THE ARCHITECTURE OF NEW CITIES AND THEIR ROLE IN SUSTAINABLE DEVELOPMENT

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Abstract. Given the growth of country’s population, it is expected that the urban population of our country will be nearly tripled in the next 30 years, thus, a level equal to the current level of cities is required. Although the vertical growth of cities, due to improvement in technical facilities and construction techniques, largely makes the issue of tripling cities impossible, but in order to prevent the problems of metropolises, we should consider the need for establishing new cities. For this purpose, studies show that despite some thriving results from establishing new cities in other countries, this practice has not been so successful in Iran and even in some cases building towns has been led to the creation of emerging problems. The purpose of this study is to indicate the role of new cities in generating space balance, job creation and attracting population as well as examining the success rate of towns.

Keywords: Metropolis, new cities, towns, space

INTRODUCTION

New cities are established to prevent the uncontrolled expansion of big cities and to attract their overflow of population like an antenna to attract potential migrants. In new cities, the distance of the city is far more from the main city and are usually outside its influence. The issue of new cities in Iran is currently one of the main policies of the Ministry of Housing along with the improvement and restoration of the historic texture of the cities, especially large cities and the exterior (physical) development of existing cities that is discussed by many experts in the field of economy, sociology, architecture, urban planning, etc. At present, despite the efforts being done, a population of 200 thousand are living in more than ten new cities across the country and it is expected that in 2021 this number raises to 5.3 million. The process of complication of the city and urbanization issues, especially the issue of housing, in recent years from the mid-1980s made the country’s territorial planning policy makers to achieve a series of plans for land preparation, as well as the creation of new cities.

Currently, to establish new cities, which its volume of construction in the history of urban planning and even among developing countries is unprecedented, important goals have been predicted that each of these goals arise from pressures and existing needs in urban areas. However, after several years from the beginning of construction work for new cities, there is still the question of how creation of new cities can meet the anticipated goals or, in other words, under what conditions and by generating what contexts this solution can be desirable and useful or perhaps loses its effectiveness and becomes a new problem. Undoubtedly, the way these cities are governed is the most effective measure that directly affects the quality of living in new cities. Thus, to answer this question, we should study new cities as settlements that have special conditions and the purpose for which they have been established.

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The Definition of New Cities

New cities in socio-economic systems of the world and according to the theoretical evolutions have been varied. A comprehensive definition for new cities have not been presented yet. But we can accept the following definitions:

- New cities are planned communities that are created in response to pre-determined targets.
- The establishment of a new city is an intentional action that premises a source of power or an organisation which is the supplier of space and resources for the development of the city and continuous control on it until the city reaches a lasting scale.
- The new city is a self-relying community with specified population and area, a certain distance from the mother city, predetermined planning, specific goals and have all required facilities for an independent environment.

Usually, new cities are designed for physical economic and social decentralization in urban areas of the major cities, so that, regarding the proximity to big cities, population can be encouraged to leave the mother city in line with the implementation of economic, social development programs. Thus, attracting the overflow of population, spatial organization of mother city and urban area, and the improvement of workplace condition, and a perfect healthy and social life will be possible. In fact, the concept of the new city is the concept of a city’s components in an organic relation with each other.

According to the previous definitions, new cities have certain specific birth date and are built in a short and specific time. These type of cities are in absolute conflict with the emersion and development of dense cities and are formed based on a core before being created and grow slowly. Planning a new city is usually based on population forecast so that this population can become a fundamental guarantee for predicting the physical economic and social needs of the future. The design and construction of new cities mainly take place in virgin and infertile lands without a basic core.

Features of the New Cities

The first feature of new cities is their establishment outside the areas of mother cities so that the new region act as an effective hub for the main city. The second feature is about the creation of a new framework of housing, work, education, leisure, business, etc. New cities in Britain, France and the Netherlands (Lelystad, Hulst) or parts of Copenhagen lay in this category. In the UK, the basic goal of establishing new cities was independence and self-sufficiency and the establishment of planned cities such as Milton Keynes or Southern Hampshire located 100 kilometers from London was for this purpose, or even medium-sized cities with a population of 100 to 200 thousand people in recent decades established to help the mother cities (while maintaining their independence). While in France, the purpose of establishing new cities in Paris region with a population of 300 to 500 thousand people is enjoying from the facilities of Paris and at the same time creating new urban centers.

