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RURAL MIGRATION OUTCOMES ON THE SUSTAINABLE DEVELOPMENT INDICATORS (CASE STUDY: GOLDASHT QUARTER IN AHVAZ)

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ABSTRACT

Informal settlements over the past few decades together with the rapid growth of cities in most developing countries have gained an unprecedented expansion. Urban migration of rural people has brought about such problems as disproportionate accommodation in the suburb areas confronting the sustainable development of rural settlements with difficulties. The main objectives of this study included: investigating the outcomes of rural migration as the cause of development and expansion of marginalization taking into consideration the social, economic, and environmental dimensions as well as for the elimination of existing disparities and sustainable development planning for the Goldasht quarter. A sample size of 361 households was estimated based on the Cochran's formula and adjusted according to the Likert spectrum. SPSS software was used to analyze the data obtained. After examining the validity of the questionnaire in this study, the KMO value was obtained as 0.766 suggesting the adequacy of sampling. The results of study hypotheses following factor analysis suggest that rural migration has no effects on the improvement of economic indicators in the suburb and that rural migrations have had negative effects on environmental issues in the outskirts. Furthermore, rural migrations have a lack of services and amenities in the outskirts.

INTRODUCTION

Informal settlements over the past few decades together with the rapid growth of cities in most developing countries have gained an unprecedented expansion. Urban migration of rural people has brought about problems such as disproportionate accommodation in the suburban areas confronting the sustainable development of rural settlements with difficulties. After the Industrial Revolution, marginalization has expanded with the development of cities so that it has disturbed the physical balance of cities. For that reason, it has incorporated both the rural migrants and the urban poor. In Iran, marginalization was initially driven around the cities and rural migrants from villages and small towns settled around cities due to a high cost of urban land.

KEY WORDS

Migration, sustainable development, marginalization, Goldasht quarter.

Slums, shanty, slum dwellers and, in a more general concept, marginalized people, are the forgotten parts of cities in which housing and living conditions are very low and unsuitable [1].

Marginalization includes the lives of all those living in urban areas, but are living in undesirable conditions in terms of income and the use of facilities and utilities. They are known as examples of the disparate, whom are not requested any comments on the future issues of cities and settlements being completely indifferent [2].

The concept of urban sustainable development implies the urban socioeconomic development whilst persisting the protection of land resources for present and future generations in order to re-exploit the natural resources within the capacity of natural systems and coordination of development projects [3].

In our country, rural-urban migrations have expanded due to the implementation of inappropriate development patterns and sidelining agriculture so that it is considered as a social, political, and economic problem. Some of these problems include irregular population growth and an increase in the population of cities as well as depopulation of villages. In addition, poverty and unemployment are among the problems that threaten villagers, hence, they migrate to cities to improve their lives with no planning.

Ahvaz is one of the cities involved in the issue of marginalization; in these areas, there have been problems such as marginal employment in informal and false jobs, unauthorized constructions, inability of municipalities to provide adequate services in these areas, environmental pollution, adverse cultural, economic, social, and political consequences, and increased crime and deviances in these regions.

Goldasht quarter is one the marginalized neighborhoods in Ahvaz located within the jurisdiction of District 6 Municipality with an area of 175.51 hectares; its population amounted 2195 individuals according to the census statistics in 2006, and it has been reported to populate 6117 individuals in 2011. Based on a stock plan known as the Alley of Gardens dating back the period before the revolution, a number of stocks were offered in separate areas of 1000 meters with dimensions of 40 × 25; these were supposed to be converted into urban villas but the area was turned into a marginalized texture in Ahvaz following the

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victory of the revolution in 1978 and the subsequent occurrence of the imposed war since 1980, which caused the influx of people residing in the border towns of Hovaizeh, Soosangerd, Hamidieh, etc. Additionally, the area had been seen as agricultural lands by the master plan in 1988 but it has become marginalized because of the present status. In this region, there are houses with less durable materials and at a low level of urban facilities and a poor state of health. The people of this region are also facing with a number of social, cultural, economic, and environmental problems.

