

Analyzing the Quality of Fulfillment of Sustainable Development's Goals in Urban Complexes. Case Study: New Town of Parand

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Abstract New towns are created in order to reply the needs such as absorbing population overflow, housing and many other factors; but their origins are not noticed at sustainable development process from the point of view of environmental programming and planning. The main goal of sustainable development concentrates on concepts such as promoting life quality that means to make qualitative and social indicators interfered, and welfare provision and social justice, however noticing social issues and spatial justice which confronts with human needs mostly in an organizational way, is among the long term and far-sighted goals, and confronts with issues by a fundamental approach. To use a descriptive-analytical method of research, this article analyses sustainability status of the new town of Parand, regarding sustainable development - environmental, economical, social and cultural. With regard to the results of the present article, paying attention merely to the framework and geometrical concepts and neglecting social goals in designing of the new town of Parand, will make it face with an improper cycle of social-economical and environmental balances, and some first-ever challenges like cultural conflicts, decline of life quality, income gaps, social disintegration, family structure weakening and unfair distribution of urban services, which neither caused urban injustice nor jeopardized social health of the city and the residents, but has made this concept unstable due to the fundamental relation between social justice and sustainable development. However, during the past ten years, the economical goals have improved well.

Keywords: *sustainable development, social goals, urban complexes, quality, new town of Parand*

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1. Introduction

Nowadays, development plays a crucial role in change and continuity of all countries, especially in developing countries such as Iran. Fulfillment of progress and development of countries depends on benefiting aptitude, ability and active presence of people and their participation in different stages of development [1]. At present, the main reason for formation of new towns in Iran, is the residence of the overflow of rapid development of big cities and in this concern, the physical and biological aspects of human have been considered in formation of new cities; however the best city is the one in which its people and residents wants to live and spend their whole day; the city that attracts individuals and can be a new beginning point in their lives and actually can be their homeland. This homeland must provide all the properties for getting prominent in the people's minds. Providing social solidarity and well environmental quality should be considered in the way prominent features of new towns are prepared.

The major question in this study is that, how and how much of the goals of sustainable development have been met in the new towns of Iran? The major goal of this study is to analyze the quality of sustainable development goals in the new city of Parand. In this regard, firstly and before anything else, the concept of sustainable development will be explained in this study and then the components that affect urban planning and design will be introduced, and in the meantime new towns and their world records will be discussed; in continue the goals of sustainable development in the new town of Parand will be evaluated and studies, in order to get into a proper and logical conclusion in this concern.

2. Conceptual Literature Review and Framework

2.1. Sustainable Development

In the beginning, development approach was mostly hardware-based, but presently the studies on distribution factors indicates paying more attention of development on

balance in distribution of economical development's results and more valuing of the software or normal-behavioral aspects of development. Nowadays, after historical evolution of different types of approaches relating to development, sustainable development approach is considered as one of the dominant approaches, that has affected thought structure of planners in organizing cities as a dominant approach; within this framework, a set of different viewpoints has been developed from modernism to extremist radical thoughts; each of which have observed the sustainability subject, its dimensions and specifications, from a particular aspect; for instance we can point to the modern, structuralistic and moderate approaches, meanwhile, in macro level, it seems that the modern approaches had been more effective on forming geographical spaces. What seems important in these approaches is the presence of economical powers of market and their roles in extent of sustainability and/or non-sustainability of residences. Actually, human residences as geographical systems and local-spatial facts have been created, while effected by ambiance-creating factors and powers in a temporal-local process and had been always changed, affected by internal and external processes (social-cultural, economical and environmental-ecological).

The term of "sustainable development" existed in management of some of the non-renewable resources, from long time ago; but this term was specially entered into the literature of this field, since 1990, due to the enormous deficiencies of quantitative economical variants in specifying development degree. Sustainable development approach was entered into the field of encyclopedia by protecting the environmental and social aspects; the gravity center of sustainable development and human development is noting to the human, factors and the phenomena about it.

