

BODY AND SPATIAL CHANGES IN THE INFORMAL SETTLEMENT LOCALITIES IN URBAN AREAS CASE STUDY OF AMRO ABAD, VARAMIN

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ABSTRACT

Rapid growth of urbanization in developing countries and increasing immigration to the big cities in recent years has created new problems in the cities. The demand for inexpensive housing as a first need for dwelling by the newly arrived immigrants is associated with unauthorized and unplanned constructions that generally lead to make informal settlements at the fringes of such cities. The issue of informal settlements in urban areas of developing countries is considered as one of the effects of increased growth of urbanization and increasing population of cities and the lack of an integrated and efficient system of urban management. The statistics provided by international organizations show that about one sixth of the world population live in slums and fringes. Considering its proximity to the Tehran metropolis, the cheap lands compared to around Tehran and its neighboring cities in the past decades Varamin has witnessed an influx of immigrants and their settlement in the lands of surrounding localities of this city that this body growth of city due to being unplanned has led to the formation of the illegal and unidentified construction in the city localities and finally has created the problem of informal settlements in urban areas of Varamin. This study plans to study how and why to emerge the informal settlements in the neighborhood of Amro Abad in Varamin. But what is evident in this issue more than this is that existence of cheap lands and proximity to Tehran cause the influx of immigrants to the city and creation of urban neighborhoods with informal settlements.

Keywords: *Changes, Body-spatial, Informal Settlements, Urban Areas*

INTRODUCTION

The issue of informal settlements in urban areas of developing countries is considered as one of the effects of increased growth of urbanization and increasing population of cities and the lack of an integrated and efficient system of urban management. The statistics provided by international organizations show that about one sixth of the world population live in slums and fringes (Haddizadeh, 2003). In the latest report by the United Nations Centre for Human Settlements has stated that about one-third to one-fourth of world population lives in absolute poverty. In this regard, the World Commission on the future of cities in the twenty first century AD, also warned that in parallel with the growth of mega city the urban poverty in the developing countries increased and this is while the major part of the urbanization has been made informal economy and along with developing the informal settlements and in the future it will be made. The trend is called in formalized Urbanization (Sarraf, 2002) that then causes the illegal settlements on land, housing shortages, urban services, unemployment and other issues.

Today the informal settlement is one of the great problems of communities. It is especially seen true in third world and developing countries so that it has become one of the most important concerns of city managers. The phenomenon of informal settlements can be related to urbanization. By beginning the Industrial Revolution in England in the eighteenth century the urbanization is developing. By seeing urban glamour, luxury, suites and facilities for living in the cities and by hoping to find work in the

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factories and getting more wages, many villagers leaved their lands, farms and orchards in the villages and migrated to cities. It was the beginning of modern urbanization in the 18th century and the cultural, economic, social problems arising out of it. Increasing the population, rising land prices, rising rents of houses, presence of brokers and brokering land, low income, the concentration of facilities in urban areas, leaving the region and land in the village by hope of finding better jobs in cities and ... are among the issues that has led to the creation of marginalization and informal settlements in urban areas. The policies of micro and mega cities, the hard laws of urban land management, unfair distribution of facilities among citizens and mismanagement of city managers in turn have also influenced the emergence of the phenomenon of informal settlements.

We can say that in the neighborhood of Amro Abad, Varamin, the first steps in the formation of informal settlements is formed in the mid-1971 by migrant villagers in western province of Iran. Now this neighborhood has many problems bodily, socially, economically and environmentally that its reasons can be entrance of immigrants, cheap urban lands and lake of management by urban manager. As stated in the article, the question can be raised: "what are the reasons of forming the informal settlements in the neighborhood of Amro Aba, Varamin?" and onsequently the hypothesis can be stated this way: "presence of cheap land and proximity to Tehran have caused an influx of immigrants to the city and creating the urban neighborhoods with informal settlements.

