

## A SYSTEMATIC APPROACH TO IMPROVE INFORMAL SETTLEMENTS BASED ON EMPOWERMENT PATTERN, THE CASE OF FOUR METROPOLITAN AREAS OF IRAN

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**ABSTRACT:** Informal settlement is one of ongoing critical challenges of urbanization in developing countries, facing a large part of urbanized people with serious problems including low access to public facilities, social deprivation and poor quality of residential environment. It has made several multi-dimensional impacts such as poverty, unemployment, distortion in urban physical form, and environmental pollution which all show the urbanization process is unsustainable in the longer term. Informal settlement emergence although has a long history in Iran's urban development history, but serious attention has been paid on since early 2000s. In this regard, some cities around the country were targeted by the World Bank and financial funds were allocated to begin measures to improve the living conditions of those resided in informal settlement zones. This paper gives an attempt to discover the constructive causes of the emergence of informal settlements in five Iranian metropolitans included Mashhad, Kermanshah, Sanandaj and Bandarabbas in hope of suggesting some practical and normative solutions to lower the problem. A combined method of research was used including content analysis, descriptive comparison, AHP and SWOT. The results of the analysis in a systematic approach showed that informal settlement emergence in Iranian cities originated from some structural causes which are being attributed to the national planning system, economic challenges and changing social norms in a transitional culture.

**KEYWORDS:** Informal Settlement, Planning System, Metropolitan, Systematic Approach, Iran.

### INTRODUCTION

Iran as one of the large countries in Western Asia Region has experienced three waves of rapid urbanization: a) after Land Reform (1961) made by Pahlavi Regime; b) after Islamic Revolution (1979); and c) after Iraq War (1981). A huge part of rural areas residents or those damaged from the War left their hometowns or villages in hope of finding safer and better place to reside in metropolitan areas. Thanks to the Islamic Government policies welcoming immigrants and low income families the context for establishing informal settlements was prepared ([Mohammadi Makerani, 2007](#)). Those who left their farms or traditional working agents had found themselves within metropolitan areas seeking new jobs. However, working in such new places are required some degree of profession which were not experienced before departing origin. Growing market of informal economy at periphery areas of metropolises is a direct effect of such population movement ([Central Bank of Iran, 2007](#)). According to formal statistics, near to 40 percent of the population of cities like

Bandarabas in South, Zahedan in East and Kermanshah in West are living in informal settlement and worked in informal economy sector ([Iranian Ministry of Housing and Urban Development, 2004](#)).

However, a considerable volume of policies recommended or measures undertaken to declining the growing wave of emigration and its consequent problems ([Rakodi, 1995](#)). World Bank as the supportive international supportive institute has participated actively in such actions. However, the success of these actions is doubtful. In fact, the approach taken already to solve the problem has been criticized in different aspects ([Neuwirth, 2005](#)). Some of critiques to conventional approach of informal settlement improvement are: a) the holistic top-down approach is less supportive of public participation; b) the budget allocated by the government or international funding agencies e.g. World Bank has not been enough to establish basic utilities and build new resistant dwellings; c) not a well-defined administration exists to manage the issues and direct the efforts to pre-defined constructive goals.

This paper attempts to first identify the principal causes of informal settlements in metropolitan areas of Iran, then reviews the actions already taken to overcome the problem. Next, it concentrates on proposing a systematic framework which removes the shortages of former actions and opens a new view on informal settlement issue. This will be ending by suggesting some normative and practical solutions as a policy package which respects the context and local circumstances.

### BACKGROUND STUDIES

Informal settlements as defined by World Bank are agglomeration of low income social groups, mostly immigrants, appeared in vulnerable zones of metropolitan areas without formal permission issued (UNCHS, 1987). Such settlements are deprived of a predefined plan thus suffering from having an appropriate spatial order and consequence (Abbott, 2002). Informal settlements are recognized by some common physical characteristics such as lack of urban facilities, physical and functional fragmentation from urban activity cores, poor access to transportation infrastructure and low quality residences (Turner, 1968).

These physical abnormalities are associated with unsustainable consequences which can be classified into three themes: a) social; b) economical; and environmental. The social impacts include criminal behaviors; social incoherence; isolation and lack of social identity. The economic consequences consist of low income, growth of informal economy, and dependence on non-based employment (NBE) such as service sector. The environmental impacts include water and air pollution, shortage of green and open space and lack of Sewage collection and disposal systems and public health infrastructure. Those live in such areas are in fact, large segments of low- and moderate-income groups. They have few choices but to rely on informal land and housing markets for access to land and shelter, thus fostering the extension of irregular settlements in urban areas. Informal land and housing provision systems stay the only realistic substitute for meeting the needs of low-income households (HABITAT, 2003).

