Abstract
For a long time, East pivot of metropolis Tehran has been playing an efficient role in spatial urban and rural habitation development in its region; so that in different periods this capacity and potential caused the pivot develop rural and urban habitations without meeting planning rules and requisites. Lack of schedule, and scattered, however, created disorganization and unfavorable conditions from different economic, social, environmental, and demographic aspects. Accordingly, the government has taken decentralization in Tehran into account based on new cities experiences in other countries and in order to decrease the population load, and also constructed and developed Pardis new town to organize habitation on this pivot in order for eliminating regional unfavorable conditions around Tehran. After more than two decades of Pardis new town construction, however, failure and success of this policy has received attention. Hence, this research serves to consider and comparatively analyze east pivot of Paris (as a successful instance of European new cities) and the one of Tehran. Research methodology is comparatively analyzing these two instances by means of spatial cartographic analyzes and comparative comparison of data related to spatial and skeletal characteristics of studied areas. perceived results indicate that planning without considering spatial relations between activities and habitation and a simple point attitude towards habitation are of main causes of failure in management and equalizing eastern region of metropolis Tehran. That is, new town Marne-La-Vallee in east of Paris comprises all houses and even old rural centers on its base beside spatial capacities of new development, whereas only determining the range of development and new buildings are considered regardless of habitations interrelations between Roudehen, Bumelen and Jajrud, and relations between other existing habitations in this pivot or spatial order has been neglected.

Key words
Spatial planning, Pardis new town, Marne-La-Vallee new town, Metropolis Tehran, Paris.
Introduction

Turning into a metropolis in universal, regional and local scale, has created developmental changes in recent years in different countries. This procedure along with different approaches and functions had negative/positive effect; thorough and correct implementation of integrated regional plans with definite developmental objectives resulted in improving respective, complementary and practical net about housing centers and activities with required facilities, and follow metropolization process in progress path and achieving positive results. It’s likely that due to different reasons such as inability or inconsistency in local, regional management and scattered growth based on common economic, political and social trends, image-making of separate regional centers results in inequality and imbalance (Kheyroddin, 2013:3). The form of metropolitan regions in metropolization is unfavorable, and scattering new poles have been regarded as the cause of hardening management and controlling region. In most cases, except for spatial segregation, providing different types of urban and rural systems with varied (and even opposite) characteristics made more problems. Of main characteristics of this kind of regional growth, wide geographical and demographic scale can be pointed out.

Problem Statement

• Problems relating to managing and balancing metropolitan regions: For a long time, East pivot of metropolis Tehran has been playing an efficient role in spatial urban and rural habitation development in its region; so that in different periods this capacity and potential caused the pivot develop rural and urban habitations without meeting planning rules and requisites. Lack of schedule, and scattered, however, created disorganization and unfavorable conditions from different economic, social, environmental, and demographic aspects. Accordingly, the government has taken decentralization in Tehran into account based on new cities experiences in other countries and in order to decrease the population load, and also constructed and developed Pardis new town to organize habitation on this pivot in order for eliminating regional unfavorable conditions around Tehran. After two-decade of creating Pardis new town, relative failures of this policy in managing eastern pivot of Tehran is taken into account in this study; although the same policy in eastern pivot of Paris yielded good results. This study is to consider eastern pivots of Tehran and Paris by comparing and contrasting results. Accordingly, decision makers can find new methods in planning and organizing Tehran metropolis.

Research Methodology

In this research we collected needed information to consider two development pivots primarily by means of library studies along with using different local and foreign researches beside Land sat satellite photographs. Subsequently, according to this information and in order for spatial comparing and contrasting, we used ArcGIS in descriptive manner. Finally, we provide perceived conclusions. Comparative study method of these two regions is due to this fact that Tehran with an area of 700 km² with a population of around eight million is approximate similar to Paris with an area of 750 km² and population of seven million. Hence they can be compared with each other regarding area and demographic issues. Furthermore, a new town in their eastern pivot has been recently developed to equalize metropolitan problems. This will be described in introducing and analyzing case studies. Comparing spatial development procedure in two pivots based on attuning policies and analyzing consequences of each case will be evaluated in next sections. Cartographic analysis of developments based on management attitude illuminates successes and failures in organizing eastern pivots in both Tehran and Paris.

