Informal Settlements and Sustainable Urban Development Case Study:  
Metropolis of Mashhad in Northeastern of Iran  

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Abstract: One of the fundamental social and economic characteristics of the southern countries is the lack of development of spatial planning system whose symptom is the irregular expansion of urban settlements. Due to the ecological traits and national policy-making manner, this expansion has caused the centralization of regional metropolises in these countries. In the geographical spaces of Iran, specially in the east, metropolis of Mashhad has proven to have these characteristics. The centralization of economical and service facilities and welfare prosperity, the increase of immigrants and the lack of economical power of rural immigrants has caused informal settlement. It creates environmental issues and social economic problems such as drug addiction, the spread of the center of moral corruption and finally instability in the urban system. The basic question is how we can properly manage the stability of these urban neighboring spaces. The result of recent studies in the metropolis of Mashhad shows that the final answers are the participation of new urban immigrants in these unstable parishes and the organization of the urban self-sufficient units as self-regulating municipalities with financial, service and developmental supports of governmental systems for a short period, as long as these management units can get autonomy.

Key words: Informal settlements • Self-sufficient municipalities • Sustainable development • Iran • Metropolis of Mashhad

INTRODUCTION

The phenomenon of informal settlements is discernible as a global concept. Recent worldwide studies show that the amount of this phenomenon, compared to the population of major cities of the world, is different. In average about 33 percent of the population of big cities, live in slums and informal settlements. In Iran after the arrival and establishment of dependent capitalism, at first, the centralized poles were formed in Tehran and some other cities. Then the relation stopped and poles of absorbent and educator was made in the cities. Trade, economic and service activities flourished in big cities. As a result, immigration to the absorbent poles started. The saturation of employment in the cities, on one hand, and overflow of the cities by the immigrant on the other hand, resulted in the phenomenon of informal settlements especially from 1941s [1].

Population of fringes in general, includes all those who reside in the economical realm of the city but are not attracted by the urban economy. Therefore, fringe residents are those who live in unconventional residency, along with the residents of the city. These social groups, by the force of the educator of their main origin (like poverty and unemployment) and influence of absorbent factors, are driven from their native provenance (tribe, village, and city) and migrate to the cities. Since most of these groups are illiterate and do not have the necessary skill for getting attracted by the labor market, they are forced to move to urban fringe [1-2].

Statement of the question: Informal settlements, along with other influential phenomena, has increased the city problems. It makes the face of the city look bad and awkward and intensifies dualism in urban society and causes the gap and many other problems. Therefore, slum is an urban problem that is the main source of crimes. Today, informal urban settlement is a one of the urban and social problems that in most countries and societies creates complex difficulties. This phenomenon, in some communities, is due to natural attraction of industrial, employment, welfare and administrative poles; and in some other societies, unemployment and poverty resulting from industrial and economic crisis, or racial discrimination and class divisions are the reasons. In some others, it results from a sudden and inordinate
increase of population, especially rural population, in relation to economic recession. Sometimes it is derived from the collection of these factors and causes fundamental problems for sustainable urban development [1-3].

**Major characteristics of informal settlements:** One of the basic features of fringe population in the developing countries and in Iran is related to the groups who aren’t attracted by the body of the city and are forced to find a shelter in some regions of the city that are away from the care of the residents and city officials and resides in the regions that are not essentially located in the urban fringe. The houses of fringe population in cities and different regions, are tin-made rooms, sheds, tents, gamier (derelict kiln), groin (houses whose walls are made from building materials but the roofs are from mat and the leaves of the of the trees) and ruined rooms. Therefore, in fringes, most of the residential units are built from the weak and preliminary materials in an unstable and non-technical way [2-4].

Compared to other urban areas, fringes are highly populated and have high density and growth percentage. Each family forms a big one including father, mother, and children and even closed relatives and contains more than a typical urban family. They, all, live under a roof in a limited space. In parish of fringes, life environment has always been polluted and no attempt is made to remove these impurities. The rubbish is irregularly collected. So pollution will be added in their environment [5].

Generally, fringe populations have unfavorable conditions and low quality of life environment of urban facilities and equipment. Such areas which are generally located in unfavorable environments lack even the least urban facilities and equipment so that, there is a little access to infrastructural facilities (including water pipelines, electricity, gas telephone network and suitable vestibule), deficiently with the least possible efficiency.

