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EVALUATION OF EFFECTIVE INDICATORS ON FORMATION OF INFORMAL SETTLEMENTS OF SHAHR GHODS

S. Heshmati*¹ and Z. Sadat Saeideh Zarabadi²

¹Master degree of School of Arts and Architecture, Tehran Science and Research Branch,
Islamic Azad University, Tehran, Iran

²Assistant Professor of School of Arts and Architecture, Tehran Science and Research Branch,
Islamic Azad University, Tehran, Iran

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ABSTRACT

Iran has faced with the growing urbanization in recent years and if we do not adopt effective planning and efficiency in the face of this sudden change these challenges will become irreparable consequences. Informal settlements are one of the symbols of this change. But with a good understanding of the phenomenon of the change in attitude it can be turned into opportunities. The purpose of this study is identifying and prioritizing effective indicators on formation of informal settlements of SHAHR GHODS and tries to some extent know the situation in these settlements and by studying main factors creating and expanding these settlements, a few suggestions are given. Effective indicators of Informal settlements can be divided in three general categories, cultural - social, economic and physical – services. Thus the survey method was used and for statistical population the residents of SHAHR GHODS informal settlements have chosen by random sampling. The required information was collected using a questionnaire and factor analysis method was examined by SPSS21 software.

Author Correspondence, e-mail: saina.heshmati@srbiau.ac.ir

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The results indicate that the social - cultural aspects and physical infrastructure – service are the most influential factors in the formation and development of SHAHR GHODS informal settlements.

Keywords: informal settlements, SHAHR GHODS, Factor Analysis

1. INTRODUCTION

Informal settlements are symbol of urban poverty and takes place with lack of urban planning, with the accumulation of low-income community and low levels of the quantity and quality of life (Karami et al., 2014). It is not a temporary and declining phenomenon but it is permanent and growing (Sarvar and Roosta, 2014). Informal settlement in Iran has growing faster than urban growth and one-fifth of the urban population is in these settlements. Current form of informal settlement in Iran started from early 1940s and until the late 1970s was heavily extended. The focus of government investment in cities are exacerbated the distance between urban and rural and migration from rural to urban areas in the hope of employment along with issues such as land reform and rising oil prices caused the formation of informal settlements in the suburbs and even in inner city areas (Ahadnejad and Ali Pour, 2013). After the revolution, in terms of intensity formation it was one of important problems of Iranian cities. During this period, the growth of capitalist relations created a significant changes in developments and political, economic and social. These developments are all necessary conditions for strengthening and growth trends in the form of rapid urbanization was provided and the country's development process in exogenous form dependent on capitalism to the periphery, caused separation of past system and subsistence production (Jamshidi et al, 2013). SHAHR GHODS with rural backgrounds of GHALE Hassan Khan and with rapid growth and increasing population in the past three decades in 2008 was changed to SHAHR GHODS city. By increasing immigrant population, lack of housing and lack of adequate supervision services for the development of the poorest neighborhoods in SHAHR GHODS increases in a way that Mohammad Abad, with about twelve years old is one of the informal settlements of SHAHR GHODS. With the expansion of the settlements and the lack of properly deal with this phenomenon, we will be faced with a variety of abnormalities urbanization. One of the most important measures to solve the problem of informal settlements is identifying the most

influential factor in the formation and expansion of informal settlements. Realizing this can be in the form of planning and developing strategies to prevent adverse consequences of these settlements. In this study, according to the evaluation of influencing factors the formation of SHAHR GHODS informal settlements in three regions of SHORAY JONUBI, Mohammadabad, Shahrak Azizi. In this context, the question arises indicators affecting improve informal settlements in regions of SHAHR GHODS? Is social-cultural aspect is more effective than other aspects?

Views of theorists in the emergence and organization of informal settlements

First term for this phenomenon in the nineteenth century was sleepy neighborhood for slums of Netherlands that have no facilities and utilities and the place for crime. It occurs when urbanization has attracted an influx of poor immigrants and poor class is emerging and growing and to demand decent housing inevitably surround the suburban communities and informal settlements mainly for the poor happens. This dual process of formal and informal urbanization appears to be the inability of the government and ineffective monitoring the trend of development issues are concerned (Hendricks Andy Simarmata, 2015 & Jeering Zhu). Informal settlements are a result of rapid industrialization and regional disparities, the adverse consequences of urbanization in the contemporary world (Zali and Pourfathi, 2012). The proliferation of informal settlements in developing countries is a serious concern because these settlements have a negative impact on quality of life. Thus reviewing the indicators and factors that increase the settlement is very important (Ziari et al, 2013). Informal settlements within the structure due to factors such as occupation and race created external structure in the same geographical factors have arisen at different times and places as a result, each of which has its own specific social and economic body but in general some of the features are similar to each other (Meshkini et al, 2013).

Seven features can be named for informal settlements:

- 1- Generally they are illegal.
- 2- They are often spontaneous
- 3- Usually they have been made by residents.

- 4- The lack of urban services such as paved road, electricity and sewage disposal systems.
- 5- Development is done unplanned and haphazardly.
- 6- Usually they are formed in urban poor areas like factory edges.
- 7- They have dense population that is composed of crowded households.