The main goal of sustainable development concentrates on concepts such as life quality progress; that is interfering quantitative, social, welfare provision and social justice indicators [2]; however, regarding social issues and spatial justice that face with human needs in an organizational way, is the long term and forethoughtful goals and faces with issues with a fundamental approach, and accordingly are leaded to a result which considers the qualitative conditions of life in proportionate to the present and future values of society [3]. Anyway, the social justice has been accepted as one of the principles of sustainable development throughout the world; however definitions of social justice are different and have fluctuations for every place. But what is accepted in all the definitions is that social justice seeks reducing the imbalances, and by removing the deep gaps between positive and negative points, can remove the harmful results that are imposed by deprivation and poverty impose on environment and sustainable development [4]. It means that the set of activities and plans that are carried out by processors and provider of a society aiming at welfare of the individuals of a society [2]. Therefore, the following definition for sustainable development is the basis of this project herein: sustainable development is a kind of urban development, which is not merely limited to the environmental balances, and social-economical sustainability and serving and social justice are the requirements thereof.

2.2. General Observations for Urban Sustainable Development

Here, regarding the principal approved in agenda 21 and Rio statement, writers' and researchers' views in the resources of study, and the world environmental problems and difficulties, and the realities existing in urban development and the exigency for changing the way of confrontation of urban planning with development, general observations for urban sustainable development, we propose that;

The economical aspect includes: 1- Identification and definition of technologies, non-sustainable items and products, and preventing production and their usage in future; 2- Encouragement to non-concentration of industries; 3- Encouragement of small urban and self-employed industries; 4- Preventing irregular emigrations; 5- Change in production, distribution and materials consumption patterns; 6- Provision of urban economical growth and development; 7- Provision of required goods in the city (if possible) for reducing distance and energy consumption; 8- Decreasing of per capita expenses of urban services in order to increase economical efficiency of the city administration.

Social-cultural aspect includes: 1- Pivotal role of man and his needs; 2- Preventing urban population explosion and reducing population growth rate up to nearly zero; 3- Valuing the identity and special cultural specifications of every city and protecting and strengthening positive local cultural values; 4- Reducing poverty and class distinctions; 5- changing the behaviors in order to change the patterns of irregular consumption of resources; 6- Mobilization of women, youth and children to participate in training and promoting level of environmental culture; 7- Fair and balanced distribution of facilities among urban districts; 8- Precise localization and optimum planning for new cities; 9- Surrounding of city with productive ecosystems or absorbing and decomposing of human wastes and wastewaters; 10- Encouragement of local experimental knowledge and innovation in the field of construction; 11- systematic distribution of cities in the area, hierarchically and in proportionate to the ecological carrying capacity of every city; 12- Considering the special environmental situation of a city as a key factor for development planning; 13- Designing of buildings based on energy consumption economization; 14- Using an integrated system of public transportation; 15- Producing of constructional materials with minimum demolition and damage to the environment; 16- Determining urban planning and designing regulations for reducing air, sound and visual pollutions; 17- Planning and designing aiming at increasing the biological efficiency of useful spaces as much as possible; 18- Supplying the same light, water and common installations with minimum cost; 19- Designing of buildings and residential complexes in which wastes reaches to minimum level; 20- Balance spatial distribution of common facilities among various districts of city; 21- Space recycling and re-using the unused or destructing spaces; 22- Revision in constructional regulations and instructions from the point of view of constructional materials consumption; 23- Precise attention to survival of buildings for several successive years (sustainability); 24- Paying attention to applications combination and multipurpose usage of spaces; 25- Compression of urban

textures for reducing distances and saving energy; 26- compression increase, based on precise studies from point of view of rate, distinction and definition for method of distributing compression in the space of the city; 27- Noting to the high importance of passages and sidewalks; 28- creating appropriate solutions for trafficking of bicycle and encouraging for using it.

Environmental aspect includes: 1- linear currency of materials (data) entering to urban system, should possibly approach to a cyclic current (materials recycling – reuse); 2- serious and precise studies and evaluation of environmental effects of urban development plans; 3- defining environmental thresholds and tolerance capacity of environment; 4- data of environmental systems must be collected and compiled and controlling indicators be defined; 5- decrease of different pollutions like air, sound, waste and wastewater; 6- Improving sanitary conditions and urban environmental health; 7- making the city safe against effects of accidents and minimizing the damages [5].

