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Identification and analysis spatial areas of urban poverty in Shahrekord neighborhoods, Iran

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ABSTRACT

One of the most important topics in development economics texts is the issue of poverty, measuring and reducing it and poverty alleviation. The first step in planning to fight poverty and reducing inequality is to have a proper understanding of the poverty situation. According to this issue, the purpose of this study is identifying and analyzing urban poverty as well as its spatial distribution in the neighborhoods of Shahrekord and to formulate and present suggestions and solutions appropriate to the approach of organizing human societies in order to address its unhealthy conditions. The present article has taken a cognitive and exploratory approach in terms of purpose and is considered evaluative-comparative in terms of method that after explaining the concept of urban poverty with the help of quantitative and qualitative data (statistical block 2016, Upstream plans, land use maps, etc.) of 40 indicators in the form of four main economic, social, cultural and physical variables has been classified using TOPSIS and AHP methods and has identified and distributed the spatial distribution of urban poverty in Shahrekord neighborhoods with ARC GIS software. Urban poverty was addressed in Shahrekord neighborhoods and a map of poverty distribution was drawn. The results show that Koreh, Borveh Pahneh, Darb Darreh, Ashtaftak and Mahdieh neighborhoods were identified as poor and targets for planning.

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1. Introduction

21st century cities will undoubtedly face great challenges, one of the most important of which is the concentration of poverty in them (Majidi Khameneh and Mohammadi, 2005). An important issue in establishing sustainable urban development is paying attention to economic, social, cultural and environmental indicators affecting urban poverty in the context of planning (marcotullio, 2001). Cities have become synonymous with growth and are increasingly exposed to adverse crises such as poverty, environmental degradation, lack of urban services, declining infrastructure, lack of access to land and shelter (Flood, 1997). One of the most important topics in development economics texts is the issue of poverty, measuring and reducing it and poverty alleviation.

At the beginning of the 21st century, more than 50% of the world's population of more than six billion people lived in urban areas (un-habita, 2003), which is mainly focused on big cities (Sarrafi, 2001). Under such circumstances, cities, especially the developing ones, are sadly depopulated, and large numbers of the poor are gradually driven to the outskirts of cities, where they face new problems arising from local conditions (Hall and Ulrich, 2000). Urban poverty is one of the major concerns of today's societies and of great political importance around the world. Decision makers at the macro and micro levels need to be aware of the extent of differences and inequalities before offering solutions to reduce inequalities and increase the quality of life (Lai et al., 2010) Unfortunately, many middle-income developing countries are on the rise.

And development does not move in a coordinated and balanced way (Stuckler, 2010) and the level of poverty, especially urban poverty, is increasing every day. Urbanization of poverty is one of the biggest challenges of global development that if the current unfavorable trend continues, in the next three decades we will have 2 billion people living in lower urban areas (Taghavi, 1995). In today's world, facilities and services are not distributed fairly and evenly at the regional level, especially in cities (Ferdrov, 2002). In recent years, many governments and decision-makers have sought to address these regional inequalities (Winkler, 2012). Inequalities in cities show themselves in different dimensions, but unfortunately most of the studies and attention paid in recent years have been on economic dimensions (Tavakoli Nia et al., 2014). The first step in planning to fight poverty and reducing inequality is to know and be aware of poverty situation. Measuring and recognizing poverty from two aspects: examining how the severity of poverty changes at different times and places, especially the recent important issue, namely recognizing the poor to target various types of aid and subsidies is of particular importance (Eftekharian et al., 2014) which is important in the field of urban studies. Spatial emergence of poverty can be formed and expanded in areas of "spatial emergence of poverty", poverty, worn-out fabrics, dysfunctional fabrics, informal settlement and marginalization with acute problems of poor immigrants, unemployment: false employment, high dependency burden, violence and insecurity and etc. (Bomanian and Rezaei, 2011). With the expansion of cities and increasing population and also the limited resources of cities for meeting the expectations and needs arising from lifestyle changes, urban poverty in Iran is also expanding (Eskandari Thani, 2014). This phenomenon can be seen in the development of informal settlements, brokerage-based urban economy, etc. in the cities. However, due to ideological support, poverty alleviation programs in Iran were seriously pursued with the first development program, so it can be said undoubtedly that the goal of poverty alleviation is one of the priorities of those programs; thus, a lot of stock, time and energy has been spent to solve the poverty crisis in the country, but efforts are still ongoing to solve or at least reduce the problem of poverty. Poverty has spread in the country, but efforts are still being made to solve or at least reduce the problem of poverty (Zahedi Asl and Basatian, 2011). The need to pay attention to this issue can be traced to the words of McNarama, the former head of World Bank, who says that if cities do not deal constructively with the poor, the poor will have a devastating attitude towards them (Sarafi, 2003). Due to the macro-national policies and the concentration of services that exist in provincial capitals of the country, it has caused a large influx of surrounding villages to these cities. Shahrekord as the capital of Chaharmahal-e- Bakhtiari province is the most populous city of this province and important service centers are concentrated in this city which has caused people to migrate to the city from surrounding cities, especially Ardal and Farsan to use the facilities and opportunities in this city. The flood of immigrants to this city can be studied in two groups, first, the creative and high-income group that is located in the northern part of the city (Mirabad and Cheshmeh pit) and the lower classes, which are mostly located on the outskirts of the city, especially in Chaleshtar and Mahdieh neighborhood. Unfortunately, at the provincial level, no study or urban development plan has been conducted in relation to the elimination of urban poverty at the city level, which has exacerbated urban poverty in this province. The first attempts to measure poverty in the late 19th century were made by Boot and Revantri in the Anglo-Saxon world. And the history of studies related to poverty in Iran dates back to the 1320s with the establishment of Ministry of Labor in Iran. These studies are mostly in the form of determining a certain minimum wage in household consumption basket. From the 1340s, Iran Statistics Center began to conclude and study costs and revenues, and published its results every year. Since then, in the country and at the global level, valuable and fruitful scientific research has been conducted in the field of poverty measurement at different geographical levels, some of which are mentioned below:

