

ORIGINAL RESEARCH PAPER

Sustainable transportation development in cycling system in urban sprawl pattern

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ABSTRACT: In edict to the rapid process of industrialization in the world, most countries, especially developing nations are seeing rapid growth in urban and for this population expansion definitely today one of the chief worries of these form of cities is the concept of sustainability in its international stereotypes. By reviewing urban development patterns over recent decades' volatility suggests the evolution of urban communities and Environmental indicators represent a serious threat urban systems that this type of uncontrolled growth in the variety of urban sprawl, urban sustainable development will be put in conflict. Public transportation as one of the primary rules of sustainability with integrated management of economic efficiency, environmental matters, resource use, soil utilization and social justice impact and declining yield optimal patterns of growth and safer living conditions for people to accept. Cycle tracks as the main priority of urban green transportation will be affected with this question and test to provide strategies for sustainability criteria proposed development program according to the explanation given to the problem of urban sprawl.


KEYWORDS: Cycling system; Development pattern; Sustainable growth; Transit; Urban sprawl

INTRODUCTION

Iran has in the past had shown in its best exemplars of sustainability. According to ecological constraints, the development of appropriate and compatible with the environment and saving resources was all models of factors bearing on stability. today blindly following the practices of the modern stereotype, not only urban but also lead to unstable weather, it could be reasoned that less urban in the country can be traced to the effects of physical, social, ethnic and environmental due uncontrolled urban development is not struggling. Browse urban development patterns over recent decades indicate the instability of growth and development of urban residential areas; environmental indicators represent a serious threat urban system. In our nation, until the form of organic development and spatial evolution of cities and urban growth determining

factors "endogenous" and local, traditional public urban, metropolitan area also will suffice, and a counterbalance between the surroundings and the city was instituted However, since the maturation and expansion of urban centers due to developments in social, economic and political nature "exogenous" to the practice of many cities surgeons became irregular

One of the main concerns in the country today is the concept of sustainability in its international stereotypes, so that with their lack of tending to basic concepts, an attempt is made in the form of principles, to spend huge fees, but failed in this regard action. Obviously one of the main challenges to the sustainability of urban transport. Sustainable management of transit transport development effects on economic efficiency, environmental affairs, resource utilization, land use and considers social justice and the reduction of environmental impacts, increase transportation system efficiency and helps improve so-

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cial life and proposes to increase system efficiency and movement of goods, services and people with the least access problems is that no reorganization strategies, policies and plans will be achieved.

The fact is that the movement of the great unwashed in the world today is low and without corrective and preventive actions will no doubt soon become a crisis. That is why developed nations and in developing forced to move toward sustainable management of transport and traffic in the city to solve many problems of sustainable transportation principles into transportation. Along with the speedy process of industrialization in the world, many countries, particularly developing countries, are experiencing rapid growth and urbanization. Migration of people from rural areas to the metropolises of the twentieth century has begun. In 1995, about 45 percent of the world population lived in urban areas and it is predicted that by 2025 this figure will increase to 60 to 65 parts. In 2003, 38 percent of Asia's population (about 2.1 billion people) lives in cities by 2020, the proportion of urban residents and 50 percent of the urban population to reach two billion people. Ewing, (1994) believes the fourth dimension will be the expansion of urban sprawl and its negative consequences criticism that impact is evaluated; otherwise, this phenomenon once before and cannot be considered a negative. What are the negative facets of the city's urban development, mainly not of the nature of the city, only a city stands up from the uneven and exogenous (Pour Mohammadi and Jam Kasri, 2010). Urbanization in Iran and the world in general, increased use of natural inputs in urban geographic locations and increasing environmental contamination in the urban centers so that the functional resources are limited and environmental quality in cities, the crisis has passed. Development municipal general concept that a modification of physical growth and social - in the cities involved and in both urban and regional levels to be raised. At the municipal level we need to know the facts about the city in terms of possibilities, constraints, opportunities and threats. Today, most governments attempt to control the process of urbanization in different ways to reinforce the beneficial aspects of urbanization avoid hazards. Changes in the physical environment and urban pattern is inevitable and a figure of factors and forces on the severity of these forms is effective (Azizi and Aarasteh, 2011). A key

issue in the context of explaining the principles of urban sustainability due to the urban model proposed in this study, other key issues raised specifically, how the model proposed development plan for the nation, especially in the metropolis with an urban distribution, is of utmost importance.

