Assessment of the impacts of urban transportation policies on improvement of the quality of public spaces in the central Tehran (Case study: Bazar neighborhood)

Fatemeh Salarvandian [1][*], Ahmad Pourahmad [2], Seyed Ali Hosseini [3]

1. Ph.D. in Geography and Urban Planning, University of Tehran
2. Professor, Department of Geography and Urban Planning, University of Tehran, Iran
3. Ph.D. in Geography and Urban Planning, University of Tehran, Iran

Extended Abstract

Introduction

Use of automobiles is increasing as a travel mode in large cities especially in developing countries. It increases the concerns over traffic jam, pollution, and the death of public spaces. Dominance of car on public spaces, particularly in city centers, is associated with difficulty to access to public spaces and makes these spaces available just for essential activities. While nowadays, having the vital urban spaces with the social activities is considered as one of the most important development criteria for cities. Moreover, making and developing public spaces is becoming a competition element of the cities to get more earnings. In one hand, finding a solution to revitalize the public spaces in small and large cities is undoubtedly a significant challenge. On the other hand, it is worthwhile and positive and needs to set the priorities which places are preceding the buildings and traffic. It caused the access of sustainable transportation becomes one of the critical challenge for present and next generations. To solve the traffic problem to regenerate public spaces, urban managers are turning to change the transportation policies. Whole of the various traffic policies try to minimize the car usage in Travel Demand Management. in the present time in Tehran, a large number of public spaces of city center is out of public access due to the increased dominance of private cars. Public spaces in Tehran become more faded and poorer, if this continues. Therefore, urban management is performing several traffic policies in Tehran city center to reduce dependence on private cars.

Methodology

With the aim of exploring the impact of traffic policies on revitalizing public spaces, this study wants to introduce the model of how traffic policies influence on improving quality of public spaces in Tehran city center using mixed method. In this research, five aspects are considered for Public space including social- cultural, infrastructure, environmental, and economic dimensions. Then, the impact of two push policies (including car and parking restrictions), and two pull policies (including the improvement of public transport facilities and pedestrianizing) are identified on these aspects. Mix Research Method is used to explore the factors which affect

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[*] Corresponding Author: fsalarvandian@ut.ac.ir

the four dimensions of public spaces. As the influences of traffic policies on public spaces are unrevealed, we used Exploring Research Method. Our method compromises three following sections. Firstly, the characteristics of good and livable urban public space are identified through literature reviews. Using qualitative research method, we studied reliable sources including documents, reports and books. Then, four dimensions including social- cultural, infrastructure, environmental, economic are ascertained for a good urban public space. In section two, using Policy Delphi Technique and by semi-structured interviews, we asked 10 people who are expert in fields of transport management, urban geography, urban planning, and urban management to introduce the features of livable urban public spaces which are almost strongly influenced by transportation polices. Eventually, we found that there are no new ideas after 16 interviews, meaning the subject reached to the theoretical saturation. After accumulating the data, the primary research model is designed. In Section three, a questionnaire is designed based on what we extracted from two previous sections. Up to 384 people in a neighborhood in central Tehran titled "Bazare Tehran" have been selected to fill out the questionnaires. Then, we employ Causal-comparative research method to determine the influences of four transportation policies on improving urban public spaces. We choose to analyze our data using a Friedman test. The Friedman test is the non-parametric alternative to the one-way ANOVA with repeated measures. It is used to test differences between groups when the dependent variable being measured is ordinal. Since we aim to compare these four transportation policies in terms of their significant contributions to improving urban public spaces, essentially the Friedman test is used. It can be used when you want to use the same sample of subjects or cases and assess them at three or more points in time or under differing conditions.

Results and Discussion
The analysis states that environmental, social-cultural, and economic and infrastructure aspects have been most influenced by traffic policies. Our findings show that the pedestrianization policy has improved the economic indicators of public spaces, at 70.3 mean. The median value for socio-cultural dimension is almost 68.86 and it is followed by the figures for environmental and physical and infrastructure dimensions, respectively, at 66.66 and 61.75. The same goes for the influence of parking restriction policy on the four dimensions. This shows 55.78 for economic, 47.59 for socio-cultural, 46.29 for environmental and 42.65 for physical and infrastructure dimensions.

Furthermore, car restriction policy has dramatically upgraded the mean values of environmental, economic, socio-cultural and physical and infrastructure dimensions at 54.96, 50.42, 46.47, and 43.02, respectively. Results for the policy of developing public transport demonstrate the highest mean value for economic aspect indicators at 69.85. The second highest value is seen for criteria of physical and infrastructure aspect with 61.77 mean. They are succeeded by figures for socio-cultural aspect at 61.59 and environmental dimensions at 59.71.

Generally speaking, these results indicate that two pull policies compromising pedestrianization and developing public transport have more influence on improving quality and revitalizing the public spaces compared with push policies, e.g., car and parking restriction schemes. From the magnitudes of the mean value, we can rank the four transportation policies in terms of their impact on regeneration of urban public spaces in Bazar neighborhood. Developing pedestrianization has the largest ratio at 66.65, meaning it is the most influential policy in reviving public spaces. The ratio for developing public transport policy is slightly smaller at 63.23. Average value for push policies is significantly small rather than two pervious policies. The policies with the smallest mean value is car restriction with 48.72 and parking restriction with 40.08, respectively.

Conclusion
It seems wise to integrate push policies, e.g., car and parking restriction schemes, with intensive policies, e.g., improvement of public transportation and development of infrastructure facilities

for walking and biking to improve their impacts on quality of urban public spaces. It is also cleared that people in public spaces are most influenced by the measures which give them more alternatives to travel rather than the measures which limit their travel choices.

Keywords: central Tehran, public spaces, quality improvement, urban transportation policies.

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