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The Role of Medium-Sized Cities in Regional Development with Preparatory Approach (Case Study of Bandar Abbas)

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ABSTRACT: Among the most important strategies of regional expansion in Territorial Spatial Arrangement policies (a management du territories) is giving the boost to central cities with regard to their place and role in the regional expansion. Hence the research examines the role of central cities of Bandar Abbas in Hormozgan regional developing and expansion using the descriptive and analytical method. The method of gathering information in this research is library research method which is based on study about theoretical bases that is related to topic of research and using of data and information inferred from reports, documents and statistical yearbook. The indicators under this study are categorized in to four main sections including economic, social-cultural, foundational and physical that is totally included of 24 indicators. The research which is proportionate to the questions and theories of research used two model included of Analytical Hierarchy process (AHP) and Location Coefficient. Finally, the results of the research indicate that the city of Bandar Abbas has the most rate of developing among the other cities of the province. Therefore the first theory of the research proves that Bandar Abbas is on the first surface of urban expansion based on the study which is related to the scale of development in the area. The results of the research show that the economic situation of Bandar Abbas is in the foundational service department, the agricultural department and Non- basic industry as well.
Key words: Central City, Regional Expansion, Territorial Spatial Arrangement, Bandar Abbas city

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INTRODUCTION

Achieving regional and national development is the great aspiration of every nation and the realization of this important matter requires that planners and policy makers to select the best models for determining the development path with an accurate understanding of the situation of the country and the region. Regional development is the development of implications such as urban and regional poverty alleviation, organic development of cities and villages, creating economic ties between human settlements, empowerment of local communities, mobility of labor, capital, people and information on the regional level and finally the creation of integrated regional networks. In most developing countries, the planners focus on spatial decentralization and land preparation with the aims of empowering the settlement system, inhibiting the abnormal metropolitan growth, reduction of regional inequalities and urban-rural dichotomy has resulted in adoption of strategies in the field of population distribution and urbanization. Among the most important of these strategies, we can refer to strengthening and supporting the medium-sized cities and considering their role in regional development [1, 2]. But unlike this trend in recent years, the role of medium-sized cities has weakened and urban chain network has led to weakening of these cities economically, socially and spatially. Thus the urban network in Iran does not have an appropriate hierarchical function and is developing toward centralization. The population and number of large cities act to the detriment of middle- and small-sized cities and rural – urban areas. These transformations have reduced the integrity and functional effectiveness of the elements of urban system and have resulted in spatial imbalances [3]. Some experts consider the land preparation as a long-term planning for better distribution of population, facilities and various activities in order to increase the convenience, comfort and harmony in society [4]. Therefore, the main purpose of the land preparation is distribution of social, economic and demographic activities and hidden and evident capacities according to changes in time and requirements. This is mainly done through a long-term perspective in order to utilize the facilities optimally and also finding out the specific role and responsibility of each region based on its capabilities and capacities in coordination with other areas. In general, the land preparation concept seeks to establish a balance between the three elements of human, space and activity [5].

Some studies have considered the role of medium-sized cities in regional development based on land preparation, among which:

Bulai and Rabinowich in their research suggest that medium-sized cities can provide better living conditions, employment and a less polluted environment for rural populations and act as local markets for the their products. These cities also provide social services and infrastructures not only for the urban population, but also for the rural population [6].

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Ziari and Taghi Aghdam have studied the function of medium-sized city of Khoy in West Azarbaijan province in spatial development. Demographic models used in this study show that the city of Khoy has the necessary population elasticity and if we ignore its role in the urban network of the province, the imbalance increases. Economic models also suggest that Khoy has a service-provider role and the industrial sector has a higher growth than other sectors. Also, the city is ranked the second after the main city of Urmia in the province in terms of economic indicators [7].

Taghvai et al., have discussed the status and the role of the middle-sized city of Hamadan in regional development. The results of this study indicate that the city has had a very strong role in regional development; so that major services and economic powers are concentrated in the city [8].

Gharakhanloo et al., studied the role of middle-sized cities in the regional development and discussed the middle-sized city of Shahreza in Isfahan province. The results show that the concentration of urban population is declining in Isfahan and hence, Shahreza has population elasticity potential, such that regardless of the city's role in the metropolitan network of the province, a greater imbalance occurs. The results of survey for the area under the influence of Shahreza show that with its service power in business, health care and education, the city has played a role beyond the scope of its influence and has spread its influence to neighboring provinces [9].

