

Neighborhood Environment Quality Improvement with Community Participation Approach and Quantitative Strategic Planning Matrix (QSPM) Technique (Case study: Cyrus Neighborhood, Tehran, Iran)

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ABSTRACT: One of the most significant concerns of urban planners, at metropolitan cities, especially in old and worn out textures, is the reduction of the quality of life and the environment, so they are always seeking for a way to improve these qualities. Low level of available services and amenities, besides physical and social disorders, have caused numerous problems and have totally become as important factors of unsustainability in such a metropolitan area. In this article, we aimed to identify those effective factors which contribute to environmental quality of neighborhoods, such as Cyrus in the city of Tehran, which have experienced urban decayed. A research method that was employed in this paper is descriptive – analytical. Data were obtained from questionnaires distributed to a randomly selected sample of 384 respondents also the interview technique was applied to gather data from residents. After that questionnaire was developed using the identified external and internal factors, and determined strategies administered to 30 experts in the field of urban planning. Further, experts participated in the formal group discussion in order to weight SWOT factors and prioritize the identified strategies, respectively. The results of this study suggest that according to the perspective of residents, experts reflected in the strategic analysis plan by using the SWOT, Internal and External (Matrix IE) and QSPM matrix; one of the key factors and the most preferred strategy to improve environmental quality in Cyrus is considering social factors such as maintaining local and original residents, increasing safety/security, keeping identity of neighborhoods and creating open spaces and decent leisure places.

Keywords: *Quality of Life, Environmental Quality, Neighborhood Satisfaction, Participation, Quantitative Strategic Planning Matrix (QSPM)*

INTRODUCTION

Quality of environment has been considered as one of the important dimensions of ideal urban planning. In the recent decades, this concept is taken away from imagination and become more scientific due to functional and practical aspects have been considered from different point of views. Quality of life and related concepts such as the quality of the environment (natural and built environment), quality of housing, social security, health, urban good governance and other concepts taken from the source of the sociologist and urban geographers

that as it is called sustainable development. These concepts in quantitative and qualitative aspects of life are manifested in the both forms of subjective and objective.

Recently, the quality of life studies has drawn the attention of environmental designers, urban planners, and policy makers, due to its usefulness in assessing the overall life satisfaction of citizens, and monitoring public policies. Even though, the importance of the neighborhood environment remains the most fundamental base of life. People spend the majority of their lives in the neighborhood that has a direct effect on their

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economic and social life. Consequently, satisfaction with the neighborhood features is one of the imperative indicators of the neighborhood quality, which affects residents' quality of life. (Sedaghatnia et al., 2013)

During the past decades, the historic core of Tehran reflects a decaying socio-spatial quality. This phenomenon in urban studies has been discussed as an urban issue. As this form of development does not consider the needs of the population, suffer from several problems that we can refer to lack of infrastructure facilities, chaotic, disorganized and unbalanced in urban performance, unplanned buildings, decreasing services per capita, insufficient convenience to urban different services, environmental pollution, unprincipled urban land uses and totally decreases of quality of life's local communities and consequently residential satisfaction.

Urban renewal policies involving a resident-based approach have been largely debated (Fraser & Lepofsky, 2004; Meegan & Mitchell, 2001), and community participation in local planning has been applied as a method to increase residential quality. The community's experience can be a fundamental starting point in the process of creating sustainable environments, which can be more responsive to the needs and preferences of residents (Romice, 2000).

As a consequence, neighborhood improvement should be based on the analysis of how residents use and experience their residential environment, and what makes them satisfied (Aiello et al., 2010).

Strategic planning is one of the pillars of redevelopment and improvement programs. Proper understanding and precise use of strategic planning and instruments to develop strategic planning makes possible access to redevelopment and improvement programs. So, in this article, efforts have been made to improve the quality of the environment for Cyrus neighborhood - in the past was one of the five neighborhoods forming the old Tehran- by using proper and minute instruments of objectives. The objectives of the article are:

Identify factors affecting the quality of the environment in the neighborhood;

Assessment of the external and internal environments of Cyrus Neighborhood Developing strategies for the improving the quality of the environment in Cyrus neighborhood.

The remainder of the article is structured as follows. First, it reviews the literature on the concept of environment quality and neighborhood satisfaction and related concepts aimed to identify effective factors which contribute to improved quality of neighborhoods which have experienced the urban decayed and disorder, then presents the current situation of the Cyrus neighborhood from a strategic management perspective and prioritizes appropriate strategic recommendations using SWOT and QSPM analysis to make this neighborhood more developed. Data for determining the internal and external environment of the neighborhood were collected using questionnaires distributed to a randomly selected sample of 384 respondents, a 5 point Likert scale was used to measure the level of the various components of neighborhood satisfaction. This ranges from; 1) very dissatisfied, 2) dissatisfied, 3) neutral,

4) satisfied, and 5) very satisfied. After that questionnaire was developed using the identified external and internal factors, and determined strategies administered to 30 experts in the field of urban planning. Further, experts participated in the formal group discussion in order to weight SWOT factors and prioritize the identified strategies, respectively. Finally, the process of formulating strategic planning is presented to this neighborhood and the proposed strategies were presented in the order of priority.

Literature Review

The current economic crisis has renewed attention to the effects of urban decay on neighborhood satisfaction and quality of life. Home foreclosures, unemployment, and population decline threaten quality of life in major metropolitan areas. Scholarship has long noted how physical disorder, abandoned properties, vacant lots, and perceptions of crime are among the strongest predictors of one's sense of satisfaction with the place (Dassopoulos et al., 2012, Woldoff, 2002; Ross & Mirowsky, 1999; Skogan, 1990). Yet research also suggests that social connections built through relationships to neighbors have a strong impact on individuals' satisfaction with their neighborhoods (Dassopoulos et al., 2012, Parkes et al., 2002; Lee et al., 1991). As urban and city planners struggle to find the best way to spend scarce resources in mitigating the effects of urban decline, it is important to disaggregate what factors are most important to residents' sense of happiness (Dassopoulos et al., 2012).

