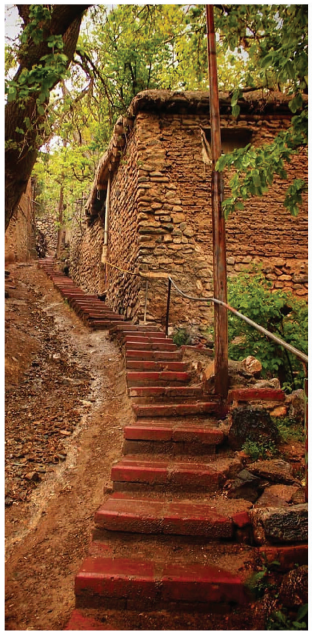
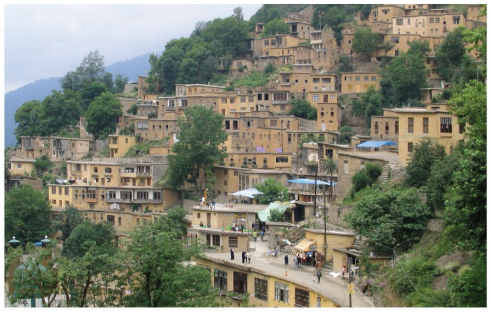


Internal Migration and Urbanization in Iran

WITH EMPHASIS ON THE PERIOD OF 2011-2016



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Ensuring rights and choices for all since 1969

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Faculty of Social Sciences

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Executive Summary

- With fertility and mortality slowing down in most countries including Iran, migration is finding an increasingly important role in demographic changes. Migration will have a significant impact on spatial redistribution and structure of the country's population, which emphasizes the importance of monitoring the country's migration flows.
- Over the past four decades, on average about one million people have migrated annually across the country. In general, however, the intensity and size of internal migrations have decreased, but the share of inter-provincial migration, i.e., migration with longer distances, has been rising.
- Until 2016, the share of urban-urban migration has always been increasing and it was the most common type of internal migration. By contrast, rural-urban migration has declined.
- Migration in Iran is still age-specific and sex-specific, namely, it is still dominated by young male migrants (aged 15-34 years). However, the percentage of female migrants aged 20-29 in 2016 was more than the same percentage for men.
- Women had a bigger share of urban-urban and rural-rural migrations. In contrast, number of men in rural-urban migration was more significant compared to women. Moreover, women have a larger share in intra-province migration compared to men, namely, women are more likely to move within their own provinces, and men are migrating between provinces.
- Migration had the most negative effect on population growth in the provinces of North Khorasan, Lorestan and Hamadan. It had the most positive effect in the Alborz, Semnan and Bushehr provinces.
- In 2016, the top areas of origin for migration in the country were Lorestan, South Khorasan and North Khorasan provinces, and on the other hand, highest rates of in-migration were for Alborz, Semnan and Yazd provinces.
- During 2011-2016, the provinces of Lorestan, Chaharmahal-Bakhtiari and Ilam had the highest negative migration rates, and on the contrary Semnan, Alborz and Yazd provinces had the highest positive migration rates.
- The provinces of Alborz, Semnan and Qom had the highest total migration rate in 2016. In fact, these are the most crowded areas in terms of arrival and departure of the migrant population.

- Urbanization in Iran had a steadily upward trend until 2016. Currently, about 74 percent of the population lives in cities. The provinces of Qom, Tehran and Alborz had the highest urbanization rate and Sistan-va-Baluchestan, Golestan and Hormozgan provinces had the least urbanization level in 2016.
- The number of cities in Iran reached 1242 in 2016, meaning that in the last 60 years, the number of cities has more than tripled. The provinces of Isfahan, Fars and Khuzestan had the highest number, and Qom, Alborz and Kohgiluyeh-va-Boyerahmad provinces, had the lowest number of urban areas.
- The percentage distribution of cities categorized by population shows that the cities with population of less than 5 thousand people are still at the top, and in total, more than 50 percent of the Iran cities have less than 10 thousand populations.
- In 2016, 8 cities had more than one million inhabitants. Nearly 21 million or about a third of urban population lived in the cities. In the last 60 years, the cities of Karaj, Mashhad, Qom and Ahvaz have experienced the highest population growth respectively.
- It is expected that internal migration will continue to remain at least at the current level and it is likely that with improvement of economic growth, internal migration increases.
- It is also expected that the growth of the country's urban population would be slightly higher than natural growth, which could exacerbate issues such as the growth of living in urban fringe areas and other environmental issues, especially in large cities.
- Focusing on local and regional development of all geographical areas of the country, along with decentralization, could effectively contribute to preventing and curing many urban-environmental issues, and it can lead to more balanced spatial distribution of the population across the country.
- Efforts to improve the socioeconomic status of rural population and improvement of the structural facilities in rural areas can help to sustain the rural population and prevent the depopulation of villages and rural areas.

Introduction

Human migration is viewed as a major social issue of modern history in the context of the general definition of the movement by people from one place to another with the intention of settling in a new location. All the statistics and evidence suggest that migration is becoming an inclusive and influential phenomenon in the world (Sharpe, 2001: 1) and perhaps this is the reason why some theorists (Castles and Miller, 1998) have called the current period as the "Age of Migration". In addition, according to available evidence and documentation, temporary and permanent migrations are becoming globalized, accelerated, diversified and feminized. The geopolitical mobility of humans is considered to be the most important part of life in human history, humans are migratory and migration is a continuous chain throughout history (Parillo, 2008).

The main questions raised by demographers are regarding the nature of the change in population. Migration along with fertility and mortality are three components that result in population dynamics. Today, the importance of migration has become clear in facilitating human development and formation of residential patterns. A growing literature has also been created in comparison with various aspects of mobility (Bell et al., 2014).

Internal migration affects the distribution and growth of the population in the origins and destinations. In addition, migration also makes significant changes in the age and sex structure of the population. Moreover, by influencing mortality, fertility and marriage, migration can have an indirect impact on population dynamics. However, the size and type of migration are very important in this regard. In family migrations, for example, the impact on populations' age and sex structure and composition in both migration origins and destinations is less than youth migrations (Mahmoudian, 2006)

Migration also causes economic, social and cultural changes. Inter-regional migration and its evolution and pattern will somehow shape the changes in the economic structure of societies, due to the fact that these migrations are related to economic development and growth (Zelinsky, 1971). Migration is also an important factor in context of social change. (Parrado and Flippen, 2005). From a social perspective, migration can strengthen pluralism in the target community; moreover, it can be a way for transferring norms, values and cultural patterns. The transfer of capital and the influence on economic production capability (through changes in the activity

and employment rates) are examples of economic consequences of migration (Zanjani, 2001: 170). Moreover, internal migration plays the role of a moderator in the economy (Yue, 2008: 1).

Migration is one of the most important ways for people to directly improve their lives. Individuals migrate for different reasons: to leave a deprived area, to find better jobs, or simply for the joy of traveling. Villagers are attracted to the glowing lights of city, and on the opposite side, city dwellers seek shelter in the outskirts of the city to escape all the lights. Retirees move to areas with pleasant weather and plenty of recreational opportunities. Due to the fact that the mass migratory movements often create important changes in the political power and economic prosperity of areas, where migrants leave or enter those areas, migration is important for government policymakers. From this perspective, studying migrant motives and their decision-making mechanism is also an important issue for study (DaVanzo, 1981: 90).

Research Questions and Objectives

Considering the above introduction, the present research is trying to answer the following questions:

- What changes have been made to the rate, trend and patterns of Iran's internal migrations during 1976-2016?
- What are the main factors affecting the internal migration?
- What are the demographic, economic and social implications of the internal migration?
- What will be the future prospects of the internal migration?
- What are the policy requirements for internal migration in Iran?

The objectives of this research are:

- Measuring migration-related indicators by using the latest available data
- Analysis of migration status and patterns with respect to time, place, and age-sex differences
- Identifying the important determinants of the internal migration
- Identifying the different implications of the internal migration
- Determining future orientation of the internal migration according to previous trends
- Providing solutions for proper and logical response to internal migration

Theoretical Considerations

Given the fact that migration involves different dimensions of human life and there are different causes for it, there are many theoretical approaches aimed at explaining, from different angles, that why people are migrating. Categorizing these ideas can also be done with respect to various factors. Migration theories can be divided into functional and transitional categories. The basis of functional theories is pull, push and balance, while transitional theories describe the patterns and processes of migration (de Haas, 2010). For instance, the theory of neoclassical economics is categorized as a functionalist theory and Zelinsky Model of Migration Transition is categorized as a transitional theory. The level of analysis is another factor in categorization of migration theories. These theories have been grouped according to three different levels: macro-, meso-, and micro-level. For example, the

theory of neoclassical economics is at the macro level, the migrant network theory is at the meso- level and the expected-value theory is at the micro level.

Neoclassical Economics Theory

The neoclassical theory emphasizes on the tendency of the rational market to maintain balance on the basis of the rational behavior of individuals and families. The basis of this theory is the rational economic considerations associated with mainly economic costs and benefits which is sometimes associated with the psychological costs and benefits of (Kurekova, 2010). These considerations are based on the wage differential in the market. Its root is in description of migration in the process of development which appeared in Hicks (1932), Lewis (1954) and Harris and Todaro (1970) research. Migration results from the geographical difference in the supply and demand of workforce and also from wage differentials between the countries with workforce and the countries with capital (i.e. sending and receiving countries). Therefore, in full employment, there is a linear relationship between income differences and migration flows. In the extended model, migration is subject to expected earnings (instead of real income) and the key variable of revenue is weighted with the probability of employment. Other corrections and empirical tests show that the above linear relationship may not exist, and the country's income difference and income level are the key factors. Similarly, the ability to emigrate is related to cost, so emigration is impossible for poor people and countries, thus the migration pattern will be arch-shaped (Kurekova, 2010). The micro level of this model is based on individual selection and theory of human capital of migration (Sjaastad, 1962; Todaro, 1969). At this level, social and demographic characteristics of people such as age, sex, education, skills, marital status and job status are considered as determinants of migration. For example, migration probability decreases with age and increases with education levels. The purpose of migration is to maximize individual resources and profits. From Sjaastad point of view, human capital is influential as an important factor in migrants' decision-making process for finding a job with a decent wage in the destination.

Pull and Push Factors

Pull and push factors are also considered in economic theories, because they have a functional approach, and are related to origin/destination balancing and the rational behavior of migrants. According to this theory, all people are potential migrants and they will migrate if they consider the benefits of migration more than its cost, and if

the living and labor market conditions in other places are better than their current location. Therefore, migration occurs when pull factors are more powerful than push ones.

Ernest Georges Ravenstein's Human Migration Law can be considered as the result of the interaction of pull and push factors. It was the first explanation of migration law which was published in his two articles (Ravenstein,1885,1889), in which Ravenstein argued, for the first time, that migration is not accidental, and is governed by a special law. His theory is presented by the 10 principles: migration and distance; step-by-step migration; flow and counter-migration; urban/rural difference; differences in migration of men and women; the causes of migration; the impact of industry, trade and communications on migration; migration and age; migration and population growth and direction of migration, etc. For example, the majority of migrants move a short distance, every migration flow generates a return or counter-migration, migrants who move longer distances tend to choose major sources of economic activity, urban residents are often less migratory than inhabitants of rural areas, and females are more migratory than males in short-distance moves.

Some principles of Ravenstein's theory attracted more attention. Zipf (1946) was a scholar who tried to explain the migration process between the two places by means of the principle of least effort. He built on Ravenstein's laws pertaining to distance and population size to formulate the gravity model of social interaction, where migration is expected to increase with an increase in the size of the population at the origin and destination and decline as the distance between the two locales increases. Stouffer (1940), with emphasis on intervening opportunities, paved the way for examining many social opportunities (in addition to economic ones) to migration analysis. Stouffer found that the explanation of migration, in relation to the number of opportunities available at a given distance, is more practical than the overall scheme of distance.

The rewriting of Roverstein's rules by Everet Lee (1966) is also important in recognizing migration time and place patterns. He categorized the factors that influence migration decisions and its process into four: 1. factors that are related to the origin, 2. factors that are related to the destination, 3. the obstacles between the origin and destination, and 4. personal characteristics of the individuals. In each region, there are several factors that attract people (with a positive sign), other factors act as repulsive (with a negative sign), and there are other factors to which people are indifferent and neutral (shown with a zero).

Dual Economy theory

Lewis (1979) uses the dual economy concept of classical economists to answer how economic growth is improving. This economy consists of two parts, the new capitalist and traditional livelihood. The capital-intensive sector possesses the low-cost traditional work force due to the fact that the traditional labor intensive sector cannot use its extra work force. As the result, migration will be intensified from the traditional sector (usually rural areas) to the capitalist sector (usually the city). The unlimited supply of work force from the traditional sector ensures the high growth of the capitalist economy. Because of the general deformation of the economy, with decline in the unlimited supply of labor, capitalist profits will be stable at a low level and when the economy comes out of the dual state it will become homogeneous. Migration also diminishes in such a situation.

The concept of dual labor market by Piore (1979) implies that the workforce migration to developed countries is due to the inherent demand of the economies of these countries for recruitment of the labor force. In the dual labor market theory, the dual economy consisting of work-centered (section one) and capital/expertise-based (section two) creates a dual labor market. Because of the difference in wages between different occupations and the motivation of people to improve their career levels in section two, those from section one constantly try to enter the section two by increasing their education and skills and upgrade themselves to higher hierarchies. As the result, the economy needs to provide the necessary workforce for the section one, which lacks a specific hierarchy, and there is no difference of income between people. The migrants, due to lower education and expertise, are normally hired in section one, and generally do manual and lower level jobs.

The New Economics of Migration theory

Proponents of this theory have criticized the theory of neoclassical economics (micro) on the basis that migration is made individually. They believe that migration decisions are not taken solely by individual activists, but also by larger units such as families or households. In other words, social choice takes the place of individual choice. In this perspective, migration is considered as a household economic strategy. An adopted strategy by families for elimination of income risks and to overcome local market constraints (Stark and Bloom, 1985). Since the families' purpose is to improve the economic situation and not to change the location, so only a minority of community members will emigrate.

Household Strategies Approach

Another new theory in the framework of the new economics migration theory is the Household Strategies Approach which is proposed by Chant and Radcliffe (1992). In this approach, the decision to migrate is seen as part of the household's life strategy instead of individual action. In the process of strategy making; it is possible that the actions, motives and preferences of the family members are convergent or in strife (White, 2011).

The Access Strategy Hypothesis was first proposed by Uteng, pointing out that access in developing countries is a gendered phenomenon. It includes access to resources, such as information, rights, land, money and property, education and training, skills, social and political participation, as well as the expression of opinions. Migration and spatial mobility are women's strategies in order to gain social benefits. When women are confronted with restrictions at the place of origin or residence, migration is one of the ways that women can improve their social conditions and status (Uteng, 2011).

Relative Deprivation Theory of Migration

The relative deprivation theory of migration builds upon the new economics of the migration framework (Stark & Taylor, 1989, 1991). Proponents of the relative deprivation approach argue that individuals or households migrate not only to maximize absolute income, but also to improve their position compared to other relevant reference groups. Relative deprivation can exist both with migration and without migration. If migration can increase the income differential of migrants and non-migrants by improving the status of migrants, and consequently increase relative deprivation, it will result in the growth of migration. Therefore, migration occurs when relative deprivation associated to migration is more than relative deprivation in the absence of migration.

Network theory

Migrant networks are a set of interpersonal relationships linking migrants to their predecessors and non-migrants at origin through their kinship, friendship and community of origin (Massey et al., 1993:448). Migrant networks increase migration by reducing the costs and risks associated with migration and increasing its benefits. Network linkages in the form of social capital, facilitate migrants' access to destination facilities. As long as the number of migrants has risen to a

significant extent (sensitive threshold), there will be a reduction in the costs and risks of subsequent migration. Initial or groundbreaking migrations (due to lack of familiarity) are associated with a lot of costs. But subsequent migrations (due to familiarity with destination) gradually become less costly. Reducing migration hazards (such as failing to get a good job) is done in the same way.

Dependency theory

The main component of the theory of dependency is the unequal exchange between countries. This theory was developed mainly by Singer (1949) and followed by a neo-Marxist-historical approach. The main emphasis of this model is on rural-urban migration. This migration is a conflict-based social process that produces and strengthens rural-urban inequality. This theory is mainly shaped for criticizing and responding to balance models for explaining migration in developing countries.

The main hypothesis of this theory stress on the unequal relationship between the industrial centers (the developed world) and the peripheral agricultural centers (developing countries). Since the distribution of power among nations is unequal, capitalist development increases inequality and strengthens the categorized economic order. Thus, developing countries are captured in a disadvantaged position in an unequal geographic-political structure. A structure that doubles their poverty (Fassmann and Musil, 2013). The rural-urban migration and migration from developing countries to developed ones are also the results of the center's dominance on the periphery. Work force migration from the periphery (poor countries) to the center (rich countries) is considered as exploitation, because different discriminations in the destination leads to the alienation of migrants (Wood, 1982).

Value Expectancy Theory

In this migration theory, the actor selects his residence from a set of alternative locations that maximizes the sum of the benefits in different dimensions (DeJong and Gardner, 1981). Certain factors affect this migration expected value. These factors are classified into four categories of individual and family characteristics, social and cultural norms, personality factors such as risk or adaptability, and the opportunity structure (Haug, 2008:588). DeJong (2000) believes that valued expectations and objectives, determines the migration motivation. The decision of families for migration of their members or the entire family is made with the expectation of reaching the valued goals. In this approach, the previous intentions of migrants are the primary determinants of the decision that leads to real migrations.

The expectations along with family standards for migration show the intention for migration and are respectively the determinants of the migration action. He proposes to use the concepts of expectations/values, family migration norms, gender roles, residence satisfaction, migration networks, and behavioral facilitators for the study of migration decision-making.

Transitional Theories

The Hypothesis of the Mobility Transition by Wilbur Zelinsky (1971) is the most important migration theory in the field of migration. Simultaneously with the efforts of demographers to explain the pattern of demographic changes in the path of modernization, Zelinsky attempted to explain patterns of change of migration in direction of demographic transition and modernization and show that modernization is generally associated with changes in the specific population movement patterns. He considers his hypothesis the Mobility Transition, and the notion of mobility in its general sense, is considered as physical/place mobility, as well as social mobility.

In this theory, with growing development and the initiation of demographic transition, the internal migration (mainly rural-urban) increases and then diminishes. Also to some extent international migration goes through the same process. But circulations are initially low and then gradually increase. These trends are linear over time. In Zelinsky's theory, migration transition first occurs for internal migration, then for international migration for skilled people, and then for the migration of unskilled people.

Skeldon (1997) considers the government formation to be effective in mobility transition. In fact, he introduces the structure factor to migration, which was not considered by Zelinsky. Skeldon distinguished the following five 'development tiers': the (1) old and (2) new core countries (e.g., Western Europe, North America, Japan) characterized by immigration and internal decentralization; (3) the expanding core (e.g., eastern China, South Africa, eastern Europe), where we find both immigration and emigration and internal centralization (i.e., urbanization and rural-to-urban migration); (4) the labor frontier (e.g., Morocco, Egypt, Turkey, Mexico, the Philippines and, until recently, Spain and Portugal), which are dominated by emigration and internal centralization; and the so-called (5) "resource niche" (e.g., many sub-Saharan African countries, parts of central Asia and Latin America), with variable, often weaker forms of migration (de haas, 2010).

The central tiers receive migrants more than the workforce areas, because of their

more interaction, development, and better workforce. Such a situation is similar to the Migration Systems Theory of Mabogunje (1970). He defined a migration system as a set of places linked by flows and counter-flows of people, goods, services, and information, which tend to facilitate further exchange, including migration, between the places. This migration is strengthened through the use of land, labor, the exploitation of raw materials, the creation of import and export communications, the strengthening of cultural and ideological links between the countries of the center and the periphery, and the creation of world cities. Future migration can be strengthened through cumulative causality. Such a situation indicates the geographical clustering and structure of migration and distances itself from the random position of the pull and push flow (Massey et al., 1993).

Skeldon's tiers system appears to be partly based on the use of center-periphery (dependency theory) and the World Systems Theory that stem from neo-Marxist and structuralist theory (de haas, 2010). The Wallerstein Modern World-System Theory (1974, 1980) relies on the interdependence of developed and less developed regions. He distinguishes between countries located in the core, semi-periphery, periphery, and external regions. The integration of peripheries through the process of capitalism global expansion is accompanied by an increase in migration to the central region countries. Increase in center is related to being on the sidelines, poverty and structural dependence of peripheral areas. The main difference with the transition theory is that in transition theory, the ultimate development of all countries have a high probability. However, the migration status in the post-transition period is unclear. Globalization has changed the situation in different ways. Some countries (in East Asia and Southeast Asia) have experienced a rapid economic growth, and some (in sub-Saharan Africa) are still lagging behind (de hass, 2010).

The Migration Hump hypothesis, presented by Martin and Taylor (1996), points out to a short-term growth of migration arising from commercial reforms. The impact of investing on job creation may take a long time. Direct foreign investment can also create this upsurge but this increase cannot be certain (de haas, 2010).

The Status of internal migration in Iran

Migrants moved from 1976 to 2016

Between 1976 and 2016, about 5.7 million people migrated within Iran's borders. This figure was approximately equal to 11.6% of the population in 1986. In this period, due to the massive immigration of Afghan people to Iran, a significant percentage

(12.2%) of migrants' previous residence is "abroad." As it is seen in Table 1, the impact of immigration (from abroad) on population of the country has been reduced in subsequent censuses. In the census of 1996, the country's migrant population proportion has increased to 14.5%. In the 2006 census, this trend continues to grow to 17.2%. Due to the fact that the census period has changed from ten years to five years, in the census of 2011, the percentage of the total internal migrant population has decreased to 7.4% (Mahmoudian and Ghasemi-Ardahaee, 2013). In the recent census, the trend of the proportion of the total number of migrants to the population has continued to decline to reach 5.3%. During 2011-2016, in-migrants who entered the Iranian borders from outside the country increased slightly, compared to the 2006-2011 period. Another noteworthy figure in the table below is the total undeclared migrants, which had a dramatic drop in comparison with the previous four censuses. During this period, the total number of undeclared migrants is about 24 thousand; while the same figure was about 400 thousand people in the census of 2006 to 2011. This can improve the accuracy of internal migration analysis in Iran.

