provinces are divided in to three groups based on development levels:

Group1: Developed or wealthy provinces ( $F < 0.6$ )

Group2: More deprived or less developed provinces ( $0.6 < F < 0.8$ )

Group3: Deprived or undeveloped countries ( $0.8 < F < 1$ )

Results of divisions in 2013 are as the following table:

**Table 7: Division of Provinces Based on Development level, 2012**

Undeveloped Provinces	Less developed Provinces	Developed Provinces	
Markazi	Khoozestan	Tehran	
Hamedan	Isfahan		
Kermanshah	Khorasan		
Lorestan	Fars		
Sistan o baluchestan	Kerman		
Hormozagan	Azarbayjan Sharghi		
Zanjan	Mazandaran		
Ghazvin	Azarbayjan Gharbi		
Semnan	Gilan		
Bushehr	Yazd		
Kohkiluye o Boyer Ahmad			
Golestan			
Ardabil			
Kordestan			
Ilam			
Charmahal o Bakhtiari			
Qom			
Khorasan Jonubi			
Khorasan Shomali			
<b>19</b>	<b>10</b>	<b>1</b>	<b>Total Sum</b>

**Provinces' Development Levels Based on Different Indexes**

Development created different meanings in Researchers and economists' minds; among them an increase in productions, more efficiency, promotion in quantitative and qualitative level of life, omitting poverty and depravity, promotion of medical and therapeutic service levels, solving unemployment and inflation problems and providing social and economic needs can be named.

All well known experts in economics have made benefit from one single concept for 'development'. Smith, Mirdal, Schultz, Rostro and Koontz are among those who mentioned the concept as "Development is a fundamental revolution from ancient society to modern society". Development does not necessarily mean creating jobs, justice, omitting poverty and depravity; they are parts of development and it should be mentioned that development is of course deeper. Basically, development is changing a civilization to another civilization; in other words it is establishing development in the thoughts of pervious society, and

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making it new in the form of novel society thought. In fact, it is the society who experiences a death and a birth; death of thoughts and systems of previous society and birth of a thought and system appropriate to the new system.

In order to diminish poverty and unemployment and to increase production and to promote human force efficiency; their roots should be recognized in economic, social, cultural, agriculture and population institutes, and solutions must be searched. Thus, different regions' deficiencies are determined based on different developmental indexes. Province programmers and authorities can make use of the information for implementing different developmental plans.

**Table 8: Provinces' Development Level According to Different Indexes**

Province	Population Development Level	Index Ranking	Product and Economic Development Level	and Index Ranking	Health and Medical Development Level	and Index Ranking	Education Development Level	Index Ranking	Culture and Tourism Development Level	and Index Ranking
Azarbayan Sharghi	0	1	0.7314	7	0.6560	7	0.7878	6	0.2582	4
Azarbayan Gharbi	0.5973	8	0.7858	11	0.6985	9	0.8339	11	0.6513	18
Ardabil	0.6647	17	0.8447	25	0.7722	24	0.8743	26	0.6279	16
Isfahan	0.6586	15	0.6134	2	0.5335	3	0.7581	4	0	1
Ilam	0.7759	26	0.8770	30	0.7985	30	0.8800	27	0.7804	27
Bushehr	0.6296	10	0.8226	16	0.7715	23	0.8830	29	0.6455	17
Tehran	0.7530	23	0.2996	1	0	1	0.4824	1	0.1115	2
Charmahal o Bakhtiari	0.7321	21	0.8572	29	0.7683	21	0.8737	24	0.7217	22
Khorasan Jonoubi	0.6586	15	0.8321	23	0.7660	26	0.8809	28	0.8098	29
Khorasan Razavi	0.4881	6	0.6597	4	0.4716	2	0.7478	3	0.3345	5
Khorasan Shomali	0.3087	2	0.8289	22	0.7905	28	0.8883	30	0.8098	29
Khouzestan	0.7449	22	0.6367	3	0.5987	4	0.5747	2	0.3931	6
Zanjan	0.6903	19	0.8229	17	0.7683	25	0.8709	22	0.6572	19
Semnan	0.6357	12	0.8260	20	0.7682	20	0.8548	18	0.6748	20
Sistan o Baluchestan	0.6532	13	0.8531	27	0.7442	15	0.8009	7	0.6279	16