Jeffres & Dobos, (1995) refer to quality of life in the broader social environment, environmental quality of life. Moller (2001) & Veenhoven, (1996) focused their study on Environmental quality of life domains include satisfaction with housing, schools, health services, safety and security, roads and transport (Westaway, 2006).

In general, urban environmental quality can be defined as an urban planning process with attention to social, economic, cultural, physical and emotional indices in both mental and visible forms (Ge & Hokao, 2006; Profect & Power, 1992; Lashkari & Khalaj, 2010)

Environmental quality of life, sometimes equated with service provision (Møller & Jackson, 1997, Westaway, 2009) and customer satisfaction with these services (Social Surveys, 2000), refers to the perceived and experienced quality of life in the broader social, physical and economic environment in the geographic space within which people live (Jeffres & Dobos, 1995; Rogerson, 1996, Westaway, 2009). Environmental quality of life includes personal assessments of satisfaction with one's house or dwelling place, schools, health services, safety and security, roads, transport, pollution levels, shopping facilities, cost of living, and jobs or employment opportunities (Cutter, 1982; Jeffres & Dobos, 1995; Rogerson, 1996; Møller & Jackson, 1997; Social Surveys, 2000; Westaway & Gumedé, 2001; Møller, 2001, 2005; Sirgy & Cornwell, 2002; NG, 2005; Westaway, 2006; Westaway, 2009).

Other indicators of environmental quality of life are satisfaction with social aspects such as friendly and cooperative neighbors,

good recreational facilities, and sense of privacy at home; physical aspects such as upkeep of homes, landscaping, crowding and noise level, and nearness of neighborhood facilities; and economic aspects such as property prices, neighborhood improvements and the cost of living in the community (Rogerson, 1996; Wee, 2000; Møller, 2001; Parkes et al., 2002; Sirgy & Cornwell, 2002, Westaway, 2009)

The question of which of these aspects are most important for neighborhoods satisfaction is difficult to answer, because studies vary greatly in the range of variables they cover and their sample population (Westaway, 2009).

Neighborhood as the most basic urban unit is a social context within which individuals draw satisfaction and live. Furthermore, researchers believed that neighborhood satisfaction is a mediator of individual well-being and a starting point in understanding quality of life. They also indicated that, there are many factors in relation to neighborhood environment that contribute to residents' satisfaction which could be defined in terms of physical and social features (Sirgy & Cornwell, 2002). On the other hand, neighborhood satisfaction measures the difference between residents' actual and desired neighborhood's circumstances. In fact, residents usually make their judgments about neighborhood conditions based on their needs and aspirations (Sirgy & Cornwell, 2002).

While modern cities offer residents, many ways to connect with others and build community, neighborhoods remain among the most common settings where residents forge the attachments to people and place that create a strong sense of quality of life. Strong, cohesive neighborhoods provide friendships, social capital, stimulate community involvement, and provide access to community resources that contribute to resident satisfaction and quality of life. Residents who report high neighborhood satisfaction have higher overall life satisfaction, mental health, and well-being (Adams 1992; Sirgy and Cornwell 2002, Dassopoulos et al. 2012). Low neighborhood satisfaction is implicated in residents' desire to move, which can disrupt neighborhood stability and cohesion (Bolan 1997; Oh 2003, Dassopoulos et al. 2012). Also Permentier surveys effect of neighborhood satisfaction and perceived reputation on intentions to leave a neighborhood (Permentier et al., 2009).

The issue of public participation has received a great attention both in theoretical and practical aspects. Most of scholars note the citizen's effectiveness in urban decision-makings, with the purpose of enabling them to manage the local affairs and make urban services to be optimized, and have considered the role of participation in sustainable urban development, realization of democracy, civil society, and the other relevant as really critical. In order to reach the sustainability and comprehensive development as well as to make the policies effective, many communities are trying to improve the sense of dynamic and active participation among their citizens (Shiehbeiki, et al., 2014).

In the next section, some studies are reviewed in order to identify effective factors which contribute to neighborhood satisfaction and improved quality of neighborhoods.

Studies on Neighborhood Satisfaction and Neighborhood Environment Quality

Many studies have shown that satisfaction with neighborhood features affect residents' quality of life (life satisfaction). An involvement of community in urban neighborhoods is an essential ingredient of sustainable housing which affects their quality of life (Choguill, 2007). A study in Malaysia has shown that residential neighborhood satisfaction is an important indicator of housing quality and condition which affects individuals' quality of life. It determines the way they respond to their residential neighborhood and environment (Abdul Ghani, 2008).

Fried (1984) found that feelings about neighborhoods are the second most important factor, after feelings about family, in explaining people's overall life satisfaction. Adams (1992) also found that neighborhood satisfaction had a positive relation to the quality of life and self-efficacy.

Neighborhood quality, has been defined as the degree of excellence or goodness found in terms of four dimensions; 1) the physical environment, 2) access to various activity nodes, 3) local services and facilities, and 4) the neighborhood's sociocultural setting (Connerly & Marans 1988, Chapman & Lombard, 2006).