Distribution of migrants by type of migration

Internal migration can be grouped in four types of rural-rural, rural-urban, urban-urban and urban-rural. Table 2 shows the share of each of these types of migration in the census from 1986 to 2016. As it appears, the share of urban-urban migration from the census 1986 to 2016 has risen from 40% to 68%. Therefore, it appears that the dominant pattern of internal migration in Iran is the urban-urban migration, and the reverse migration, i.e. urban-rural migration, is declining. The share of rural-urban migration is also low, and the increase in the urban population of the country cannot be attributed to this type of migration. Moreover, other reasons such as the transformation of rural areas into towns or the integration of rural areas into cities can be considered as the main reasons for increasing the urban population of the country.

Table 1. Distribution of migrants by previous place of residence, 1976-2016

Year	Total number of migrants	Shahrestan[1] of census		Other Shahrestans in the provinces		Shahrestans of other provinces		Abroad	Undeclared
		Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**		
1976-1986	5744687	270596	1283639	957944	441589	1362417	500517	699978	228007
1986-1996	8718770	1229360	1959393	1849384	457807	2524121	415800	238331	44574
1996-2006	12148148	1638662	2259380	2549939	561750	4201075	572966	260495	103881
2006-2011	5534666	1162508	802842	995037	112667	1857041	108450	102519	393602
2011-2016	4300988	347617	437987	1117640	205186	1883524	174479	110829	23726

Source: Mahmoudian and Ghasemi-Ardahaee 2013 and the results of the 2016 census

Table 2. Percentage of internal migrants by type of migration, 1986-2016

Year	Type of migration			
	Urban-urban	**Urban-rural**	**Rural-rural**	**Rural-urban**
1976-1986	40	14	14	32
1986-1996	48	18	11	22
1996-2006	54	17	9	20
2006-2011	65	15	7	13
2011-2016	68	12	5	15

Source: Mahmoudian and Ghasemi-Ardahaee 2013 and the results of the 2016 census

Inter-provincial migration flows

Table 3 presents the inter-provincial migration flows in 2006-2016. In the period from 2006 to 2011, the total number of 1,965,491 people left their provinces in the country and entered other provinces. In other words, the total size of inter-provincial departures during this period is equal to the below figure. In the recent period, from 2011 to 2016, the size of inter-provincial migrations reached above 2 million. This issue represents the importance of the migration in Iran, which has been expanding. In the mentioned period, the provinces of Tehran, Alborz and Isfahan have the highest number of in-migrants. In contrast, the provinces of Ilam, Kohgiluyeh-va-Boyerahmad and Chaharmahal-va-Bakhtiari received the lowest number of in-migrants. Therefore, Tehran province is still the top destination in Iran's internal migration flows.

Table 4 shows the in-migration and out-migration rates, as well as the net migration rates for all provinces of the country in the years 2006-2011 and 2011-2016. The

[1] .Shahrestan is a part of province consisting some rural and urban areas

out-migration and in-migration rates were calculated, respectively, by dividing the number of out-migrants and in-migrants to multiplication of the mid-year population to number 5. Since the durations studied were 5-year, the average population is multiplied by 5. It is also noteworthy that the out-migration and in-migration rates are calculated per 1000 population. For example, in East Azarbaijan province in 2011-2016, in every 1,000 people, 3.56 individuals have left the province's population and 2.56 individuals have entered. Therefore, the migration rate of this province is equal to negative 1, this means East Azarbaijan Province has lost 1 person in its population due to inter-provincial migration during 2011-2016 per 1000 population.

Based on the findings of table and the net rate of migration during 2011-2016, the most receiving provinces (the top destinations) of the country were Semnan, Alborz, Yazd, Qom and Tehran in descending order. During the same period, the top sending provinces (origins) in the country were Lorestan, Chaharmahal-va-Bakhtiari, Ilam, Hamedan and Kermanshah.

In Figures 1 and 2, the net migration rate of the country provinces for two periods of 2006 to 2011 and 2011 to 2016 are shown. As presented in Figure 1, in this period, 13 provinces had a positive net migration rate. The provinces of Alborz, Semnan and Bushehr have the highest net migration and on the other hand the provinces of Lorestan, Kermanshah, Chaharmahal-va-Bakhtiari, Sistan-va-Baluchestan, Khuzestan, Ardebil and Hamadan have the most negative net migration.

Table 3. Inter-provincial migration status, 2006-2016

Province	Inter-provincial migration			
	to 2011 2006		to 2016 2011	
	Out-migrants	In-migrants	Out-migrants	In-migrants
Total	1965491	1965491	2062954	2062954
East Azerbaijan	71728	64330	67968	48908
West Azarbaijan	51732	37851	48309	34809
Ardebil	39827	26232	44625	24384
Esfahan	92656	139368	103140	127903
Ilam	18513	15858	23066	11795
Alborz	97799	190341	103437	207669
Bushehr	27405	51612	30885	43705
Tehran	400821	379158	350632	516922
Chaharmahal-va-Bakhtiari	31551	14965	38844	17577
South Khorasan	17499	31201	31260	28787
Khorasan Razavi	115021	108827	107786	112027
North Khorasan	30238	29836	37011	21548
Khuzestan	114493	60521	135491	53632
Zanjan	26880	30277	30493	23960
Semnan	23256	41506	22622	53268
Sistan-va-Baluchestan	60414	27000	59627	27301
Fars	98589	73170	92934	72745
Qazvin	37998	31598	34918	36010
Qom	40930	45644	41608	63861
Kurdistan	46954	36793	49618	37789
Kerman	43935	37792	48217	26477
Kermanshah	77131	39020	77553	42625
Kohgiluyeh-va-Boyerahmad	17193	12940	26123	13930
Golestan	37179	51017	51848	33699
Guilan	56106	85924	61555	74891
Lorestan	60735	24991	91472	27350
Mazandaran	53660	78947	59063	69714
Markazi	43538	51333	50126	44570
Hormozgan	43427	51437	47552	65599
Hamedan	63724	45512	71636	39218
Yazd	24559	50490	23535	60281

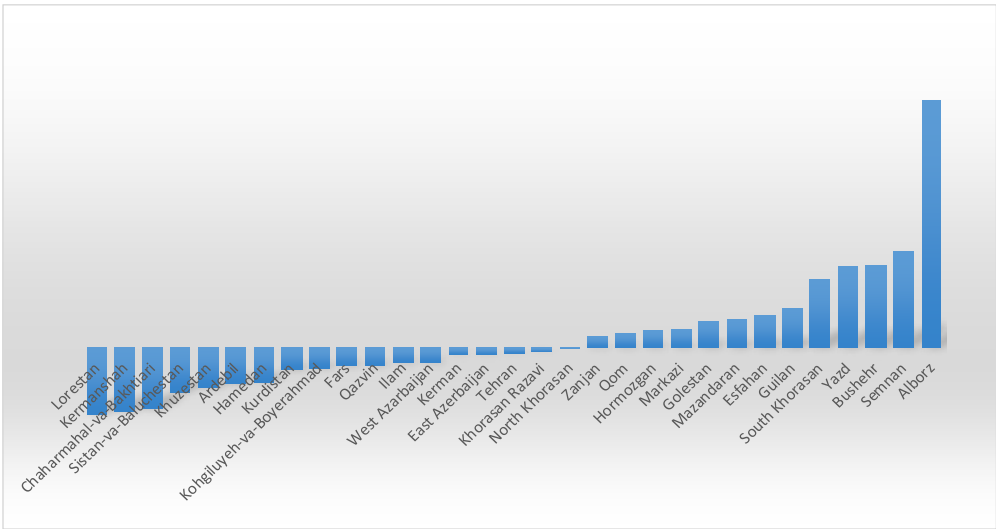
Source: 2011 and 2016 censuses results

Table 4. Rates of out-migrantion, in-migrantion and net migration in different provinces of the country, 2006-2016

Province	Out-migrantion rate		In-migration rate		Net migration rate	
	2006-2011	**2011-2016**	**2006-2011**	**2011-2016**	**2006-2011**	**2011-2016**
East Azerbaijan	3.92	3.56	3.51	2.56	0.40-	1.00-
West Azarbaijan	3.48	3.05	2.54	2.19	0.93-	0.85-
Ardebil	6.43	7.09	4.24	3.87	2.20-	3.21-
Esfahan	3.93	4.13	5.91	5.12	1.98	0.99
Ilam	6.71	8.11	5.75	4.15	0.96-	3.96-
Alborz	16.22	8.07	31.56	16.21	15.34	8.14
Bushehr	5.71	5.62	10.76	7.96	5.05	2.33
Tehran	6.26	5.51	5.92	8.12	0.34-	2.61
Chaharmahal-va-Bakhtiari	7.20	8.43	3.41	3.81	3.78-	4.62-
South Khorasan	5.39	8.74	9.61	8.04	4.22	0.69-
Khorasan Razavi	3.97	3.47	3.76	3.61	0.21-	0.14
North Khorasan	7.20	8.55	7.11	4.98	0.10-	3.57-
Khuzestan	5.20	5.86	2.75	2.32	2.45-	3.54-
Zanjan	5.43	5.88	6.12	4.62	0.69-	1.26-
Semnan	7.62	6.79	13.60	15.98	5.98	9.19
Sistan-va-Baluchestan	4.89	4.49	2.19	2.06	2.71-	2.44-
Fars	4.41	3.93	3.28	3.08	1.14-	0.85-
Qazvin	6.48	5.64	5.39	5.82	1.09-	0.18
Qom	7.45	6.81	8.30	10.45	0.86	3.64
Kurdistan	6.40	6.41	5.02	4.88	1.39-	1.53-
Kerman	3.14	3.16	2.70	1.74	0.44-	1.42-
Kermanshah	8.07	7.96	4.08	4.37	3.99-	3.58-
Kohgiluyeh-va-Boyerahmad	5.32	7.62	4.00	4.06	1.32-	3.56-
Golestan	4.38	5.69	6.01	3.70	1.63	1.99-
Guilan	4.59	4.91	7.03	5.98	2.44	1.06
Lorestan	7.00	10.41	2.88	3.11	4.12-	7.30-
Mazandaran	3.58	3.72	5.27	4.39	1.69	0.67
Markazi	6.30	7.05	7.43	6.27	1.13	0.78-
Hormozgan	5.83	5.67	6.90	7.82	1.07	2.15
Hamedan	7.36	8.20	5.26	4.49	2.10-	3.71-
Yazd	4.76	4.25	9.78	10.90	5.02	6.64

Source: 2011 and 2016 censuses results

Figure 1. Provincial distribution of net migration, 2006-2011



Source: 2011 census

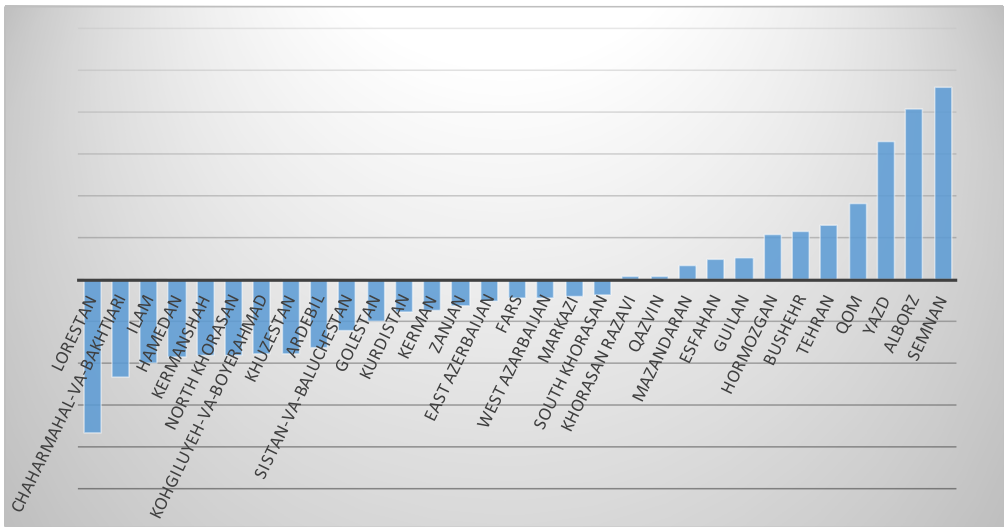
The net migration rate for the provinces of the country during 2011-2016 is presented in figure 2. In general, we see a decline in the number of positive net migration provinces compared to the 2006-2011 period. The number of provinces with positive net migration dropped from 13 to 10 in two periods from 2006 to 2016. Semnan, Alborz, Yazd, Qom, Tehran, Bushehr, Hormozgan, Guilan, Isfahan and Mazandaran have the highest net migration figures in descending order. Tehran, which had a negative migration rate of 0.34 during 2006-2011, in the current period, has experienced a positive migration rate. In the last 5 years, the provinces of Lorestan, Chaharmahal-va-Bakhtiari, Ilam, Hamedan, Kermanshah, North Khorasan, Kohgiluyeh-va-Boyerahmad, Khuzestan, Ardebil, and Sistan-va-Baluchestan had the highest negative migration rate.

Inter-provincial migration in the most sending and receiving provinces

As mentioned above, the provinces of Semnan, Alborz, Yazd, Qom and Tehran have the most positive net migration rates and on the other hand provinces of Lorestan,

Chaharmahal-va-Bakhtiari, Ilam, Hamedan and Kermanshah have the most negative net migration rates in the 5-year period from 2006 to 2011, among the provinces of the country. The migration status of each of the aforementioned provinces will be further explained in order to show migration exchanges of these provinces with other provinces of the country, the results of which are in tables 5 to 14 and reported in figures 3 to 12. In other words, it attempts to identify the path of the migrants entering and leaving these provinces in the country. Semnan has the most migration interactions with the provinces of Tehran and Khorasan Razavi, with 33% of in-migrants entering this province belonging to Tehran and more than 13% of migrants from Khorasan Razavi. In contrast, more than 34 and 15 percent of out-migrants who left Semnan province immigrated to the Tehran and Khorasan Razavi, respectively.

Figure 2. Provincial distribution of net migration, 2011-2016



Source: 2016 census

The findings also show that 43% of in-migrants into the province of Alborz are from Tehran and in the next place is Kermanshah province, which sends about 7% of migrants entering the Alborz province. More than 49% of migrants who left the province of Alborz entered Tehran and 7% of migrants also entered Guilan province. Therefore, from 2011 to 2016, the largest migration from Alborz province was to Tehran. Yazd, as a destination province, experienced the highest migration exchange with Fars, Kerman and Tehran provinces. More than 14 and 13 percent of in-migrants who entered the province of Yazd, originated from Fars and Kerman provinces. Probably, distance and geographical dimension played an important role in these migration flows. In addition, the results indicate that 19 and 12 percent of

Yazd migrants migrated to the Tehran and Fars provinces, respectively.

Analysis of Qom province migration flows indicates that this province has the most migration exchange with Tehran, Khuzestan and Isfahan provinces. Approximately 20 and 9 percent of in-migrants entered the Qom province from the two provinces of Tehran and Khuzestan. In contrast, more than 29 and 9 percent of migrants who left Qom province, migrated to two provinces of Tehran and Esfahan. Thus, Tehran province had the most influence and role in the migration flows of Qom province during 2011-2016. The findings indicate that about 10 and 8 percent of migrants entered the province of Tehran were from two Alborz and Lorestan provinces, respectively. On the other hand, most migrants from the province of Tehran migrated to the provinces of Alborz (25 percent) and Guilan (8 percent). Regarding the number of migrants entering Tehran, there is no significant difference between the provinces of the country, but in contrast, regarding the migration flow from Tehran, it is observed that the province of Alborz plays an important role in comparison with other provinces of the country, in attracting migrants from Tehran province.

Lorestan province with the most negative migration rate has the highest migration exchange with Khuzestan, Tehran and Alborz provinces. More than 24% and about 23% of migrants entering this province were migrants from Khuzestan and Tehran provinces, and 45% of the migrants who left the Lorestan to Tehran and 10% of them have migrated to Alborz. Therefore, the province of Tehran has a very significant impact on the migration of Lorestan province.

The findings show that 49 and more than 19 percent of migrants entering Chaharmahal-va-Bakhtiari province were migrants from Isfahan and Khuzestan provinces respectively. Moreover, more than 52 percent of leaving migrants of the province have migrated to Isfahan province. Therefore, Isfahan province plays the most role in the migration flows of Chaharmahal-va-Bakhtiari province. Approximately 20 and 18 percent of migrants entered the province of Ilam are from Khuzestan and Kermanshah provinces. In contrast, about 37 and 13 percent of out-migrants who left the province of Ilam, migrated to the provinces of Tehran and Kermanshah respectively. Therefore, Tehran province is also very important in Ilam's Migration flow. Hamedan province, having the highest migration exchanges with the provinces of Tehran, Alborz and Kurdistan, has been the top out-migration province. About 27 and 12 percent of migrants entered the province were migrants from Tehran and Kurdistan, and most migrants who left the province have entered the provinces of Tehran (47%) and Alborz (about 14%). Kermanshah province, like

Hamedan province, has had most of its migration exchanges with the provinces of Tehran, Kurdistan and Alborz, approximately 19 and 14 percent of migrants entering this province were migrants from Tehran and Kurdistan provinces. On the other hand, about 37 percent of Kermanshah migrants, migrated to Tehran province and Alborz province in the second place, with 18 percent. Therefore, Tehran has had the most influence and role in the migration flow of Kermanshah province.

Table 5. Inter-provincial in-migrants and out-migrants of province of Semnan, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	320	0.6	168	0.7
Western Azerbaijan	540	1.0	167	0.7
Ardebil	533	1.0	87	0.4
Esfahan	2151	4.0	475	2.1
Alborz	2076	3.9	831	3.7
Ilam	612	1.1	28	0.1
Bushehr	506	0.9	75	0.3
Tehran	17556	33.0	7724	34.1
Chaharmahal-va-Bakhtiari	467	0.9	45	0.2
South Khorasan	836	1.6	213	0.9
Khorasan Razavi	7076	13.3	3402	15.0
North Khorasan	1457	2.7	666	2.9
Khuzestan	869	1.6	129	0.6
Zanjan	350	0.7	121	0.5
Sistan-va-Baluchestan	1460	2.7	213	0.9
Fars	961	1.8	232	1.0
Qazvin	486	0.9	174	0.8
Qom	904	1.7	646	2.9
Kurdistan	283	0.5	199	0.9
Kerman	343	0.6	110	0.5
Kermanshah	552	1.0	123	0.5
Kohgiluyeh-va-Boyerahmad	165	0.3	25	0.1
Golestan	6170	11.6	2952	13.0
Guilan	542	1.0	371	1.6
Lorestan	571	1.1	127	0.6
Mazandaran	3696	6.9	2521	11.1
Markazi	760	1.4	195	0.9
Hormozgan	286	0.5	248	1.1
Hamedan	481	0.9	187	0.8
Yazd	259	0.5	168	0.7
Total	53268	100.0	22622	100.0

Source: 2016 censuses

Table 6. Inter-provincial migrants entered and left the province of Alborz, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	7445	3.6	2509	2.4
Western Azerbaijan	2613	1.3	1169	1.1
Ardebil	4251	2.0	1305	1.3
Esfahan	4685	2.3	2431	2.4
Alborz	1513	0.7	278	0.3
Ilam	762	0.4	311	0.3
Bushehr	89197	43.0	50885	49.2
Tehran	393	0.2	110	0.1
Chaharmahal-va-Bakhtiari	497	0.2	404	0.4
South Khorasan	4648	2.2	2540	2.5
Khorasan Razavi	1537	0.7	549	0.5
North Khorasan	11688	5.6	1814	1.8
Khuzestan	5270	2.5	3109	3.0
Zanjan	831	0.4	2076	2.0
Sistan-va-Baluchestan	1312	0.6	224	0.2
Fars	2158	1.0	980	0.9
Qazvin	6454	3.1	5233	5.1
Qom	2233	1.1	2189	2.1
Kurdistan	4921	2.4	1631	1.6
Kerman	1407	0.7	564	0.5
Kermanshah	14149	6.8	3276	3.2
Kohgiluyeh-va-Boyerahmad	332	0.2	72	0.1
Golestan	1789	0.9	820	0.8
Guilan	7824	3.8	7212	7.0
Lorestan	9167	4.4	1285	1.2
Mazandaran	4201	2.0	3761	3.6
Markazi	3746	1.8	1742	1.7
Hormozgan	1504	0.7	1005	1.0
Hamedan	9726	4.7	2706	2.6
Yazd	1416	0.7	1247	1.2
Total	207669	100.0	103437	100.0

Source: 2016 census

Table 7. Inter-provincial migrants entered and left the province of Yazd, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	244	0.4	187	0.8
Western Azerbaijan	252	0.4	89	0.4
Ardebil	301	0.5	97	0.4
Esfahan	7006	11.6	2809	11.9
Alborz	1247	2.1	1416	6.0
Ilam	153	0.3	37	0.2
Bushehr	400	0.7	195	0.8
Tehran	5778	9.6	4482	19.0
Chaharmahal-va-Bakhtiari	1809	3.0	324	1.4
South Khorasan	1965	3.3	516	2.2
Khorasan Razavi	3284	5.5	1952	8.3
North Khorasan	278	0.5	80	0.3
Khuzestan	5686	9.4	810	3.4
Zanjan	98	0.2	58	0.2
Sistan-va-Baluchestan	168	0.3	259	1.1
Fars	5686	9.4	490	2.1
Qazvin	8552	14.2	2858	12.1
Qom	158	0.3	109	0.5
Kurdistan	1076	1.8	1000	4.2
Kerman	200	0.3	91	0.4
Kermanshah	8046	13.4	2483	10.6
Kohgiluyeh-va-Boyerahmad	518	0.9	241	1.0
Golestan	922	1.5	222	0.9
Guilan	834	1.4	295	1.3
Lorestan	414	0.7	295	1.3
Mazandaran	1604	2.7	296	1.3
Markazi	461	0.8	363	1.5
Hormozgan	245	0.4	226	1.0
Hamedan	2570	4.3	1080	4.6
Yazd	326	0.5	175	0.7
Total	60281	100.0	23535	100.0