The consequences of informal settlements and generally the most important harms that this phenomenon can impose on the cities and cause instability of urban development are:

- Social harms like spread of crime and murder, drug addiction or its distribution and sale, the spread of prostitution, the spread of alcoholic drinks and its distribution and selling, the expansion of various kinds of physical contacts and beats.
- Cultural harms like the increase of cultural illiteracy and decrease of interest on cultural education.
- Physical harms include irregular residential structure, the erosion of buildings, unorganized facade of buildings and its undesirable effects on the appearance and the image of the cities, intensification of urban traffic in the regions.
- Hygienic harms such as dispose of garbage and domestic sewage in the regions, and the stench and the prevalence of various kinds of diseases, sound and air pollution.
- Economical harms include the spread of peddling, the increase in poverty, and increase of the number of permanent and seasonal unemployed of the city.
- Political and Security harms are rapid reaction of fringe population to political sedition and their great tendency to participate in the demonstrations, rallies and street riots, in appearance, for restoring their citizenship rights, the prevalence of transgression to the resident’ s possessions and honor of other areas, and the social harm effects on the securities of the cities including political and security harms on their status results from the phenomenon of informal settlement [5-6].

**Informal settlements in Iran:** In Iran after the arrival and establishment of dependent capitalism, at first centralized poles was formed in Tehran and few other cities. Then, ties and relation stopped and poles of absorbent and educator appeared in the cities. Trade, economic and service activities flourished in big cities. As a result, immigration to the absorbent poles started. The saturation of employment in the cities, on one hand, overflow of the cities by the immigrant on the other hand, resulted in the phenomenon of informal settlement especially from the 1941s. After the occurrence of major changes in the decades after the 1961 (agrarian reform) the informal settlements growth became more intensely.

After the revolution (1978), by evolutions done in this period such as the aftermaths of the Revolution, war phenomenon, economic issues and problems caused by war and drought, besides previous factors, have intensified the problem of informal settlement [6].

**Physical development of Mashhad:** Mashhad has have great development in the past decade and its expansion becomes more than population growth. This shows one of the specifications of rapid urbanization in important cities of the country. In fact social classes that are added to the population of big cities are mainly the low-income ones. They, economically, can't enjoy the benefits of urban technology and equipment facilities, especially for
preparing housing in expensive and suitable lands inside city legal limits and inevitably residing outside the city. The greater dimensions of the city are the greater concentration of population and facilities. In addition, by the increase in the price of land, driven classes of city to the country are intensified. It has two stages. In early stages of urban concentration, informal settlements became discontinuous and, in a large scale, are seen in the informal settlements of big cities. In addition to continuous urban informal settlements in the past decade, in Mashhad, tendency towards discontinuous developments and the population settlement in its urban region has been created within the radius of 40 km especially in the West [1-6].

Irregular Informal settlements of Mashhad: The studies of development and construction plans show that physical development of Mashhad in the continuous texture reverses the approved comprehensive plan. Not only, land allocated to development in the western city debased population of the predicted comprehensive plans, but also physical development in the East and the eastern area excesses the legal limits and places more population than what is predicted. Immethodical informal settlements, in the East and North of Mashhad has happened mainly in agricultural lands in interval between Mashhad and seasonal river (Kashf River). It is one of the most agricultural regions of northern Khorasan. Physical development of Mashhad between 1976 and 1986 has integrated over 18 villages in its urban centre (two towns of Golshahr and Sakhteman are of examples). The integration processes of the villages in the development of big cities are inevitable. However, if it is not planned properly, it will be damage for agricultural lands and pose problems for informal settlements management and equipment.

The results of Mashhad sphere of influence focus on the studies of development and construction plan about the density of fringe of Mashhad where there has been intensive population activities in the past decade. The study of the population distribution centers and important migrant centers throughout Mashhad shows that the majority of them are located beside seasonal river (Kashf River). The period before 1921 A. D.: In this time, fringe population occupied urban fringes especially north and east Mashhad, which may be due to countless villages in these parts. This means that the majority of villages were located beside seasonal river (Kashf River).

The period between 1921 and 1941 A. D.: From historical Safavaid by the end of Ghajar (2009-1809), Mashhad had no obvious changes and had preserved his old form of fortification. Nevertheless, in this time, it has found a new face and by the construction of the streets and new buildings in old city noticeably is transformed. The people whose houses have been destroyed to make new streets and those who intend to be permanent residents to Mashhad need a place to live. Therefore, the city expanded toward the rampart, towards the west and south-west. In the same period, for the first time, about 200 to 300 people of south east of Iran tribes (Zabolis) immigrated to Mashhad and near the northern entrance of the city known as behind Ghuchan gate. At that time Shah Abbas Street was the exit gate of the city where there have been fortification and ravine (city canal).