The aim of this study was to evaluate the consequences of rural migration on the sustainable development indicators as a case study in the Goldasht quarter within the marginalized areas in Ahvaz during 1981-2015 and to provide solutions to the outcomes of migration on the socioeconomic, cultural, and environmental indicators. Moreover, the national and international studies conducted in this area will be discussed.

[4], studied the effects of rural migrations on the development of marginal settlements and threat to social security of urban areas within the Taher Kalan quarter in Ahvaz and found that one of the factors in the formation and spatial distribution of marginalized communities is a lack of space and poor distribution of public services rendering the centralization of poor groups in areas without adequate facilities and services as well as in cheap urban areas. In addition, due to economic problems, low income, and comparison with others living within the city, people have gained a great tendency to commit criminal conducts.

The causes of migrations to the city of Ahvaz among the inhabitants of marginalized neighborhoods within the Manba-e A'ab quarter in Ahvaz. Their results showed that the economic, cultural, and social factors, respectively, have had the greatest impacts on the immigrations of people [5].

the biggest problem of immigrants to be housing and job; they create informal settlements with regard to housing and in terms of job, they deal with false jobs or activities in the area of contraband, theft, and other criminal activities to comply with the environment. The authors suggest that creation of affordable housing, increasing technical and professional skills of villagers, and participating the residents in public management through the formation of councils and local communities to be appropriate strategies [6].

the main causes of marginalization in the Mallashiyeh of Ahvaz to be the lack of proper planning to build infrastructures and weakness of civil administration institutions in the cities of Khuzestan Province, especially the imposed war in Ahvaz as a very effective factor; the author has introduced the approach and strategy of organizing as one of the main solutions to the problem of marginalization [7].

Land ownership and other factors differently affect migrations. Accordingly, international migrations in the region are mostly affected by human capital and less influenced by agricultural practices and environmental conditions of the region. Local national and internal migrations are more affected by access to land and social capital [8].

Considers rural poverty as the main cause of migrations to the cities and believes that rural people move to cities to escape poverty injuries [9].

The relative role of people's satisfaction with their locations and mentions that immigration is a rational and targeted operation accomplished spontaneously by the immigrant to modify or improve the quality of life [10].

informal settlements to be the outcomes of antithetic and disfigure development in the urban system and stated that more than 50 percent of the world population live in cities, the spatial areas that draw a wide context of micro and macro communication structures, social conflicts, and organized violence. A lot of socio-economic and political problems in developing countries have been caused by disfigured growth and expansion of urban systems and spaces [11].

MATERIALS AND METHODS

This is an applied research and a descriptive-analytical one in terms of methodology. Data were collected through both library and field surveys. In the library method, the required information was obtained through books, organizational documents, articles, organizational archives, and various scientific websites. The second method consisted of field studies and interviews carried out via the preparation of questionnaires and, ultimately, classification and analysis of field studies.

The study population was a sample of 1233 households in the Goldasht district. Cochran's formula was used to determine the sample size. This formula is one of the most widely used methods to calculate the sample size, where (n) the sample, (N) population size, (z) the standard normal variable unit equal to 1.96 at a confidence level of 95%, (p) proportion of the population with a certain attribute, (q) the proportion of

the population lacking certain traits (if p and q values are not available, they can be considered 0.5), (d) the allowable error usually equal to 0.01 or 0.05.

Accordingly, a sample size of 361 households was obtained using the Cochran's sampling formula. The questionnaires were distributed among the study population and collected by researchers upon completion.

In order to achieve the desired validity, the questionnaire was modified according to the comments of supervisor, faculty members, and also through consulting with informed experts on the issues related to the research topic; eventually, the standardization and validity of the questionnaire were confirmed. Cronbach's alpha as a measurement tool was used to examine the reliability of the questionnaire. When the calculated percentage of this procedure is closer to 0.7, the questionnaire is more reliable. The Cronbach's alpha, therefore, was calculated for questions concerning the indicators of social, economic, and environmental services amounting to 0.85, 0.75, and 0.81, respectively, indicating the reliability of the questionnaire.