2.3. Review of Definitions for New towns & its Worldwide History

With regard to the future growth of citizens' population, urban development is the central issue of the world's urban issues. Most important factors of urban development respond to the residential needs of population from different dimensions. In order to prevent urban irregular growth - that is not considered as a good phenomenon – necessity of procedures such as supervision on natural growth rate of citizens' population and control of high growth rate of emigration to cities, is felt. These two solutions are significantly effective in controlling the growth and distribution of citizens' population. However, if we can not apply these solutions and/or their application fails, development of city will be inevitable [6]. If urban development needs are not satisfied by improvement and renovation of internal texture of cities and successive development of cities that are located in places where are not faced with natural or artificial limits, the non-successive urban development shall be necessary. If no plan is arranged for remained population overflow, unplanned self-built cities will grow like mushrooms; and for long periods, spending heavy expenditures for solving problems of these cities will be inevitable [7]. In this situation, spatial decentralization policy based on building new towns that is one of the most direct forms of decentralization at developing countries, will be selected as a pattern for non-successive urban development.

The formal theory of creating new towns was firstly proposed by Leonardo Da Vinci for preventing population growth and solving the urban problems of Milan [8]. Creating such cities in contemporary period was set forth with the theory of Howard's garden city, in 1898. By developing Howard's theory, Raymond Unwin and Bari Parker, presented his idea in the form of satellite towns' theory as the social towns that are built for decentralization of big cities [9]. In first half of the twentieth century, these towns were used as organizing tools of compressed metropolis regions and in order to solve their problems, especially in capital cities and population distribution within the limits around them [9]. Continuing this process in the second half of twentieth

century, the concept of new city was greatly developed and had various goals; one of which is social goals or population distribution organization in metropolis regions [10].

Pier Merline believes that the new residential towns are functionally classified as one of the three major groups of the world's new cities. These new towns are designed within the limits of urban development policies and mostly are created for distribution of population and activities compression from big cities, aiming at dwelling of population [11]. Gideon Golany considers the new overflowing cities as new domiciles that are constructed in order to improve conditions and organize the metropolis regions, by decentralization and distribution of population around them [12]. Peter Katz considers establishment of new satellite towns as one of the plans and inseparable parts of new urbanization paradigm, for completing the inter-city development plan and re-enlivening the metropolis region [13]. Peter Hall and Colin, versed in urban development procedures in the new millennium, have propounded the new towns as a good solution in sub-regional level.

Studies carried out by Shin, shows that the new town of suburbs of Seoul could play an effective role in creating population balance in metropolis region of Seoul, by absorbing the overflow of metropolis population, and based on studies of Hui and Lam on new towns of Hong Kong, these cities have succeeded in decentralizing of city centers and absorbing of metropolis population. Different studies on new towns of Iran showed that these towns have not been succeeded in absorbing surplus of metropolis population and a low population is dwelling therein.

Presently, the plan for creating new towns has been considered from two aspects; one for reducing the population and activity concentration at big cities; the other as a solution for solving or reducing the life problems in cities, population increase, creating of new concepts in the field of urbanization, removing problems arising from living near industrial factories, population compression and finally social and environmental issues, provides the way for creating new towns. In twentieth century, selecting location of new towns has been based on good weather and climate conditions and by using extensive transportation networks, especially for the new towns that are created for employees of heavy industries. Even, existence of a good way more than status of the natural resources required by operating industries, has been significant.

Economical structure of new towns is planned based on the levels of employed population of them. In developing countries, instead of being planned on the basis of employment provision in new town and then specifying its population, it is related to providing residential place for emigrants to the capital city. In this concern, the way of dwelling of emigrants population asking for employment, besides the capital city and new city, will affect the surrounding limits of these towns [14]. Therefore, in specifying the location of new towns, regarding the surrounding limits and independency of new towns should be regarded significantly.

History of new towns in the world should be commenced with name of garden city that was set forth by Ebenezer Howard, for more than one past century, with

the main purpose of social reforms in cities [15]. First new towns were created entitled as garden cities, and then in the second period of new towns creation, the first country that planned and executed this idea, was United Kingdom [16]. Creation and establishment of new towns of UK, was considered in plan of big London, by Abercrombie in 1944, based on report of Barlow Commission. He suggested construction of 10 new satellite towns on suburbs of London in order to execute decentralization policy. Since this period on (1945), construction of new towns in other countries of the world was mostly set forth for the purpose of decentralization from metropolises and continued.

Britain can be considered as the head of creating new cities, during twentieth century. Up to 1970, at least 33 new towns have been constructed in this country and operated [17]. These cities are firstly situated on the route of connecting ways of the country – such as roads, railways or rivers – and secondly are limited from the point of view of population rate. Then their situation to with London city is considered in two states of suburb and out of suburbs. Every town is relatively independent from the point of view of function and biological facilities are provided for most of them. However, these towns are connected to London and other points of Britain via good connecting routs and specification of adjacency units and economical functions are considered in them.