In an urban system over other systems are all complex and mentally sick. Everything is intertwined and constantly evolving. Therefore, "the only constant thing about cities is that they are always changing". A series of genes and natural forces, political, economic, societal, cultural and technological influence cities and also impose a novel perspective to confront and the physical body in the context of changes in the content and also provides its structures. Body cities are always alive after birth under the influence of multiple factors in the context of time and space to grow. Most great cities gathering place since the start of human life has been his life. Bringing to life the city is one of the important points in the history of mankind and in the result and embodiment of social, economic, political and cultural period (Azizpour, et al., 2009). Over time, and especially after the industrial revolution, factors such as the dramatic increase in population, technology, capital accumulation, concentration of production, industrial development and trade relations, the increasing mobility of the population and ultimately the dynamics of urban life, in the old stable and unstable faced with the problem of the rapid growth of manufacturing (Azizpour, et al., 2009). Referable to the outgrowth and development of cities and urbanization accelerated review process, the type and characteristics of metropolitan development are of special importance. One of the primary causes of the difficulty of measuring development lies in the definition of evolution. Many developing criteria and indicators with which to assess the qualitative aspects, and they cannot be measured directly Evaluate ideas and experiences related to the phenomenon of dispe Sarai and Moayedfar, (2010) region, indicating analyzes, approaches and different solutions, even contradictory in this study. This different context Economic, Social and conditions of each of the subject areas and urban dwellers and looks that are why in any of the subject areas in each nation, different result are obtained. Therefore, the choice of any of the mentioned theories can lead to neglect of other facets of the issue (Ahmadi, et al., 2010). The primary aim of this survey was to ascertain the uni-

versal rules of sustainability through the basic concepts of model-driven evolution of urban transport, especially bike route planning as one of the purest and healthiest, non-motorized mobility.

This study was carried out at Faculty of Art and Architecture, Islamic Azad University, Science and Research Branch during 2016.

MATERIALS AND METHODS

Type of research is the development and analytical methods. We use the collected information to the documentary (library) and the layer's basic theoretical fundamentals of basic concepts such as sustainable urban development, sustainable transport, and distribution patterns of urban development, trying to explain the concepts targeted this research is in line with urban sustainability through the use of strategies to fit the pattern of urban sustainability with respect to the axis of the bike path.

Theoretical literature

Urban sustainable development

Sustainable development is a concept that in the wake of rising fears about the negative effects of unbridled appeared (Rasafi and Zarabad Pour, 2009). For the definition of sustainable development should first examine the beginning words and concepts that form that is to be compensated. Term stability alone does not make sense or significance is very changeable and varying. But when the concept of sustainability in relation to a subject or figure of the nub is used, began to hold anatomy and what its significance becomes more readable. The concept of sustainability is rooted in an ecological principle. Agreeing to this rule if the natural environment as much as possible, or efficiency operation to be performed, the capital (ecological benefits) to remain stable and our utilization of the environment every bit it can be always stable productive (Saraie and Moayed pour, 2010). Constancy is an increment or decrease or a static goal that is doable. Kemp as well said that Vos and have stability translated into a project or a billet with no certain end, the measures can be pressed out from it or they can be based on unambiguous decisions that goal is possible. Ideal sustainability of development efforts in a scheme. Ideals of morality and values are obtained and are truly immeasurable. The concept of sustainability, a destination that remains dynamic makes us a keener apprehension of our environmen-

tal and social system to obtain, it also points to continuously develop (Bagheri and Hjorth, 2006). In late years, sustainability not only among students but also among the public, has become a vernacular word, And the mind that sustainability is founded on consensus and scientific reform has been picked apart. Sustainability has three main stipulations:

- A) The field of sustainable productivity of populations and ecosystems can be accomplished.
- B) Sustainable abundance and biodiversity of individual species in ecosystems to human exploitation and more generally human intervention.
- C) Sustainable economic growth without destroying resources for future generations (Gatto, 1995).