The variables in this study included migration, marginalization, sustainable development indicators, economic indicators, social indicators, and environmental indicators.

Data analysis and testing the hypotheses were performed by using the SPSS 20 statistical analysis software with two descriptive (frequency, mean, standard deviation) and inferential statistical methods such as Chi-square test, and correlation analyses of Pearson and Spearman.

RESULTS AND DISCUSSION

All 361 distributed questionnaires were collected. According to the results, there were 66.8 percent male and 33% female respondents. The age groups of the respondents consisted of 22.4 percent in 18-28 years, 29.4 percent in 29-38 years, 18.6 percent in 39-48 years, 20.2 percent in 49-58 years, and 9.4 percent in the group of 59 years and older. In terms of education levels, the percentages of respondents with under diploma, diploma, associate diploma, and bachelor's degrees, respectively, were 82%, 7.5%, 2.8%, and 7.8%. Regarding the headman's occupation of household among the respondents, there were 0.8% employees, 41.3% workers, 1.1% housewives, 5.5% hucksters, 26.9% self-employed, and 24.4% unemployed. The monthly income levels of the respondents amounted less than 200, 200,000 to 500,000, 500,000 to 1,000,000, and 1,000,000 to 20,000,000 Rial with frequencies of 31, 42.9, 24.4, and 1.7 percent, respectively; none of the participants earned 20,000,000 Rial and higher.

The results of the questionnaire revealed that all the respondents were not native to this area. Concerning the previous living situation of the respondents, 18.3, 73.4, 8.3, respectively, used to live in Ahvaz, the surrounding villages, and adjacent cities; none of the subjects used to live in nearby provinces. With respect to the main reason for the migration of the respondents, 38, 22.4, 29.9, and 9.7 percent, respectively, noted the war, better jobs and changing careers, more access to facilities, and further education of themselves and their children. About the main reason for choosing Goldasht quarter to live in, 34.1, 10.8, 15.2, and 39.9 percent of the respondents, respectively, denoted the cheapness of the land and housing as well as the low rents, proximity to the workplace, nearness to relatives, and security as the major causes. In terms of willingness to leave the current location, 20.7 percent of the respondents tend to leave the present location while 79.3 percent of them do not tend to abandon their current location. Regarding the tendency to leave the current location, 286 individuals out of all of the respondents (361 individuals) do not tend to leave their current location whereas 75 individuals incline to abandon their present place. From 75 people who tend to leave their current location, 5.3 percent due to health problems and environmental pollution, 1.1 percent because of low cultural level and 14.4 percent because of lacking amenities incline to depart their current location and none of the subjects mentioned their abandonment due to social ills. Concerning the status of unwillingness to leave the current location among 286 people who do not want to leave their current location, 37.9 percent reasoned the cheapness of land and housing as well as low rents, 37.4 percent due to proximity to relatives, and 3.8 percent because of nearness to the workplace do not want to abandon their existing location; none of the participants denoted very low expenses and appropriate income as the major motivations to stay in their present settlement.

With respect to the ownership status of housing units, 46, 21.3, and 32 percent of the respondents had owned property (with document), owned property (no document), and rented houses, respectively; none of the subjects had dedicated, free, and equal-to-service housing units. In terms of the situation of housing unit duration, 16.9, 23.8, 50.7, and 8.6 percent of the respondents, respectively, owned houses with durations of less than 5 years, 5-10 years, 10-20 years, and 20-30 years; none of the subjects owned houses more than 40 years old. In terms of materials used in the buildings of the respondents, 90% used in the brick and iron, 1.1% applied steel structure, and 8.8% employed concrete in the buildings; none of the subjects used adobe, clay, and wood materials in the structure. The qualities of the respondents' buildings included 16.1 percent with new structures, 19.7 percent as repaired, 3.3 percent as

destructible, and 60.9 percent as acceptable ones. The respondents' satisfaction states of settlement in the quarter showed frequencies of 0.8, 8.3, 82.3, and 8.6, respectively, for weak, moderate, good, and very good satisfaction levels; none of the subjects marked a very weak satisfaction level.

