Determination the Level of Development of Rural Areas in Marvdasht City

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Abstract: Levels of development and the level of regions using quantitative methods, on the one hand led to the recognition of inequalities between regions and the other is trying to reduce and eliminate existing inequalities. This research aimed to the city of rural districts Marvdasht using 20 indicators in the form of social norms, economic, infrastructural and cultural - sports results of the general census of population and housing in 1390 with two models, numerical taxonomy has been developed by TOPSIS model. The results indicate that there is a difference between the results of two models so that the taxonomy model villages Ramjerd 2, Ramjerd 1 and North Kamfiruz and TOPSIS model villages Majdabadi, Khafrak Alia and Ramjerd 1, Rudbal, Naqsh-e Rustam are the best villages. However, the most disadvantaged in numerical taxonomy side, Doroodzan and South Kamfiruz, Naqsh-e-Rustam and in TOPSIS, district of Khurram Makan, Doroodzan, Abraj and Rahmat. Overall results indicate that differs significantly from the level of development of this city can be seen in this county every year, resulting in the migration of rural residents to cities like Marvdasht.

1. Introduction

In the opinion of experts, there are different interpretations of the word development, including the ability to increase production, improve efficiency, enhance quality and quantity of life, poverty alleviation, improve the level of health services, addressing the problems of unemployment and inflation, socio-economic needs, to education, culture and active participation in various social arenas noted. Therefore, the development of complex and multi-dimensional process that involves changes in the social structure, attitudes of the people and national institutions, as well as accelerating economic growth, reduce inequality and eradicate poverty and social justice, and environmental sustainability (Todaro, 1999, 23). Featuring intense focus and imbalances, including third world countries and his feature is disabled Results polar growth policies. As a result, other areas for action are marginal. To create the right balance in order to shape the spaces and homogenous, made the first step in its regional planning, socio-economic inequalities and cultural knowledge of different areas. Create balance and harmony in urban and rural public structures and systems of the best examples of development is (Monfarediyan Sarvestani, 2007, 17). Iran was affected by historical, cultural, and geographic and a macro policy in the field of development has followed a different path. The supremacy of livelihood friendly city on two other ways of 50s due to agrarian reform, and the subsequent pseudo-modern Islamic Revolution and war of the country's space system is imbalanced. The results of this change are generally clear differences in the degree of development at the provincial, regional and national levels are evident (Ziyari, 2006, 13).

Identify and analyze the current situation, analyze bottlenecks, constraints, features and usability, the correct understanding of the needs and priorities related to their quality and quantity, can be convenient and efficient planners in developing programs to help. Therefore, this study analyzed the development of rural areas in the city of Marvdasht as one of the most important city in agricultural production in the country.

Literature Review

The process of improving human life in different sciences such as psychology, health, economy, environment and sociology checked (Costanza et al., 2007). This improvement in quality of life as developed in the economics literature is considered. Previously only economic criteria such as per capita income were due. The per capita income deficit also been investigated in numerous studies. Easterlin believes there is a weak relationship between income and happiness individual. Now a more comprehensive concept of economic development and various aspects of political, economic, social, cultural and communication and for a long time it was the per capita income criterion for economic development. The first criterion for per capita income levels of different countries and regardless of its purchasing power was

used until the Usher (1996) on per capita income as a measure to calculate the economic development; although in this study the use of the exchange rate implicitly suggested, always type the exchange rate of error was given, and the Summers &Heston (1998) purchasing power parity exchange rates were replaced. GDP per capita based on purchasing power parity index only helped to solve some of the problems and some of the problems, which are always on how to calculate national income, did not disappear (Masjedi, 2002). The most important challenge in the calculation of national income the gap between relative prices (Kamelen and Nockson, 1999). Another criticism of per capita income, lack of attention to issues of distribution and characteristics of the human figure, and that's why it was tried in the 1970s to use the features of economic indicators - social care (Desai, 1991). The sum of these terms along with the efforts of age (1985-1992) to provide Human Development Index (HDI) led. Components needed for human development to goods, resources, functions and usability knew. Although this index was used to a large extent, the most important aspect is the low defect (Bernger, Chouchane and Verdier, 2007). More recently, the indicators of quality of life (QOL) are considering.