Movahed and Massoudi Rad in their study examined the role and function of the middle-sized city of Boroujerd in regional economic development. The results showed that Boroujerd as the second largest city in the region has been effective in improving the total economic conditions of the region by providing services, industrial and agricultural functions and as a middle-sized city of the region can be effective in economic dynamic and continuity of smaller surrounding areas through mutual interactions and processes with them [10]. Dadashpour et al (2010) in a study entitled as "An Analysis of the Spatial Organization of System of the Southern Coastal Cities in Iran" show that the initial concentration and urban indicators have had their maximum values in 1976. In contrast, the balance indices represent the most imbalanced situations at the time. Also, the research indicates a resurgence of polarization over the period of 1976 to 2006 in the region for the above indicators [11].

Hence, the present study was to analyze the role of the middle-sized city of Bandar Abbas in Hormozgan region development with a preparatory approach. The main objective of the present study was to analyze the role of the city of Bandar Abbas with a preparatory approach and to assess the development status and the economic role of Bandar Abbas in the regional level.

MATERIAL AND METHODS

In terms of objective, this study was an applied one and in terms of methodology, it was a descriptive - analytical study. Data collection in the research was library-based i.e. referring to the relevant theoretical basics and using data and information of reports, documents and statistical yearbooks. The studied indicators classified in four main economic, socio -cultural, infrastructural and physical categories are as follows:

Economic indicators: Employment rate, the number of dependent individuals, the number of job opportunities created for every 1,000 people, the number of banks per 1000 people, per capita of bank deposits. Socio- Cultural indicators: the number of units offering social services per 1,000 people, the number of insured individuals by Social Security per 1,000 people, the literacy percentage, the number of mosques per 1,000 people, the capacity of theaters per 1,000 people.

Infrastructural indices: the number of water subscribers per 1,000 people, the number of electricity subscribers per 1,000 people, the penetration rate of mobile phones, the penetration rate of land-line phones, the number of active medical centers per 1,000 people, the number of beds available in active medical institutions per 1,000 people, the number of medical laboratories per 1,000 people, the number of pharmacies per 1,000 people, the number of general practitioners per 1000 people, the number of specialist physicians per 1,000 people .

Physical indicators: Average residential floor area, green space per capita, park space per capita, the reverse of the amount of waste generated per 1000 people in tonnes.

The research studied area was Hormozgan province and based on the research objectives the area surrounding the middle-sized city of Bandar Abbas was studied. Based on the research questions and assumptions, two models were used. Thus, Analytical Hierarchy Process (AHP) model was used to test the first hypothesis. All the main criteria and sub-criteria of this model should be compared in a pairwise manner and weighted according to their relative importance. In this regard, the present research used the opinions of 50 experts and scholars in the field of development issues to compare its main criteria and sub-criteria and thus, the relative importance of each criterion was measured compared to the other criteria and all the main weighted criteria and sub-criteria were identified. Finally, using these weights and multiplying them to the selected indices of the status of each urban center (which are actually the same criteria and sub-criteria of the research), the urban centers are ranked and classified. It is worth mentioning that because the existing data on the selected indicators were only present for the city centers, only 13 urban centers were ranked that had the urban centrality in the province. Spatial coefficient was used to test the second hypothesis. Using this method, it can be determined whether the economy of the city is fundamental or non-fundamental to the region. If the ratio is less than one, then the city's economy is non-fundamental. This means that the city or the region should import its required goods and services. On the contrary, if the coefficient is greater than one, then the city has a fundamental economy and the city is the exporter of goods and services.

RESULTS

Determining the weight of main criteria

Based on the comparisons made and the results obtained, the weight of economic criterion was 0.391, the weight of social criterion was 0.138, the weight of infrastructural criterion was 0.276 and the weight of physical criterion was 0.195.

Table 1. Pair-wise comparison of the main development criteria

physical	infrastructural	Socio-cultural	Economic	Criterion	Relative weight
2	2	2		Economic	0.391
0.5	0.5			Socio-cultural	0.138
2				infrastructural	0.276
				physical	0.195

Determining the weight of economic sub-criteria

The results obtained in this section show that the index of inverse load of dependent individuals had the highest importance with a score of 0.359, while the index of the number of banks with a score of 0.06 per 1,000 people is the least important criterion. The weight of each sub-criterion has been specified in Table 2.