Stability capacity to create, tests, and maintain adaptive capabilities. Maturation of the process of creating, testing and maintaining the opportunity. Hence the outcome of the merger, sustainable development, at the same time creating opportunities to accelerate abilities applicable had driven (Bagheri and Hjorth, 2006).

With the issue of environmental waste and slim down the general point of living, particularly in urban community's approach "sustainable development" was premised by the United Nations. The Brandlnd Commission in 1987, for the first time in the report "Our Common Future" explained the concept of sustainable growth is development that can encounter the demands of the present generation without damaging the needs of future generations and compatible with their interests met max. 20 years before the second conference to be held in Rio de Janeiro in 1992, the conference "Environment and Development" was called, a statement issued by the 27 principles of the Earth Charter was called and the demeanor of people towards the environment and evolution was conceptualized. Accommodation at the next conference to name two, in 1995 in Istanbul, the accent was on the decisions of the Rio Conference.

If society, both socially as well as environmentally sustainable, physical and societal demands of the community in the combined and coordinated. In fact, stability is supplied when a serial publication of social stability with the goal of societal justice, economic stability and environmental sustainability with the objective to find out the economic viability of the ecological balance there.

Sustainable urban development that was sustainable development, life is not much, but it has some practi-

cal work and research to give (Saraie and Moayed pour, 2010) Pythral sustainable urban development is defined as “a figure of modern development that the uninterrupted growth of cities and urban communities for future generations guarantees”. The definition of sustainable urban, Satterthwaite in a scholarly debate about the sustainable city of the need to search for towns and rural areas where the demands of the residents he spoke to development without imposing unsustainable demands on natural resources and local or global system provided. The Urban sustainable city is an ideal that can furnish shelter and health services to people in a manner that can provide all the needs of occupiers. In conditions of physical, sustainable urban development, the changes in land use and densities to satisfy the demands of residents in the area of living accommodations, transport, leisure and catering to the human action comes up over time, in terms of environmental, habitable and life, economically feasible and socially cohesive and harmonious hold. In sight of the social dimension or layer based on equality, social justice, equality and sustainable growth in the area of social ecology and urban ecology discussed its branches and believes that the main players in the development of human beings and society (Ebrahim Zadeh and East, 2009). The definition of sustainable urban development should be given the convergence of views of three groups: Economists, ecologists and sociologists. Reciprocity, balance between the aims of the three groups over time can build stability. In general, the theoretical concept of sustainability in the region is to reduce pollution, conservation of natural resources, reducing the volume of municipal waste, increase recycling, reduce energy consumption, increase useful life in urban and rural areas by creating green areas and trees, urban, urban decentralization and low dispersion, increasing the average density in the suburbs, reducing road traffic, waste management, recycling of non-distribution of resources and provide full local food (Saraie and Moayed Parr, 2010). Features of sustainable development in urban areas are inter-generational equality, equality within a generation (including social equality, geographical equality and equality in government), protection of the natural environment (and enduring within the carrying capability), the minimal use of non-renewable, economic survival and diversity, self-sufficient society, individual benefit and basic needs of society (Ebrahim Zadeh *et al.*, 2009). Urban sustainable development

elements. Picking out and determining factors in the growth and underdevelopment, and whether the status of development, stability or instability of the show, one of the indispensable steps in the provision of urban growth. The demand for sustainable development indexes in the United Nations Conference on Environment and Development in Rio de Janeiro in June 1992, was highlighted in chapters 8 and 40 of Agenda 21 are listed. Different countries based on the United Nations Commission on Sustainable Development (CSD) which is important passages general framework presented in Agenda 21, to provide indicators appropriate to their own land.