Studies on neighborhood satisfaction serve various purposes, including description or indication of the quality of life and other social phenomena like residential satisfaction, residential mobility and sense of belonging and present housing conditions (Amerigo & Aragonés, 1990; Fang, 2006). They are also used in assessing residents' well-being and livability of environments (Hur & Morrow-Jones, 2008; Leby & Hashim, 2010) and can serve as feedback to planners and administrators to meet the needs of residents and for residents to make appropriate housing choices (Basolo & Strong, 2002) and as a measure of success or failure of mass housing (Gruber & Shelton, 1987; Djerbani & Al-Abed, 2000) and urban revitalization projects (Fang, 2006). Indeed, studies on neighborhood satisfaction have generally shown that the level of residents' satisfaction with their neighborhoods has far reaching implications not only for their health and well-being but also on their mobility decisions and willingness to contribute to improvements in the neighborhood as explained by Hur & Morrow-Jones (2008).

Lovejoy et al, (2010) summarized empirical studies since 1980 that looked at built environmental factors which were associated with neighborhood satisfaction. The built environment factors in these studies were: proximity to businesses, shopping and work, public transit, availability of parking, recreational facilities, street lighting, view of nature or greenery, open space, blight or vandalism, traffic congestion, density, and public housing. In their study on characteristics associated with higher level of neighborhood satisfaction among residents in traditional and suburban neighborhoods in northern California region of the US. Therefore, neighborhood satisfaction is generally understood to mean the assessment of the extent to which neighborhood environments are meeting the needs, expectations and aspirations of residents. They find that neighborhood satisfaction is higher among the

traditional neighborhood residents, even after controlling for socio demographics and other characteristics. Differences in the characteristics associated with satisfaction in each group include the perception of liveliness and diversity, contributing significantly only among the segment of the sample living in traditional neighborhoods, and the perception of economic homogeneity, contributing significantly only among the suburban segment. Features such as parking, yards, and school quality do not emerge as important predictors of satisfaction for either group. The most important features for neighborhood satisfaction among both groups are the attractive appearance and perceived safety of neighborhoods, suggesting that any innovative neighborhood designs are most likely to succeed in attracting residents if able to foster these qualities.

Oktay & Marans (2010) the results from a survey of the adult population in the historic core of the city of Famagusta analyzed in order to understand their overall evaluation of the quality of urban life and the degree of satisfaction with their neighborhood which reflects a decaying socio-spatial quality. In addition, the role neighborhood attributes (Urban/environmental attributes such as accessibility, attractiveness of the place; Social attributes appropriateness as a place to live, availability of things to do, appropriateness as a place to raise children; Physical attributes: cleanliness, noise level and traffic intensity), the use and evaluation of the cultural and recreational activities, and safety might play on the overall satisfaction questioned.

This study aimed to identify key indicators affecting the residents' perception of overall quality of urban life in the Walled City of Famagusta, the historic core of the city, which reflects a decaying socio-spatial quality. They first present a brief overview of the research methodology and then analyze the results from a household survey carried out in the Walled City, in order to provide a sheer understanding of people's feelings about their neighborhood environment and the overall urban quality of life in case of implementation of a possible regeneration scheme for the area. The research contributes some empirical evidence to verify the claimed benefits and shortcomings in terms of effects of neighborhood satisfaction, sense of community, a sense of belonging, neighborhood attributes, use/evaluation of cultural and recreational opportunities and safety on the overall quality of urban life of the residents, as well as to identify the predictors of the neighborhood satisfaction (Oktay & Marans, 2010).

Salleh & Badaruzaman, (2011) advanced that previous research findings on resident satisfaction has provided a basis for measuring housing satisfaction which includes; Dwelling units satisfaction, Neighborhood quality satisfaction, Management services satisfaction as provided by the developers or land owner, satisfaction with the facilities and amenities within the building structure and its surroundings.

Salleh (2008) examines two influencing factors of quality of life to include satisfaction towards housing and the surroundings; and the findings reveal neighborhood factors as the most significant on housing satisfaction. The factors contributing to a low level of satisfaction were related to neighborhood facilities

and surrounding areas; which are poor public transportation, lack of children's playground, multi-purpose hall, parking areas, safety and facilities for the disabled.

Ramdane & Abdullah, 2000 (cited in Salleh & Badaruzaman, 2011) discovers three factors affecting satisfaction towards housing; dwelling units, neighborhood and community service factors. Neighborhood factors recorded high significance regarding housing satisfaction variables.

Taeab Rashid (2013) examines the perception of residential environmental satisfaction, of old (Malkendi) and new (Bakhtiari nwe) neighborhood in Slemani city, Kurdistan-Iraq. Through a household survey, 200 respondents were randomly sampled in each of the two neighborhoods. Spear man rank correlation technique was used to test the relationship that exists between some neighborhood choice factors and level of satisfaction of residents. Findings showed that the respondents' choice of neighborhood with respect to safety, provision of facilities/services and social environment was significantly related to their level of neighborhood satisfaction. This suggests that the quality of physical and social environment to a certain level fulfills the intentions of residents in choosing to live in the neighborhoods, but the new neighborhood tended to perform better. There is a need for policy makers and planners to revitalize the infrastructures, especially road networks and building structures in the old neighborhood to ensure that residents' welfare and satisfaction are adequately met.

Iran has recently paid special attention to evaluate urban environmental quality by using various indicators. In a main study after reviewing traditional methods, a model has been presented for evaluation of urban environmental quality (Bahrainy & Tabibian, 1998). On the other hand, quantitative and qualitative characteristics of Tehran's environmental quality (safety and security, well-being and health, equipment and amenities, social environment, housing, transport and energy) were evaluated as an average with a score of 53.3% in a similar study that was conducted in 1996 (Tabibian & Faryadi, 2002). After that, Tehran's urban environmental quality (distribution of services, social environment, urban utilities and services, housing, safety and security, transportation) has been evaluated again by reforming and optimization previous indicators (Seifollahi & Faryadi, 2011).