Topical Literature and Research Background

Informal settlements in the world have a long history that since the formation to now are called with various topics such as marginalization, spontaneous and unsuitable habitats, shanty communities, and abnormal and spontaneous settlement. It is so that a person other than the owner of land constructed a dwelling with or without the landowner's permission. But they were not the illegal marginal dwellings in the sense that we define and classify. However, the "informal settlements" is actually a term attributed to the West that its background dates back to the writings of thinkers such as Robert E. Park, Everet Stone, John Turner and Charles Abrams. In their writings, Robert Park and Everett Stone tried to reveal a personality type, a man with an informal settlement in the cultural collision and conflict. As Park has shown, a human living in informal settlements is who in his destiny is doomed to live in a society with a not different but rather conflicting (Kazemi, 1980). John (1969) adopted a positive and optimistic view and described informal settlements as a suitable solution to the housing problem in urban areas of developing countries (Turner, 1968). The informal settlements are a prominent factor in urbanization and providing housing for the urban poor. These settlements should not be as a part of the national housing crisis, but as a contribution to the poor to solve their problems (El-Batran *et al.*, 1998). In fact such settlements are an irregular problem of spatial concentration of low-income groups in vulnerable areas of the city that are made as completely unorganized (spontaneous and without licenses from the municipal institutions). Due to the speed of formation and lack of oversight of executive agencies these areas do not have acceptably biological standards and generally are formed in the lack of (ideal) formed system of residence and the poor's accountability to their need of settlement in a very short time. In the literature of urban development, these areas are thought to be among the most vulnerable areas and the conditions in these areas are considered favorable for the occurrence of social disorders. After the years of 1962 and 1963, the growth of informal settlements in Iran reach to the extent that necessity of different investigations and researches on the informal settlement was highlighted by government authorities, universities and social researchers and then research and after that the numerous studies have been collected. Thus, during the decades of 1971, 1981 and 1991 in the major cities of Iran the different studies of marginalization have been conducted that these studies mainly has been conducted by government agencies, particularly PBO and further the universities have pioneered in studying the marginalization in Iran and have addressed the state of suburbanites.

MATERIALS AND METHODS

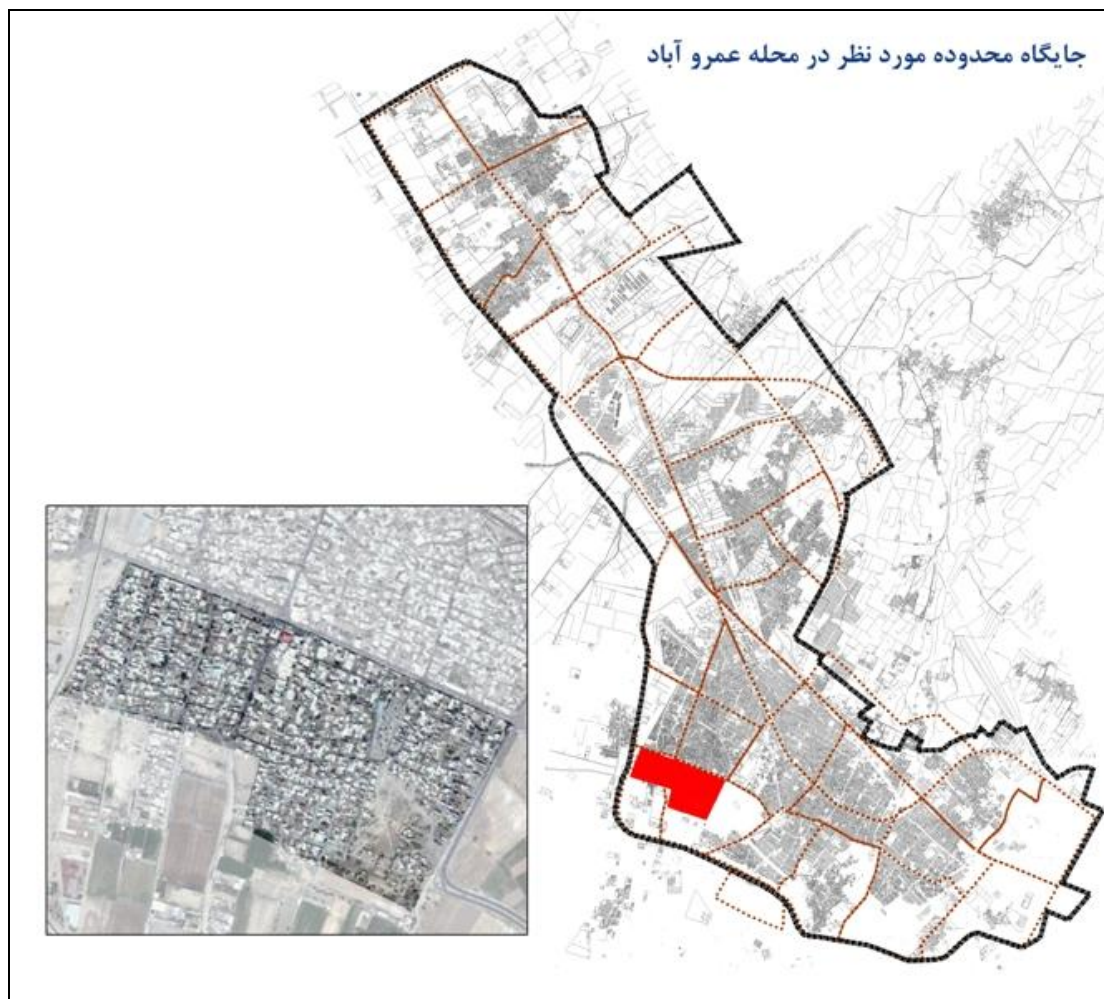
Due to the vastness of the subject under study and lack of possibility of a complete census a field study was used for data collection that is done by the technique of survey. This research is a basic and applied