Research Theoretical Framework

• The policy of creating new towns in order for organizig spatial reformations in metropolitan regions: In national scale, cities construct part of complicated system of urban places, coordinated and regarded as key agents in economic, social and political structure in regions and larger levels. Reciprocal relations between small and big cities are considerable in sense of defining a country or region as a system of urban housing (Pacione, 2005:22). In fact, urban system is a set of coordinated cities constructing the structure of urban dwellings in an area, region, country and the world. It is, however, not limited to a series of urban dwellings; rather, includes processes and relationships between these.
habitations. These systems are fed by internal texture, human procedure, productive factors, ideas, information and innovations (Parter, et al, 2005:88). Since there are hierarchical performances and activities in different cities and also services provided in accordance with their population’s needs, in a balanced urban system there will be hierarchical relations as well. Big cities in a region like mid-sized cities have effective relationships with each other. Therefore, cities with regard to population rage and being supported by facilities and services are provided with mutual reactions (Dadashpour, 2011:103). Furthermore, lack of symmetry and balance in each geographical area has roots in two separate sets of factors: intra-regional and extra-regional factors (Momeni, 1998:36). Intera-regional agents include natural geographical conditions dominant on the area, water, soil, etc. extra-regional factors too, play an important role in development or lack of development in areas. These are due to policy making and the selected strategy for improvement. Creating and improving new towns for balancing metropolitan regions are considered as the major approaches for avoiding multicenter model in the fields relating to metropolises. Thus, different policies for realizing and improving new towns in different countries such as Britain and France -pioneers of developing new European towns- have been adopted. The economic downturn in 1929 made many problems relating to distributing and developing industry due to necessity of region realization. It’s in this period that Europeans began to think again of parks. Therefore, in 1937 a commission called Barrow was founded in which a report namely ‘royal’ would explain the necessity of scheduled limitations as to housing, business and industry; Whereas new towns were created after World War II to reconstruct population (InsaCiriza, 2012:224).

The ideal number of habitants in new towns based on the committee’s estimate is 30 to 50 thousand; sometimes up to 250 thousand. Root of new towns takes this fact into account that the habitants work in the city they live to avoid occupational daily trips. Having issued in 1946, “New Town Act” institution were subject to changes in 1959, 1965, 1968 and 1976 and established act of new towns. This way, place and span of new towns are identified by minister and local authorities. This institution purchases lands and after that, designs commercial, residential and industrial buildings along with basic infrastructures involving water, telephone, electricity, road, etc. This is a joint stock and uses national loan which is paid off through sale and rent. This method is utilized in France and Spain with some changes (InsaCiriza, 2012:224-225). France implemented a similar plan namely “Nouvelles Villes” in urban regional schedule of new towns. Central state is responsible for decision making about construction, place finding and specifying loans to new town municipalities. There is no institute in France, rather different deserved authorities for constructing new towns. EPA1 in France sells lands to private real estate agencies so that they begin construction in accordance with EPA terms and conditions. Furthermore, seven members out of local-regional offices rule respective affairs (InsaCiriza, 2012:225).

Considering housing system reformations and emerging effects and procedures between different habitations in metropolitan areas, type of issues and area of spatial effects in relation to each other have gone under new changes and became more complicated, so that consideration is now more difficult than before. Traditional role of new towns in overloaded population centers in metropolises has changed into a base for life (Bervet, N, 2012). As a result, modern attitude towards new towns is in line of organizing and balancing metropolitan areas.

Review of Literature
Golany considers new over-loadable towns as new dwellings created for the purpose of improving conditions and organizing metropolitan areas through decentralization and population distribution around them (Golany, 1967:80).