Source: 2016 census

Table 8. Inter-provincial migrants entered and left the province of Qom, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	2204	3.5	1048	2.5
Western Azerbaijan	876	1.4	560	1.3
Ardebil	483	0.8	262	0.6
Esfahan	5094	8.0	3934	9.5
Alborz	2189	3.4	2233	5.4
Ilam	554	0.9	196	0.5
Bushehr	718	1.1	484	1.2
Tehran	12437	19.5	12132	29.2
Chaharmahal-va-Bakhtiari	651	1.0	375	0.9
South Khorasan	454	0.7	194	0.5
Khorasan Razavi	2338	3.7	1809	4.3
North Khorasan	226	0.4	241	0.6
Khuzestan	5762	9.0	1199	2.9
Zanjan	2005	3.1	1033	2.5
Sistan-va-Baluchestan	646	1.0	904	2.2
Fars	664	1.0	338	0.8
Qazvin	2512	3.9	1094	2.6
Qom	924	1.4	687	1.7
Kurdistan	552	0.9	571	1.4
Kerman	1931	3.0	756	1.8
Kermanshah	1573	2.5	509	1.2
Kohgiluyeh-va-Boyerahmad	703	1.1	240	0.6
Golestan	744	1.2	534	1.3
Guilan	1324	2.1	1317	3.2
Lorestan	3976	6.2	834	2.0
Mazandaran	1897	3.0	1501	3.6
Markazi	4537	7.1	3521	8.5
Hormozgan	547	0.9	423	1.0
Hamedan	4340	6.8	1603	3.9
Yazd	1000	1.6	1076	2.6
Total	63861	100.0	41608	100.0

Source: 2016 census

Table 9. Inter-provincial migrants entered and left the province of Tehran, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	26624	5.15	14362	4.1
Western Azerbaijan	11903	2.30	6525	1.9
Ardebil	21585	4.18	9247	2.6
Esfahan	27629	5.34	18364	5.2
Alborz	50885	9.84	89197	25.4
Ilam	8501	1.64	1907	0.5
Bushehr	3452	0.67	2233	0.6
Tehran	2705	0.52	858	0.2
Chaharmahal-va-Bakhtiari	3934	0.76	1980	0.6
South Khorasan	33414	6.46	21241	6.1
Khorasan Razavi	11734	2.27	4487	1.3
North Khorasan	22645	4.38	5484	1.6
Khuzestan	10821	2.09	6290	1.8
Zanjan	7724	1.49	17556	5.0
Sistan-va-Baluchestan	5578	1.08	1865	0.5
Fars	12734	2.46	7018	2.0
Qazvin	11979	2.32	9206	2.6
Qom	12132	2.35	12437	3.5
Kurdistan	16422	3.18	8374	2.4
Kerman	6813	1.32	2663	0.8
Kermanshah	28521	5.52	8051	2.3
Kohgiluyeh-va-Boyerahmad	2124	0.41	596	0.2
Golestan	20258	3.92	7324	2.1
Guilan	24404	4.72	28531	8.1
Lorestan	41136	7.96	6237	1.8
Mazandaran	21867	4.23	23643	6.7
Markazi	23861	4.62	12644	3.6
Hormozgan	7407	1.43	6021	1.7
Hamedan	33648	6.51	10513	3.0
Yazd	4482	0.87	5778	1.6
Total	516922	100.0	350632	100.0

Source: 2016 census

Table 10. Inter-provincial migrants entered and left the province of Lorestan, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	140	0.5	193	0.2
Western Azerbaijan	179	0.7	263	0.3
Ardebil	46	0.2	214	0.2
Esfahan	2485	9.1	7024	7.7
Alborz	1285	4.7	9167	10.0
Ilam	800	2.9	1464	1.6
Bushehr	319	1.2	795	0.9
Tehran	6237	22.8	41136	45.0
Chaharmahal-va-Bakhtiari	262	1.0	158	0.2
South Khorasan	36	0.1	77	0.1
Khorasan Razavi	294	1.1	577	0.6
North Khorasan	15	0.1	62	0.1
Khuzestan	6687	24.4	7066	7.7
Zanjan	109	0.4	213	0.2
Sistan-va-Baluchestan	127	0.5	571	0.6
Fars	192	0.7	200	0.2
Qazvin	646	2.4	1156	1.3
Qom	139	0.5	589	0.6
Kurdistan	834	3.0	3976	4.3
Kerman	1075	3.9	1441	1.6
Kermanshah	185	0.7	339	0.4
Kohgiluyeh-va-Boyerahmad	1460	5.3	3464	3.8
Golestan	195	0.7	114	0.1
Guilan	82	0.3	139	0.2
Lorestan	162	0.6	364	0.4
Mazandaran	247	0.9	705	0.8
Markazi	1278	4.7	5018	5.5
Hormozgan	608	2.2	1304	1.4
Hamedan	930	3.4	2079	2.3
Yazd	296	1.1	1604	1.8
Total	27350	100.0	91472	100.0

Source: 2016 census

Table 11. Inter-provincial migrants entered and left the province of Chaharmahal-va-Bakhtiari, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	69	0.4	79	0.2
Western Azerbaijan	40	0.2	100	0.3
Ardebil	36	0.2	21	0.1
Esfahan	8617	49.0	20226	52.1
Alborz	110	0.6	393	1.0
Ilam	82	0.5	142	0.4
Bushehr	454	2.6	2263	5.8
Tehran	858	4.9	2705	7.0
Chaharmahal-va-Bakhtiari	23	0.1	110	0.3
South Khorasan	177	1.0	361	0.9
Khorasan Razavi	21	0.1	56	0.1
North Khorasan	3350	19.1	3302	8.5
Khuzestan	24	0.1	94	0.2
Zanjan	45	0.3	467	1.2
Sistan-va-Baluchestan	200	1.1	192	0.5
Fars	619	3.5	1461	3.8
Qazvin	41	0.2	97	0.2
Qom	375	2.1	651	1.7
Kurdistan	37	0.2	112	0.3
Kerman	186	1.1	366	0.9
Kermanshah	109	0.6	343	0.9
Kohgiluyeh-va-Boyerahmad	585	3.3	657	1.7
Golestan	70	0.4	93	0.2
Guilan	98	0.6	162	0.4
Lorestan	158	0.9	262	0.7
Mazandaran	142	0.8	305	0.8
Markazi	150	0.9	437	1.1
Hormozgan	491	2.8	1338	3.4
Hamedan	86	0.5	240	0.6
Yazd	324	1.8	1809	4.7
Total	17577	100.0	38844	0.2

Source: 2016 census

Table 12. Inter-provincial migrants entered and left the province of Ilam, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	180	1.5	126	0.5
Western Azerbaijan	201	1.7	127	0.6
Ardebil	47	0.4	49	0.2
Esfahan	502	4.3	741	3.2
Alborz	278	2.4	1513	6.6
Ilam	124	1.1	247	1.1
Bushehr	1907	16.2	8501	36.9
Tehran	142	1.2	82	0.4
Chaharmahal-va-Bakhtiari	13	0.1	21	0.1
South Khorasan	125	1.1	189	0.8
Khorasan Razavi	14	0.1	20	0.1
North Khorasan	2308	19.6	2518	10.9
Khuzestan	60	0.5	72	0.3
Zanjan	28	0.2	612	2.7
Sistan-va-Baluchestan	37	0.3	45	0.2
Fars	217	1.8	229	1.0
Qazvin	57	0.5	185	0.8
Qom	196	1.7	554	2.4
Kurdistan	505	4.3	790	3.4
Kerman	47	0.4	77	0.3
Kermanshah	2103	17.8	2915	12.6
Kohgiluyeh-va-Boyerahmad	91	0.8	36	0.2
Golestan	58	0.5	83	0.4
Guilan	115	1.0	161	0.7
Lorestan	1464	12.4	800	3.5
Mazandaran	117	1.0	345	1.5
Markazi	210	1.8	565	2.4
Hormozgan	231	2.0	723	3.1
Hamedan	381	3.2	587	2.5
Yazd	37	0.3	153	0.7
Total	11795	100.0	23066	100.0

Source: 2016 census

Table 13. Inter-provincial migrants entered and left the province of Hamedan, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	461	1.2	466	0.7
Western Azerbaijan	636	1.6	474	0.7
Ardebil	140	0.4	233	0.3
Esfahan	1460	3.7	1836	2.6
Alborz	2706	6.9	9726	13.6
Ilam	587	1.5	381	0.5
Bushehr	443	1.1	778	1.1
Tehran	10513	26.8	33648	47.0
Chaharmahal-va-Bakhtiari	240	0.6	86	0.1
South Khorasan	49	0.1	111	0.2
Khorasan Razavi	386	1.0	529	0.7
North Khorasan	57	0.1	90	0.1
Khuzestan	2276	5.8	1572	2.2
Zanjan	432	1.1	492	0.7
Sistan-va-Baluchestan	187	0.5	481	0.7
Fars	238	0.6	271	0.4
Qazvin	897	2.3	1275	1.8
Qom	525	1.3	735	1.0
Kurdistan	1603	4.1	4340	6.1
Kerman	4852	12.4	2980	4.2
Kermanshah	231	0.6	262	0.4
Kohgiluyeh-va-Boyerahmad	4091	10.4	3344	4.7
Golestan	187	0.5	225	0.3
Guilan	114	0.3	123	0.2
Lorestan	470	1.2	710	1.0
Mazandaran	2079	5.3	930	1.3
Markazi	491	1.3	853	1.2
Hormozgan	2050	5.2	3240	4.5
Hamedan	642	1.6	1119	1.6
Yazd	175	0.4	326	0.5
Total	39218	100.0	71636	100.0

Source: 2016 census

Table 14. Inter-provincial migrants entered and left the province of Kermanshah, 2011-2016

Province	In-migrants		Out-migrants	
	Number	**Percentages**	**Number**	**Percentages**
East Azarbaijan	800	1.9	529	0.7
Western Azerbaijan	1130	2.7	840	1.1
Ardebil	200	0.5	316	0.4
Esfahan	1701	4.0	2822	3.6
Alborz	3276	7.7	14149	18.2
Ilam	2915	6.8	2103	2.7
Bushehr	348	0.8	469	0.6
Tehran	8051	18.9	28521	36.8
Chaharmahal-va-Bakhtiari	343	0.8	109	0.1
South Khorasan	50	0.1	82	0.1
Khorasan Razavi	867	2.0	751	1.0
North Khorasan	47	0.1	70	0.1
Khuzestan	3380	7.9	1712	2.2
Zanjan	443	1.0	393	0.5
Sistan-va-Baluchestan	123	0.3	552	0.7
Fars	218	0.5	148	0.2
Qazvin	698	1.6	806	1.0
Qom	685	1.6	1750	2.3
Kurdistan	509	1.2	1573	2.0
Kerman	5841	13.7	7164	9.2
Kermanshah	295	0.7	192	0.2
Kohgiluyeh-va-Boyerahmad	156	0.4	78	0.1
Golestan	291	0.7	252	0.3
Guilan	426	1.0	734	0.9
Lorestan	3464	8.1	1460	1.9
Mazandaran	596	1.4	1042	1.3
Markazi	1313	3.1	2959	3.8
Hormozgan	874	2.1	1368	1.8
Hamedan	3344	7.8	4091	5.3
Yazd	241	0.6	518	0.7
Total	42625	100.0	77553	100.0

Source: 2016 census

Figure 3. The most important migration exchanges of Semnan province, the first destination for migrants of the country, 2011-2016

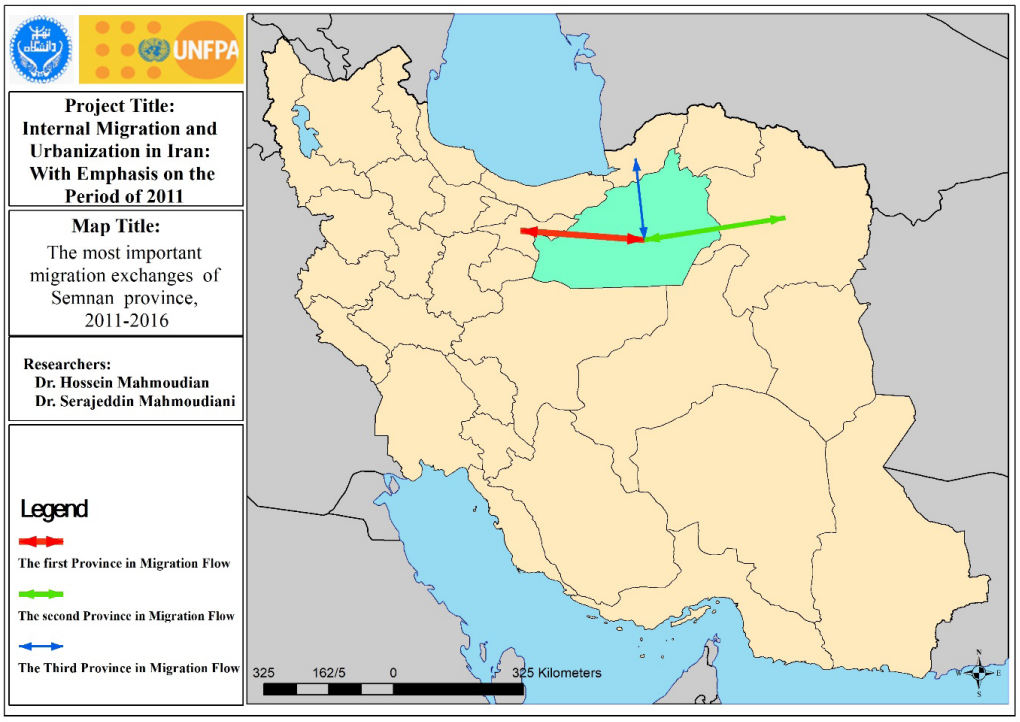


Figure 4. The most important migration exchanges of Alborz province, the second destination for migrants of the country, 2011-2016

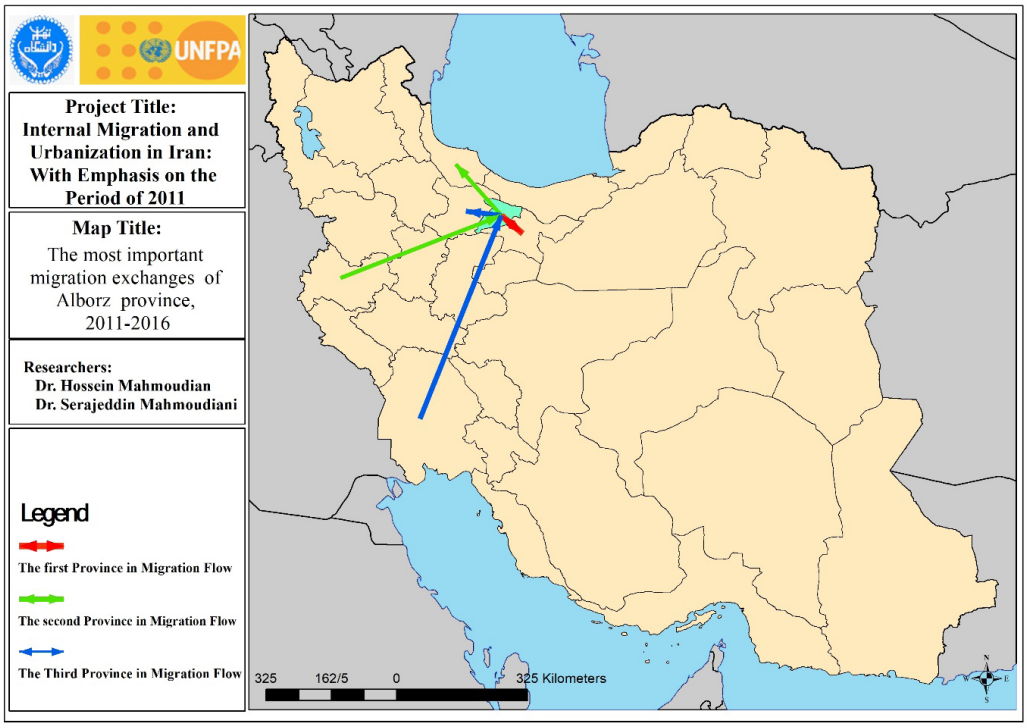


Figure 5. The most important migration exchanges of Yazd province, the third destination for migrants of the country, 2011-2016

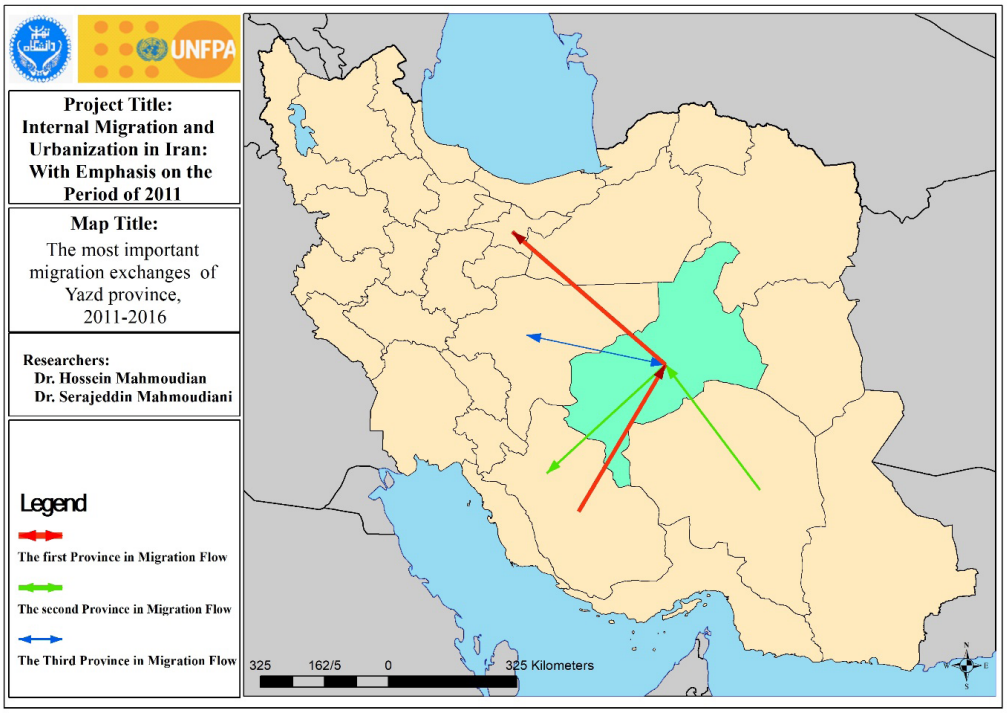


Figure 6. The most important migration exchanges of Qom province, the fourth destination for migrants of the country, 2011-2016

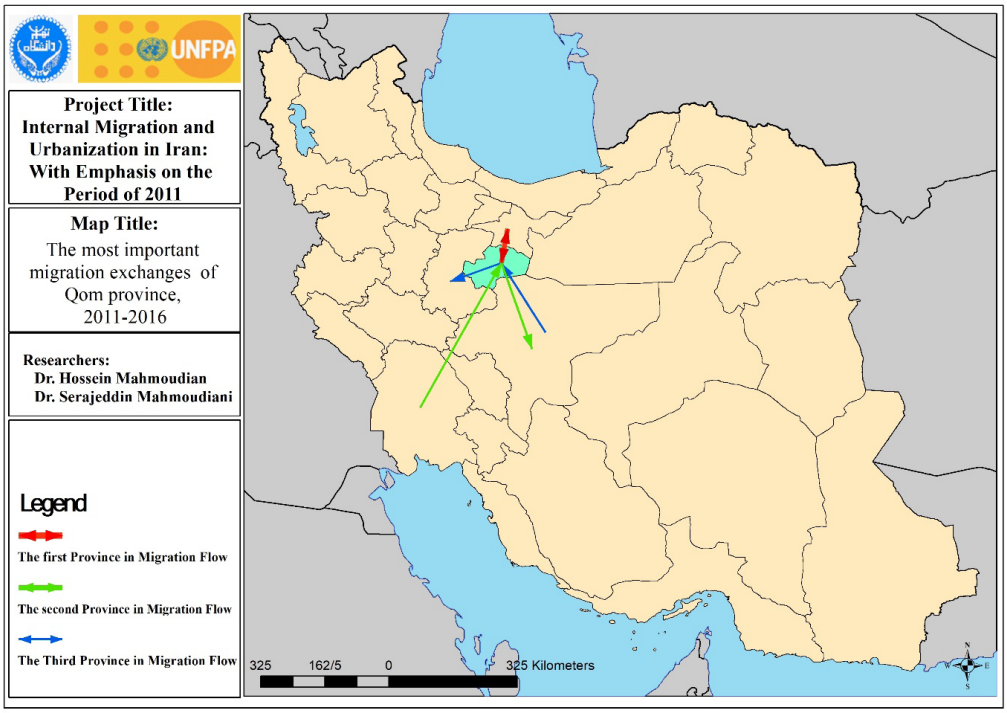


Figure 7. The most important migration exchanges of Tehran province, the fifth destination for migrants of the country, 2011-2016

