

***Impact Assessment of Sprawling on Lands Use
Change of Middle-Sized Cities (Case Study: Qorveh
City)***

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Abstract

Today, the unplanned and horizontal extension of cities is an important issue for urban planners. This is the result of irregular growth of population on cities' border and suburbs, as well as human's developmental actions such as destruction of lands of economic value for construction. As a result of such factors, a city's breadth undergoes changes, and leads to the unproductive development of city. This study is applied in orientation aiming to assess the phenomenon of sprawling in the development of Qorveh. The method is descriptive-analytical and the tool of gathering data includes documentary and library studies. Data were also collected from organizations and research centers related to the study. In this study, for answering the questions we used different models. At first, for gaining the map of rate of vegetation lands destruction we used Fuzzy Artmap, LCM and Gross Tab table in Idrisi Selva application and Google Earth, also we used CA- Markov for forecasting city's future development. The results of analysis show change of land status of vegetation areas during 1986- 2016 such that 1165/5 Hectare from vegetation lands have changed to constructed lands. This process gradually causes horizontal spread. Therefore, we can see such an action in connecting the village of Qalee to Qorveh from south part and the expansion of Divzand village toward surrounding lands. While suitable agricultural land is more in this part, according to the obtained forecasts for the year 1410, 126/27 hectares from the vegetation lands will have their use changed to construction land; all of these items are among major reasons of horizontal spread and change of body structure and also environmental problems.

Introduction

Urban scattering is one of the main challenges in spatial planning in the 21st century. Urban scattering, as a special form of urban development with low density, dispersion, is car-dependet and influences social and environmental characteristics. Therefore, horizontal extension or urban sprawl always leads to land-use change. It's possible that this change happens in agricultural and garden lands or includes pastures, forests, and inclined hillsides of mountains and hills because population and actions that shift from the central city to the ground in the sprawling process, need the land to settle in around. Therefore, we can say land user change around the city has a direct proportion with the city size. Whenever the city is bigger, and without exact planning, its effect on user change of the periphery lands is more.

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Materials & Methods

The method of the research is practical and for analyzing, we prepared Landsat satellite of urban area of Qorveh related to the periods of 1986, 2000, and 2016. It is necessary to mention that prepared pictures are related to Landsat satellite (4, 5, and 8) and TM and OLI/TIRS sensors that are in the form of false-color images related to selective band 2, 4, 7. Then we determined the condition of intended applications for doing the work, consisting of four classified classes including built lands, vegetation lands, not- planting lands and water areas. In the following, for the assessment and evaluation of the condition of applications and classification of satellite pictures we used the Fuzzy Art map model that is a supervised algorithm. Then, the created changes between applications using the LCM model were shown, and at the end CA- Markov model has been used for forecasting Qorveh's application changes until the year 2030.

Results and discussion

Classification of satellite pictures in the urban area of Qorveh using the Fuzzy Art map model shows that area of use of built lands in Qorveh during the years 1986- 2016 has a level increase from 6.23% to 18.27% and the rest of applications has a level decrease toward built lands. In the following Cross, Tab table shows that the most decrease in vegetation lands from the years 1986 until 2016 has been 586.26 Hectares. Reviews from the years 2016 until 2030 show that the most level of change has been inbuilt lands that represent physical development in Qorveh. This leads to complete change in not-planting lands and a decrease in their breadth, also causes vegetation lands and environment destruction. For the rest, including non- planting lands, vegetation lands and water areas has the most decrease in the area of use. Assessment of applications changes using the LCM model shows that about 822.24 Hectares have added to constructed lands extension and there has no decrease in constructed lands extension. In the end, the results of the area of uses forecast using Markov chain and automatic cells show that constructed lands will have 373.95 Hectares than 2016. Also, non- planted lands 184.23 Hectares, vegetation lands 179.55 Hectares and water areas 10.17 Hectares will have level decrease. As a result, the process of probable changes in vegetation lands in the year 1410 will cause official and unofficial construction around the city that destroys other lands .

Conclusion

The results gathered from analyzing user change in vegetation lands during the years 1986-2016 show that 1165.5 hectares from vegetation lands have changed to constructed lands, a fact which gradually causes horizontal extension and lack of city coherence. During the years, Qorveh has experienced the most intense process of urban development in most directions including northwest. Therefore, such a thing can be seen by the Markov model in the development of the villages around and their attachment to Qorveh. We can name villages such as Qal'eh in the south and the development of Divzand toward lands around which high-quality agricultural lands can be seen in this area. All of these cases are the main reasons for horizontal development and change of physical structure and environmental problems in this city.

Keywords: Horizontal Development, Physical Development, Middle sized cities, Land use, Qorveh City

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Passive Defense Strategic Measurement and Zoning in Urban Historical Context (Case Study: Dezful, Iran)

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Abstract

The city of Dezful, especially its old tissues, is very important owing to its location in Khuzestan boundary province; moreover, during the eight years of sacred defense, the city has suffered many damages. Investigating and evaluating the internal and external state of Dezful old text makes it possible to present strategies based on the principles of passive defense to create a sense of security. This research seeks to answer this question: "What are the solutions for improving the old textures of Dezful based on passive defense principles?" In this regard, the research method used is based on the nature of deductive-a posteriori methods and adaptive study method. ArcGIS and Expert Choice softwares were applied and SWOT and AHP techniques were combined to scale the vulnerability. The strengths, weaknesses, opportunities and threats of Dezful worn out textures have been investigated and strategies have been presented that are in accordance with the principles of passive defense. The results of the research show that defense strategies are more important than other strategies. Strategies with a weight of more than 0.05 include ten cases, the most important of which are the location of sensitive users with a weight of 0.082 and the improvement of infrastructure networks with a weight of 0.081, and the remaining strategies have a weighing less value. Therefore, there are some solutions for the top ten strategies at the end of the research.