Ren (2011), in a study as a model of poverty dynamics in middle-poverty neighborhoods; is a multi-level approach. This study examines the process of transition of middle neighborhoods to the cycle of poverty and concludes that the process of neighborhoods' transition can be explained by the classical

model of life cycle in metropolitan areas of the United States. Sun Jing (2008) entitled in a study that "Concentration and distribution of poverty in social groups in urban China" showed that there is more and more severe poverty than official statistics of the country in some social groups, including the laboring class, unemployed and rural migrants. They are three measures: first: identifying high inequalities in the existing social security network, second: identifying social groups that have suffered multiple harms, and thirdly: groups that are not covered by the social security network. Span Dahl et al. (2005) entitled in The Dynamics of Poverty and Social Deprivation in Norway with the aim of testing the relationship between poverty and social deprivation or social exclusion and believes that background of studies conducted with a static approach to poverty does not show much connection between poverty and social exclusion. In other words, temporary and transient poverty does not cause much social deprivation, but the longer the experience of poverty for individuals, the more social deprivation occurs. Zanganeh et al. (2015) entitled in Spatial Extensions of Urban Poverty in Arak and have studied and analyzed the spatial poverty in Arak neighborhoods. The leveling results of identified areas indicate that the central part is located in first rank, 20-meter axis of Miqan and Rudaki and Bagh Khalaj neighborhoods in second rank), Davaran and Koshtargah neighborhood, Football neighborhood and Valiasr alley in third rank and finally Naseri Kooy alley in fourth rank in terms of privilege and favorable biological conditions. Rezaei et al. (2013) entitled in Identification and evaluation of spatial areas of urban poverty in Yazd to better understand the situation of spatial emergence of poverty in its neighborhoods, in order to find solutions and basic planning to select measures. The results show that 12.2% of the affluent neighborhoods of Yazd are very poor, 19.5% are poor, 26.8% are affluent and only 4.9% are very affluent. Azizi et al. (2014) entitled in a study on the situation of urban poverty (Case study: Mahabad city) which examines poverty in Mahabad and its impact on the city and urban management and shows the questionnaire analysis results. According to the obtained results, the problem of unemployment in city, limited production capacities and weak economic foundations are among factors that have caused uneven distribution of resources and increased poverty in Mahabad and as a result has increased social inequalities in this city. Architectural and urban planning consulting engineers of the Economic Office (2008) in a study project entitled "Studying urban poverty and identification of slums (informal settlements) in Arak "in order to identify informal settlements and provide plans to empower and improve these areas. Nafiseh Marsousi (2011) has conducted studies on spatial analysis of social justice in Tehran. Also, the increasing poverty development and spatio-social heterogeneity between the regions of Tehran is well evident. According to above, the main purpose of this study is to identify neighborhoods with urban poverty in Shahrekord and investigate the causes so that perhaps with this strategy, it can identify and solve various physical, socio-economic and spatial problems of these neighborhoods.

- Recognition and study of dimensions, variables and indicators of urban poverty in Shahrekord
- Analysis of urban poverty in Shahrekord neighborhoods in terms of economic, social, physical and cultural dimensions

In the late 20th century, various factors led to the formation of a phenomenon called urbanization or urban poverty. The inevitable end of urban development due to the overflow of labor in rural areas and the inefficiency of economic adjustment policies in the 1980s and its effect on reducing the pace of economic development, the number of vulnerable groups, especially in developing countries increased and gradually shifted from urban to rural areas (Javaheri Poor, 2003). In other words, urban poverty has been the subject of debate by sociologists, economists, and politicians for more than a century. Due to growing and unfortunate concentration of poverty in cities, the debate over the causes, consequences, and solutions to combat it has been particularly popular in recent decades (Curley, 2009). Conceptually, if we want to study poverty, we must say that urban poverty has a multidimensional meaning that is known by low income and consumption and other bad conditions related to employment, housing, health care, education and even the individual's position in social networks. (Jordan and Redley, 1994). In other words, urban poverty is

a part of the spatial and physical organization of the city, which is also manifested in the form of poor housing and deprivation of services and urban infrastructure (Vali Nouri, 2016). If we consider poverty as deprivation of basic needs and capabilities, including adequate nutrition, health, education, proper employment, housing, social services, and participation in decision-making, urban poverty, on the one hand, is the transformation of this multidimensional and composite deprivation into a spatial structure and the formation of deprived neighborhoods in the city, and on the other hand, low levels of actual social, cultural, and political capabilities of all social strata living in the city (Samet and Salehi, 2016). Urban poverty is a multidimensional phenomenon and urbanites are suffering due to many deprivations, including lack of access to employment opportunities, housing, adequate infrastructure, lack of social security and access to health, education and personal security (Nour Mohammadi and Hazeri, 2010). Poverty is especially common in cities and suburban areas and the reason is the existence of discriminatory policies (Afrakhteh, 2013). The definition of poverty has evolved over the past decade, as the Global Development Report (1990) expanded on the traditional definition of income-based poverty, adding to other indicators and components such as lack of access to adequate health care, education and nutrition. The 2001-2002 Global Development Report also added other dimensions such as silence, vulnerability and powerlessness (Hjorth, 2003). In other words, poverty is not only related to consumption with insufficient income, but also includes other dimensions such as health, nutrition, illiteracy, lack of social relations, insecurity, low self-esteem and powerlessness (Couddoul, Elentschel, and Wodon, 2002). Urban poverty is also a multidimensional phenomenon that occurs in urban areas; this means that poor people suffer from a variety of disadvantages such as lack of access to employment, adequate services and housing, social protection, lack of access to health, education and security, and personal safety (World Bank, 2002). Urban poverty is a broad topic on which various theories and perspectives are presented, the most important of which are listed in the table below:

