

## A STUDY ON THE DISPERSAL OF IRANIAN CITIES ACCORDING TO THEIR LATITUDES

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### ABSTRACT

The unsuitable distribution of population among different urban levels and inconsistency between different cities according to their urban hierarchy and also imbalanced dispersal of the cities across the country grounds, altogether have led to several economic, social and political problems for the Iranian citizens. This research generally studies the dispersal of cities based on their locations and their latitudes in particular, and through a descriptive-analytic method. After collecting all data in need related to the cities, they were classified in three segments: located in 25 to 30 degrees, 30 to 35, and 35 to 39; and then these data were analyzed and interpreted. General results show that the first segment-latitudes between 25 to 30 degrees-includes about 25.06% of all Iranian cities; the second one-latitudes between 30 to 35 degrees-includes 31.69% and the last but not the least one-latitudes between 35 to 39 degrees-is where about 43.25% of the Iranian cities are located in. Hence, there is an imbalanced dispersal pattern in Iran in a way that the more we go towards north in Iran, the number of cities increases.

**KEY WORDS:** *Latitude, Iranian Cities, Dispersal*

### Introduction

The urban life is one of the most important aspects of modern social life throughout the world. This is not a new phenomenon and existed in the past, too, but it cannot be compared with what we see today both in the number of cities and their population. In fact, the growth of tendencies towards moving to the cities and urban life as a worldwide matter began in the second half of the 21<sup>st</sup> century. It's a global issue and has occurred in almost every country. This global process has formed the spatial distribution of earth's population. It looks like an irreversible process (Pumain, 2006). The hierarchical system of the cities is a result of central place theory. Generally, the level of each city is determined by the number and diversity of activities that it offers; normally, there is positive relationship between the number and diversity of such activities. So, the cities of higher levels have more population, too. Hence, a first class city is the largest one in the hierarchy and vice versa (Shokuei, 1998). Historical events-especially in recent decades-related to the establishment of governments, industrial revolution and capitalism have also affected forming of the civilizations, common urban life cultural norms, city functions, urban growth and changes in inner and outer

forces. In modern world, the growth of metropolisation has occurred simultaneously with the industrial revolution. The population of cities is increasing everyday as the number of places called city is. The physical expansion of these cities is swallowing the lands around them. Such a phenomenon in our country began long ago in different shapes and aspects and has led to many problems and issues according to the nature and traditional systems of the cities in this region. Due to its geographical location, Iran always has been the path connecting the Eastern and Western world; a region in which many people from different races and nations have been visiting and even living; several languages and accents are spoken and different genetic features are mixed here. In relation with natural elements, traditional cities of Iran have adapted themselves with different environments so that they have become parts of them as well. A mountainous city in Iran has the exact features which the conditions of mountains require. In deserts, cities are formed in a way that follows the environmental circumstances. There have been plans made for reacting to fortunes and misfortunes of natural phenomena in cities of Iran. Fortunes have been used to improve the life style and misfortunes have been restricted by special techniques and methods. Although technical knowledge has had its special conditions due to the time, but cities built in the past have used impressive techniques to control the natural environment optimally. Just take a look at the watering systems in different regions of Iran, especially in the plains of Khuzestan and Isfahan, where aqueducts are built in semi-dry zones. The water pumped into the pipes is used for drinking, or developing parks and fountains, swimming pools and public toilets in different places. Using water and gardens for refreshing the air, decreasing the temperature and building more beautiful structures is a controversial issue by itself. To evaluate this, we need to take a look at cities located in mountainous regions and deserts from Khoy, Isfahan and Khansar to Kashan, Hamedan and Yazd. Historical gardens of Iran such as the Golshan Garden in Tabas or the Hasht Behesht (Eight Heavens), Chahar Baq (Four Gardens) in Isfahan or Baqe Finn (the Finn Garden) in Kashan are other samples of this matter. The spatial distribution system of cities and activities in optimum land use in Iran implies the severe geographical differences; some urban centers have become dominant and ideal places to live and thus lead the economic, social and even political movements in the country. Nevertheless, other national locations are depended to them and are being attracted and attached to them. However, it's not ambiguous that why such a phenomenon is happening, but there is an immediate need for studying how this bimodal is forming a social, economic and cultural break (or gap), which will bring the unity and uniformity of the civilized urban systems of this country to an end.