Introduction

This old texture has become vulnerable to natural and anthropological damages in the center of cities due to the presence of old buildings, worn-out texture, and unsuitable accessibility. Since safety and security are the most basic requirements to achieve desired standards of people's comfort and well-being, the passive defense in the history of Iranian architecture has been considered as one of the important measures of the rulers during the development of cities. As a result, the passive defense is one of the most basic requirements in the initial design of cities and their installations to provide the maximum security with minimum discomfort for people to defend against threats. Every act to secure the human society and natural and built environment is a passive defense if it is protection-oriented with civil nature. Therefore, this study tries to present suitable solutions in terms of physical and social indicators form obtained in the field and library studies and master plans based on passive defense principles.

One of the most important issues that should be considered when designing and planning cities is to adhere to some passive defense measures and

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principles to reduce the effects of these types of crises. Iran has always suffered many casualties and financial losses due to its geographic and political situation. This issue is very significant in Khuzestan province because it is a border province, and the eight years of sacred defense have shown that the cities of this province, including Dezful, have suffered considerable casualties and financial losses. Therefore, the theoretical and practical condition of defense and passive defense has been important in the face of the crisis in this area. Hence, one of the prerequisites for the sustainable and comprehensive development of worn-out textures, including the old texture of Dezful, is to explain the plans for preventing and reducing damages to natural and unnatural accidents. This research seeks to answer this question: "What are the solutions for improving the old textures of Dezful based on passive defense principles?" This research aims to identify the weaknesses, strengths, opportunities, and threats of crisis management by considering the current condition of the worn-out and old texture of Dezful. Identifying the weaknesses, strengths, opportunities, and threats of crisis management and providing suitable solutions for the conditions of these textures is necessary for the proper planning of worn-out urban textures like Dezful old texture.

Materials and Methods

The nature of the research method is the development of use. The research method is a combination of descriptive-analytical methods. The research has two parts: 1) zoning, and 2) strategic measurement of old texture based on passive defense. In the first part, the target effective criteria were extracted by using the library method, questionnaire, and literature review. Then, the relative weight of criteria obtained in Expert Choice by using AHP statistical models was produced in ArcGIS as GIS layers.

The vulnerability zone is obtained by the overlap of these layers. In the second section, through library research, field observation, and SWOT matrix, the strengths, weaknesses, opportunities, and threats of the old Dezful texture have been studied and a table has been compiled. Then, according to the SWOT table, strategies are presented in line with passive defense principles and then, the most important strategies that have the highest scores are presented as design solutions.

Results and Discussion

Based on the study and the gathered information of Dezful maps, 20 criteria including high-density places, populated areas, high-rise buildings, education centers, broadcasting centers, centers with supportive functions, military bases and sensitive martial centers, industrial and hazardous materials centers, open spaces, land slope, soil type, water, electricity, gas and telecommunication lines, highways, roads, sub-roads, communication networks, and city center were produced as GIS layers. Then, they overlapped with ArcGIS. The results were obtained by considering the relative weights of criteria in Expert Choice software using AHP statistical models. Analysis showed that Katkatan, Shah Rokneddin, and Sakian old neighborhoods are less vulnerable than other places; however, regarding figure (3), the total old texture of Dezful is more vulnerable, especially Roodband, Ghaleh, Choolian, Kalantarian, Majdian, and Ali Malek neighborhoods.

This figure also shows the 10 prioritized strategies. According to this figure, strategies with a weight of more than 0.05 are included in the 10 strategies. The results of prioritizing the strategies presented for adhering passive defense principles in the worn-out texture of the study showed that locating sensitive uses and improving infrastructure networks are among the most important

strategies and the remaining strategies have less weight. Two strategies, namely preserving the desired properties of buildings and utilizing the desirable properties of the region to minimize the crisis have achieved the lowest weight.

Conclusion

Changes and transformations in urban textures are inevitable. One of these changes is that textures wear out over time and this is the most important issues in terms of safety for the people. These types of textures are highly vulnerable to natural and unnatural accidents. One of the most important ways to improve such environments is to use passive defense principles and provide solutions in this regard. Therefore, to achieve the goals of passive defense in the country and the mobilization of the people, the role of their place of living, i.e. cities is very important. Dezful, with all its old textures, is an important city at the border Khuzestan Province. This city has suffered many damages during the eight-year war of Iran-Iraq. The study and evaluation of the internal and external conditions of Dezful old texture provide suitable strategies for the current conditions based on the passive defense principles and create a sense of security.

There are some researches about passive defense in recent decades in Iran but research about presenting strategies and solutions based on passive defense principles in the old texture of Dezful is scarce. Therefore, this research tries to present solutions based on the current conditions in forms of physical and social indicators according to the field and library studies and master plans. Accordingly, in this study, vulnerability assessment and evaluation of strengths, weaknesses, opportunities, and threats in Dezful worn-out texture were done and appropriate strategies for this texture were introduced using SWOT and GIS. To reduce the vulnerability of Dezful historical texture, some neighborhoods are given priority like Roodband, Ghaleh, Chollian, Kalantarian, Majdian and Ali Malek. The results of the study show that the neighborhoods of KatKatan, Shah Rokneddin and Sakian are less vulnerable than other neighborhoods. In addition, defensive strategies are more important with the weight of 0.261 because these strategies should cover the weaknesses and threats of the textures. On the other hand, the mean vulnerability of Dezful was 0.05. Strategies with a weight of more than 0.05 include ten cases, the most important of which are the location of sensitive users with a weight of 0.082 and the improvement of infrastructure networks with a weight of 0.081, and the remaining strategies have lower weights. Two strategies, namely preserving the desirable properties of buildings with a weight of 0.017, and taking advantage of the desirable properties of the region to reduce the crisis with a weight of 0.018, have received the minimum weight. Finally, some suggestions are proposed for ten top strategies including WT: identifying sensitive uses in Dezful texture; WO: suitable location of water, gas and electricity networks; ST: reducing the building height in proportion to passage width, and SO: formulating a comprehensive crisis management plan. Table (6) shows the priority of these ten strategies based on their weight. This table provides operational solutions for each strategy.