Table 1. Different perspectives and indicators of deprived urban neighborhoods formation (Irandoost et al., 2013)

perspectives	Criteria for the formation of deprived neighborhoods
Eecologic	Changes in land use Lack of housing and maintenance Migration of rural workers to the city
Period of poverty and marginalization	Lack of investment to develop employment Migration of villagers to cities
Essential needs	Failure to meet social needs Migration of villagers to cities Impossibility of providing housing by urban poor Inefficiency of official land and housing markets
Liberal	Large population of deprived families Motivation, social disorder among the poor Enlightened immigrants in order to find a job Widening the poverty gap and macroeconomic factors Lack of supervision and work in traditional society
Radical	The big gap between rich and poor in the city due to weakness of unbalanced capitalist system Low level of workers' wages Investment willingness to deal with the growing trend of declining consumption in the capitalist economy Reducing investment in equipment
Dependence	Dependence of the center on the surroundings Increasing urbanization and urban growth
Political economy	Exploitation of lower classes Accumulation of wealth and power in a city
New liberal	Colonial view of proportion and expropriation The problem of laws causes the economy to be marginalized High cost formalization

An analysis of different schools suggests that different contexts, mechanisms and processes are involved in the formation of spatial dimensions of urban poverty, which according to the general and specific conditions prevailing in each place, the practical mechanism of its formation and occurrence is different (Zanganeh et al., 2015). The result of debate is that it can be boldly stated that the indicators of urban poverty in the cities of our country are also observed in some way and part of the existing problems are due to these factors.

2. Material and Methods

The evaluative-comparative research method guides the methodological framework of this article. In terms of purpose, this research is in the group of cognitive-exploratory research. Due to the nature of the problem and the purpose of the research, research data include documentary-library resources (books and written sources, statistical blocks of 2016, maps, etc.). The study population in this study is the neighborhoods (34 neighborhoods) of Shahrekord with a population of 143882 people. In line with the research, first, using economic, socio-cultural and physical indicators, the areas facing urban poverty in the customary neighborhoods of Shahrekord were identified and each of indicators obtained was weighted by experts to perform the weighting operation of indicators from the analysis model. Hierarchy (AHP) and software (Expert Choice) were used. It is noteworthy that to determine the weights of each index, as well as the weight of each dimension, 20 AHP questionnaires were distributed among experts and specialists who were somewhat knowledgeable about the subject under study and the sampling method was purposeful. Then, to rank the indicators used, Topsis quantitative modeling model (Topsis) and Excel software environment (Excel) have been used. In this section, it should be acknowledged that the model used was for all four dimensions of economic, social, cultural and physical, and to obtain the final status, each of the dimensions was weighted and then multiplied together. After the final result and leveling of each neighborhood in different dimensions were determined, these data were linked to Shahrekord map and the spatial distribution of urban poverty in Shahrekord neighborhoods was determined in ArcGIS software environment (Fig. 1). The present study has obtained the desired results in the form of following analytical model.

