

ORIGINAL RESEARCH PAPER

Examination of Sustainable Transportation in Approach to Sustainability

A. H. Ali Mohammadi Chermahini *¹, A. Mokhtari Sharafabad ¹

¹Department of Urban Planning, Faculty of Architecture and Urban Planning, Islamic Art University of Tabriz, Tabriz, Iran

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ABSTRACT: Given the rapid industrialization process in the world, most countries, especially developing countries, are experiencing rapid urbanization, and in relation to this demographic development, one of the main concerns of today's cities is to reach the concept of sustainability in its international stereotype. The review of urban development patterns in recent decades suggests the instability of the growth and development of urban communities, and important environmental indicators indicate a serious threat to urban systems, which, in the form of urban dispersion, lead to sustainable urban development Confronts. Urban transport as one of the main principles of sustainability with integrated management affects economic efficiency, environmental issues, resource consumption, land use and social justice, and results in lower productivity of optimal development patterns and improved people's livelihoods. Biking directions as the main priority of urban green transportation are of interest to this research and are trying to present strategies for proposing a suitable development platform with explanation of sustainability criteria in relation to the urban dispersal scourge.

Keywords: Rapid urbanization, sustainability, urban systems, Urban transport, suitable development

Research Methodology

The type of developmental research is descriptive-analytic. Initially, using the collection of information in a documentary (library) way and studying the basic layers of theoretical foundations related to basic concepts such as transport, sustainable transport, the concepts of traffic and environmental sustainability, attempts to explain the targeted concepts of this. The research is aimed at sustainability of urban transport through the implementation of strategies for modeling appropriately considering the urban axis.

Sustainable transportation and transportation

Urban transport: What has been said at the Stockholm Conference in defining sustainable development are three major issues of economic, human and social development, environmental and ecological

health. And there will be sustained transportation that will support these three areas. The importance of the transportation sector in urban sustainability is evident in both classical and more recent theories so that one of the main components of each strategy can be found in any planning. Therefore, in order to achieve urban sustainability and green economy, the priority of the sustainability principle in the city can be arranged. The importance of this sector in sustainable urban economic development can be twofold: firstly, the role of the carrier's role in environmental impacts in terms of greenhouse gas emissions and air pollutants and noise pollution and fuel management in order to achieve sustainable development and Use is more efficient than the resources invested in infrastructure. (Perkins, 2011). The transport infrastructure of a city is defined by the quality of the roads, the scale of access to public transportation and the access points inside them. The ease with which people can reach buildings, places, spaces, and collections It provides access to an area within a metropolitan area

 *Corresponding Author Email: Ahmadarten02@gmail.com
Tell: +989016604751

that can be considered for distance, travel time, and travel costs. It should also be said that infrastructure in the form of transportation networks has a direct impact on the scale of local markets (Jenks & Jones, 2010). The second aspect is the role of urban transport in creating jobs and economic development in the city. Specifically, the United Nations Environment, Security and Safety Act, Green Movement, comes about when it comes to sustainability through support for the global climate, ecosystems, public health and natural resources, and the strengthening of two other poles, such as the economic and social poles. (Bengarte and Schaltenberg, 2011). Given the three parameters of economic, social and environmental sustainability of transport, one can point out principles that are important in developing urban patterns and in defining the goals of development. Creating suitable spaces for walking. 2. Creating a suitable environment for cyclists and non-motorized vehicles. 3. Low-cost and extensive public transportation. 4. Manage trips by providing access to clean walks by reducing the number of vehicles and at safe speed. - Transportation of goods and goods in the cleanest and safest way . Given these principles and emphasis on the optimization of effective strategies for choosing the type of transport in cities, the second principle can be considered in relation to the research objectives How to create a development template. Therefore, sustainable transport is a set of integrated, dynamic, continuous and integrated policies and guidelines that includes social, economic and environmental goals. The report of the World Bank contains the perspectives on sustainable transport, including the economic, financial, environmental, and ecological and social aspects, which can be understood as the long-term implications of defining green and sustainable transport definitions. The benefits of this type of transportation are clearly justified by optimal investment strategies, which, with absolute priority for low-cost transportation systems, the injection of technology in public systems, promotes the culture of using non-motorized transport, and in particular cycling. These types of investments, in particular in developed countries, have found their place, but in developing countries, they need long-term reluctance. This type of displacement system is in fact the most effective and most convenient way of transporting vehicles and vehicles with the least amount of fuel and energy with the most reasonable costs and the least traffic and use of the environment

