

INVESTIGATING SOCIAL JUSTICE IN USING URBAN SERVICES IN DIFFERENT URBAN AREAS (CASE STUDY: BAGHDAD, IRAQ)

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Abstract

Spatial justice is the main problem in many cities. It is located between social ideas and geography concept. Spatial justice examines the situation of neighbourhoods in terms of how services are distributed and the extent to which they have various socio-economic and infrastructural indicators. In the present article, the situation of spatial justice in the distribution of municipal services in the 18 neighbourhoods of Baghdad's districts has been investigated. The research method is descriptive-analytical. First, the distribution of services in District neighbourhoods was analysed using the VIKOR model. Then, in order to measure the performance of urban management from the method of service distribution, statistical tests in SPSS software were used. The results of the VIKOR model show that the distribution of services in the neighbourhoods of District is not fair. Where the search problem was "What is the differences of social Justice in Using Urban Services between Different Urban Areas in Baghdad", While the research hypothesis was covered " There is a significant difference of social Justice in Using Urban Services between Different Urban Areas in Baghdad". To reach the goal of the research that addresses "Identify differences of social Justice in Using Urban Services between Different Urban Areas in Baghdad".

Keywords: Baghdad neighbourhoods, Service distribution, Spatial justice, Urban management..

1. Introduction

The concept of justice and equality is one of the most controversial concepts in the history of thought and many interpretations and theories have been made about it. In other words, since the inequality between human beings, the term equality and the pursuit of justice has been coined. The importance of the issue of social justice increases when it is used in human spaces such as cities [1]. Today, cities, regardless of their geographical location and economic and political structure, have become a scene of social conflict. Distinct social classes are completely separated from each other and the gap between rich and poor is constantly widening [2]. In industrialized countries, all basic amenities are available to urban residents at reasonable costs [3]. In contrast, in developing countries, most citizens do not have adequate access to basic services. In many areas with rapidly growing urbanization in the developing countries, the demand for public services far exceeds the current public capacity and private facilities. Based on this, it is argued that in some cities, the crisis situation is occurring rapidly. This, in addition to the scarcity of resources, is the result of unplanned growth and an unsuitable pattern of service distribution [4].

Baghdad is the largest city in Iraq and the second largest city in Southwest Asia, the capital of Baghdad province and the capital of the country, which is located in the geographical centre of the Tigris River. In the 2015 census, it had a population of 8,405,172. Baghdad is one of the historical and cultural cities in the Arab world and the Middle East. The history of Baghdad dates back to the Abbasid period, and before that the Sassanid capital was the city of Ctesiphon near present-day Baghdad. At that time, Baghdad was the name of a small land near Ctesiphon. It was chosen as the capital of the caliphate during the Abbasid period and became a letter at the same time; As a symbol for the Islamic lands of the Middle Ages.

The city of Baghdad was founded on July 30, 762, on the west bank of the Tigris River by the Barmakians during the Abbasid period, during the reign of Caliph Mansour. Al-Mansour built four gates for Baghdad; The Gate of Khorasan, also known as Baba al-Dawla, was due to the Abbasid government's success in Khorasan, and Bab al-Sham, which was to the Levant, then Bab al-Kufa, to Kufa, and then the Gate of Basra [5]. The city is a living being that paves the way for the growth and excellence of the inhabitants or causes the decline of their personality, and urban services and facilities have a great role in this regard. Services and facilities are opportunities that must be distributed equally and equitably in cities in order to establish social, economic and spatial justice in urban areas.

Inadequate distribution of services not only upsets the population and balances it in the city, but also shapes urban spaces in contradiction with justice in social and economic dimensions. This inequality and imbalance are natural in cities, and it is impossible to eliminate it without exaggeration; But it is possible to minimize it [6]. Social justice has been one of the most appealing slogans of human schools throughout history; It has also been one of the most important topics for social scientists in recent decades [7]. This is due to the realistic approach of all humanities disciplines to the process of inequality in the world. In the present era, the main cause of crises in human societies is rooted in social inequality and injustice [8]. Social justice is one of the concepts that has had different applications and perceptions in the history of human life.