Table 2. Pair-wise comparison of the economic sub-criteria

Per capita bank deposits (in Million Rials)	The number of banks per 1000 people	The number of employment opportunities created per 1,000 economically active individuals	inverse load of dependent individuals	Employment rate	Sub-criterion	Relative weight
2	4	1	0.5		Employment rate	0.225
2	5	2			inverse load of dependent individuals	0.359
2	3				The number of employment opportunities created per 1,000 economically active individuals	0.213
0.33					The number of banks per 1000 people	0.06
					Per capita bank deposits (in Million Rials)	0.142

Determining the weight of socio- cultural sub-criteria

Based on the results obtained in this aspect, the highest weight is associated with the literacy percentage and then the indices of the number of mosques per 1,000 people, the number of insured people by Social Security per 1,000 people, the number of units offering social services per 1,000 people and the capacities of theaters per 1,000 people were ranked in the next places of the list. The weights of each of these criteria are given in Table 3.

Table 3. Pair-wise comparison of the socio-economic sub-criteria

the capacities of theaters per 1,000 people	the number of mosques per 1,000 people	literacy percentage	the number of insured people by Social Security per 1,000 people	the number of units offering social services per 1,000 people	Sub-criterion	Relative weight
4	0.33	0.25	1		the number of units offering social services per 1,000 people	0.125
5	0.33	0.25			the number of insured people by Social Security per 1,000 people	0.135
5	2				literacy percentage	0.422

3	he number of mosques per 1,000 people	0.265
	the capacities of theaters per 1,000 people	0.053

Determining the weight of infrastructural sub-criteria:

10 sub-criteria were defined as infrastructural sub-criteria as follows:

the number of water subscribers per 1,000 people, the number of electricity subscribers per 1,000 people, the penetration rate of mobile phones, the penetration rate of land-line phones, the number of active medical centers per 1,000 people, the number of beds available in active medical institutions per 1,000 people, the number of medical laboratories per 1,000 people, the number of pharmacies per 1,000 people, the number of general practitioners per 1000 people, the number of specialist physicians per 1,000 people. The weight of each of the above criteria is given in Table 4:

Table 4. Pair-wise comparison of the fundamental sub-criteria

A	B	C	D	E	F	G	H	I	J	Sub-criterion	Relative weight
5	3	3	7	6	3	5	4	1	1	the number of water subscribers per 1,000 people	0.233
5	3	3	7	6	3	5	4	1	1	the number of electricity subscribers per 1,000 people	0.233
0.5	0.33	0.33	0.5	0.5	0.33	3	1	0.25	0.25	the penetration rate of mobile phones	0.043
0.5	0.5	0.5	0.5	0.5	0.5	1	0.33	0.2	0.2	the penetration rate of land-line phones	0.033
0.25	0.33	2	3	2	1	2	3	0.33	0.33	the number of active medical centers per 1,000 people	0.078
0.25	0.33	0.33	1	1	0.5	2	2	0.17	0.17	the number of beds available in active medical institutions per 1,000 people	0.042
0.25	0.33	0.33	1	1	0.33	2	2	0.14	0.14	the number of medical laboratories per 1,000 people	0.039
0.33	0.5	1	3	3	0.5	2	3	0.33	0.33	the number of pharmacies per 1,000 people	0.074
0.5	1	2	3	3	3	2	3	0.33	0.33	the number of general practitioners per 1000 people	0.102

1	2	3	4	4	4	2	2	0.2	0.2	the number of specialist physicians per 1,000 people	0.123

A: the number of specialist physicians per 1,000 people
B: the number of general practitioners per 1000 people
C: the number of pharmacies per 1,000 people
D: the number of medical laboratories per 1,000 people
E: the number of beds available in active medical institutions per 1,000 people
F: the number of active medical centers per 1,000 people
G: the penetration rate of land-line phones
H: the penetration rate of mobile phones
I: the number of electricity subscribers per 1,000 people
J: the number of water subscribers per 1,000 people
Determining the weights of physical sub- criteria

Comparing the results of these indicators shows that green space per capita has the greatest importance with the weight of 0.558 and the next ranks are associated with the indices of average floor area for the permits issued for residential construction, the inverse of per capita generated waste (kg) and per capita park space, respectively. The weights are specified in Table 5.