In USA, especially after the 2nd world war, creation of new towns has been regarded in such a way that besides dwelling of employees of local industrial sector, adjacency and social units can be organized too. In Eastern Europe Countries, location of new towns has been on the basis of the level of need for creation of these cities and distribution of population and activities at regional levels. In these countries, two types of new towns were also noticed: one of the new satellite towns is in the limits around main cities, and the other is in regional level that is set forth as the growth pole for fulfillment of the social and economical development of these regions [17].

Whereas, the idea and movement of creating new towns in Iran has a long background along with creation of residential townships, townships adjacent to complexes and industrial regions, and company townships, its plan as a fundamental movement in the urbanization system of the country and mainly for balancing a part of the population in the limits of metropolises and main centers of population, refers to the second half of the 1981 decade, and since then creating new towns was set in the agendum of the Ministry of Housing and Urbanization. In 2007, the New Towns Civil Company was established based on the statute approved in the Ministry of Housing and Urbanization and carried out the responsibility for planning, policy making, designing and execution of new towns. During the years 1989 to 1991, eighteen new town civil companies were established as the subset of holding company's triangle [18].

On the rate of population growth in Tehran during 70-year period (since 1921 and on), we can study the role of natural growth factor and immigration in population growth of this metropolis. During the four decades that an enormous capacity of interprovincial migration to Tehran happened, the migration proportion in population growth of this metropolis was estimated for 60 percent. In 1986-1996 decade, population of non-official dwelling places of

the city increased from about one million to two million people, whereas the total population of the metropolis region at the same duration showed a total increase of 2.5 million (40 percent was added to the population of suburbs). The main factor for growth of non-official places of residence in the region has been the internal migration instead of rural migration. Therefore, the plan for construction of three new towns of Hashtgerd, Pardis and Parand, and execution of the project of Andisheh new town in 1990 were approved and the preparatory operations in some of them were promptly commenced. Up to 1999, excluding Andisheh New Town, the population dwelling ability of other towns were much lower than what was anticipated in the first 5-year plan [19].

Based on definition of executive by-law of creation and construction of new towns, new town is attributed to a place where the limits thereof is formed and created for dwelling and activity of a population of about 50000 or at least 10000 residential units, plus buildings and public, social and economical installations, outside of the urban limits and protected area of the existing towns (Secretariat of the Higher Council of Urbanization and Architecture of Iran).

Based on goals and policies for creating new towns in Iran, studying on investment ways, employment, reason for existence of towns, management, transportation, urban design, passive defense, urban installations, green areas, and industry, were considered as the basis of the project. An example of the policies for construction of new towns, is to notice to the industries and factories that can be beneficial for the region of the country and the industries that should be transferred from the metropolis to the new town; and also economical planning for employment, proportionate distribution of population, general economical balance and lawfulness observation. One of the other goals for construction of new towns in Iran, is to prevent the irregular growth of metropolises, transfer of workshops and disturbing industries of metropolis, prevent irregular increase of price of land, create employment centers in the new town, refining of metropolis in order to organize its growth separately, reduce the transportation charges between working and residential centers, prevent living on the fringes of the big cities, provide occupations in the new town and prevent it from being as dormitory, prevent environment and construction of preplanned urban constructions that are in proportionate to the real needs of population.

3. Methodology

In the present research, aiming at applied study like analysis of sustainable development aspects in Parand New Town, studies the effects thereof in residence sustainability; in this article, descriptive-analyzing method has been used based on library studies (making slips) and field studies (open observations and reports of civil reports of new towns and city maps), and techniques of descriptive and inferential statistics are used to analyze data.

4. Analysis of Data and Results Interpretations

4.1. Parand New Town

Parand New Town is situated in 10 km distance from south side of Robatkarim, adjacent to west side of Imamkhomeini Airport, 45-km of southwest side of Tehran, and on the route connecting Tehran to Saveh, at south side of Shahriar City and in Robatkarim district. Lands of Parand from north side are related to the southern mountains of Takhterostam. This limit at the extremity of urban complex of Tehran, by south is limited to Shour River stream, limits of trans-railway of south, connecting roads and uncultivated lands that are gradually exiting from operation capability level. By east, these lands are adjacent to the lands of international airport of Tehran, and by west and northwest are connected to the open and uncultivated lands that will provide further development capabilities in the future. Studies show that this town enjoys good potential conditions for development. The first development and civil project of this town was approved in 1998 with horizon of 2016, and anticipated the population maximum level of 80548 for the town.