Keywords: Security, Passive Defense, Historical Texture, Worn-Out Texture, Dezful.

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Investigating the Effects of Transportation Policies on Sustainable Neighborhood Development (Case Study: Chelekhaneh Neighborhood, Rasht City)

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Abstract

The growing use of private cars has raised concerns about traffic, environmental pollution and neglected historic sites in cities. Currently, due to the dominance of cars in the city of Rasht, many valuable neighborhoods in the central part of the country have become inaccessible to pedestrians and have only become a place for activities such as car parks. The aim of this study is to investigate the impact of traffic-absorption policies on the development of sustainable neighborhoods. In this study, modified coefficients, regression and structural analysis were used to analyze the path of two attractive policies of public transportation development and development of spaces for pedestrians and two repulsive policies of restricting car traffic and parking restrictions to evaluate Chelekhaneh neighborhood of Rasht. Is. The Cochran's formula was used to determine the sample size, which was calculated to be 384 people. The reliability of the questionnaires was obtained by Cronbach's alpha of 0.834. By examining the findings, the regression coefficients in the two repulsive policies; restrictions on car traffic and parking restrictions are ranked first in the physical-environmental dimension, and fourth in the communication and stress dimension, respectively. The physical-environmental dimension of the environment with a beta coefficient of 0.86 in the limit of car traffic and in the parking limit with a beta coefficient of 0.84 and the communication and control dimension in the restriction of car traffic and parking limit with a beta coefficient of 0.75 and 59.5, respectively. 0 was obtained from the citizens. As a result, absorption policies alone cannot be involved in recreating neighborhoods; Rather, these policies can be effective when complemented by other traffic policies, such as repulsion policies.

Introduction

Today, the growing trend of urbanization and the rapid expansion of cities in recent decades has strengthened and reinforced the idea that the city and its components are part of the inseparable life of today's human beings. Following increasing urban growth, poverty, the spread of inequality in urban spaces, and the growth of social and cultural anomalies are becoming more pervasive. As a result, urban instability has become one of the main issues and challenges of 21st century cities. The persistence and inequality of such urban growth has challenged and warned of the instability of the current urbanization. Therefore, the concept of sustainability has become a sustainable method in urban studies. In this regard, the concept of urban sustainability neighborhoods is a new approach in urban design and planning that aims to improve and sustain environmental quality and health of citizens. The structure of urban neighborhoods emphasizes greater longevity and sustainability, and social,

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economic, and physical construction. Therefore, due to over-concentration of the population and economic activities in urban centers, especially in less developed countries, the sustainability of urban development has been considered more. Sustainable urban development has broad and complex dimensions. At the moment, relying on an individual factor to shape it is not a deliberate measure. The best factors that should be considered in the development of this urban phenomenon are: economic, environmental, social and physical factors. Thus, sustainable development is not just about environmental policy, and it cannot be achieved without solving economic, social, and physical problems. And it is important that the neighborhood was inhabited by ethnic, racial and religious groups. In large cities, each neighborhood has sometimes been a city in its own right, semi-independent with specific markets, mosques, and administrative offices, as opposed to the city's administrative, commercial, and religious centers, which have been part of the city's solidarity chart.

Materials and Methods

The present study is descriptive-analytical in terms of method and practical in terms of purpose. The research is a survey conducted by completing a researcher-made questionnaire and reviewed several times by experts. To measure the sustainability of neighborhoods, five dimensions of physical-environmental environment, access, social and economic have 11 criteria and are questioned based on 20 sub-criteria. To this end, 18 policies have been extracted, and finally, based on the conditions of the study area, 4 final policies have been selected, and thus documented. These include the dominance of private cars and the lack of proper infrastructure and services for public transport. The sampling method is random and correlation information analysis method, which is considered as one of the analysis methods. Finally, to fit the data - the model is used through AMOS software version 24 and SmartPLS software to provide a structural analytical model of each of the hypotheses expressed in the research in relation to its variables. And to calculate the reliability of the indicators, a sample of 384 people was performed and then the reliability of the questionnaire was calculated by Cronbach's alpha method and Cronbach's alpha coefficient was 0.834, which indicates the high level of reliability of the questionnaire. The SPSS 25 software has also been used to analyze data. The indicators evaluated in the research have been extracted with emphasis on measurability and measurability by reviewing the relevant texts.

Results and Discussion

The correlation coefficient between the variables of sustainable neighborhoods and the positive nature of public transport development has been calculated. As the rate of this type of policy increases in Rasht, the physical-environmental indexes are 80%, communication and access 75%, social 81% and economic 0.80. will increase. On the other hand, one of the prerequisites for regression analysis is to examine the significance of regression analysis, which according to Table 11, regression analysis is significant, and then presented. It is noteworthy that car traffic limitation variable is 74% capable of predicting physical-environmental changes, 57% communication and accessibility, 67% social and 64% economic of a neighborhood. The beta coefficients of the variables were calculated as 0.860, 0.759, 0.822 and 0.805, respectively. These positive coefficients indicate that if a variable standard deviation of the car traffic limit increases around the neighborhood of Chalkhaneh, the coefficients of this tendency of citizens to be more socially, environmentally, more easily accessible and economically connected, there is also an increase

in the likelihood of people being restricted by car traffic. The indirect effects of parking restrictions on the components of sustainable neighborhoods have also been investigated. The AMOS software version 24 is used to evaluate the accuracy of data-models to evaluate models of all four policy areas. There are several indicators in this path analysis, including the most important ones. From: GFI, AGFI, CFI, NFI, RMSEA. These values indicate the fit of the fit-and-fit data-model indices. The main indices are the Normalized Fit Index (NFI), which for the proposed model must be between zero and one. Also, the RMSEA index is used in most structural equation analyzes, which, if the value is less than 0.05, fits the model well if it is between 0.05 and 0.08. The value of this index is also reported in the present study.