The third feature of the new cities is to be suburban to cover the mother city with a residential belt. Transportation related facilities such as subway, etc. naturally helps these cities to have this feature. Cities such as Randstad (Germany) Lumiere, Caen Cuverville (France) and New American cities are classified in this category.
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The Emergence and Evolution of New Cities in the World

New cities are planned communities that are established in response to the predetermined goals. A new city, is self-relying community with specific population and area, certain distance from the mother city, predetermined planning, specific goals and all have the necessary facilities to create an independent environment. New cities are mainly designed for physical, economical, social decentralization in urban area of large cities. These cities have the role of attracting the overflow of population, spatial organisation of the mother city and urban area, improving the condition of workplace and having a healthy social life.

The establishment of new cities after the industrial revolution was considered as the transition from a traditional society to an industrial society. Therefore, along with the establishment of industrial units in the existing cities, the creation of new cities in the transition of these cities was regarded as an answer to solve the issues related to the settlement of the population. During the last two centuries, most cities were established near the mineral resources and large-scale industrial units to be taken into account as a growth hub in order to achieve regional development policies. Following this purpose, these cities have required a performance related to everyday needs for the welfare of their urban population. The plan for generating new cities has a long history. During the twentieth century, the former Soviet Union and Britain were considered pioneer in creating new industrial cities and in the establishment of residential cities respectively. This issue during the period after the Second World War, in addition to the former Soviet Union and the United Kingdom, has been expanded in the United States, France and Eastern European and the creation of new cities was growing in these regions. In the twentieth century, England was among the first countries in which they studied and performed the establishment of new cities. “Sir Christopher Wren” and “John Allyn” were among those who performed the first practices in the construction of cities based on the planned processes. One of the most famous cities that built according to independent plans set in the late 18th century was Washington DC, the capital of the United States. Many new cities were built at the time of approving the plan of establishing new cities after the war in Britain. Cities such as "Rennes" and "Richie" in the seventeenth and eighteenth centuries in France and "New Delhi" After the First World War in India are among these cities.

After World War II, new cities were regarded as a pattern to help solving social, economical, and environmental problems of large cities. This pattern presented the distribution of population and employment throughout the entire country, so that the idea of a new city with regional development tool quickly could spread around the world. This theory was implemented not only in countries that have been urbanized rapidly, but also was used to generate growth hubs, spatial organization, attract overflow of population, control the growth of mother cities, transmit the political-administrative centers, avoid the destruction of agricultural lands, develop undeveloped areas, re-construct the destroyed cities, integrate the villages, create appropriate environment to settle workers in the industrial sector, decentralization, and prevent the growth of capitals, scientific identity and spatial distribution of industry and population.

New cities in Iran

In Iran, the rapid growth of urbanization in the past three decades was not adaptive to the ability of equipping urban spaces and the expansion of infrastructures and did not generate the required productive jobs. Since the distribution of urban spaces is controlled in the context of a comprehensive plan that is based on sectoral and regional coordination has not been performed, problems caused by the rapid growth of urban population are complicated. As a result, problems such as housing expensiveness, unemployment and unofficial settlement, have appeared in the
urban society feature of the country in its strongest possible terms and solving them requires full-scale and planned effort.

Urbanization growth in Iran can be compared by Rostow's theory of economic growth (the traditional, transitional, rising, maturity and mass consumption), namely the 1921-1951 period that the traditional economy is broken (traditional society) and dependent capitalism is influenced through oil industry monetary relations (transitional period). City, during the traditional period, has mostly a political and communicative function.

Iran, after the transitional period in the rising process (1960-79) joins global capitalism and to do this the required infrastructures for the full deployment of capitalism are created to reach the maturity period. In rising period, in addition to the existing function of cities, the industrial function is largely added (Athari, 106: 1989). The growth in urbanization during the rising period was due to severe relation of centre - suburb 1 and exogenous development 2 as a result of dollars earned by selling oil and replacement strategies for imports, led to the strengthening of single urban area, the mega city of Tehran, and regional mother cities. As a result, suburban cities are suffering from the lack of facilities and population leading to severe population and capital density in Tehran metropolis and regional mother cities such as Mashhad, Isfahan, Shiraz and Tabriz, which are independent from the development of their upstream city, meaning that Tehran and downstream cities are developing and, thus, with intensifying the fraction of urban hierarchy system, they are moving toward polarization.