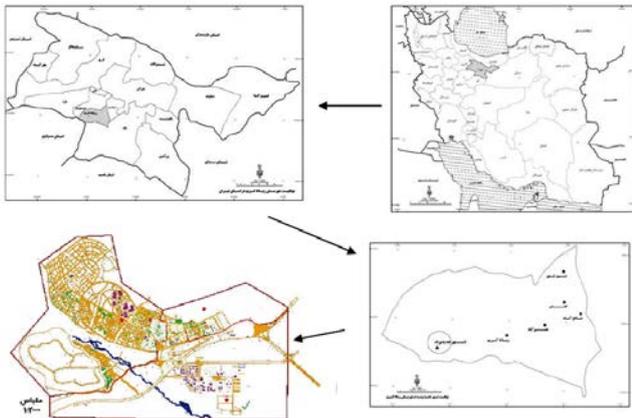


Figure 1. Map for situation of Parand new town in Iran, area of urban complex of Tehran and Robatkarim – Reference: Governor General Dept. of Tehran

4.2. Sustainable Development Aspects in Parand New Town

Whereas, planning is a management tool and requires study and introduction, then we can say that study and introduction to urban areas and analysis of their capabilities and deficiencies is so important in the process of urban planning; therefore, being informed of the facilities, capabilities, weak points and deficiencies are considered as an exigency for presenting conscious management plans. This consciousness is so important that (UMP, Urban Management Plan of the United Nations) considers it as legitimation of urban management [20]. Therefore, conscious action of urban management in spatial distribution of social benefits for reducing spatial imbalances [21] and promotion of quality of framework environment and accordingly promotion of life quality [22] and achieving urban sustainability requires analytical perception of the existing condition, in which seeks allocation of resources with best combination for removing the imbalances.

4.2.1. Environmental Aspects

In order to study the green and natural structure of the town, elements of this structure should be recognized and the relationship logic between them should be studied, to achieve the analysis of the green and natural skeleton. Most important elements are as follows: green and natural corridors including linear parks in town scale, town belts, rivers, streams etc, green and natural areas as parks, rivers, cultivated lands, highlands, etc.



Figure 2. Map for green and natural structure of Parand new town; Reference: Farnahad Consulting Engineers

Studies show that distribution of open areas and forest vegetation, affects town's climate. If green strips and wooded parks and natural forests of towns are managed properly, can provide the other facilities like possibility for interaction between urban and natural processes, besides green lungs and/or recreation places [23]. The goal is open and green areas planning and designing, organizing and regulating all the scattered and open areas of the town, where an important part of the citizens' public life is spent and is recognized as "public site", and these areas are organized and designed for social, cultural and recreation activities of the citizens [24]. Halperin believes that existence of green areas and local parks are exigent to fulfill the man's need to nature and relation with it. Besides local parks, he named central parks that settle ecological balance which is one of the biological needs of human being, with their large green areas in the center of towns [25].

Regarding the aforementioned issues about existence of green areas and parks that are considered as the major and exigent elements of every city, not only they affect the ecology of the town and purify the air, but also create an area suitable for spending their leisure times and promenade of the citizens in these areas, so that they can have the opportunity for visiting each other and social interacting and gives a humanistic display to the urban areas and the town. These areas like squares and streets of the town can cause manifestation of a dwelling place impression.

With regard to the observations on public areas of Parand New Town, particularly on green areas and parks, vegetation and trees that can manifest special beauty and attractions and attracts the viewer sight, are not seen. Just we can see the open and uncultivated areas with no trees and vegetation, which lack delightfulness, dynamism and spirit of life in the town. Even in parks of the town, they have not paid much attention to lawn and planting trees, and if there are trees, their protection is neglected; so that

the adults are not inclined to sit and children have no motivation for playing in parks.

4.2.2. Economical Aspects

What we get from studies on Parand New Town, concerning the extent of urban public and service functions, is that a linear axis forms the functional structure of Parand town; in this concern has a desirable and significant connection with the main regional functional axes and minor structure of the town. One of the major elements of the major structure of the town includes roadways and sidewalks of it. Main structure of accessibility and connection has a dominant linear pattern that in textures is transformed to a centralized checkered pattern. Moreover, in Parand New Town, the suburb connections are provided via connection of second grade major axes with first grade ones like old road and Tehran-Saveh freeway. Inner city connections is also provided based on principles of hierarchy of accessibilities via major and minor connecting routes and major and minor local streets.

