# **Explaining Environmental Livability of Rural Settlements around Rasht Metropolis**

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Received: 2018/10/11 Accepted: 2019/07/11

#### **Extended Abstract**

#### Introduction

Today livability is regarded as an introduction to sustainable development. A great deal of attention is paid to assessment and evaluation in the field of planning and policy for rural settlements. Livability includes various dimensions such as environmental, socio-cultural, economic, institutional-management, and physical ones. Achieving a livable habitat requires each dimension to be evaluated and improved. Therefore, the goal of this paper is to explain environmental livability of villages around Rasht metropolis. The research is an applied one, employing a descriptive-analytical method and collecting its data via documentary resources and field studies. The statistical population of this research contains the villages around the Rasht metropolis. To assess environmental livability, the paper uses five recognized components, namely green space, pollution (environmental quality), visual quality, landscape and rural perspective, and resilience (28 items). For so doing, it gathers the required information by getting help from villagers and rural managers, thus identifying the study scope.

# Methodology

In this study Dehyars and living household supervisors were selected through random sampling to respond to the designed questionnaires. It assessed the questionnaire's validity, by using previous studies as well as the approval of experts in the field of rural studies. As for assessing the questionnaires' reliability, it employed Cronbach's alpha method. The results (0.731) confirmed the questionnaire's reliability for conducting the research. Once the questionnaire's results were ensured, it got designed to collect information and analyze the descriptive statistics and then for inferential statistics, create an index. For this purpose, the items were first rounded and then, due to the fact that a correct comparison of the items required same value indicators, the negative ones became positive in value. For this convertion from negative to positive, the items had to be either reduced to a constant or reversed, which in case of the present study, the latter was true. To complete the indexation process one should fix scale differences and get

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numeric information. For this purpose, the research employed standardization method, then to weigh the indicators. Weight assessment used judgments' opinion method, wherein a questionnaire was filled for each village by well-known experts. There, each component was given a value between one and ten. Afterwards, the average weights were obtained and then the numbers were considered within the range of 1-3, where 3 had the highest weight. Finally, the weight was achieved. Applied scaled-up indexes and mean and standard deviation of the indicators got calculated and further research steps utilized these indicators to carry out quantitative operations.

#### **Result and Discussion**

Results show the manner and quality of waste collection from the village surface with an average of 3.85, natural beauty eye with an average of 3.78, and air pollution (no air pollution was intended as the score changed from negative to positive) with an average of 3.36 had the highest average, while enjoyment and quality of children's play space with an average of 0.09, presence of a sewage disposal system with an average of 1.77, and the quality of wastewater collection with an average of 2.10 had the lowest average. The high average showed respondents' satisfaction as well as the possibility of greater impact on rural viability. To determine the effect of the independent variable (environmental dimension) on the dependent one (livability), bivariate regression (simple linear regression) was used with the same method. Test results showed that the amount of determination coefficient statistics (variance explained by the set of variables) was equal to 0.593, meaning that 59.3% of the variation in livability could be explained by the environmental dimension. This reflected the impact of this dimension. F statistic was 50.935, being meaningful up to one thousandth, and representing the dependence of livability on this dimension. In other words, environmental indicators had an impact on livability. In the following, by examining the results of the indexation, it could be found out that among the studied indicators, resilience index, with a score of 9.49, was the highest and green area index, with a score of 3.137, was the lowest. Highest score of livability in the environmental dimension belonged to Alman Village, whereas the lowest was observed in Karchovandan village. Finally, there were the Leveled villages, studied in five levels, namely very desirable, desirable, moderate, undesirable, and very undesirable.

## Conclusion

With the help of field surveys and documentation and by identifying environmental components and items in rural settlements around Rasht metropolis, it was found that villagers were satisfied by the type and quality of waste collection from the village surface, beautiful natural eye, and non-contamination more than other components. In contrast, they were not satisfied with enjoyment and quality of children's play space, sewage disposal system, and collection quality of sewage. After identifying the items and collecting the data, indicative steps were taken and with the help of a single sample T test it was identified that indicators could be generalized to the whole society and then with the help of regression analysis the effect of environmental dimension on livability was shown. By using the mean of indexes, resilience had the most and greenhouse had the least effective indices, with Alman village having the highest livability rate and Karchovandan village, the lowest. Afterwards, the studied villages were ranked at five levels of livability, based on their average score. According to these levels, the villages of Talamseshanbe, Alman, and Bijarbane belonged to very desirable livability level (6.60-7.17); Kasar and Pirkolachah to desirable (6.04-6.60); Fashtam, Gilpordesar, Pasikhan, Piledarbon, Garfam, Shekarestalkh, and Pachkenar to moderate (5.47-6.04); Dareposht, Keshalvarzal,

Varazgah, Koleshtaleshan, Kheshtmasjed, Balakoyakh, Roknsara, Lachegorab, Shalkoh, Kizhdeh, Bijarpas, Kisarvarzal, Vishkavarzal, Pasvishe, Tazeabad, Siaestalkh, Komakol, and Mangode to undesirable (4.91-5.47); and Rodborde, Tarazkoh, Tochipaybast, Karchovandan, Gorabvarzal, Ravajir, and Vishkamatir to very undesirable (4.91-5.47).

**Keywords:** Explanation, Livability, Rural settlements, Environmental livability, Rasht Metropolis.

# Spatial Analysis of Vulnerability Clusters in Physical Texture of Gorgan City against Earthquake, Using Spatial Statistics

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Received: 2019/05/10 Accepted: 2019/08/04

#### **Extended abstract**

#### Introduction

Earthquake is one of the most natural hazards for cities, being dangerous, destructive, and unpredictable. According to Iranian Crisis Management Organization, seventy eight percent of the country's surface is in high seismic risk area, with 10% of human-caused mortality related to earthquakes. Golestan Province, the second-ranked province in this regard, always faces earthquake hazard, located in the first high-risk areas. In general, four main theories are related to cities' vulnerability: first, the human ecology theory that has emphasized the unbreakable bonding of biophysical processes and social processes; second, the theory of political economy, which has integrated macro and micro perspectives, providing a better analytical framework for complexity and dependence comprehensive understanding of vulnerability-causing factors; third, the theory of community-oriented compatibility, which is based on identification, assistance, and implementation of community-based activities strengthening the capacity of local people to adapt to life in a risky and unpredictable situation; and fourth, resilience which is the capacity or ability of the community to predict, prepare, and respond quickly against the effects and consequences of disaster. According to the country's Crisis Management Organization, 78% of the country lie in high-risk seismic areas with 10% of human losses coming from earthquake-related disasters. Golestan Province belongs to second-ranked provinces facing earthquakes in Iran, being first in terms of the high risk from such disasters. Results from several surveys show that 840 earthquakes have been registered in Golestan with many regions of the province susceptible to landslides. Seismic zoning maps has shown that Golestan Province has four zones, regardless of the effect of alluvial deposits. They include areas with very high, high, medium, and low seismic hazard. Gorgan, the capital city of this province is located in very very high and high areas. Accordingly, this research tries to measure and make a spatial analysis of vulnerability clusters in physical textures of Gorgan in critical conditions in order to determine immediate intervention. However, seismic zoning maps for seismic rock placement, based on the background of accelerated shifts of earth's powerful movement for the return period of 475 and 2475 years show that regardless of the effect of alluvial deposits Golestan Province has four zones, areas with high, high, medium and the city of Gorgan is low in many areas.