As a person from the lower social class with a person with a high economic status, a Muslim with a non-Muslim, a citizen living in the affluent area of the capital with

a person living in a remote village, etc., each have a different view of justice. Therefore, justice also depends on the time and place and type of relations between the system and social structures [9]. The prospect of life without justice seems to be gloomy; Therefore, in previous decades, geographers pay more attention to the impact of social justice and inequality on the morphology and spatial organization of cities [10].

John Stuart Mill was the first to use the term social justice in the modern sense. According to him, social justice means that society should treat all those who deserve it equally [11]. David Smith was also the first geographer to speak about welfare and social justice in geography. David Harvey considers the application of social justice in geographical analysis as a revolution in geographical ideas [12]. In defining justice and social justice, Harvey states: "Justice is seen as a principle (or set of principles) created to resolve conflicting claims. Social justice, in fact, is the specific application of these principles to overcome the conflicts that are necessary for social cooperation for the development of individuals [13].

Contrary to popular belief, the concept of social justice is extremely mental and fluid; So that an objective, specific and acceptable theme is not imagined for everyone [14]. What is important in this is the need for the concept of spatial justice as an objective manifestation of social justice [15]. Simply put, spatial justice is the link between social justice and space; Therefore, analysis of the interaction between space and society is necessary in understanding social injustices and how to formulate policies to reduce or solve them [16].

The issue of spatial justice has evolved greatly over the past two decades; But so far planners have been unable to provide a comprehensive and comprehensive assessment of spatial justice; Because spatial justice has never been so easy [17]. On the other hand, few scientific studies have been conducted on the spatial justice of urban public facilities and the studies conducted have focused more on the single issue of facilities [18].

Figure 1 shows an aerial map of Baghdad. In this research, an attempt is made to evaluate the subject and its different angles using different methods, so that others can understand it. Given the nature of the subject and objectives of the research, the approach to the research space is descriptive-analytical. In addition, considering that library methods are also used in this research, it is also considered as a part of documentary research. For this purpose, in this research, first, the required data have been collected through centres, related organizations, as well as observations and field studies. The analytical part of the research is divided into two stages.

Part 1: After selecting the desired service indicators using the entropy model, the indicators are scored and the VIKOR model is used to rank and prioritize the distribution of facilities and services at the neighbourhood level. Various software such as ArcGIS and Excel have also been used to prepare tables, charts and maps. Where the use of the Arc GIS program was based on creating maps for each region in which services are distributed and knowing the efficiency of the distribution of these services in the region and their suitability to the size of the population and as shown in Fig. 2., which is a simple model for making maps in the Arc GIS program for shortness as for the standard. The standard adopted in the measurement is the Iraqi standard of urban housing for the year 2010 prepared by the Ministry of Construction and Housing.



Fig. 1. GIS map of Baghdad (USGS earth explorer).

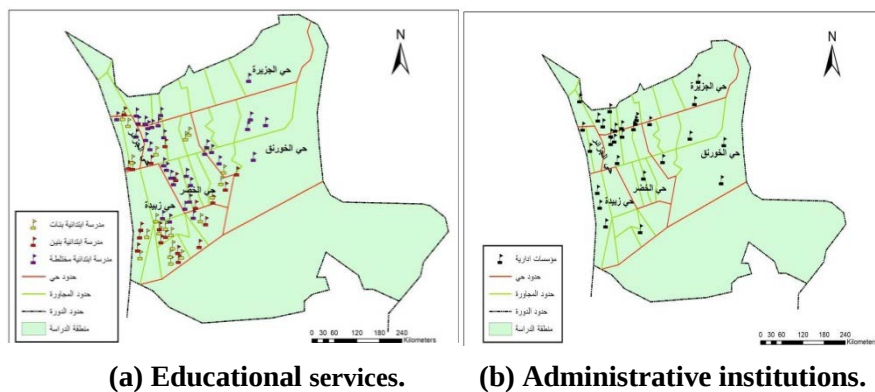


Fig. 2. Arc GIS maps for Azamiye.

Part 2: In order to analyse the relationship between citizens' satisfaction with the method of service distribution and the performance of urban management in the spatial distribution of services, data analysis was performed using one-way analysis of variance and SPSS software. The statistical population is 18 districts of Baghdad. The Cochran relation was used to estimate the sample size. The population of the study area is 1,415,730 people and based on the mentioned relationship, the sample size is 2,015 questionnaires. The validity of the questionnaire was 0.71% using Bartlett test and its reliability was 0.73% using Cronbach's alpha.