In summary, the extant literature has concentrated on physical, social, environmental attributes of the environment that effect on neighborhood satisfaction and environmental quality, examining social environment, urban utilities and services, housing, safety and security, transportation and etc. at the dwelling, neighborhood and community scale, often with conflicting findings. So, this article is going to make a difference with previous studies by identifying effective factors which contribute to improved quality of neighborhoods which have experienced the urban decayed and disorder, from the viewpoint of residents and experts in the field of urban planning by using SWOT and QSPM analysis.

The Technique of Quantitative Strategic Planning

Matrix (QSPM) determines the relative attractiveness of

strategies. For this purpose, major external opportunities and threats, and internal strengths and weaknesses are written down in the right-side column of the strategic planning matrix. The information is obtained directly from the internal and external factor evaluation matrixes. A weight or coefficient is assigned to the external and internal factors which play an important role in the system's success (Austin & Hapkins, 2004). The coefficients are right like the coefficients of the internal and external factor evaluation matrixes. In the next step, the matrixes of the second phase are compared to each other, and the strategies the system is to adopt and implement are determined. These strategies are written down in the top row of the strategic planning matrix. Then, attractiveness scores are determined. These are numerical values which indicate attractiveness of each strategy within a set of strategies. In order to determine the attractiveness score, those internal and external factors having an important role in the system's success are studied. Then, a question is raised about each of them: does this factor have any important role in the process of choosing or adopting the strategies?

If so, then the strategies should be compared to each other with respect to the key factor. In particular, the attractiveness scores should be determined for each of the strategies so that the importance of a strategy relative to the other ones can be determined (with respect to the factor in question). The attractiveness score is as follows; 1) without attractiveness, 2) somewhat attractive, 3) having reasonable attractiveness, 4) very attractive. If the answer to the question above is no, it indicates that the factor does not have any important role (in terms of the strategy's success) in the process of choosing the strategies, and so should not be assigned an attractiveness score.

Finally, the sum of the attractiveness scores is calculated. The goal of summing the attractiveness scores is to obtain the product of the coefficient (second phase) multiplied by the attractiveness scores (the fourth phase). The sum of the attractiveness scores indicates the relative attractiveness of each of the strategies, which is obtained only through considering the effect of the relevant external and internal factors. The higher the attractiveness scores are, the more attractive the strategy in question will be (of course, with respect to the factors considered). The tremendous difference between the sums of the attractiveness scores in each set of strategies indicates a strategy to be more desirable than the other one (Shiehbeiki et al., 2014).

In the next sections, we describe the study area, and then explain the methodology employed to assess the environmental quality of neighborhoods.

Study Area

The first step in the analysis is recognizing the characteristics of the study area. Cyrus neighborhood, which was named Chalemeydan in the past was one of the five neighborhoods forming the old Tehran. Cyrus neighborhood in the urban divisions of Tehran is at district No. 17 of Region No. 12 with an area of about 40 hectares. It is bordered with 15 Khordad

Street in the north, Ray in the east, Molavi in the south and Mostafa Khomeini in the west of its limits. In three corners related to it, there are important cross sections such as Qiyam square, Molavi intersection and Cyrus Intersection. With the establishment of over crossing bridge over Ray Street and broadening this pivot, the fourth corner has a disordered situation. Following the destruction of neighboring units, this street has found a destructive and ruined form. The shape of this urban block is irregular trapezoid whose highest side along with 15 Khordad Street has 710 meters of length and its shortest side has a 500 meters long. The two neighboring sides of Molavi and Cyrus have stretched 650 and 700 meters accordingly (Tehran Municipality, 2007; Akbarpour Saraskanroud, 2011).

The declining trend of neighborhood over the past decades has led to exit of the original residents from the city center and tendency of immigrants and low income people to settle in it that predispose physical and social problems in the neighborhood. Worn out and decayed texture, inappropriate access network alongside ruined, abandoned spaces and vacant lots and the inappropriate construction with the texture are the most important physical characteristics of the neighborhood. Socially, settlement of immigrants and low income people, high rate of social problems, crime and insecurity in neighborhoods with low level of social capital are the main problems in the neighborhood.

MATERIALS AND METHODS

According to the goal of this article neighborhood environmental quality improvement, research method that was employed in this paper is descriptive – analytical. Data were obtained from questionnaires distributed to a randomly selected sample of 384 respondents-Cochran method for determining the sample size is used- also the interview technique was applied to gather data from residents -with emphasis on the opportunities provided for citizen participation- of the Cyrus neighborhood. Questionnaires have been completed by two trained people. To avoid bias resulting from questionnaire design, the questions were constructed in such a way that they were direct, simple and familiar to the respondents. Nevertheless, some explanations by the interviewers were expected to clarify certain points so that certain level of consistency could be achieved in the interview.

The questionnaire was divided into 4 parts: physical, social, environmental and functional. However, the instruments were prepared based on the previous neighborhood satisfaction studies and documents related to the powers and limits of city, regional and national macro plans, improvement plans of the neighborhood with little adjustment to suit the purpose of the research. A 5 point Likert scale was used to measure the level of the various components of neighborhood satisfaction. This ranges from; 1) very dissatisfied, 2) dissatisfied, 3) neutral, 4) satisfied, and 5) very satisfied. After that questionnaire was developed using the identified external and internal factors, and determined strategies administered to 30 experts in the field of urban planning. Further, experts participated in the formal group discussion in order to weight SWOT factors and



Fig. 1: The Location of Study Area, Region 12, Tehran, Iran. (Source: Tavana, 2014)

prioritize the identified strategies, respectively.