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#### Methodology

The current research was an applied one, its method being descriptive-analytical. It investigated the determinant criterion of physical texture vulnerability degree in Gorgan in terms of five criteria, namely number of floors, fineness, buildings' age, and therir materials. Once this criterion got evaluating and converted to comparable and standard scales, it was used from Analytic Network Analysis (ANP) to determine relative weight of each criterion. Indicator prioritization was done according to expert opinions and indicators' evaluation. Finally, the blocks were classified with VIKOR Model in terms of their vulnerability, resulting in the physical vulnerability map of building units at the urban blocks level of Gorgan city. Then, vulnerable spatial clusters analysis of Gorgan city was carried out via the Getis-Ord model.

#### **Results and Discussion**

Results from the study show that the highest and lowest effective factors for vulnerability assessment of the Gorgan city blocks were related to the index of building materials with a weight of 0.425, and the index of pettiness with a weight of 0.126, respectively. Based on VIKOR Model results, the highest degree of physical vulnerability could be seen in the central and somewhat southern parts of Gorgan. Also, the eastern and western regions and somewhat north of the city fared better with regard to this index. The Hotspot analysis clearly showed the gap between the center, the south, and the margins of the eastern and western regions with other parts of Gorgan. As a result, the central and southern regions as well as the margins of the eastern and western regions of Gorgan were in an inappropriate situation in terms of vulnerability during the earthquake. At the same time, the northern, western, and eastern parts of the city suffered less damage during the earthquake, thanks to their buildings' physical characteristics.

#### Conclusion

Researches like Ródenas et al. (2018), Rusydi et al. (2017), Ianoş et al. (2017), Kushe et al. (2017), Mehraban Motlagh and Motamedi (2018), and Paivastehgar et al. (2017) have emphasized zoning of vulnerable sites in cities such as Palu, Bucharest, Karonga, Shiraz, and Imamzadeh Hasan, Tehran. However, the present study focused on spatial analysis of the vulnerable zones of Gorgan, simultaneously determining their clusters. At the same time, this research did not overlook focusing on vulnerability zoning as well. The comparative analysis of vulnerability in Gorgan indicated that the central region had less residential units than the peripheral region of Gorgan. Buildings in the central part were more ancient. The periphery buildings had higher elevation than the center. Also, peripheral buildings were better in terms of access to passages, being wider than the central parts of the city. In general, the buildings in the peripheral parts proved to be less vulnerable than the central ones. In this regard, it is suggested to 1) establish crisis management centers and emergency services in the west and east of the city, 2) prevent congestion especially in hazardous areas, 3) open roads, and 4) give incentives to worn-out buildings regeneration by both the government and the municipality.

Through comparative analysis of vulnerability in Gorgan, it can be concluded that the central area has less residential units than the periphery of the city. Older buildings are more in the central part, while those in the periphery have higher elevation. Also, peripheral buildings are better off in terms of access to passages.

**Keywords:** Vulnerability, Vulnerable clusters, Earthquake, Physical texture, Gorgan city.

# The Role of Public Contribution in Restoration of Urban Decay in Jahrom City

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#### **Extended Abstract**

#### Introduction

Once a suitable living space for citizens, older districts in cities, can no longer have the same performance due to technological improvements and changes in environmental, social, and economic needs. While they were the heart of wealth and power of cities in the past, under current conditions (in almost every city) and because of their poor infrastructure and urban services they are considered as disorganized from a physical point of view. Research on historical centers of cities as well as their restoration, or in other words, improvement of urban decays, the tangible need of which has attracted officials' attention, is caused by different inferences drawn from insight, culture, tradition, art, architecture, and in a sense lifestyles during last three centuries. During the last century, Iranian lifestyle has undergone fundamental changes, causing the impact of their past long culture and rich civilization no longer to be felt nowadays. Different studies conducted on older districts of Iranian cities show that most dealing with these areas are based on mere conservation and repair of valuable monuments, while little attention has been given to special planning with the aim of revitalization and restoration of socioeconomic and cultural life in these areas. Experience of urban management and planning for restoration of older city districts in Iran dates back to 1921. In early 1971, the role and significance of historical areas increased through holding seminars and introducing scientific books and articles. After the Islamic Revolution, attempts in this regard decreased. Since 1985, through conducting research projects, publishing scientific books and articles, and holding seminars, activities in the field expedited. Thus, the current study seeks to investigate the role of public contribution in restoration of Jahrom city urban decay.

#### Methodology

This study was conducted with an applied-developmental purpose, using research theoretical foundations via a library method. Moreover, data collection was done through field observation and questionnaires. Once the questionnaire got developed, it was completed through random sampling. The geographical area of this study was consisted of the older districts with a

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population and size of 104 and 22375, respectively. Sample size was calculated, using Cochrane formula. Also, by means of SPSS and Excel software programs, the data got analyzed in statistical descriptive methods (Tables of Frequency Distribution) as well as inferential statistics (Factor Analysis, Pearson).

#### **Results and Discussion**

Research findings were recorded in two parts: at first, individual characteristics of the respondents and data got analyzed, and then the indices were prioritized by means of Factor and Heuristic analyses, thus investigating the four physical (eight items), social (six items), economic (five items), and environmental (four items) indices. According to research findings, the fact that initial variable became the superior factor was because of Varimax rotation. In order to conduct a satisfactory Factor Analysis the value of KMO should be larger than 0.5. As Table 1 shows, results from the test stood higher than 0.5, having a significance level of 0.00. Therefore, the correlation between variables could be proven by a 99% likelihood.