The questionnaire was distributed among individuals based on the percentage share of 18 neighbourhoods in the total population of the region. Where the indicators shown in Table 1 were used to measure and know the extent of citizens' satisfaction with the distribution of services in their regions, in addition to evaluation through the Arc GIS program.

Table 1. Indicators used in the research.

Educational services	Transportation and warehousing
Urological-disciplinary services	Cultural and artistic services
Urban equipment services	Religious services
Recreational-sports services	Parking
Tourist services	Park and green space
City Services	Commercial services
Health Service	

2. Operational Stage of VIKOR Technique

In this paragraph, the process of explaining the steps to be applied in the program to form the matrix after the data collection process will be carried out in order to reach the results and weight the criteria that achieve social justice and serve the citizens.

Step 1: After collecting the data and combining them, the raw data matrix of each criterion was defined in the study area. The decision matrix consists of options (rows) and criteria (columns). The options are the 18 districts of Baghdad, and the criteria are the 13 criteria mentioned earlier.

Step 2: In this stage, after the formation of the decision matrix, the normalization of this matrix is done through the following relation.

Step 3: At this stage, after normalizing the decision matrix, the criteria (W) are weighted. For this purpose, there are several integrated methods such as AHP, ANP, Shannon entropy, etc. that are used according to the need. In this research, the entropy method is used.

Step 4: After weighting the criteria, the normalized matrix is multiplied by the resulting weight and the normal weight matrix is obtained.

Step 5: In this step, the highest value of f_i^+ and the lowest value of f_i^- standard functions are extracted from the decision matrix.

Step 6: After determining the highest and lowest benchmark values, the values of S_j (utility index) and R_j (dissatisfaction index) should be calculated. To do this, the weights obtained in entropy are first multiplied by the decision matrix.

Step 7: In this step, the Vikor index, which is the final score of each option, is calculated. as Table 2 Less value is the high utility of the option obtained using the following equation.

Table 2. Calculation of Q value and final ranking.

Rank	Qi	District	Rank	Qi	District
9	0.589	KAZEMIYE	7	0.438	AZAMIYE
2	0.083	AMERIYE	1	0.069	BETAVIN
17	0.863	ALMANSOUR	16	0.832	KERADE
15	0.819	GHADESIYE	12	0.713	SHAAB
13	0.718	DUREH	6	0.42	NEW BAGHDAD
3	0.143	SEYEDIYE	5	0.183	ZAFERANIYE
8	0.542	GHZALIYE	11	0.695	VAZIRIYE
4	0.155	JAHAD	14	0.767	ALFAZL
18	1	HORIYE	10	0.629	SADUN

In response to the second question of the research, due to its nature, one-way analysis of variance has been used as Table 3. The results of the one-way analysis of variance test and Tukey post hoc test to assess the level of satisfaction with the distribution of services in the neighbourhoods are given in the following tables.

Table 3. One-way analysis of variance for satisfaction with the way services are distributed among neighbourhoods.

Sig.	F	SUM SQ	Df	Sources	
9.320	0.000	1.628	17	27.682	Within group
		0.175	309	53.988	Inside group
			326	81.669	Total

In addition to the analytical approach, in which the research relied on maps in the Arc GIS program, which identifies the distribution locations of the various services mentioned in Table 1 and compares the fair distribution of these services and the ease with which all residents of the region can access these services, enjoy and benefit from them within the residential neighbourhood and the areas that have been chosen.

To interpret the result of the analysis of variance test as significant or insignificant, the mean difference of the studied variable between the groups must be based on the significance of the value of F. That is, when the significance level (Sig.) Of the F test is less than 0.05, then the assumption of the difference between the means of the groups is confirmed and, conversely, the assumption of their statistical similarity is rejected.

According to Table 3, the variable "Satisfaction with the way of service distribution" with the level of significance (Sig.) ($P < 0.01$) has shown a significant difference between neighbourhoods. That is, the value of Fisher test in this variable is less than 0.01 with an error level of less than 0.01 and is 99% significant and shows that the difference between the mean of this variable between neighbourhoods is statistically significant; But this difference in means is not clear. Tukey's post hoc test was used to determine the difference between the means in satisfaction with the distribution of services.