Two types of causes have been recognized accelerating informal settlement formation: a) structural causes; and b) non-structural causes (Islam, 2006; Moreno and Warah, 2006; Bolay, 2006). The structural causes include:

- fast urbanization growth and unplanned physical urban development;
- imbalanced distribution of human settlements and cities throughout the

country;

- Failure of the government in providing the qualified housing for the poor;
- Lack of enough financial support for housing projects and related infrastructure;
- Lack of well-defined executive plans for urban land management; and
- Weakness of spatial planning at different geographical scales.

Furthermore, some non-structural causes are being effective in emergence of informal settlements. These are:

- Weakness of urban development plans in forecasting enough housing space and shortage for the future
- Low access to financial aid for the poor especially for those active in informal economy
- Lack of local non-governmental organizations (NGOs) supporting community based organizations (CBOs).

### METHODOLOGY AND DATA

According to the literature, there are a large number of criteria that support the regularization of informal settlement. These can be divided into five main groups: financial recourses, development plan, public participation, administration and land tenure. Each of those can be detailed in sub-criteria. The full structure of such hierarchy is depicted as below (Figure 1):



Figure 1: The conceptual hierarchy model

The analytic hierarchy process (AHP) is a structured technique for organizing and analyzing complex decisions, based on mathematics and psychology. It was developed by Thomas L. Saaty in the 1970s and has been extensively studied and refined since then. It has particular application in group decision making, and is used around the world in a wide variety of decision situations, in fields such as government, business, industry, healthcare, and education. In this research, AHP is used to weight these criteria in order to figure out that each of these criteria how much are important for organizing

an informal settlements. For this purpose some of the experts were asked to weight these criteria. Then according to the literature of informal settlement the Strength, Weakness, Opportunities and threaten (SWOT) of an informal Settlement were studied. A SWOT analysis guides the planners to identify the positives and negatives inside the organization (S-W) and outside of it, in the external environment (O-T). Developing a full awareness of the situation can help with both strategic planning and decision-making (Golkar, 2005). The SWOT method was originally developed for business and industry, but it is equally useful in the work of community health and development, education, and urban planning. Finally SWOT matrix is quantified for each of cities which are studied in this research.

The case for this study comes from a set of urban areas throughout the country. The main large cities of Iran encountering with informal settlement problem are detailed Table 1.

**Table 1:** The share of informal population settled in Iranian large cities

| Row | City Name  | City Population | Population of Informal Settlements | Ratio |
|-----|------------|-----------------|------------------------------------|-------|
| 1   | Bandarabas | 475000          | 230000                             | 48.4  |
| 2   | Zahedan    | 580000          | 220000                             | 37.9  |
| 3   | Kermanshah | 780000          | 280000                             | 35.9  |
| 4   | Uremia     | 550000          | 190000                             | 34.5  |
| 5   | Mashhad    | 2070604         | 705794                             | 34.1  |
| 6   | Ahvaz      | 980000          | 320000                             | 32.7  |
| 7   | Tabriz     | 1290000         | 330000                             | 25.5  |
| 8   | Hamedan    | 464000          | 97400                              | 21    |
| 9   | Sanandaj   | 328000          | 67000                              | 20.4  |
| 10  | Tehran     | 12000000        | 2380000                            | 19.8  |

Source: Ministry of Housing and Urban Planning (2013).

Because of having limited acces to the data of all these areas only four cities are selected here: Bandarabas, Kermanshah, Mashhad and Sanandaj. Bandarabas is the capital of Hormozgan province located in southeast of Iran with a population of 475000. It is rank first in terms of the share of informal settled population. Kermanshah is rank third among those cities that have informal settlement and it has a population of 780000. It is the capital of Kermanshah province in west of Iran. Mashhad with a population of 2070604 has a share of 24 percent informal residents. Mashhad is located at north east of the country and is the capital of Khorasan Razavi province. Sanandaj is the capital of Kordestan province at west of Iran and its population is 328'000.

**ANALYSIS**

As regards, informal settlements are impartible from third world countries, before understanding the main criteria for organizing

them it really important to study them and recognize their pros and cons. Therefor at first according to the literature of informal settlement and studying of case studies the general Strength, Weakness, Opportunities and threaten (SWOT) are studied.

As Table 2 indicates informal settlements are not contained with a lot of weaknesses and they have strength and opportunities too. Their weakness for one thing refers more to social problems because these areas are segregated from other parts of the cities and people are suffering from the lack of utilities. In other hand since they are living in group their sense of community and identity is stronger that other places. Moreover, they can prepare cheap workers for a city which can be really useful for the cities' economics but because of the existence of social exclusion and the sense of unevenness in informal settlement always urban riot and be possible from these groups which is one of the most significant threatens of informal settlements.