In Table 1 are the issues of atmosphere, land, oceans and seas, fresh water and biological Tvny Fruity indicators identified and explicated. Unfortunately, provide indicators appropriate to the economic, societal, ethnic, ecological and within the CSD program in the country on behalf of any of the offices and relevant institutions there. Although in this area, few practical research in Tehran on environmental issues has been constituted by some researchers, but not pervasive yet research in this field (Ebrahimzadeh and Saraie, 2009; Masnavi, (2002) and due to the increasing urban problems in this respect, the need strongly felt.

Urban Sprawl

Urban sprawl as a form or heard of urban development, in the area of urban development has pros and cons. Dispersion in terms of esthetics, efficiency, social and environmental justice and convicted on various areas of the image in terms of equality and the economy has been defended (Galster, 2001). Pieser (1989), believes that the reality of contemporary urban sprawl and by consumer preferences, is an inevitable movement. Gordon and Richardson (1997) indicate that the dispersion enhancing the character of life and societal welfare.

Wrap the views and judgements of experts in different periods, the definition of urban sprawl, there are five principal approaches:

- A) Based on the physical shape
- B) Focus on the aesthetic aspects of the landscape
- C) Based on land use;
- D) Due to the effects and consequences of this phenomemo;
- E) Rely on physical growth of the city (Ahmadinejad, *et al.*, 2010).

Table 1: Sustainable development factors structure

Indicator	Subsidiary	Main Subjects	Dimensions
The emission of greenhouse gases	Climate change	Atmosphere	Environmental Dimension
Thinning of the ozone layer substance	Thinning of the ozone layer		
The concentration of air pollutants in urban areas	Air quality		
Arable and permanent crop land	Agriculture	The Earth	
Use of fertilizers			
The use of pesticides in agriculture			
Forest area as a percentage of the earth's surface	Forests		
The cut down trees			
The amount of land under desertification	Desertification		
Permanent and temporary settlement area	Urbanization		
Concentration of algae in coastal waters	Coastal zone	oceans, seas and coasts	
Percent of all people who live in coastal areas			
Annual catch most species	Fishing		
Annual surface water and groundwater withdrawal as a percentage of total available water	Water quantity	Freshwater	
BOD in water particles	water quality		
Basil focus on fresh water			
Key ecosystem level selected	Ecosystem	Biodiversity	
Protected area as a percentage of the overall level			
Frequency of selected key species	Species		

In fact, diffusion and the deprivation metaphor of choice along the outskirts of urban centers and lack of explanation for everything and nothing (Galster, 2001) categories in Table 2 are different definitions of urban sprawl.

Harvey & Clark “, patterns of urban distribution consist of three types of inventory-based” low-density development continuum “,” linear or strip development “and” development Jumping Frog “have. We can say this three times with the same” growth linear “,” cluster “and” Open “that by” Wilson and his fellows “were produced. «Angel and his fellows” are also three types of urban development are mentioned to as distribution, including the “secondary city center”, “strip development” and “development of the distribution of the species” is (Meshkini, et al., 2010) These images generally have characteristics that are more in the literature that can be programmed to low density, dispersion or scattered development, separation location of work, lack of open spaces noted applications. Galastr (2001) and Samar (2005), the expansion of urban sprawl and land usage practices in an urban

area knows that the combination of 8 Myarmjza shows (Wassmer, 2005). Density (population), continuity (continuity) focus, the cluster sampling, centralization, core-oriented, mixed uses and proximity distance (proximity) indicators shows in Table 3.

Urban sprawl and sustainable forms of shipping

Hence as to achieve urban sustainability and the green economy, priority to the precept of sustainability in this fashion, the result will be. The grandness of this sector in the sustainable economic development of the city could be two aspects: First, the function of transport environmental impact of greenhouse gas discharges and air pollutants and noise pollution and fuel management in order to achieve sustainable growth and more effective usage of resources is invested in infrastructure (Perkins, 2011). Transport infrastructure of their city for quality of roads, the state of access to public transport and ease of access are defined within them that people can go into buildings, places, reach space, and set the relations within a metropolitan area that offers access can distance, travel time, and costs to

be taken into account. It should also be articulated at the network transport infrastructure has a direct impingement on the scale of the local market (Junks and Jones, 2010). Secondly the urban transport sector plays a significant role in business creation and economic evolution of the urban center. In especial, the lack of definition of the United Nations Environment Brnahh, green transport occurs through the backing of the global climate, ecosystems, public health and innate resources and enhances the economic and social poles such as pole achieve sustainability principles. Granting to the parameters of the 3 branches of economic, societal and environmental sustainability principles can be noted that the transport MTV and urban growth pattern and the development of purpose are important.