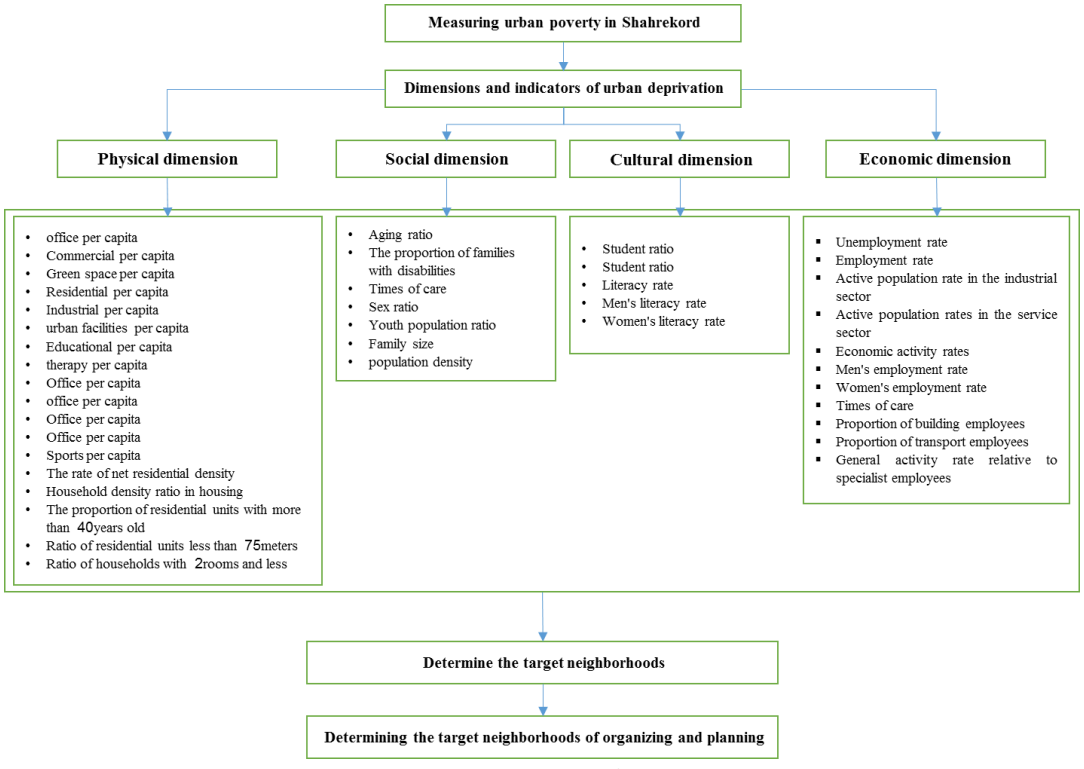

Fig. 1. Analytical model of research

2.1. Study Area

The study area in this research is Shahrekord city and its neighborhoods. The city has a population of 143882 people and includes five districts and 34 neighborhoods in the existing urban context. Shahrekord is the highest center of province in Iran, with an altitude of 2060 meters above sea level, 470 meters. In recent years, the intensity and distribution of municipal services in these neighborhoods has become more important, and although in some neighborhoods the total service levels of neighborhoods may seem sufficient, but due to the imbalance in their location, there is no satisfactory order. Lack of services, especially sports, green, recreational spaces, shopping and trade centers, poor condition of roads and intersections, inadequacies related to public health in neighborhoods, flooding of houses during rain, etc. are among the problems and service-development needs of these neighborhoods (Fig. 2).

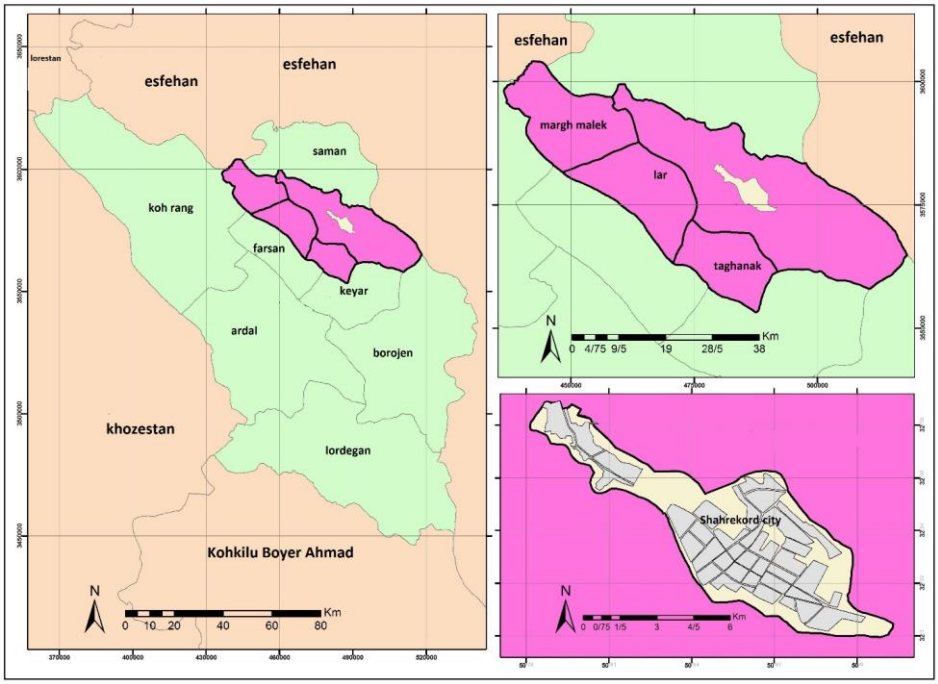

Fig. 2. Shahrekord Location

3. Results and discussion

As mentioned in the research method, in order to level Shahrekord neighborhoods from the perspective of urban poverty, the Topsis multi-criteria decision-making model and AHP weighting method have been used. There is no relation to the model used, therefore only the final weight of each index is mentioned and the drawings related to each dimension are given below. In the first stage of the Topsis model, we need to form a matrix, and after collecting the data and combining them, the raw data matrix of each of the criteria is defined in the study area.

Step 1: Forming a decision matrix:
Step 2: De-scaling the data matrix from the opposite relation (Eq. 1):

$$A_{ij} = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ a_{m1} & a_{m2} & \cdots & a_{mn} \end{bmatrix} \quad (1)$$

Step 3: Balanced unscaled matrix
To do this, we need to have the weights of the indicators, so first, using AHP model and Expert Choice software, we calculate the weights of the indicators:

Fig. 3. The weight of dimensions that determine urban poverty

According to the above diagram, the highest weight is allocated to the dependency load and the aging ratio, and in this regard, urban per capita have taken low weights. This may be due to the fact that the discussion of poverty covers more economic and social aspects and less attention is paid to its physical aspect.

Step 4: The measured unbalanced matrix can now be obtained. For this purpose, the unmeasured matrix is multiplied by $-\mathrm{W}_{n\times n}$ matrix which its principal diameter elements are weights of indices and the other elements are zero.

Next, the positive and negative ideals are calculated according to the unmeasured scales. The largest weight of indicators is determined as the positive ideal and the smallest weight is determined as the negative ideal.