This indicator by Morris (1979) and as an indicator of the physical quality of life and life expectancy components, the rate of infant mortality and illiteracy rates. It was also about other efforts. For example, Morris and colleagues tried living area index based on basic physical and cultural needs are identified. Now this index as an indicator of quality of life, including health units, educational and ecological known and the most important thing about the indicators to determine the quality of life for its components was considered (Zhu, 2001). On the other hand, in relation to the development of several theories have been proposed and so that the duality theory that most fans believe that Third World societies into two categories amenable to industrial countries (which are more advanced) and communities that are not amenable to industrial countries (backward and primitive are) divided into (Naraqi, 1991, 160).

Some of these ideas are communities composed of two parts, the first part Industrial City which is changeable and the second part of traditional or agricultural (rural) that is stationary and sedentary. Fu - Chen Lu et al (1981) focused his studies on Asian countries put and from three aspects will be dealt with as main components of a macro model to explain the dichotomy in the world have offered space. These include:

A) The internal relations of duality North and South;

B) The dichotomy between formal and informal economic activities;

C) Dichotomy between urban areas and rural areas (Saeidi, 1996, 128)

Play by Torsten Hagrastrand theory was proposed in 1953 at Lund University in Sweden. In his view, the spread of phenomena can be investigated in two separate parts as follows:

A- Adaptive streaming: at this stage, broadcast or transfer takes place directly seeps;

B- Distribution hierarchy: at this stage of play, phenomena and innovation, spread on a regular basis in the form of spatial hierarchy. It has wide application in rural geography and its effects on rural communities and to promote rural Green Revolution, adopting new technologies and new technologies observed (Shakuie, 1996, 302).

John Friedman core-periphery theory to build a relationship with the colonial center on space systems refers (Azimi, 2002, 100-102). He described the development as a batch process and the density of the invention, the system divides the space surrounding the center. Central areas of organized as subsystems that have a high capacity for development and adjacent areas, systems that are under development by institutions of the central region and considering how their relationship will be determined on the basis of major dependence (Friedman, 1972, 96). In other words, in this theory that the development center as a source of development in the center to the periphery flows (Clark, 2000, 9).

Table 1: Studies to determine the level of development

Researcher	Year	Title	Results
Joe and Mariya	2001	Ranking development of the country Portugal	The results showed that the quality of life of the human development index for measuring development is more efficient
Ziari et al.	2001	Determine the degree of development of villages in Yazd	The results show that 17 villages are heterogeneous compared to other villages in the city of Yazd, the city gets most of its villages and the city of Taft had the highest percentage of deprived villages
Masjedi	2001	Preparation of combined indicators and rankings developed countries of the world	In addition, the combined indicators of per capita income and human development index indicators were also used. The average rating change based on a combination of the human

Researcher	Year	Title	Results
			development index and per capita income equal to 6.4 and 8.13, respectively
Amini Nezhad	2008	Determining the status of development of rural areas in the South Pars Installations Bushehr by Morris and Taxonomy	Results show that 46 percent of villages in the disadvantaged group, 38.5 percent moderately satisfactory and 15 per cent higher in the group with
Fetrous and Beheshtifar	2009	Placement of Agricultural Development in the provinces	The results showed that the level of agricultural development, the years 1993-2003 the average increase agricultural dichotomy between them has fallen
Mohammadi et al.	2009	Determine the level of development of the villages in the central city of Ardabil Using Taxonomy	Concluded that in the district of the central city of Ardabil situation is heterogeneous in terms of development, to the extent that some disadvantaged villages and deprived half of the villages outnumbers the medium and developed.
Khezri, Eslami, Borzoueian, Mansouri, Sales, Bakhtiyari, Nourbakhsh, Azar and Gholamrezaei, Ahangari and Dalvand	(1997, 1993, 1995, 1996, 1997, 2003, 2006 and 2005)	Determine the level of development	Khezri study, in the city of Kurdistan, the development of rural areas by the Islamic Iran in the period 1976-1986, ranking the city of Mazandaran province on the basis of the level of development (Borzooei), Assess the development of the city of Tehran in the 1976-1986 period by third Mansouri, the level of industrial development in two provinces in 1994 and 1997 by Bakhtiari and Lorestan province city also ranked based on the level of development in the agricultural sector, but it also cited studies of factor analysis. In some studies, such as study and December Noorbakhsh and Gholamrezayee, using the Human Development Index ranking of provinces in the country. Forging and Dalvand In one study, the development of the city of Lorestan province in general in 1994 and 2003 time periods set by the province and city have been ranked in terms of degree of development.