Of course it should be noted that the adjacency of urban equipped axle with the main axle of the town, along with providing this axle with potentials and capacities, can cause functional and activity deficiencies and limits. This must be observed for 80 m width of axle and its effects on activities and functions of the urban equipped axle. This width may also cause reduction in functional and conceptual relation of the two sides of the axle.



Figure 3. Map of functional-connecting areas of Parand New Town – Reference: Farnahad Consulting Engineers

Thinkers believe that the radial cities are the best urban forms, because approaching more and more to the center causes more concentration and saves the urban areas from quiescence and immovability. The town with a central square and a main avenue is more dynamic in compare with multi-center or checkered towns [16]. According to the studies, form of Parand New Town is planned and implemented as linear and checkered which can cause non-concentration, immovability and non-dynamism.

Linear development of towns will result in emerging textures with urban centralization and in these types of towns we can observe only relative thin and delightful layers of urban usages, the behind of which are residential textures. Therefore, in this development pattern, no significant urban centers will be created and most of the areas enjoy the properties if linear and dynamic axes and lack of static spaces will result in removal of delightfulness inside the town.

Observing the passages network of Parand New Town, shows balance and no blockage in the route along the infinite view that is impressed by objective designing for

passing of riding human, and not much strategies has been laid out to facilitate and securing access of the passersby. These passages are actually channels for passing of vehicles, and in their best state, are the channels for access of the vehicles to different places, and in this concern they are designed for trafficking of vehicles, without paying attention to the passersby. Whereas, Halperin insists on omitting the exigency of vehicles and placing it in the second level of importance, in order to feel a lovely life, full of tranquility in a street of a town [25]. and Gol believes that the space in which life is in circulation, usually is formed under influence of passerby and at most bike, and not for places in which bike is dominant, because wit slow movement we can watch our surroundings and have the chance for participating in the activities circulating in space.

We can say that Parand New Town has no passerby network and it seems that they did not considered passerby in its design. Due to deficiency of this network, and being no relation between public areas and neglecting their quality, the residents are more inclined to traffic as passerby along the axes of vehicles network. Most of the passages lack a sidewalk with minimum easy pacing capability. Skeletal form and dimension and length of these passages are not basically proportionate to the passerby's movement and no attempt was carried out for attracting the passersby who have to traverse a long way.

4.2.3. 1-1-3 Socio-Cultural Aspects

Mass flow form in the field of towns, plays an essential role in formation of the main structure of the town, just as units with higher compression that play a more important role in the basic structure of a town. As you see in the following map, in the limits of urban edges, there is low and special low compression and in central parts there is average, high and special high compression. In the limits of the lands of annexation that are specified for the purpose of Mehr Housing Provision, proposed building compression, there is high and special high compression. Because a significant part of the suburbs of the urban equipped axle are surrounded by areas with high and special high compression, this axle can be changed into a live and dynamic axle and fulfill the needs of the citizens of these areas.

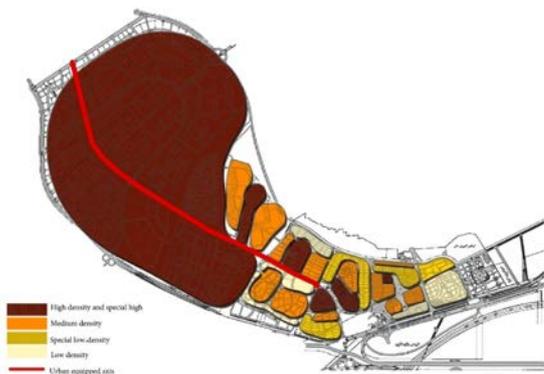


Figure 4. Map of buildings compression in the area of Parand New Town – reference: Armanshahr Consulting Engineers

Zuker believes that square and its elements from the point of view of structure, is a part of the structure of the urban space, and from the point of view of social approach,

it places the social interactions of people in itself. In fact these areas have created a location for gathering of people and manifest a humanistic display to it by providing the possibility of social interactions [25]. Halperin, considers the small squares in district scale, as one of the urban open areas that cause manifestation of a dwelling place impression, and he believes that these squares by changing into the center of its district, may be as a place for gathering of the activities of the district. He believes that, the famous squares of the world are important as social symbols, not because of their beautiful design, but for the different and important social occurrences happening therein.

