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USING OF THE FOUR PILLARS OF THE CITY'S SUBWAY SWOT ANALYSIS TECHNIQUES

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ABSTRACT

The metro in the world as one of the primary means of transporting passengers and goods in urban environments is of paramount importance. So many politicians have done to respond and provide the necessary measures for the development of urban transport. Certainly the construction of metro routes designed with advantages and disadvantages faced. This research was carried out using techniques SWOT analysis tries, with four pillars of analysis (strengths, weaknesses, threats and opportunities) metro city proper strategies to provide the desired improvements. The results show a total of six strengths, weaknesses, six, five, four opportunities and threats identified 11 strategies that cover them.

Keywords:Metro, city, strengths and weaknesses, opportunities and threats, SWOT

INTRODUCTION

For many years the subway from the elementary to the advanced form today, as one of the best vehicles in the world is known. Subway or city train (subway) is one of the important infrastructure needs of urban communities are affected. That is why the government is trying to planning and the allocation of credit to the construction of the act, especially in big cities. But in developing countries, the transportation category. So that all people are in direct contact with Parallel of development of urban public services and facilities needs to be increased, in turn, a new dimension to public issues, especially the issue of transportation wills metropolises. On the other hand, many governments to improve traffic management and passenger transport development strategy are very efficient

subway know. But what is noteworthy is that the construction of the subway has always been associated with advantages and disadvantages. High costs, long time, barriers and problems arising from the implementation, management and operation phases of the urban management issues facing the on the other hand, tissues and organs to maintain the historic nature of the city without the slightest damage to monuments is introduced. Decision makers, planners, urban designers and managers are committed.

But it should be notedthe benefits of proper construction of the subway is far more income than expenses,time and engineering knowledge has to be in different phases, from design to implementation and operation carried Metro . This research was carried out using techniques SWOT analysis attempts,

The four pillars of the analysis (strengths, weaknesses, threats and opportunities) metro city that offers optimal strategies for development. The paper also attempts using the experiences of experts from the design phase to the operation of the provide solutions to poverty and sustainable exploitation of underground damage historic towns that meet the unique monuments are recommended.

Background and literature

In the relevant literature, subway or metro system named passenger trains into the city. Metro or subway can be under or on the ground and move on its own track, Subway at least the problem of traffic and air pollution in large cities is very effective. In the history of early modern Metros became clear that they were not and could not use the subway today, the first underground mines were used shipping lanes. On these lines, the wagons were open to the wheels with the human body, and later moved to the horse, when the steam trains were used, the public soon realize passenger trains underground. The world's first subway opened in London in 1863 AD. Paris, Budapest, Istanbul and then to Glasgow Subway system is equipped, The use of technology in the late 19th and early 20th century subway quickly spread in major cities of Europe and America, Currently, about 160 cities have metro systems, and a number of other cities in the metro's construction.

As well as the cities of Tokyo, Moscow and Seoul have subway worlds most used. London in the UK has the longest metro cities in the world. The total length of 408 km in the city's subway lines and 868 million passengers annually by the lines are moved. After London, New York in the United States located as the second longest metro lines. The town is 371 km long

subway lines 1 billion and 203 million passengers annually by the lines moved. Tokyo, Japan, with a 286.2 km metro, ranked third among the world's cities and 2 billion and 660 million passengers annually by the lines moved. In 2002, metro networks in the world with more than 150 million passengers per day, i.e. 34 times had shifted the average daily passenger airline in the world. The comparison of socioeconomic shows development, organization and operation of the subway system. In previous studies on this topic, refer to the following articles. In a review article by Qajar and Lotfi of sustainable development metropolis of Tehran subway map, the results show besides the obvious effect to reduce the types of interactions and the Metro (traffic, pollution, crime, social, etc.)

