



## Evaluation and ranking of urban areas in terms of social capital -Case study: Zahedan

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### ***Abstract***

*The social capital as one of the key factors affecting settlements in the macro (the society), or in the middle (i.e. firms and institutions) and in the later wisdom (i.e., households and individuals) known to pay attention to it could lead to the development of society. Considering the above, the aim of this study is to evaluate and rank in terms of social capital in the city of Zahedan Zahedan is Zahedan population of 567,449 inhabitants and the sample is calculated using a sample of 384 people, study library of, you know, using questionnaires and to analyze the data from one sample T-test in SPSS software to rank metropolitan areas (in terms of social capital) of AHP and entropy VIKOR is used. One sample T-test results indicate that social capital of Zahedan residents are in good condition. Given that the average 3 is calculated from the test T, (3.26) that are higher than the base standard. The mean difference in level of more than 99% is statistically significant and reliable ((Sig = 0.000. And finally by using entropy and VIKOR urban areas in terms of social capital Zahedan been ranked the Region 3 Zahedan In the first place, the city of Zahedan 4 second, third district city of Zahedan in the third and the fifth district and the city of Zahedan in the fourth and fifth, respectively, with respect to social capital.*

***Key words:*** social capital, social security entropy model, Zahedan.

### **Introduction**

Today, social capital, human and physical capital is more important than the role plays and organizations and networks of social relationships and group cohesion among people, organizations, and individuals and organizations-the organizations. In the absence of social capital, other capital lose their effectiveness and social capital, taking cultural and economic development of

roads, rough and tough they (Khmer et al., 1390: 96).

Social capital is characterized by the ability to organize collectively to maximize cooperative group problem solving. In the absence of social capital, the ability to use public resources for public purposes there is no joint cooperation is unlikely to increase human capital, financial capital can only have



positive results into the (Tajbakhsh, 1384: 10).

Social capital is now in search of new concepts of economic, social communities. In a statement made today on the side of human capital, financial and economic capital utilization has been called social capital (Nezakatbar and Vaisi, 1387 : 256). The existence of social capital is key to the establishment of civil society and citizenship LIFE lack of social capital and its establishment is the fundamental barrier Brassy. Communities with this new capital unit, suitable for the development of a strong civil society, accountable and effective civil institutions Democrats, are to provide and grow in this environment. The accumulation of social capital of the authoritarian, autocratic thinking, opportunism, distrust, by... prevent (Hajipour, 1385: 43-44). Scale neighborhood social capital resources in neighborhood communities, through the presence of trust, action and interaction, shared norms of behavior, joint commitments, formal and informal networks of effective information channels are created. The capital may be updated by individuals and groups in the community to facilitate the services used (Key, 2005: 162).

### Statement of the problem

Zahedan city with a population of 567,449 people as the population of the South East's hub and center of Sistan and Baluchestan province on the one hand and also due to the proximity of the border with Pakistan and Afghanistan, the political and security situation in a variety with other cities in Iran. So with regard to the above, in the study of social capital in the city of Zahedan Zahedan has been ranked in urban areas.

### Background research

The first studies in this area include Putnam study (1999) noted. And the effect of social capital and democracy in various regions of Italy investigated. According to him, northern Italy, a higher level of social capital are, on the contrary southern Italy, with lower levels of social capital are. Putnam in 1999 and 2001. Another study carried out in the different regions of the United States and studied the relationship between social capital and government civil. According to the study, social capital in decades, whether in America is decreased.

- Boulder year (1999), a study conducted in South Wales intercourse of social capital and community development as its main basis for Bullen& onyx, 1999: 97)).

- Fukuyama in 1999, the relationship between social capital focuses on civil society. In his paper to extend the radius of trust and social capital through networks deals with confidence. Fukuyama says one of the biggest shortcomings of social capital is the lack of consensus in assessment and measurement. Grubbers discussion of strategies to increase social capital, the role of government, religion and globalization has placed great emphasis. Many investigations have been carried out in Iran. Many translations of Coleman, Fukuyama,. Then, the other great works by, GA resort and M. Chalabi as books or articles about social capital has been published.