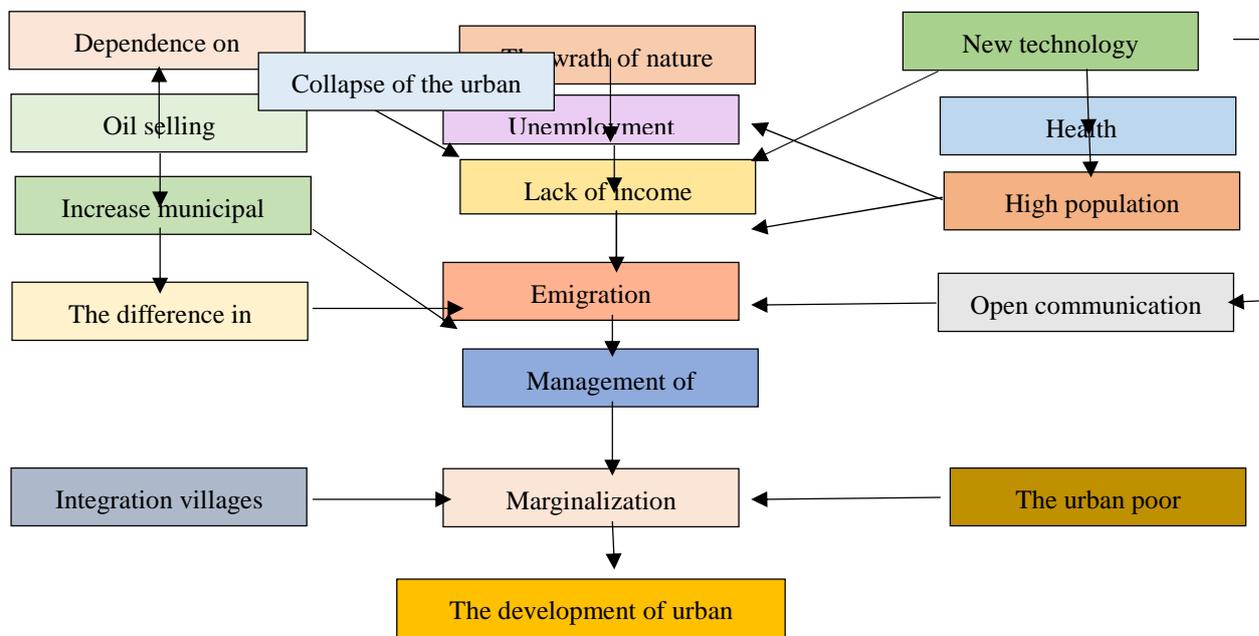
Based on studies in the field of marginalization in different areas of slum-dwellers in large cities, the most important features include: population overcrowding, poor construction, poor cultural, social and economic, unemployment, false employment, collective hygiene, lack of access to educational and welfare, increasing crime, corruption (Zangiabadi and Mobaraki, 2012). Informal settlements will be determined through a combination of concentrated poverty, insecurity and poor quality housing, political exclusion, and lack of access to basic services supporting life such as clean water, sanitation, and health care (Robert E. Snyder, Guillermo Jaime's, 2013).

In general, housing units was made with poor quality of construction materials and construction methods such as metal / cans, cardboard, plastic and other materials. Basic infrastructure such as drinking water, sewerage and drainage are often absent (Weeks & stein, 2011).

"The causes and development of such settlements can be divided into several categories:

- Natural disasters (floods, drought, etc.)
- Social and political events (such as regional conflicts) aims to provide the central government time
- Economic structure (such as increasing urban poverty and the ineffectiveness of formal land and housing markets).
- Planning and urban management system failure (lack of space marginalization of low-income housing).
- Weaknesses in the sector-specific programs to meet the needs shelter for the poor to appropriate geographical distribution of population and activities in the range
- The existence of illegitimate power bands and land thief

- Urban population growth that most experts believe the main reason for the formation of informal settlements. Rural to urban migration that arises from the lack of attention to the agricultural sector (Taghavi Gudarzi, et al, 2012)



Flowchart 1: formation and immigration and marginalization in the cities of Iran, (source: Naghdi and Zare, 2012)

The first step in the migration process of the formation of informal settlements and urban low-income rural migrants for various reasons could not resolved their needs through official market their own shelter to be through the unofficial market. Some of these features are shared among all informal settlements and some in each is different from other settlements. Studying the differences and similarities in understanding the causes of the emergence and proliferation of informal settlements, identify priorities and choose is the best essential way (Weeks & Stein and F.A.O, 2010). A specific pattern cannot be provided for all unofficial accommodation of world, but its formation has economic base so that the "Gilbert" and "Gangr" know it as logical and rational response against poverty.

Table 1: differences in terms of appearance and the formation of informal settlements

differences in terms of appearance and the formation of informal settlements				
Residents' Features	Ownership way and land tenure	Quality of management and behavior of governments	Political situation	Social and economic conditions

Table 2: Summary of views category and opinions in the field of formation and organization of informal settlements

Main Approach	Problem-oriented views	Related ideas	Aspects and characteristics of emphasized Comments
		Urban ecological theories Organization and power-oriented The combination of these two tendencies views	<ul style="list-style-type: none"> reducing the marginalization or as a complication urban settlement result of incorrect function and incomplete urban planners and managers Ignoring the roots and foundations involved in creating the margins informal settlements or squatter settlement is merely a natural phenomenon and ordinary municipal Marginalization result of the class struggle for housing and land and settle in the community Emphasizing of social segregation and the impact of reference Informal settlements or marginalized by removing, cleaning, collecting and physical actions is resolved This approach is more generalized in Western countries (segregation analysis of religion, race) According to the results of social segregation, spatial and dimensional problems of the advantages of these theories
		Making radical Dependence theories Theory of Universal City Theory of Political Economy Modernization	<ul style="list-style-type: none"> Marginalization is a reflection of the mechanisms of global capitalism Informal settlement on the outskirts is the result of margining center The ideas are root of foundations and the main factors for the formation of squatters or informal settlements to explain There is a close relationship between the political, economic, social, Third World societies with the