Tehran metropolitan management, the construction and manufacturing process technology based Metro International is acceptable, although there was a breakdown of some of the MPG, however, prevents the occurrence of any threats made fortifications along the subway. In another study by periodic and work colleagues as economic, socio-cultural and ecological exploitation of the Tehran Metro has taken place, the results show scheduled for subway construction and development of requirements and procedures are complex the monitor threats during construction and operation is very considerable. The results show positive effects, despite threats from the subway to the cost and utilization.

Methods Research

in this study, data were collected by means of interviews, SWOT technique was used to analyze the data obtained, and Strategic SWOT analysis is a valuable tool. This is both a SWOT Tahm micro to the macro level is the best strategy in the areas of planning, management and marketing offers, he field survey method was used to determine the status and functioning of the market. Using the results of other studies and interviews with experts in the list of weaknesses, strengths, opportunities and threats were made Metro, Then, using the Delphi method, the weight of each component of the weaknesses, strengths, opportunities and threats were identified from the perspective of experts. To determine the weight of each of the four elements of SWOT of Likert scores 5 as very high, high scores 4 points, 3 medium, low and very low scores 1 point 2 is used. Analysis of resultsAfter preparation, purification and extraction of data from field studies, documents and interviews, the SWOT analysis to assess limitations (weaknesses and threats) and Metro advantages (strengths and weaknesses) was used.

• provide the best strengths to deliver aggressive strategies of the strengths of Metro

• provide the best opportunities to provide diversification strategies

• an internal weaknesses and proposed metro strategy review

• an existing threats to provide defensive strategies to meet the threats Metro

1-4 Examine the internal factors affecting the city's subway of Esfahan

To identify strengths and weaknesses, the subway in four dimensions: economic, sociocultural, physical and organizational examined. The results are presented in table 1.

Analysis of the strengths, weaknesses, opportunities and threats

In line with the analysis conducted by interview Likert strengths and weaknesses, opportunities and threats were assessed. Table 2 shows the total weight of the average weights, and ranks the relative weight of each component of the strengths, weaknesses, opportunities and threats.

According to the results of the analysis, SWOT, to achieve the proper functioning of the metro station and the city following guidelines are provided in Table 3.

Level	Strong points	Weak points
economic	1. Reduce the cost of moving 2. Reduce transport 3. Reducing energy consumption	1. Select the correct paths of motion 2. A severe shortage of funds and funds
culture	1. subway ask people to launch soon	1. The absence of caste in the operation of the subway as a student and the elderly.
Skeletal	1. Dealing with the most important monuments of the axes defined	Lack of quality equipment 2. The environmental hazards in the City
organization	1. Integrated Management of Urban Train	Lack of coordination, especially cultural heritage and municipal
level	**chances**	**Threats**
Economic	1. The willingness of private sector investment in the city's subway	1. The destruction of a variety of directions and axes
Social and Cultural	People need to move every day in the city	. urban congestion, especially the mother station
Skeletal	1. Reduce Air Pollution 2. Reducing the volume of traffic and passenger traffic in the city of Solo	1. The loss of function of the tissue surrounding the metro
organization	1. Understand the urban management of urban development based on equipping Metro	1. The heterogeneity of the public sector in equipment and facilities, subway

Table 2: Analysis of strengths, weaknesses, opportunities and threats of the city's subway

