Evaluating the Legibility of Urban Sidewalks for Good Urban Governance (Case Study: District 12 of Tehran)

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ABSTRACT

Population increasing growth has created adverse socioeconomic, environmental and physical consequences for the lives of its inhabitants in most urban parts of the world, especially in urban areas in recent decades. While, cities relatively provided better living spaces for human beings, before the advent of modernization into the people's biological culture. One of these spaces is its sidewalks. This paper has been aimed to assess the legibility of urban sidewalks for the implementation of good urban governance in the central region of Tehran (District 12). In the first step, research's review of literature was studied. And three dimensions of the sidewalk (human, man-made and natural) were extracted based on these studies and the human dimension was selected among three dimensions, according to the field of the study, and physical sector was selected among two functional and physical components. Four indicators in continue were identified among it and it was conducted by one of the most influential urban governance indicators (participation) in a form of a standard questionnaire (self-made) and the size of a distributed questionnaire was determined by using Morgan table, and sidewalks pattern of the region was evaluated according to the indicators, than to distribution and conduction of 385 questionnaires by 3 target community groups of (20%) citizens of region, (60%) chief executives of regions and university specialists (20%). Then the collected data statistics were analyzed by questionnaires by descriptive and inferential statistics. In the inferential statistics section with respect to the normal distribution of variables, structural equation modeling was used to calculate the correlation coefficients of Pearson correlation coefficient to test the fitness of the theoretical and proposed model of research with data, and regression test was used to analyze the effect of coefficients in environment SPSS software.

Keywords: *Public spaces; Sidewalk; Readability; Good urban governance; Participation.*

INTRODUCTION

Today, the city without areas of a sidewalk is a sign of an outdated and desolate city. Uncontrolled urban development, vehicles' increase and environmental degradation have had adverse effects on urban structure and, consequently, on the physical and mental health of citizens [1]. A revolution has begun in activities without a vehicle with the start of the third millennium. This movement gained a great credibility at the national and international levels from the European Union and the United States. In addition, the efforts of the confrontation leaders in Bogota and Curitiba have proven that there is no need to have much wealth for a city to create a high-quality human environment. The excessive importance of speed, technology and time, encourages humans to move quickly machines in private spaces. The dominance of the vehicle

has prevented the establishment of dynamic social relations in public spaces on various aspects of human life, and the perception of urban environment is very superficial.

STATEMENT OF THE PROBLEM

More than half of the world's population was settled in cities for the first time in the history of urban development in 2003, which evaluations showed that in this growing process, developed and developing countries had no equal contribution and nearly 90% of this population belongs to the urban areas of developing countries. The role and importance of sidewalks was reduced with the onset of the Industrial Revolution, followed by the domination of modernist thinking, and in particular the theory of the "city with a personal car" and, the pedestrian lost his status and priority in urban space.

Meanwhile, Iran over the past decades, has been faced with the issue of urbanization and its positive and negative consequences like many developing countries, while this issue has been taken place at different speeds in Iran. The urban population has been ranged from 31.4 to 71.3 percent, and it has been ranged at the urban area such as Tehran to more than 5 times in the period from 1335 to 1390. Nowadays, the old urban centres of Iran, despite the existence of extensive and unique pedestrians' networks, such as the orders and passages of the old textures, and successful experiences of the past that its obvious example can be observed in Chahar Bagh, Isfahan. According to the prevailing opinion of the scholars, Paris Champs-Elysées' designs has been inspired by it, the domination of a modernist attitude towards urban spaces and unconditional car domination suggests that no attention has been paid to their restoration and organization, and most of these valuable networks and spaces has remained subdued and fickle in the designs framework with limited and external introspection without having a clear position among urban functions and they are going through a declining period and their course of retreat, just for this reason (the loss of functions). And since, urban management had a top-down approach based on the evidence at present and alone cannot respond to these problems, and it found out the need for a public participation in the management of the city in its plans and actions in recent years, and, on the other hand, the successful experiences of the cities of developed countries in this area, it is necessary to organize a management with the centrality of the good city governance that requires the participation of the people. A pattern that defined as a collaborative process of development whereby all the beneficiaries of governance, including the private sector and civil society provide means for rapid urbanization problems. Nowadays, one of the important indicators of urban sidewalk, which has a two-way relationship with the quality of life of citizens and urban management, is the legibility of existing sidewalks in the city, which, if used correctly, it is an appropriate place for the organization of the good urban governance (partnership, justice, identity, etc.) and it will be of great help to urban management and will reduce urban costs. Therefore, the most important goal in this research is to answer this question that the legibility of urban sidewalks (placed in the 12th municipality of Tehran), to

somewhat causes a moving towards a good urban governance in view of people, experts and users?

RESEARCH OBJECTIVES

In this regard, the objectives of the present research can be categorized as follows:

Understanding the legibility of the 12th district sidewalks and then providing a model for organizing city sidewalks in order to have a good urban governance.