RESULTS AND DISSCUSION

Internal Factors Evaluation (IFE) and External Factors Evaluation (EFE) Matrix

For the evaluation of strategic internal and external factors

IFE and EFE matrices were used. IFE matrix is indicative of internal strengths and weaknesses and EFE matrix is representative of external threats and opportunities. The matrix was formed to evaluate each separate factor. Each factor was assigned a weighting score between zero (insignificant) to one (very important). As a result, the total score in each matrix is

Table 1. Internal Factors Evaluation (IFE) Matrix.

	Internal factor	Weight	Rating	Weighted score
Strengths	S ₁ : Existence of Nayebalsaltaneh bazaar as a shopping center in main structure of neighborhood.	0.05	2	0.10
	S ₂ : Municipality and responsible institutions support from the rehabilitation and renovation in the texture and granting special privileges.	0.06	3	0.18
	S ₃ : Preserved historical identity of texture and existence of registered historical elements at cultural heritage.	0.06	3	0.18
	S ₄ : Social cohesive among local and original residents.	0.06	3	0.18
	S ₅ : Low rate of renting fee and housing price as compared with other neighborhoods of city.	0.04	2	0.12
	S ₆ : Powerful commercial margin and livability and activity of neighborhood during day.	0.04	2	0.08
	S ₇ : Sense of belonging to neighborhood among local people.	0.06	3	0.18
	S ₈ : High religious beliefs and existence of cultural commons in particular religious ones among the residents.	0.03	3	0.09
	S ₉ : Local and public institutions within the neighborhood.	0.07	3	0.21
	S ₁₀ : Available bases for participating of local people in administrating the neighborhood and .renovation plan	0.05	2	0.10
Weaknesses	W ₁ : Inappropriate access network.	0.06	1	0.06
	W ₂ : Existence of ruined and abandoned area.	0.06	2	0.12
	W ₃ : Urban life recession at night after bazar closed.	0.05	1	0.05
	W ₄ : Shortage of open and green spaces.	0.04	1	0.04
	W ₅ : Exit of original residents from the city center and tendency of immigrants to settle in the city center.	0.04	2	0.08
	W ₆ : High micro lithic and unsteady of buildings.	0.05	1	0.05
	W ₇ : Lots of urban fallow lands within texture.	0.03	2	0.06
	W ₈ : High rate of crime.	0.06	1	0.06
	W ₉ : Changing most of the residential units to storerooms.	0.05	2	0.10
	W ₁₀ : Existence of small and pollutant workshops within residential area.	0.03	3	0.09
Total		1		2.19

Table 2. External Factors Evaluation (EFE) Matrix.

	External factor	Weight	Rating	Weighted score
Opportunities	O ₁ : Proximity to Grand Bazaar, Tehran.	0.05	3	0.15
	O ₂ : Possibility of joint investment with owners in residential and commercial environments.	0.06	4	0.24
	O ₃ : The willingness of employees to continue working and employment within the bazar surrounding and using this potential for participating.	0.06	3	0.18
	O ₄ : The existence of several rehabilitation and renewal plans for neighborhood.	0.05	3	0.15
	O ₅ : Historical identity of the neighborhood and opportunity for tourist attraction because of some historical monuments.	0.06	3	0.18
	O ₆ : Locating in region 12 as commercial core of Tehran.	0.04	3	0.12
	O ₇ : Availability of facilities and public utilities such as metro and etc. in close proximity to the neighborhood.	0.04	2	0.08
	O ₈ : Tendency of public and private sectors to construct within neighborhood.	0.04	3	0.12
	O ₉ : Rate of attention to improve the quality of urban management in the neighborhood.	0.05	3	0.15
	O ₁₀ : Attention of Tehran Cultural Heritage Organization to historical monuments of neighborhood.	0.04	2	0.08
Threats	T ₁ : Pollutions due to proximity to Grand Bazaar, Tehran.	0.04	1	0.04
	T ₂ : Inappropriate network access and roadway connectivity from inside to outside of neighborhood and vice versa.	0.05	2	0.10
	T ₃ : Social unsuitability of neighborhood due to immigration	0.06	1	0.06
	T ₄ : Lack of diversity and mixed land uses and vitality in the some hours of the day.	0.05	2	0.10
	T ₅ : High-density and incompatible construction with the structure and historical identity and unbalanced with the level of existing infrastructures in the neighborhood	0.06	2	0.12
	T ₆ : Lack of balanced cooperation between public and private sectors for investigating.	0.04	3	0.12
	T ₇ : Low trends of renovation of fabric and low tendency for investigating between owners.	0.06	2	0.12
	T ₈ : High rate of tenants and settlement of owners outside of neighborhood.	0.04	2	0.08
	T ₉ : Commercial activities focus.	0.05	2	0.10
	T ₁₀ : Tendency of low income people to settle in the city center.	0.05	1	0.05
Total		1		2.18

equal to one. Then, the present situation of each agent was determined with a number between 1 and 5 (poor = 1; lower than the average = 2; median = 3; above average = 4; good = 5) and weighted score was calculated for each factor. Rate of each row of internal and external factor playing an effect in the region was multiplied by the weight of the normalized factor and placed in a new column as a weighted score.

The final score between 1 to 1.99 indicate severe weakness factors in the neighborhood. From 2 to 2.99 indicates a bad situation and a score of 3 to 4 represents the ideal situation of the neighborhood. As can be seen, the sum of internal factors is 2.13 and external factors in the neighborhood is 2.18, which reflect the chaotic and bad situation neighborhood.