- Khorasgani Rabbani et al (1389) in an article entitled "Measuring social capital at the community level" to recognize the dimensions of social capital at the level of district 9 of Mashhad have to conclude



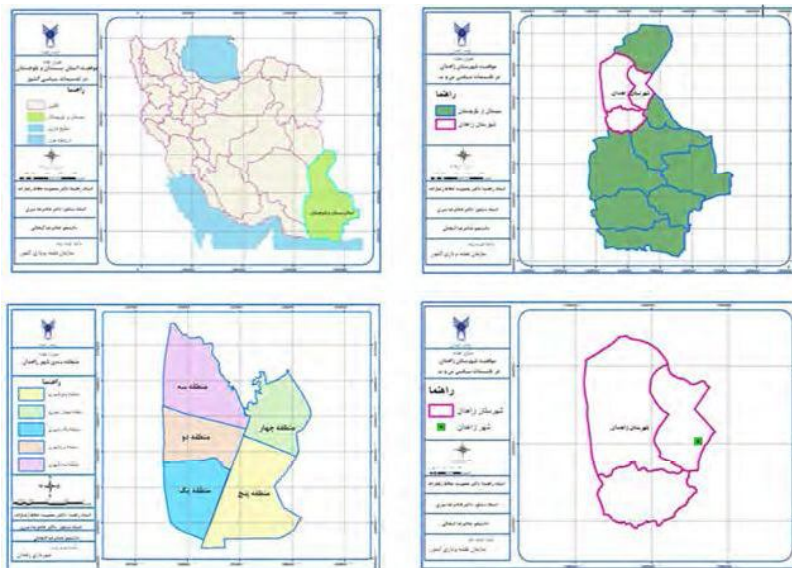
that the average social capital at the district level is a bit lower than average.

## 2. Geographical location of Zahedan

Zahedan, Sistan-Baluchistan province in the East and Iran near the border with Afghanistan and Pakistan. North of the city of Zabol, from the North East to Afghanistan, from North West to South Khorasan, Kerman from the West, from the South West to Iranshahr, from East

to Pakistan and the South East of Khash is limited. An area of 36,581 square kilometers and is the city of Zahedan mathematics position at longitude 60 degrees, 51 minutes and 25 seconds east and latitude 29 degrees 30 minutes 45 seconds north located. Height of 1385 meters above sea level and has a 4 section 3 of the 8 districts and 2102 villages. (Warsi et al., 1387: 145).

Map-location study area



Source: ibin

Table 1: Population in urban areas Zahedan

	City	Population
1	Region 1	111283
2	Region 2	112399
3	Region 3	118484
4	Region 4	112942
5	District 5	112341

## 3. Research Methodology



The type and purpose of the present study used a cross-sectional nature of the survey strategy. Research and Social Monitoring requires the use of appropriate methodology. And research methodology combines qualitative and quantitative methods in a multistep process (from design items and data collection to interpretation of results) is to work together. And various analyzes on the data associated with the variables applied to achieve the desired goals. In this type of field data gathered through appropriate means such and such are coded and entered into SPSS software to test and quantitative analysis carried out on them. In this study, questionnaire data have been collected for the public to get through the test T (analysis of significant differences), contingency

tables (relations between variables), solidarity (of relations), to test the hypothesis. VIKOR mathematical techniques in this study to prioritize urban areas of Zahedan in terms of social capital and a sense of security will be discussed.

The study, residents of the city of Zahedan, will be different levels of age and education. The population includes all groups of people living in urban areas is Zahedan. Total population of 567,449 people, which now is based on Cochran sample of 384 adults living in the city of Zahedan, can be used in each metropolitan area city of Zahedan in accordance with Table 2, respectively.

Table 2: Number of samples in each of the urban areas

	City	Population	Sample size
1	Region 1	111283	75
2	Region 2	112399	76
3	Region 3	118484	80
4	Region 4	112942	77
5	District 5	112341	76

Source: Findings

The validity of the obtained Cronbach's alpha test is 0.933. Since this amount is more than 0.7 Therefore, we conclude this study is of sufficient reliability.

VIKOR (multi-criteria optimization methods and solution)

#### 4.1 overall analysis of social capital components using T-test,

Items related to each of the variables are combined and interpreted by one-sample

t-test analysis. The results indicate that social capital variables are in good condition. Given that the average is 3 variables are calculated from the base and higher standard. The mean difference in level of more than 99% is statistically significant and reliable ((Sig = 0.000.

And the factors related to social capital are combined and interpreted by one-sample t-test analysis. The results



indicate that social capital is the city of Zahedan in good condition. Given that the average 3 is calculated from the test T, 3.26, which is higher than the base standard. The mean difference in level of

more than 99% is statistically significant and reliable ((Sig = 0.000. The results of the social capital in the tables (3 and 4) is given.