- 1 - Create appropriate spaces create a friendly environment for bicyclists and other vehicles, walking
- 2 - Non-motorized public transport, low cost and extensive
- 3 - Manage access to hiking trips to clean by cutting down the number of vehicles and the safe speed
- 4 - Transport cargo cleanest and safest mode

Agreeing to these principles and emphasis on effective strategies for picking out the Solaris optimization mode of transport in cities can second principle with regard to the objectives of the research on how to create a growth model for considered. So sustainable transport, integrated set of policies and guidelines, dynamic, continuous, and includes the objectives of social, economic and environmental.

Table 2: Some of the definitions of urban sprawl (Meshkini et al., 2010)

Gottinder and Budd, (2005)	Distribution, casual and low-density development in a broad range called, the dominant figure in the form of residential housing units is single households. As a consequence of this design is typical of urban, social isolation more people, global warming is due to emissions from private cars, flood and corrosion due to the growth, paving of land, the decline of small farms, the destruction of wildlife and disrupt the rest of nature.
USHUD, (1999)	Distribution is a specific type of suburban growth, residential and non-residential settlements characterized by the presence of very low-density, automobile-based transport control, and infinite urban development outwards and territorial segregation is practiced.
Jaeger et al., (2009)	Distribution of external growth, unsystematic and unplanned urban and rural spaces, and the consequences of urbanization is growing too. The term dispersion can be low in density, car-based growth, decline and lack of continuity of the urban land uses complex was put on.
Poelmans and Rompaey, (2009)	A model of urban evolution, which is more widely spread than they should be. Because the pieces are made underdeveloped parts scattered. Distribution of urban development is defined as a peculiar kind of low density, sparseness, and the imposition of harmful environmental and social consequences, including features it is.
ARL and VLP, (1999)	Distribution, including the distribution or destruction of landscapes and ecosystems, through sparse and sporadic development of urban settlements built in the remote areas. Characteristic features of the new metropolitan growth, particularly in developed countries, including low-density development along the landscape. Work-oriented suburbs and small towns outside the main cities is the expansion of urban fields.
Tawana and Mezy, (2009)	The dispersion of the implications of metropolitan particularly during the final half century and means for horizontal expansion of urban centers in the surrounding rural regions. In this process, as a result of displacement and relocation of activities of the city center to the periphery occurs, a full scope of investment flows and economic opportunities shift from the core to the fringe. “Longo Mario” believes that urban distribution features known cities of developing nations, particularly Latin America, the panorama of poverty, informal settlements and illegal use of land on the fringes of cities, lack of infrastructure and severe It also shows public facilities and services and amenities.

The World Bank reports pillars of sustainable transport, including economic and financial pillar, environmental and social ecology and includes a central access to the definition of green and sustainable transport concepts can be received shortly. The advantages of this type of transfer are clearly justified on optimal investment strategy is absolutely a priority to affordable transport system, injection technology in the public system, encourage the usage of non-motorized conveyance, particularly cycling. These types of investments, especially in developed states, have found its place in developing countries requires long-term Brnahh. This character of drift is the most efficacious and most convenient means to propel men and vehicles with the lowest energy consumption and Svkhn the most popular and least expensive means of traffic and the environment For example, Denmark’s capital Copenhagen is one of the best cities in Europe for Dvchrkhh–Svary. Since the inaugural story was made in 1995 and 2003 bike bicycle traffic increased by 41%, while the figure for motor vehicles is 18%. In conditions of physical dispersion, usually around downtown radial or linear happens along the highway. In urban regions and around the city by changes in ground usage, along highways and approach the cities is expanding. Generally, scattering some kind of evolution requires the demolition of farming ground, open spaces and ecological residents interpreted

the space. In conditions of urban sprawl include the development of Frog Jump, linear low-density tape and noted (Meshkini, *et al.*, 2010). In general, in addition to the growth of a kind of division with the priority on the substance of any theory about the practices of evolution did in direct contact with the sustainable evolution of the Quality that indicates in Table 4.