The Position of New Cities in Urban System

Regarding the position and role of new cities in the process and urban system of Iran, four entirely distinct periods can be considered:

1. Between the two world wars or transition process, new cities in Iran are evolved without a clear strategy and based on major functions and according to a rural basic core (Zahedan and Noshahr), they are currently thriving, successful and regarded as a city.

2. During World War II until the mid-1960s, new cities are formed without a clear strategy and based on an urban core and according to the basic pieces and hosteling performance, and for the development of the oil industry and other fields of oil industry.

3. From mid-1960s to 1979, which is called the rising period, new cities are formed with the strategy of exploiting natural resources and with the absence of a basic core that their main role has been regional development, providing accommodation and land speculation.

4. After the Islamic Revolution, 28 new suburban towns were formed in the form of approved and non-approved without basic core and with the role of optimum settlement and attracting overflow of regional population, given the expected population of six million people by 2016, have been planned based on the refining strategy and spatial organization of regional mother cities and the mega city of Tehran and the balanced economical-social distribution of growth.

Now, after the establishment of these cities and the evaluation of the purpose of their construction, it is identified that these cities have created many problems in the early stages and formation as well as settlement system of the country.
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The main objectives of the new cities

The policy of establishing new cities after the revolution is certainly one of the greatest and the most important policies that has been adopted in the field of urban planning and urbanization of the country as a whole, but we should see what was the origin of adopting such a policy and on the basis of which strategy has been concluded to this result. In this case, the Ministry of Housing has provided the following reasons in addition to the physical problems of cities.

The most important objectives of the new cities can be outlined as follows:

- Preventing irregular development and avoiding mother city to become metropolis
- Transferring workshops from mother city to new city
- Attracting the overflow of population by creating employment centers in new city
- Preventing the rising price of land in mother city and land speculation due to the infinite expansion of mother city
- Purifying mother city for organizing its development in a detached form
- Reducing transportation costs from mother city to industrial areas around large cities and eliminating the time wasted by employees in the mentioned industrial areas and the displacement of residents due to the size of the major city
- Preventing illegal settlements in major cities
- Mitigating the traffic within the mother city
- Establishing settlement lodgings near the workplace
- Using non-agricultural lands for generating new cities and preventing the destruction of agricultural lands located in the vicinity of metropolises
- Creating jobs in new city and prevent them to become hostel
- Reducing the cost price of residential buildings due to the low price of land according to the proportion of construction costs and land prices in major cities, and accordingly, the possibility of providing housing for people
- Transferring people’s small investment from intermediary activities to investment in housing and industry and productive workshops due to the low price of land and removing the huge goodwill in big cities
- Reducing the costs of infrastructure development in mother city
- Releasing the levels of factories and annoying workshops within the mother city to Create the required infrastructure facilities such as green spaces, educational and traffic services
- Preventing environmental pollution in large cities which in some cities, including Tehran has become dangerous.
- Generating pre-planned city adapted with actual needs of society

The imperfect Functions of New Cities

The new city, despite the numerous contributions, can not be as a mother city, because it does not have its specific attractions. Mother city has become a city over time, and has been established based on gradual needs of the new forms of its institutions and organizations. While the new city is built according to the determined geographical distance around metropolis and could not easily complete itself and has to be located as suburban town and dependent near the metropolitan city. Diversity of ethnic groups and nations, being ignored by other ethnic groups and resulting cultural tentionts that are created by this situation, could not present a good image of the city. The new city is an unrealistic move towards directing the urbanization and to focus on suburbs which does not show a bright future.
The Pattern of new Cities in Iran

New cities in Iran are classified in five patterns in terms of establishment in space and function:

Organizational - Industrial New Cities

This pattern was designed and established as the first step in creating new cities and to make optimal use of potential resources and facilities in different areas of the country. These type of cities, due to certain geographical location and socio-economic conditions, got a special role and most of them have self-reliance and have created sufficient jobs and services for the residents such as Abadan, Andimeshk, Masjed Soleiman, Puladshahr, Piranshahr, Bandar-e-Shahpur, Aghajari, Haftgol, Zarand-e-now, Shahre Mese Sarcheshmeh, and Industrial cities of Alborz, Saveh, Rasht and so on.