Peter Katz in paradigm of new urbanization, supplementing intramural development planning and also vitalizing these areas, regards creating new satellite towns as one of these programs and as an indispensable part of it (Katz, 1996). Wide researches have been done relating to economic-environmental problems in new towns some of which will be discussed later in this paper. In 2007, a project called “sharing experiences of environment management in new European towns” considered there areas: “Ile-de-France”,
“Hertfordshire” and “Zuid holland” from environmental aspect. This fact that these areas were developed so fast during their construction period can be used as an experience related to creating new towns in other countries. In this project, results such as enhancing constant and green infrastructures, developing changes in planning, creating public service and training centers, compatibility of construction with nature, environment improvement, etc. are represented (Vinay, 2007).

In 2002, a report namely “problems of new and future towns” challenged new towns’ problems and provided alternations for each. For example, decreasing population density and balancing new towns are regarded as one issue; and on the other hand, several solutions including planning about density, public transportation, building attractive sales centers, preparing houses, job creation, inventory, building entertainment facilities, etc. are presented (TSO, 2002). A research considers developments of new towns in Britain territories for the future decade in 2014 in order to achieve a profile of planning in new towns in England. In this research, natural agents including slope, protected areas, lagoons, etc. were considered in addition to demographic agents like growth rate and comparison between populations in new towns. At the end, considering objectives represents some strategies for each new town. There are plenty of detailed strategies, but generally, we point out strategies related to zoning, protecting specific areas and monuments (Dean & Partners, 2014). In another book under title of “Marne-La-Vallee, from new town to reality” translated by Wein, it’s mentioned that by the passage of four decades after establishment of Marne-La-Vallee new town, how much this city achieved reality and what its problems are (Cailly, 2012). Furthermore, in a paper namely “challenges and problems evaluation of new towns and their rate of success in Iran”, challenges and problems of Sahand new town are taken into account.

The results indicate that Sahand new town failed to perform its roles and functions and couldn’t decrease the problems of Tabriz metropolis so that day to day increased demographic, economic and formational problems (Abedini, 2008: 166-191).

In another article titled “considering effects of creating new towns on balancing regional occupational and housing space”, balancing in Andisheh new town is studied. This city could have had more portions in balancing regional occupational and housing space (Johari, 2011: 93-110). So far, few studies have been done related to Pardis new town most of which considers a simple comparison between population rate in planning and current population; in such a way that it seems external agents are disregarded. Therefore, no researches have been done completely related to this study. Correspondingly, this research can bring about a new different approach in studying and considering new towns.

**Introducing two studies for comparison in two metropolitan regions: Tehran and Paris**

The most prominent reason of focus on eastern pivot in Paris and Tehran is the similarities in these two cities, such that scheming for creating new town in both pivots with similar distance from central city and the properties of main cities (Tehran with 700 km² area with eight million population compared with Paris with 750 km² area and around seven million population), make the procedure analogies meaningful. Marne-La-Vallee new town in Paris east pivot, based on transportation development pivot integrated with highway and rail paths, is a considerable instance of development in regional scale (Kheyroddin, 2012).

Having predicted Pardis new town and completing housing network in line of eastern transit pivot and current scattered growth in this pivot, Tehran eastern pivot is regarded as a metropolitan development of unbalanced Tehran (Fig.1).

- **Marne-La-Vallee new town for balancing eastern pivot of Paris urban region**

Urban region of Paris and increasing its international role from long ago since expansionist approaches of Charles de Gaulle, are taken for serious. The first strategic thought affecting on Paris district started in 1928. From 1946 to 1975 population increased on marginal parts of Paris from 11.5 to 16.3 percent causing so many economic, social and formational problems.

Delouvrier developed the region inharmoniously using modernity mechanism strategy and constant extension along with decentralization and increasing areas out of urban limitation in order to organize them. His great idea included establishment of a series of new towns, creating communication paths,
motor transportation, railway communications, and development of new poles and determining protective areas.

In second half of twentieth century, high population growth rate in French; especially in urban area of Paris was predicted. Changes, however, in trends of dwellings type and new social-economic needs were inevitable demanding a correct planning.