Granting to the theory, as considerably as the types of distribution in the study area to reach the appropriate development model, the various theories in this regard, we stressed to more Brttabq and stability of the opinions of transport cycling emphasis especially system

Factors affecting planning bike routes

Planning stages of cycle routes, including bed feasibility study for the creation of bike paths (feasibility criteria) and improving existing roads and construction (standards development path) respectively. Feasibility criteria for the creation of bike tracks, letting in a lack of biking culture, as one of the most important measures in relation to the founding and development of bike paths, the current culture in the community is on the bike and biking system. Low social dimension of habit biking, By local decision making and provincial and national importance and cultural barriers in the way of distributing the benefits biking culture can be bettered by applying the

Table 3: The definition of urban sprawl identifies some indicators (Meshkini, *et al.*, 2010)

Center	Multi-core or single-core variables, including measuring central metropolitan area inside the radius of the central business district constant, and the number of population centers.
Continuity	Continuously variable contains measurement-based street network density and average size of the building blocks of the stoppages with less than 500 foot peak is. Every bit the size of the blocks increases, the number of intersections per unit area decreases, that it is used as an indicator of the street network congestion.
Density	Population density measurements using a combination of census and statistics are made official. By measuring the perfect density, metropolitan population at very high or low density living, and proximity to urban centers occurs.
Land-use Mixture	Three elements mixed uses measurements combined or separately through an analysis of the principal factors is integrated. These include the percentage of jobs to population, diversity of land uses, and access to residential and non-residential purpose.
Diffusion index	Measuring combines urban density or scattering takes place through the four urban form factors.

following ingredients:

- 1- General advertising, the role of mass media, especially television, is necessary to improve the booking organization
- 2- The guidelines and criteria for the city, through which the bike can be seen one of the main vehicles in preparation programs and projects considered planning and urban purposes.
- 3- Education, awareness of the possibilities and potential riders of bikies and the vehicle and secure method bike through education and training drivers on safety issues bikiers motor vehicles.
- 4- Introduction of the sample, the sample project, which targets to get the bike path biking culture and is designed to determine Shahaar.

Development of cycling in cities large popular participation and funding demands. To lay up such a partnership, formed a committee of citizens, with the intent of encouraging cycling is necessary (Ministry of Housing and Urban Development, 1996).

Advertising and training costs related to the provision, invention and modification of existing streets and crossings that are unsuitable for cycling. Construction of separate routes, bike paths maintenance (repair, snow removal, cleaning) the price of a bicycle parking Add to match the cost of motorized transportation system to run the wheel. Create traffic, population and setting goals for the trip are also important factors, in general, developed nations are receiving more care than the motorcycle show.

Table 4: Categories theories of urban development patterns in relation to the concept of sustainability

Sustainable development approach	Basic concepts	Theory model of urban development
Applications to become more sustainable rural to urban areas, especially in the third and fourth 2	Population change in the center and outskirts	Urbanization process
The accent is on stability, according to the precept of equal advantage	Modification shape and structure in dense urban blocks and parts and interdependent, in concert with the development of the metropolis	Ecological classic
With an emphasis on sustainability compression density	The accent on the relationship between urban form and tone of liveliness	Compact urban building
Sustainability with an stress on development in countries with low population density	Decentralization, focusing on providing comfortable conditions, the variation in the method of travel, equality and social justice for citizens	Distribution and urban expansion
The emphasis on sustainability in the context of cost reduction	Population, higher income residents, agricultural land prices lower and lower transportation costs	Urban Economics
Accent on the principles of supply and demand in accordance with the principle of technology and sustainability of dividing income	Decentralization of firms and households in terms of changes in the demand for land related to changes in income and applied science	Natural evolution
Sustainability based in a suburban settlement in accordance with the natural resources available	The desire to take root in the cities, in terms of facilities located in the outskirts of residential areas	Flights from decay
Ground control and top-down policies and lack of compatibility with urban sustainability	The user does more to land on the basis of public interest, and increase the chance of breaking up in urban regions	Financial land
Depending on the evolution and the constancy of the self-governing area	To focus resources in great urban centers and single mothers in the command region	Dependence
Sustainable transport development	Development of road network and main roads of communication	Linear structure or a corridor