Table 1- KMO and Bartlett's Tests

| KMO                          |            | 0.653   |
|------------------------------|------------|---------|
| Bartletts Test of Sphericity | Chi-Square | 876/425 |
|                              | d.f        | 435     |
|                              | р          | 0.000   |

#### Results from analysis and value of every factor

Indices in each factor that were above 0.5 constituted one factor by themselves, while those that could not be added to them, formed other factors. What is more, the sum of the variance of the four mentioned factors was 66.154%, the largest of which (17.798%) became the first factor. The variance value of 66.154% shows that the results analysis has been satisfactory. Moreover, the results show that in this analysis, 17.798% of the variance was defined by the first factor, with the second, third, and fourth factors calculating 17.689%, 16.252%, and 14.145% of the variance, respectively. According to research findings and above tables, physical factor, or more obviously physical problems, and social problems such as social disorders presented in the mentioned old districts, are considered the most influential issues. Therefore, in order to organize the district, the mentioned factor could be useful in region improvement planning.

Also, in order to investigate the degree of contribution and satisfaction, Pearson Coefficient Correlation was utilized with the findings showing that considering value of Pearson Correlation Coefficient (0.632), with a confidence of 0.99 and an error level below 0.01, there was a meaningful statistical relation between the two degrees of contribution and trust variables. In other words, the more the trust in government officials, the greater the contribution.

# Conclusion

Results obtained from Factor Analysis conducted on four public contribution variables prove helpful and effective in restoring urban decay. More than 91% of the dwellers in overall level of urban decay region are contributive. This is in such a way that if dwellers' contribution to urban decay restoration and improvement become organized, its effect will be doubled. Investigation of the overall level of urban decay region shows that 31.09% of the dwellers are organized as region councils and associations. Moreover, dwellers' opinions show that in case facilities and motivating policies are provided, about 72.42% of them willingly welcome the restoration and improvement of residential buildings. For instance, according to the first factor with variance values of 3.738 and 17.798, the most important factor in Factor Analysis, physical factor is the

most significant one in urban decay. Second significant factor is the social one, with economic and environmental factors in the next ranks. Results show that a Pearson Correlation Coefficient of 0.168, confidence of 0.99, and error level below 0.01, poses a meaningful statistical relation between the two variables of contribution and trust. In other words, the greater the people's trust in government officials, the higher their contribution.

Keywords: Public Contribution, Urban Decay, Factor Analysis, Jahrom City.

# Evaluation of the Effects of Housing Improvment Special Plan on the Physical Structure and Economic Performance of Rural Housings (Case Study: Eilagh-E- Jonobi District, Dehgolan County)

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Received: 2019/01/22 Accepted: 2019/08/11

#### Extended abstract

#### Introduction

The house is a residential place, which is both relaxing and soothing. It serves as a shelter between the family and the surrounding environment that meets one's biological, livelihood, economic, social, cultural, and psychological needs. Hence it plays quite an important role. Non-resilience of rural housing to the occurrence of various natural disasters, along with the deteriorated texture of these houses, has made governments to seek improving the quality of rural housing through implementing various policies. The Rural Housing Improvement Plan was started by the Islamic Revolution Housing Foundation in 1995 with the aim of improving the quality of housing and rural texture and promoting the level of safety, health, welfare, and comfort of rural houses. The project brought some kind of face to face and urban housing into the traditional Rural structure and became operational in Dehgolan. The County of Dehgolan, an area in Kurdistan Province, takes in a high portion of rural population in the province, having five rural regions in terms of country division. This study assesses the rural housing situation of the Eilagh-e-Jonobi, seeking to find the effects of housing renovation project on physical and economic dimensions of rural housing in the study area.

#### Methodology

This research was an applied library survey, being descriptive-analytical. The statistical population of the study lived in rural areas of Eilagh-e-Jonobi, Dehgolan County, and the sample was consisted of three villages of Qadarmarz, Bashmaq, and Bakrabad. The main data collection method involved observing the field, using questionnaires, and considering the wide area of the study from a total of 606 residential units in the studied villages. In this way, by means of the modified Cochran Method, sixty residential units got selected as the sample. Through randomized stratified sampling method, both the percentage and share of sample size in each village were chosen. A questionnaire was used to collect field data. Experts' opinions

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and Cronbach's Alpha Method helped assessing its validity and reliability, respectively. For the questionnaire's economic indicators, consisted of 15 items, the coefficient turned out to be 0/744, whereas for the physical index, with 14 components, it was 0/897. To analyze the data, the research utilized descriptive statistics such as frequency distribution, mean, and standard deviation along with inferential statistics methods such as chi-square test, one-sample t-test, and Spearman correlation coefficient.

#### **Results and Discussion**

Evaluation of three important components, with regard to quality measurement of physical dimension of housing, suggests that housing renovation has a positive impact on improving the quality indices such as building strength, increasing level of satisfaction based on materials type and structural strength, and observing the principles and technical standards. Thus, with a significance level of 0/000, the coefficient of chi-square for the component of increasing the building strength is equal to 133/300; for overall satisfaction of the physical dimension, to 24/933; and for assessing the effect on observance of technical principles, to 40/933. Results from the t-test on the hypothesis indicate its significance as well as the negative impact of housing renovation on women's participation in economic activities. Thus, with a significance level of 0/30, the coefficient of t-test is 9/452, confirming the hypothesis. The impact of housing renovation and changing rural housing functions emphasizes the level of women's participation in economic activity. Part of the economic activities, including production of handicrafts like carpet weaving as well as some activities related to keeping the livestock and dairy products, is the result of activities by rural women, which by removing the relevant spaces and reducing the number of livestock and, consequently, rural houses, these activities have also dropped significantly.

#### Conclusion

Despite the prevalence of non-rigorous residential units in the rural districts under study, over the past two decades many of worn-out buildings have been renovated in the framework of this plan. A study of 15 economic categories indicates that due to the type of rural livelihood, often farmed, housing renovation does not have a favorable impact on household economic status, somehow undermining diverse economic activities of rural households. Surveying the level of satisfaction from physical aspects of rural housing has shown a relatively favorable situation, in which the owners are pleased with the improvement of safety level, building's resistance degree, and the type of materials used in the manufacturing process. Thanks to the benefit of spaces such as toilets, baths, and kitchens, they consider the quality and sanitary level of the renovated houses as desirable. But they are not satisfied with the limited level of infrastructure as well as the lack of attention paid to the design of interior plans of rural houses. Respondents have been of the opinion that the way of constructing new homes has changed the traditional landscape of villages. By blindly following the designs and architectures of urban houses, this minimizes the environmental and climatic factors in the construction of new houses. One criticism of the residents from a physical point of view to new rural houses concerns the removal of many livelihood spaces in rural houses, not to mention the reduction of housing infrastructure.