### Review of Literature

At the beginning of the 21<sup>st</sup> century, the human civilization is moving towards metropolisation more rapidly. The world is becoming a world of cities, born and expanding everywhere in the developing countries. In the 3<sup>rd</sup> world countries, this urban development has led to several inequities between regions and cities, causing the pursuit of better life in migrations (Bergman et al, 2004). The spatial distribution system of cities and optimum land use activities in Iran represents severe geographical differences. Some urban centers have become dominant and ideal places to live and thus lead the economic, social and even political movements in the country. Nevertheless, other national locations are depended to them and are being attracted and attached to them. However, it's not ambiguous that why such a phenomenon is happening, but there is an immediate need for

studying how this bimodal is forming a social, economic and cultural break (or gap), which will bring the unity and uniformity of the civilized urban systems of this country to an end.

Robert M. Anthony (2014) in his research “Political experience and the distribution of urban populations”, studies the effects of political factors on the distribution of urban populations. His findings show that the status of capitals in mega cities of the country is positively related to its supremacy condition. The subject of urban systems in urban geography is the origin of many different theories about residential hierarchies and urban networks, from which the center-around theory of John Freedman, central place of Walter Christaller and the Act of Rank-Size from Zipov can be mentioned. The purpose of these theories is to clarify the residential hierarchy which would help the uniform development (Sarrafı, 2000). Nazariyan (2012) in his book, the Dynamism of Iranian Urban System, discusses different dimensions of city ranking and factors affecting the locating of cities in Iran. In his other book, the Urban Geography of Iran (2000), he proceeds towards locating and formation of Iranian cities according to various elements and emphasizes on the importance of height from the sea level. Many other studies have been carried out across the globe that mentioning all of them needs many articles; Denise et al, in their work “City Size Distribution and Metropolisation”, suggested two theoretical interpretations related to the city size distribution: 1.The central place theory 2.The simple random model that is particularly taken from the Rank-Size model. Using this model, they defined a city size inequity index for each part of the world and believe that such inequity in city size is mostly depended to the residential age than economic development level (Denise et al, 2006).

## Methodology

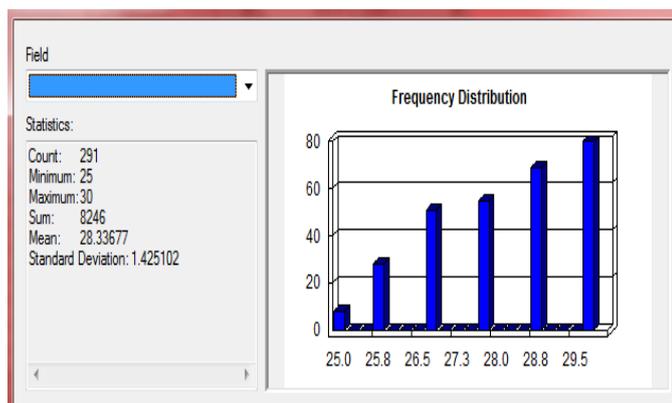
Since this is a descriptive-analytical research, after all needed data and geographical information related to the cities of Iran (1161 cities, according to the latest statistics in 2011) were collected, the Geographical Information System (GIS) was used to analyze and interpret the data.

## Findings

The city dispersal and concentration of urban population is not equal in different regions of our country. North, west and southwestern parts of the country have good climatic conditions; they are special geographical locations which have been the birthplace of some of very first civilizations and are still more crowded than the other regions. Even due to special geographical location, the rainfall average in Iran differs and as we go from west to east, it will decrease. Now, according to the Latitudes between (25 to 39 northern degrees) in which Iran is located, the Iranian cities can be divided into three classifications as follows:

### 1<sup>st</sup> Category: latitudes between 25-30 northern degrees

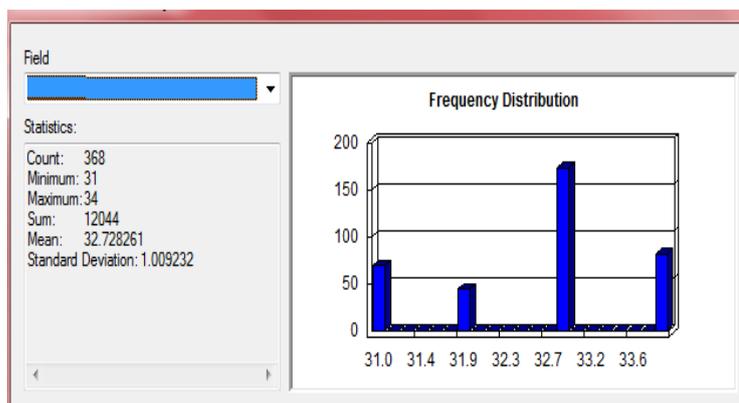
As you can see in figure 1, the total number of cities in this part is 291, most of them located in latitudes between 28 to 30 degrees. Total average for this class is 28.33 degrees of northern latitude.