Detailed planning done in this respect and a huge budget to exercise it is intended. Bicycle production nearly tripled from 1970 to 2002 and in 2002 around 104 million bikes produced. Specifically, in the forthcoming years, particularly from 2014 onwards, this trend has increased. One of the most important actions those municipal officials in developing countries on the precepts of sustainability in urban design and transportation are virgin, creating favorable conditions for bike traffic. In comparison, the percentage of developed nations as the transportation system so that a nation like the Netherlands, around 30%, Denmark 20%, Germany 12% in the number of walks is included.

Indicators of bicycle transport in urban distribution

- 1-Access the appropriate continuity with regard to the importance of access, land use regulation and restructuring of urban space rather than physical displacement of people and vehicles and vertical expansion Shhrbaayjad proportion of curbs on the optimal density
- 2-Feasibility of transport decisions on the selection of appropriate attention to the correct mixing applications with priority given to green transport routes
- 3-Recall when - where, as a foundation of stability especially in high-density centralization

Depending on the type of work and research on the one hand by examining how planning for decision-making and the decision to make this type of stability To explain the general principles of how the process of formation of the system of macro-regional policy and urban biking.

RESULTS AND DISCUSSION

As a conclusion, it can be more serious and more appropriate for this character of conveyance is a priority for the stability and development of cities is Strategy development with priority bicycle route planning as the modeling of urban growth.

After mentioning that this type of scheme, the patterns according to the most metropolitan city of the state, particularly those who, overcoming urban sprawl and unsustainable development is listed as a linear city development prospects

Specific criteria must be primarily to facilitate sustainable transport in urban housing should meet:

- Increase the capacitance of the population, within the context of the existing compact urban growth

- Increased content and functional diversity downtown
- Evolution of the bipolar balance in scattered fields
- Formation of regional urban centers, to bring down the force per unit area on the city center
- Central structure, communication networks annular City Such measures may sustainability in urban transport with a aspect to developing physical potential bike path - to create the necessary distance that its Mtabq secondary strategy will be used as follows:
 - Renovation and reconstruction of old urban tissue, to increase people's mental security in the use of non-motorized conveyance
 - Fill the empty spaces and discrete city; a city bike path to integrate the optimal function of existing applications;
 - The protection of ecologically sensitive lands, creating continuity in the case of urban green land along the road
 - Approach to public transport, the origination of more and cheaper approach to the great unwashed
 - Compact city approach and policies, improving the tone of the environment in marginal regions.

Then it can be a model for sustainable urban development is due to the strategies proposed:

Model of Concentration in tissue expansion

When cities need to enlarge to hold the additional population, the development and use inner city wasteland, the most appropriate model of growth, particularly in cities with a high relative density not considered because this type of expansion always with the increasing density takes place. Increase in urban density in the stability needed to pull in appropriate provisions to carry. Select a model with a focus in particular non-motorized transport within the setting of urban sustainability can be a big service. The role of urban land, mass and volume control buildings and blocks the establishment of this tissue are also considered important in this issue.

Model of continuous radial expansion

If you ask to make new urban spaces, continuous expansion model can be utilized as a scientific and effective resolution for optimum density and prevent uncontrolled expansion of the urban center. This guide can adapt the spatial structure of the area and contributing to the destruction of good agricultural land around the city contributes. Transport and establishing the proper balance between them and the city's main priority conjunction space to non-

motorized conveyance, especially road cycling can be an appropriate choice forces.