**Keywords:** Housing, Rural Housing, Housing Improvement Special Plan, Physical and Economic Performance.

# **Determining the Optimal Route Network, Using Geographic Information** System (Case Study: RoodSar-Qazvin Road)

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Received: 2019/03/17 Accepted: 2019/10/22

#### **Extended Abstract**

#### Introduction

In road construction, the most basic parameter is to find the shortest path, ideally linking the starting point to the destination with a straight line, since shortening the route significantly reduces the amount or quantity of equipment needed, e.g. the foundations and road asphalt, while cutting the costs of operational procedures like mapping, geology, and soil mechanics. The functionality of roads as one of the infrastructural structures in the development of the national economy does not need more emphasis; nevertheless, developing inappropriatelydesigned roads will bring a remarkably negative impact on the environment, damage it in some cases. This damage is so great that it undermines the benefits of increased communication and access. The environmental impact of roads on the environment can be attributed to air pollution, noise, surface water, altered patterns, or even the destruction of local communities through displacement. On the other hand, the sensitivity of communication routes in terms of security, both economic and social, doubles the importance of this issue. Hence, it is very necessary to pay special attention to correct and optimal routes when constructing roads. Most roads, constructed via conventional methods, do not have all technical, engineering, economic, and environmental considerations and standards, resulting in increased costs of building communication paths as well as the possibility of destroying environment by crossing unauthorized areas.

#### Methodology

The present research was descriptive-analytic, first studied in a library with documents on the theoretical frameworks as well as literature on route and routing. This was followed by field observations and surveys, in which the required information was completed. Finally, by integrating the existing maps and the collected information, it was provided in ArcGIS software program. In this regard, the use of modern principles based on the GIS can play a significant role in solving the routing problem. When designing the route via GIS, one can model effective factors such as technical, engineering, economic, and environmental ones and, by performing the required analyzes, determine the optimal choice. In the process of determining the path, the first practical step of the research is to extract information layers. Here, information about the study area, e.g. the existing roads, faults, health centers, and areas of each user's file shape format was prepared and collected on a scale of 1/25000 from the municipality. Among the abovementioned criteria, the desired criterion was the distance from centers and zones.

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#### **Results and Discussion**

Once the route got designed with GIS, each option had to be evaluated in terms of compliance with environmental characteristics of other paths, so that the one with a lower environmental impact could be selected as the optimal choice. Choosing the optimal route among the planned ones is in fact a kind of multi-criteria decision making, wherein the final goal is to select the optimal route. The criteria for doing so include the road slope, the lay of the land surrounding the road, the type of soil crossing the route, possible intersections of the road with rivers, the type of land cover, and the area of the passageway in the region. Since decision making is about selecting the optimal route, the issue is very important and occurrence of any error might cause irreparable losses. This makes it necessary to adopt reasonable and appropriate methods to find the optimal choice. As such, this research employed Analytical Hierarchy Process (AHP), introduced by Sahyati in 1980.

#### Conclusion

Suitable road design and road planning are among the factors that affect the sustainable city development. Not only does it increase the efficiency of the road network, but also it reduces the costs and shortens the paths. Urban roads, in addition to being costly in terms of their design, construction, and maintenance, and having negative environmental impacts, are of a special economic, environmental, and public opinion sensitivity. Therefore, it is necessary for them to have a proper design and comply with required standards in this regard. In order to construct any new road, the first step is to select an optimal route. It is always wise to choose the best route with the minimal costs. In order to determine a path, it is often necessary to evaluate several criteria. Because in the routing process, there are several quantitative and qualitative parameters that are practically independent and mutually interacting, it is necessary to use the multi-criteria evaluation method as a decision support method. In case of the present research, it was GIS whose capabilities in building a database and performing various analyses on it made it possible to interfere with all effective parameters when determining the optimal route. In order to determine the optimal route, twelve criteria, namely geology, police stations, power lines, landslide, residential areas, distance from the road, distance from faults, erosion, elevation, slope, flood, and land use got evaluated. Based on this research, it was found that the designed road passed through less relative obstacles like rivers and urban and rural areas, and avoided all sensitive areas of the environment. As a result, the total cost of gaining different information layers would drop due to observing privacy policies and the reducing adverse environmental effects. Also, with regard to all the tracks, it can be said that the restrictions, especially their distribution, play an important role in determining the route. In other words, the main role and range of the route got limited by these factors, resulting in determination of the shortest distance.

**Keywords:** Optimal route, shortest route, GIS.

# Analysis of the Effective Forces in Urbanization of Rent in the Form of Urban Residential Land Development Plans (Case study: Zanjan city)

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Received: 2019/06/05 Accepted: 2019/10/28

#### **Extended Abstract**

#### Introduction

The city structure as a spatial form comes from the interaction between environmental, economic, social, and political processes. According to the Growth Coalition Theory, the basis of the coalition for the growth of local power elements in cities mainly depends on land factors. In this context, active agents in land market and urban property become key factors in urban development and production of rent space. This paper, based on theoretical literature on urban land rent, introduces rent-seeking mechanisms in urban residential land supply process, and at the same time studies the production of urban space derived from it. Afterwards it exmplains urbanization of rent process with an emphasis on redistributional rent-seeking as the main attribute of economic rentiers system in Iran along with its impact on the structure of Zanjan, Iran.

In Iranian cities, rent-seeking happens in available urban spaces with a great variety of proposed rents. Otherwise, this occurs through creation of new spaces that are contrary to urban development standards, mainly with the aim of achieving absolute rents. The latter scenario, according to Lefebvre's readings, is in the form of producing new spaces or spatial expansion. Due to production of new spaces, in comparison with spatial constraints, rent-seeking plays a major role in urbanization and city construction in Iran. In this regard, one of the fields of urbanization that concerns rent and rent-seeking in the cities of Iran is inefficient allocation. This can be seen in the scarce number of urban spaces, due to undeveloped lands through ineffective implementation of land development policies, one of the most important and prevalent urban land policies since the 1980s, introduced to the residential land speculation system. This economic practice is one of the characteristics of Iran's urbanization, which is directly related to the economic structure of the country, called the rentier system. The residential land supplied in this way, with varying degrees of underdevelopment level and excessive use and actual demand of the city, creates the ground for high exchange value. Thus for a long period of time, without a complete development of

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residential land, it provides the space for redistributional rent-seeking, resulting from the absolute exchange value created on the land.

## Methodology

This paper employed a descriptive-analytical method to examine the role of factors, affecting the of rent prices in Zanjan within a rentier economic system by residential land development plans. Data were collected through library and field studies. It went through data analysis, path analysis, the multidimensional decision-making model, the multi-criteria decision-making model, and Delphi analysis method with fuzzy weighting, inside DPSIR model. At first, the data were ranked by Delphi process and fuzzy weighting. Then, they got weighted and ranked, using a multi-criteria decision making model. In the next step, using the path analysis method, the effect of each component got analyzed on the production of the rented space.