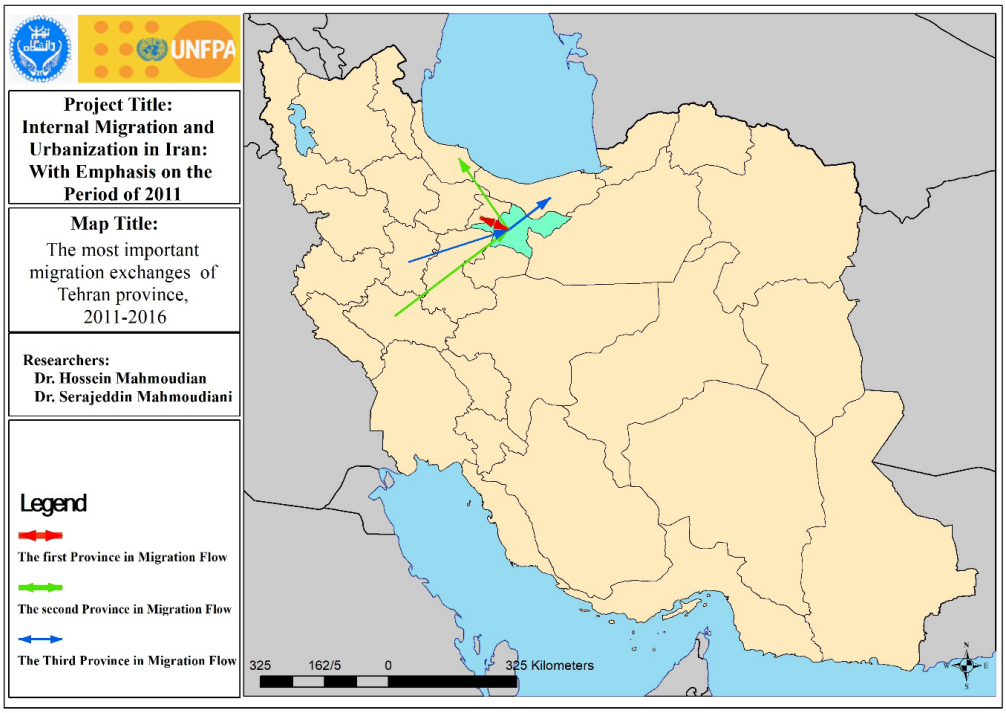


Figure 8. The most important migration exchanges of Lorestan province, the number one area of origin of migrants in the country, 2011-2016

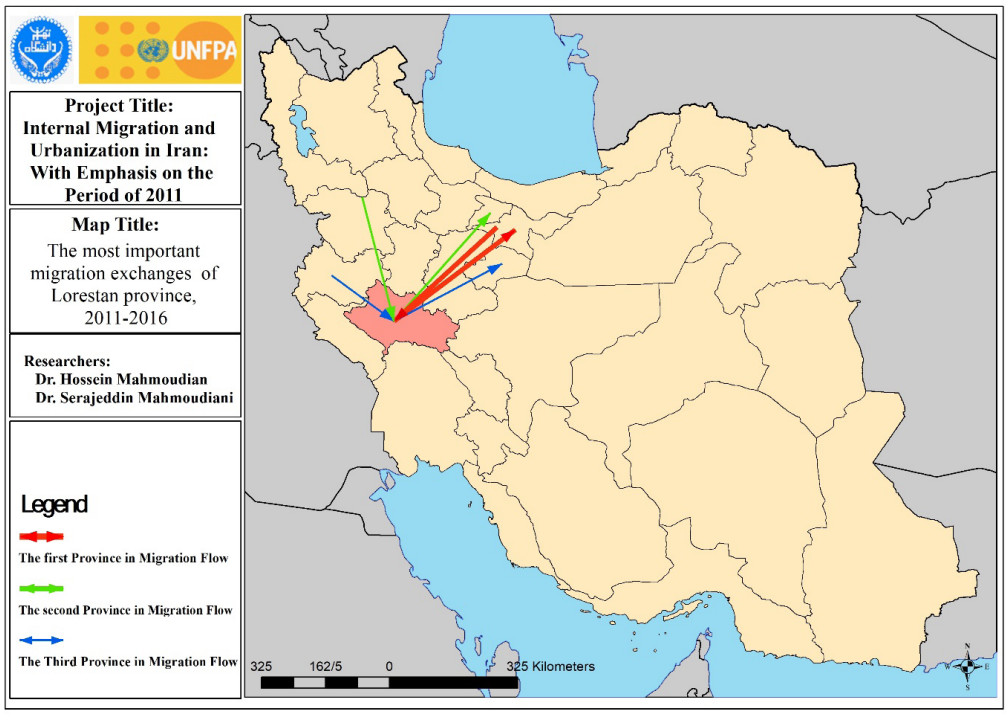


Figure 9. The most important migration exchanges of Chaharmahal-va-Bakhtiari province, the number two area of origin of migrants in the country, 2011-2016

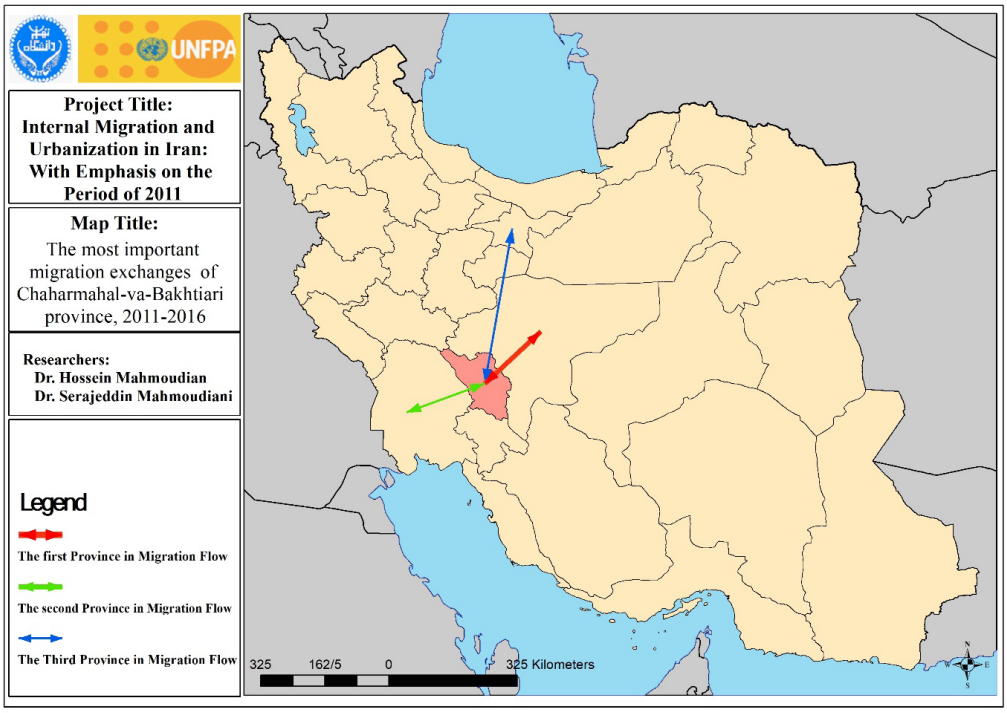


Figure 10. The most important migration exchanges of Ilam province, the number three area of origin of migrants in the country, 2011-2016

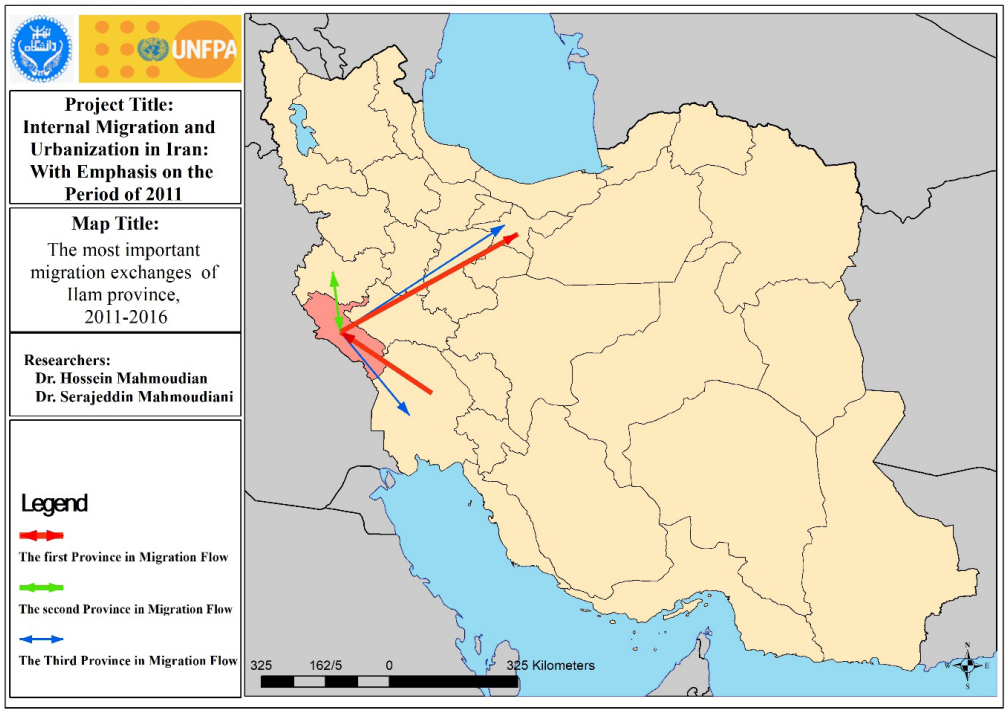


Figure 11. The most important migration exchanges of Hamedan province, the number four area of origin of migrants in the country, 2011-2016

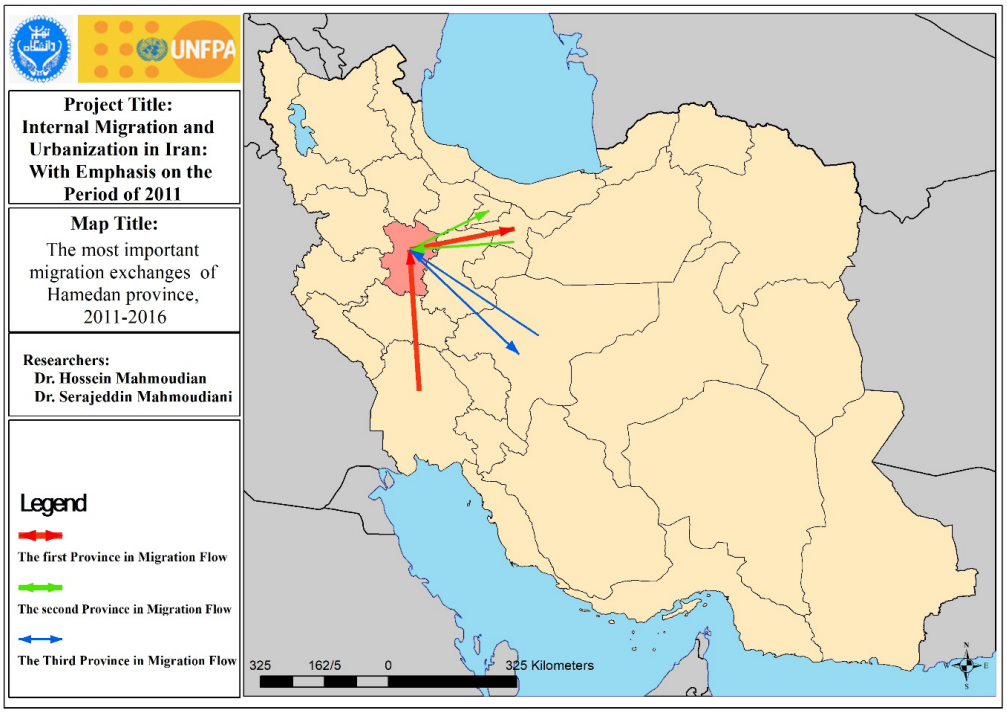
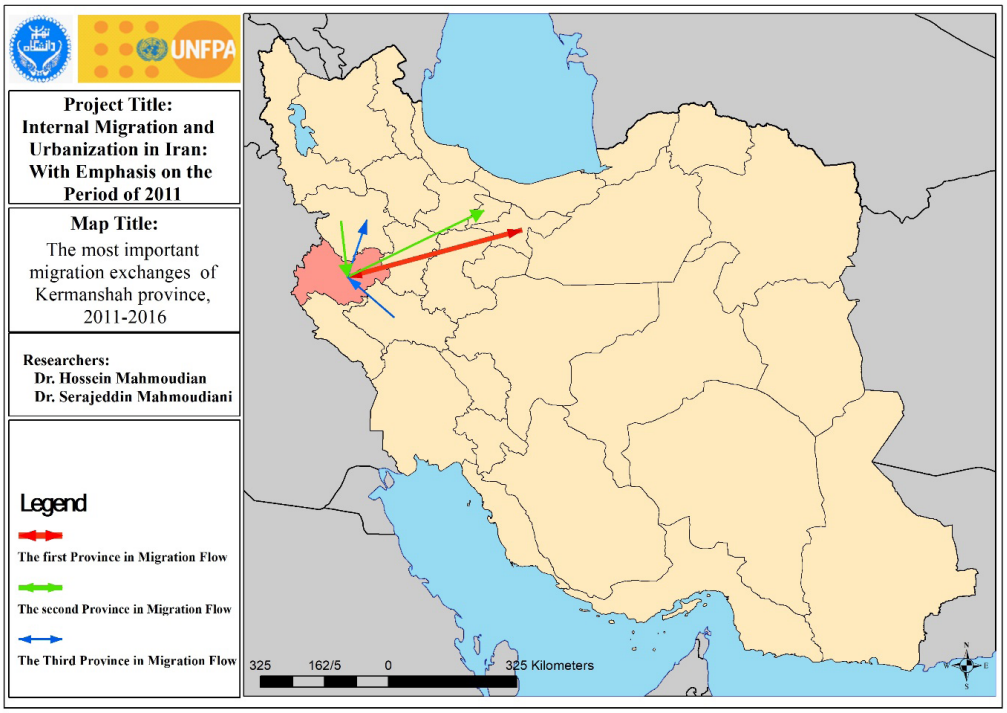


Figure 12. The most important migration exchanges of Kermanshahprovince, the number five area of origin of migrants in the country, 2011-201



Generally, Tehran province is the most popular destination for migrants from out-migration provinces, in the way that it is the number one destination of migrants who left the provinces of Lorestan, Ilam, Hamedan and Kermanshah. From a regionalized perspective to migration flows, the migration flows from western provinces are largely towards the capital of the country. Certainly, problems such as unemployment in the provinces and centralization in Tehran had a significant impact in shaping this migration flow. Tehran province plays an important trans-regional role in internal migration in Iran, in the way that Tehran is the desirable destination of some specific regions of the country, and it is also considered as the most important destination for all regions of the country. Another noteworthy point in migration flows is the geographical distance between the origin and destination of migration, meaning that most of internal migrations, with the exception of migration to Tehran, has taken place within adjacent provinces. Tehran province has a particular position which made it a front-runner in different in-migration provinces of the country. In other cases, migrants prefer to immigrate to the provinces adjacent to their place of residence. This issue is related to one of the Ravenstein's Laws of Migration, arguing that most migrations occur initially at short distances.

Migrants' duration of stay in destinations

The information in Table 15 indicates that in total, 28.3% of migrants have stayed for less than one year, 19.5% of migrants have stayed for two years, 17.5% of migrants have stayed for three years, and only 5.5% of migrants have stayed for five years in their destinations. Therefore, the highest proportion of migrants in the period from 2011 to 2016 are those whose duration of stay is less than one year.

Table 15. Length of stay of migrants in destination, 2011-2016

Duration of stay	Number of in-migrants	Percentage
Less than one year	1216500	28.3
year 1	722950	16.8
years 2	837563	19.5
years 3	754096	17.5
years 4	509812	11.9
years 5	235340	5.5
Not stated	24727	0.6
Total	4300988	100

Source: 2016 census results

Migrants by previous place of residence (urban/rural)

As the findings of Table 16 shows, about 30 percent of migrants, migrated within the province and 8 percent of the inter-provincial migrants migrated from villages, meaning that the origin of their migration were rural areas. Therefore, the rural population mainly move within their provinces and rarely leave their province to migrate to other provinces. In total, about 20% of migrants with rural origin migrated within the borders of the country during 2011 to 2016. In other words, their previous residence was in rural areas. It needs to be noted that the unclaimed amounts of provinces, cities and foreign migrants are excluded from the calculations.

Table 16. Migrants by previous place of residence (rural / urban), 2016

Type of migration	Previous place of residence	Number of migrants	Percentage
Intra-provincial	Rural	643173	30.5
	Urban	1465257	69.5
Inter-provincial	Rural	174718	8.5
	Urban	1888236	91.5
Total	Rural	817891	19.6
	Urban	3353493	80.4

Source: 2016 census results

Migration ratio

Migration ratio index will be used in order to show the contribution of migration to the share of births and deaths (natural factors) in changes in the provinces' population. This index is the ratio of the net number of migrants to a region, to difference of births and deaths (births minus death) to that region over a given period. This indicator shows the contribution of migration to the natural increase of the population (birth and death) in population changes.

$$\text{Migration ratio} = \frac{\text{Net Number of Migrants}}{\text{number of deaths - number of births}} \times 1000$$

According to the data presented in Table 17 and Figure 13, in the studied period migration had the most positive effect on population changes in the provinces of

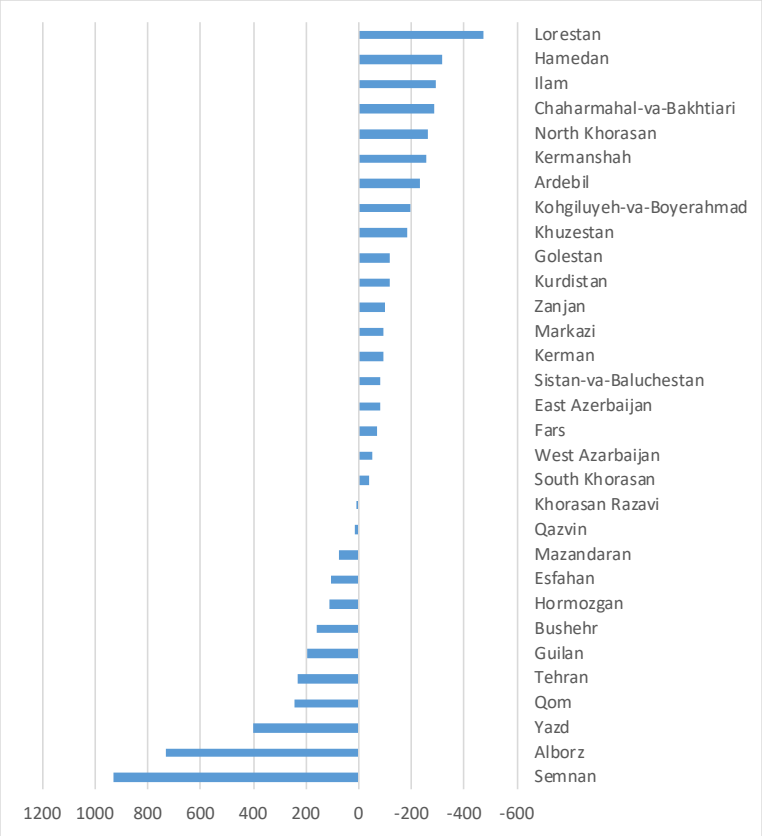
Semnan, Alborz, Yazd, Tehran and Qom in descending order. In contrast, migration in the last 5 years has had the most negative or decreasing effect on Lorestan, Kermanshah, Hamedan, Ilam, Chaharmahal, Bakhtiari and North Khorasan provinces in terms of population changes in comparison with the effects of fertility and death. The share of migration in the population changes of Qazvin and Khorasan Razavi provinces was at the lowest possible level during the same period.

Table 17. Births, deaths and migration ratio of the provinces of the country, 2011- 2016

Province	Out-migrants	In-migrants	Net Migration Number	Number of births	Number of deaths	Migration ratio
East Azerbaijan	67968	48908	19060-	352134	123711	83-
West Azarbaijan	48309	34809	13500-	334800	85453	54-
Ardebil	44625	24384	20241-	125655	37563	230-
Esfahan	103140	127903	24763	365411	132728	106
Alborz	103437	207669	104232	190898	48483	732
Ilam	23066	11795	11271-	53267	14761	293-
Bushehr	30885	43705	12820	105321	24006	158
Tehran	350632	516922	166290	955491	243632	234
Chaharma-hal-va-Bakhtiari	38844	17577	21267-	104020	29361	285-
South Khorasan	31260	28787	2473-	85744	22254	39-
Khorasan Razavi	107786	112027	4241	715477	175585	8
North Khorasan	37011	21548	15463-	91348	32374	262-
Khuzestan	135491	53632	81859-	553775	110713	185-
Zanjan	30493	23960	6533-	101790	34191	97-
Semnan	22622	53268	30646	50995	18034	930
Sistan-va-Baluch-estan	59627	27301	32326-	479126	96506	84-
Fars	92934	72745	20189-	427480	124781	67-
Qazvin	34918	36010	1092	109320	35006	15
Qom	41608	63861	22253	121066	30353	245
Kurdistan	49618	37789	11829-	148784	47550	117-
Kerman	48217	26477	21740-	305543	66623	91-
Kermanshah	77553	42625	34928-	205139	68139	255-
Kohgi-luyeh-va-Boyer-ahmad	26123	13930	12193-	79718	17466	196-
Golestan	51848	33699	18149-	209207	55850	118-
Guilan	61555	74891	13336	159664	91965	197
Lorestan	91472	27350	64122-	189263	54474	476-
Mazandaran	59063	69714	10651	226127	89978	78
Markazi	50126	44570	5556-	110947	49631	91-
Hormozgan	47552	65599	18047	196223	37873	114
Hamedan	71636	39218	32418-	164472	62694	319-
Yazd	23535	60281	36746	120048	28777	403

Source: Census 2016; National Organization for Civil Registration

Figure 13. Migration ratio of provinces of Iran during 2011-2016



Migration and population growth

In general, the absolute population growth of the provinces in the country is influenced by births, deaths and migration. Regardless of factors such as transformation of villages into cities, integration of rural areas into cities, and inaccurate registration of the births and deaths of a region; the difference between the real and natural growth of the population can be attributed to the effect of migration on population growth in that region. As the data in Table 18 and Figure 14 show, in-migrantion to the provinces of Alborz and Semnan has caused 1.26 and 1.17 percent addition to the natural population growth of those provinces. In contrast, migration has had a decreasing effect on the population growth rate of provinces such as North Khorasan, Lorestan, Hamedan and Kermanshah, in the way that about 1.5% of the natural population growth of North Khorasan and Lorestan has declined due to out-migrantion of the population from these provinces. This issue highlights the importance of inter-provincial migration flows in the country.