Step 5: Obtain the distance of each option from the positive and negative ideal and the relative proximity of each option to the ideal solution (Eq. 2).

$$V = n \times \mathrm{W}_{n\times n} \quad (2)$$

And according to the values of CLs, it is possible to rank the options (Eq. 3):

$$\mathrm{A}_1 > \mathrm{A}_4 > \mathrm{A}_2 > \mathrm{A}_3 \quad (3)$$

Table 2. The weight of each indicator at the neighborhood level

Authorized neighbor hoods	Customary neighbor hoods	Dimensions								Final score	Final status
		economic		social		cultural		somatic			
		score	status	score	status	score	status	score	status		
1	koreha	0.051	Very poor	0.0353	Very poor	0.028	Very poor	0.003	Very poor	o.o28	Very poor
2	Barom paheh	0.079	opulent	0.07	normal	0.071	very poor	0.074	opulent	0.031	poor
3	Haji abad	0.083	normal	0.0783	normal	0.071	opulent	0.073	normal	0.077	poor
4	Koye police	0.08	very poor	0.0783	normal	0.071	normal	0.073	poor	0.07	poor
5	Darb dareh	0.04	very poor	0.0353	poor	0.028	very poor	0.030	poor	0.044	very poor
6	Posht deh	0.17	opulent	0.1053	opulent	0.09	poor	0.105	poor	0.1	opulent
7	markazi	0.11	opulent	0.1	normal	0.094	normal	0.103	opulent	0.106	opulent
8	Deh sharghi	0.15	opulent	0.1053	normal	0.098	very opulent	0.103	poor	0.104	opulent
9	Payeh shahraki	0.083	opulent	0.035	poor	0.08	poor	0.03	opulent	0.074	poor
10	markazi	0.097	opulent	0.0923	poor	0.085	poor	0.087	poor	0.098	normal
11	markazi	0.091	poor	0.09	opulent	0.08	poor	0.077	very poor	0.099	normal
12	markazi	0.097	normal	0.095	normal	0.085	poor	0.08	poor	0.09	normal
13	markazi	0.09	very poor	0.0923	opulent	0.088	normal	0.087	poor	0.095	normal
14	Deh sharghi	0.097	very poor	0.0923	opulent	0.09	normal	0.08	poor	0.091	normal
15	markazi	0.098	very poor	0.0923	poor	0.085	normal	0.087	very poor	0.096	normal
16	Park melat	0.11	opulent	0.1053	normal	0.098	poor	0.103	poor	0.104	opulent
17	cheshmeh	0.097	opulent	0.0923	poor	0.085	normal	0.087	poor	0.091	normal
18	Deh gharbi	0.097	opulent	0.091	normal	0.085	poor	0.087	poor	0.09	normal
19	shokhmoti	0.083	normal	0.0783	normal	0.071	opulent	0.073	normal	0.08	poor
20	tahhiljan	0.11	opulent	0.1053	poor	0.098	opulent	0.100	opulent	0.104	opulent
21	Sar cheshmeh	0.083	opulent	0.0783	normal	0.071	poor	0.073	normal	0.077	poor
22	Mir ababd	0.128	very	0.1233	normal	0.116	very	0.118	very	0.122	very

	gharbi		opulent				opulent		opulent		opulent
23	shahrdari	0.083	opulent	0.0783	normal	0.071	poor	0.073	opulent	0.079	poor
24	Mir abad sharghi	0.128	opulent	0.1233	normal	0.116	very opulent	0.118	opulent	0.12	very opulent
25	farhakgian	0.11	opulent	0.1053	normal	0.098	poor	0.100	very poor	0.104	opulent
26	Mir abad	0.12	very opulent	0.1233	opulent	0.116	very opulent	0.118	normal	0.122	very opulent
27	Bagher abad	0.124	normal	0.124	very opulent	0.116	very opulent	0.112	normal	0.124	very opulent
28	babavali	0.128	opulent	0.1233	very opulent	0.119	very opulent	0.113	opulent	0.112	very opulent
29	eshkeftak	0.04	very poor	0.0353	poor	0.028	very poor	0.030	normal	0.028	very poor
30	chaleshtor	0.083	poor	0.0783	poor	0.075	opulent	0.073	poor	0.08	poor
31	Gharyeh dehkoed	0.08	normal	0.07	opulent	0.071	very opulent	0.075	poor	0.077	poor
32	Park melat	0.097	very poor	0.0923	poor	0.085	normal	0.087	very poor	0.091	normal
33	mahdyeh	0.04	very poor	0.0353	poor	0.028	very poor	0.030	very poor	0.03	very poor
34	eshkeftak	0.074	normal	0.0783	poor	0.071	opulent	0.073	normal	0.06	poor

After performing the TOPSIS model in Excel environment, it has placed this data in GIS environment, which is the spatial distribution of urban poverty in Shahrekord in terms of different dimensions (Figs 4, 5, 6 and 7). According to above maps, south neighborhoods of Shahrekord are in an unfavorable situation and in fact in a very poor range in terms of social dimension. In the map related to this dimension, it was revealed that northern neighborhoods of this city, which are newly formed (especially the neighborhoods of West Mirabad and East Mirabad) of this city, are socially prosperous groups living in such neighborhoods, and consequently other dimensions. It can be seen from the economic point of view; the northern neighborhoods are in a good position in terms of the city's poverty indicators. An important factor in determining urban poverty economically is the employment rate and unemployment. In this regard, it should be said that the southern neighborhoods are usually engaged in false or low-income jobs; because most of them are immigrants (surrounding towns and villages). In addition, in northwestern part of Shahrekord, the neighborhoods of Darreh Ashkaft and Mahdieh are in a very unfavorable situation, which is an important and influential factor in the poverty of these neighborhoods and it can be said that in fact these neighborhoods are villages attached to the city. In this regard, the residents of these neighborhoods have a low level of literacy and expertise, and also the type of household in these neighborhoods is different from the city, which ultimately all these factors have led to economic poverty in these neighborhoods. Physically, it should be noted that the central part of the city, which is actually Shahrekord's core formation, is in poor condition. In part of this city, the number of residential units with a small area and also the number of residential units with a life of more than 40 years are high. In addition, the per capita of the city, which actually indicates the privilage of a city or neighborhood (per capita green space, education, sports, etc.) is very low and in contrast to northern neighborhoods of the city, namely Baba Vali, Bagherabad and Mirabad east and west contract. Then, to show the situation of urban poverty in the neighborhoods of Shahrekord, we tried combining the above four maps.