After completion of both the IFE and EFE matrices, the table strategy is completed. This table compares the internal and external factors, and devise strategies to eliminate weaknesses and threats, and strategies to promote strengths and opportunities are developed.

The next step in strategic planning is formulating strategies. In this section, the strategy will be discussed based on the most important determinants from the point of view of neighborhood stakeholders. There are four types of matching strategy using

the SWOT matrix, namely aggressive strategy (SO), diversity strategy (ST), adaptive strategy (WO) and defensive strategies (WT) (Wang & Hong, 2011, 282). Results are presented in the below (Table3).

QSPM Matrix

Stages to from the QSPM matrix are as follows. In the first column in this matrix, the list of the external factors, strategic factors including all threats and opportunities as well as internal factors, strategic factors, including all weaknesses and strengths are recorded. In the second column the weighted score of each strategic factor is copied directly from the IFE and EFE matrices. The following columns contain a variety of strategies resulted from the SWOT matrices includes the quadruple strategies of WO, ST, WT and SO. Each of the corresponding columns related to the strategies is divided to sub-categories (namely that of AS and TAS). Under the column of AS, attraction score is given; it's such that each strategy is compared and measured with the relative strategy in question to see whether this factor does have an effect in the corresponding strategy? The attractiveness scores are distributed as such: 1=not attractive; 2=relatively attractive; 3=possible acceptable

attractiveness; 4 = highly attractive. The scores for the second column (weighted or balanced score) are multiplied by the rated attractiveness and the total points of interest or attractiveness

are interested in the TAS column which represents the relative attractiveness of each factor on the strategy. The total point of TAS is calculated at the bottom row of each strategy column

Table 3. SWOT Matrix.

(SO) aggressive Strategies	conservative Strategies (WO)
SO1: Paying Long-term lending to homeowners in order to renovating and retrofitting (S2,S10-O2,O4,O9)	WO1: Organizing dilapidated and abandoned areas and creating neighborhoods according to the user requirements in these spaces (W2,W7-O2,O8)
SO2: Strengthening the role of local institutions in the urban management of neighborhood (S9,S10-O2)	WO2: Proper lighting at night and removing unsafe spaces and corners and narrow spaces in the neighborhood and good design of spaces (W1,W3,W8-O9)
SO3: Organizing and strengthening the role of non-governmental organizations (NGO) in the neighborhood and political and financial supports from them and granting them administrative responsibilities (S9,S10-O2,O3)	WO3: Creating required public utilities in the neighborhood (W4-O4,O7,O9)
SO4: Restoring and maintaining historical identity and reputation to neighborhood as one of the five forming neighborhoods of the city of old Tehran (S3,S7-O5,O10)	WO4: Encouraging owners to integrate and retrofit buildings in the neighborhood and eliminating of troublesome rules in them (W6,W2-O2,O3)
SO5: Planning to change pollutant business activities in the Bazar with compatible businesses residential and attractive population (S1,S6-O1,O2,O3)	WO5: Planning for Changing incompatible business activities and utilizing of understanding and cooperating with the owners and creating compatible land-uses (W9,W10-O2,O3,O6)
Competitive Strategies (ST)	Defensive Strategies (WT)
ST1: Planning for culturing and informing citizens about their rights and neighborhood conditions through the creation of working groups and ads (S7,S8,S10-T8,T3)	WT1: Landscaping and improving the quality of urban furniture, walkaways and public spaces (W2,W1-T2)
ST2: Controlling and monitoring of new constructions and fitting new buildings to infrastructure and neighborhood identity (S3-T5,T10)	WT2: Raising the level of network access based on needs of the neighborhood (W2-T2)
ST3: Planning for organizing of registered monuments of cultural heritage and granting special privileges to these buildings (S3,S1-T6,T9)	WT3: Planning to increase cultural and public spaces and enhancing the vitality within the neighborhood (W4-T7,T9)
ST4: Planning to keep and maintain local and original residents (S4,S7-T3,T8)	WT4: Preventing from land uses such as warehouse and garage in a residential area and avoiding renting residential buildings to other kinds of uses through continuous control (W9,W3-T1,T9)
ST5: Planning to increase the variety and mixed compatible land-uses in the neighborhood and night activities (S6,S2-T4)	WT5: Increasing safety/security by eliminating criminal and indefensible spaces (W8,W7,W6-T4,T8,T10)

Table 4. QSPM Matrix for SO Strategies.

Strategy		SO1		SO2		SO3		SO4		SO5	
Factor	Weight	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS
S1	0.05	2	0.10	1	0.05	1	0.05	3	0.15	4	0.20
S2	0.06	4	0.24	3	0.18	3	0.18	3	0.18	3	0.18
S3	0.06	2	0.12	2	0.12	1	0.06	4	0.24	2	0.12
S4	0.06	3	0.18	4	0.24	3	0.18	3	0.18	1	0.06
S5	0.04	2	0.08	1	0.04	2	0.08	1	0.04	1	0.04
S6	0.04	2	0.08	0	0	0	0	2	0.08	3	0.12
S7	0.06	3	0.18	4	0.24	4	0.24	3	0.18	2	0.12

Conyiniue of Table 4. QSPM Matrix for SO Strategies.