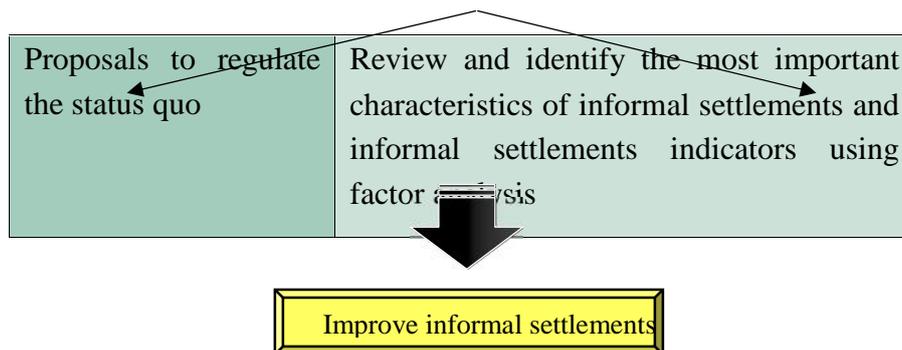
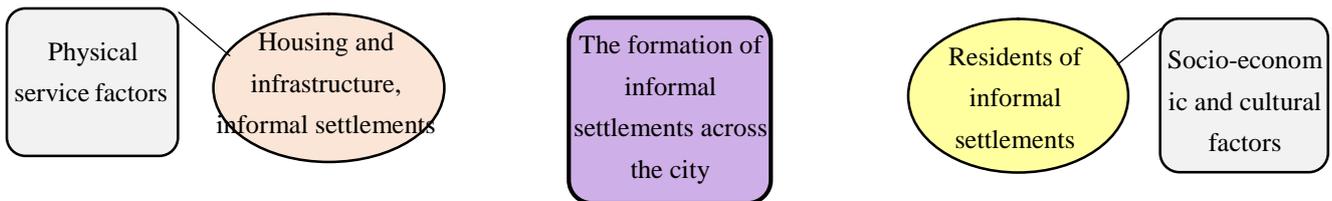
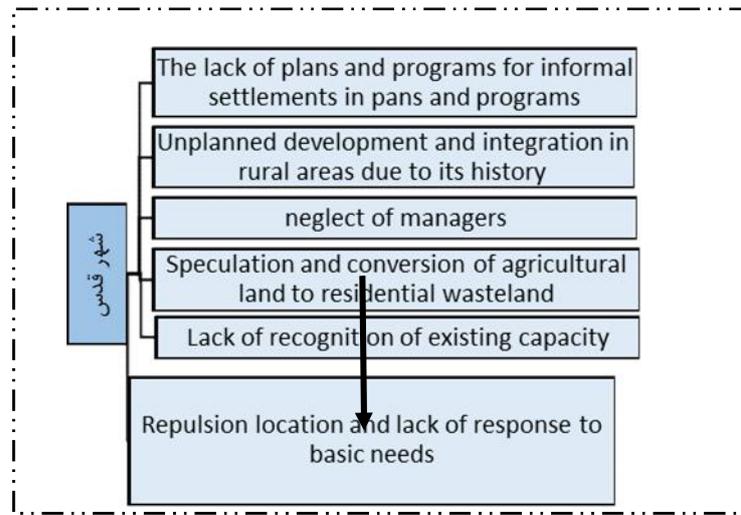
	theory	<p>formation of non-official residence</p> <ul style="list-style-type: none"> • Pattern of urbanization, urbanization, pattern of development, reform of macro-political, economic, military land and settlement systems, determining the cause, manner and process of the formation of informal settlements • Emphasis on political reform, political economy, the country program approach, strengthening partnerships, an approach to sustainable development and the transfer of improvements and fixes to the problem of marginalization of national and international political system reform is the other main points of view • The correct explanation of backwardness, structural analysis of the differences in the Third World urbanization developed countries, awareness of society to fundamental changes in the political economy of frost, the autopsy empowerment of urban management systems in the provision of infrastructure and improvement of its strengths
	<p>Functionalism Participatory Planning The importance of institutionalized Empowerment theory</p>	<ul style="list-style-type: none"> • Theories have nothing to do with the causes and factors involved in the emergence of informal settlements. • Informal settlements or squatter settlement and its consequences such as security and poverty as an urban reality to accept. • Based on these theories immediate settlement fundamental change in all aspects of society to improve and out of the state of informal settlements there • The above must be realistically strategies and solutions spontaneous, realistic, repellent issues, factual and footsteps were coming in. • Auto settlements in metropolitan areas are a response to the problem of housing and employment • The response in the framework of powers, the requirements and demands of the poor meaningful and appropriate physical space has found its form. • Do not provide fundamental answers, permanent and final solution to the problem of informal settlements and trapped in cycles of temporary arrangement and position of the theoretical

			<p>objection</p> <ul style="list-style-type: none"> • Empowerment initiatives, improving the quality of the environment, institutionalizing security criteria, providing affordable housing in solving the fundamental guidelines continued success confirms theories.
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Source: Kargar, 2010

2. METHODOLOGY

This study in term of the subject is descriptive - analytical and in terms of achievements is practical. In order to collect data from survey method (observation and questionnaires) and library (books, taking notes, articles, etc.) was used. The statistical population based on the 2011 census, is over 25630 people using a sample size of the study sample was randomly identified 378 individuals and by using a random sampling and Cochran formula the sample size of 378 were selected. Factor analysis method with SPSS21 software extracted the indicators and evaluated them. Factor analysis is a multivariate statistical method, which the enormous series of apparently irrelevant variables, a particular relationship unites under a hypothetical model (Irاندoust et al, 2013). Factor analysis indeed, the is the expansion of principal component analysis and the purpose is reducing the size of the original variables and variables into a limited number of factors that could explain the most basic variables change (Mirmousavi et al, 2012). In both methods, the attempt is approximated the covariance matrix, but this approximation is more the factor analysis of precision.