According to the obtained value of Tukey post hoc test in the variable of satisfaction with the way of service distribution, the biggest difference in the mean score of satisfaction with the method of service distribution between HORIYE-AZAMIYE (sig: 0.000), 1.102 and JAHAD-AZAMIYE (sig: 0.000) 1,070 It was observed that GHZALIYE and JAHAD neighbourhoods were more satisfied with the way services were distributed than AZAMIYE neighbourhood, respectively.

The lowest level of satisfaction with the distribution of meaningful services among GHADESIYE-ALMANSOUR (sig: 0.034) neighbourhoods is 0.411 - and DUREH-SEYEDIYE (0.023) is -0.441, which is lower than GHADESIYE and DUREH neighbourhoods compared to SEYEDIYE at a lower level of satisfaction services are located.

Table 4 shows the averages in the third column to the seventh column from the lowest average to the highest average. From the citizens' point of view, HORIYE neighbourhood with an average of 3.0769 has the highest average in the variable of

satisfaction with the way of service distribution and AZAMIYE neighbourhood with an average of 1.9744 has the lowest average in this variable.

Table 4. Status of average citizens' satisfaction with the way services is distributed.

Subset for alpha = 0.05					N	District
5	4	3	2	1		
				1.9744	24	AZAMIYE
			2.3791	2.3791	114	BETAVIN
			2.4396	2.4396	14	KERADE
			2.4396	2.4396	21	SHAAB
		2.4725	2.4725	2.4725	14	NEW BAGHDAD
		2.4744	2.4744	2.4744	6	ZAFERANIYE
		2.4897	2.4897	2.4897	30	VAZIRIYE
	2.5171	2.5171	2.5171	2.5171	118	ALFAZL
2.5566	2.5566	2.5566	2.5566		17	SADUN
2.5799	2.5799	2.5799	2.5799		13	KAZEMIYE
2.6325	2.6325	2.6325	2.6325		9	AMERIYE
2.6593	2.6593	2.6593	2.6593		7	ALMANSOUR
2.6808	2.6808	2.6808	2.6808		20	GHADESIYE
2.7094	2.7094	2.7094	2.7094		18	DUREH
2.9015	2.9015	2.9015	2.9015		25	SEYEDIYE
2.9984	2.9984	2.9984			49	GHZALIYE
3.0452	3.0452				17	JAHAD
3.0769					11	HORIYE
0.90	0.78	0.81	0.87	0.59		Sig.

3. Objective Evaluation and Self-Assessment

In this paragraph, the indicators mentioned in Table 1, which were relied upon in the research, were evaluated. The objective evaluation emphasized the fairness of the spatial distribution of services in the selected areas in terms of optimal distribution, in terms of ease of access, and in terms of appropriateness of services for the population in the area, which was relied here on Analysis using maps in the LGIS program. As for the self-assessment, which was with the participation of the people in the regions, by knowing the extent of their satisfaction with the services in their residential areas through distribution, efficiency, area, preparation, etc.

4. Conclusion

In this study, in order to assess the situation of spatial justice, the distribution of services was examined from both objective (Through the distribution of services in the regions and knowing the efficiency of the distribution of these services in the city and their suitability for the number of residents) and subjective aspects. In the area of objective indicators, the studies showed that various facilities and services in the neighbourhoods of Baghdad's districts are not evenly distributed and there is a large gap between neighbourhoods. Citizens are not the only ones who can provide services on their own; Therefore, providing it for people living in the city requires mechanisms and programs that must be organized by the city administration; Thus, regardless of the nature of these services, urban management due to the commanding view from the top down on the one hand has caused unfair

distribution of services at the neighbourhood level and disregard for citizens' views on how to distribute services and on the has created a complex process that Citizens' satisfaction with the way services are distributed varies. As a result, the results indicated that the spatial distribution of services was not equitable in a manner that satisfies most of the citizens, as well as it is insufficient to prepare the population in most areas, in addition to the fact that citizens were not satisfied enough with the services found in the elected residential areas.

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