(World Bank, 1996)

Sustainable urban development

Sustainable development is a concept that emerged after growing concerns about the negative effects of unbridled development. In order to define sustainable development, it is best to first analyze the concepts of the words forming the phrase. The term sustainability alone has no meaning or its meaning is very vague and variable. The concept of sustainability only begins to develop when it relates to an issue or to the name of nature, and what makes its meaning clearer. The concept of sustainability is rooted in an ecological principle. According to this principle, if in any environment, as much as the natural capacity to produce the environment, exploitation or productivity, the principle of capital (ecological benefits) remains stable and our use of the environment is always as stable as the production power.

Stability is not a system that increases or decreases, or a static goal that is achievable. Also, as Woods and Camp argued, sustainability cannot be translated into a scheme or a definite endpoint, whose criteria can be extracted, or unambiguous decisions can be made on which to achieve the goal.

The ideal of sustainability is the development effort in a system. Ideals are derived from ethics and values and are in fact indescribable. This overall concept of sustainability is a dynamic goal. As we gain a greater understanding of our social-ecological system, this goal is constantly evolving. In recent years, sustainability has become commonplace among scholars, but also among the public, and has been criticized for the idea that sustainability is based on consensus and scientific reform. Sustainability has three main attributes:

- A) Sustainable sources of resources that benefit populations and ecosystems.
- B) the sustainability and biodiversity of individual species in ecosystems relative to human exploitation and, more generally, human interventions.
- (C) Sustainable economic development without destroying resources for future generations (Gatto, 1995).

Sustainability is the ability to create, test and maintain an adaptive capability. Developing the process of creating, testing and maintaining opportunity. So the term derived from the integration of these two, sustainable development, is to accelerate adaptive abilities while creating opportunities. With the de-

velopment of environmental degradation and a decline in the general level of people's lives, especially in urban communities, the UN's "sustainable development" approach was raised. In 1987, the Commission of Commerce for the first time in the report "Our Common Future" described the concept of sustainable development as follows: an extension that can meet the needs of the present generation without compromising the needs of future generations and consistent with their interests. To make it took 20 years for the second conference to take place in Rio de Janeiro in 1992; the conference, called "Environment and Development", issued a statement with 27 principles, called the Earth Charter, and the basis for the behavior of the world's people towards the environment and development. Imagined at the next conference, the Skeleton II, in 1995 in Istanbul, it also emphasized the approval of the Rio Conference.

If society is both socially and environmentally sustainable, then the physical and social design of the community must be integrated and coordinated. Indeed, sustainability is provided when a set of social sustainability with the aim of social justice, economic sustainability with the goal of economic survival and environmental sustainability with the objective of ecological balance. Sustainable development of the city, which was developed after a sustained development, has not had much life, but it has been able to address some practical, research and research. Pietherhal defines sustainable urban development as "a form of modern development that guarantees the continuous development of cities and urban communities for future generations." In the definition of a sustainable city, Stuart Witt speaks in his wisdom about the sustainable city of the necessity of searching for cities and rural areas where residents' needs for development are provided without imposing unstable demands on resources and natural and local or global systems. Sustainable city is an ideal city that can provide food for human beings in such a way that it can provide all the needs of the inhabitants.

Structurally, sustainable urban development means changes in land use and levels of population density in order to meet the city's needs for housing, transportation, leisure and food, so that over time, the city is ecologically, habitable and livelier, economically durable and socially coordinated. In the perspective of social dimension or equality, social

equity and social justice, sustainable development is discussed in the field of social ecology and its sub-branch of urban ecology, and believes that the main actors in development are human and social. In the definition of sustainable urban development, the three groups should focus on convergence: economists, ecologists and sociologists. Interrelationships, balances and balances between the goals of these three groups over time can provide sustainability.

In general, the theoretical basis of the concept of sustainability in the city and the area is: reducing pollution, maintaining natural resources, reducing the amount of urban waste, increasing recycling, reducing energy consumption, increasing the beneficial organisms in the city and the countryside by creating green areas and forest trees And urbanization, urban decentralization and reduction of dispersion, increasing average congestion in urban suburbs, reducing road traffic, managing non-recoverable waste, distributing resources, and providing a complete local feed

The characteristics of sustainable development at the city level are: intergenerational equality, intergenerational equity (including social equality, geographical equality and equality in government), the protection of the natural environment (and life within its capacity to tolerate it), the use of at least non-sources Renewable, economic survival and diversity, self-sufficient society, individual well-being and meeting the basic needs of society.