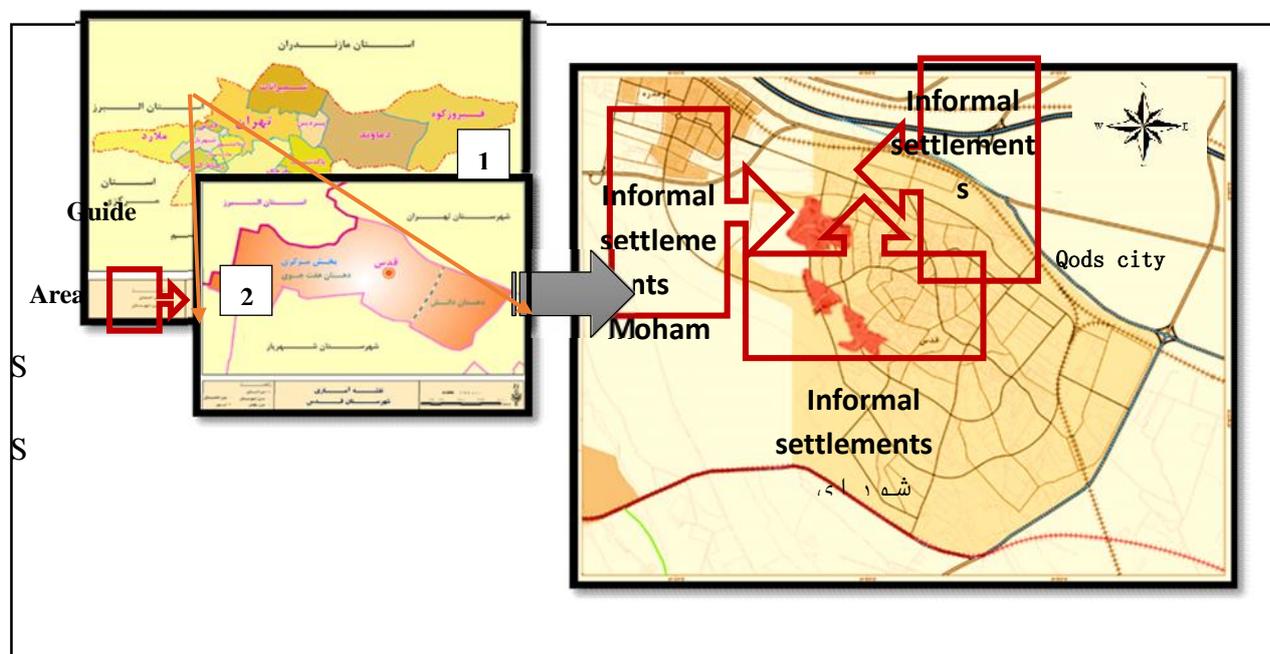


SHAHR GHODS and locations of its informal settlements

GH is a small village near the border southwest of Tehran, Tehran Municipality's District 9 and 18 and from the West and from the East to the Red fence has been limited to Kavousieh. It was founded in 1989 by the City of GH with other parts such as: Kavousieh, settlements merged and became SHAHR GHODS. Municipal services were included and covered. Later,

Parnan village was added and the city population reached to 230147 people and 60338 families in 2006. SHAHR GHODS is in the south Central Alborz range between Tehran and Karaj to Tehran's event and from the West, from the East to the Andisheh and Shariar, from the north and from the south by the city of Karaj city by city Garmdarreh and Baghestan. Because of neighboring to Fath highway and new road and Shariar way, it has a good location. In 2009 SHAHR GHODS was detached from Shariar and became the capital of SHAHR GHODS. The current range of SHAHR GHODS is in the vicinity of district 21 in Tehran. In the 2011 census the city's population to 283,517 people, of which 144,911 are males and 138,606 females and the number of households reached to 83 035 households (Population and Housing Census 2011). But the number of household members decreases in the household 3.4 compared to 5 years. The number of young households is increasing but household size is reduced. According to the 2011 population and housing census total number of immigrants entering the SHAHR GHODS reached to 34 686 people. Informal settlements in SHAHR GHODS in the past two decades have been created. The three districts of about 90 hectares in area and in west of SHAHR GHODS and the southern and northern sides of the boulevard located. Shahrak Azizi land is adjacent to military barracks walls, Mahmudabad area with sand and gravel and south area adjacent to the watercourse of Karaj River and is close to sand mining. Ranges of informal settlements in SHAHR GHODS since 1996 have taken shape. taken shape.

Map 1: Geographical location of ranges the informal settlements in SHAHR GHODS compared to SHAHR GHODS and Tehran Province



Source of 1 and 2: statistics organization and Source 3: Researcher

Indicators to assess the effect on formation of informal settlements we need to understand the current status of these settlements, in order to arrange cultural in three dimensions - social, economic and physical - service areas to be studied.

3. RESEARCH INDICATORS

To achieve the goal of research is required to identify the dimensions, criteria and sub criteria. According to a study undertaken to assess the most influential Indicators, they are raised and summarized in the table below.

Table 3: Dimensions, criteria and sub-criteria

Dimensions	Criteria	sub-criteria
Social-cultural	households Profile	The population ranges non-formal settlements nationality and ethnicity Ranges non-formal settlement population density compared to the three ranges of the city - the number of households in the household - sex and age composition - the birthplace of the head of the family – supervisor features (Age and Gender)
	Literacy level	Literacy level of the breadwinner - the number of literate people in the family
	Migration	Aboriginal status residents - the birthplace of the head of household - previous Location - migration- incentives for people to migrate from their previous settlements - causes of the current settlements
Economic	Employment structure	Breadwinner employment – job shift - the number of people employed in the family - work employment
	Economic situation of households	Family income - monthly family expenses - the cost of rent family - family insurance status
Physical-Service	Accommodation	Ownership status - micro lithic parts in settlements - density residential units Number of people in the room – old of buildings
	Infrastructure	Quality water supply - sewage system - electricity grid - a hierarchy of access - the quality of pathways

Source: researchers

Cultural features – population

The population of three regions of informal settlements in SHAHR GHODS in 2006 from 17840 people reached to 25630 people in 2011. Over the years, close to 8,000 people are seeing increasing population.

Table 4: Population in the years 2006-2011

District	Population 2006	Male 2006	Female 2006	Population 2011	Population 2011 based on percent
Shoray Jonoubi	4990	2644	2346	6031	23/5
Shahrak Azizi	11420	5905	5515	16262	63/5
Mohamad Abad	1430	747	683	3337	13
Total	17840	15730	14449	25630	100

Source: Census 2006 – 2011

The population in the three regions is on the rise and Muhammad Abad Ranges with less background than the other two areas of population growth is high, the empty land is not made in consideration Muhammad Abad Ranges in the future to attract large numbers of immigrants. As you can see in the figure; Shahrak Azizi due to the extent of almost 50 percent of total range, has a large crowd.