#### Results and Discussion

Regarding the influence of different forces on shaping the urban rented space, field surveys also showed that the urban growth boundary control indicators with direct effect of 0.527 had the greatest correlation with city construction, based on urban land rent. In other words, the statistical community, when explaining the relations between independent and dependent components, believed that what could control urban construction from rented space production, were components based on controlling the city's boundaries. Thus, it could be more effective in optimal organization of urban spaces. In contrast, macroeconomic indicators, influenced by the performance of the rentier government, with a direct effect of 0.359, proved to be less effective, compared to other components.

These components undermined the structure of urban management. As urban management weakens and macroeconomic processes, creating the rents, are not controlled, local government and non-government agents, involved in land and housing, become unable to control the flow of land and urban housing. Therefore, the production of rented space in the city through rent-seeking behavior of the economic-social elite gets intensified.

In this regard, statistical findings indicated that the share of land prices at the cost of housing with a coefficient of 0.794, the share of oil added value in GDP with a coefficient of 0.792, the ratio of liquidity in GDP with a coefficient of 0.774, duration of permits, and construction for more than 80% of residential lands in land development plans with a coefficient of 0.749 had the biggest impact on production of rented space according to the Todim Model.

#### Conclusion

Considering this research's findings about the impact of different economic, social, and managerial forces on the production of rent space in Zanjan city, in order to improve the status quo and move towards production of urban spaces as a suitable response to real housing needs, it is necessary to take the following into consideration:

- Management of oil revenues, liquidity, and government assistance to create a productive urban economy
- Prevention of buying/selling or speculation of land plots through proper implementation of residential land development policies, based on real land needs
- Attentiveness to urban regeneration policies
- Facilitation of issuing building permits for vacant land.

**Keywords:** Urban space production, Urbanization of rents, Redistributional rent-seeking Residential land development plan, Zanjan city.

# Identification and Classification of Socio-Economic Resilience Criteria in Informal Settlements (Case Study: District 6 of region 4, Tehran Municipality, Focusing on Khak Sefid Neighborhood)

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Received: 2019/09/08 Accepted: 2019/11/17

#### **Extended Abstract**

#### Introduction

Most cities and settlements are founded in places, exposed to all kinds of natural disasters and hazards. This has made managers and urban planners to be confrontational, always attempting to reduce hazards. The recent years has seen introduction of a new concept in face of unknowns and uncertainties, called "resilience", which can be introduced as a concept of disruption, surprise, and change. Knowledge of resilience and resiliency status is of particular account. There are two types of disaster management strategies: Predictive and Resilience, the one for dealing with problems, and the other for dealing with unknown problems.

#### Methodology

This research is an applied descriptive-analytical one, applied in Khak Sefid Neighborhood, Tehran. To compare the indices, a questionnaire was prepared by 20 faculty members and experts in environmental planning, urban planning, rural planning, and urban planning (in terms of decision making and ranking techniques based on the researcher's opinion). The range of the topic as well as the experts in the field were chosen, along with the number of samples considered to reach a theoretical saturation. The greater the number of matched answers, the more weighted the criteria from FANP. Each criteion's weight was influenced by the degree of resilience in the layers and the maps were combined to determine the resiliency.

#### **Results and Discussion**

According to the study findings, the area of the informal settlement under study was not in a good condition in terms of resiliency, indicating high vulnerability of this tissue to natural disasters and hazards. Survey of spatial resilience status showed that resilience rates in each of the indices differed at different levels of the neighborhood, displaying no uniform trend. Areas of low resilience were the most socially disadvantaged: They were less valuable in terms of land prices, and more economically vulnerable, housing the poorest and the most vulnerable class of the society. Hence, they have empty room.

#### Conclusion

In general, the present study proved that the resilience of white soil neighborhood and informal settlement textures to environmental crises was poor. When examining the spatial status of each

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resilience index at the neighborhood level, it found different resilience conditions, resulting in different status in of physical, social, and economic nature. Therefore, it can be deduced that different resilience indices have different effects. With changes in the status of indices pertaining to resilience rate of Khak Sefid Neighborhood at different levels of the neighborhood also changed the resilience status.

**Keyword:** Resilience Components, Socio-Economic Resilience, Informal Settlement, Khak Sefid, Tehran.

# Analysis of Javanrud Urban Land Use Vulnerability to Earthquake, Using Network Analysis (ANP) and Geographic Information System (GIS)

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Received: 2019/04/23 Accepted: 2019/12/15

#### **Extended Abstract**

Natural and human hazards are always a threat to human life. In recent decades, despite scientific advances, prediction of disasters, and crisis management, natural disasters continue to cost human societies dearly. Iran belongs to the 10 most disaster-stricken countries in the world. Among these disasters, earthquake is of particular importance in Iran, since it occurs more frequently and entails significantly more casualties than other natural calamities.

The city of Javanrood in western Iran has a unique position with special circmstances in relation to earthquake. As such, the present study uses ANP and Super Decision and ARC GIS software programs for land use data of Javanrood, namely 30\*30 m DEM and ground map Geology on a scale of 1:100,000. After explaining the principles, it gives the vulnerability maps of the city, required for identification of the danger zones. The results indicate that about 20% of Javanrood urban areas are moderately vulnerable to this type of hazard and do not provide a good physical structure within the context of earthquake management. The apartments belonging to Maskan Mehr Project are more vulnerable as they are located on the high margins of the city on inadequate bedrocks, high elevations and slopes, and more floors than other houses.

#### Methodology

This research employed ANP, super decision software, and ARC GIS software, for land area data, i.e. 30 \* 30 meter DEM and geology map on a scale of 1:100,000. After explaining the principles, objectives, and considerations of inactive defense along with the analysis of passive defense approach in urban areas, the vulnerability maps required to identify the risk areas were identified and, finally, strategies for inertial defense measures related to urban management were provided.