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research that according to it the statistical community (neighborhood of Amro Abad) completed questionnaires and then the questionnaires were analyzed by using descriptive and analytic statistics. In following the issues and problems in the neighborhood were evaluated by using the analytic techniques and according to it the strategies and policies proposed in the neighborhood studied are presented. In this paper, the methods of data collection were the professor and library methods and the field operations and questionnaire is used.

Needs and Objectives of Research

Varamin during the last 50 years is presented as one of the centers of attraction of the immigrant population in the region. In turn Varamin has had high growth in terms of population and consequently the body during the last 50 years so that the average population growth of this city for 40 years (1966-2006) was reported 7.3 percent. However, while to 1996 Varamin had an almost identical growth over the years 1971- 1996 in terms of population but in terms of body the body development was raised a more compact to 1976 and then more dispersed growth and expansion of the city began in 1976. Perhaps we can say that the body development predominantly occurred during 1976-1986. In this period the massive immigration from all parts of country to the metropolitan area of Tehran and the inability of immigrants to settle in Tehran inclined them to villages surrounding Tehran and the its outcome was the growth and development of Tehran of satellite cities around Tehran including Varamin in this period. Growth and development of Varamin during 1970s and 1980s led to appear the parts of the informal areas of Amro Abad, Neighborhood of Sakina Bano....



Map 1: Place of Amro Abad in Varamin

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In this area the city of Amro Abad, Varamin, was selected for case study. In the area studied the rural migrants were settled outside the legal range in the early years of the revolution due to the weak economic ability and high cost of land and housing in the official and legal part of the city considering the waivers resulting from the revolution atmosphere and its values. Due to being outside of the official boundaries of the city this area has been deprived of services such as waste collection, sanitation facilities, the medical, educational and welfare services and totally of all infrastructure services. Also the said area with the concentration of low-income classes and management troubles has many environmental problems, crime and delinquency. With these interpretations of the area studied and the problems arising and with aim of studying the economic and social factors affecting the informal settlements in the area studied and offering the suggestions and strategies to reduce the tendency to informal settlements in the area studied and its similar areas due to the emergence of informal settlement areas the study and investigation of these problems seem to be necessary.

Geographic Range of Amro Abad, Varamin

The neighborhood of Amro Abad is considered as one of the main neighborhood of Varamin. This neighborhood that extends along the southwestern of Varamin, was considered as a village in the outskirts of the city anciently that has joined to the main body of city over the development of central part of city in the course of time. According to the data of statistics center in 2006 the population of the area was approximately 14,247 persons. Due to being conventional, the neighborhood has an area of about 92 hectares that the target range by consulting engineers to organize the spontaneous settlements in the area is about 42 hectares located in the southernmost of the neighborhood.