Observing the squares in Parand New Town, the observer recognizes that their function is merely for traffic and plays the role of intersections of main routes. They are considered as a set of empty areas and open areas inside a passage network which lacks any type of place for social interactions. There is no square which attracts people and creates a location for social interactions and communications, conversations and visits of the citizens.

As per repetitive visits from Parand New Town, what attract one in the first look at the city, from the point of view of spatial appearance and body, is the complexes and similar and uniform buildings that has been constructed by cooperation companies, mass constructors, organizations and departments in order to be transferred to the personnel and official employees. Uniform and similar appearance of the complexes with a geometrical generality, and no variety in appearance and superstructure and form of them (most of the superstructures are brick-work), have changed the city to complex of big residential complexes placed in a row, and constructed by cooperation companies, which is contrary to the life spirit existing therein, while having no proper urban design, and inspire a coarse and light combination to the viewer, and the viewer does not feel any complication and controversy at architecture of the town. Similar appearance of the blocks and complexes caused reduction in lack of variety and enormous architectures, and lack of clarity and manifestation throughout the town. Construction of these complexes are mostly observed dispersedly all over the city; in a way that the open and extended areas are left among them with no plan and mostly as uncultivated, and this has prevented creation of an integrated spatial structure and organization in the town. This type of space and appearance is so boring for the viewer and does not create any attraction for the citizens to walk and loiter in the town and watch views and areas of the town, while having social interactions and visiting the citizens and make the town active and dynamic.



Figure 5. Images of the left areas and similar appearance of the urban blocks in Parand New Town

According to Halperin, whereas the streets, squares of the city, local parks and small squares are as theater stages for the citizens' roaming, should be furnished with enormous objects and a good design for public use. He believes that the urban areas must be enriched with vases, statues and sculptures, and good lightings; especially natural elements as water and trees create a unique quality [25]. Regarding the observations on public areas of Parand new town, streets, squares and parks of the town are not furnished properly. The street of Parand New Town has not the type of vegetation and trees that can make the surroundings and street sides too beautiful and makes the viewer to watch its attractiveness. What can be observed are straight and uniform streets, in an unlimited view, and cars that sometimes passes through them fast? Even urban parks and squares are not properly designed and landscaped too, and/or probably left unfinished.



Figure 6. Images from public lifeless areas with no social life in Parand New Town

When we talk about a new town in urban design and planning, there is a higher expectation for achieving a higher standard to select transportation systems, installations, facilities and urban infra-structures, in compare with other towns. Citizens of the new town who have moved their residential place from a metropolis or small town in the district to a new town having, enormous wishes, naturally have more expectations in compare with their last state, both for the house and services and in general the urban affairs.

Population attracting rate in new towns is firstly related to the beliefs of people, way of welcoming of the applicants and the desirability level of the urban services, and in some ways to the progress of the new towns' project [26]; on the other hand, after commencement of the citizens' dwelling at the new town, they request for all the services, wholly and with the same quality of the metropolis [27]; it means that the applicants of land and housing in new towns, does not accept any type of housing and demand a minimum of urban equipment and installations, proper housing and public and welfare services.

Burby and Weiss believe that one of the factors for which people feel satisfied for selecting the new towns, is fulfillment of main goals that the families want to achieve when moving to a new town [28]. In this concern, Michele and Warnie emphasize on that this fact should be included in the studies on new towns' planning, that construction of new towns will take long for at least 30 years and of course waiting this much for formation of the town is impossible, and the dissatisfaction of the citizens from the first stages cannot be remedied by pleasing them with long term promises and place them in desert or lagoon. For new towns, it is not sufficient to merely attract people but it is more important to keep migrants. In the meantime, being

inclined to stay in the town and the extent of satisfaction from moving to these towns are considered as important factors.