S8	0.03	0	0	2	0.06	3	0.09	1	0.03	1	0.03
S9	0.07	2	0.14	4	0.28	4	0.28	2	0.14	2	0.14
S10	0.05	4	0.20	4	0.20	4	0.20	2	0.10	3	0.15
O1	0.05	2	0.10	0	0	0	0	3	0.15	3	0.15
O2	0.06	4	0.24	4	0.24	3	0.18	2	0.12	3	0.18
O3	0.06	4	0.24	4	0.24	4	0.24	3	0.18	4	0.24
O4	0.05	3	0.15	2	0.10	3	0.15	3	0.15	3	0.15
O5	0.06	2	0.12	2	0.12	2	0.12	4	0.24	3	0.18
O6	0.04	1	0.04	1	0.04	1	0.04	2	0.08	3	0.12
O7	0.04	1	0.04	1	0.04	2	0.08	2	0.08	2	0.08
O8	0.04	3	0.12	2	0.08	1	0.04	3	0.12	1	0.04
O9	0.05	3	0.015	3	0.15	3	0.15	4	0.20	3	0.15
O10	0.04	1	0.04	1	0.04	1	0.04	3	0.12	1	0.04
Total	1		2.56		2.46		2.40		2.76		2.49

Table 5. QSPM Matrix for WO Strategies.

Strategy		WO1		WO2		WO3		WO4		WO5	
Factor	Weight	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS
W1	0.06	2	0.12	2	0.12	3	0.18	2	0.12	3	0.18
W2	0.06	4	0.24	3	0.18	4	0.24	3	0.18	3	0.18
W3	0.05	2	0.10	3	0.15	2	0.10	2	0.10	4	0.20
W4	0.04	4	0.16	2	0.08	4	0.16	3	0.12	2	0.08
W5	0.04	1	0.04	3	0.12	2	0.08	2	0.08	2	0.08
W6	0.05	2	0.10	4	0.20	2	0.10	4	0.20	1	0.05
W7	0.03	4	0.12	4	0.12	4	0.12	4	0.12	1	0.03
W8	0.06	2	0.12	4	0.24	2	0.12	2	0.12	1	0.06
W9	0.05	1	0.05	2	0.10	1	0.05	4	0.20	4	0.20
W10	0.03	2	0.06	1	0.03	1	0.03	2	0.06	4	0.12
O1	0.05	1	0.05	2	0.10	1	0.05	1	0.05	3	0.15
O2	0.06	3	0.18	2	0.12	3	0.18	4	0.24	3	0.18
O3	0.06	2	0.12	1	0.06	3	0.18	3	0.18	4	0.24
O4	0.05	3	0.15	3	0.15	3	0.15	4	0.20	3	0.15
O5	0.06	3	0.18	3	0.18	2	0.12	2	0.12	2	0.12
O6	0.04	2	0.08	2	0.08	2	0.08	1	0.04	4	0.16
O7	0.04	1	0.04	1	0.04	3	0.12	2	0.08	1	0.04
O8	0.04	4	0.16	3	0.12	4	0.16	2	0.08	2	0.08
O9	0.05	3	0.15	3	0.15	4	0.20	4	0.20	3	0.15
O10	0.04	2	0.08	2	0.08	1	0.04	1	0.04	0	0
Total	1		2.30		2.32		2.34		2.53		2.41

Table 6. QSPM Matrix for ST Strategies.

Strategy		ST1		ST2		ST3		ST4		ST5	
Factor	Weight	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS
S1	0.05	0	0	0	0	3	0.15	0	0	3	0.15
S2	0.06	4	0.24	4	0.24	2	0.12	4	0.24	3	0.18
S3	0.06	4	0.24	4	0.24	4	0.24	3	0.18	2	0.12
S4	0.06	4	0.24	3	0.18	2	0.12	4	0.24	3	0.18
S5	0.04	0	0	2	0.08	1	0.04	2	0.08	0	0
S6	0.04	2	0.08	0	0	3	0.12	2	0.08	3	0.12
S7	0.06	3	0.18	4	0.24	3	0.18	4	0.24	2	0.12
S8	0.03	3	0.09	2	0.06	2	0.06	4	0.12	0	0
S9	0.07	4	0.28	4	0.28	4	0.28	4	0.28	2	0.14
S10	0.05	4	0.20	3	0.15	4	0.20	4	0.20	2	0.10
T1	0.04	0	0	1	0.04	2	0.08	2	0.08	3	0.12
T2	0.05	2	0.10	1	0.05	1	0.05	2	0.10	2	0.10
T3	0.06	3	0.18	2	0.12	1	0.06	4	0.24	1	0.06
T4	0.05	2	0.10	2	0.10	3	0.15	3	0.15	4	0.20
T5	0.06	3	0.18	4	0.24	4	0.24	2	0.12	2	0.12
T6	0.04	2	0.08	3	0.12	4	0.16	1	0.04	2	0.08
T7	0.06	3	0.18	3	0.18	3	0.18	3	0.18	2	0.12
T8	0.04	2	0.08	2	0.08	2	0.08	4	0.16	1	0.04
T9	0.05	2	0.10	2	0.10	1	0.05	4	0.20	4	0.20
T10	0.05	3	0.15	2	0.10	2	0.10	4	0.20	2	0.10
Total	1		2.44		2.60		2.66		3.13		2.35

Table 7. QSPM Matrix for WT Strategies.

Strategy		WT1		WT2		WT3		WT4		WT5	
Factor	Weight	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS
W1	0.06	3	0.18	4	0.24	2	0.12	1	0.06	4	0.24
W2	0.06	4	0.24	2	0.12	4	0.24	2	0.12	4	0.24
W3	0.05	3	0.15	2	0.10	2	0.10	4	0.20	4	0.20
W4	0.04	3	0.12	3	0.12	4	0.16	1	0.04	3	0.12
W5	0.04	2	0.08	3	0.18	3	0.12	4	0.16	4	0.16
W6	0.03	3	0.15	4	0.20	4	0.20	1	0.05	2	0.10
W7	0.03	3	0.09	2	0.06	4	0.12	3	0.09	4	0.12
W8	0.06	2	0.12	3	0.18	4	0.24	2	0.12	4	0.24
W9	0.05	1	0.05	2	0.10	2	0.10	4	0.20	3	0.15
W10	0.03	3	0.09	1	0.03	2	0.06	4	0.12	1	0.03
T1	0.04	1	0.04	2	0.08	1	0.04	4	0.16	2	0.08
T2	0.05	4	0.20	4	0.20	2	0.10	1	0.05	2	0.10

Continue of Table 7. QSPM Matrix for WT Strategies.