The concept of sustainable transport

Sustainable development is in search of a balance between the environmental, social and economic qualities (in the present). However, one of the environmental, social and economic aspects should be balanced, it is not very clear. An important problem Sustainably, providing one of the goals of sustainability (economic growth, environmental protection, or social equity) may be in conflict with other goals. For example, the construction of arterial ways with the aim of facilitating the transfer of goods and achieving economic growth may have Environmental disadvantages. Perhaps different environmental and transport policies are not always in the same direction (Beella and Brezet, 2007).

It goes on to say that the concept of sustainable transport means that a set of integrated, dynamic, continuous and integrated policies and guidelines

embraces economic, social and environmental goals that are fairly distributed and used effectively to meet the needs of the transport community and Generations have to be summarized only in the sustainability of the nature of transportation systems. Indicators such as energy consumption, carbon dioxide production, land degradation, waste generation, traffic safety, etc. What is clear is this The goal is to plan sustainable transport, reduce transportation costs in the social, economic sectors the environment on the one hand, and coordinating the dynamic development of the transport sector with other parts of a community and existing resources, on the other hand. The definitions of sustainable transport are conceptually different and in most cases are descriptive and output-oriented, rather analytical and process-oriented. In order to achieve further performance in the definition of sustainable transport, more studies are needed to quantify the various elements of the transportation system (zuidgeest et al, 2000).

The aim of sustainable transport

Increasing the efficiency and mobility of passengers and goods and services with minimal access problems. If sustainable transport is not taken into consideration, it will turn into a major crisis in the near future. In general, it can be defined in a sustainable shipping sentence as follows: rapid population movement by minimizing costs, maximizing services and reducing the harm that can be found in the environment. Also, in World Bank Report 1336, sustainable transport First of all, the economic and financial framework, including the appropriateness of the organizational structure, actions, investment for transport infrastructure, is stated first. Second, the environmental and ecological pillar, which involves examining how investments are made for transportation and the choice of different forms of transport that affect the reduction of energy consumption and emissions of pollutants. Third, Social Pillar: Marlon G. Boarnet (2008) emphasizes the importance of providing access to transport services for all segments of society.

Sustainable transport indicators

A: Comprehensiveness is the basis of sustainable development that has various dimensions such as comprehensiveness, time, space, section, and place that its stakeholders should consider all of these is-

sues when deciding what to consider if this is a fundamental step. Have been removed.

B. Access to the place of movement; In this regard, there should be actions that include land use planning and urban spatial renewal, instead of human physical displacement and vehicle information transfer, vertical expansion of the city instead of the horizontal expansion of the city, Consider shipping problems.

C. (Possible transport decisions

Sustainable Transportation Goals: For two American scholars, Thomas and Fordham, sustainable transport is equivalent to reducing vehicle dependency, and is aimed at:

- Reduce the need for travel by individuals to reduce the volume and travel distance
- Changes in the way of traveling) from motorcycles to non-motorized and group choices
- Improved motorcycle performance
- Sustainable development and sustainable transport have a common link and are close to each other in terms of goal

Sustainable Transportation Advantage

The role of sustainable transport in sustainable development is important in relation to factors such as general welfare, national economy, environment and social impacts that are relevant to the basic functions of the community, hence the choice of shipping systems that are consistent with the optimal use of fuel and energy and Environmental conditions are among the first priorities of sustainable development. Therefore, having a dynamic, coordinated and organized transport network is one of the main criteria for measuring the development of societies in today's world. Based on this, a society that has a more efficient transportation network will benefit from wider development. The positive characteristics of sustainable transport are due to infrastructure conditions, economic efficiency, developmental level of the region or country in question, but some of them can be mentioned in general: economic growth, reduction of production costs, access to services And general welfare, increasing the productivity of services in transportation infrastructure has direct and indirect effects directly; access to labor and indirectly; to hospitals, schools, entertainments, etc., in order to enhance these benefits to a strategy. Cohesive needs are needed because land-transport changes are directly related to each other.

Each of these changes The effects of which can be clearly seen in the other

Sustainable transport infrastructure

One of the most important prerequisites for developing sustainable shipping is the preparation of the necessary routes in this area as the main transport infrastructure. Below is a list of these types of infrastructure.