Descriptive findings

The effects of economic indicators in the Goldasht quarter

To evaluate the effects of economic indicators in the studied area, the following statements were questioned: "How is the economic situation of residents in Goldasht?, How is the welfare of your family?, How satisfied are you with your employment? How satisfied are you with your income?, How satisfied are you with the price of the residential land? How satisfied are you with access to jobs?, How satisfied are you with the quality of food?, How satisfied are you with the improvement of life standards ?, How much are you satisfied with family welfare?, How much is satisfaction with settlement in the quarter?, To what extent are you satisfied with the improvement of materials in your house (building)?" [Table 1].

According to [Table 1], the average total impact of economic indicators was not equal to 2.78, which is not in a good ranking.

Among the research statements in the field of economic indicators, the lowest average belonged to the index "How satisfied are you with access to the jobs?" with an average of 2.46 and a standard deviation of 0.933, and the highest average was recorded for the index "To what extent are you satisfied with the improvement of materials in your house (building)?" with an average of 3.62 and a standard deviation of 0.650.

Table 1: The impacts of economic indicators in the Goldasht quarter

Row	Item	Effectiveness					Standard deviation	Average
		Very weak	Weak	Moderate	Good	Very good		
1	How is the economic situation of residents in Goldasht?	0	33.2	64.3	2.5	0	0.513	2.69
2	How is the welfare of your family?	9.1	23.0	52.1	15.8	0	0.830	2.74
3	To what extent are you satisfied with your employment?	17.2	19.9	50.1	12.7	0	0.918	2.58
4	How satisfied are you with your income?	19.1	24.1	46.0	10.8	0	0.922	2.48
5	How satisfied are you with the residential land prices?	3.6	10.5	59.6	26.3	0	0.711	3.08
6	How satisfied are you with access to jobs?	21.1	21.6	47.4	10.0	0	0.933	2.46
7	How satisfied are you with the quality of food?	0.8	13.9	58.7	26.6	0	0.653	3.11
8	How satisfied are you with the improvement of living standards?	15.0	33.0	41.3	10.8	0	0.875	2.47
9	How satisfied are you with the welfare of the family?	13.6	31.3	41.0	14.1	0	0.896	2.55
10	To what extent are you satisfied with the improvement of materials in your house (building)?	2.2	2.8	24.9	70.1	0	0.650	3.62
Total		9.9	21.4	48.6	20.0	0	0.602	2.78

The effects of environmental indicators in the goldasht quarter

In order to investigate the effects of environmental indicators in the studied area, the following statements were questioned: "How is the state of cleanliness in the streets and locations?, How is the access to safe water in this area?, How is the status of sewage disposal in the area?, How is access to the sewerage network in this region? " [Table 2]. Among the items of research in the field of environmental indicators, the lowest average belonged to the index "How is access to the sewerage network in this region?" with an

average of 1.35 and a standard deviation of 0.478, and the highest average was recorded for the index "How is access to safe water in this area?" with an average of 2.78 and a standard deviation of 1.12.

Table 2: The effects of environmental indicators in the Goldasht quarter

Row	Items	Effectiveness					Standard deviation	Average
		Very weak	Weak	Average	Good	Very good		
11	What is the state of cleanliness in the streets and the quarter?	9.1	59.3	27.4	4.2	0	0.680	2.26
12	How is access to clean water in the area?	18.6	19.7	26.0	35.7	0	1.12	2.78
13	What is the status of sewage disposal in this area?	47.4	49.3	3.3	0	0	0.560	1.55
14	How is access to sewerage network in this area?	64.8	35.2	0	0	0	0.478	1.35
Total		35.0	40.9	14.1	10.0	0	0.490	1.99

The effects of service indicators in the Goldasht quarter

To evaluate the effects in the studied area, the following indicators were questioned: "How is the authorized access to electricity?, How is access to city gas?, How is the status of asphalt in this area?, How is the availability of healthcare home and health Service?, How is the access to primary school?, How is access to high school and pre-university? How is the status of public transportation (taxi)?, How is the status of public transportation (buses)?, How is the security situation in this area?, How are the security services and police centers?, How is access to shopping centers and malls in the area ?, How is the access to the phone?, How is the status of municipal services in the area?, To what extent are you satisfied with the improvement of the physical condition (physical) in this area?" [Table 3].