Provincial Total Migration Rate

The total migration rate can be used to show the entire migration flows (in-

migrations and out-migrations) in a province. In other words, the rate shows the total traffic of people in a location. It is also named as gross migration rate. Total migration is the proportion of total migrants entering and leaving the same area over a period of time to the total population of that area in the middle of that time period. In Table 19 and Figure 15, it is observed that the population of Alborz and Semnan provinces has been most affected by inter-provincial migration flows. On the other hand, provinces of Kerman, West Azarbaijan and East Azarbaijan had the least effect from migratory flows.

Table 18. Migration effect on population growth rate by province, 2011-2016[2]

Province	Natural growth rate	Absolute growth rate	Migration effect on population (%) growth rate
East Azarbaijan	1.20	0.97	0.23-
Western Azerbaijan	1.57	1.17	0.40-
Ardebil	1.40	0.35	1.05-
Esfahan	0.93	0.97	0.04
Alborz	1.11	2.37	1.26
Ilam	1.35	0.80	0.55-
Bushehr	1.48	2.41	0.93
Tehran	1.12	1.72	0.60
Chaharmahal-va-Bakhtiari	1.62	1.15	0.47-
North Khorasan	1.36	0.11-	1.47-
Khuzestan	1.92	0.78	1.14-
Zanjan	1.30	0.81	0.49-
Semnan	0.99	2.16	1.17
Sistan-va-Baluchestan	2.88	1.83	1.05-
Fars	1.28	1.08	0.20-
Qom	1.48	2.33	0.85
Kurdistan	1.31	1.42	0.11
Kerman	1.57	1.49	0.08-
Kermanshah	1.41	0.07	1.34-
Kohgiluyeh-va-Boyerahmad	1.82	1.60	0.22-
Golestan	1.68	1.01	0.67-
Guilan	0.54	0.40	0.14-
Lorestan	1.53	0.07	1.46-
Mazandaran	0.86	1.33	0.47
Central	0.86	0.22	0.64-
Hormozgan	1.89	2.39	0.50
Hamedan	1.16	0.23-	1.39-

۲ By examining the migration proportions and comparing them with the effect of migration on population growth, it was concluded that the effect of migration on population growth in four provinces of Yazd, Khorasan Razavi, South Khorasan and Qazvin was not logical due to the problems in the data. Therefore, they were excluded from the analyses.

Figure 14. Migration effect on population growth rate by province, 2011- 2016

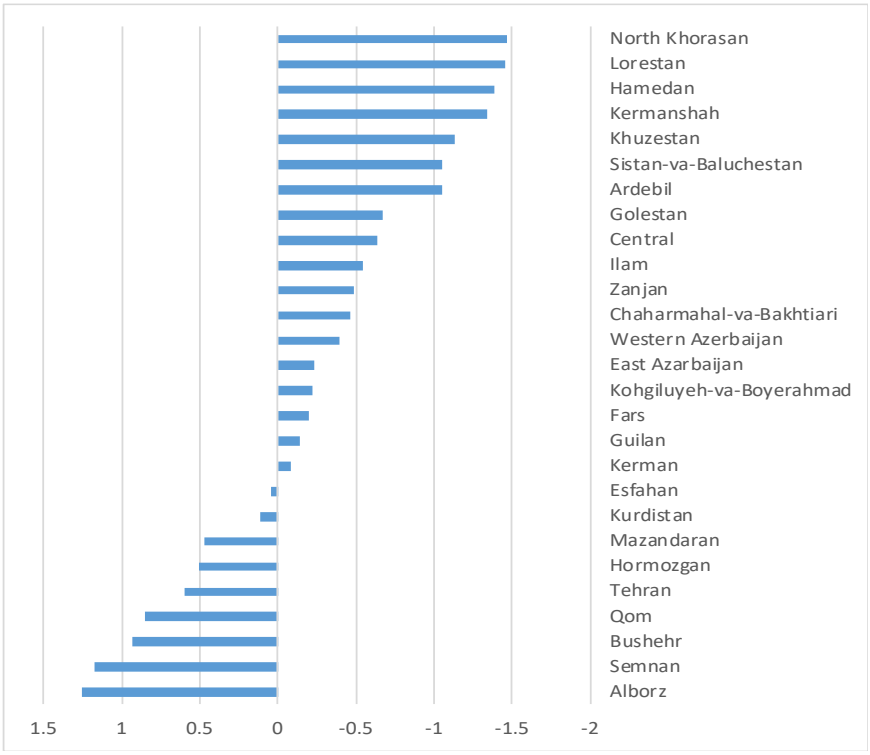
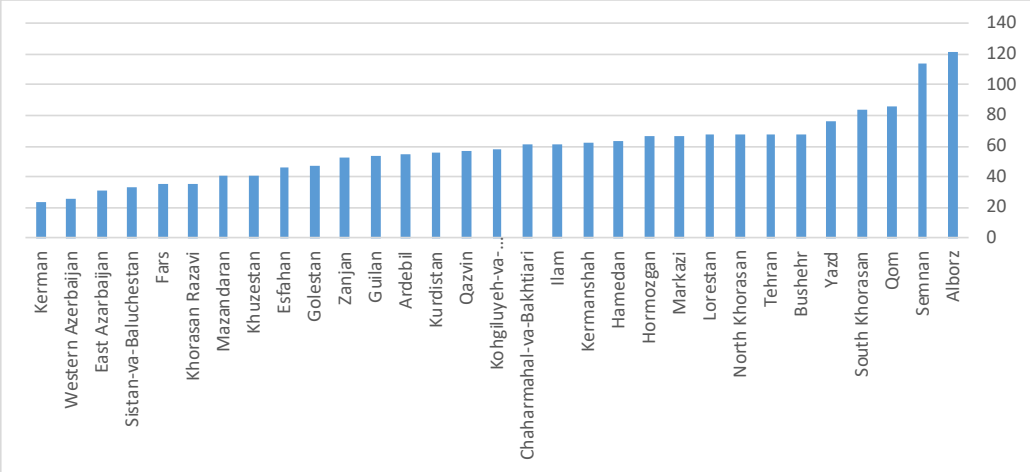


Table 19. Total migration rate of the provinces during 2011-2016

Province	Total migration rate	Province	Total migration rate
East Azarbaijan	31	**Fars**	35
Western Azerbaijan	26	**Qazvin**	57
Ardebil	55	**Qom**	86
Esfahan	46	**Kurdistan**	56
Alborz	121	**Kerman**	24
Ilam	61	**Kermanshah**	62
Bushehr	68	**Kohgiluyeh-va-Boyer-ahmad**	58
Tehran	68	**Golestan**	47
Chaharmahal-va-Bakhtiari	61	**Guilan**	54
South Khorasan	84	**Lorestan**	68
Khorasan Razavi	35	**Mazandaran**	41
North Khorasan	68	**Markazi**	67
Khuzestan	41	**Hormozgan**	67
Zanjan	53	**Hamedan**	63
Semnan	114	**Yazd**	76
Sistan-va-Baluchestan	33		

Source: 2016 census

Figure 15. Total in-migrantion rate of the provinces during 2011-2016



The status of internal migrants by age

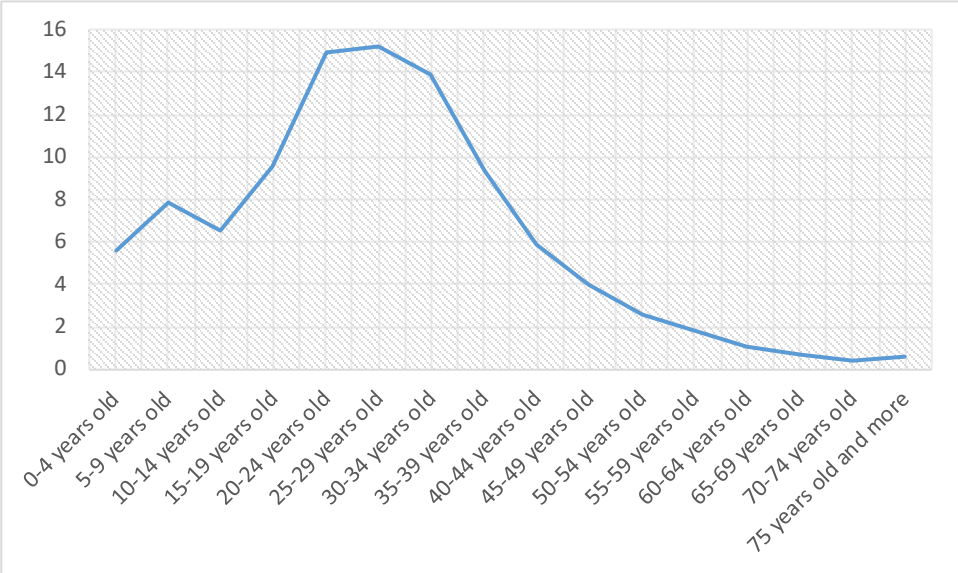
Table 20 lists the internal migrants throughout the country (intra- and inter-provincial) during 2011-2016, categorized by age group. According to this table, the 20-24, 25-29 and 30-34 age groups had the highest share in the country's migration flows respectively. The fact that the majority of migrants are aged 20 to 34 years old indicates that there exists a young age pattern in the country's internal migration.

Table 20. The population of the country's migrants by age groups, 2016

Age group	Number	Percentage
years old 0-4	241221	5.6
years old 5-9	337677	7.9
years old 10-14	278287	6.5
years old 15-19	413355	9.6
years old 20-24	639825	14.9
years old 25-29	653520	15.2
years old 30-34	599686	13.9
years old 35-39	404380	9.4
years old 40-44	252377	5.9
years old 45-49	172124	4
years old 50-54	111088	2.6
years old 55-59	76032	1.8
years old 60-64	49408	1.1
years old 65-69	28183	0.7
years old 70-74	17051	0.4
years old and more 75	26774	0.6
Total	4300988	100

Figure 16 depicts a better picture of the age pattern of migrants in Iran from 2011 to 2016. As clearly shown, the migration age starts an upward trend from 10 to 14 years old and begins to decline dramatically at the age of 34. This indicates that the majority of internal migrants are young.

Figure 16. Age pattern of internal migrants in Iran, 2011-2016



Figures 17 to 21 show the age pattern of total migrants and their migration type. Figure 17 confirms the fact that migrants are young in Iran's migration flows. The age pyramid of the rural-rural migrants indicates that the majority of male migrants in this type of migration are between 15 to 19 years old, and the majority of female migrants are in the 20-29 age group. Migration for the purpose of study and marriage can be the reasons for such a difference. In rural-urban migration, the population balance is dominated by men. The highest percentage of migrants belong to the age group of 20-29 years. The migration of men for compulsory military service can be one of the reasons for this difference. In the urban-urban migration, the share of women in the age group of 20 to 29 years is more than men. This is also true for rural-urban migration, chiefly due to their pursuit of further education and better jobs (Mahmoudian and Ghasemi-Ardahaee, 2013).