Accordingly, The Paris Region Planning and Development Agency started to work in 1960 represented the Master Plan for Urban Planning and Development of the Paris Region. This plan focuses on new towns development especially regarding place finding. Wastelands near cities and villages helped to find six places suitable for creating a town with the capacity of 500 thousand people in each, totally attracted three million people. This plan emphasizes on fulfilling infrastructural design of a 260 km express rail network as well as a 900 km road. The ultimate document was presented and issued in 1975 (Kheyroddin, 2013:3).

Eventually, five new cities namely: “Cergy-Pontoise”, “Marne-La-Vallee”, “Evry”, “Saint-Quentinen Yvelines” and “Senart” were recommended around Paris (Fig.2).

In 1994 Paris urbanization studies center (APUR) through identifying population growth found that regional population will reach to 11.8 million in 2015. Hence they decided to design an area within the span of Seine et Marne in east of Paris. That’s not only an important housing but also a communication path (Gordon & Partners, 2006:53).
This plan operates to improve housing, special activities and transportation in strip shape. Table 1 indicates the process of plans and infrastructures. The generation procedure of eastern pivot of Paris and establishing Marne-La-Vallee town indicate that improving housing was accomplished simultaneously with development of different infrastructures including highways, railways, tourist, economic and service centers.

- **Pardis new town for balancing eastern part of Tehran**

In Iran, new towns are planned and designed bases on special regional demands and for achieving specific goals including absorbing the overload of metropolis, avoiding irregular population growth, providing land and house according to financial conditions.

### Table 1. The Process of Marne-La-Vallee development. Source: interview, 2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>Five new towns around Paris were scheduled</td>
</tr>
<tr>
<td>1972</td>
<td>Local planning and developing Marne-La-Vallee</td>
</tr>
<tr>
<td>1976</td>
<td>Building A4 highway</td>
</tr>
<tr>
<td>1977</td>
<td>Building RER line (regional railway network)</td>
</tr>
<tr>
<td>1980</td>
<td>Extending RER railway up to Tours limitation</td>
</tr>
<tr>
<td>1986</td>
<td>Beginning of development of Cité Descartes (Decart collegiate town)</td>
</tr>
<tr>
<td>1987</td>
<td>Place finding for creating Euro Disney Land</td>
</tr>
<tr>
<td>1992</td>
<td>Establishing Euro Disney Land Park</td>
</tr>
<tr>
<td>1994</td>
<td>Establishing TGV and RER express railway stations</td>
</tr>
<tr>
<td>1997</td>
<td>École Nationale des Ponts &amp; Chaussées (establishing new site of ENPC industrial university)</td>
</tr>
<tr>
<td>2000</td>
<td>Building sales center Val d’Europe</td>
</tr>
<tr>
<td>2002</td>
<td>Building second part of Euro Disney Land park</td>
</tr>
<tr>
<td>2007</td>
<td>Inaugurating express railway of Marne-La-Vallee (TGV)</td>
</tr>
<tr>
<td>2009</td>
<td>Introducing Marne-La-Vallee as an appropriate town in Paris area</td>
</tr>
<tr>
<td>2011</td>
<td>Marne-La-Vallee was selected as the location of two future stations in Paris area</td>
</tr>
</tbody>
</table>

Fig. 2. Geographical position of new towns around Paris region. Source: SDAURP, 1965.
potential of low-middle income people, job creation, etc. based on this objectives, four new towns (Pardis 20 km, Hashtgerd 60 km, Andisheh 20 km and Parand 40 km far from Tehran located on East, West, West south and also West south of Tehran, respectively) were designed and began to be established since the end 1980s (Fig.3).

The formation process of Pardis new town on right side of Tehran in represented in table 2 so that forming all infrastructures and activities with considerable delay are obvious.

Table 1 and 2 show evolutions stages and spatial improvement of two new towns: Pardis in Tehran and Marne-La-Vallee in Paris area. As indicated, Pardis is established 25 years after Marne-La-Vallee. Meanwhile, Marne-La-Vallee evolutions was made it as an independent polar with international uses like Euro Disney Land park, TGV station and university centers. In addition, its plans were based on integrated activities and transportation systems from the very beginning. Pardis, nevertheless, works still as an area constructing dwellings and is trying to take ultra-housing roles (like technology part and more others). As an instance, study-to-exploitation phase study related to only one main path (Tehran-Pardis highway) lasted more than 20 years.