Map 2: The total population of informal settlements SHAHR GHODS limits



Source: researchers

Almost all residents are Iranian households and are Muslim and ethnically Turkish-speaking. The gross density of Shahrak Azizi 332 persons per hectare in 2011 is the first place, Shoray Jonoubi 251 hectare and Mohammadabad 185 hectare is the last, there are empty and less

populated areas of low population density in Mohammad Abad. All three regions have been enhanced density from 2006. The population of SHAHR GHODS was 283,517 people in 2011, 83,035 family sizes and family size was 3.4. The dimension of households in informal settlements with a population of 25,630 people in 2011, the number of households 6929 and household size is 3.7. In 2006, households dimension after the separation of families' settlements regions informal settlements in Shahrak Azizi was first place with the households of 4.2, Shoray Jonubi 3.93 and Mohammadabad 3.9 has the last. Distribution of households by division shows the number of households in sparsely populated in Mohammadabad and Shahrak Azizi was more than Shoray Jonubi. Age structure and sex ratio of the population in three major groups study area represents the young population that has significant number of working age and activity. That many people in search of employment and work in the future and with the lack of jobs and lack of skills and expertise are faced with unemployment. Mohammadabad despite of low-old record compared to Shahrak Azizi and Shoray Jonubi has increasing growth. All three regions in the coming years, shows the population potential demand for education and health services. Depending on the age and gender of household head profile head according to the questionnaire are evaluated.

Table 5: Age and gender of household head separated by district

Age of household head	20-30	30-40	40-50	50-60	Over 60	Gender	
Shoray Jonubi	18/7	38/4	25/2	16/9	0/8	Male	91/7
						Female	8/3
Shahrak Azizi	22/9	30/3	27/6	18/7	0/5	Male	89/9
						Female	10/1
Mohammadabad	28/3	19/1	38/9	13/3	0/2	Male	94/1
						Female	5/9

Source: research findings

Literacy level of head of family puts a great impact in attitudes and lifestyle. The highest percentage of illiteracy or elementary level are in these three regions and higher education levels does not exceed from 0.1 to 0.2. Unlike normal conditions in informal settlements families, due to poverty rather than sending children to learn; they are shipped to work. Given that in recent decades the supply educational services is not free of charge for families and the

cost of education, reduced intention of low-income families. However, literacy level of residents is desirable that it would be considered fertile ground for skills and vocational training to help in achieving the goals and empowering better regions of informal settlements. Here, however, the criterion for family literacy level from elementary to higher education movement has been considered. The most amounts is Shoray Jonubi with 37.2 % of 2 literate people in the family, in Shahrak Azizi with 33.4 % and 4 literate people in the family and in Mohammadabad, 33.4% with 2 literate people in the family.

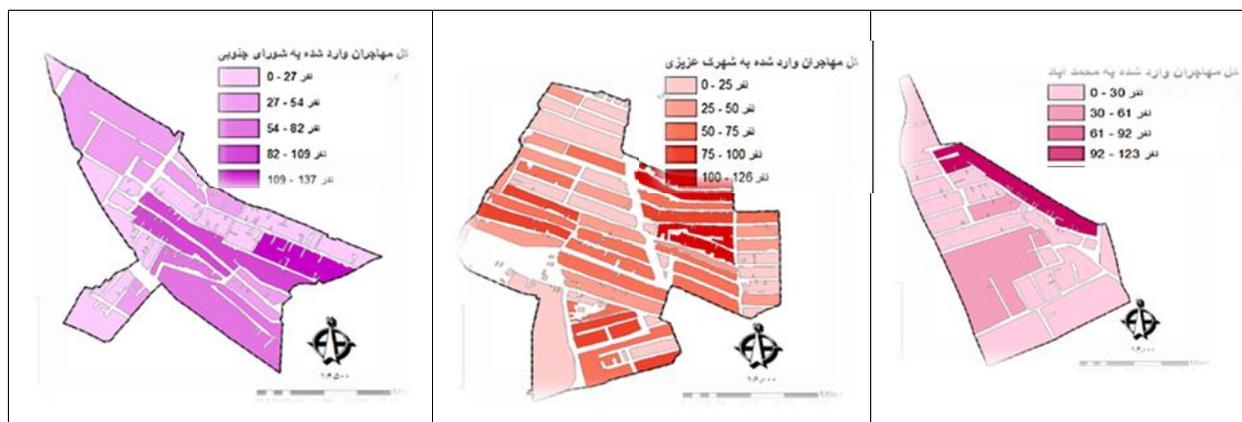
Often informal settlements shelters are immigrants from different parts for a better future. That's why as informal settlements where indigenous peoples to be of very little and most population are non-indigenous. The three districts are not exempt from this. The average of endemic situation in the three regions shows about 3 percent of the total population and about 97 percent were non-native.

The birthplace of the head of household can represent indigenous or an immigrant family. In Shoray Jonubi region they are from Hamedan, Azarbaijan Sharghi-Ghrabi and Gilan-Mazandaran, in Shahrak Azizi they are from Azarbaijan Sharghi-Ghrabi, Ardabil and Zanzan and in Mohammadaabad they are from Zanzan, Azarbaijan Sharghi-Ghrabi and Ardabil. Most residents of informal settlements regions are immigrants from surrounding towns and villages and given the history of these three regions, it has been further immigration of the 1990 and still continues. Most immigrants, about 60 percent of their old location nearby cities or small towns and villages within the province announced. Migration time in Shoray Jonubi is more than two other regions. Migration time has a direct relationship with physical age of the region. Migration time in Shoray Jonubi and Shahrak Azizi was between 15-20 and in Mohammadabad is between 10-15.