Green paths: The green path is a tall piece that is often used for recreation, pedestrian crossings and cycling, as well as for trams and light rail vehicles sometimes.

Bicycle paths: Part of the road through the line for exclusive use of the bike.

Bus routes: This is considered as an effective solution to the challenge of urban traffic.

Railways: In the form of underground trains, monorails, etc. (Bianco, Martha J, 1999)

Solutions to sustainable transport: Demand management: to meet the needs of growing mobility,

there are two possible options: first, demand management, the second is the increase in capacities, increasing capacity is logical, but demand management coupled with capacity increase may not seem logical (Marlon G. Boarent, 2008) Popular Participation: The only way to achieve the goals of a healthy society and sustainable development can be seen through the use of popular participation.

Public participation should be ensured in order to ensure policy, because if it is done with people's participation, it will be more sustainable by using the facilities and potential in remote areas, which will advance the region and prevent the migration of people from that area. In other words, participation is considered as a key element in the process of sustainable development, and it is referred to as the missing link of the development process, which can be the goal of development and the means to achieve it. Achieving sustainable transport requires collective commitment at the community level. The free and active participation of all stakeholder groups and informal unions from the appointment, expert, representatives of public opinion, politicians, managers and activists in the field of transportation and related areas such as urbanization, environment and health can contribute to the process of participatory process Sustainable transport planning is effective. Preparing for change and accepting collective responsibility is essential for the start of this process.

Non-motorized transport: Another way to achieve sustainable development is through the design of the environment that can encourage and use non-motorized modes, such as landscape changes, activities and passageways, and attracting and encouraging strolling And bikers to enjoy and discover the beauty of the surroundings. Which should provide its favorable conditions, including non-motorized transportation (cycling, pedestrian), cycling routes that are divided into three different types, including three-way cycling paths, a two-way route Bicycle riding (bike line), the first course of cycling (a bicycle or a separate road) in Tehran, with the private sector participation, this type of transportation follows a long-term plan. To make

Use of public transport instead of personal use: In this context, the use of BRT subways and buses, and in some countries, urban style trains, monorail, especially in metropolitan areas, are due to low prices, and people are more willing to escape traffic The use of these devices will save time and money and reduce damage to the environment and safety in the journey by increasing efficiency and performance.

Solutions and measures to achieve sustainable transport

Implementation of plans to reduce the traffic relaxation in Seoul has been widely implemented and efforts to encourage hiking and cycling in this city are interesting. For example, the implementation of one of these projects in Seoul in 2116 caused Seoul to award the award for sustainable transport. Under the leadership of the mayor, the four-mile-long, four-mile high-rise motorway that once covered the city of Chao-Ying Chichon River, was replaced with a park with river views, high-rise walkways and public squares. Exclusive bus lines have been built over 36 miles of crowded streets and urban governance has begun plans for additional bus lines as part of wider plans to improve the city's bus system. Based on planned designs, all Seoul city buses are to be replaced by CNG fuel buses. In addition, the expansion of rail lines reduces environmental pollution. There are also plans to expand the share of bicycle use and bike routes for the coming years. One of the key principles of sustainability in the Canadian transport industry is that for cities a 31-year perspective has been considered. In this perspective, efforts have been made to bring transport closer to sustainable development. Principles such

as incentives for bicycling and hiking and changing attitudes about the use of personal cars and ... The plans they provided included: reducing air pollution, reducing distance, encouraging people to use bikes and hiking, as well as investing in transportation infrastructure Quotes, providing quality facilities for people using public transport and ...

Conclusion

The development of continuous transport at a macroeconomic level has led to increased economic growth and social returns from private investments, and at the micro level, improved transportation has led to a reduction in production and distribution costs, which, with the comprehensive development of the market, the rise of healthy competition has increased. In addition, the evolution of transport infrastructure in urban areas leads to an increase in the efficiency and efficiency of labor and capital. In order to achieve sustainable development in transportation planning, appropriate and appropriate investment and precise planning should be made, as well as for expediting Achieving the goal of sustainable transport should pay attention to non-motorized and pedestrian transport, as one of the important pillars for achieving a sustainable transport development agenda should be taken into account in all respects. In this regard, we have to consider different sectors such as economic, social and environmental, because it improves efficiency, improves the quality of work, improves economic efficiency, facilitates people's comfort. When transport planning is planned, the goals of development are sustainable in accordance with the wishes and needs of individuals.

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