Conclusion

In the present study, a study of the correlation coefficient of policies by qualitative dimensions of sustainable neighborhoods shows that negative or punitive policies including two policies of car traffic restrictions and parking restrictions, respectively, have the greatest impact on improving the physical-environmental quality of Cheleh neighborhood. Also, two positive or incentive policies, including the development of public transport and the policy of developing spaces for pedestrians at a greater distance than the other two policies, have been effective in improving these characteristics, respectively. In other words, negative policies provide more physical-environmental-environmental, social, economic and communication and access options than positive policies by providing more options. Therefore, it can be said that among the four selected policies, the two policies of restricting car traffic and parking restrictions, which are punitive policies to reduce dependence on personal cars, have had a much greater impact than the other two policies. . These two policies provide a platform for increasing the use of public transport and provide spaces for pedestrians. In general, incentive traffic policies alone cannot lead to the re-creation of sustainable neighborhoods; Rather, these policies can be effective when supplemented by other punitive traffic policies, such as restricting car traffic and parking restrictions.

Keyword: Pull and push policies, sustainable neighborhoods, RMSEA indicator, Cheleh Khaneh neighborhood, Rasht.

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Developing a Research Agenda on the Relationship between Physical Environment and Mental Health

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Abstract

After two decades of focused global efforts on the link between the physical environment and health, while most of these studies have focused on the objective components of obesity and obesity, there is little research to improve mental health, especially in the country Iran. Accordingly, the present paper attempts to provide a research agenda for urban designers by reviewing the narrative of empirical literature and empirical evidence, and outlining the main challenges and ambiguities that research faces. A variety of databases and search engines such as Google Scholar, Pop Fashion, Scopus and Web of Science have been used to find articles. Selected articles were chosen on the basis of subject relevance, number of citations, and recent findings. Of the selected studies, 72, 25, and 3 percent, respectively, were published between 2010 and 2009, prior to 2000 and 2009, with an average of 151, 676, and 284 citations, respectively. The complexity of understanding mental health disorders coupled with the lack of conclusive results makes it difficult to justify and advocate the integration of urban mental health policies for societies that place economics and speculation at the top of policymaking. Although it is clear that physical components and cities are affecting the improvement or deterioration of mental health, the mechanisms of action remain unclear. In addition, there are few studies that have measured the effectiveness and effectiveness of urban policies on mental health.

Introduction

The debate over the relationship between the built environment and public health is not new. However, in recent decades, with the change in people's lifestyles and the spread of new medical problems, it has taken on other dimensions. While the prevalence of obesity and related non-communicable diseases such as cardiovascular disease, type 2 diabetes, heart strokes and pedestrians are at the center of attention, mental disorders such as depression, stress and anxiety in the competitive world and Fast today have received less attention. Thus, the role of urban planners and designers in this area is very small, so that after about twenty years, there are serious ambiguities about the results of these studies. In this regard, the present article has tried to provide these ambiguities as a circle of challenges in the form of a research agenda with regard to theoretical and experimental gaps on this issue in the country.

Materials and Methods

The present article is considered as a narrative overview for its purpose and nature. Initial searches used systematic reviews, with emphasis on the words "urban

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environment" and "mental health", "health", "well-being", "mental disorders" and "depression", then reviewing these articles and repeating the terms. Key to them, subsequent searches focused on systematic review articles in the three categories of transportation and pendulum travels, the green space and the link to nature and housing status. Finally, by examining the key assumptions of these groups, searches were conducted on empirical research to critically examine the evidence. A variety of databases and search engines such as Google Scholar, Pop Fashion, Scopus and Web of Science have been used to find articles. Selected articles were chosen on the basis of subject relevance, number of citations, and recent findings. Of the selected studies, 72, 25, and 3 percent, respectively, were published between 2010 and 2009, prior to 2000 and 2009, with an average of 151, 676, and 284 citations, respectively.

Results and Discussion

By reviewing various studies on the relationship between the physical environment and mental health, four related conceptual and methodological challenges have been identified.

First, most of these investigations are not interdisciplinary. As a result, they cannot define the appropriate variables or geographical units for their analysis of physical or mental health. Thus, a significant portion of the findings are compromised or mistakenly opposed. This is reflected in the definition of the neighborhood unit and its associated characteristics.

Second, a correct understanding of the scales. While different conditions at different levels may cause mental and mental disorders influenced by hereditary and genetic factors, family and friend's environment, and ultimately residential and community environment, attention to spatial and temporal scales can play a determining role to provide analytics results.

Third, most studies have focused on cross-sectional data. These data cannot determine the causal effects of the variables on mental health. As a result, they cannot measure the efficiency and effectiveness of urbanization policies and practices.

Fourth, the complexity and intertwining of urban variables. Just one or two variables in assessing the components of neighborhood units without considering the controlling, mediating, and intervening variables cannot alone represent the mechanisms that influence the human-built environment on mental health, and simply by designers and Get urban planners into action. Therefore, using structural equation models such as path analysis can be a better alternative for measuring the bivariate causal relationships.