**Table 2:** The SWOT matrix

| Strength                  |                                  | Weakness                         |                        |
|---------------------------|----------------------------------|----------------------------------|------------------------|
| Self Sufficiency          | Cheap Workers                    | Social Exclusion                 | Social Segregation     |
| Supporting Service Sector | Local Identity and Community     | Poor access to utilities         | Cultural Fragmentation |
|                           |                                  | Low Security                     | Unemployment           |
|                           |                                  | Land tenure Security             | Illegal Construction   |
| Opportunities             |                                  | Threaten                         |                        |
| Informal Economy          | Motivated Workers                | Social Riots                     | Potential of Crime     |
| Affordable Housing Supply | Tendency to public participation | Environmental Degradation        | Housing vulnerability  |
|                           |                                  | Increasing Rural-Urban Migration |                        |

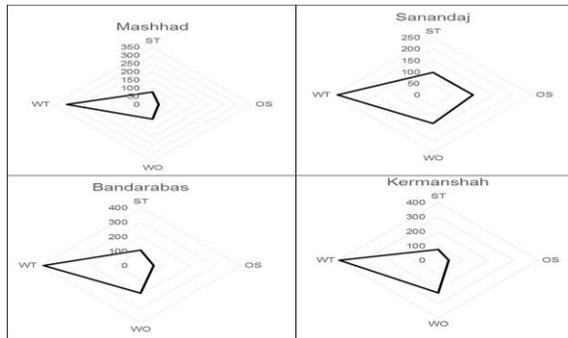
Although the above matrix is a general matrix for informal settlements, it doesn't mean that these components are the same for all the places and cities. As it was mentioned above Bandarabas, Kermanshah, Mashhad and Sanandaj because of the limited access to the data are chosen for this research.

All these four cities have several informal settlements inside and outside the city which cause lots of problem for these cities, But the amount of these problems aren't the same for all these four cities therefore according to the SWOT matrix these cities were quantified according to the characteristics that each of them have in order to understand the method that should be chosen for organizing an informal settlement. For this purpose the components of each cells of SWOT matrix were weighted according to their importance in comparison with each other. Then their ratio is multiplied by the gained cities' score in each of matrix's

components. Finally the score of each strategy is calculated (Table 3).

**Table 3:** The strategy analysis results

| Strategies | ST       | WT       | WO       | OS       |
|------------|----------|----------|----------|----------|
| Mashhad    | 75.78125 | 304.3375 | 89.7325  | 22.34375 |
| Shiraz     | 98.8     | 241.8    | 124.9688 | 102.125  |
| Bandarabas | 107.9125 | 389.8188 | 191.2925 | 52.955   |
| Kermanshah | 74.5725  | 396.7013 | 227.15   | 42.7     |



**Figure 2:** The comparison of four case cities with regard to strategy analysis

As Figure 3 shows between the four strategies which are gained from SWOT matrix, defensive strategy has gained the highest score for all four cities despite the fact that the situations in these cities are completely different from each other. It means that for example the amount of segregation or other things aren't the same for these four cities. In fact defensive strategy is just like prevention strategies in other word it is used in order not to let informal settlements to develop (Raisdana, 2000). Empowerment can be one of the most important method of defensive strategy because empowering people improve their situation in terms of economic therefore they don't have to migrate to other cities for earning money which leads to forming of informal settlements because these people can't

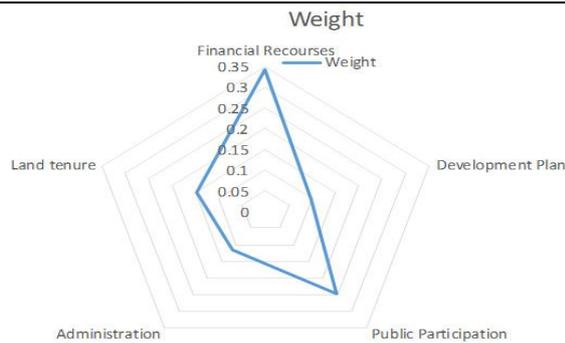
afford to live in city center. Giving more power through education, information, coaching and counseling, and amplify the possibilities to get or create a job or business, trough micro-credits, access to information and communication technology (ICT) networks is the best way to achieve poverty eradication. Empowering have to also mean give the primary needs to someone: water, food, house, communications, energy, job, health (Gupta, 1994).

primary needs to someone: water, food, house, communications, energy, job, health In fact, defensive strategy has chosen for all four cities because preventing from shaping of informal settlements doesn't have to the cities and its characteristics because it is just as a rule the if cities prevent from shaping of informal settlements they don't have to designing some plan for organizing it.