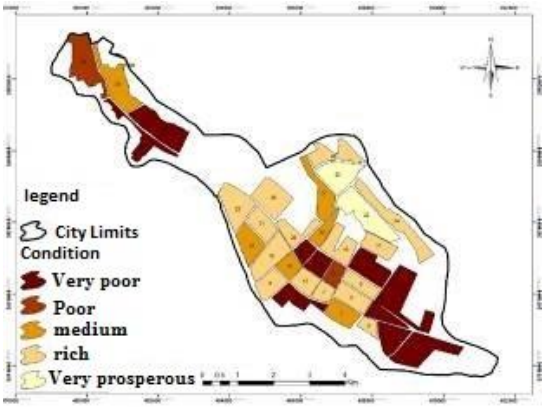

Fig. 5. The poverty zone in terms of economic indicators

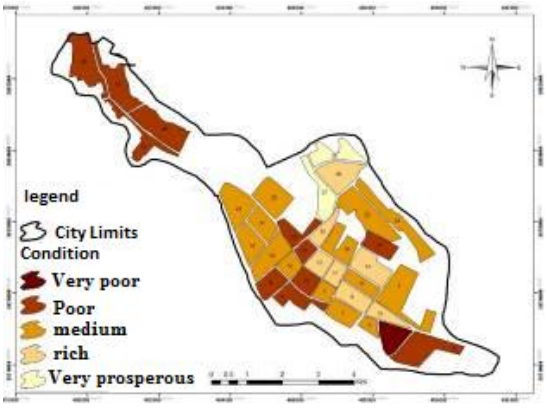

Fig. 4. Pandemic Zone in terms of social indicators

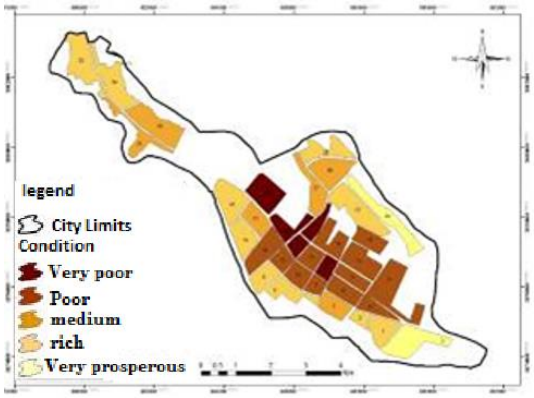

Fig. 7. Pandemic zone of poverty in terms of physical indicators

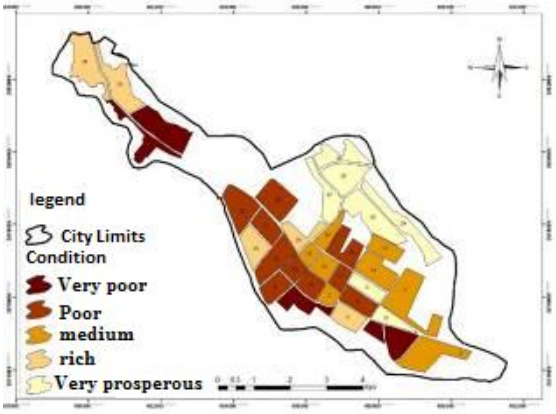

Fig. 6. Pandemic zone of poverty in terms of cultural indicators

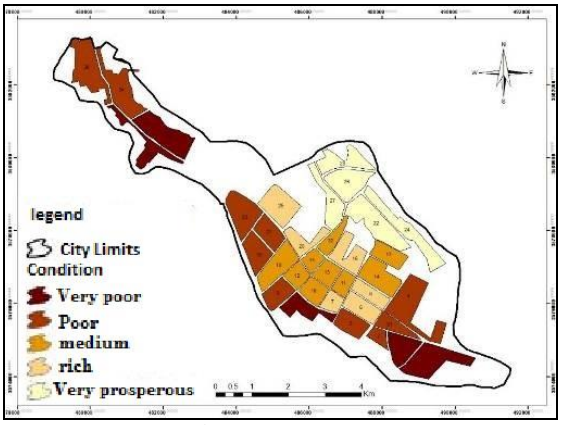

Fig. 8. Pandi Zone of Poverty in Shahrekord neighborhoods

According to Figure 7, which is a combination of four maps related to economic, social, cultural and physical dimensions, the five neighborhoods of Koreh, Brom Pahneh, Darb Darreh, Ashtaftak and Mahdieh were identified as target neighborhoods (very poor). As shown in Figure 7, the southern and western neighborhoods are in an unfavorable situation in terms of urban poverty indicators. In general, it can be said that the closer we get from the north of the city to the south of the city, the more the urban poverty areas become apparent, and more importantly, the poverty slope, in addition to being directly correlated with geographical direction (north to south), is directly correlated topographically. In addition, the neighborhoods of Ashttek, Chaleshtar and Mahdieh in the northwest of the city are in poor condition. These neighborhoods are rural areas that have been annexed to the city in recent years, and the economy and cultural conditions of these settlements are still the same, so that their economy is dependent on agriculture and animal husbandry and culturally have their own customs.