Conclusions

The complexity of understanding mental health disorders coupled with the lack of conclusive results makes it difficult to justify and advocate the integration of urban mental health policies for societies that place economics and speculation at the top of policymaking. Although it is clear that physical components and cities are affecting the improvement or deterioration of mental health, the mechanisms of action remain unclear. In addition, there are few studies that have measured the effectiveness and effectiveness of urban policies on mental health. One reason for this may be the fear of the media dimension and the politicization of such issues. In such a case, some people believe that expressing negative or positive outcomes in economic, social and environmental language projects can be beneficial to achieving health goals. Thus, it is necessary to provide a research agenda to better understand and provide theoretical support and empirical application in the country in order to complement the results of this research and to go beyond the discussions on the relationship between tissue and the urban environment and mental health. From this perspective, it seems that the entry of urban planners and urban geographers into interdisciplinary research in the field of health is the first step to eliminate ambiguities. The definition of urban components in the language of medicine and psychology in different climates and cultures in a

comparative manner can greatly facilitate comparisons. Access to cohort data can also allow longitudinal investigations. Using these data and structural modelling can be very helpful in understanding the mechanisms, processes, and how they work. Considering different spatial and temporal scales simultaneously in the studies can clarify the importance of the variables. For example, which distance or travel time can best explain the role of commuting trips in increasing or decreasing stress. Clarifying these ambiguities can allow comparative comparisons of the different physical components and their effects on different mental health disorders. This will provide an appropriate framework for assessing the effectiveness of different design options and the effectiveness of their policies and actions over time, which can serve as a strategic guideline for planning and planning different urban areas and neighborhoods. In addition, the results of these studies can provide strong support for prioritizing mental health in plans and programs.

Keywords: built environment, mental health, walkability, neighborhood, depression

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Investigating the pattern of physical expansion in Northern Cities (A Case Study of Kiakola City)

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Abstract

With the rapid growth of urbanization in Iran, in addition to increasing the number of cities and their population size, the size of cities also grew and expanded rapidly, so much so that the rapid physical expansion of cities even surpassed the rate of population growth. This unplanned growth led to the horizontal expansion and created a phenomenon known as sprawl. Accordingly, the purpose of this study is to investigate the stages and pattern of physical development of Kiyakola city during the past decades and to analyze the factors affecting them. The city has experienced significant physical growth in recent years as a political center of newly established township of Simorgh. The methodology of the research is based on descriptive and analytical approaches that will determine the direction and form of physical development using physical expansion models such as spatial population density analysis, Moran's spatial autocorrelation methods, and hot spots in GIS. The results of applying the models for city show that the physical expansion of the city was dispersed and non-condensed during 1976-2006 which prepared the ground for rapid growth without planning. The results of spatial analysis show that the density in all three indices of population, housing and construction has a cluster distribution pattern and spatial autocorrelation. Most of the hot spots are in the western and central parts of the city, and the coldest spots are in the eastern and southeastern parts of the city.

Keywords: physical expansion, sprawl, spatial analysis, Kiakola

Introduction

The city is a collection of spatial embodiment and crystallization of human roles in a geographical environment that is shaped and developed in proportion to the facilities, talents, cultural richness and individual tastes. Conversely, population growth and the size of cities and towns in the world have had a profound effect on humans and the environment as a result of increasing urbanization. Therefore, one of the vital issues for urban scientists in connection with the sustainability of the city is the form of the city (compression or distribution). The spatial growth of any city can be horizontal or vertical. Spatial growth appears in the form of an increase in the city limits, the so-called horizontal expansion, and in the event of an intensification of the situation, in the form of sprawl and Physical growth in the form of infill development leads to the formation of compact city. These different patterns have different consequences than the type of expansion they create in the city. In fact, the rapid expansion of cities has caused many problems in most countries of the world; so that not only urban development policies but also socio-economic and environmental issues in many urban areas have been affected by this phenomenon. The problem of rapid growth and horizontal

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expansion of cities in Third World countries is more acute than in many developed countries. Kiakla city was selected as the political and administrative center of Simorgh city in 2011. Therefore, it has gone through its stages of growth and expansion faster than natural growth between 1996 and 2016.

Materials and Methods

The methodology of the research is based on analytical and descriptive approaches. The statistical population in this study, according to the research topic, is all 7 neighborhoods which consisted a population of 8040. The GIS layers of the city were prepared to determine the form of the city for the years 2016 and 2006; and then, based on the neighborhood of the municipality, the information of statistical blocks was extracted in relation to population, building area, ownership, etc. And was added to the GIS documentation table. After determining the form of the neighborhoods, using the entropy models of Shannon and Holdren, the physical expansion pattern of Kiakla city was determined and then the amount of spatial self-correlation in the city and its neighborhoods was investigated using Moran and hot spots.

Results and Discussion

Building density in 2016 in Shahid Beheshti neighborhood with 60.89% had the highest density and in Dastkandeh Kola and Abandan fuel districts with 17.64 and 25.99%, respectively, had the lowest density. Also, in 2006, the neighborhoods of Shahid Beheshti town and the new neighborhood of Islam with 70.62% and 69.7%, respectively, had the highest building density and Vazimal neighborhoods, Abandan fuel and Dastkandeh, respectively, with 22.04, 24.29 and 25.45%. They had the highest building density. According to Moran model, it can be inferred that the phenomenon of population density, residential and building density in Kiakla city in 2016 follows the cluster pattern; it means that blocks with high or low population densities are adjacent to each other and are neighbors. The hot spot index in population density, residential density and building density of blocks of Kiakola city in 2016 showed that the western part of the city has had the most positive spatial correlation in population, residential and building density. The eastern and northeastern parts of Kiakla have had the highest negative spatial correlation in population, residential and building density. The estimated entropy value in 2006 was calculated about 1.729. Also, the entropy value of Kiakla city in 2016 was equal to 1.6366, which shows that the physical expansion of the city in the last ten years is scattered and dense. The results of the analysis of the Holdren model in the period 2006-2016 showed that 72 percent of the city's physical growth was due to population growth, and about 28 percent of the city's growth was related to the city's horizontal and sprawl growth, which led to a decrease in gross population density and an increase in gross per capita of urban land. Therefore, it can be said that the main cause of instability of the physical expansion pattern of Kiakla city during the years 2006-2016 was population growth, which is due to the rural-urban migration.