The New Suburban cities

The most common type of creating new cities in Iran is new suburban cities. The necessity of the establishment of such cities had been due to the growing problems of big cities before and after the revolution. This pattern has been largely used around major cities, especially Tehran, its main role is the spatial organization of the main city and attracting the overflow population of large cities. Dozens of cities and industrial hubs have been established before the revolution following the implementation of urban and regional comprehensive plans that, in addition to the private sector, the Ministry of Housing and Urban Development have been involved in their construction. In addition to these cities, after the revolution, new cities are also under construction. Some new cities before and after the revolution are Shahin Shahr, Majlesi and Baharestan in Isfahan, Hashtgerd, Parand, Andishe in Tehran, Alavi in Bandar Abbas, Sahand in Tabriz, Sadra in Shiraz, Ramin in Ahvaz, Ramshar in Zabol, Tabas in Chah Bahar, Golbahar and Binalood in Mashhad and, Mohajeran in Arak.

These type of cities act beyond the master plan and mostly in the mother city area to implement the strategy of constructing new cities approved by Urban Planning Council and discontinuous development of the main city. After the revolution, due to the anticipated doubling population of country and tripling of its urban population during the period of 1986-2021, the need for design and construction of these cities, spatial organization of major cities, and to control its population and physical growth was discussed.

New Cities with Independent Identity

This pattern is used for creating balance in the distribution of population and resources, regional development, relative self-sufficiency in terms of employment and services, environmental principles and ultimately separation from problems that large cities are facing. In Iran, none of the established new cities in terms of function was successful to perform functions of this kind.

New Joined Cities

New joined cities are located within the master plan of the mother city and act as its residential or industrial part. Most of these cities over time have been physically merged into the main cities and generated a dual biological, productive environment such as Malek Shahr and Khane Isfahan in Isfahan, Vali Asr quarter in Tabriz, Reza Shahr in Mashhad, Lavizan, Kan and Ekbatan in Tehran, Safaieh in Yazd, and Moali Abad in Shiraz all of which have been created for urban and residential complexes purposes to provide housing for government employees and individuals as well as spatial organization of the mother city. Their main feature is the lack of fundamental productive roles. These type of cities have been constructed in pre-revolutionary
era to implement the fifth development program and in post-revolutionary era to achieve the policy of transferring land to individuals.

CONCLUSION
Sustainable urban security within the framework of sustainable urban development is the outcome and the sum of all indicators of environmental, economical and social sustainability. Development process of some metropolises in recent decades has been in such a way that to provide the causes of the security instability in these cities. The most prominent evolutions could be classified in four groups of population growth, spatial - physical expansion, structural evolutions and the emergence of centralization. These evolutions have led to population density and growth, increased migration to metropolises and suburbs, unofficial settlement of low-income groups in urban regions, transformation of illegal settlements to suburban towns and formation of the urban system, and finally spatial polarization of rich and poor in north, south, and center and suburb which contrive social devianes and expand crisis centers and intensifies the elements involed in instability in terms of security pathology. Also the existance of governmental centralized system in the country and the establishment of decision-making institutions and senior managers and the focus of economical and social factors in metropolises, has given a specific position to this city in terms of management and control of all the country’s affairs. Environmental factors, socio-cultural factors, economic factors, urban economic management, security and disciplinary management, environmental management, socio-cultural management, urban sustainable development, the existance of this degree of focus intensifies the vulnerability of metropolises, particularly in the face of external threats, and the outbreak and actualization of these threats could jeopardize the national security. It seems that now, with the development of communication and information facilities, the association of political-administrative centrality with socio-economic centrality is not necessary. Examining the Socio-economic indicators such as employment, housing, education, population and environmental factors such as earthquakes show that metropolises are facing instability in all aspects. The main reason of this instability is the existance of severe inequalities in metropolises so that the residents of central and southern parts of the city could live in the conditions of great vulnerability. Since the inequality of resources and accessibility can lead to competition and conflict and continuing social conflicts and social abnormalities, violence and urban unrests, it could be concluded that achieving sustainable urban security in metropolises depends on the attention to various aspects of sustainable development and ultimately reducing inequalities and removing imbalances in the urban system. Thus, given the above mentioned issues, the establishment of new cities to prevent uncontrolled development and a mother city to become a metropolis, transformation of workshops from mother city to new city, attracting the overflow of population by creating job centers in new city, the reduction of transportation costs from mother city to industrial zones near major cities and the elimination of the time wasted by employees in the mentioned industrial zones and the displacement of residents, due to the extensive size of major cities, preventing illegal settlements in major cities, and mitigation of traffic within the mother city have been generated.

REFERENCES

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