RESULTS AND DISCUSSION

Results

Stages of Body Development of City and the Formation of Informal Settlements in Amro Abad

With the entry of foreign culture in the city and quickly and illegal constructions in the city associated with the lack of adequate supervision of related urban systems, the ranges from the city, mainly located in the margins, are transformed into spontaneous settlements with their features. The central part of Varamin like other ancient cities oh Iran is formed in the center of agricultural land which was able to partially restore its original structure after many vicissitudes in its history. Restructuring and redefining the role of Varamin in relation to the metropolitan of Tehran during recent years caused the body and economic growth of the city among the surrounding cities. Amro Abad is one of the Varamin neighborhoods that the proximity to Tehran and Varamin and low land prices in the area has caused the rapid and often unplanned urban growth and development by the migrants, especially during and after the Islamic Revolution and this has led to the incorporation of surrounding villages and hamlets to the main body. The presence of farmland on the fringes of the villages which leads to cheaper land prices as well as their proximity to the main city center and the labor market has created the best place to settle the immigrants.

Option	Percent
Lack of economic and financial ability	48%
High profit of bank loans for the purchase of suitable land and house	17%
Low costs and prices of the land	32%
other	3%

Source: author's field studies

And based on the causes of cases listed in Table 1 the most main characteristics of Amro Abad, Varamin, can be stated as follows:

1. The compression of neighborhood texture and very small residential plots compared to the whole town.
2. Impenetrability of the urban underclass neighborhoods due to unplanned construction.

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3. Instability of structure due to lack of monitoring municipality and the use of inappropriate and cheap materials
4. Lack of the proper floor for the roads and the dirt floor of most of them.
5. Lack of required service application and low medicinal-health per capita, green spaces, recreational and educational spaces and like that.
6. Lack of appropriate neighborhood facilities, such as sewer, telephone, gas.

1- Body Characteristics

Roads in Amro Abad Neighborhood

Most roads in this area did not have a good situation and a very bad state is made during precipitation and in some places several sewages are formed. Bathroom and kitchen sewages directly enter into the street network and after covering a distance enter a water canal that was built for agricultural use, and is used to irrigate crops. Adjacent canal and when the amount of sewages increases due to raining, it goes out of the brooks and flows on the ground and like other areas makes the health and environmental problems for many of residents and the environment. Also the waste dumped in brooks and there is a bad smell in the air. Also the sludge in the brooks of water stays in place after dredging for long time and in addition to bad smell it is a appropriate place for reproducing and gathering vermin and mice.

In some parts of the area including Ghaem Street, the brooks are without cover and sometimes the children fall into the brooks. It should be noted that these brooks have been covered before but its cover were removed due to obstruction because of the presence of garbage and its safety is not suitable. Barren and agricultural lands are very high in this area and in some cases wastewaters enter into these lands or household waste is left in these lands. In this area there are the dry waste storage warehouses and industrial units of food production and more studies should be done to determine how the sewages of these production units and also their waste are disposed of. In the event of a natural disaster or fire the availability of road is very bad. Electrical wiring situation in the streets is inappropriate.

The state of collecting debris is not appropriate in the area and a large amount of debris has been left between the canal and the neighborhood Amro Abad. Adjacent to the area a canal is located canal which is not safe and one side of it has shield and the other side does not has and the possibility of falling people in the canal is very high. The sewage of this area also enters the wastewater into the canal and the farmland directly.

State of Roads in Amro Abad Neighborhood

State of roads	Meter	Percent
Good and well	Over 15 m	7%
Average	Less than 15 m to 6 m	31%
Unfavorable	Less than 6 m	62%

Source: Field Studies

Quality of Buildings in Amro Abad

One of the other factors influencing the texture of informal settlements is the building quality and consequently the resistance of buildings against natural hazards such as earthquakes and floods. Table shows the quality of buildings at three levels of new and good, repaired and demolished.

State of the Quality of Buildings in Amro Abad

State of building texture	Percent
Newly-built	15%
Repaired	47%
Old an demolished	38%

Source: Field Studies

Number of Building Floors

Based on the information obtained, the buildings with more than four floors scarcely exist in this neighborhood, and most of the newly-built buildings have three floors and with 0.11% these buildings

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with three floors form the least number. Table show the number of floors in buildings in neighborhoods studied.

State of Number of Floors in Amro Abad

Number of floors	Percent
1	52%
2	34%
3	11%
4	3%

Source: Field Studies

Grading the Residential Components based on Area

In Amro Abad most residential components have the tiny grains so that more than 71% of the components have an area under 100 square meters. Tables 4-9 show gradation of residential components.