Although some indicators about development always kept in mind, Gillis and colleagues (2006), Meyer (2008) and Todaro (2004) argue that improve human life and well-being of each index to show it can be used as an indicator of development is considered. Seems to be trying to pick some limited but decisive measures, aiming to ease the calculation is done. So if you have access to extensive information, using more indicators can provide more comprehensive guidelines. Another important point is the importance weight assigned to each index that can change position of

selected areas. Ease of use fuzzy logic its proper weight in the allocation indexes can improve relations with the techniques used to measure development cause.

Research methodology

According to its intended purpose, in this study, descriptive research - analysis is used. The population of this research is villages of the Marvdasht city. On this basis, related literature and previous studies on the subject of using library collection and then to determine the levels of development of rural areas, 20 parameters were studied in the form of five criteria that include:

Table 2: Indicators and evaluation parameters to determine the level of development

Index	Parameter
Social	Percent literacy - Percent with male literacy - literacy of women - Household after sex ratio - the number of orbital elementary, middle and high school
Economic	The male employment rate - rate of female employment - the unemployment rate - the number of banks
Infrastructure	The percentage of households with electricity, water, gas, health centers and Bakery
sporty-cultural	The number of library Sport Saloons many mosques

Personal data mining villages of the city and then Marvdasht to determine the level of development of numerical taxonomy and TOPSIS model was used.

Location of the study area

With the establishment north of the Marvdasht city in Fars province and the wide extent of about 4537.4 km/sq geographical location ′44 ˚51 to 30 ˚53 east longitude and ′15˚ 29 to ′59˚ 30 north latitude and at an altitude of 1600 meters above sea level. The political divisions of the city from the north to the city of Eghlid and Khorrambid, from the East to the city Arsanjan, from the south to the city of Shiraz and from the West to the city Sepidan are limited. The city of Fars province is considered the second largest city in terms of population. The city center is Marvdasht in terms of location is located 45 km North West of Shiraz. More than 43% of the total city area mountain areas and hilly and plain areas and the rest of the post are formed. The city has 4 sections (Markazi, Seyyedan, Doroodzan and Kamfiruz) and 14 villages (Mohammadabad, Kenareh, Naqsh-e-Rustam, Rudbal, Ramjerd 1, Rahmat, Khafrak Aliya, Doroodzan, Abraj, Ramjerd 2, North Kamfiruz, South Kamfiruz and Khorram Makan) (Statistical annals, 2011).
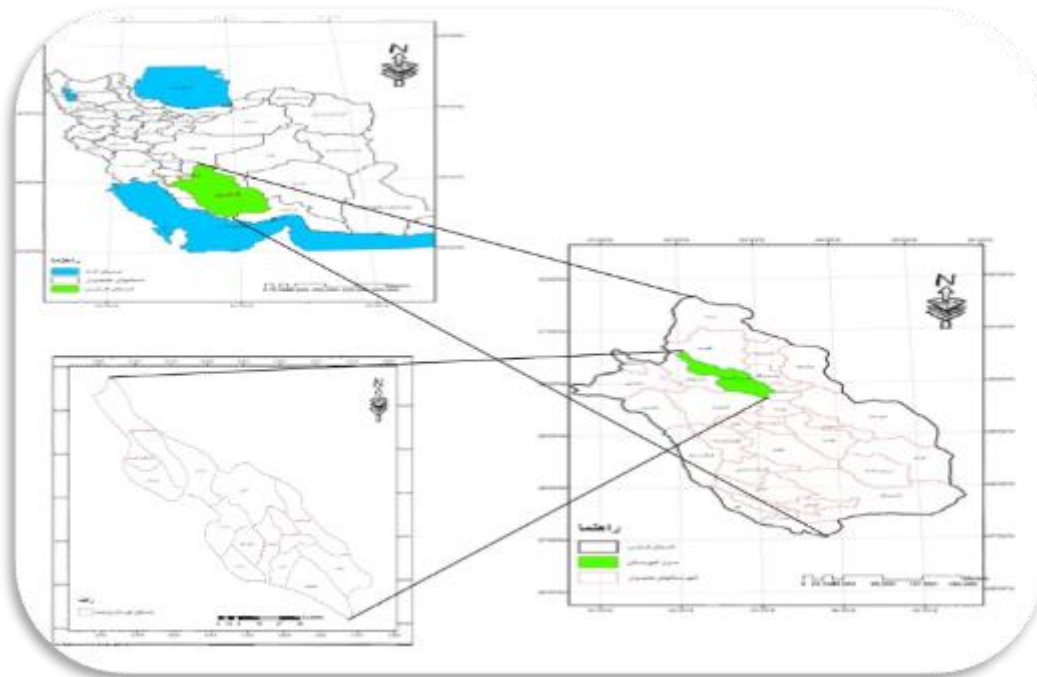

Figure 1: Location of the city in the province and indicates the position of rural districts in the city.