Figure 17. Age pyramid of total internal migrants, 2011-2016

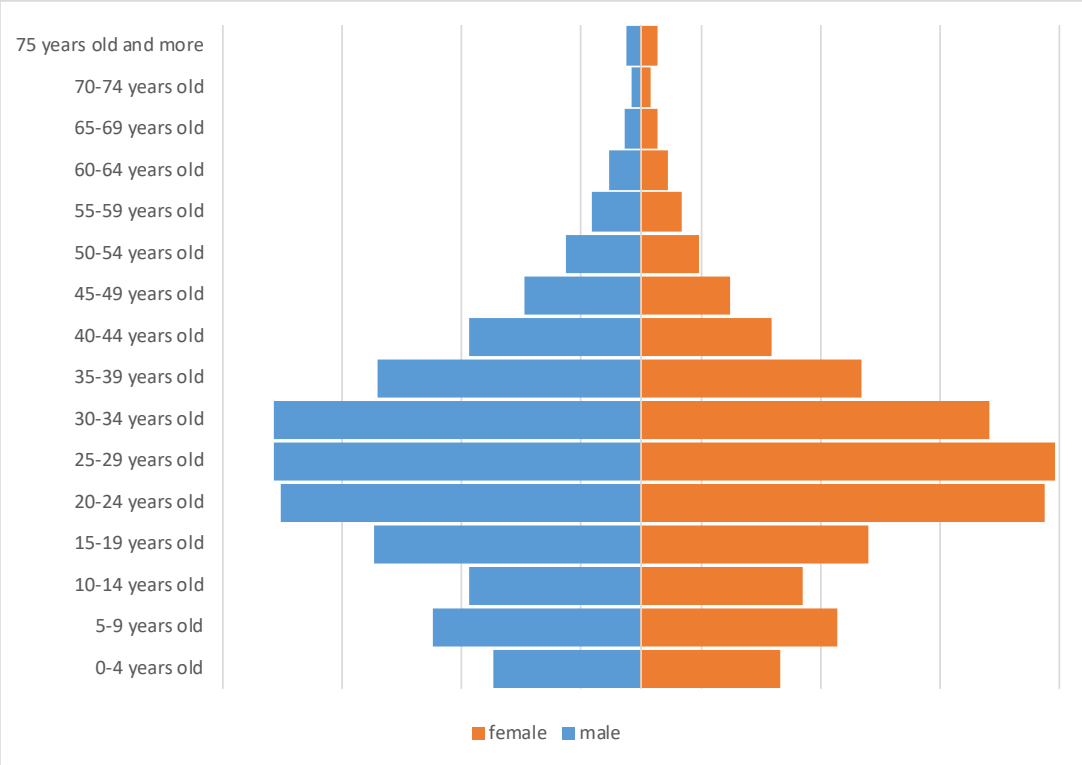


Figure 18. Age pyramid of rural-rural migrants, 2011-2016

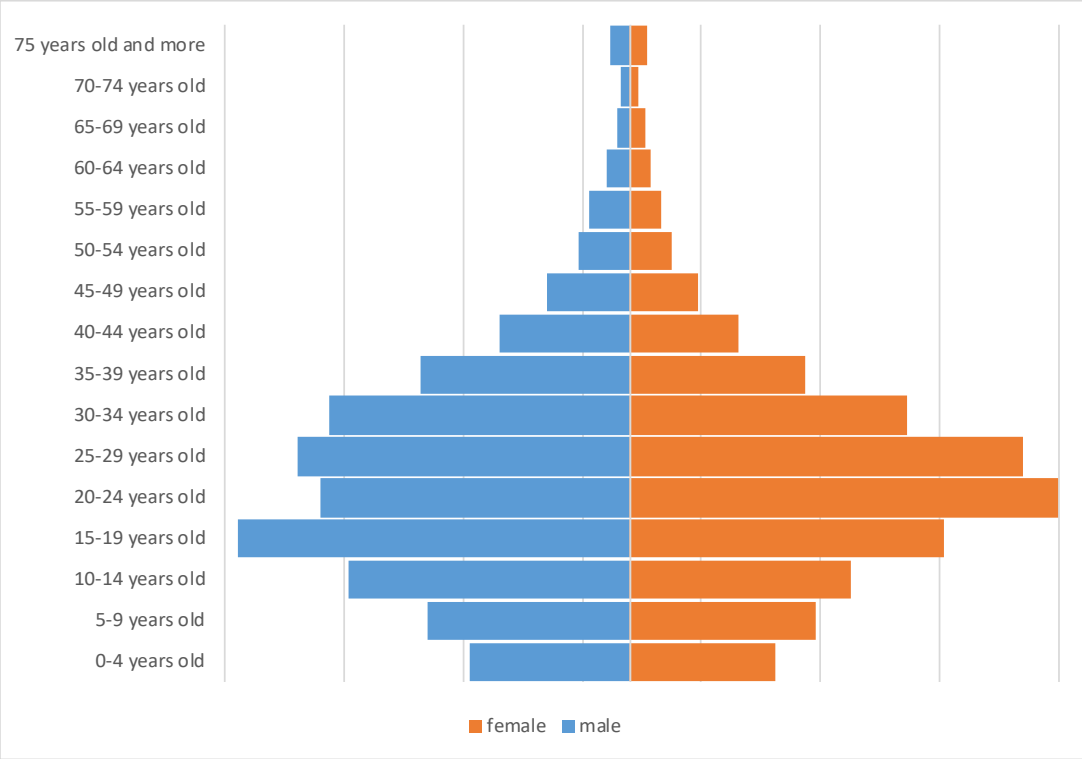


Figure 19. Age pyramid of urban-rural migrants, 2011-2016

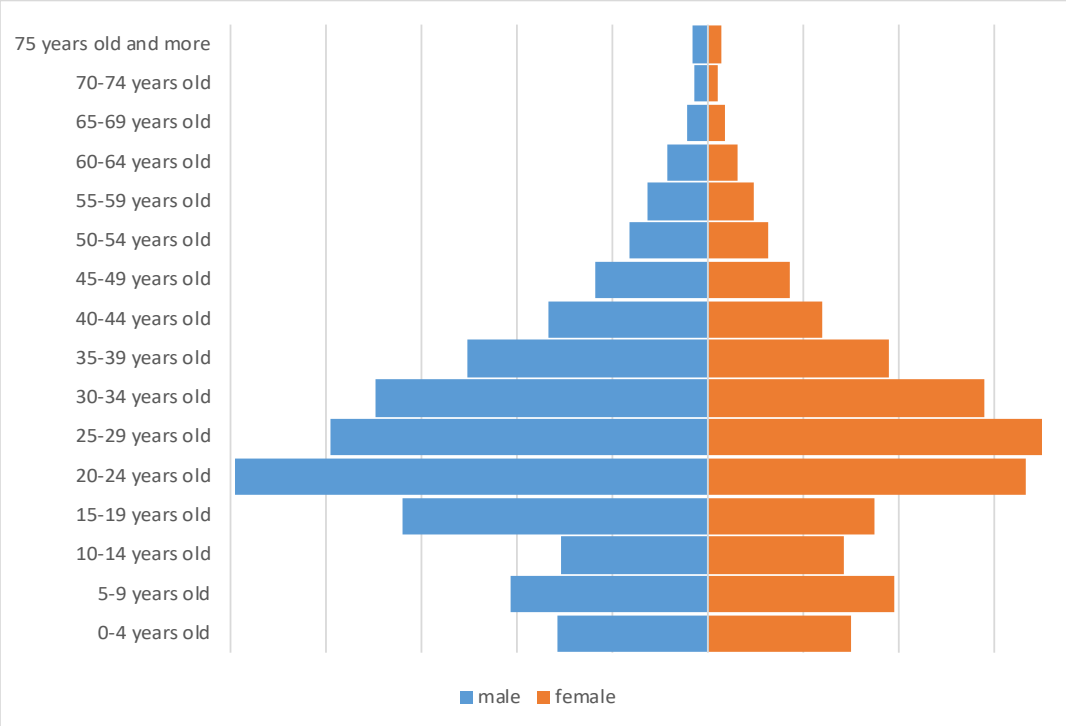


Figure 20. Age pyramid of urban-urban migrants, 2011-2016

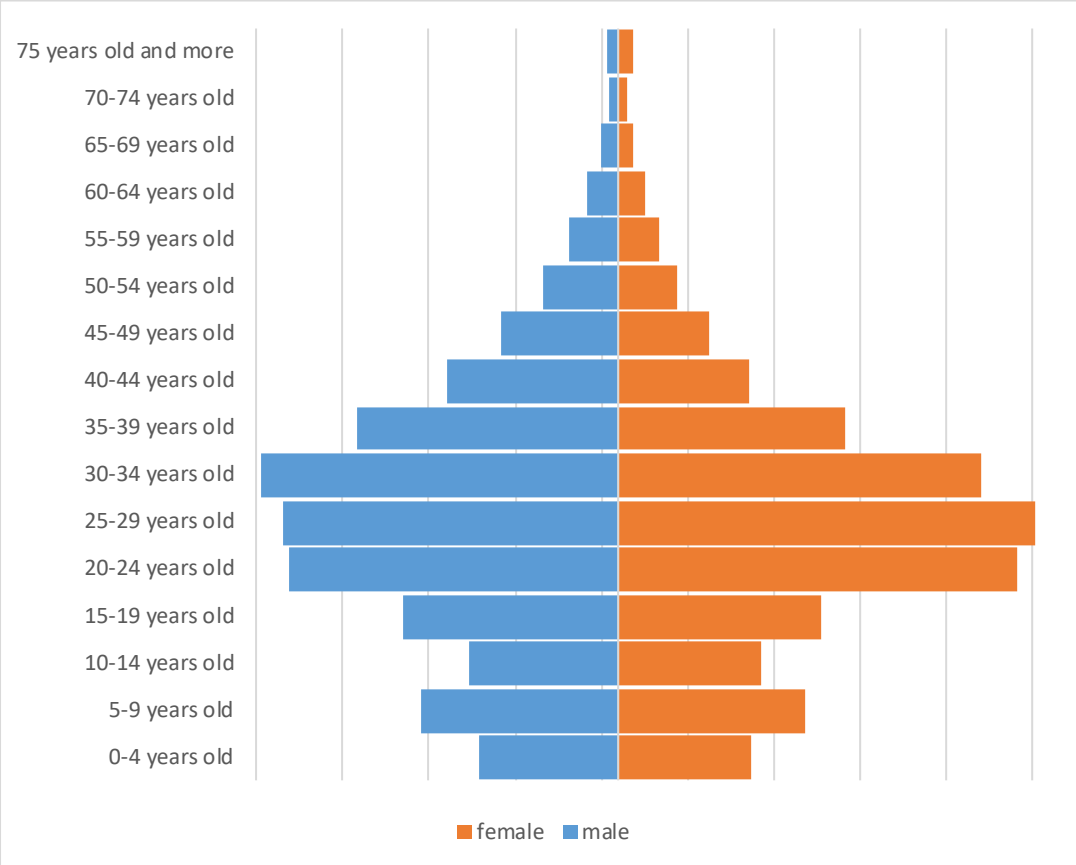
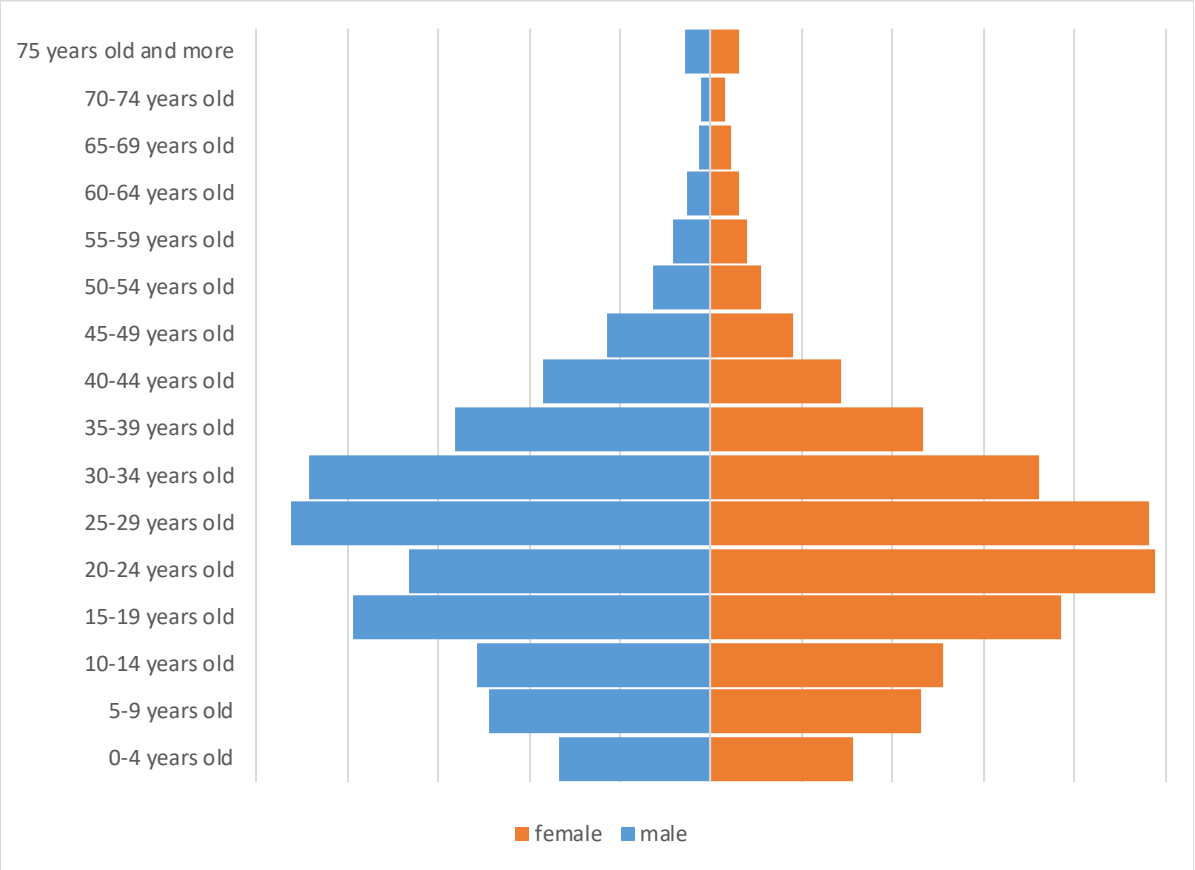


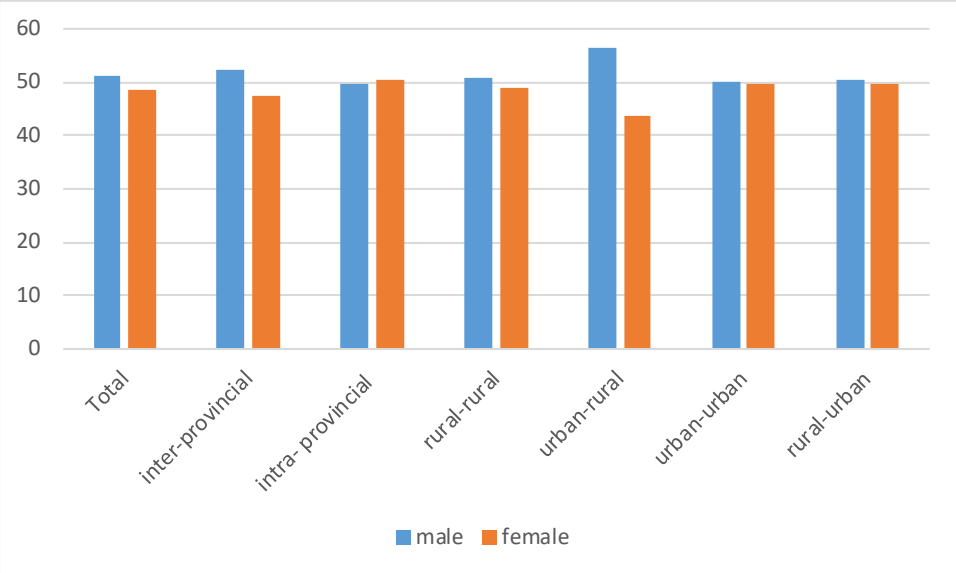
Figure 21. Age pyramid of rural-urban migrants, 2011-2016



State of internal migrants by sex

The results of the recent census indicate that of the total number of migrants in the country during 2011-2016, 51.4% were men and 48.6% were women. The shares of men and women in inter-provincial migration was 52.4 and 47.6 and in intra-provincial migration was 49.6 and 50.4 percent respectively. With regard to urban to rural migration, the male and female percentages were also 56.4% and 43.6%, respectively. In the urban-urban migration, the share of each sex was recorded as 50.2% for men and 49.8% for women, and in the case of rural-urban migration, the share of men and women was 50.4% and 49.6% respectively. Figure 22 clearly shows that the share of men and women is relatively equal in a variety of migration flows, however, the share of women in urban to rural migration is lower than men. In addition, the findings show that in general, the share of women in intra-provincial migration flows is more than men, and on the contrary men have a greater share in inter-provincial migration.

Figure 22. Percentage of migrants by type of immigration and sex, 2011-2016



According to Table 21, net migration for men and women is fairly equal in the provinces of East Azerbaijan, West Azarbaijan and Ardebil. In the provinces of Tehran and Alborz, net migration is positive for women and men, with women having a bigger share than men, meaning Tehran is a desirable destination for women migrants.

On the contrary, net migration for men and women in provinces such as Ilam, Kurdistan and Kermanshah is negative, and women are more likely to migrate from these provinces. It appears that these provinces do not have the capacity and attractiveness for their own residents anymore. Another point is the South Khorasan province situation, which has a positive net migration rate for men and a negative migration rate for women. This indicates that over the past 5 years this province has lost a portion of its female population and has added to the population of male, and this can affect the sex composition of the province. The opposite of this situation exists in Khorasan Razavi province, which has a negative migration rate for men and a purely positive migration for women. It appears that during the recent migration, this province lost part of its male population due to migration and in contrast, the number of women in the province has increased as a result of migration.

In table 22 and figure 23, total sex ratio, total migrants and inter-provincial migrants are shown. The results of the 2016 census indicate that the total sex ratio of migrants is 105.7. Women have a higher number in the age group of 20-29 years old and the age group of 75 and over. In contrast, there is a great gap between male and female migrants with a higher number of men at the age of 40 to 64. For a more accurate

analysis of this issue, table 22 presents the sex ratio of inter-provincial migrants by age group. The total sex ratio of the inter-provincial migrants is more than 110, which indicates the domination of men in inter-provincial migration. As it is seen, male migrants are more than female migrants in all age groups, except for two age groups of 20-29 years and 75+ years. This difference is at the highest level in the 40-64 age group, though the number of men aged 15-19 years is also significantly higher than women.

Table 21. Net migrants of provinces of the country by sex, 2011-2016

Province	Male			Female		
	Exited	Entered	Net migration	Exited	Entered	Net migration
East Azerbaijan	36674	25830	10844-	31294	23078	8216-
West Azarbaijan	27518	20127	7391-	20791	14682	6109-
Ardebil	23349	14178	9171-	21276	10206	11070-
Esfahan	52388	65600	13212	50752	62303	11551
Alborz	51446	102778	51332	51991	104891	52900
Ilam	12013	7017	4996-	11053	4778	6275-
Bushehr	16326	28452	12126	14559	15253	694
Tehran	181957	261364	79407	168675	255558	86883
Chaharmahal-va-Bakhtiari	20547	8711	11836-	18297	8866	9431-
South Khorasan	16255	17947	1692	15005	10840	4165-
Khorasan Razavi	58127	57768	359-	49659	54259	4600
North Khorasan	19198	11252	7946-	17813	10296	7517-
Khuzestan	71633	28792	42841-	63858	24840	39018-
Zanjan	15902	12155	3747-	14591	11805	2786-
Semnan	11803	27815	16012	10819	25453	14634
Sistan-va-Baluchestan	34219	16928	17291-	25408	10373	15035
Fars	50145	38838	11307-	42789	33907	8882-
Qazvin	17704	18283	579	17214	17727	513
Qom	21134	31206	10072	20474	32655	12181
Kurdistan	27115	21401	5714-	22503	16388	6115-
Kerman	24737	15456	9281-	23480	11021	12459-
Kermanshah	40089	25347	14742-	37464	17278	20186-
Kohgiluyeh-va-Boyerahmad	14452	7052	7400-	11671	6878	4793-
Golestan	27253	16766	10487-	24595	16933	7662-
Guilan	30040	38618	8578	31515	36273	4758
Lorestan	48145	13979	34166-	43327	13371	29956-
Mazandaran	30271	35302	5031	28792	34412	5620
Markazi	25159	23664	1495-	24967	20906	4061-
Hormozgan	26157	36706	10549	21395	28893	7498
Hamedan	37006	19497	17509-	34630	19721	14909-
Yazd	12508	32441	19933	11027	27840	16813

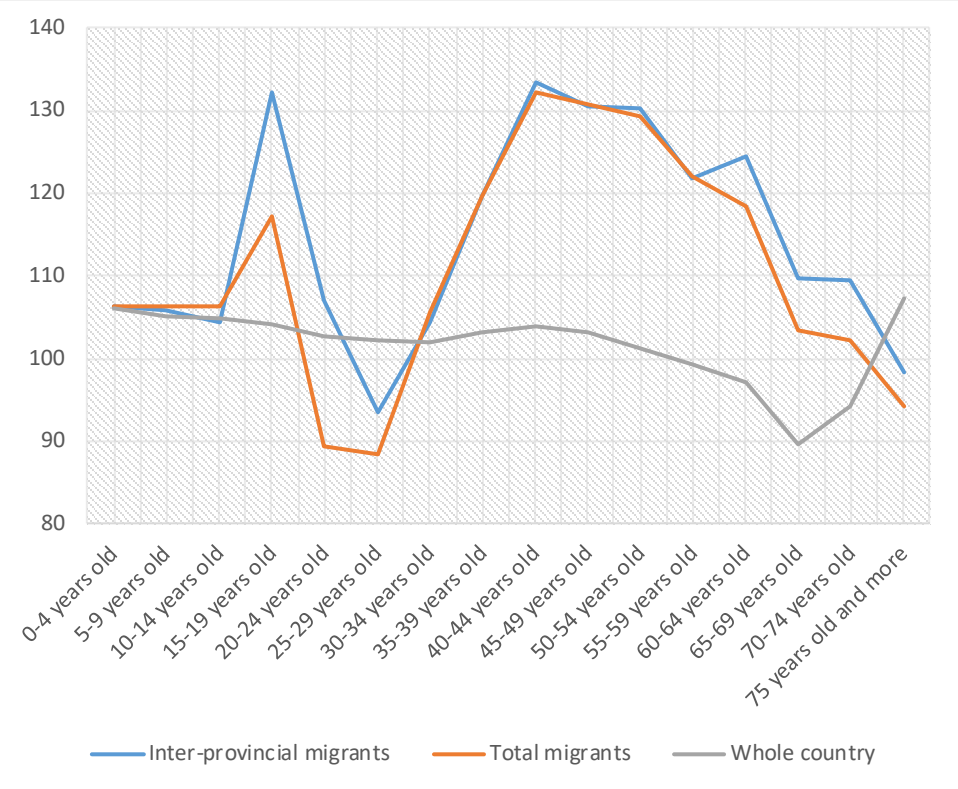
Source: 2016 census results

Table 22. Sex ratio of migrants and total population of the country, 2011-2016

Age group	Sex ratio		
	Inter-provincial migrants	**Total migrants**	**Whole country**
years old 0-4	106.2	106.3	106.0
years old 5-9	105.8	106.3	105.1
years old 10-14	104.3	106.4	104.8
years old 15-19	132.2	117.1	104.2
years old 20-24	107.0	89.5	102.6
years old 25-29	93.4	88.5	102.1
years old 30-34	104.5	105.7	101.9
years old 35-39	119.6	119.5	103.1
years old 40-44	133.5	132.1	104.0
years old 45-49	130.4	130.7	103.2
years old 50-54	130.2	129.4	101.3
years old 55-59	121.7	122.1	99.4
years old 60-64	124.4	118.3	97.1
years old 65-69	109.7	103.3	89.6
years old 70-74	109.4	102.1	94.2
years old and more 75	98.4	94.3	107.2
Total	110.2	105.7	102.7

Source: 2016 census results

Figure 23. The sex ratio of migrants and the total population during 2011-2016



Socio-economic differences between migrants and non-migrants

In order to analyze the migrants' situation and their differences with non-migrants more accurately, raw data of 2 percent sample of 2016 census was used. Results (Table 23) showed that the average age of migrants was 27.8, which is about 28 years old, and on the other hand the corresponding figure for non-migrants is 31.3 years old, thus, migrants are on average 3 years younger than non-migrants. The average total births number for migrants was 2.2 and for the non-migrants is 3.1.

More than 94 percent of internal migrants in Iran are literate, while this figure for non-migrants is about 87 percent. Moreover, more than 57% of migrants have under high school diploma education, and this number for non-migrants is 48 percent. However, in terms of higher education, non-migrants were in a better position than migrants. Also fewer migrants were busy studying than non-migrants. But migrants were more successful in employment than non-migrants (38 percent migrants compared to 34 percent non-migrants). As with marital status, about 72% of migrants were married and 24% were single or never married. The corresponding figures for non-migrants were 64% and 30% respectively.

The sex ratio of the migrant population is lower than the non-migrant population. The analysis of the status of migrants and non-migrants by age indicates that around 22% of migrants are under the age of 15 years old. This percentage for non-migrants is about 24%. About 32 percent of migrants are 15 to 29 years old, while corresponding figure for non-migrants is lower. In contrast, only two percent of the migrants are elderly, one third of the same figure for non-migrants (more than 6 percent). This situation reflects the younger population of migrants compared to non-migrants. The average number of children for migrants is less than the non-migrants. Thus, it can be said that migrants had smaller families than non-migrants. All differences between migrants and non-migrants were statistically significant.

In general, migrant populations were younger, more literate, more employed than non-migrant populations. In contrast, in terms of education level, marriage, number of children, and sex ratio, they were lower compared to non-migrant populations. This situation indicates that migration is mainly carried out at a young age and to improve the economic situation of the family. The lower sex ratio of the migrants' population indicates, to some extent, the desire of women to migrate (to improve their situation).

Table 23. Sample population percentage in terms of migration status, by selected variables

Variable		Migrant	Non-migrant
Literacy condition	Literate	94.1	87.2
	illiterate	5.9	12.8
	Total	100.0	100.0
Level of education	Under high school diploma	47.6	57.1
	High school diploma	23.1	21.9
	University graduate	29.3	21.1
	Total	100.00	100.00
Educational status	Studying	25.6	24.4
	Not studying	74.4	75.6
	Total	100.0	100.0
Employment status	Employed	37.8	34.1
	Unemployed	4.9	5.0
	Student	17.9	18.1
	Housewife	32.2	31.3
	Unemployed, but having income	3.5	5.8
	Others	3.7	5.6
	Total	100.0	100.0
marital status	Married	71.9	64.0
	Widowed	2.0	4.3
	Divorced	2.1	1.6
	Never married	24.0	30.0
	Total	100.0	100.0
Sex	Male	49.8	50.4
	Female	50.2	49.6
	Total	100.0	100.0
Age	0-15	22.2	24.3
	15-29	32.5	24.2
	30-64	43.4	45.1
	65+	1.9	6.4
	Total	100.0	100.0
Number children ever born	One child	39.3	21.9
	Two children	33.2	29.6
	Three children	13.2	16.7
	Four children and more	14.2	31.8
	Total	100.0	100.0

Source: 2% sample of 2016 census

Causes of Internal Migration in Iran

Significant internal migration in Iran mainly started in the form of rural-urban migration in the 1960s. Primary migration was mainly due to rural push factors, which was manifested in forms of declining production and income, rising unemployment, inadequate government investment in rural areas, and increasing population growth (Mahmoudian and Moshfegh, 2012). In the following decades, with the decline in population growth and the general increase in rural education, urban attractions played a bigger role in the continuation of this migration. In addition, environmental degradation has led to water shortage and drought (mainly in the last decade), or the complete discharge of rural areas (rural depopulation) or rotation (living in rural areas and working in other areas) (Khaje-Zadeh, 2017).

The analysis of inter-provincial migration suggests that in the decade of 1976-1986, income deficit, unemployment and population growth were the main (positive) causes of out-migration. In the next decade (1986-1996) human capital was also added. In the decade of 1996-2006, the effect of income was eliminated, but three factors of unemployment, population growth of the origin areas, and human capital remained significant (Moshfegh, 2010).

Over the past two decades, there has been a direct correlation between the number of migrants and the country's economic growth. The highest rate of migration occurred during the decade of 1996-2006, which coincided with the peak of economic growth. With declining economic growth, population movements have also declined. In consecutive decades, regional inequalities in terms of developmental and employment opportunities have been the main stimuli for rural-urban migration and from less developed regions to more developed regions. (Mahmoudian and Ghasemi-Ardahaee, 2013; Shokrani, 2015). Provincial migrants' distribution in the country is correlated with the distribution of economic and social facilities, although there are some exceptions. More developed provinces are associated with higher in-migration, while less developed provinces had higher out-migration.

With regard to development and migration in Shahrestans, there are four visible patterns. The first model, namely, low development and low in-migration, mainly includes the western strip of the country, i.e. the West Azerbaijan, Kurdistan, Kermanshah, and Sistan-va-Baluchestan provinces. The second model, high development and high in-migration, mainly involves the central regions of the country, around the capital, the northern Caspian coastline, and industrial cities of

Bushehr Province. In the third model, high development and low in-migration, there are some coastal cities of Hormozgan province, and some cities in the provinces of Kerman and South Khorasan. And the fourth model, low development and high in-migration, mostly includes cities around industrial centers such as Mallard and Pishwa (Shukriani, 2015). Therefore, in most regions, the more-developed/more in-migration pattern is dominant, with the exception of new industrial areas established in less developed regions, and the problems of metropolitan cities (which make circulation necessary).

The analysis of the cause of migration at the individual level can be done through the causes stated by migrants. The question regarding the reason for migration was asked only in the 2006 and 2011 censuses. In the 2016 census, the question regarding the cause of migration was eliminated. Therefore, the analysis of the causes of migration was done according to the 2006 and 2011 censuses. As shown in table 24, the causes of migration were defined in 8 categories in the 2006 census, and 9 categories in the 2011 census. In both 2006 and 2011, the major reason for migration (46%) was stated as "to follow the household's decision to migrate". Between 2006 and 2011, fewer migrants stated "search for a job", "search for a better job", "job transfers" and "compulsory military service" as reasons for their migration; and instead, "access to better housing" was introduced as a new reason for migration, which accounted for about 11% of reasons for all migrations. In 2011, access to better housing was more important for migrations to rural areas than those to urban areas while causes related to education were more important for migrants in urban areas.