The period between 1941 and 1978 A.D.: In this stage, Mashhad rapid growths reached to a high level and caused the fringes extend more toward outer areas, so informal settlements is intensified. Some of these fringes are some parts of Amirkabir parishes, border of Sento Road and Garage-keepers. The villages, in which Mashhad development has reached and as a result become urban fringes, should be accounted. Some of them are Eshrat Abad, Mohammad Abad, the village of Zarineh and Taqi Abad village. Between 1966 and 1976, in addition to the urban expansion toward the east and northeast, that transformed the brick furnaces to urban slums, a number of villages were integrated into urban textures. Not all of two groups of villages and shops that are urbanized between 1966 and 1976, with a total population of 381, exceeded more than nine [5-6].

The period since 1978 and so far: With the Islamic Revolution in 1978 and lack of constant supervision on urban lands, and start of war with Iraq and the entry of Afghan refugees in Mashhad, informal settlements was severely developed including Moft Abad and etc.

Geographical distribution of the informal settlements in Mashhad: In order to place embodiment of space informal settlements in Mashhad, geographical distribution is very
effective. Metropolis of Mashhad has expanded by the new immigrants or fringe population in these regions:

1. Northern Mashhad includes fringe population and slum residents of Abkuh sugar factory, Nikhodak, east and northeast border of Khwaja Rabie garden.
2. Short access of northeast, the East and southeast of Mashhad includes fringe population and slum residents of Deravy, Sis Abad, Hemat Abad, Arena of Haji Taqi Khán, Altimar, Panjtan castle, Radeh, Neizeh, Golshahr, Mehr Abad, Koode Haji Fakhar, Kermanis Hosein Abad, Kherad Beik Castle, Sakhteman Castle, Shotore geloo ghale khiban, Mohamad Abad, Shambles borders, Baharestan city garden, Noosh street, Gole Khatmy (marshmallow), Kargaran(workers) lane, Shahid(martyr) Beheshti town, and etc.
3. Southern side of Mashhad includes Baharestan town, Sayedi alley, Sento Road border, Moft Abad,Eastern border of T.V Square, Nine valleys and etc.

The population and area of Mashhad fringe: According to the recent studies, the population of fringes in Mashhad in 1976 has been 60000 per square. While it has increased to 600000 in 1992 and in 2009 to 670000. During 30 years, the population of informal settlements has been added 11 times. It is interesting that the total area of Mashhad has been extended from 85 square kilometers to 475 kilometers during these years. In fact, informal settlements has extended six times.

Effective factors on fundamental challenges of the informal settlements in Mashhad: In recent studies done in Mashhad, effective factors on development of the phenomenon of marginalization with a systematic attitude are considered.

1. Lack of facilities in the countryside, strong attraction of Mashhad, drought, lack of security, employment and income and access to more value-added are the major causes of unmanageable migration of villagers from rural residence of metropolis fringes and from the eastern Iran.
2. Widespread abnormalities in Mashhad fringe. Important factors of social abnormalities including cultural poverty are caused by the city of unofficial activities, lack of security, lack of cultural identity, tends to drugs, robbery and other crimes. According to the statistics, among the existing 2520 prisoner of Mashhad, 57 percent of them are fringe residents.
3. The phenomenon of social protests and gatherings(155 cases during the last 4 years) whose major reasons are shortage of water, gas, bus service, to prevent the uncontrolled and illegal constructions and clash of officials, accidents and lack of benefits of remedial services(53 percent of protesters are adults less than 20 years old.).
4. Lack of official legal system for strategic planning in metropolis of Mashhad that is one of the effects of problems to prevent immethodical constructions other issues including negligence of municipality, insufficiency of land judicial laws, legal contact consequences, and the lack of municipality facilities and inconsistency of related organizations.

CONCLUSION

One of the basic patterns in planning for sustainable urban development is indeed that of informal settlements system in order to make spatial balance between this atmosphere and the metropolis one. Hence, determination of the strategy, policies and executive programs are extremely important. Since they cause stability of urban systems, on one hand, and the resistance of the regional and national or international economic and social development systems on another hand [6].

The programming for sustainable urban development, in order to organize Informal settlements in Mashhad, must be based on strategy of cooperative programming in order to institutionalize self-regulating municipalities with the financial and service supports of governmental institutions.

Thus, goals for organizing patterns of fringe population in this city and other cities of third world countries with these specifications are following:

1. To control and manage population centers of Mashhad fringe with regard to the plan of urban development based on national and regional programming of space development.
2. To determine settlement and residency system of population in metropolis fringes based on a suitable of biological model.
3. To rise the quality of living environment through an ideal system and to make the possibility of giving services to cities and villages by organizing comprehensive, continuous and active participation of fringe population and to systematize the construction patterns of urban houses.
4. To provide necessary conditions to normalize social behavior in order to increase social security of urban fringes with the cooperation of executive organizations through establishing relevant cultural organizations for fringe population.

REFERENCES