Table 5. Pair-wise comparison of environmental- physical indicators

the inverse of per capita generated waste (kg)	per capita park space	green space per capita	average floor area for the permits issued for residential construction	Sub-criterion	Relative weight
3	2	0.33		average floor area for the permits issued for residential construction	0.232
5	5			green space per capita	0.558
0.5				per capita park space	0.092
				the inverse of per capita generated waste (kg)	0.119

Ranking of urban centers of Hormozgan province:

As can be seen in Table 6, Bandar Abbas and Sardasht were selected as the most developed and the least developed cities of the province, respectively. This finding was obtained based on decision-making matrix for economic, socio-cultural, infrastructural and physical sub-criteria.

Table 6. Ranking of urban centers of Hormozgan province in terms of development

	Economy	Socio-cultural	Infrastructural	Physical	Total	Rank
Abu Musa	0.0248	0.00364	0.00680	0.003793	0.039033	4
Bastak	0.016429	0.00344	0.00774	0.003269	0.030878	5
Sardasht	0.001295	0.0044	0.00720	0.002071	0.014966	13
Bandar Abbas	0.023341	0.0035	0.00627	0.035266	0.068377	1
Bandar Lengeh	0.019072	0.00362	0.00495	0.00287	0.030512	6
Parsian	0.020424	0.00336	0.00955	0.007678	0.041012	3
Jask	0.015493	0.00354	0.00631	0.001035	0.026378	11
Haji Abad	0.015654	0.00322	0.00613	0.005436	0.03044	7
Bandar-e Khamir	0.013797	0.00326	0.00775	0.004763	0.02957	8
Dehbaz	0.016335	0.00324	0.00547	0.00347	0.028515	9
Sirik	0.006983	0.00362	0.00604	0.004032	0.020675	12
Gheshm	0.032757	0.00342	0.00553	0.011552	0.053259	2
Minab	0.016024	0.00318	0.00582	0.002838	0.027862	10

DISCUSSION

The present research studied Bandar Abbas as a middle-sized city in Hormozgan and investigated its role in regional development with a preparatory approach. Results findings indicate that the ranking of urban centers of Hormozgan province in terms of development, were as follows:

1– Bandar Abbas 2- Gheshm 3- Parsian 4- Abu Musa 5- Bastak 6- Bandar Lengeh 7- Haji Abad 8- Bandar-e Khamir 9- Dehbaz 10- Minab 11- Jask 12- Sirik 13- Sardashat

According to their rank of development, these urban centers are classified into four levels:

Level 1: Bandar Abbas Gheshm and Parsian

Level 2: Abu Musa, Bastak, Bandar Lengeh

Level 3: Haji Abad, Bandar-e khamir, Dehbaz

Level 4: Minab, Jask, Sirik, Sardasht.

Based on these findings, Bandar Abbas is the most developed city of the region and thus the first research hypothesis is confirmed.

For testing the second hypothesis, the spatial coefficients obtained for the agricultural and the industrial sectors are 0.14 and 0.34, respectively that are lower than one. Thus the economy of Bandar Abbas is non-fundamental in these two sectors. Also, the spatial coefficient of Bandar Abbas for the service sector is 1.66 that shows a fundamental economy in this section. Thus the second hypothesis is also confirmed.

Thus, Bandar Abbas has the highest rate of development among the cities of Hormozgan province and due to its high population capacity, it has been the main settlement for a large part of the population of the Hormozgan province and due to its possibilities and potentials, provides a rather better condition for living. Therefore, while this city is regarded as a development anchorage in the Hormozgan region, by attracting the immigrants of the province and preventing their direct immigration to national metropolises such as Tehran, Isfahan and Shiraz in national level, it has also been helpful in optimum spatial distribution of national lands and it has acted based on the land preparation policies. Also research findings show that the economy of the city is highly dependent on the services sector and the agricultural and industrial sectors have not a significant role in its economy. This has led the economy of the city to be in infrastructural condition in services sector, but its status in the agricultural and industrial sectors is not fundamental.

Research suggestions

1) Enhancing the agricultural and industrial sectors in Bandar Abbas in terms of the employed people. Due to the high immigrant population to the city, mostly from rural areas and small towns surrounding the city, this is of great importance and should be carried out based on developing the conversional and light industries.

2) Organizing and training the immigrants and job seekers in terms of short-period trainings for promoting small industrial workshop.

3)Strengthening and enhancing the communicative role of Bandar Abbas in the development of communication inter- and intra-network of the province with the aim of optimal distribution of population, activity, capital, information, etc. in the province level.

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