Comparative analysis of two developmental pivots in east of Paris and Tehran

- **Spatial scale comparison (relating to population and political division limitation) of two developmental pivot**

Fig. 4 compares political-demographic divisions of Marne-La-Vallee in east of Paris and Pardis in east of Tehran. Generally speaking, Marne-La-Vallee new town is divided into 4 districts with length of 23 and width of 9 kilometers; totally an area of more than 17 thousand hectares. However, Pardis is apportioned only into 11 districts with length of 10 and width of 3 kilometers, averagely 4 thousand hectares; that is, less than the whole area occupied by Disney Land in Marne-La-Vallee town. More simply, Marne-La-Vallee’s area is 4 times as much as Pardis.

According to the statistics announced in Marne-La-Vallee website and respective maps, this area includes more than 280 thousand people with an ascending growth rage. Pardis new town, on the other side, according to the statistics announced...
in 2011 includes around 38 thousand people. The most important point here is that this town hasn’t yet reached to its predicted favorable population amount; but during these 25 years civil engineering organization revised its extensive designs and increased the construction area many a time. Even at present, civil engineering organization has started studying and revising demographical detailed projects for around 550 thousand people in this area; it’s the same amount of Oromia population.

Content consideration of Marne-La-Vallee area shows that this city first included 10 towns, 16 villages and 30 districts like suburbs, etc. as a matter of fact, this town primarily helped with the coherence and integration of the whole area and then planning and development. In a way that it could create several identified centers through adding towns and villages; in contrast to Pardis, however, regardless of this potential capacity, it only includes 7 villages.

Design of this city is dependent from adjacent villages and towns including Jajrud, Roudehen, Bumehen, etc. each one operates independently and without any integration with each other. Therefore, if a hypothetical area like Marne-La-Vallee is created in east pivot of Tehran, there will be, too, such potential developments involving Roudehen, Bumehen, 57 villages like Chenaran, Baghak, etc (Fig. 5,6).
Fig. 6. Land uses comparison between metropolises Paris and Tehran. Source: author.
Planning in Marne-La-Vallee new town was for the purpose of construction development with varied functions in a way that it created a considerable capacity and centralization in it. While Pardis new town based on interviews made with experts and field conclusions indicates that preferences are building residential units.

As shown in figures 5 and 6 Marne-La-Vallee includes in each of 4 spans several key functions involving Disney Land park, Decart university district including 4 university sites like computer, architecture, electrical and industrial systems and a series of laboratories of France studies center, grand sales centers, RER railways and stations, TGV station, monuments, etc. but in the procedure of Pardis development in east pivot of Tehran, activity, functional center development has taken least into account comparing to housing improvements. We can only point out Pardis Technology Park and Islamic Azad University in which most of employees don’t reside in Pardis. In other words, housing development and job creation in this span has been not coherent and integrated.

Comparing facilities and infrastructures development of two pivots

Comparing facilities and infrastructures in two developmental pivots related to their planning and transportation system implementation shows that Marne-La-Vallee is integrated. Along with establishing more than 75 houses, this implement plans of rail, air and road transportation networks. As instances, at the end of this pivot, through building TGV express train station, it provided fast transportation facilities to other main cities sales centers. In addition, in order for decreasing national and regional traffic, it tried to persuade passengers to use public transportation systems and try different paths. For example, in this town there’s no need to cross Paris, rather railways and roads have access to two airports; in Pardis, however, for reaching airport, one has to cross Tehran. Fig. 7 and 8 indicate this comparison, so that Pardis operates so weakly in transportation systems at present and has only one highway.