**Figure 1:** The status of Iranian cities located in latitudes between 25-30 northern degrees (resource: Findings of the present study, 2014)

2<sup>nd</sup> category: latitudes between 31-35 northern degrees

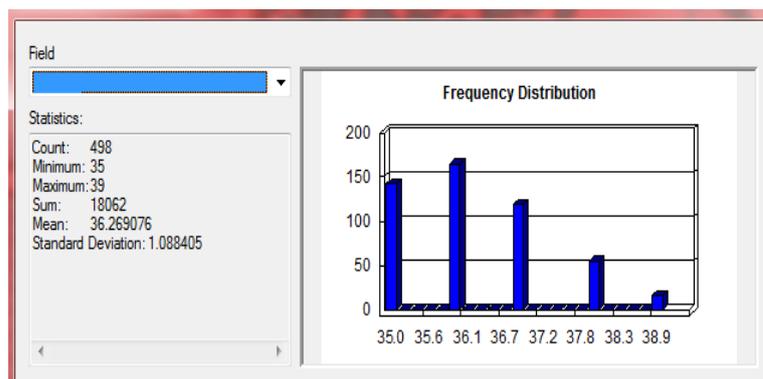
Analyzing this section, figure 2 shows that totally 361 cities are located here, implying an increase of 77 cities. It tells us that moving towards higher latitudes in Iran, we'll find more cities built. The dispersal average for this class is 32.72; this shows that most cities of this region are located at the latitude 32.



**Figure 2:** The status of Iranian cities located in latitudes between 31-35 northern degrees (resource: Findings of the present study, 2014)

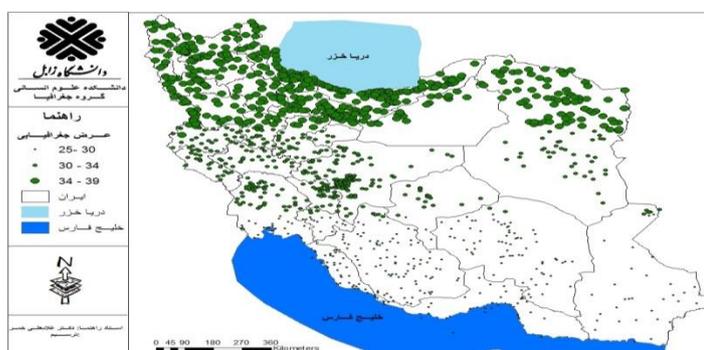
3<sup>rd</sup> category: latitudes between 35-39 northern degrees

This is the last category of Iranian dispersal levels according to their latitudes. As you can see in figure 3, there are 498 cities in this part, that is 207 cities more than first category and 130 cities more than the second one. This will clearly prove the increase of Iranian cities in number as we go towards higher latitudes. The dispersal average for this class is 36.26, which shows that most cities are located at this latitude.



**Figure 3:** The status of Iranian cities located in latitudes between 35-39 northern degrees (resource: Findings of the present study, 2014)

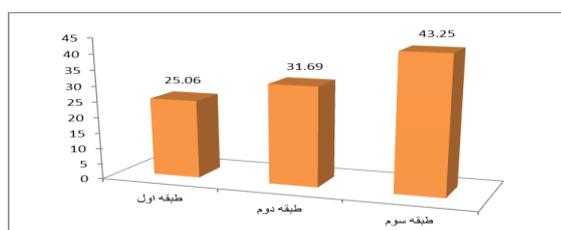
Figure 4 is the final map representing the dispersal of Iranian cities according to the northern latitudes. As you can see, the more you look towards higher latitudes (north), more cities you will find.



**Figure 4:** Final map of the dispersal of Iranian cities in different latitudes (resource: Findings of the present study, 2014)

**Conclusion**

Due to the evaluations and classifications made, figure 5 represents the ultimate conclusion of this subject. It seems that most cities (43.25%) are located within the 3<sup>rd</sup> category (between 35-39 northern latitudes). This category includes North West, North and North East parts of Iran; according to fit climatic circumstances and suitable environmental conditions, most cities are built here in which most urban population are living. 31.69% of cities are within the second category and the rest (25.06) lie in the third one.



**Figure 5:**

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