Analysis Strengths	Total sinker	t	R
S1 .Reduce the cost of moving	16	4	3
S2 .Reduce transport	18	4.5	2
S3 .Reducing energy consumption	19	4.75	1
S4 .People claim to launch the first subway	12	3	6
S5 .Dealing with the most important monuments of the axes defined	14	3.5	5
S6 .I integrated Management of Urban Train	15	3.75	4
Analysis Weaknesses	Total	average	score
W1 .Choosing movement paths	17	4.25	2
W2 .Severe shortage of funds and funds	19	4.75	1
W3 .The absence of caste in the operation of the subway as a student - and the elderly.	13	3.25	5
W4 .The lack of quality equipment	14	3.5	4
W5 .Environmental hazards in the City	16	4	3
W6 .Lack of coordination, especially cultural heritage and municipal	11	2.75	6
chances			
O1 .Willingness of private sector investment in the city's subway	16	4	2
O2 .People need to move every day in the city	18	4.5	1
O3. Reduce air pollution	18	4.5	1
O4 .Reduce the volume of traffic and passenger traffic in the city of Solo	18	4.5	1
O5 .Understanding urban management of urban development based on equipping Metro	15	3.75	3
Threat Analysis	Total	Average	score
T1 .Destroy all kinds of directions and axes	17	4.25	2
T2 .Particularly urban density	18	4.5	1
T3 .The loss of function of the tissue surrounding the metro	13	3.25	3
T4 .Heterogeneity of the public sector in equipment and facilities, subway	12	3	4

Source: Negarandegan

Table 3: Guidelines for the development of the subway in Isfahan

SWOT	Chances	Threats
Strengths	Aggressive competitive strategies (SO) * design new routes and future needs of the city * benefit from the capabilities of the private sector in Metro launch * The use of new technologies in the construction of the subway * the experts	Diversification strategies ST * determine subway extension needs to move * variety of facilities, subway services * check possible topics for the development of the city's subway
Weaknesses	Revised guidelines (WO) * review of the program and the state of development of metros * explain the rules and regulations of the construction of the subway	Defensive strategies (WT) * Setting up specialized committees to manage the Metro * Create and encourage people to participate in the development of infrastructure, facilities Metro

Source: Negarandegan

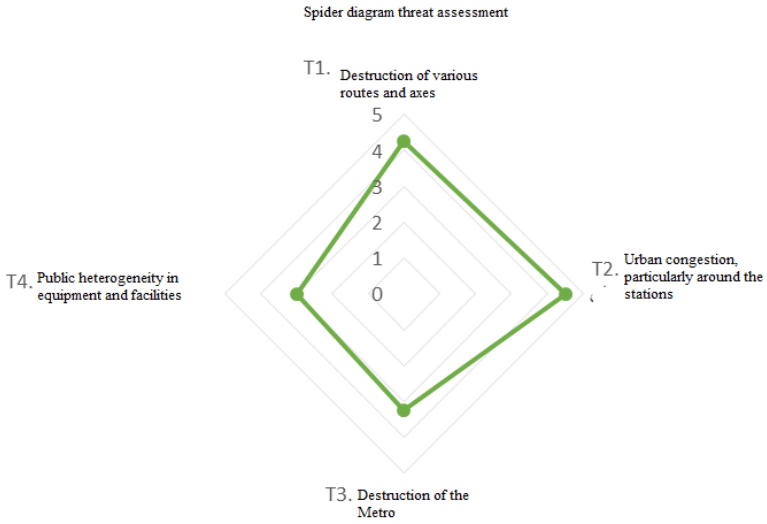
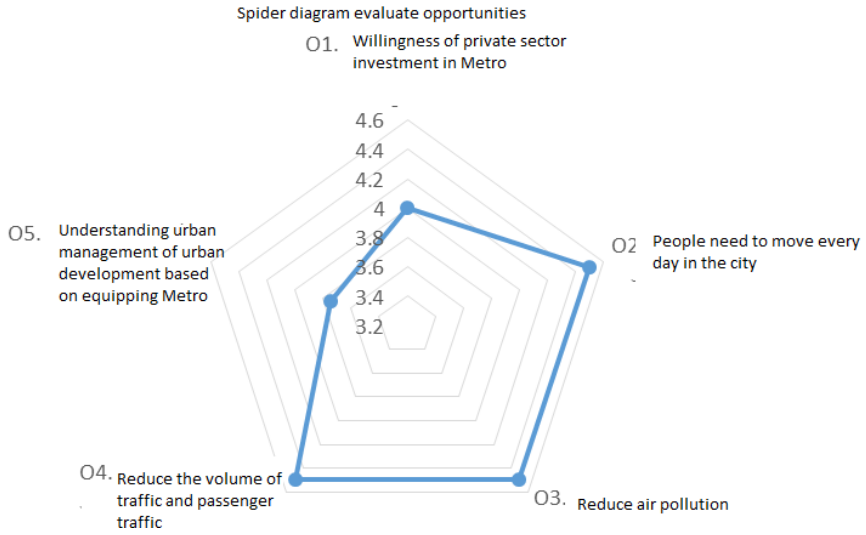
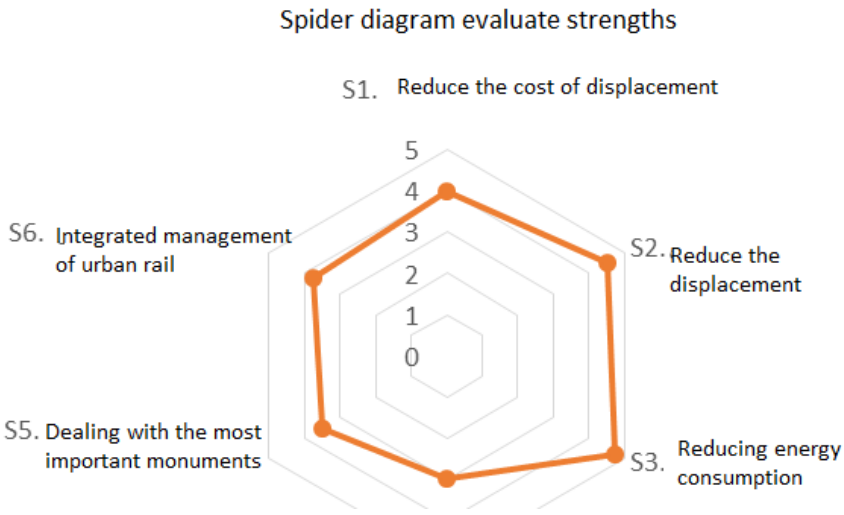