According to [Table 3], the average total impact of service indicators was equal to 2.78, which is not in a good ranking.

Among the items of research in the field of economic indicators, the lowest average belonged to the index "How is the status of public transportation (buses)?" with an average of 1.33 and a standard deviation of 0.496, and the highest average was recorded for the index "How is the security situation in this area?" with an average of 3.99 and a standard deviation of 0.139.

Table 3: The values of services indices in the Goldasht quarter

Row	Items	Effectiveness					Standard deviation	Average
		Very weak	Weak	Average	Good	Very good		
15	How is access to the authorized electricity?	0	32.7	8.0	59.3	0	0.922	3.26
16	How is access to city gas?	0	20.2	10.5	69.3	0	0.810	3.49
17	How is the status of asphalt in this area?	0	41.8	51.5	6.6	0	0.601	2.64
18	How is access to healthcare home and health services?	58.4	38.5	1.1	0.8	1.1	0.675	1.47
19	Access to primary school look like?	1.9	7.8	31.6	58.7	0	0.722	3.47
20	How is the status of access to high school and pre-university?	64.0	33.8	1.1	0	1.1	0.630	1.40
21	How is status of public transportation (taxi)?	0	0	3.0	95.8	1.1	0.203	3.98
22	How is the status of public transport (buses)?	67.3	31.6	1.1	0	0	0.496	1.33
23	How is the security situation in the region?	0	0	1.1	98.1	0.8	0.139	3.99
24	How are the security centers and police services?	0.8	22.7	49.0	27.4	0	0.731	3.03
25	How is access to shopping centers and malls in the area?	0.8	65.4	33.8	0	0	0.488	2.32

26	How is the access to the phone?	0	22.2	4.2	73.7	0	0.833	3.51
27	How is the status of municipal services in this area?	1.7	91.1	7.2	0	0	0.292	2.05
28	To what extent are you satisfied with the improvement of the physical condition in this area?	6.6	77.0	16.3	0	0	0.470	2.09
Total		14.4	34.6	15.7	35.0	0.3	0.211	2.72

Analytical results

Among the types of rotations in factor analysis, the Equamax rotation created the most suitable load factor on the indices. Therefore, this rotation was used to increase the load factor of more effective factors. Given that the value of KMO (almost 0.766) was more than 0.6 and also the significance level of Bartlett's test is $0.000 > 0.05$, therefore, the factor analysis is appropriate. The conducted analysis showed that the three factors explain about 68% of the variance or variability of the variables.

Table 4: The final statistical attributes based on the processing of three factors with eigenvalues greater than one

Main components	Percentage of variance explained by each factor	Percentage of total explained variance	Percentage of total explained variance
1	6.240	21.516	21.516
2	5.358	18.485	39.991
3	2.152	7.421	67.413

Testing hypotheses

The first hypothesis: It seems that rural migration has had a positive effect on improving economic indicators in the outskirts

According to [Table 5], the average responses to the indicators of economic components in the Goldasht quarter is equal to 2.78 showing that the focus of answers is very far from the number three indicating a vast difference between the sample average and the amount of the test value (3). In addition, based on contents of [Table 5], the significance level obtained is smaller than an error level of $\alpha = 0.05$. Also, the confidence intervals obtained for the difference between the average of the sample and the test value is negative, which is at least equal to -0.216, hence, the hypothesis is not acceptable; that is to say the migration of villagers did not have a positive effect on improving economic indicators in the outskirts. Moreover, because the average of responses is less than the mean value, the majority of participants have chosen the low and very low options. And due to the negativity of the minimal difference between the average of the sample and the test value, it is concluded that the rural migration has negatively affected the economic indicators in the outskirts.