Network Analysis Process (ANP), used in this research, is one of the multivariate decision-making techniques that is very similar to Hierarchical Analysis Process (AHP), being an expanded form of the latter and functioning in a better way. It was first proposed by Thomas El Saaty in 1996. What is more, the theory behind this process is that there is a network structure of the successor to the hierarchical structure. It takes into account the complex relation between decision elements through replacement of a hierarchical structure with a network structure. For this reason, the use of ANP has increased in most areas in recent years. The network analysis method is consisted of 6 steps:

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Step One: Modeling and Explaining the Problem

Step Two: Matrix-Pair Comparison Matrix and Estimatation of the Relative Weight

Stage Three: Formation of Primary Supermatrix Stage Four: Formation of Weight Supermatrix

Step Five: Sufficiently large weighted supermatrix for matrix elements to converge with

their row values being equal

Step Six: Calculatation of the final weight of the criteria

#### **Results and Discusssion**

Results showed that Javanrood can be divided into three areas: old, new, and marginal. The central part of the city, due to its ancient texture along with vast majority of administrative, commercial, and service centers is of special importance. The older the building, the greater the wear resistance of its materials, which goes hand in hand with the fact that the use of lowquality materials in the past, had reduced buildings' resistance to earthquake, mounting its level of vulnerability. Relief and health centers are among the most important urban services in the event of accidents for citizens. As the distance from these centers increases, timely relief to citizens is reduced, resulting in a higher level of vulnerability. Presence of open spaces and green spaces in the city's neighborhoods, in addition to allowing the residents to escape and take shelter, thus reducing the number of injuries, can also serve as temporary accommodation centers. So, both during and after the earthquake, it can prove effective in reducing the damage. Slope is also one of the factors to affect the vulnerability of residential buildings and urban facilities to natural factors such as earthquakes. The greater the slope, the higher the vulnerability to earthquakes and vice versa. Moreover, the bedrock type is the most important environmental factor for earthquake waves, influential by moving away and passing alluvial layers. The bedrock factors are known as the effect of the site, which as a resonance of earthquake waves, changes the characteristics of seismic waves such as amplitude, frequency, and durability of the strong movement.

#### Conclusion

In general, the older the building, the more resistant the building to earthquakes and the greater the vulnerability of the construction due to its increased material burnout and use of past durable materials. Also, the buildings have moderate vulnerability in the suburbs, having the most vulnerable buildings mainly belonging to Maskan Mehr Project houses. This is due to their higher margins and height as well as their greater number of bedrock and floors. Finally about 20% of the built-up spaces in Javanrood have a moderate to high vulnerability to these types of hazards, not providing a desirable body structure within the framework of earthquake management. Marginal neighborhoods in the area of high vulnerability, as well as apartment belonging to Maskan Mehr Project are more vulnerable due to the high elevation of the city, inappropriate bedrock, and the height and slope and the number of floors in comparison to other houses. The residential space and land use of this city are represented in a way that can lead to a great human catastrophe in case of lack of attention and proper planning for controlling earthquakes. Therefore, it is imperative that the city's management and institutions take action to reduce the vulnerability of these areas by looking at passive defense.

**Keywords:** ANP, Vulnerability, Javanrood, Earthquakes, GIS.

# Spatial and Space Analysis of Human Resources Challenges in Agricultural Sector in Rural Areas of Malayer County

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#### **Extended Abstract**

#### Introduction

After many years of experience, the world has realized that countries need specialized, motivated human resources to be among the leading countries. Human resources are considered the most important factor, determining and accelerating a country's process of growth and development. Agriculture, industry, and services are of particular importance as they are three main sectors of every country's economy.

This study tries to identify the factors, affecting human resource (HR) challenges in the agricultural sector of rural areas of Malayer. It also looks for the priorities and actions, necessary to maintain human resources in the agricultural sector of rural areas, achieve sustainable development in the villages as well as the whole country, and supply sustainable food resources and livelihoods. In other words, it seeks to determine the factors, leading to a challenge for the HR of the agricultural sector in rural areas in central district of Malayer. For this purpose, the following hypotheses are formulated:

- Economic factors, including lack of employment due to inappropriate policies in rural areas, cause the greatest HR challenge.
- Service-related and infrastructural factors affect the HR challenge of the agricultural sector in rural areas of Malayer.
- Socio-cultural factors affect the HR challenge of the agricultural sector in rural areas of Malayer.

#### Methodology

This study was conducted through a descriptive-analytical method in several stages. The desk-documentary research method was used in the first stage, pertaining to the theoretical part of the

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research. The data were collected in the second stage, using field methods such as observation, interviews, surveys, and attendance at residential areas. The third stage was related to data analysis and giving suggestions. The statistical population of the study included 73 villages of the central district of Malayer. Due to the large population, one hundred households from 5 villages in the center of the district were selected as the research sample. The main instrument of the research was a researcher-made questionnaire, the validity and reliability of which were confirmed by using the views of a panel of experts, calculating Cronbach's alpha coefficient, and other approved methods. The data got analyzed in SPSS. Thus, considering factors such as administrative political citizenship, distance from the city, population, and cultural differences, five villages of Joozan, Joorab, Aznav, Mehrabad, and Alavi, at the center of rural districts of Malayer, were selected as the sample. The heads of the households under study were the surveyed population in the study. For a more accurate analysis, the number of households was determined using quota sampling from among the households of 5 sample villages, and finally, a survey was conducted, using the simple random sampling method. This part contained descriptive and analytical (inferential) statistics. In the first part, the demographic characteristics as well as the variables related to the research hypotheses were presented in descriptive statistics tables and figures. The analytical statistics part employed Kolmogorov-Smirnov, one-sample ttest, Friedman, Kendall's Correlation, Chi-square, and Eta tests. SPSS was also used to analyze the extracted data.

#### **Findings and Discussion**

Economic factors such as lack of employment due to inappropriate policies in rural areas have given rise to the greatest challenge in human resources with the highest mean score. This suggests that these factors have been the most important factors to create HR challenges in rural areas in the central district of Malayer, with the next ranks belonging to socio-cultural factors and service-related as well as infrastructural factors, respectively. Moreover, the significance level from the Chi-square statistic in Friedman test indicates that the confirmation error percentage of the significance level of the above test has been significant at 95% confidence interval. It can, therefore, be said that economic factors such as lack of employment due to inappropriate policies at the village level have caused the greatest challenge in human resources. Therefore, the first hypothesis is confirmed and the null hypothesis, rejected.

H2: Service-related and infrastructural factors affect HR challenges in rural areas. The parametric one-sample t-test was used to test the above hypothesis. The significance level obtained from the t-statistic was brlow 0.05, showing that there was a significant difference between the value score (standard limit) and the mean value of the population. Given that the mean of the sample presented in the table stood above the value score (mean difference = 0.14), the effect of service-related and infrastructural factors on the HR challenge of the rural areas was confirmed, thereby confirming the second hypothesis of the research.

In relation to the third hypothesis, the significance level obtained from the t-test was much smaller than 0.05, indicating that there was a significant difference between the value score (standard limit) and the mean value of the population. Moreover, considering that the mean of the sample was higher than the value score (mean difference = 0.445), socio-cultural factors proved to be effective in facing the HR challenges in rural areas, also confirming the third hypothesis.

#### Conclusion

According to Friedman's test, economic factors such as lack of employment due to inappropriate policies in rural areas have created the greatest challenge in human resources with the mean rank of 2.3. The second and third ranks belong to socio-cultural, service-related and infrastructural factors with the mean ranks of 2.08 and 1.63, respectively.