Figure 1: The components of the four pillars of the city's subway
Source: The author





CONCLUSION AND RECOMMENDATIONS

evaluate the strengths, weaknesses, opportunities and threats that the dimensions can be used to analyze the subway in Isfahan. Economic, socio-cultural, physical and organizational views can be explained. In all parts of the world in the implementation of development ideas that respond to the needs of the resident population, difficulties and challenges will occur. One of the problems facing the threat of subway construction, especially in cities that are valuable monuments. The conservation and preservation of human heritage monuments as widespread and can be considered a duty.

In this regard, the following recommendations arising from the implementation of the analysis presented in this study.

1. First of all, with emphasis on the experience at the international level it is necessary to adopt preventive measures to take no damage and threat.

   In this context, the use of skilled and experienced professors and experts at international level from first principles, cost and time to the first essential.
2. One of the most important steps in the construction of the subway, its design phase. At this stage it should as far as possible the location, directions and sensitive topics that have been faced with congestion monuments, and to avoid alternative routes and select the appropriate options. This is a review of the pre-emptive strategy that effectively reduces threats and possible damage to the monuments.

   The full compliance with applicable rules and regulations in the engineering strength of double importance of harm reduction.
3. With regard to the best standards in the construction phase has helped to reduce the threat. The full compliance with applicable rules and regulations in the engineering strength of double importance of harm reduction.
4. Select the type of equipment and cars, rails and other accessories with good quality and reduces vibration and vibration during the operation phase. Continuously monitored and updated using standard agencies, especially in the vicinity of historical monuments and thus increase the awareness of Sudden injury and threat management is in crisis.

5. The estimated carrying capacity, the volume of passenger traffic and train traffic is very importance. For this reason, it is possible to achieve the desired size, the amount of traffic and reduce the amount of vibration and vibration. Be unexpected events such as fires, floods and earthquake engineering considerations also be applied to disaster management in an effective manner.

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