State of Number of Floors in Amro Abad

number of floors	Percent
Less than 50	18.77
50-100	52.28
100-150	22.05
150-200	4.56
200-300	2.11
More than 300	0.22
50-100	18.77
Sum	100%

Source: Field Studies

Type of Building Materials

One of the main characteristics of informal settlements is the use of without or less durable materials in constructing a shelter that its main reason is the reduction in construction costs. In Amro Abad, about 70 percent of residential buildings is are formed from less durable materials such as stone and wood, blocks and lift walls and only 30 percent have used the brick and iron but not appropriately and structural engineering but they have been built as lift walls.

Age of Building in Amro Abad

Old age	percent
1-15	19.52
15-30	30.49
More than 30 years	49.97
Sum	100%

Source: Field Studies

As shown in above table, after the building with over 30 years that have the highest percent, there are the building with 30-15 years with 30.49 and the residential components with less than 15 years having the less frequency with 19.52. The map shows the age of residential components.

The Way of Disposal of Surface Water, Sewer and Garbage

What is visible almost in all informal settlement areas (in all areas of Tabriz, especially the old areas of the city) is the inappropriate system for collecting the surface water and house wastewaters.

Almost in all localities of informal settlements of the city the surface waters gathered by uncovered v-shaped brooks in the middle of the streets. Notably, the sewages of residential houses are released to these brooks. In addition to make a bad face of the neighborhoods and causing problems for traffic and traffic areas, it creates many environmental problems. However, the urban sewage system covers approximately 70% of the area under study.

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1. Evaluation of Infrastructures

Field studies and the results of the questionnaire show that over 95 percent of residents Amro Abad have access to the piped water, electricity, telephone, gas. But despite having relatively complete infrastructure facilities in the neighborhood, the quality of these facilities is very low. According to residents, due to the weak and the old power grid, there are stopping or connecting the electricity in many cases in the area. On the other hand, low-pressure water along with the rotten water transmission pipes leads to severe problems in the water supply in many parts of this neighborhood.

2. Social Characteristics of the Studied Neighborhood of Amro Abad, Varamin

The neighborhood is now considered as one of the largest neighborhoods of city which is divided to sublocalities including Esmaeil Abad, Nghashan alley, Ghaem alley and etc. while in master plan studies this neighborhood is known as old areas but a part of the neighborhood, particularly its margins, can be included in a series of informal settlement. Ghaem alley is a point of Amro Abad where has a quite different condition than the rest of neighborhoods. Adjacent to this neighborhood with a relatively large area of land, a brooks full of sewage sludge, defenseless places used by thieves and addicts and drug dealers, with very small residential buildings, the social class of residents (mainly the lower classes, including workers, self-employed and unorganized sector workers and the unemployed), increasing invisible addiction (in the conversation with the residents we interviewed with three addicted men) give it a different place in Amro Abad. Not having the building permit at the beginning of construction for more buildings has not prevented to receive municipal services now. But the buildings do not have official documents. Only one of the alleys of this street was bereft of urban gas due to city planning of 45 m street. The main problem has stated the sludge brook and its bad smell and venomous animals caused by sewage and water pollution, being the neighborhood far away and the lack of police supervision, lack of leisure facilities such as a park for children.

Most Social Problems in Amro Abad

Problems	Percent
robbery and theft	14%
Knives and social delinquency	38%
High number of addicts and sale of drugs	32%
other	16%

Source: author's field studies

Summary of Research Findings

According to the age of Varamin, the official settlements in this city date back to before the Revolution but the highest amount of inappropriate constructions has been in relation to the migration of residents along with the Islamic Revolution and later to 1990s that reached to its peak. The most informal settlements in North, North West, South and South West of the city of Varamin are formed that Amro Abad is one of these settlements. The major features of the area include improper construction in terms of sustainability and the status of the inappropriate materials used and road grids and improper disposal of surface water and sewages.

Discussion

According to the social, economic, physical and environmental characteristics of Amro Abad where was presented as field study in this research and by referring to previous chapters and studying the trend of informal settlements in Iran and by field study of Amro Abad it can be deduced that there are the fundamental differences of informal settlements between the world countries and Iran that this is also true in the case of Amro Abad.