Most of migration is due to lack of life satisfaction and more for economic reasons and unemployment and is the cause of their change. There are different reasons for migration. More migrants are looking to find jobs, better income and having the proper life. According to the results, it was found that low rent cost and low land prices is the most important factor in choosing this settlement. Housing is the most critical needs of low-income families and they do not show special attention to the situation of services and facilities. To create a better life

they go to the metropolis of Tehran but unlike their mentality practically they are left at the gates of Tehran and are seeking shelter for their life, that perhaps even in terms of facilities it is lower than its predecessor city or village settlements.

Map 3: Total immigrants to the regions of informal settlements in SHAHR GHODS



Source: researcher

4. ECONOMIC FEATURES

Employment is a serious issue in the lives of people in society and in the informal settlement phenomenon unemployment is serious issue. Informal settlements ranges higher percentage of unemployment in SHAHR GHODS compared to Tehran. In addition to being good for jobs and employment need to acquire skills and knowledge it requires hospitalization for recruiting these people.

Table 6: job status of head of family in regions

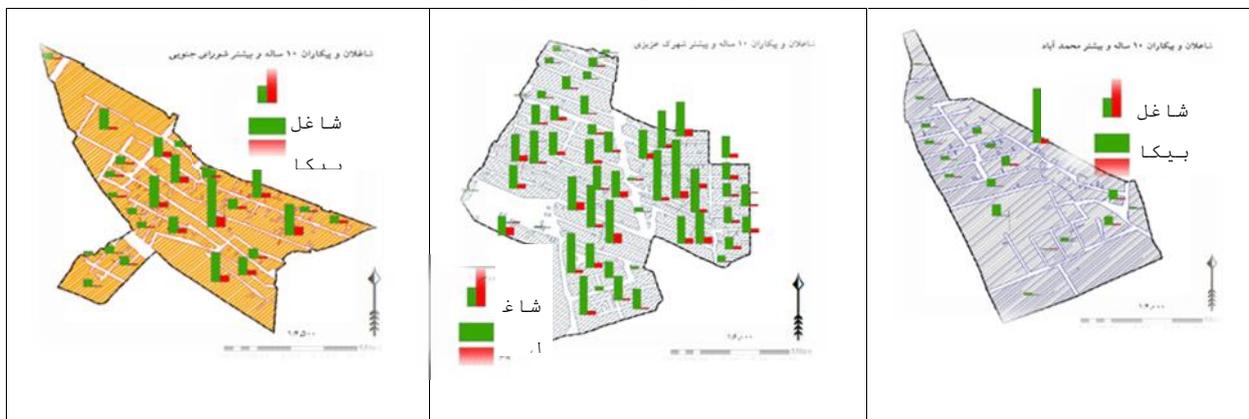
job status of head of family	unemployed	Laborer	Self-employed	Governmental employee	Private company employee
Shoray Jonubi	23/1	31/9	23/4	11/3	10/3
Shahrak Azizi	224/	30/7	27/3	410/	7/4
Mohammadabad	22/9	33/4	21/3	9/8	12/6

Source: research findings

More businesses and people who work in the public and private sectors have been placed in permanent jobs. Most people in informal settlements due to lack of expertise may operate

simultaneously in the cross-sectional seasonal jobs. 60% of the area of informal settlements in SHAHR GHODS and the cross have seasonal jobs. Many low-income families according to their mandatory needs, a wife and children work with head of household in temporary or permanent jobs. Children start working at an early age in addition to education and or drop school and become breadwinners. Women also have to support the family both inside and outside the home by having part-time jobs such as sewing, crafts. The highest percentage of people employed in family 1 and 5 and more, with amounts to be allocated.

Map 4: employed and unemployed 10 or more years of informal settlements regions in SHAHR GHODS



Source: researchers

In examine a range of informal settlements has been found that people working in this area, the work is more is inside and around the region. 60 to 70 per cent of employment is within the scope of their activities. According to the employment of the breadwinner and the number of employed people in the family that has been discussed in previous issues approximately 25 percent of them are unemployed and roughly 60 percent of people were self-employed or workers. Almost 50 percent of households also 1 to 2 people in the family are working. The past eight years, the poverty line was calculated for a family was about 650 thousand Tomans which should be around one million Tomans now. In these three regions their income was between 400 to 800 thousands Tomans. Families of informal settlements provide their basic needs according to the income as a result, the monthly costs associated directly with household income.

Table 7: The family's monthly expenses and the percentage in three regions

Monthly expenses	200-400 Thousands Tomans	400-600 Thousands Tomans	600-800 Thousands Tomans	800 Thousands Tomans to 1 million	More than a million
Shoray Jonubi	19/1	30/9	38/3	11/2	0/5
Shahrak Azizi	18/7	36	30/4	13/2	1/7
Mohammad Abad	18/6	29/9	34/7	14/8	2

Source: research findings

Low land prices and rent housing is absorber for low-income people in informal settlements. In three regions informal settlements close to 40 percent of residents live in their own home so they do not need to pay rent. And have better conditions compared to tenants. 100% of them about the monthly savings said that they do not have any savings which was predictable according to their income.

Table 8: The cost of rent (Tomans) and the percentage in three regions

Cost of Rent	Less than 100 thousands	100-200 thousands	200-300 thousands	More than 300 thousands	Personal house
Shoray Jonubi	26/7	28	6/6	1/7	37
Shahrak Azizi	29/3	25	5/3	1/4	39
Mohammadabad	31/7	22	8/1	2/2	36

Source: research findings

Insurance status has a direct relationship to jobs of head of household because other family members are covered by the family head. Most families because the head of household, and no official permanent jobs, are not covered by insurance and the average in three regions 85% of households do not have insurance.