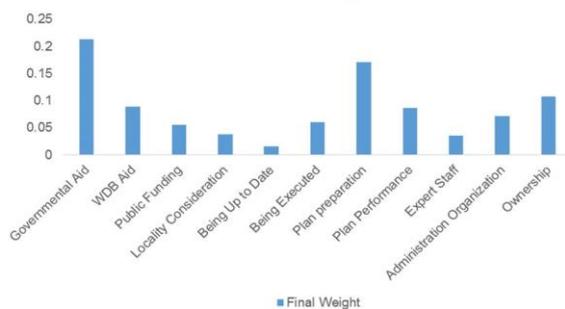
Therefore after figuring out the most important strategy it is essential to study the most important criteria that should be considered in organizing the informal settlements. As it was mentioned above organizing an informal settlement has five main criteria which each of them can be divided into some sub-criteria. According to the literature these five main criteria are financial recourses, development plan, public participation, administration and land tenure. For weighting these criteria some experts were asked and the final results were entered into AHP method to understand the order of these variables from the most important to the less. This trend was done for the sub-criteria too. Results indicate that according to the opinion of experts and the analysis of AHP "financial/human resources" is the most significant (Table 4).

**Table 4:** The AHP result

| Criterion                 | Weight | Sub-Criterion               | Weight | Final Weight |
|---------------------------|--------|-----------------------------|--------|--------------|
| Financial/human Resources | 0.341  | Governmental Aid            | 0.594  | 0.213        |
|                           |        | WDB Aid                     | 0.249  | 0.089        |
|                           |        | Public Funding              | 0.157  | 0.056        |
| Development Plan          | 0.097  | Locality Consideration      | 0.333  | 0.038        |
|                           |        | Being Up to Date            | 0.140  | 0.016        |
| Public Participation      | 0.247  | Being Executed              | 0.528  | 0.06         |
|                           |        | Plan preparation            | 0.667  | 0.171        |
| Administration            | 0.115  | Plan Performance            | 0.333  | 0.086        |
|                           |        | Expert Staff                | 0.333  | 0.036        |
| Land tenure               | 0.147  | Administration Organization | 0.667  | 0.072        |
|                           |        | Ownership                   | 0.667  | 0.108        |
|                           |        | Regulation and Low          | 0.333  | 0.054        |



**Figure 3:** The role of affecting factors



**Figure 4:** The comparison of attributes of informal settlement expansion

As Figure 1 and Table 3 depict between the five main criteria the financial resources and public participation are the most important criterion for organizing an informal settlement. Financial resources contains governmental aid which is really necessary since organizing an informal settlement costs a lot and ordinary people or companies can't afford it. As it was studied before empowerment is one of the most reliable method for organizing an informal settlement and it can't be implemented without the governmental aid. The second important criterion refers to people who are living in an informal settlement and changes can affect their lives. It means that organizing an informal settlement needs public participation which can warrant the success of plan since citizens' desire are considered in designing and implementing of it. Therefore designing a plan for organizing an informal settlement without considering at least these two main criteria which play an important role in empowering the informal settlement can't be accountable.

### CONCLUSION

The main thesis of this paper is that, in overall, the complications encountered with informal settlements (especially in Iran) have not been methodically and systematically addressed yet. In fact, informal settlements and their inhabitants have regularly been ignored in the broader political and physical development

practices of the country. However, some efforts have been undertaken in improving informal settlements by the central government, local governments, community-based organizations (CBOs) or international institutes such as World Bank or UNHABITAT. In this regard, several development and regeneration projects have been commenced in the preceding 20 years (e.g. in Mashhad, Sanandaj, Kermanshah and Bandarabbas as the cases of this research). In such limited cases, many positive outcomes can be observed which act as the leading directions for the future. On the other hand, many barriers have been appeared preventing the progress of such projects. Inadequate human and fiscal capitals, uncertain managerial processes, oppressive controlling rules, and idealistic standards have all been reported as main obstacles.

This paper made an attempt to discover the main causes of expanding of informal settlements in Iranian large cities. These are: human/financial recourses, development plan, public participation, administration and land tenure. The trends were analyzed using SWOT process. Next, the AHP model was employed to weighting these factors by asking some urban experts (n=30). The results of the modeling then were interpreted and discussed referring to the literature. The results indicated that human/financial resources and public participation can be considered as the main causes of the extension of informal settlements in Iranian cities. Any policy-making effort should take account these two factors. However, it should be noted that each case has its own solution and the belief as "one-fits-all" solution may more disregards other changes and fortifies the complications of informal settlements. Some policy and planning implications can be extracted from this research:

- Altering the procedure of plan-making towards a strategic vision focusing on mid-term and short-term directions;
- Establishing an integrated framework of major policy fields including land management, land use planning, housing and social planning;
- Fostering the informal settlement's links to the broader economic, social, environmental and physical development processes.
- Providing an administrative/managerial framework to linking stakeholders and key actors from different grounds with an emphasis on socially disadvantaged groups;
- Providing knowledge and training on informal settlement issues, and accessibility to relevant information.

This research can be improved by increasing the

number of case studies, using more advanced analytical techniques and also by focusing on a specific case.

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