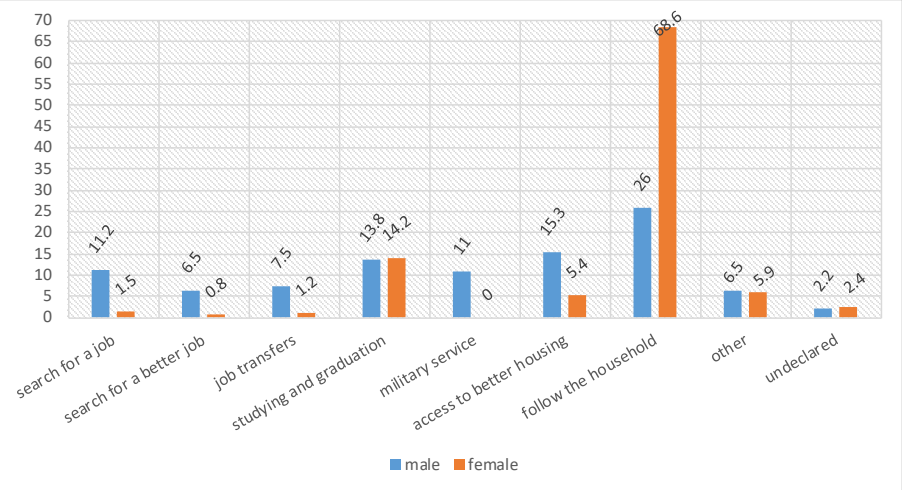
Figure 24 illustrates the causes of migration of men and women in 2011. As shown in this figure, "to follow the household's decision to migrate" was the reason stated by about 69 percent of women, and 26 percent of men. In other categories of reasons for migration, men had higher percentages. Apart from military service that is specific for men, men are more likely to migrate to seek better housing and better jobs than women. For female migrants, apart from following the household, migration for study and for better housing were among the top reasons.

Table 24. Percentage of migrants by causes of migration and migration destination, 2006-2011

Year	Migration destination	Cause of migration									
		search for a job	search for a better job	job transfers	studying and graduation	military service	access to better housing	follow the household	other	undeclared	Total
2011	Total	6.6	3.8	4.5	14.0	5.8	10.6	46.2	6.2	2.3	100.0
	Urban	6.6	3.9	5.1	15.4	4.1	10.1	46.0	6.6	2.2	100.0
	Rural	6.7	3.6	2.4	8.9	11.9	21.3	46.8	5.1	2.4	100.0
2006	Total	8.7	5.0	5.1	9.9	10.4	--	46.0	10.1	4.8	100.0
	Urban	8.6	5.2	5.8	11.3	7.5	--	46.7	10.1	4.8	100.0
	Rural	9.1	4.6	3.1	5.7	18.5	--	43.9	10.3	4.8	100.0

Source: censuses results of 2006 and 2011

Figure 24. The cause of internal migration categorized by gender during 2006-2011



The Status of urbanization in Iran

In 1956, less than one third of the population (31.4% of population) lived in urban areas, and in the next two censuses, most of the Iranian population lived in rural areas. Only around the year 1981, the populations in rural and urban areas reached equal levels, but since then, the urban population has continuously exceeded the rural population.

As shown in Table 25, according to the recent census, 74% of Iran's population lives in urban areas and the percentage is increasing. In 2016, Qom province had the highest urbanization rate (95%), and the provinces of Tehran, Alborz and Isfahan

were ranked next. In contrast, the provinces of Sistan-va-Baluchestan, Golestan and Hormozgan experienced the least urbanization (in descending order) in the same year. It should be noted that the province of Sistan-va-Baluchestan is the only province where less than 50 percent of its population is urban and this figure is above 50% for other provinces. It should be noted that urbanization rate is achieved by dividing the urban population by the total population. With the exception of Sistan-va-Baluchestan province, this trend has been growing in all other provinces. The provinces of Chaharmahal-va-Bakhtiari, Kordestan and Ardebil had the highest increase and the provinces of Sistan-va-Baluchestan, Kerman and Qom had experienced the least increase in urbanization.

Table 26 shows the average annual growth of urban areas of the country by province. It is noticeable that urban population growth in the last census in all provinces was positive. Hormozgan province with the growth rate of 4.27 and, in contrast, Markazi province with the growth rate of 1.03, have the highest and lowest urban population growth rates, respectively. In this period, the population growth rate of the country was about 2% per annum. Also, the findings show that in the years 1986 to 2016, only in the provinces of Bushehr, Hormozgan, Khuzestan and South Khorasan, the changes in the urban population growth rate are positive and other provinces have experienced a decline in urban population growth.

Number of cities

In the first census of Iran in 1956, there were 201 cities in the country, and in the last census in 2016 the number of Iranian cities reached 1242 cities (Table 27). This means that the number of Iranian cities over a 60-year period has increased by six times.

As it appears, the provinces of Isfahan and Fars are ranked first and second with more than 100 cities, and Qom is ranked last in the country with only 6 cities. During 2011-2016, Khuzestan province had the largest increase in the number of cities, with 15 cities added. In Yazd province, on the contrary, 3 cities were reduced. During 2011-2016, the number of cities in the provinces of Tehran, Qom, Qazvin, Lorestan, Western Azerbaijan, and Sistan-va-Baluchestan remained stable.

Tables 28-30 show the distribution of cities in the country by province, and by population size, during 1996-2016. The urban population is presented in the form of 9 categories. The results of Table 27 shows that in the provinces of East Azarbaijan, West Azarbaijan, Ardebil, Ilam, Bushehr, South Khorasan, North Khorasan, Khuzestan, Zanjan, Fars, Kurdistan, Kermanshah, Kohgiluyeh-va-Boyerahmad, Lorestan, Hamedan and Hormozgan, (in 16 provinces of the country), cities with

less than 5 thousand population are dominating. In the provinces of Isfahan, Khorasan Razavi, Chaharmahal-va-Bakhtiari, Semnan, Qazvin, Kerman, Golestan, Central, Yazd and Mazandaran, most of the cities are in the population level of 5-10 thousand people. In the provinces of Sistan-va-Baluchestan and Guilan, cities with 10 to 25 thousand people are dominating. In the Tehran province, 10 out of the 42 cities have a population of 25 to 50 thousand people. In the province of Alborz, 4 out of 17 cities in the province have a population of 100 to 250 thousand people.

Table 25. Urbanization rate in the country by province, 1996-2016

Province	2006	2011	2016	Change during 2006-2016
whole country	68.5	71.4	74.0	5.5
East Azarbaijan	66.7	69.2	71.9	5.2
Western Azerbaijan	60.0	62.7	65.4	5.4
Ardebil	58.3	64.0	68.2	9.9
Esfahan	83.3	85.4	88.0	4.7
Ilam	60.7	64.0	68.1	7.4
Alborz	-	90.5	92.6	-
Bushehr	65.2	68.2	71.9	6.7
Tehran	91.3	92.8	93.9	2.6
Chaharmahal-va-Bakhtiari	51.6	58.2	64.1	12.5
South Khorasan	51.3	56.0	59.0	7.7
Khorasan Razavi	68.2	79.2	73.1	4.9
North Khorasan	48.4	51.5	56.1	7.7
Khuzestan	67.2	71.0	75.5	8.3
Zanjan	58.0	62.5	67.3	9.3
Semnan	74.7	77.0	79.8	5.1
Sistan-va-Baluchestan	49.6	49.0	48.5	1.1-
Fars	61.2	67.6	70.1	8.9
Qazvin	68.1	73.1	74.8	6.7
Qom	93.9	95.2	95.2	1.3
Kurdistan	59.4	66.0	70.8	11.4
Kerman	58.5	57.5	58.7	0.2
Kermanshah	66.8	69.7	75.2	8.4
Kohgiluyeh-va-Boyerahmad	47.6	52.6	55.7	8.1
Golestan	49.2	51.0	53.3	4.1
Guilan	53.9	60.3	63.3	9.4
Lorestan	59.4	61.3	64.5	5.1
Mazandaran	53.2	54.7	57.8	4.6
Markazi	69.0	73.9	76.9	7.9
Hormozgan	47.1	50.0	54.7	7.6
Hamedan	57.6	59.2	63.1	5.5
Yazd	79.7	82.8	85.3	5.6

Source: Census 2006, 2011 and 2016

Table 26. Annual growth rate of the urban population of the country by province during 1986-2016

Province	1986-1996	1996-2006	2006-2011	2011-2016	Changes in the rate during 1986-2016
whole country	3.21	2.74	2.14	1.97	1.24-
East Azarbaijan	2.37	1.83	1.43	1.72	0.65-
Western Azerbaijan	3.83	2.75	2.30	2.02	1.81-
Ardebil	3.26	2.33	2.30	1.63	1.63-
Esfahan	3.27	2.68	2.87	1.58	1.69-
Ilam	4.88	4.19	3.46	2.06	2.82-
Alborz	5.18	2.46	1.50	2.84	2.34-
Bushehr	2.57	3.88	4.05	3.48	0.91
Tehran	2.04	2.38	1.65	1.95	0.09-
Chaharmahal-va-Bakhtiari	4.1	2.58	3.33	3.12	0.98-
South Khorasan	3.94	4.08	2.58	4.11	0.17
Khorasan Razavi	2.77	2.83	2.49	1.75	1.02-
North Khorasan	4.37	2.95	2.63	1.62	2.75-
Khuzestan	1.66	2.06	2.29	2.00	0.34
Zanjan	3.07	2.69	2.56	2.30	0.77-
Semnan	3.41	2.55	2.00	2.88	0.53-
Sistan-va-Baluchestan	5.00	4.15	0.82	1.60	3.4-
Fars	3.00	2.06	3.21	1.83	1.17-
Qazvin	4.22	3.47	2.45	1.63	2.59-
Qom	3.65	2.37	2.20	2.34	1.31-
Kurdistan	5.12	1.95	2.87	2.84	2.28-
Kerman	4.26	3.89	1.71	1.92	2.34-
Kermanshah	2.94	1.35	1.54	1.62	1.32-
Kohgiluyeh-va-Boyerahmad	6.73	3.53	2.78	2.77	3.96-
Golestan	3.39	3.05	2.65	1.90	1.49-
Guilan	2.95	2.13	2.93	1.38	1.57-
Lorestan	2.89	1.84	1.07	1.07	1.83-
Mazandaran	2.95	2.67	1.60	2.44	0.51-
Markazi	3.95	2.88	2.31	1.03	2.92-
Hormozgan	3.72	4.07	3.58	4.27	0.55
Hamedan	3.71	1.92	1.19	1.07	2.64-
Yazd	3.65	2.96	2.41	1.77	1.88-

Source: censuses from 1986 to 2016

Table 27. Number of cities in the country by province, 1986- 2006

Province	2006	2011	2016	Changes in number during 2011-2016
whole country	1012	1139	1242	103
East Azarbaijan	57	58	62	4
Western Azerbaijan	36	42	42	0
Ardebil	21	24	26	2
Esfahan	92	101	107	6
Ilam	19	21	25	4
Alborz	-	16	17	1
Bushehr	29	32	37	5
Tehran	51	39	42	3
Chaharmahal-va-Bakhtiari	26	31	40	9
South Khorasan	20	25	28	3
Khorasan Razavi	66	72	73	1
North Khorasan	15	18	22	4
Khuzestan	47	61	76	15
Zanjan	16	18	21	3
Semnan	16	17	20	3
Sistan-va-Baluchestan	32	37	37	0
Fars	73	93	102	9
Qazvin	24	25	25	0
Qom	5	6	6	0
Kurdistan	23	25	29	4
Kerman	57	64	71	7
Kermanshah	28	29	32	3
Kohgiluyeh-va-Boyerahmad	13	16	17	1
Golestan	24	25	29	4
Guilan	49	51	52	1
Lorestan	23	25	25	0
Mazandaran	51	53	58	5
Markazi	27	32	33	1
Hormozgan	22	32	38	6
Hamedan	27	27	29	2
Yazd	23	24	21	3-

Source: Census 2006, 2011 and 2016

Table 28. Distribution of cities in terms of population by province, 2006

Province	.No	(Population (in thousand								
		Less than 5	5-9	10-24	25-49	50-99	100-249	250-449	500-999	More than 1000
East Azarbaijan	57	22	13	12	4	3	2	0	0	1
Western Azerbaijan	36	11	9	3	5	3	4	0	1	0
Ardebil	21	8	6	2	2	2	0	1	0	0
Esfahan	92	24	23	26	8	5	4	1	0	1
Ilam	19	9	3	4	2	0	1	0	0	0
Bushehr	29	8	9	8	1	2	1	0	0	0
Tehran	51	5	6	13	8	8	8	1	0	2
Chaharmahal-va-Bakhtiari	26	4	8	10	3	0	1	0	0	0
southern Khorasan	20	9	5	4	1	0	1	0	0	0
Khorasan Razavi	66	24	22	7	6	2	4	0	0	1
North Khorasan	15	8	1	2	1	2	1	0	0	0
Khuzestan	47	8	9	13	3	5	8	0	1	0
Zanjan	16	6	4	2	2	1	0	1	0	0
Semnan	16	5	5	2	1	1	2	0	0	0
Sistan-va-Baluchestan	32	13	4	8	1	3	2	0	1	0
Fars	73	14	24	21	3	8	2	0	0	1
Qazvin	24	8	5	5	3	2	0	1	0	0
Qom	5	2	2	0	0	0	0	0	1	0
Kurdistan	23	12	2	2	2	3	1	1	0	0
Kerman	57	18	20	9	4	3	2	0	1	0
Kermanshah	28	14	2	4	5	2	0	0	1	0
Kohgiluyeh-va-Boyer-ahmad	13	4	3	3	0	2	1	0	0	0
Golestan	24	2	6	7	7	0	1	1	0	0
Guilan	49	15	12	12	6	2	1	0	1	0
Lorestan	23	12	2	1	2	3	2	1	0	0
Mazandaran	51	13	15	8	9	2	3	1	0	0
Markazi	27	8	8	6	2	1	1	1	0	0
Hormozgan	22	7	4	6	3	1	0	1	0	0
Hamedan	27	11	5	5	2	2	1	1	0	0
Yazd	23	7	4	5	4	2	0	1	0	0

Source: Mahmoudian and Ghasemi-Ardahaee, 2013

Table 29. Distribution of cities in terms of population categorized by province, 2011

Province	.No	(Population (in thousand								
		Less than 5	5-9	10-24	25-49	50-99	100-249	250-449	500-999	More than 1000
East Azarbaijan	58	19	17	10	6	3	2	0	0	1
Western Azerbaijan	42	15	10	4	5	3	4	0	1	0
Ardebil	24	12	5	2	2	2	0	1	0	0
Esfahan	101	29	27	26	6	7	4	1	0	1
Alborz	16	3	2	4	0	3	3	0	0	1
Ilam	21	11	2	5	2	0	1	0	0	0
Bushehr	32	8	9	10	1	3	1	0	0	0
Tehran	39	4	2	9	8	6	5	4	0	1
Chaharmahal-va-Bakh-	31	7	10	9	3	1	1	0	0	0
southern Khorasan	25	14	5	3	2	0	1	0	0	0
Khorasan Razavi	72	25	24	8	7	3	4	0	0	1
North Khorasan	18	9	2	4	0	2	1	0	0	0
Khuzestan	61	14	15	14	3	5	9	0	0	1
Zanjan	18	6	6	2	1	2	0	1	0	0
Semnan	17	5	6	2	1	1	2	0	0	0
Sistan-va-Baluchestan	37	13	8	9	1	4	1	0	1	0
Fars	93	29	27	17	9	7	3	0	0	1
Qazvin	25	5	8	6	1	4	0	0	0	0
Qom	6	3	2	0	0	0	0	0	0	1
Kurdistan	25	13	2	2	2	3	2	1	0	0
Kerman	64	22	20	12	4	1	4	0	1	0
Kermanshah	29	14	2	5	4	3	0	0	1	0
Kohgiluyeh-va-Boyer-	16	6	3	4	0	2	1	0	0	0
Golestan	25	2	7	7	7	0	1	0	0	0
Guilan	51	6	10	15	5	3	1	0	1	0
Lorestan	25	12	4	0	3	4	1	1	0	0
Mazandaran	53	14	15	9	8	3	3	1	0	0
Markazi	32	11	10	5	3	1	1	1	0	0
Hormozgan	32	13	8	6	3	1	0	1	0	0
Hamedan	27	11	4	6	2	2	1	0	1	0
Yazd	24	6	5	6	4	2	0	1	0	0

Source: Mahmoudian and Ghasemi-Ardahaee, 2013

Table 30. Distribution of cities in terms of population categorized by province, 2016

Province	.No	(Population (in thousand								
		Less than 5	5-9	10-24	25-49	50-99	100-249	250-449	500-999	More than 1000
East Azarbaijan	62	22	16	11	6	3	3	0	0	1
Western Azerbaijan	42	14	10	3	7	3	4	0	1	0
Ardebil	26	11	8	2	2	2	0	0	1	0
Esfahan	107	27	34	25	9	6	4	1	0	1
Alborz	17	3	0	3	3	3	4	0	0	1
Ilam	25	15	2	5	2	0	1	0	0	0
Bushehr	37	11	9	10	3	2	2	0	0	0
Tehran	42	5	1	6	10	8	7	4	0	1
Chaharmahal-va-Bakhtiari	40	12	13	10	3	1	1	0	0	
southern Khorasan	28	14	7	3	3	0	1	0	0	0
Khorasan Razavi	73	23	24	10	7	2	5	1	0	1
North Khorasan	22	14	1	3	1	2	1	0	0	0
Khuzestan	76	20	20	14	6	6	8	1	0	1
Zanjan	21	9	6	2	1	2	0	1	0	0
Semnan	20	6	7	3	1	1	2	0	0	0
Sistan-va-Baluchestan	37	10	8	12	1	2	3	0	1	0
Fars	102	34	31	17	9	7	3	0	0	1
Qazvin	25	5	8	6	0	5	0	1	0	0
Qom	6	3	1	1	0	0	0	0	0	1
Kurdistan	29	16	3	1	2	3	3	1	0	0
Kerman	71	22	24	15	2	3	4	0	1	0
Kermanshah	32	18	1	4	5	3	0	0	1	0
Kohgiluyeh-va-Boyerah-mad	17	6	3	5	0	2	1	0	0	0
Golestan	29	5	8	7	5	2	1	1	0	0
Guilan	52	14	11	17	4	3	2	0	1	0
Lorestan	25	12	4	0	3	3	2	1	0	0
Mazandaran	58	13	17	12	7	5	2	2	0	0
Markazi	33	11	13	4	2	1	1	0	1	0
Hormozgan	38	17	9	5	5	1	0	0	1	0
Hamedan	29	11	6	6	1	3	1	0	1	0
Yazd	21	4	5	5	3	3	0	0	1	0

Source: Census, 2016

Table 31 shows that in 2006, most cities of the country (about 31%), had less than 5000 people. This figure continued to grow to about 33% in 2011 and 2016. In 2006, more than 75% of the cities in the country had fewer than 25,000 people, and the proportion reached 76% in 2011 and 2016. In general, the majority of the cities in Iran have less than 25 thousand people, and during 2006-2016, no significant change has taken place in the urban population class.

Table 31. Distribution of cities by population in the period of 1995-2016

Year	No. and percentage	(Population (in thousand								
		Less than 5	5-9	10-24	25-49	50-99	100-249	250-449	500-999	More than 1000
2006	1012	311	241	210	100	70	54	13	7	6
	100.0	30.7	23.8	20.7	9.8	6.9	5.3	1.2	0.7	0.6
2011	1139	371	277	222	103	81	57	15	6	8
	100.0	32.6	24.3	19.4	9.0	7.1	5.0	1.3	0.5	0.7
2016	1242	407	310	227	113	87	66	14	10	8
	100.0	32.8	24.9	18.2	9.0	7.0	5.3	1.1	0.8	0.6

Source: Mahmoudian and Ghasemi-Ardahaee 1392; census of 2016

Table 32 shows the population of cities with more than one million inhabitants, or the metropolises of the country, during 1956-2016. In 2016, there were 8 cities in the country with a population of over one million people. In 2016, in comparison with 2011, Shiraz replaced the city of Tabriz and climbed to fifth place. The city of Qom, which was the last city in 2011 with a population of more than one million people, occupied the ranking of the city of Ahwaz in 2016. Ahwaz is now the eighth and last city in the country with a population of more than one million people. In 2016, about 21 million people of the total population of the country lived in these 8 cities, which accounts for about a quarter of the country's population. These cities account for more than 35 percent of the country's urban population, which has been around 60 million people, meaning that more than a third of the country's population lives in these eight cities. It should be noted that "Soomar" in the city of Qasreshirin, Kermanshah province with a population of 180 is the smallest city in terms of population. The cities of Balawe in the province of Ilam and Goznak in Mazandaran province with a population of 264 and 319 respectively, are second and third smallest cities.

Table 32. The population of the metropolises of the country, 1956-2016

City	(Population (in thousand							
	1956	1966	1976	1986	1996	2006	2011	2016
Tehran	1512	2720	4530	6043	6759	7705	8154	8693
Mashhad	242	410	668	1464	1887	2427	2749	3001
Esfahan	255	424	662	987	1266	1600	1756	1961
Karaj	15	44	138	275	941	1377	1615	1592
Shiraz	171	270	426	848	1053	1227	1461	1565
Tabriz	290	403	598	971	1191	1400	1495	1558
Qom	100	134	247	543	778	952	1074	1201
Ahvaz	120	206	334	580	805	970	1112	1184
Total	2705	4611	7603	11711	14680	17658	19416	20755

Source: Mahmoudian andGhasemi-Ardahaee, 1392; census of 2016

Table 33 shows that between 2006 and 2006, population growth rate was positive in Tehran and Isfahan metropolises; and negative in other metropolises. In other words, although the absolute population in metropolises has been increasing, but in most of these metropolises, population growth has declined. Karaj is the only metropolitan city that has had a negative population growth during 2011-2016, which means that the city has lost its absolute population during the mentioned period from about 1600 thousand to about 1500 thousand people.