REVIEW OF LITERATURE

Those who travel with small wheels such as roller skates, skates, scooters and wheelchair users are also included as pedestrians in some societies [2]. In modern times, this term usually refers to someone walking on roads or sidewalks, but this has not been the case in the past. Various other parameters can also be used to define good urban governance, such as hydrological factors such as Meteorological Parameters [3], climate changes [4, 5], flood [6, 7], and environmental factors [8], factors associated with integrated, Geographic Information System (GIS) [9] and systematic management [10].

Pedestrian and Sidewalk

Sidewalk-orientation and increasing the capability of sidewalks have been accepted as a sustainable form of an acceptable city, considering the concept of a stable and densely populated city, and smart growth. By many urban planners in recent years [11]. Sidewalks are passages with highest social role in which vehicle's transport has been eliminated, and non-motorized transport routes prioritized with the exception of special vehicles (firefighting, emergency and police) in emergency situations [12]. In the other definitions of sidewalks, there are linear spaces in the city that are formed with maximum social role, pedestrians have full control over these spaces, and the motorized transport is used only for special services [13], also the sidewalk's width is a place where its residents of any age and ability can feel secure and comfort, fitness and charm in walking [14].

Effective factors on the Spatial Qualities of Sidewalks

There are four components in the area of public spaces that are effective, such as; liveliness, permeability, safety, security, and legibility.

Legibility

Many concepts have been used in the review of literature to define a legible environment such as

simplicity, integrity, comprehensibility, organization, and so on. These attributes refer to the space indicators. However, measuring the legibility value is not possible through these concepts.

Two variables have been indicated for measuring the legibility:

- Complexity degree of the spatial plan
- Signs detection value

As already mentioned, the spatial design refers to two-dimensional knowledge of space, while the signs depend on the three-dimensional knowledge of space. These two variables are used during the rout-finding process.

Governance

The term governance means focusing on the process of the way of devoted authority and resources in controlled and coordinated actions [15]. Also, a simple definition of urban governance has been defined as the quality of relations between government and citizens [16].

Concepts and world criteria of good urban governance

International organizations and scholars have outlined various criteria for explaining good governance. In the second United Nations Conference on Human Settlements, criteria such as accountability, inclusiveness, participation, law-oriented and so on have been introduced as good governance features.

Participation

Participation is the cornerstone of good governance. People's participation can be directly or through legitimate intermediaries between the government and them or their elected representatives (UNDP, 2010). The important point is that the creation of democracy does not necessarily mean involving the expectations of the vulnerable sectors in the adoption of policies, but that the participation must be organized and implemented through the defined means [17].

METHODOLOGY OF RESEARCH

Data analysis is done through descriptive and inferential statistical methods and with the help of related software, since the present study is a survey. After completing the questionnaire and encoding them, the codes were transmitted to the computer and the information was analysed with the help of related software. Data analysis has been done in two sectors: descriptive statistics and inferential statistics.

Descriptive Statistics

In this sector, the researcher first has described the statistical sample using descriptive statistics indicators means and, has described the data with the help of related graphs and statistical tables.

Inferential Statistics

In this sector, the researcher has been used the structural equation modelling to test the fitness of the theoretical and proposed model of research with data and he has been used of Pearson correlation coefficient to calculate the correlation coefficients and he has been used of regression test to analyse the effect of coefficients in SPSS software environment with inferential statistics patterns and according to the distribution of research variables in society, after determining the distribution of variables using Kolmogorov-Smirnov test at the community level and describing the data.

Evaluation of City Sidewalks, 12th District of Tehran

Nine sidewalks have been constructed within the area of 12th in recent years that almost all of these sidewalks have been constructed, dominantly within the market and the historical texture of the city between 2011 to 2016 and they have had the regional, trans-regional, and even national and tourist functions by being adjacent to the market and a part of the city's historical buildings.

DISCUSSION AND CONCLUSION:

Question: Does legibility on the sidewalks cause moving towards the good urban governance?

Hypothesis: it seems that legibility on the sidewalks causes moving towards the good urban governance.

Characteristics of respondents: descriptive information of demographic variables including the concentration and distribution indicators of the obtained points is presented in the following table.

Table1. *Results of Hypothesis test*

Test Result	Significant level	Correlation Type	T- Test
Accepting the hypothesis	t>1.96	Pearson	2.241

Therefore, it is concluded components of legibility variable at the sidewalks can significantly lead to good urban governance

based on statistical models of the study. Second hypothesis is accepted using the statistical research model.

Recommendation

Recommendation to Managers

- Using informational symbols (brochures, billboards, etc.) to increase the use of existing public transport, subway and parking
- Poll, discussion and in general making a background for the participation of businessmen and pedestrians

Recommendation to the Executives

Using of contemplative and indigenous elements (statues, drawings, 3D images, etc.), comfortable and suitable furniture and taking into account the needs of all members of society, especially kids, the elderly and the disabled,

ACKNOWLEDGEMENT

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