4.3. Testing & Describing Data

With regard to the three goals of sustainable development, the group of researchers have observed the percentage of fulfillment of the goals considered at the plan, in three axes, for ten successive years, based on the reports of the Specialized Holding Company of Development & Civil of New Towns, and the findings thereof are shown at the following table;

Table 1. Percentage of fulfillment of sustainable development goals in Parand New Town, during the years 2002 – 2011; Reference: Writers

Social – Cultural goals	Economic goals	Environmental goals	Year
0%	4.5%	2.1%	81
0.2%	4.9%	3.6%	82
1%	5.3%	3.9%	83
1.2%	6.7%	3.9%	84
2%	13.9%	4.6%	85
2.1%	15.8%	4.9%	86
2.6%	20.3%	5.9%	87
3.1%	27.4%	6.5%	88
4.8%	42.9%	12.1%	89
8.3%	53.2%	17.4%	90
2.53%	19.49%	6.49%	میانگین ده سال

We follow with studying the percentage of sustainable development goals during the last 10 years, separately in linear diagrams, we find the ascending process of all the goals; but according to the observations, economical goals during the past ten years have always had an ascending movement with more speed, and it shows the economic growth of Parand new town. Whereas, the environmental and social goals show an ascending trend that is greatly different from the economic goals.

Merely noticing the structural and geometrical concepts and neglecting social goals in Parand New Town, has confronted it with an undesirable cycle of social-economic and environmental imbalances, and some first-ever challenges, such as cultural contradictions, reduction of life qualities, income gaps, social discreteness, weak family bases and unfairness in distributing urban services, that not only caused urban injustice and jeopardized social health of the town and its citizens, but also has weakened this concept due to the fundamental connection between social justice and sustainable development; whereas, economic goals have fulfilled well, during the past ten years.

However, Parand New Town has not been as a center for employment, contrary to its mentioned goal, and this is one of serious difficulties resulting in failure of the project. Moreover, refining of metropolis in order to organize separated growth and development, preventing raise of prices of lands and its speculation at metropolis, not only is fulfilled, but also has increased more during the past ten years.

It is obvious that lack of relationship between urban management foundations in major cities and plans for creating new towns, is the core of this failure. This means that if urban management foundation did not sell constructional compression upon demand for housing, increase of population of these cities would be led to new town with planning of procedures. Moreover, reduction in internal traffic of the main cities, construction of residential places beside working place, preventing new towns changing into dormitory, absorbing small capitals of people for small industries and production workshops in new towns and reduction of charges for development of fundamental installations of metropolises were not that much successful.

For construction of Parand New Town, some points like social, cultural, mental and environmental sustainability should be considered while providing public and fundamental needs, proper housing, and good recreation, educational and health installations. With regard to that

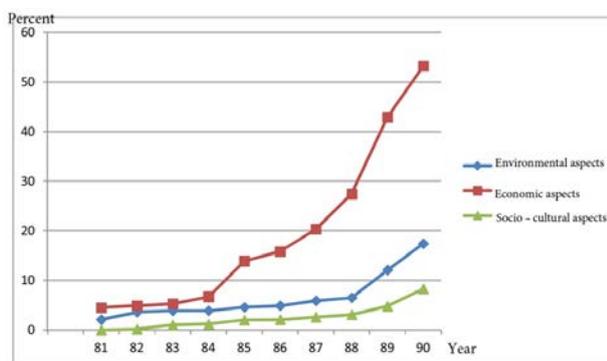


Figure 7. Percentage of fulfillment of sustainable development goals in Parand New Town, during the years 2002 – 2011; Reference: Writers

As we see in the above diagram, the economic aspect during the past 10 years has had the highest average of 19.49 among other aspects of sustainable development. Average of social aspect is lower than all the other aspects, so strengthening of social sustainability is very important.

5. Conclusions

In the present research, aiming at applied study like analysis of sustainable development aspects in Parand New Town, studies the effects thereof in residence sustainability. The survey was carried out in line with the objectives of the environmental, economic, social and cultural - has achieved remarkable results in Parand New Town.

working place of a large share of the heads of family members in Parand New Town, is in Tehran, the employed people leaving for their working places in Tehran, early in the morning and come back to their residential places in Parand New Town, late in the evening. This is the same for their children who study at universities. Therefore, the town remains solely for their wives and other members of the employees' families for the major hours of the day. These citizens mainly consist of whom are not acquainted with each other from the point of view of social aspects and cultural familiarities, and do not know families, specially the spouses of each other. The common cultural aspects were not effective in selecting their dwelling place.

Local social cores in Parand New Town are formed in an artificial way. They remind a kind of fear from hazards and lack of cultural and social and recreation attractions that are very effective on strengthening social bases of social life. Texture of the town with green areas, wide streets designed with flowers has designed the towns appearance very well, but strangeness of the town's texture with regular process of the people's life, have made the citizens weary and deprived them from having needed social activities, and made the town boring or even intolerable for the citizens, in a short period of time.

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