Table 3. Characteristics of target areas in relation to the whole city

The name of neighborhood	population	Percentage to the whole city	Area(m)	Percentage to the whole city
koreh	11462	7.966	990193.9	4.990
Barm pahneh	7523	5.229	523630.1	2.639
Darb dareh	3481	2.419	492631.7	2.483
Eshtaftak	4263	2.963	943353.6	4.754
Mahdieh	3424	2.380	525009	2.646

Table 4. Status of analyzed indicators in the target areas

Dimension	Index	koreh	Barm pahneh	Darb dareh	Eshtaftak	Mahdieh
Somatic	Per capita office	-	1.3083	2.3200	0.0000	0.0000
	Commercial per capita	0.247	1.5712	3.0000	0.8239	0.6000
	Green space per capita	0.020	0.2736	0.0779	0.0000	0.3500
	Residential per capita	6.9	31.3	26.0670	32.4415	33.2000
	Industrial per capita	34.610	0.5789	110.7982	114.0000	113.7425
	Urban facilities per capita	0.240	-	0.0282	0.0235	0.2000
	Educational per capita	41.5	32.2	29.3466	32.4415	3.0959
	Therapy per capita	-	0.0366	0.0415	1.7135	0.4788
	Religious per capita	-	-	0.0000	0.0545	0.3617
	Sports per capita	-	-	0.0000	1.4710	0.0000
	The rate of net residential density	0.1451	0.0320	0.3516	0.3592	0.3766
	Household density ratio in housing	1.11	1.05	0.0403	0.0953	0.0872
	Ratio of residential units with more than 40 years old	12.66	7.015	-2.8375	9.4668	7.0575
	Ratio of residential units less than 75 meters	8.48	8.29	7.2412	7.9821	10.0524
	Proportion of households with two rooms and less	25.51	30.79	5.2577	4.2897	4.2704
Social-cultural	Graduation ratio	6.73	9.31	14.1147	10.1621	13.8943
	College Student ratio	17.86	5.68	7.9395	6.9205	7.7369
	Student ratio	57.11	67.65	64.6188	65.0116	63.4429
	Literacy rate	85.34	85.42	90.1701	86.2619	88.7170
	Men literacy rate	90.21	90.29	93.2831	91.3289	92.6256
	Women literacy rate	80.62	80.60	87.0335	81.1662	84.6959
	Aging ratio	7.95	5.81	3.4398	1.4053	2.6930
	The proportion of families with disabilities	5.19	4.77	1.8427	1.4557	3.1423
	Dependency burden	36.35	41.70	5.7120	3.7656	3.4161
	Sex ratio of the population	98.00	100.29	100.9815	100.3289	103.6883
	Youth population ratio	18.71	23.62	22.3786	21.3699	22.8388
	Family size	2.10	8.98	4.7157	4.8231	4.9065
	Population density	115.76	143.67	103.2787	128.7502	108.7221
Economical	Unemployment rate	13.68	12.64	82.0825	83.9896	86.3119
	Employment rate	77.41	88.68	0.6537	2.3930	38.2547
	Active population rate in the industry sector	17.22	15.43	45.2259	43.9636	46.3851
	Active population rate in the service sector	31.95	40.97	85.4600	83.8015	84.8088
	Economic activity rates	84.30	84.52	14.4204	12.0078	12.3071
	Women employment rate	12.28	10.89	67.6621	71.9818	7.0049
	Men employment rate	65.13	77.79	15.1649	9.3542	65.9553
	Net dependency burden (economic)	0.79	0.75	4.1044	0.6283	1.9439
	Proportion of building employees	10.82	9.81	0.7704	2.8342	2.0162
	Proportion of transport employees	4.13	4.60	73.1112	72.0854	71.9042
	General activity rate	73.34	70.57	8.2220	7.2589	7.6814
	Proportion of specialized employees	8.44	7.71	7.2739	7.9604	5.0877

In explaining the process and factors affecting the formation of spatial areas of urban poverty in Shahrekord, it should be said that the distribution of urban poverty areas can be examined in two categories. They are located in northwestern part of the city and include Mahdieh and Ashtaftek neighborhoods. These villages were annexed to the city during the last decade and in the detailed plan of Shahrekord city and the adjoining neighborhoods approved on 3/4/2011. They include the neighborhoods of Koreh, Brom

Pahneh, and Darb Darreh. As the natives of these neighborhoods have moved to the north of the city and in areas with better living conditions and better access to services, they have replaced this social group in front of the villagers and immigrants of other cities.

4. Conclusion

According to the obtained results, the neighborhoods of Koreh, Barveh Pahneh, Darb Darreh, Ashtaftek and Mahdieh were identified as the target neighborhoods of planning, which means that the poverty areas are mainly located in western and northwestern outskirts of the city. This is due to the existence of cheap land and low-urban services in these areas, which ultimately go back to the illegal and unruly construction in recent decades, which are classified in the form of car dwellings and fringes. The reason of poverty in Mahdieh and Ashtaftneighborhoods of is that they're are not culturally homogeneous, which makes the neighborhoods criminal and the affluent class and officials are less willing to be present in them. The poverty situation in Koreh and Boroum Pahneh neighborhoods is that no urban development has taken place in theme and they have joined the city in recent years, which has led to less urban facilities and services in these neighborhoods. The Darb-e-Darreh neighborhood in central part of the city follows a different pattern of formation, and the reason for this area being among the areas of urban poverty is adherence of this part to the phenomenon of urban decline. Shahrekord is expanding to the north Darb Darreh neighborhood, which is located in southern part of the city, evacuating the population and also moving services from the south of city to the north of city. Also, according to the results obtained from multi-criteria decision-making model, Topsis neighborhoods of Mahdieh, Ashttek, Darb Darreh, Brom Pahneh and Koreh were identified as the most deprived neighborhoods in terms of the desired indicators. Inattention and insufficient study of policies and planning and taste and sectoral decisions are very important factors in the unfavorable and unequal distribution of development services. This research is new compared to other researches that have been done in this field in the sense that firstly, the indicators used include all aspects related to urban poverty and by weighting each index, it has been examined at the level of urban areas. Is. In addition, a separate map has been drawn for each of the dimensions analyzed, which makes the intervention approaches to empower neighborhoods to be selected more accurately.