T3	0.06	2	0.12	2	0.12	3	0.18	4	0.24	4	0.24
T4	0.05	3	0.15	1	0.05	4	0.20	3	0.15	4	0.20
T5	0.06	3	0.18	2	0.12	2	0.12	1	0.06	2	0.12
T6	0.04	1	0.04	2	0.08	3	0.12	2	0.08	0	0
T7	0.06	3	0.18	3	0.18	3	0.18	4	0.24	3	0.18
T8	0.04	2	0.08	2	0.08	3	0.12	3	0.12	4	0.16
T9	0.05	2	0.10	3	0.15	3	0.15	4	0.20	2	0.10
T10	0.05	3	0.15	3	0.15	3	0.15	4	0.20	4	0.20
Total	1		2.51		2.66		2.70		2.66		2.88

Table 8: Priority Strategy Based on Quantitative Strategic Planning Matrix (QSPM).

Priority	Attractiveness Score	Strategy
First	3.13	Planning to keep and maintain local and original residents.
Second	2.88	Increasing safety/security by eliminating criminal and indefensible spaces.
Third	2.76	Restoring and maintaining historical identity and reputation to neighborhood as one of the five forming neighborhoods of the city of old Tehran.
Forth	2.70	Planning to increase open and public leisure spaces and enhancing the vitality within the neighborhood.

and the different options of strategy for each organization shall be determined through its numerical value and thus the basis for a comparison provided (Saeb et al., 2012).

Finally, Based on the analysis of the internal and external environment, SWOT matrix and QSPM be obtained, the authorities in improving of the Cyrus neighborhood should choose strategies as a priority strategy can be seen in Table 8.

CONCLUSION

One of the main concerns of urban planner about worn out and decayed textures is improving quality of life and the environment. The current situation of Cyrus neighborhood renewed attention to the effects of urban decay on neighborhood satisfaction and quality of life. Physical disorder, abandoned properties, vacant lots, totally low quality of the environment has led to exit of the original residents from the city center and tendency of immigrants and low income people to settle in it that predispose physical and social problems in the neighborhood. Socially, settlement of immigrants and low income people has caused high rates of social problems

such as, crime and insecurity in neighborhoods, low level of social capital that threaten quality of life in one of the five neighborhoods forming the old Tehran as major metropolitan areas in Iran.

Assessment of environmental quality and improvement of the environment in the urban decayed area had always been difficult. In this article, we aimed to identify those effective factors which contribute to environmental qualities of Cyrus from residents and expert's point of view.

The results of this study, according to the perspective of resident, stakeholder and experts reflected in strategic analysis plan by using the SWOT, Internal and External (Matrix IE) and QSPM matrix; the total final scores of internal factors for Cyrus neighborhood in the matrix of internal factors evaluation (Weaknesses and Strengths) is equal to 2.13 and the total final scores of external factors for Cyrus neighborhood in the matrix of external factors evaluation (Opportunities and Threats) is equal to 2.18, which reflect the chaotic and bad situation of neighborhood. Actually, scores lower than 2.5 indicate that Weaknesses and Threats overcome to Strengths and Opportunities, as proved in this article.

In the following, four types of matching strategy using the SWOT matrix, namely aggressive strategy (SO), diversity strategy (ST), adaptive strategy (WO) and defensive strategies (WT) are presented. Then, to set priorities for implementing these strategies, the data were entered into the matrix QSPM. The analysis of findings indicates that strategy ST4 (Planning to keep and maintain local and original residents) with a score of 3.13 is the most significant strategy from the point of view of residents and experts. This suggests that residents of Cyrus think the main reason of most of problems in their neighborhood is related to exit of the original residents from the city center and tendency of immigrants and low income people to settle in it. As a result, demolishing of social cohesion is one of the key factors that play a role in the high rate of social problem and crimes. Strategy WT5 (Increasing safety/security by eliminating criminal and indefensible spaces) with a score of 2.88 located in the second priority. Actually, this reveals that the security and safety are other important environmental factors that must be improved. The third priority with a score of 2.70 among the proposed strategies is SO4 (Restoring and maintaining historical identity and reputation to neighborhood as one of the five forming neighborhoods of the city of old Tehran) with a score of 2.76. In fact, raising the social status and restoring the identity and reputation of the neighborhood is one of the most important demands of the residents that these days have been quite disappeared and caused the neighborhood become worn out with high rate of social problems which provide a suitable home to settle low-income individuals and immigrants. The fourth priority strategies belongs to WT3 (Planning to increase openness and public leisure spaces and enhancing the vitality within the neighborhood). It means a shortage of leisure and cultural spaces is one of the main problems that play a role in reducing the level of quality of life and vitality. Therefore, the residents have considered leisure spaces in the neighborhood as another important factor. Finally and in general, it can be said that, contrary to initial assumptions, regarding to improving the quality of Cyrus neighborhood environment, the results of the evaluation showed that social factors are more important than the physical factors from the point of view of residents, experts and stakeholders, therefore priority to improve the quality of neighborhood should be more concerned with social aspects such as maintaining social structure, increasing security/safety and restoring social status of the neighborhood. Also, it cannot deny that physical factors play a significant role in achieving these purposes.

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