Table 5: Comparison of average scores of the participants resulted from the one sample t-test

Number	Average	Standard deviation
361	2.78	0.602
t -statistic	df	Significance
-6.84	360	0.000
Difference between the average and the test value	Confidence interval of 0.95 for the difference between the average and the test value	
	Lower bound	Upper bound
-0.216	-0.279	-0.154

The second hypothesis: It seems that rural migrations have had negative effects on the environmental issues in the outskirts

One-sample t-test was used to assess the effects of rural migrations on the environmental issues in the outskirts. The results of this test indicate that there is a significant difference between the average of total environmental indicators (1.99) and number 3 at a confidence level of 95% ($p\text{-value} < 0.05$). However, the average obtained is lower than the theoretical mean (3) assessed and their difference from the numerical

suitability has also been assessed as negative, i.e. the majority of subjects have chosen the low and very low (negative effects) options. Therefore, the second hypothesis is accepted and it can be concluded that rural migrations have had negative effects on the environment issues in the outskirts [Table 6].

Table 6: Comparison of the mean scores of subjects in one-sample t-test

Number	Average	Standard deviation
361	1.99	0.490
t-statistic	df	Significance level
39.03	360	0.000
Difference between the average and the test value	Confidence interval of 0.95 for the difference between the average and the test value	
	Lower bound	Upper bound
-1.008	-1.05	-0.957

The third hypothesis: Rural migrations have the shortage of services and amenities in the outskirts

One-sample t-test was used to assess the effects of services and amenities in the outskirts. The results of this test indicate that there is a significant difference between the average of total service indicators (2.72) and number 3 at a confidence level of 95% (p value<0.05). However, the average obtained is lower than the theoretical mean (3) assessed and their difference from the numerical suitability has also been assessed as negative, i.e. the majority of subjects have chosen the low and very low (shortages) options. Therefore, the third hypothesis is accepted and it can be concluded that rural migrations have the shortage of services and amenities in the outskirts [Table 6].

Table 7: Comparison of mean scores of the subjects in one-sample t-test

Number	Average	Standard deviation
361	2.72	0.211
t-statistic	df	Significance level
-25.03	360	0.000
Difference between the average and the test value	Confidence interval (0.95) for the difference between the average and the test value	
	Lower bound	Upper bound
-0.278	-0.300	-0.256

CONCLUSION

Over the past few decades, informal settlements along with the rapid growth of cities have gained unprecedented expansions in many developing countries. Rural migration to urban areas has created problems such as disproportionate accommodation in the outskirts so that it has confronted sustainable development of rural settlements with difficulties. The physical conditions of marginalized locations include the lack of suitable amenities, environmental and health problems, and disability to provide adequate public services. The marginalized people are the urban poor preoccupied with the material issues. They lack many urban and economic amenities, have a low social status, are more satisfied with the rural life, and have limited progress motivation.

Due to the existing marginalization problems in Ahwas as well as those in the Goldasht, this region was selected and the results showed that the main problem was illiteracy and consequently, there are many economic problems. They migrated from other rural areas mostly because of security problems and are satisfied with their current location, but are dissatisfied with the quality of municipal services.

The results showed that the root cause of the marginalization needs to be sought at the same factors that have led to rural-urban migration. When the villagers enter the city they inevitably settle the non-use suburban lands and in low-cost, marginalized areas as they possess no settlements and are also very poor financially. Additionally, because the marginalized lack adequate literacy and are often non-skilled and void of techniques and expertise, they are not absorbed in the urban economy, hence, the frequency of unemployment is exacerbated in these regions. Overall, sustainable urban development is affected by the presence of the marginalized and rural migrants and the results have shown that these effects have been true from both the social and environmental dimensions in the Goldasht area but not in the economic dimension.

CONFLICT OF INTEREST

Authors declare no conflict of interest.

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