Numerical Taxonomy Model

Necessary understanding of planning, identify the areas relative to each other in terms of development in order to achieve this, using different models and techniques is crucial (Taghvaei et al., 2011, 59). In the last decade the use of quantitative methods in the planning area are increasingly increased (Husseinzadeh Dalir, 2001, 45). One of these models, numerical taxonomy is. In 1986, Professor Helviyng of the Higher School of Economics in UNESCO (Ziyari, 2001, 137) and this method for grading, sorting and comparison with the settlements of regions according to their degree of development and modernization posed (Datta, 1986, 5). The procedure for determining homogeneous units or a variety of subjects in a three-dimensional vector space without the use of regression, variance and correlation analysis will be able to take a more or less homogeneous subset divide and therefore this method can be used as the criterion for recognizing the social and economic development in the study area used (Badri, 1990, 89). In this way the classification and grouping of areas, settlements and other places, various indicators related to development planning intended to be, and then do the necessary calculations and rankings areas or settlements within each group, the degree of development of each is determined.

In the later stages using the results ranked according to short-term goals, medium and long term can be used to fix the imbalance between areas and settlements paid (hijrati, 2000, 132).

TOPSIS model

Hiigvander in 1981 proposed TOPSIS model. This is one of the finest multi-criteria decision-making models (Momeni, 2008, 24). In multi-attribute

methods such as TOPSIS, target, rankings and selecting superior (Kohansal and Rafiei, 93, 2008).

This technique is based on the notion that option, should the minimum distance from the positive ideal solution and maximum distance from the negative ideal solution (worst possible). It is assumed that the utility of each indicator steadily increased or decreased. TOPSIS scores between zero and one. The index is closer TOPSIS its rating is the ideal puppet (Momeni, 2008, 24-29). The overall structure of the model is as follows (Asgharpour, 2008, 260-266).