Some studies, of course, have started regarding metro establishment but it seems that studies should have been accomplished before the town creation so that it would be finished now (Fig. 7,8).
Comparing centralization and coordination of housing and job finding in Pardis and Marne-La-Vallee

Extensive plan of Paris region started in 1962. Right after a short delay around 5 years, extensive Tehran plan was provided but demographic and construction loading started in 1991 decade. It increased the population density and centralization in metropolitan central region, while in Paris area improvements had been stopped at central part and began in new towns. As it’s indicated in experiences and considerations regarding work place in Marne-La-Vallee and Paris in 1990-2005 periods, due to lack of attraction in metropolis since 1990 the rate of job offer gradually decreased. In contrast, recruitment and job offer increased in Marne-La-Vallee such that it reached 44% in 2005 from 36% in 1990 (Brevet, 2006:3). Areas of daily activities of Paris inhabitants are shown in Fig. 9, most of which reside in Marne-La-Vallee showing the centralization of this town regarding housing and job finding. No specific study has been done about the workplace of habitants and spatial distribution, however, field-limited observations and interviews in this span indicated no consistency between places of work and live for habitants, since most of activity centers attracting population to work haven’t been created in town’s limitation. Therefore through comparing these two pivots, a considerable relative belonging feeling for Marne-La-Vallee habitants is perceived but this centralization and belonging emotion is not observed in Pardis. Moreover, most of Pardis habitants prefer to spend their spare time out of town due to lack of entertainment facilities.
Conclusions

In Marne-La-Vallee it’s tried to create big intermural commercial centers, parks, tourist attraction in order to organize scattered sales centers in different parts. Through this approach, Marne-La-Vallee has enhanced its consistency and attraction and intensified this fact that this is not a dormitory. Roads and RER rapid railway infrastructures and their stations are considered as the major cores of urban development. Central RER stations as the main center of spatial development avoided spatial dispersion and created a centralized coherent region around itself. These urban cores surrounded by greenbelt have their own centers. Integrated consideration about Marne-La-Vallee as a new pivot with several specific cores related to railways and rapid train networks provided it with a balanced development.

In addition, it’s tried to enhance the sense of belonging by creating entertainment and service centers including Disney Land park, Da Vinci natural park, university centers, state buildings around them along with enhancing the urban functions and centralization in such a way that most of inhabitants prefer to stay there after work hours and on weekends.

Since the beginning and creation of Pardis new town in east pivot of Tehran many studies and programs have been done most of which regarded housing and residential units development in different forms. This principle is rarely taken into account that along with creating houses, there must be entertainment, occupational and public service centers. The pioneers might think that residential and commercial regions would attract population; but in fact city is a place being able to provide population with any kinds of demands. Thus, operations regarding physical improvement fail to enhance the centralization of this town.

Disregarding main improvement and planning including grand commercial centers, big activity centers, development and improvement of supreme education centers, and entertainment will intensify the unsuccessful planning in spite of huge inventory dedicated to this town. On the other hand, lack of consideration of simultaneous development of urban infrastructures including railway and air network appropriate with broadening residential units will result in catastrophic failure.

Generally speaking, it’s perceived that strong points of eastern pivot of Paris are owe to an integrated model consisting of all residential places, potential activities and mutual relationships despite the way of management.
and organization of Pardis new town in which all of them are neglected. That is, mutual relationships and consistency with existed towns like Jajrud, Roudehen, Bumehen and Damavand are disregarded and they’re left to operate separately. This problem will be intensified when the relation and role of new towns’ development are not in consistence with metropolis changes and lack spatial construction strategies. Therefore, balancing Tehran regardless of increasing growth rate in the central city and its relation with new cores’ role around will not be effective. It means that in last 20 years not only Tehran city growth hasn’t slowed down, but also experienced a faster and more intensified extension. On the other side, spatial growth of Paris at the same time with establishing and determining new towns around it, has been decreased and many activities started in suburban areas; specially Marne-La-Vallee.

This process enhanced centralization, attraction and sense of identification of habitants. So that new town title has been gradually disappeared and it changed to a common place for living. Precise comparison between the respective pivots from the developmental, social and economic aspects can provide us with more interesting trainings for balancing metropolitan regions which may be used as the subject of next future researches.

Endnote
1.Etablissement Public d’Aménegement

Reference list
Success and Failure in Metropolitan Regions Organization... /17-30