Table 33. The growth rate of metropolitan areas in 2016 during 1956-2016

City								Changes over 2006-2016
	1956-1966	1966-1976	1976-1986	1986-1996	1996-2006	2006-2011	2011-2016	
Tehran	6.05	5.23	2.92	1.13	1.32	1.14	1.29	0.15
Mashhad	5.41	5.00	8.16	2.57	2.55	2.52	1.77	0.75-
Esfahan	5.22	4.56	4.07	2.52	2.37	1.88	2.23	0.35
Karaj	11.36	12.11	7.14	13.09	3.88	3.24	0.29-	3.53-
Shiraz	4.67	4.67	7.13	2.19	1.54	3.55	1.38	2.17-
Tabriz	3.35	4.03	4.97	2.06	1.63	1.32	0.83	0.49-
Qom	2.97	6.31	8.20	3.66	2.04	2.44	2.26	0.18-
Ahvaz	5.55	4.95	5.67	3.33	1.88	2.77	1.26	1.51-
Total	5.48	5.13	4.41	2.29	1.86	1.92	1.34	0.57-

Source: Mahmoudian and Ghasemi-Ardahaee, 1392; census of 2016

Several factors have contributed to increasing the urban population of the country. The rural-urban migration, the natural increase of urban population, conversion of rural into urban areas, and annexations of villages into bigger towns and cities, are all factors influencing the growth of urban population. In the early decades, due to the significant size of rural-urban migration, migration has been the main driver of urban population growth. With the decline of rural-urban migration and growth of urban population, the influence of other factors has been augmented. At present, due to a significant reduction in the percentage of rural population, the main growth of the urban population is due to the natural urban population growth.

Another significant factor in the growth of urban population is that the definition of 'city' has changed since the early 1990s from 'population size' as a criterion to that of 'having an administrative and political unit' (i.e., a municipality). This change had a significant impact on urbanization: because cities received larger funds compared to villages, and because of some other social and political advantages, many low-income rural areas turned into cities. This phenomenon also happened in larger units such as districts, cities and provinces. The annexation of villages to cities has been largely true of metropolitan cities, and its impact on urban population growth is lower than other factors. In general, the rise of urbanization in Iran, like other developing countries, has been largely due to economic, social and political centralizations.

Challenges related to migration and urbanization

The huge migration that has taken place, and the consequent growth of urbanization in the country in the past decades, has had a number of implications, including imbalanced distribution of population across the country. Continuous migration from less-developed into more developed areas have increased the concentration of population in the central and northern regions. The continuation of such a situation will increase inequality in the distribution of the population.

The relatively large rural-urban migration population has increased the economic, social and demographic difference between rural and urban areas. Many rural areas are subject to destruction. With the migration of young people, the population age structure of rural areas has become aging. The remaining population, mostly elderly and women, do not possess sufficient financial means. In addition to economic problems, many rural elders who live far away from their children and close relatives,

suffer from mental and psychological problems (Mahmoudian and Zarghami, 2016). Also, as a result of the migration of most rural men, the rural women have less chances of marriage. For example, the percentage of married rural women aged 30-40 has been less that their urban counterparts.

Among other consequences of internal migration and urbanization are the growing number of people living in urban fringe areas and environmental pollution (Mahmoudian and Ghasemi-Ardahaee, 2013). According to unofficial estimates, about one-third of urban population now lives in informal settlements and urban fringes with poor living conditions.

Migration and Urbanization Policymaking in Iran

There are two main categories of policies related to migration and population redistribution: direct policies, such as travel and resettlement restrictions; and indirect policies such as improving the conditions of areas of origin (such as rural development programs).

Regarding direct migration policies, certain regulations were enforced (after the Islamic Revolution) on settlement and occupation of people in Tehran and other big cities, including restrictions on buying residential units, employment permits and even enrollment of children in schools. This policy, which aimed to control the growth of the population of Tehran and several large cities, was implemented in a limited period in the country and led to a decline in Tehran's population growth and an increase in the population of suburban areas of Tehran. Another policy that was implemented was the policy of establishing new towns around Tehran. The creation of new towns/cities, like Hashtgerd, proved successful in partly redistributing the population of Tehran.

One of the other direct policies was the transfer of the population to other areas. Some action was taken with regard to relocating Tehran-based government employees to other cities, but it was never seriously followed up. Also, changing the capital city as an option to control the population of Tehran has sometimes been considered, but effective action has not been taken in this regard (Mahmoudian and Ghasemi-Ardahaee, 2013).

With regard to rural development, effective steps have also been taken in Iran, the starting point of which can be attributed to the launch of development programs in the early 1950's. Rural development programs were implemented based on the

development of agricultural sector in the form of agricultural crop growth, changing land ownership rights, employment generation, infrastructure strengthening, poverty and inequality reduction, and rural depopulation (Shakouri, 2005). After the Revolution, rural development was pursued in the form of national development programs. The Sixth Development Plan (2017-2022) emphasizes rural development through regional equilibrium, agricultural development, water management, environmental protection, improvement of rural housing, and empowerment of rural populations. The General Population Policies of the Country (2013) also addresses migration and population redistribution through geographical distribution of the population; retention and attraction of populations in rural, less-populated and border areas.

The failure in realization of the goals of the development plans before the Revolution resulted in reduced number of employees and smaller share of the agricultural sector and caused widespread rural-urban migration (Shakouri, 2005). Similarly, the development of rural areas after the Revolution paved the way for migration to the cities. The incompatibility of the measures taken with the economic, social and cultural conditions of rural areas was one of the main causes of ineffectiveness of rural development programs in keeping the population, especially young people in rural areas.

Policies related to urban planning are usually expressed in the form of national development plans. The Sixth Development Plan has detailed the population policies. Examples of these policies are improving housing and transportation in cities and urban fringe areas, preventing the creation of informal settlements, and improving the living conditions in urban fringe areas.

Policy requirements

In Iran, no well-designed and targeted population policies have been enforced on internal migration in the country. Nonetheless, some actions, such as the creation of new cities, have had an effect on population redistribution. Through the application of appropriate migration policies, some degree of population balance can be created between areas. In these migration policies, the origins and destination of migrations, the characteristics of migrants and the causes of migration should be carefully considered. Implementing appropriate policies can reduce unwanted migrations and redistribute the population appropriately.

Considering the situation of migration and urbanization in the country and in line with sections 9, 10 and 11 of the General Population Policies of the Country, which focus on the issue of migration management and spatial redistribution, targeted and effective planning is essential in the following cases:

• Establishing a migration authority whose role is to guide and assist in the production and collection of data and information, support research activities, and engage with legislative bodies to formulate appropriate migration policies.

• Diversifying migratory data sources by improving the production of record data and performing periodic surveys to better understand the scope, patterns and causes of migration.

• Applying a cost-benefit approach to migration, given that migration does not always have negative consequences.

• More attention to the policy of creating and strengthening middle and alternative cities (given its positive performance).

• Special attention to central or large villages in order to integrate small villages and optimize allocation of facilities.

• More attention to development and economic growth as main drivers of migration. Reducing regional inequalities will bring about a greater balance of migration flows.

• Identifying and organizing migrants in destinations (especially those living in fringe areas of mega cities) in order to achieve sustainable urban development, as well as paying special attention to the remaining populations in rural areas, with a view to improving their living conditions.

• Strengthening urban planning to achieve sustainable urban development with the aim of providing prosperity and welfare for all people residing in urban areas and in urban fringe areas.

• Attention to the economic, social and environmental conditions of rural areas, in all rural development planning.

Summary and Conclusions

Human migration, as one of the most important variables affecting the demographic changes of countries, has become even more significant in recent years. The increasing importance of migration stems from the fact that in most countries of the world, fertility and mortality are relatively at low levels, and therefore the migration factor in the population changes plays a more significant role. The situation and developments of internal migration in Iran are also important from the perspective that fertility and mortality are at a low level and, therefore, internal migration can have significant effects on the geographic composition of the country's population. Urbanization as a consequence of internal migration plays a significant role in changing the country's economic and social situation. Rapid urbanization, as in many developing countries, has had various consequences. The purpose of this study was to investigate the status of internal migration and urbanization in Iran with respect to their economic, social and demographic correlates.

The findings showed that the country had the highest number of migrants in the period from 1996 to 2006, which was more than 12 million, i.e. over 17% of the total population at that time. In the periods of 2006-2011 and 2011-2016, when census intervals have changed from ten years to five years, naturally, the total number of migrants was reduced compared to previous censuses, but it is worth noting that in the preceding 5 years, during 2006-2011, the number of migrants in the country had been declining by about one million. In the 5 years leading up to the 2016 census, a total of about 4 million migrants were registered in the country, accounting for about 5% of the total population of the country. Between 1976 and 2011, the size of foreign migrants entering the country decreased to about 2 percent from about 12 percent, but over the last five years, the share of foreign migrants of the total number of migrants has slightly increased. In sum, statistics show that the highest number of foreign migrants dates back to 1965-1986, because of the inflow of Afghan immigrants to Iran following the Soviet occupation.

In the period of 2011-2016, compared to preceding periods, the share of inter-provincial and inter-Shahrestan migrations increased. In contrast, intra-Sahrestan migrations have decreased. This means that in the recent censuses, the migrants have moved at longer intervals.

In the period of 1976-2016, the trend of urban-urban migration in the city has been quite upward and increased from 40 to 68 percent. In contrast, rural-rural migration

experienced a completely descending trend. Meanwhile, the continuously declining trend of rural-urban migration during 1976-2011, was increased again by 2 percent in the period of 2011-2016. In total, over the past 40 years, around one million people have internally migrated annually. The number of migrants in the country has experienced an increasing trend until 2006, but started to decline afterwards.

In the period of 2011-2016, the provinces of West Azarbaijan, Kerman and Khorasan Razavi, had the least in-migration; and the provinces of North Khorasan, South Khorasan and Lorestan had the most out-migration in the country. The in-migration index also indicates that during the same period, the provinces of Kerman, Sistan-va-Baluchestan, and West Azarbaijan had the least in-migration and in the provinces of Yazd, Semnan and Alborz had the highest rate of in-migration. The provinces of Lorestan, Chaharmahal, Bakhtiari and Ilam had the highest net negative migration rates; and the provinces of Yazd, Alborz and Semnan had the highest net positive migration rates. These figures show that Yazd, Alborz and Semnan are the top destinations, and Lorestan, Chaharmahal-va-Bakhtiari and Ilam are the most prominent areas of origin for migrants in the recent census. Studies on inter-provincial migrations showed that, firstly, Tehran province is still a major destination for many migrants and plays an important role in attracting migrants from other provinces; secondly, migrants generally move between and among adjacent provinces; and thirdly, migration from the west has been largely toward the center and the capital. Therefore, Tehran plays a trans-regional role in internal migration.

The total migration rate, which indicates the size of two-way movements, indicates that the provinces of Alborz, Semnan and Qom have the largest population movements. In contrast, the provinces of Kerman, West Azarbaijan and East Azarbaijan have the lowest population movements. Migration ratio shows that migration in Lorestan province has had a decreasing effect on population growth compared to fertility and mortality. In contrast, this effect has been increasing for the provinces of Semnan and Alborz. Analyses of the relationship between migration and population growth reveal that migration trend has decreased the natural population growth in the Northern Khorasan and Lorestan provinces and, on the contrary, has increased the natural population growth in the provinces of Alborz and Semnan.

The age and sex pattern of migrants showed that the peak of migration flows in the country is approximately between the ages of 14 and 34, and from the age of 34 onward, the size of the migrant population is reduced. In other words, migration is still age and sex-specific. Compared to men, the share of women in intra-

provincial migrations is higher than the inter-provincial migrations, meaning that women are more likely to move within their own provinces, while men contribute to long-distance migrations more than women. The findings also confirm the migration among women aged 20-29 are more than men of the same age group, and women mostly had urban-urban and rural-urban migrations, while men's rural-urban migrations were more than women. Aside from migration due to "following the household's decision", women mainly migrate for the purpose of studying, while men's migrations are mainly because of finding better jobs and to serve the compulsory military service.

The younger migrants were more literate and had fewer children. They had lower levels of education, were married and possibly migrated to seek jobs, so they had higher employment rates compared to non-migrants. Women's desire for migration to promote their economic and social conditions has reduced the sex ratio of migrants compared to the same figure for non-migrants.

The urban population of the country has risen from about 30 percent in 1956 to 74 percent in 2016. The provinces of Qom, Tehran and Alborz have the highest urbanization rate, and the provinces of Sistan-va-Baluchestan, Golestan and Hormozgan have recorded the lowest urbanization rates in the period of 2011-2016. Over 95% of the population of the Qom province are urban residents, in contrast to 48% urban population of Sistan-va-Baluchestan province. The number of cities in Iran was 1242 in 2016, while there were only 119 cities in the country in the first census in 1956, i.e. a growth of more than 10 times, which indicates the relatively rapid growth of cities and urban population. A noticeable portion of cities during 2006-2016 had less than 5 thousand people. In the 2016, about 33% of the cities of the country were in this population group, showing an increase compared to the previous two censuses.

In total, and in the last three censuses, more than 50% of the country's urban population has inhabited in cities with fewer than 10,000 people. In 2016, there were 8 metropolitan or major cities in the country with a population of over one million. In 1956, only Tehran had a population of more than one million. Now a total of 21 million people, about one third of the urban population of the country, live in eight cities. It should be noted that the rapid growth of the major cities of the country continued until 1996, but the pace has relaxed since then.

It seems that development (in the sense of improvement of economic and social conditions) has played a major role in the re-distribution of the population resulting from migration. Although early large-scale rural-urban migrations were more due to rural push factors (e.g. low incomes and population growth) rather than high development of the destinations, the recent migrations have been mainly due to human capital and the development of the destinations. Therefore, due to the fluctuating economic and social conditions of the country, migration movements also fluctuate. In terms of internal migration, the situation in Iran is lower than the global average (Bell et al., 2015). In this regard, economic growth will lead to increased internal emigrations.

Centralization has been a major feature of migration movements. Early migrations were mostly directed towards the capital and, to some extent, big cities. As the country became more developed, migration destinations became more diversified. Currently, the central regions of the country are the top destinations for migrants. With the expansion of general and academic education and increased human capital, women's migration (for study and for improvement of living conditions) has increased. In addition, as women become more empowered, their role in migration decision-making has also increased (Mahmoudiani, 2017).

Imbalanced distribution of population, urbanization, rural evacuation, increased populations living in urban fringe areas and environmental pollution have been the negative consequences of internal migration in the country. To balance the population redistribution, different policies, like controlling the population of big cities, creating new towns and rural development, have been implemented. Of the policies, controlling the population of Tehran, through changing the destination of migrants to other areas and creating intermediary cities, has been more successful. It seems that upgrading the knowledge of the process and conditions of migration, reducing regional inequalities, adopting a cost-benefit approach to migration, proper integration of migrants in the destination, and sustainable rural development seem to result in a more balanced redistribution of the population.

References

Bell, M., E. Charles-Edwards, D. Kupiszewska, M. Kupiszewskai, J. Stillwell and Y. Zhu, (2014). "International migration data around the world: assessing contemporary practice", Population, Space and place, pp. 1-33.

Bell, M., Elin Charles-Edwards, Philipp Ueffing, John Stillwell, Marek Kupiszewski, and Dorota Kupiszewskaand. (2015). "Internal Migration and Development: Comparing Migration Intensities around the World", Population and Development Review, 41(1):33-58.

Castles, S., and M. Miller, (1998). The Age of Migration: International Population Movements in the Modern World, 2nd edition, London: Macmillan Press.

Chant S. and S. A. Radcliffe (1992). "Migration and development: the importance of gender", in: Sylvia Chant (ed.), Gender and migration in developing countries, London, England, Belhaven Press, pp. 1-29.

DaVanzo, J. (1981). "Microeconomic approaches to studying migration decisions", in: De Jong, G. F., and Gardner, R. W. (eds), Migration Decision Making; Multidisciplinary Approaches to Micro Level Studies in Developed and Developing Countries, New York: Pergamon Press.

de Haas, Hein (2010). "Migration transitions: a theoretical and empirical inquiry into the developmental drivers of international migration", Working Paper, International Migration Institute, University of Oxford.

De Jong, G. F. (2000). "Expectations, gender and norms in migration decision-making", Population Studies, 54: 307-319.

De Jong, G. F., and R.W. Gardner, (1981). Migration Decision Making: Multidisciplinary Approaches to Micro Level Studies in Developed and Developing Countries, New York: Pergamon Press.

Fassmann, Heinz and Elizabeth Musil (2013). "Conceptual framework for modelling longer term migratory, labor market and human capital processes", Working Paper, No. 1, Univesitat Wien.

Harris, J. and M. P. Todaro (1970). "Migration unemployment and development", American Economic Review, 60:126-142.

Haug, S. (2008). "Migration networks and migration decision-making", Journal of Ethnic and Migration Studies, 34(4): 585 -605.

Hicks, J. R. (1932). The Theory of Wages, Macmillan, London.

Khajeh-Zadeh, Faezeh (2017). "A study of environmental migration in Iran", (in Persian), MA Thesis in Demography, Faculty of Social Sciences, University of Tehran.

Kurekova, L. (2010). "Theories of migration: critical review in the context of EU East-West flows", Best Participant Essay Series, European University Institute.

Lee, Everet S. (1966). "A theory of migration", Demography, 3(1):47-57.

Lewis, W. A. (1954). "Economic development with unlimited supplies of labor", The Manchester School, 22:139-191.

Mabogunje, A. L. (1970). Systems Approach to a Theory of Rural-Urban Migration. Geographical Analysis 2:1-18.

Mahmoudani, Sarajeddin (2017). "A study of the role of women and its determinants in the process of decision making of migration to Tehran province", (in Persian), Ph.D. Thesis in Demography, Faculty of Social Sciences, University of Tehran.

Mahmoudian, Hossein (2008). "Afghans' migration to Iran: changes in social, economic and demographic situation and adaptation to the host society", (in Persian), Journal of Population Association of Iran (in Persian), Vol. 2, No. 4, pp. 42-69.

Mahmoudian, Hossein and Ali Ghasemi-Ardahaee (2013). Internal Migration and Urbanization in Iran, Faculty of Social Sciences of the University of Tehran and UNFPA (http://iran.unfpa.org/siuation.asp).

Mahmoudian, Hossein and Hossein Zarghami (2016). "The effects of children's migration on social support of rural aged parents", Rural Research, (in Persian), Vol. 7, No. 1, pp. 29-53.

Mahmoudian, Hossein and Mahmoud Moshfegh (2012). Internal Migration in Iran (in Persian), Deputy of Social and Cultural Affairs, Tehran Municipality.

Martin, P. L., and J. E. Taylor. (1996). "The anatomy of a migration hump," in Development strategy, employment, and migration: Insights from models. Edited by J. E. e. Taylor, pp. 43-62. Paris: OECD, Development Centre.

Massey, D. S., J. Arango, G. Hugo, A. Kouaouci, A. Pellegrino, and J. E. Taylor (1993). "Theories of international migration: a review and appraisal", Population and Development Review, 19(3): 431-66.

Moshfegh, Mahmoud (2010). "Internal migration in Iran: A study the levels and trends of internal migration in Iran and its determinants in the period 1975-2005, (In Persian), Ph.D. Thesis in Demography, Faculty of Social Sciences, University of Tehran.

Parillo, V. N. (2008). Encyclopedia of Social problems, United States: SAGE Publication.

Parrado E. A. and C. A. Flippen (2005). "Migration and gender among Mexican Women", American Sociological Review, 70: 606-632.

Piore, Michael J. (1979). Birds of Passage: Migrant Labor in Industrial Societies, Cambridge, Cambridge University Press.

Ravenstein, E. G. (1885). "On the laws of migration", Journal of the Royal Statistical Society, 48(2):167-235.

Ravenstein, E. G. (1889). "The laws of migration", Journal of the Royal Statistical Society, 52(2):241-305.

Shakouri Ali (2005). Agricultural Development Policy in Iran, (In Persian), Tehran: SAMT Publication.

Sharpe, P. (2001). "Gender and the experience of migration", In: Sharpe, P. (ed.), Women, Gender and Labour Migration: Historical and global perspective, London: Routledge Press.

Shokriani, Mohsen (2015). "Development and migration: The impact of development on the inter-Sahrestan migration in Iran during 2006-2011", (In Persian), MA Thesis in Demography, Faculty of Social Sciences, University of Tehran.

Singer, H. W. (1949). "Economic progress in underdeveloped countries",

Social Research, 16(1):1-11.

Sjaastad, Larry (1962). "The costs and returns of migration", Journal of Political Economy, 70:80-2014.

Skeldon R. (1997). Migration and Development: A global Perspective. Essex: Longman.

Stark, Oded and David E. Bloom (1985). "The new economics of labor migration", American Economic Review, 75(2):173-178.

Stark, Oded and J. Edward Taylor (1989). "Relative deprivation and international migration", Demography, 26(1):1-14.

Stark, Oded and J. Edward Taylor (1991). "Migration incentives, migration types: the role of relative deprivation", The Economic Journal, 101(408):1163-1178.

Statistical Center of Iran (2011). Detailed results of the general census of population and housing.

Statistical Center of Iran (2016). Detailed results of the general census of population and housing.

Stouffer, S. A. (1940). "Intervening opportunities: a theory relating mobility and distance", American Sociological Review, 5(6):845-67.

Todaro, Michael P. (1969). "A model of labor migration and urban unemployment in less-developed countries", American Economic Review, 59:138-148.

Uteng, T. P. (2011). "Gender and migration in developing world", Background Paper, World Development Report, World Bank.

Wallerstein, I. (1980). The Modern World System II, Mercantilism and the Consolidation of the European World-Economy, 1600-1750, New York: Academic Press.

Wallerstein, I. (1974). The Modern World System I, Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century, New York: Academic Press.

White, A. (2009). "Internal migration, identity and livelihood strategies in contemporary Russia", Journal of Ethnic and Migration Review, 35 (4): 555-573.

Wood, Charles (1982). "Equilibrium and historical-structural perspectives on migration", International Migration Review, 16(2):298-319.

Yue, H. (2008). "Three essays on migration", PhD dissertation, Department of Economics, University of Manitoba.

Zanjani, Habibullah (2001). Migration, (In Persian), Tehran: SAMT Publication.

Zelinsky, ZW. (1971). "The Hypothesis of the Mobility Transition". Geographical Review, 61:219-249.

Zipf, G. K. (1946). "The P1 P2/D hypothesis: on the intercity movement of persons", American Sociological Review, 11:677-86.