Conclusion

The results of this study showed that spatial self-correlation in the city in all three indicators of density is positive and close to one. Thus, the spatial self-correlation of density in the city of Kiakla follows a high cluster pattern. The results of the hot spots model revealed that the western parts of the city have a high density of population and buildings, as a result of the formation of hot space clusters in these areas and also the eastern areas of the city have less

density of population and buildings. As a result of the formation of cold space clusters. Based on the results of the Shannon and Holdren entropy model, it can be said that the pattern of expansion and the physical-spatial form of the city follow the scattered form and expands horizontally. This indicates sprawl growth and physical expansion, which has led to the deterioration of the city and the destruction of some of the best agricultural land.

Keywords: Physical expansion, sprawl, spatial analysis, Kiakla

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Investigating Factors Affecting Lack of Futurology Approach research in the Process of Regional Planning System (Case Study: North Coast Provinces of Iran)

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Abstract

Looking at the process of development and economic growth of developed and developing countries, it is observed that despite the fact that our country is rich in terms of resources, geographical location and economic development it has always been one of the middle countries. But so far regional studies have not mentioned the status of future approach in regional planning system and have merely addressed everyday issues of minor importance in order to aiming for Planning system. This research is a practical-developmental in purpose and descriptive-analytical in method. Combining documentary and survey data using Delphi techniques we tried to identify effective factors in lack of attention to the future approach research in the process of regional planning system, with a case study of Northern provinces and using MICMAC Analytical Techniques and Software. Key Factors influencing the future approach research in the process of regional planning system with emphasis on the Northern provinces were identify and explained. The results of the analysis show that factors such as the sovereignty of economic planning, the way of choosing the goals and tools of developing programs, lack of attention to possible future scenarios and centralization of the planning system is one of the main reasons for not paying attention to the future approach researches in the planning system process. Finally, appropriate solutions were presented to improve the process of logical planning system.

Introduction

It appears that in the field of urban and regional planning as one of the branches of humanities and social sciences in which future prediction has the most application, the need to change the approach from prediction to imperative futures is inevitable and now the process of urban and regional studies requires reengineering in order to use this new approach. Principally Future management is a bridge through future approach research and effective management. From this point of view, all systems, processes, and methods for understanding early changes and evolutions and their relation to strategies have been under consideration. Given the future analysis plays a role in determining the strategy, the purpose of futures approach research is creation and testing

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possible and desirable futures to improve decision making. Now, to understand the reasons for disregarding the status of future approach research in the country, the present study attempts to investigate a case study of the provinces of northern Iran in which the regional planning system without paying attention to the future unlike other parts of the country, has led to regional imbalances, exacerbation of some areas, loss of resources and potentials of the region.

Materials and Methods

Questionnaires and Delphi technique were used to obtain information. Questionnaires were administered just by the experts in development and programming field who have surrounding knowledge of development issues. To collect information in each of the provinces, using effective content analysis in the form of a closed questionnaire, factor harming regional planning system due to disregard for the future approach research of Northern provinces were executed by asking experts in development and programming field who have surrounding knowledge of development issues. In the second round of Delphi, prioritizing the effective components of the first stage of Delphi was done. In the final step, the results were extracted using Ray's various cross-analysis methods including structural analysis and Mac software.

Results and Discussion

According to the reviews, although targeting and executive policies of the Northern Provincial Planning studies, have taken implementation potentials into consideration, in the recent development programs of the country (with emphasis on the Fifth and Sixth development plans) there have not even been a slightest mention to macro targeting of the potentials of Caspian Sea coastal region. So it has to be said goals appropriate to future approach research in Northern coastal region cannot be achieved without paying attention to the objectives set out in the Upstream Documents (Development Plans). Finally 34 variables harming regional planning system in the Northern provinces of the country were extracted, based on the discussions in theoretical foundations and Delphi methodology, which interactions for MIC MAC software input and second round Delphi were completed by experts in the area. According to the outputs of Mick Mc software the most effective factors in lack of attention to future approach research in regional planning system were orderly such as bellows: sovereignty of economic planning, lack of attention to possible future scenarios, Sectional, Island and point approaches, goals and tools of program implementation and the centralization of the development planning system.

Conclusions

Investigate the results of long experience in preparing regional programs in the past and the results of data analysis in this research shows that due to the existence of central planning system and the dominance of macroeconomic planning, sectional planning, regional planning has always been influenced and directed by macro and sectorial programs cousin sectorial approach in programming and aim-orientation rather than process-orientation. On the other hand, regional development goals cannot be achieved without taking development planning goals into consideration. In this regard, financing, the use of both public and private sectors, increasing collaboration between institutions in the region and the use of these institutions will be useful for the development of community activities. On the one hand, the major challenge for the contemporary planners in dealing with the future is its unpredictability. Consequently, according to necessity of overview of the planning process, the position of the pillars of the country planning system at three national, regional

and provincial levels and in the four stages of planning, including coordination, planning, implementation, and monitoring are also required. Also, according to planning system pathology and the necessity of formulating possible future scenarios in formulating the goals and prospects of the country's development plans, transforming the Duties of the Development and Futurology approach research of Country Budget and Planning Organization will be an effective step in this new approach.