The results of the model Taxonomy and TOPSIS

Table 3: Raw data matrix

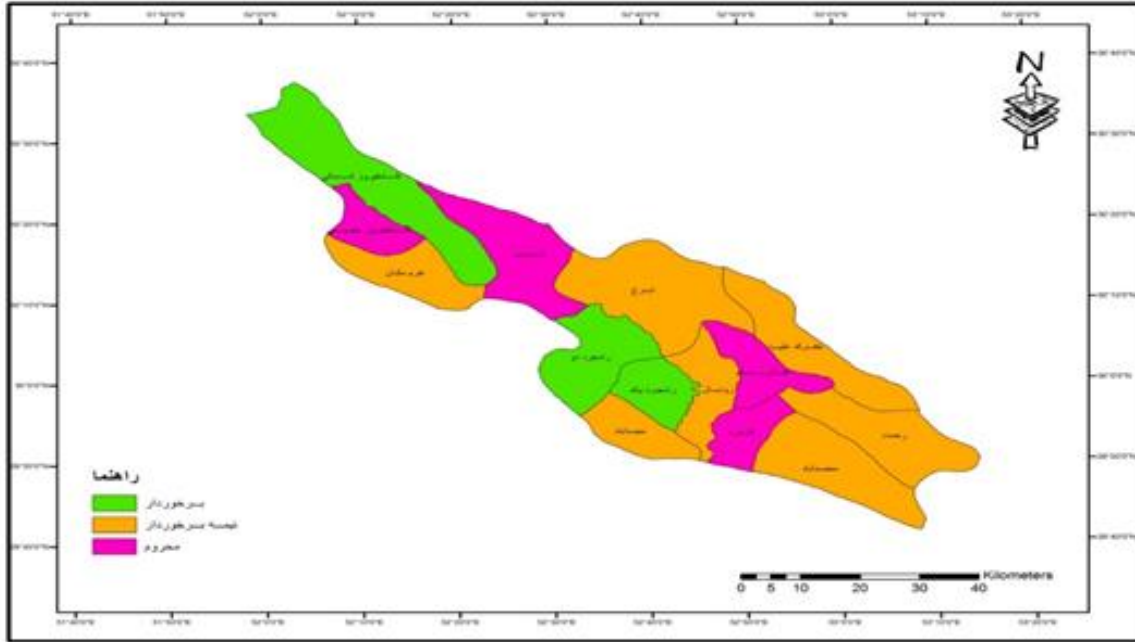| Villages | | | | | | | | | | | | | | | | |
Mohammadabad	Kenareh	Majdabad	Rahmat	Ramjerd 1	Rudbal	Naqsh-e-Rustam	Ramjerd 2	Khafrak Aliya	Abraj	Khorram Makan	South Kamfiruz	Doroodzan	North Kamfiruz	Orientation	Parameter	Index
76.56	79.44	78.10	76.81	80.74	75.74	72.39	93.34	77.06	73.11	72.65	74.25	73.39	82.81	+	percentage of literacy	Social
81.41	84.07	81.30	80.32	87.35	79.65	77.04	96.50	80.26	80.02	80.48	82.45	80.42	89.99	+	literacy rate for men	
71.36	74.58	74.77	73.23	73.85	71.75	67.46	90.08	73.74	66.36	64.90	65.93	66.14	75.72	+	literacy rate for women	
3.53	3.55	3.75	3.75	3.73	3.69	3.62	3.75	3.42	3.94	4.14	3.88	3.69	3.60		Family size	
121.95	118.40	112.58	111.57	123.16	113.10	121.08	110.12	113.20	117.57	122.84	127.05	125.41	117.29		sex ratio	
1.50	0.44	1.02	1.85	1.21	0.94	0.69	1.86	0.90	1.28	1.19	1.13	0.73	1.49	+	The number of primary schools in 1000	
0.69	0.44	1.02	1.05	0.50	0.56	0.69	1.08	0.40	0.94	0.71	1.13	0.64	1.23	+	number of schools in 1000	
0.35	0.10	0.38	0.26	0.40	0.28	0.21	0.23	0.40	0.26	0.24	0.00	0.09	0.35	+	number of high school in 1000	
83.47	85.31	74.76	83.69	74.62	88.15	90.33	81.52	91.09	81.53	85.32	60.63	73.41	89.89	+		Economic
2.88	3.96	1.44	2.82	5.26	3.09	2.02	3.05	5.40	2.30	7.32	2.03	2.73	3.48	+	female employment rate	
0.14	0.11	0.24	0.13	0.20	0.09	0.08	0.15	0.04	0.16	0.07	0.37	0.24	0.07	+	unemployment rate	
0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	+	number of banks in 1000	Infrastructure
8.96	2.45	4.76	9.55	8.66	4.49	2.50	9.00	3.08	9.07	5.90	3.84	5.05	6.96	+	percentage of households with electricity	
0.41	1.40	4.76	0.33	0.75	0.69	1.00	0.00	1.03	0.00	0.00	0.00	0.00	0.00	+	percentage of households with gas	
5.70	2.45	4.76	7.57	6.02	4.49	2.50	8.71	2.74	8.06	6.39	4.38	3.70	6.64	+	percentage of households with piped water	
0.12	0.15	0.13	0.09	0.20	0.09	0.14	0.08	0.30	0.09	0.12	0.14	0.27	0.18	+	number of health centers in 1000	
0.23	0.35	0.25	0.70	0.50	0.37	0.00	0.77	0.20	0.09	0.47	0.14	0.46	0.53	+	number of bakeries in 1000	
0.00	0.00	0.00	0.00	0.10	0.09	0.07	0.08	0.00	0.00	0.00	0.00	0.00	0.09	+	number of libraries in 1000	sporty-cultural
0.12	0.05	0.00	0.00	0.20	0.09	0.41	0.23	0.20	0.09	0.00	0.14	0.00	0.09	+	number of sports venues in 1000	
1.50	0.54	1.27	1.41	1.31	0.84	0.62	2.17	0.90	1.37	1.19	0.85	0.64	1.32	+	number of mosques in 1000	