References

Afrakhteh, H., 2013. *Definition of Poverty*, Vocabulary of Environmental Hazards. Scientific Center of Environmental Hazards Spatial Analysis, 1, 126 p (In Persian).

Azizi, M., Movahed, A., Sasanpour, F. & kardeh, N., 2014. An analysis of urban poverty (Case study: Mahabad). *Sepehr*, 90, 60-69 (In Persian).

Bemanian, M. & Hadi, R., 2011. Assessing the effects of migration as the most important factor in determining the extent of urban poverty in informal settlements using GIS Case study: Kashmar. *Environmental Planning Quarterly*, 15, 85-95 (In Persian).

Coudouel, A., Hentschel, J.S. & Wodon, Q.T., 2002. Poverty measurement and analysis. *A Sourcebook for Poverty Reduction Strategies*, 1, 27-74.

Curley, A., 2005. Theories of urban poverty and implications for public housing policy. *Journal of Sociology and Social Welfare*, 2, 97-119.

Eftekharian, P. & Salimifar, M., 2014. A Study of poverty in urban areas of Kerman Province and its comparison with the whole country. *Quarterly Journal of Economic Research*, 54, 213-238 (In Persian).

Eskandari Thani, M., 2014. *Tehran, Poverty in General, Challenges and Approaches to Deal with it Emphasis on the Development of Local Communities*, Ph.D. Dissertation, Shahid Beheshti university of Tehran (In Persian).

Fedorov, L., 2002. Regional inequality and regional polarization in Russia, 1990-99. *World Development*, 30(3), 443-456.

Hall, P., Pfeiffer, U. (2000). *Urban Future 21*. London: Routledge, https://doi.org/10.4324/9781315011523.

Hjorth, P., 2003. Knowledge development and management for urban poverty alleviation. *Habitat International*, 27(3), 381-392.

Irandoost, K., 2007. *Informal Housing as a Manifestation of Unsustainable Urban Development*, Ph.D. Dissertation, Shahid Beheshti university of Tehran (In Persian).

Javaherpour, M., 2002. The global poverty challenge, *Social Welfare Quarterly*, 6, 127-147 (In Persian).

Jordan, B. & Redley, M., 1994. Polarisation, underclass and the welfare state. *Work Employment and Society*, 8(2), 153-176.

Lai, D., Huang, J., Risser, J.M. & Kapadia, A.S., 2008. Statistical properties of generalized Gini coefficient with application to health inequality measurement. *Social Indicators Research*, 87, 249-258.

Marcotullio, P.J., 2001. Asian urban sustainability in the era of globalization. *Habitat International*, 25(4), 577-598.

Marsousi, N., 2004. *Spatial Analysis of Social Justice in Tehran*, Municipalities Monthly, No. 65 (In Persian).

Noor, M. & Hatef Hazeri, M., 2010. Factors related to urban poverty in Iran during the years, *Scientific Quarterly of Social Welfare Research*, 40, 42-53.

Ren, C., 2011. *Modeling Poverty Dynamics in Moderate-Poverty Neighborhoods: A Multi-level Approach*, Ph.D. Dissertation, The Ohio State University.

Rezaei, M., Mehdi, A. & Khavarian, A., 2014. Identification and evaluation of spatial areas of urban poverty in Yazd. *Human Geography Research*, 46, 28-48 (In Persian).

Samet, S. & Salehi, M., 2016. Capability poverty approach in urban development strategy sudies, *The First International Conference on Urban Economics*, Tehran, Iran (In Persian).

Sarafi, M., 2002. Towards a theory for organizing informal settlement - from suburban to urban text. *Journal of Urban Planning and Architecture Haft Shahr*, 8, 5-11 (In Persian).

Statistics Center of Iran, 2016. *Statistical Block of Shahrekord*.

Stuckler, D., Basu, S. & McKee, M., 2010. Drivers of inequality in Millennium Development Goal progress: a statistical analysis. *PLoS Med*, 7(3), e1000241.

Taghavi, N., 1995. *Basics of Demography*, first edition, Nia Publications, 228 p (In Persian).

Tavakoli Nia, j., Reza, K. & Sharifi, A., 2014. Evaluation of urban systems in nine regions of the country based on multi-criteria decision making method (AHP), *Quarterly Journal of Urban Planning Studies*, 2, 77-99 (In Persian).

Vali Nouri, S., 2016. *Spatial Analysis of Urban Poverty Scan in Tehran Metropolis*, Ph.D. Dissertation, Kharazmi University of Tehran (In Persian).

Winkler, A., 2012. Measuring regional inequality: an index of socio-economic pressure for Serbia. *Zbornik radova-Geografski fakultet Univerziteta u Beogradu*, 60, 81-102.

World Bank, 2002. Poverty Reduction and the World Bank: Progress in Operationalizing the WDR2000/2001. Washington DC, Worldbank, https://openknowledge. Worldbank.org/handle/10986/14077.

Zahedi, A. & Mohammad, M., 2011. Issues and problems of poverty in Iran. *Quarterly Journal of Welfare Planning and Social Development*, 7, 28-40(In Persian).

Zanganeh, A., Talkhabi, H., Gazerani, F. & Yosefi Feshangi, M., 2015. Spatial Extent of Urban Poverty in Arak City. *Journal of Spatial Analysis Environmental Hazards,* 2(1), 93-107 (In Persian).