Physical - Service features

Table 9: analyzing the physical conditions of informal settlement

analyzing the physical conditions of informal settlement	
Shoray Jonubi	<ul style="list-style-type: none"> - It is located in southwest of the city. - In the vicinity Shoray Jonubi Blvd and Shah Bodaghian St. - Adjacent to the watercourse Karaj River and close to the sand and gravel - With an area of approximately 24 hectares - Older than two other regions - Until 2006, 85 percent of the area growth and in recent years 15 % of its remaining has expanded
Shahrak Azizi	<ul style="list-style-type: none"> - It is located in west of the city - Adjacent to land and walls of military barracks - With an area of approximately 50 hectares - Is older than the other region - Until 2006, completely had its growth and in recent years 7 % of its remaining has expanded - Physical growth stopped due to lack of vacant land and the steep of land
Mohammadabad	<ul style="list-style-type: none"> - It is located in west of the city - Does not existed before 1991 - Adjacent to sand and sea sand mining - With an area of approximately 18 hectares - Adjacent to Mohammadabad St. - Until 2006, 40 percent of the area growth and in recent years 60 % of its remaining has expanded

Source: researchers

Aside from being good urban management supervision with regard to the immigration and residence in the city and factors such as land speculation, land and illegally selling land endowment and endowment just settlement of the expansion of informal settlements has increased sharply.

Table 10: analyzing the ownership status of the separation based on the percentage in three regions

Ownership status	Six dengue document	Letter of promise	Heritage	Definitive peace	Possessive
Shoray Jonubi	0/15	0/84	0	0	0/01
Shahrak Azizi	0/02	0/92	0	0/01	0/05
Mohammadabad	0	1	0	0	0

Source: Consulting Engineers of Amayesh and Toseh Alborz, 2011

Shoray Jonubi had 15% Six dengue document, 84% of Letter of promise, 1% Possessive and Definitive peace and Heritage was 0%.; Shahrak Azizi had 2% Six dengue document, 92% of Letter of promise, 1% Definitive peace and 5% Possessive and Heritage was 0%, Mohammadabad had 100% of Letter of promise. Micro lithic is shown and approximately 70 to 80 percent of the parts below 100 square meters show and about 30% of them are less than 50 square meters.

Utilization of more space at private residences is one of the key indicators of quality of life. Micro lithic residential and overcrowding in residential units indicate low quality of life of people living in informal settlements. Residential units have less than 2 people, including the students, staff and families without children. Number of rooms in the housing unit facility is that according to the micro lithic, infrastructure and density of persons in informal settlements housing units to separate ranges are as follows; region of Shoray Jonubi 79 percent has no room or has 1 room, and 19 percent had 2 bedrooms and 1percent with 3 rooms. Eegion of Shahrak Azizi 80 percent has no room or has 1 room, and 20 percent had 2 bedrooms and 1percent with 3 rooms. In Mohammadabad region 54 percent has no room or has 1 room, and 54 percent had 2 bedrooms and 1percent has 3 or 4 rooms that show quality of life is higher than the other two areas.

Shoray Jonubi is older than two other regions. Settlements expanded rapidly in recent years due to shortage of land in this area. But Muhammad Abad because did not exist until 1993 it expanded rapidly, which is due to speculation, the intensity of migration and lack of supervision and planning of the settlements. Although Shahrak Azizi is not older than Shoray Jonubi, but the growth is relatively uniform. Buildings age has direct relationship with region age. With the growth and extension of the city and the emergence of informal settlements that lack of planning has been done for immigration has created problems such as water low pressure, switching the water in the range of informal settlements. It should be noted there are piped water networks in three regions. More sewage disposal as well in three levels of absorption and is guided out. Depending on their circumstances, each has different percentages. All three regions have access to electricity grid but about 90 percent on average in all three regions have power and 10 percent have no power.

The quality material that was used through the passages and collecting surface water systems was checked. In Shoray Jonubi and Shahrak Azizi more than 80 percent of roads are lacking in quality and surface water collection system but the passages quality of Mohammadabad is worse than other regions.

5. RESEARCH FINDINGS

After reviewing the current situation and using factor analysis summarizes our data, top ten indicators were obtained.

In the first stage: data matrix can be prepared in the name dimensions that the headlines are indexes and head of columns are regions by using the procedure of divided by the average dispute resolution scale.

The second phase: calculating the correlation matrix for the next stage of computing and communication within the Indicators used. The correlation between m Indicators can be written as a m matrix. Given that correlation of each index with itself is one as well as high and low triangular diagonal of a diagonal triangle is equal and symmetric.

Table 11: Correlation Matrix

		XX1	XX2	XX3
Correlation	XX1	1.000	.962	.933
	XX2	.962	1.000	.911
	XX3	.933	.911	1.000
Sig. (1-tailed)	XX1		.000	.000
	XX2	.000		.000
	XX3	.000	.000	

a. Determinant = .009

Source: research findings

Third stage: extracting factors using the correlation matrix between the indexes is obtained. Using the factor matrix, the common factors and the relative importance of each of the index is realized. In fact, the relative importance of each indicator loading indicators corresponding to each of the relevant factors that defined the so-called load factor. The factor analysis of indicators in connection with the factors, indicators are used which their correlation are higher than 0.5. The correlation of each variable is called Factor Loading and its value varies between -1 and +1. The variance explained by each factor equal to the square of its operating

loads. The Eigen value of variance is the highest and it is more than 1.

Based on Kaiser just held on the basis of the sum of squared factor loadings of (amount of) is one or more. In Scree specific amount for each factor graph is drawn. The eigenvalues at the point where the curve becomes horizontal, it is called the Scree and that the factors at left are actual and those that are located on the right side are considered error factors.

- 1- Unroasted factor solution option should be disabled otherwise it gives unnecessary information.
- 2- Options scree plot for rocky map (Map all operating points) should be activated.
- 3- If you wish to obtain factors that have a special privilege (larger than a certain level) we should activate Eigen value over option and if we want to get a certain number of key factors we have to activate the option of the number of factors.

Table 12: Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.871	95.708	95.708
2	.094	3.138	98.846
3	.035	1.154	100.000

Extraction Method: Principal Component Analysis.