However, in terms of providing services and creating conditions for Bdnmsjm at the regional level and have a relatively good level of ease environmental conditions applies strategies in this model will be the cause.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interests regarding the publication of this manuscript.

REFERENCES

- Ahmadi, G.; Zebardast, E., (2010). A comparative study of sprawl in three cities in central Iran Case study: Ardebil, Sanandaj Kashan, J. Archit. Urbanism.5 (1): 25-32.
- Azizi, M.; Arasteh, M., (2011). Explain of urban sprawl in order to building density factor, J. Urban Identity, 8(1): 5-15.
- Azizpour, M.; Delir, K.; Esmailpour, N., (2009). Evaluation of Yazd city rapid growth relation with population motivation, J. Geo. Environ. Plann., 37(2): 105-124.
- Bagheri, A.; Hjorth, P., (2006). "Planning for sustainable development: a paradigm shift towards a process-based approach" in Sustainable Dev., 15(2): 83-96.
- Bongardt, D.; Schaltenberg, P., (2011). Transport in green economy, United Kingdom, 122-130.
- DHUD, (1996). Regulations Department of Housing and Urban Development, Ministry of Housing and Urban Development, USA.
- Ebrahim Zadeh, I.; Rafiei, G., (2009). Analysis of the spatial pattern of physical development evaluated by using the Shannon entropy models and Holdren and desirable model for future expansion, Res. Hum. Geogr.,69(1): 25-33.
- Ebrahim Zadeh, I.; Sarai, M.; Eskandari Sani, H., (2009). Analysis and evaluation of urban development have case study in Mashhad, Res. Hum. Geogr. 95(2): 9-12.
- Ewing, R., (1994). Characteristics, causes and effects of sprawl: A literature review: Environ. Urban Stud., 21(2): 53-62.
- Galster, G.; Hanson, R.; Ratcliffe, M.; Wolman, H.; Coleman, S.; Freihage, J., (2001). Wrestling Sprawl to the Ground: Defining and Measuring an Elusive Concept, Hous. Policy Debate. 12(4): 681-818.
- Gatto, M., (1995). Sustainability: Is it a well defined concept. Ecol. Soc. Am., 5(4): 151-156.
- Habibi, S.; Saedi Rezvani, H., (2005). Participatory urban planning, theoretical exploration in Iran. J. Fine
- Jenks, M.; Jones, C., (2010). Dimentions of the sustainable city, Springer, 125-155.
- Meshkini, A; Gholami,P. ;Parviz, F.,(2010) Urban sprawl pattern : typology , dimentions, metrics and effective factors, J. Armanshahr, 5(1): 169-184.
- Perkin, S., (2011). Green growth and transport, Int. transport forum at the OECD, Paris - Sukhdev. p, 2009, green economy for an urban age, green Economy Initiative and chairman of the Global Markets Centre, Istanbul.
- Perkins, S., (2011). Green growth and transport, Int. transport forum at the OECD,Paris - Sukhdev. p, 2009, Green economy for an urban age, Green Economy Initiative and chairman of the Global Markets Centre, Istanbul,125-133.
- Pour Mohamadi, M.; Jame Kasra, M., (2011). Analyze of unbalanced development of tabriz, j. Geo. Res. 11(1) :31-55.
- Pour Mohamadi, P.; Jam kasra, M., (2011). Analysis of the pattern of uneven development Tabriz, Res. Hum. Geogr., 100(2): 69-80.
- Rasaie, A.; Zarabadi Pour, S.,(2009). Examination of sustainable transport of iran by using multi criteria analysis, j. Sc. Technol. Environ.2(1): 33-46.
- Saraie, M.; Moeidi Far, S., (2010). evaluation of development among in central cities in order to environmental ciraiterias, Ardakan city, J. Geo. Environ. Planning, 37(1): 47-76.
- Wassmer, R.W., (2005). Causes of urban sprawl (decentralization) in the United States: natural evolution, flight from blight, and the fiscalization of land use, department of public policy and administration. Sacramento State University.184-152.