Keywords: Futurology Approach research, Planning System, Regional Planning, Coastal Regions of Northern Iran

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Designing a Model of Urban Tourism Economy with Structural-Interpretive Approach

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Abstract

Tourism is now recognized as the third largest economic industry in the world. Tourism is a rapidly growing economic sector. Expanding this industry can create job opportunities, generate income, reduce poverty, increase community welfare and so on. Therefore, it can boost economic growth and development of a country or region. The city is the main structure of many types of tourism, and many tourism cannot be considered without the presence of the city. Therefore, the researcher in this paper seeks to find a tourism economics model for development. This study is a qualitative research that analyzes the sources related to urban tourism economics and then uses interpretive structural modeling technique to implement it. This method is one of the systems analysis methods that examines the interactions between the elements of the system. MICMAC method has been used for clustering the dimensions of urban tourism economy. The findings showed that among the domestic and local production dimensions and afterwards the investment had the most influence, income and currency inflow to the country.

Introduction

Today, tourism is a large part of the economic development of many countries and can be a leading industry in the field of tourist attraction, employment, income generation, etc. It has attracted the attention of many statesmen and investors today. The positive effects of this industry on boosting the country's economic growth are not hidden, but unfortunately, despite the importance of tourism in the world, and because Iran is one of the world's major tourism hubs due to its archaeological, natural resources and religious sites, there is still a large vacuum. In the Model of Iranian Tourism Economy and Identification of Factors Affecting it Therefore, considering the aforementioned and the vacuum mentioned above, the researcher in this study seeks to answer the question what is the model of urban tourism economy?

Materials and Methods

This research is applied in terms of purpose and in terms of "qualitative" method that studies and analyzes the related resources and then uses the structural-interpretive approach of analyzing and extracting the model of urban tourism economy. The conceptual model has been addressed because in qualitative research, unlike the quantitative research in which the theoretical model is designed, the conceptual model is designed

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Discussion and Results

In the present study, the variables are classified into five levels and are classified at the highest level (first level) of income generation, which has the least influence on other factors, and at the lowest level (fifth level), local and local production, such as under rock Model building is functioning so development in urban tourism economy starts from this variable and spreads to other variables.

Conclusions

At the threshold of the third millennium, the tourism industry has taken a prominent place in the economies of countries and plays an active and effective role in promoting the economic, social and cultural structure of countries, especially in developed countries. Cities generally have many tourist attractions and always attract many tourists. Tourism, among the leisure activities, has the most diversity and mobility, on the one hand, and the widest spatial and spatial area, on the other. It can be argued that tourism, especially urban tourism, is in a position to carry out all other leisure activities, such as shopping, hiking, and tourism planning and management. And it is multi-faceted that has attracted the attention of industry executives and activists. Today, tourism is seen as an economic matter; therefore, its task, activity and purpose are considered important because cities are the manifestation of economic, political, social and cultural power and the driving force of government. In this paper, firstly, documentary methodologies of important dimensions and indicators affecting urban tourism economy were studied and identified, then they were studied through experts and the dimensions and indicators were extracted, then the researcher studied each dimension and index in the Structural Approach. The review and results of the interpretive structural section are as follows: The Integrated Model of Urban Tourism Economics is extracted from the analysis of the relationships and classifications of the dimensions and characteristics of "urban tourism economy". It has the most impact on other dimensions. Other results of the research can be mentioned on the results of the influence-correlation matrix. In this matrix the indicators of urban tourism economy are divided into four levels according to the influence of each index on the other indices and the degree of dependency of each index on the other indices. It shows that among the dimensions of local and domestic production and then investment, they have the most influence, income generation and foreign exchange inflows into the country.

Key Words: Tourism, Economics, Structural-Interpretive Approach

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Investigation of Temperature Variability in Babolsar Urban Spaces for Urban Heat Island Detection

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Abstract

The present study investigated the temperature difference in Babolsar. The main purpose of this work is to study the temperature differences and identify the urban heat island formation in Babolsar. To this end, we used collected data from three data loggers and hourly data from Babolsar Meteorological Station. Data loggers recorded data from 25 September 2018 to 10 March 2019 in three points of this city. Finally, 3478 hourly data were extracted and created one matrix (3478*5). Initially, time variations were investigated, with DTD and Δ DTD methods. Hourly observations showed that the differences between urban and suburban areas were not significantly different at night and day, and the minimum temperature variability of all stations was similar. Investigation of the effect of wind on the spatial temperature differences showed that with increasing wind speed the temperature variability of different parts of Babolsar increases. According to the indices needed for urban heat island formation, this study showed that there isn't a precise and acceptable sign of urban heat island formation in Babolsar.

Introduction

The mechanisms of human life greatly alter the status of the Earth's surface. The city is the most distinctive human manipulation in nature. Cities as special centers for human settlements have special characteristics. Urban heat Island Effect is the most obvious and best documented example of unwanted manipulation in the climate. The formation of the heat Island can be expected in most cities. But the geographical features of the place play a large role in shaping this phenomenon. Wetlands are one of the factors that reduce the intensity of urban heat island. The ideal conditions for the formation of a heat island are low winds with nocturnal air at night (Brandsma & Wolters, 2012). It is conducted that generally, in urban environments, the minimum temperature variability is lower than in rural and suburban environments

The purpose of this study is to determine are there significant reasons to show that Babolsar has urban heat island or not?

Materials and Methods

This study was conducted in Babolsar city in Mazandaran province. We used hourly data that recorded with three data logger (MIC 98583 USB-Data Logger, Taiwan) and Babolsar meteorological station. Two following integrated methods were used: 1) the day to day temperature variation (DTD); 2) the difference between day to day variability of daily maximum temperature (DTD max) and day to day variability of daily minimum temperature (DTDmin) (Tam, Gough, & Mohsin, 2015).