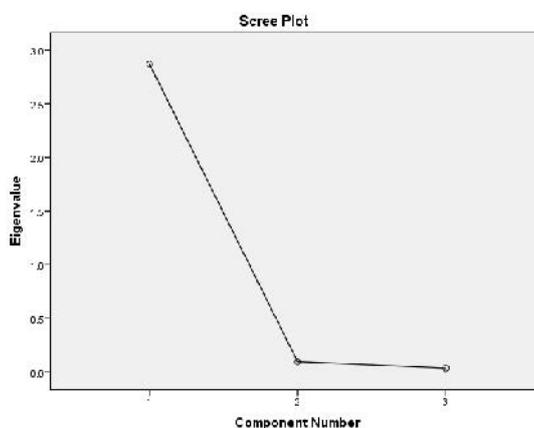


Fig.2. Rocky Diagram, source: Findings

Step Four: Swing Factor, to analyze the factors explained the phenomenon with a smaller number of primary variables. Basically factors should be kept of which have no validity. But before turning process the mean of any factor cannot be properly understood. At this stage of the variable the obtained main factor is presented. Factor analysis assumes "bind variables in the factor" is introduced and variables of correlation coefficients greater than 0.5 in each of the selection and the rest are deleted.

Last stage: Interpretation and naming the agent so that the factors according to this method adopt different values which reflects their impact, now, according to numbers given in the column FAC1-1 numbers with regard to this matter through SPSS 21 software for determining Top 10 factors we use method of scaled factor scores. Formula 1:

$$\text{Scaled factor scores} = (\text{FS}_{\text{Max}} / \text{FS}_{\text{is}}) / (\text{FS}_{\text{Max}} - \text{FS}_{\text{Min}}).$$

Table 13: Top ten influential Indicators in the range of informal settlements

Rank	Sub-criteria a	Criteria	Dimension	Loading factor
1	population density	Households Profile	Social-cultural	7.684
2	Non-indigenous people	Migration	Social-cultural	2.466
3	Male breadwinner	Households Profile	Social-cultural	2.303
4	Power electricity	Infrastructure	Physical- service	2.228
5	Inappropriate pass ways	Infrastructure	Physical- service	2.225
6	No insurance	Checking Economic situation of households	Economic	2.063
7	Sewage driven out	Infrastructure	Physical- service	1.688
8	Women at age of 14-65	Households Profile	Social-cultural	1.493
9	Place of employment within the scope	Checking employment status	Economic	1.434
10	Having 0-1 room	Accommodation	Physical- service	1.432

Source; Research findings

6. CONCLUSION AND RECOMMENDATIONS

One of the most important measures to solve the problem of informal settlements is

identifying the most influential factor in the formation and expansion of informal settlements. By realizing this can be in the form of planning and development strategies stop adverse consequences and hinder the growth of these settlements. In this study, according to its goal of identifying the origins and causes of the development of SHAHR GHODS informal settlements, finally, the evaluation considered the most influential indicator was the creation of these settlements that by using factor analysis results indicate that social factors - culture is more important than any other factor and to be considered as the first factor. The second factor is infrastructure, physical - service and economic factors is the last one.

According to the results of the factor analysis we can say that the social dimension is more important than the other dimensions. During the past 5 years due to increasing population density and attracting non-local multi-ethnic and tribal structure in the region represents the uncontrolled migration of people from villages and other towns in the region of informal settlements. As well as other known factors the influence of the head of the family lead family members to immigrate to housing and employment in the informal sector. These people due to lack of expertise and lack of education and income are turning to false jobs and finally enhancing the role of women in terms of education and skills for employment opportunities and its direct impact on household income will be considered.

The second most important dimension in SHAHR GHODS informal settlements is the physical dimension. Basically informal settlement areas on land without planning shape as the car and expand usually lack the infrastructure and their officials do not know themselves obliged to supply and monitor the infrastructure of these areas. There are passages out waste and an improper conduct informal settlement within SHAHR GHODS is one of the things that have been mentioned in factor analysis method. The existence of electricity in these regions reflects the unofficial use of infrastructure building of SHAHR GHODS that is not seen by authorities. Having more than one room in residential areas of SHAHR GHODS informal settlements is due to the high density of housing unit with low infrastructure, indicating a low level of quality of life for people in informal settlements.

According to the results of factor analysis lack of insurance and employment in the economic is effective within the range of SHAHR GHODS informal settlements. Householder's not

having insurance is because of unemployment or lack of employment is in the informal sector and has a lot to do with having the expertise and sufficient income. As a result, these people faced with poverty and economic disadvantage. Rating the top place of employment within the scope of settlement reflects people's willingness to work near their location and at least regions of informal settlements in SHAHR GHODS is not a dormitory for the metropolis of Tehran. This can be empowering approach was helped in organizing informal settlements. And by creating employment and entrepreneurship for productive sectors and industries within the scope of a settlement to reduce unemployment and exclusion from employment in the informal sector is a great help. Finally, it would increase the revenue, reduce poverty and improve the living conditions.

According to the understanding and analysis carried out to determine the most influential factor in the formation and development of informal settlements in SHAHR GHODS it can be provided in the form of a two-stage program in order to organize the settlements in terms of social, economic and spatial. Informal settlements due to geographical location of the city of SHAHR GHODS as the largest city in the West of Tehran and because of the many large industrial plants and their mother in immigration are faced with most serious problems.

- The first step: to improve the previous settlements situation of people living in informal settlements
- The second step: fixing the existing informal settlements

Stabilizing and controlling the status quo of informal settlements to prevent and control the development of these settlements is just automatic. Because they do not prevent the development of uncontrollable problems and solving the matter become out of control. Especially when uninhabited wasteland and are intended to develop land use plans are not specified. This step is very important because these settlements stop the automatic development process does not become a threat to region in future. Informal settlements as a physical effect is emanating from the social and economic causes. Improving life quality is a performance requirement in order to the efficiency of the whole system in Tehran.

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