**Keywords:** Human Resource Development, Rural Areas, Agriculture Sector, Malayer.

# Spatial Analysis of Sense of Belonging to a Place in Restoration of Deteriorated Texture, Using Geographically Weighted Regression in District Three of Tabriz

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Received: 2019/05/20 Accepted: 2019/12/25

#### **Extended Abstract**

#### Introduction

Sense of belonging is a dimension of the sum of the sense of place and positive attachment, formed between the individual and the place. At the same time, worn-out textures and old neighborhoods, as the dominant beating heart of cities, are the most important public spaces that need to be taken care of and kept by residents within the texture. Today, many planners and designers have emphasized revitalizion of these textures by prioritizing the residents' needs and communicating with not only the physical space but also the issues related to location. Considering the issues raised, it seems essential to pay attention to worn-out urban contexts, both spatial and psychological so as to increase residents' satisfaction. For example, worn-out urban contexts are one of the problems that, in addition to the legal system, have diminished the appearance and quality of urban life, leading to the establishment of many roads and densities of services, infrastructure, and urban facilities. The issues raised indicate that the need to intervene in aging tissues to improve their quality of life is crucial. In Tabriz, worn-out textures account for one fifth of the city's total area of 2,530 hectares, making it the second largest city in terms of worn-out textures. According to the latest estimates, 400 to 500,000 Tabriz citizens live in such areas. Studies show that the rigid regulations of urban planning, lack of adequate financial resources, and lack of ingenious and strategic management in the worn-out textures will swallow Tabriz over time. On the other hand, the worn-out texture of Tabriz as a vibrant urban location has obvious physical, semantic, and functional differences from its neighborhoods. This has had a significant impact on the sense of belonging. Therefore, based on many scientific studies, research on the subject involves the use of numerical and statistical information that is influenced by the concept of space and environment. Spatial data are, thus, the most basic and important data, used by environmental analysts and geoscientists in their research.

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#### Methodology

The conventional global regression method assumes a constant correlation between spatial variables for modeling the area that does not take into account spatial instability of the variables. The major advantage of GWR (Geographic Weighted Regression) over conventional regression models is its ability to investigate spatial instability. Spatial instability indicates that the measurement or estimation of relations between variables varies from place to place. The GWR method is a regression technique that significantly improves ordinary regression to be used in spatial data. Therefore, the maps generated from these analyses play a key role in the non-stationary spatial description and interpretation of the variables. In this method, the coefficients of the explanatory variables are estimated, using weighted matrices, where each variable's weight is determined based on the distance of each observation to the estimated position of the variable. GWR is one of the methods to estimate model parameters when there is a dependence among observations of each point. The main idea of GWR is that the study of independent and dependent variables in the study area is done in places where their position is known.

#### **Result and Discussion**

Since different indices can be used in regeneration of worn-out tissue, this study considered the sense of location as a dependent variable and the other parameters in three social, physical, and environmental indices as independent ones. They were also used to obtain goodness of fit indices (R2). The VIF index helped determining the linearity of the independent variables. VIF is a feature, used to know whether there is a linear correlation between independent variables or not. It shows the intensity of the linearity among independent variables (multiple linearity). In fact, the index indicates the amount of change in the estimated coefficients for each end. The minimum value of this positive index is one and its maximum is infinite. As a rule of thumb, if VIF is greater than 7.5, it represents a high multiplicity of linearity. Here, according to the results, the VIF index for the variables, used, was a lot, making them incapable of getting involved in modeling (VHF> 1, VIF <7.5). Therefore, the assumption that the input variables are independent seemed to be correct for all used variables. The sense of belonging among the three studied indices had the most impact on social indicators, followed by environmental and physical indicators.

#### Conclusion

Results from this research show that the role of social and environmental factors is more important in restoring the worn out texture. Regarding the status of the sense of belonging to locality in the studied area, three findings show that Maralan Neighborhood in which Montazeri, New Pasteur, Ashrafi, Hafez, and Laklar Streets were located along with Hakimi Neighborhood did enjoy the highest sense of belonging within Shariati, Taleghani, Azadi Boulevard, and Martyr Fathi Vend Regions as well as the parish. These neighborhoods are located in the northern, central, and eastern parts of the Third District. In order to raise the sense of belonging to the area, it is possible to modernize the worn-out tissues, especially in public spaces and interiors of residential blocks. On the other hand, by providing welfare facilities, creating sufficient parking lots, and observing visual spatial proportions one can keep on promoting the sense of belonging to the location among the residents of the region.

**Keywords:** geographically weighted regression, Tabriz, spatial analysis, sense of belonging.

# Genealogy as a Method for Analyzing "City Role" Developments (Case Study: Mashhad)

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Received: 2019/06/01 Accepted: 2019/12/28

#### **Extended Abstract**

#### Introduction

Different approaches have been proposed by planners and theorists to analyze the role of cities. From the point of view of structuralism and theories such as political economy, urban systems are often considered a changing system. In a genealogical approach to urban role analysis, theorists such as Foucault analyze the urban space in the domain of power and knowledge, which ultimately leads to the formation of the social space of the city, changing and transforming its dominant role over time.

The study area of the present article is Mashhad, home to 63% of the urban population in Khorasan Razavi Province and the largest city in the province (Mashhad Municipality, 2016). Given the special cultural and religious status of the city at a national and regional level, the need for a closer examination of the areas of urban role and function will make it possible to exploit the existing potentials of the city in the direction of rational future development of the city. An analysis of the power structures and knowledge of Mashhad's current space along with interpretation of how this space is formed in the geographical area can reveal the imbalances at local and regional levels. On the other hand, understanding all the potentials in space can lead to the design of a new paradigm of urban space management in Mashhad.

This article aims at defining and designing a method to analyze the current role and function of cities based on Foucault's "genealogy", for which purpose it has studied the role of the city of Mashhad. The genealogy of Mashhad's role seeks to answer the following questions: What role or dominant role does the city have now in geographical space, regardless of its initial formation and role in its emergence? How have these roles evolved over time and what has been the origin of their discourse? And finally, what is the power and capacity of the city to diversify into new roles?