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Investigating day-to-day variability of temperature was first used by (Karl, Knight, & Plummer, 1995) for climate purposes and subsequently developed by (Gough & Hu, 2016).

The day to day temperature variation is based on the following equations:

Equation 1:

$$DTD = \sum |t_i - t_{i-1}| / (n - 1)$$

Where Σ is the sum over all n data elements, t is daily temperature, i is the counter that marches through the days in a time period (e.g. a month), $| |$ is the absolute value, and n is the number of days elements.

Equation 2:

$$\Delta DTD = DTD(tmax) - DTD(tmin)$$

Results and Discussion

Examination of hourly temperature differences showed that highest difference in different parts of Babolsar occur during the day and around 4 pm and is lowest at night. Examination of day-to-day temperature (DTD) variations at stations showed that the maximum temperature variability at all the stations was higher than the minimum temperature variability. The day-to-day variability of the minimum temperature is not significantly different across all stations compared to the maximum temperature. This indicates that all stations have almost daily homogeneous minimum temperature variations. The study of the effect of wind in this city showed that with the increase of the wind speed the temperature differences in Babolsar are increasing. Considering that in the calm air the urban heat island and temperature differences will increase the study of the effect of wind in the city showed that with the increase of wind speed the temperature differences in Babolsar will increase. This can itself be a reason for the lack of a heat island in Babolsar.

Conclusion

Considering the conditions required for heat island formation, there is no significant difference in temperature variability between the studied stations. As a result, it can be seen as a very weak example of the role of the city in creating temperature differences in Babolsar. According other studies wetlands have a significant effect on temperature equilibrium and reduce temperature differences (Zhang, Zhu, & Jiang, 2016) and reduce or decrease urban heat island size. Also studies in the Kochi region of India show this condition (Thomas & Zachariah, 2016). The study shows that in Babolsar, given the size and location of a coastal city and two canals on both sides, it is not possible to form a thermal island as it does in large cities.

Keywords: Variability, Day to day, Temperature, Heat Island, Babolsar

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Codifying the Rules of Ecological Wisdom in Planning for the Regeneration of Livability in the Neighborhoods of Desert Cities (Case Study: City of Yazd)

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Abstract

Currently, cities are the largest forces changing the ecological conditions of the landscape and influencing ecological structures and processes. There seems to be no harmony or balance between the urban networks and the patterns in nature today, and the urban networks are dominating the vulnerable ecological networks. Disregarding ecological infrastructures and the imbalance between the natural and man-made environments has led to concerns about the livability of cities and urban areas for urban planners and designers. Livability crisis is the crisis of unlivable urban spaces that suffer from environmental challenges, the gap between man and nature, and the rupture of natural environment. These are some of the most significant problems in contemporary cities.

Introduction

Livability is a complicated, multi-dimensional concept that reflects the welfare of a local community. Ecological wisdom is an approach derived from the intellectual paradigm of ecology for city and planning tools, aiming to achieve social-ecological sustainability over long periods of time. Researchers have highlighted the ability of ecological wisdom in combining ecological knowledge with the development process, with the support of stakeholders, so as to enhance the experiences of life quality and livability. They argue that, by creating comprehensive and multi-dimensional perspectives, ecological wisdom turns urban planning into an ecological and resilient planning. The present study aims to investigate the relationship between the two approaches, ecological wisdom and livability, in the neighborhoods of the ancient city of Yazd and to highlight the indispensability of ecological wisdom approach in the regeneration of livability in urban neighborhoods.

Materials and Methods

The present study uses comparative-deductive method. In order to have an analytic-comparative study of the two approaches, ecological wisdom and livability, we will explain and analyze a series of concepts using the Delphi method and asking questions from experts (15 experts in geography, urban planning, environment and urbanism); then we will compare the two

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approaches by elaborating on similarities and differences in terms of their principles and applications. The driving forces, criteria, and sub-criteria of livability were deduced using the ecological wisdom approach in neighborhood structure and form, neighborhood space, neighborhood function, neighborhood landscape, neighborhood ecological services and processes. The livability of historical and new neighborhoods of Yazd was compared based on the criteria obtained from questionnaires and SPSS statistical analysis, and the final stage was to codify the rules of ecological wisdom in the regeneration of livability in the neighborhoods of the ancient desert cities.

Results and Discussion

An examination of the criteria obtained from the comparison between historical and new textures of Yazd suggests that the studied historical texture has a higher livability compared to the new one. The neighborhood space and the form and structure of man-made environment have the greatest influence on providing the livability of the neighborhoods under study. Form and structure are completely consistent with the natural context. The orientation of the buildings and passages are in such a way as to have the best use of winds, proper lighting, and optimal use of the sun heat in the summer and winter. The bazaars reflect the dominant spirit of the society of their time, serve as the vibrant core of the city, and, after all this time, still support the flow of light and air as well as air conditioning. Coherent urbanism with a connected texture and harmonious structure, intermixture of land uses, the connectivity of neighborhood spaces via sidewalks, creation of corridors for the flow of air and water through the neighborhood spaces, and the existence of gardens, and open spaces, green spaces have all set the stage for enhancing the livability of these neighborhoods.

Conclusion

An examination of the criteria obtained from comparison between historical and new textures of Yazd suggests that the studied historical texture has a higher livability compared to the new one. In other words, the ecological wisdom principles governing the planning and design of the historical neighborhoods have given rise to a sustainable structure and function that meets the needs of the users of the space and enhances livability. It is hoped that the ecological wisdom principles extracted from the ancient textures of the desert cities would provide a solution for the regeneration of livability, integration of ancient and new textures, and enhancing of the positive sustainable structures and functions in urban ecosystems.

Keywords: Desert City, Ecological Wisdom, Livability, Regeneration, Urban Ecology.

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