Table 3: Descriptive results from one sample t-test related components of social capital

One-Sample Statistics				
Variable	N	Mean	Std. Deviation	Std. Error Mean
taking part	384	3.3003	.50219	.02563
Solidarity	384	3.2466	.44162	.02254
Confidence	384	3.1515	.50529	.02579
Relation	384	3.3611	.94945	.04845
social capital	384	3.2649	.38199	.01949

Source: research findings

Table 4: Results of one-sample t-test related components of social capital

One-Sample Test						
Test Value = 3						
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
taking part	11.716	383	.000	.30026	.2499	.3506
Solidarity	10.943	383	.000	.24661	.2023	.2909
Confidence	5.874	383	.000	.15148	.1008	.2022
Relation	7.453	383	.000	.36111	.2658	.4564
social capital	13.588	383	.000	.26487	.2265	.3032

#### 4.2 Ranking neighborhoods in terms of social capital

##### First stage:

Weighting criteria

Weight and importance of each criterion must be determined through models such

as AHP, ANP and other value model is achieved by weighting the criteria.

First, the raw matrix

This preliminary data to each of the areas and the list is calculated based on various criteria.



Table 5: First stage: raw matrix based on the partnership, trust, solidarity and social relations

	Social participation	social trust,	social cohesion	social relations
Region 1	3.076	2.94	3.074	2.946
Region 2	3.326	3.065	3.246	3.118
Region 3	3.359	3.379	3.289	4.051
Region 4	3.498	3.365	3.456	3.691
District 5	3.226	2.992	3.169	2.964
sum	16.485	15.741	16.234	16.77

Source: research findings

**Second, normalize the data**

At this point the index to be 2 to accomplish and then the square root of the sum of each column and divide by the square root of the sum of each of the values can be done.

Table 6: Small amounts of the decision matrix

	Social participation	social trust,	social cohesion	social relations
Region 1	0.19	0.19	0.19	0.18
Region 2	0.20	0.19	0.20	0.19
Region 3	0.20	0.21	0.20	0.24
Region 4	0.21	0.21	0.21	0.22
District 5	0.20	0.19	0.20	0.18

Source: research findings

**Step Three: weighted normal matrix**

At this stage should be to weight indicators showed that the Shannon entropy method used in this research. The following formula is calculated.

$$P_{ij} = \frac{r_{ij}}{\sum r_{ij}} \quad \forall i, j$$

$$E = -k \sum_{i=1}^n [p_i \times \ln p_i]$$

$$k = 1/\ln 10 = 0.434294482$$



Then comes entropy.

Weighted to the quantities of the normal matrix of each of the options on weight criteria (which has already been obtained in other ways) is multiplied.

Table 7: The weight of each of the indicators are based on the Shannon entropy

Social participation	social trust	social cohesion	social relations
0.18	0.26	0.31	0.25

Source: research findings

Table 8: Matrix normalized weight of each indicator

	Social participation	social trust,	social cohesion	social relations
Region 1	0.05	0.06	0.05	0.03
Region 2	0.05	0.06	0.05	0.03
Region 3	0.05	0.07	0.05	0.04
Region 4	0.05	0.07	0.06	0.04
District 5	0.05	0.06	0.05	0.03

Source: research findings

**The fourth step is to calculate the ideal positive (fi) and negative (fi-)**

Determining the highest and lowest values of normal weight matrix

The largest and smallest value is determined each column.

Here for the greatest number of numerically largest and smallest positive value has the highest negative value.

So if we measure the negative type, the greatest number is the lowest and smallest contrary, ie the maximum value and vice versa.

$$f_i^+ = \max_j f_{ij}; \quad f_i^- = \min_j f_{ij}$$

Table 9: Stage IV the highest and lowest index

The highest and lowest index	social participation	social trust	social solidarity	Community Relations
f+	0.05	0.07	0.06	0.04
f-	0.05	0.06	0.05	0.03



The other to obtain  $S_j$ ,  $R_j$  and women in the index multiplied by the sum of each row of utility and discontent finally obtained.

Fifth step: Calculate the distance from the ideal, at least (and):

The other to obtain  $S_j$ ,  $R_j$  weights in the index multiplied by the sum of each row of utility and discontent finally achieved

Utility index (S) and dissatisfaction Index (R)

$$S_j = \sum_{i=1}^n w_i \cdot \frac{f_i^* - f_{ij}}{f_i^* - f_i^-}; \quad R_j = \max_i \left[ w_i \cdot \frac{f_i^* - f_{ij}}{f_i^* - f_i^-} \right]$$

$f_i^*$  = the number of normal weight matrix for each column

$f_{ij}$  = number desired option for each criterion in the matrix of normal weight

$f_i^-$  = smallest number of normal weight matrix for each column

Naturally, for each option for each criterion a utility index achieved a total of  $S_j$  option specifies the index.

The biggest  $S_j$  of each option for each criterion, the index of dissatisfaction (R) is an option.