Figure 2: Grading the development of rural areas of the Marvdasht city in numerical taxonomy
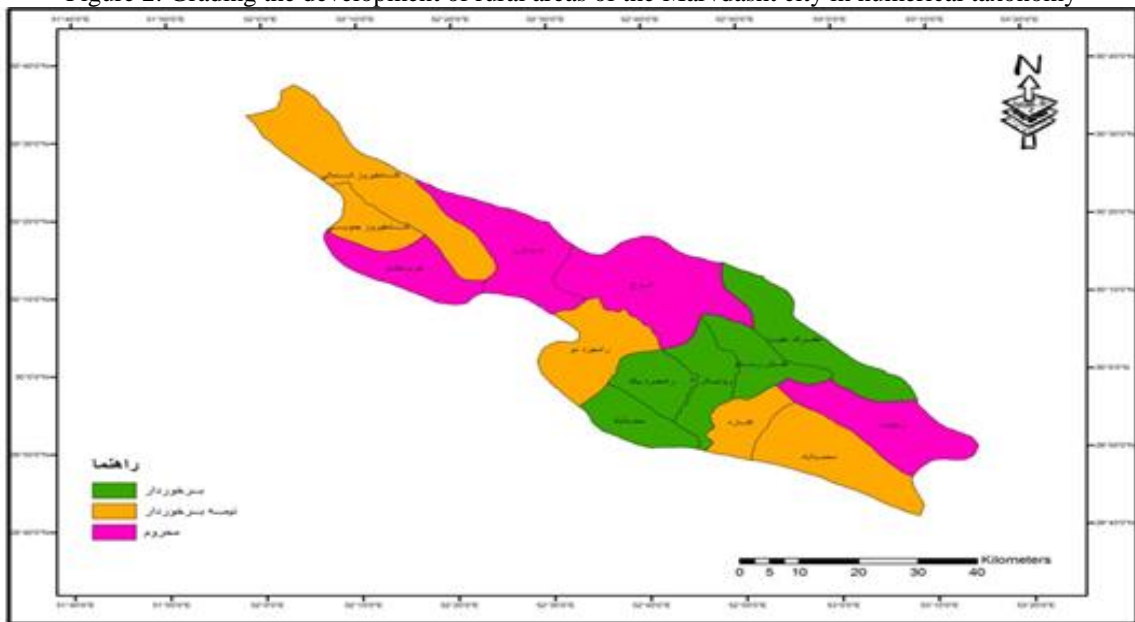

Figure 3: Grading the development of villages Marvdasht city in TOPSIS model

Discussion and conclusion

Overall evaluation of rural communities in Iran shows that social welfare programs and rural development does accordance with sustainable development. Since development programs remain far from achieving goals in all areas, most have negative effects on rural communities. The results of the numerical taxonomy and topsis represents a different level of development among sub-city is Marvdasht. Coefficients obtained by numerical taxonomy shows that the taxonomy model villages Ramjerd 2, Ramjerd 1 and North Kamfiruz and TOPSIS model Khafrak Aliya, Naqsh-e-Rustam, Rudbal, Ramjerd 1 and Mohammadabad have best conditions. In both models Ramjerd villages 1, is designated as villages. The villages also close to the central city of Marvdasht, and on the other hand due to being in communication pathway west Marvdasht appropriate amenities. On the other hand, due to its fertile agricultural land in the district has made adequate yearly income residents and the financial ability to equip their homes they may abound to the amenities. Results also showed that in

both underserved villages village known as Doroodzan. The main reason for these villages it can be far from the central city of Marvdasht and inappropriate road connecting villages of the area. Interestingly, the results of numerical taxonomy, depriving the edge of the villages and the villages is located at a minimum distance from the city of Marvdasht. The main reason can be found in large population because of its proximity to the city of Marvdasht and a mismatch between infrastructure, economic, social and cultural and sports with its population.

Table 4: FIO and CL grading districts in terms of their level of development in taxonomy and TOPSIS

Grading	CL	Grading	FIO	Village
7	0.297	3	0.567	North Kamfiruz
13	0.064	13	0.880	Doroodzan
9	0.105	14	0.880	South Kamfiruz
14	0.063	5	0.708	Khorram Makan
12	0.069	9	0.771	Abraj
2	0.460	6	0.721	Khafrak Aliya
6	0.358	1	0.410	Ramjerd 2
5	0.411	11	0.835	Naqsh-e-Rustam
4	0.417	10	0.779	Rudbal
3	0.457	2	0.548	Ramjerd 1
11	0.092	4	0.689	Rahmat
1	0.471	8	0.757	Majdabad
8	0.235	12	0.874	Kenareh
10	0.104	7	0.734	Mohammadabad

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