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Fars	0.7800	27	0.6740	5	0.5999	5	0.8152	8	0.2054	3
Ghazvi n	0.6175	9	0.8266	21	0.7707	22	8494	14	0.7569	26
Qom	0.6647	17	0.8567	28	0.7771	27	0.8739	25	0.8156	30
Kordest an	0.6357	12	0.8466	26	0.7473	17	0.8722	23	0.6924	21
Kerman	0.7685	24	0.7058	6	0.7057	10	0.8186	10	0.4225	7
Kerman shah	0.8629	30	0.8259	19	0.7254	11	0.8545	17	0.6064	14
Kohkil uye o Boyer Ahmad	0.8366	28	0.8428	24	0.7967	9	0.8163	9	0.7276	23
Golesta n	0.5224	7	0.8225	15	0.7266	2	0.8668	19	0.7452	24
Gilan	0.6802	18	0.7992	13	0.6825	8	0.8367	12	0.5868	10
Loresta n	0.8555	29	0.8115	14	0.7465	16	0.8505	15	0.7511	25
Mazand aran	0.4287	5	0.7468	8	0.6465	6	0.7720	5	0.5985	12
Markaz i	0.7321	21	0.7940	12	0.7579	18	0.8669	20	0.5750	9
Hormoz agan	0.3964	4	0.7539	9	0.7621	19	0.8703	21	0.5926	11
Hamed an	0.7725	25	0.8238	18	0.7276	13	0.8476	13	0.6044	14
Yazd	0.3607	3	0.7772	10	0.7433	14	0.8520	16	0.5732	8

From classification of various regions, it is understood that Azarbayjan Sharghi province enjoys the best status and Kermanshah province keeps the worst status based on unemployment rate. From Health and medicine perspective, Tehran province is located at the top position of development ranking while Ilam province stands at the lowest level.

Based on educational indexes, Tehran province obtains the best status while Khorasan Shomali stands in the worst status. Based on cultural issues, Isfahan province possesses the highest ranking, and Qom province keeps the worst ranking.

Therefore, it is observed that Ilam province stands in the worst status based on two indexes which include health, medicine, economic and production. Thus, it is advised that authorities and programmers should pay special heed to credit distributions in order to promote economic development.

**Discussions, Conclusions and Suggestions**

This study was done to achieve a single multi criteria decision making model for evaluating provinces. Indeed, provinces were ranked based on various development indexes by the use of Taxonomy model. The achieved results from data analysis are as follows: Applying the socio-economic indexes, it was clarified that provinces experienced a growth during the 6 periods. Generally, based on the mentioned indexes Tehran, Isfahan, Khoozestan, Khorasan Razavi and Fars are considered as the firsts of development while Kordestan, Ilam, Charmahal o Bakhtiari, Qom, Khorasan Shomali and Khorasan Jonubi provinces stand at the lowest rankings of the table.

In 2008, Tehran province with development level of 0.3575 is considered as the most developed, and Ilam with development level of 0.8876 is considered as the least developed. Ilam stands below average at the lowest level of 12 measured indexes while Tehran province stands below average just regarding 2 indexes of mining value added and electricity consumption.

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According to economic indexes of the tables, some provinces stand above average and some other stand below the average; these features must be studied to be promoted, at least, to average level. By this way, average level of provinces is also increased.

In 2009, Tehran province was again the most developed, and Ilam stood at the most deprived position among other provinces of the country. In this year, Tehran's development level indicated 1 percent increase, and Ilam province's development level also experienced 1.5 percent of increase.

In 2010, Tehran province with the development level of 0.3512 achieved the position of the most development province, and Qom province was recognized as the most deprived province with development level of 0.8654. In all the 12 indexes, Qom province stands below the average; development level of this province decreased as much as 2.3 percent in one year.

In 2011, most of provinces experienced an increase in development level. Tehran achieved 'the most developed' title and Ilam province stood at the lowest level.

Tehran province with the development level of 0.3426 was considered as the most developed and Khorasan and Khorasan (2012) were categorized as the most undeveloped provinces of the country. While development level of Tehran province increased 0.4 percent.

Tehran province development level increased as much as 3.1%. Khorasan and Khorasan (2013) were categorized as the most undeveloped provinces of the country. It seems necessary for programmers to pay special heed to the way they distribute the credit in order to promote economic development of the entire country. Meanwhile, provinces' rankings generally experienced little changes.

According to provinces' ranking results, it is suggested to programmers to establish area-regional balances by using a development program.

District and regional programming process includes two primary distinguished and connected stages. First stage includes: operation analysis of pervious socio-economic system, status, problems, current shortcomings and future developmental perspective. Second stage includes: recognition, evaluation, program selection and social and economic developmental plans which are designated for solving current and future plans of district and region. By selecting proper indexes for studying different parts of society and economic of the region, also by comparing these indexes with country and/ or regional indexes and finally by comparing goals and measures defined in some districts, establishing a regional balance is possible. Of course, some areas enjoy special natural resources; they have special considerations on economic savings, some provinces enjoy merits in production or services due to historical reasons; all these considerations must be included in future plans. In most indexes, regional potentials had no significant effect; social justice which is optimal distribution of resources and public facilities should be implemented in order to promote provinces and the areas' status which stand below the country average. Indeed, proper decisions should be made to solve depravity and to remove any regional imbalances.

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