However, in developing countries the informal settlement in shantytowns, on the graves, rooftops, boats ... are formed and sometimes it reaches to more than 50 percent of their cities.

In this regard we can name many and varied examples in Latin America, Africa and Asia. Like Mexico 46%, Turkey 50%, Casablanca 70%, Addis Ababa 90% (Harsion and Paul 1985) while in Iran the unconventional housing in urban areas is formed only 0.9% of housings or while in Calcutta 600 thousand

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people sleep on sidewalks. The vast majority of the population of informal settlements in Iran lives in the beam or brick houses.

Another significant problem is that informal housing developers in Iran rarely capture forcibly or without payment of land price. According to the results obtained the majority of Amro Abad residents are not the ones who have occupied the lands at first. And more than 80 percent of residents have purchased the lands from the informal market. On the other hand, making body of informal settlements in Iran is far more acceptable than other countries.

For example, in informal settlements of Islam Shahr during providing its comprehensive plan (1985) the average land area was 120 square meters and the average area covered by residential building was 90 square meters and all were at least with girders and brick. Despite the reduction of real income of households in 1985-1993, in Akbarabad and Sultanabad the housing quality is also remarkable. Because in this year, the average residential land was 75 square meters and the average area covered by residential building was 61 square meters and all were at least with brick and iron that is more than the average infrastructure area of residential buildings in many developing countries or the per capita of residential infrastructure area in the settlements was 10.6 square meters, while the per capita of infrastructure in the capitals of developed countries in Dares Salaam, New Delhi, Nairobi, Beijing, Jakarta, Rabat and Tunis was 5.0, 68, 5.1, 9.3, 10.1, 6.0 and 6.7 square meters, respectively"(Department of Housing and Urban Development, 1994, p 50, e).

However, contrary to idea of Western historians that consider the suburbanites as the lazy and poor people and ones who lost their hopes for a better life, the residents of informal housings in Iran especially in Amro Abad have very participation in the social and economic issues and the improvement and reconstruction of neighborhood that is a practical example of an area with a hopeful and vibrant community so that more than 90 percent of the population has declare any cooperation in the field of improvement and reconstruction and social participation.

On the other hand, 91 percent of Amro Abad residents have programs for the future development of housing units qualitatively and quantitatively. 80% of residents need the loan and the government support to rebuild and renovate their housing and according to residents they have not received any governmental support for constructing their housing until now and have stated its main reason the lack of formal ownership of land and the lack of knowledge of the banking system. However, the area residents have able to make housing at the conventional extent without any government assistance about housing.

Here, according to the research abstract design and its realization by the hypothesis, we address the conclusion of hypothesis:

Hypothesis 1: The causes of development and expansion Amro Abad can be the cheaper lands and proximity to Tehran that has caused the influx of migrants and intense migration to small towns and villages over the past two. The properties were seized by ownership and social and political unrest in the country.

According to research conducted and the questions asked from area residents 78% of residents are immigrants who have migrated from other parts of Varamin and the mentioned area and 96 percent of Amro Abad residents came to the area after the revolution. On the other hand, high prices of land and housing in the legal and formal range of Varamin city compared to the economic ability of low-income groups led to the illegal construction of housing in Amro Abad.

According to the comment of so many people that it was done by field study the residents of neighborhood had to settle illegally in the area due to the high cost of land and housing in the legal and formal part of city that sometimes included more than 10 times of their annual income and according to the results obtained 68% of residents living in the area consider the high cost of land and housing and rent of house in the formal part as the reason of settlement in the area and it leads to the growth and development of this area.

The results obtained in Amro Abad the immigrants settled outside the legal part gradually in the early years because of the weak economic ability and high prices of land and housing in the legal part. The management and service inconsistency is visible in Amro Abad.

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Given the above matters and the studies conducted during this research we concluded that there is no similarity between the areas of informal settlements in the world countries and Iran and the area studied historically, economically, socially, culturally, physically. These facts caused by the injection of oil revenues over the years to Iran economy. And that is why “the index of welfare in Iran is higher than GDP in international comparisons. In other words, the planning of spatial development and housing can be successful in organizing informal settlements with a lot more ease in Iran than other developing countries because organizing informal settlements of those who construct housing units with minimum specifications without government assistance is very simple.

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