Table 10: Calculate the value and prioritize options

	Reliable	partnership	relations	cohesion	$S_j$	$R_j$
Region 1	0.25	0.31	0.26	0.18	0.31	1.00
Region 2	0.10	0.22	0.14	0.15	0.22	0.62
Region 3	0.08	0.00	0.11	0.00	0.11	0.20
Region 4	0.00	0.01	0.00	0.06	0.06	0.07
District 5	0.16	0.27	0.20	0.18	0.27	0.81

Source: research findings

Sixth step: Calculate the Q value and the final ranking options

Through the following formula:

$$Q_j = v \cdot \frac{S_j - S^-}{S^* - S^-} + (1 - v) \cdot \frac{R_j - R^-}{R^* - R^-}$$

□  $V$  = constant 0.5

□  $S_j$  = total value of S for each option





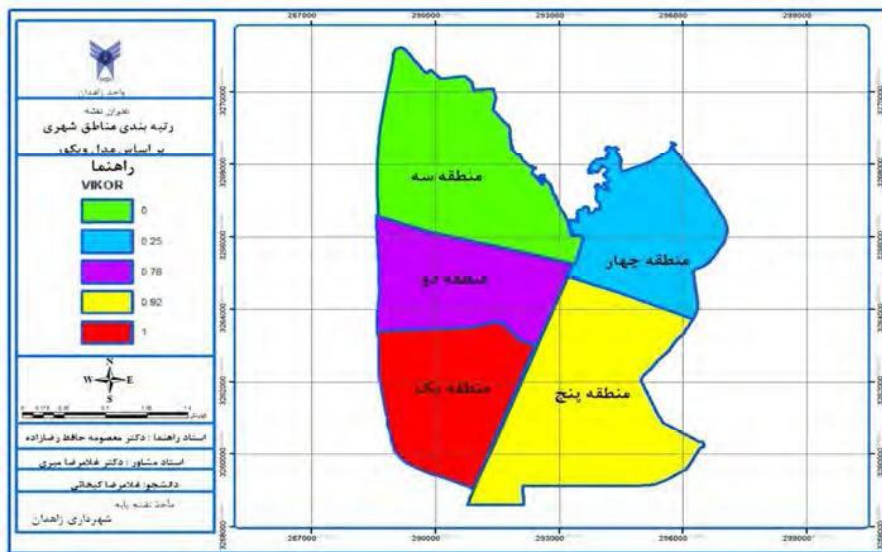
- S = the number of S for each option
  - S\* = smallest number of S for each option
  - Rj = total R-value for each option
  - R- = largest index number R for each option
  - R\* = R smallest index number for each option
- The smallest value of Q as the best option is selected.

Table 11: Stage Six: Q value of the final grade

	Q
Region 1	1.00
Region 2	0.76
Region 3	0.00
Region 4	0.25
District 5	0.92

According to the results of VIKOR Region 3 Zahedan in the first place, the city of Zahedan 4 second, the third, and the three cities of Zahedan, a city of Zahedan five and four respectively in fourth and fifth in terms of social capital with. Jdv15-35)

Map 2: Ranking urban areas in terms of social capital using VIKOR





## Conclusion

In this study, the evaluation and ranking of urban areas in terms of social capital in the city of Zahedan, which generally can be concluded from the findings:

- Statements relating to any of the social capital variables are combined and interpreted by one-sample t-test analysis. The results indicate that social capital variables are in good condition. Given that the average is 3 variables are calculated from the base and higher standard. The mean difference in level of more than 99 percent to statistically significant and reliable is ((Sig = 0.000 and the factors related to social capital are combined and by the t-test one sample has been interpreted. Results indicate that social capital is the city of Zahedan in good condition. The third is that the average calculated value of the test T, 3.26, which is higher than the base standard. The average difference More than 99 percent level of confidence is statistically significant ((Sig = 0.000 (Tables 3 and 4).

- According to the results of VIKOR Region 3 Zahedan in the first place, the city of Zahedan 4 second, the third, and the three cities of Zahedan, a city of Zahedan five and four, respectively, in the fourth and fifth in terms of capital are social. Table 11)

## Offers

1. The findings suggest that the development of social partnership, a sense of security is also increasing. Hence, educational institutions such as schools and universities to improve training and promote participation in community areas as well as radio and television production and broadcasting in the culture of the help and assistance to

others and strengthen partnerships between They can have an important role.

2. Strengthen communication and trust between family members by the parents so that parents spend a lot of time your family issues, and sufficient communication with each other and maintain.

3. Strengthening mutual trust others in childhood and the role of education and enhance communication skills and socialization with other people by a family that could have a major role in reducing crime.

4. The sense of sacrifice and self-denial, self-esteem and interest in the community in children by adult family members.

5. According to the findings of research into the recommended neighborly relations of people who live in a neighborhood with local communities and their active participation in mutual trust between neighbors to make over time, which this Social capital is strengthened neighborhood.

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