# Methodology

Genealogy-based research rests on the foundations of heuristic theory; the essence of genealogical method is to work with old and outdated documents since genealogy has a history of returning to the past, and its historical sources and past documents. Of course, where there is

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no document, field methods such as interviews and historical memory are also used. Methods of information analysis in this type of research include;

- Genealogical analysis: analyzing the ancestry of past and present roles of the city, by examining discourse zones, historical breakpoints, and analyzing the effects of the discourse on urban space and the relations of power and knowledge shaping the role of the city
- Content analysis: analysis of national, regional, and local (city) development documents as well as related scientific research

#### Results and Discussion

The network of power relations, explaining the political economy of the city, illustrates how urban space is created and developed. An examination of the current roles of Mashhad shows that the city, due to its special position in the structure of Iranian urban system and accepting its politicalmanagerial role, has become a top economic hub as well as a superior service hub, being assisted by institutions at national and international levels. Meanwhile, existing management structures play their political, economic, and service roles and functions. Beyond its dominant political and managerial role in Iran's geographical planning system, it also has a unique role as a pilgrimage and tourism destination, and this role has been the vision of Mashhad's development from the past (at the time of its creation) to date. Mashhad, besides the shrine of Imam Reza, is the focus of many public services (legal, health, technical, specialized, tourism, educational, scientific-cultural, etc.). The city of Mashhad, on the other hand, is a pilgrimage city. Pilgrimage to this city is an integral feature in the eyes of its visitors and residents, attracting millions of tourists annually to the city, with most tourists claiming pilgrimage as one of the most important goals of their trip. Among the roles explored in Mashhad, two are political, administrative and tourism, and pilgrimage can be considered the focal role of this city. In the shadow of these two roles, many other roles have also been expanded in Mashhad.

Analyzing the correlation between power and knowledge in shaping and defining the dominant role of pilgrimage and tourism in Mashhad and expressing the existing truth regime is possible through reviewing scientific plans and documents and projects, implemented in Mashhad. Higher frequency of fundamental and developmental researches, mainly in the form of a research project, developed by scientific and research institutions, indicates the importance of the knowledge support category of the authorities (urban and regional management) in defining the role of the city as well as the production and reproduction of Mashhad space. This interconnected network of knowledge production, in fact, guides the urban lifestyle, creating the kind of thinking that empowers people under the generated network system, who in turn generate space at different levels.

#### Conclusion

Analyzing the dominant discourse that explain the roles of Mashhad shows that the political-administrative role is in the first place, followed by tourism and pilgrimage in the second place. Today's vision of Mashhad is the result of an interconnected power structure and knowledge that can be seen in productions (scientific-technical-specialized) and guiding texts focused on the subject (extracurricular documents). The proposed strategies of these texts and the way in which they have been politicized in the documents of tradition and the patterns of cooperation between the agents of power have finally come to create the existing discourse and produce and reproduce the urban and social space, resulting from it.

Keywords: Genealogy, Knowledge, Power, Role of City, Mashhad.

# Monitoring the Theory of the Right to the City in Reproducing Age – Friendly Space of the city (Case study: Worn-Out Texture of Central District of Zanjan)

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Received: 2019/05/27 Accepted: 2019/12/29

#### **Extended Abstract**

#### Introduction

The city is considered a social right, with the role of urban space in production of the daily life rhythm and reproduction of social relations making an approach in citizenship rights, in which the residents must be the main players and beneficiaries in the creation of urban space. Meanwhile, the increasing lifespan of humans and growing elderly population are considerable results of the 21st century. Ageing is a biological process rather than a disease, an important phenomenon that gradually befalls everyone. The phenomenon of aging creates significant changes in all aspects of human societies' life, including a wide range of age structures, values, and criteria, as well as the creation of social organizations. It is very important to confront the challenges, posed by this phenomenon, and adopt appropriate policies to improve physical, social, and mental status of the elderly. In this regard, by turning the city into an age-friendly space, it seems that Lefebvre ideas could be appropriate criteria for spatial intervention in the cities for the benefit of vulnerable group. Lefebvre's idea of the right to the city is a powerful response to all cities, especially those wherein the citizens suffer from extreme conflict in different forms (deprivation and depriving groups of people from the right to peace, security, and solidarity). Since the right to the city belongs to all its inhabitants, a study on elderly's right to the city as a vulnerable group in need of support, doubles its importance.

# Methodology

This research was descriptive-analytical. In the terms of time span, it considered the present circumstances. Following the study of Lefebvre ideas to extract spatial manifestations of the idea of the right to the city as a conceptual model of research, the condition of the elderly resident in the worn-out texture of Zanjan city was investigated. Since the number of elderly residents in the worn-out texture was not clear enough, this study employed the sampling method of the missing statistical population to determine the sample size, which turned out to be 170 individuals. The locative sampling method of the study was clustering, with the clusters getting selected systematically. The studying condition of the elderly resident in the texture was

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done by SF-36 standard questionnaire with Likert spectral ranking and face-to-face interviews by the researchers. Research indicators got compiled in two parts: independent and dependent variables and contextual variables. The dependent variable included "the right to the city" and the independent ones were the "the right to appropriate use of urban space" and the "the right to participate", both with 3 indicators. The contextual variables also included individual characteristics of the statistical population. To analyze the data, descriptive tables and charts, Kruskal-Wallis test (to investigate the differences between the statistical groups on the subject of the research), and the path analysis test (to study the effect of the indicators of the right to use urban space and the right to participate on the urban right component) were utilized with the help of SPSS software program.

#### **Results and Discussion**

The findings showed that the right to the city in the worn-out texture of Zanjan city did not materialize and the average satisfaction of the statistical population from the right to the city index was 2.94, which was below the average. Meanwhile, the right to appropriate use of urban space had a rating of 3.01, with the participation right having a rating of 2.87. Study of the statistical population with Kruskal-Wallis Test showed that the elderly with different physical characteristics did not have a unique understanding of the status of the right to the city index in the worn-out texture of Zanjan. Yet, there was no disagreement between other different groups of gender, socioeconomic status, and length of stay in the city, which added to the importance of the right to the city concept. The study of the right to the city indicators and the effect of each one on urban space with the path analysis test showed that the total effect of the right to appropriate use of urban space component on the right to the city component was 0.827 and the total effect of the component of the right to participate was 0.823. This trend showed that in terms of statistical population, the components of appropriate right to use and right to participate had a favorable impact on the right to the city component and by strengthening these two components, one can create a favorable urban environment in the central worn-out texture of Zanjan and adapt it to the needs of different groups, especially the elderly.

#### **Conclusions**

From Lefebvre's view, the right to the city manifests itself as a privileged form of rights. There is no doubt that today the concept of the right to the city is used as an umbrella term for sustainability, with its meaning becoming much wider, compared to what Lefebvre first applied. According to the research findings, the component of the right to participate with a score lower than the right to appropriate use of urban space should be considered and planned first based on the needs for upgrading the urban space production/citizenship right, and then on urban decision making and urban organization. In this way, the group of elderly people who enjoy more leisure time than other members of society can be active and productive members in creating vibrant urban spaces and experience dynamic aging.

The right to appropriate use of urban space should also be considered based on the needs for upgrading the control and ownership of space, physical share, and ultimately urban vitality, in line with the right to participate in order. The reason behind this is that the elderly is a group with mobility limitations who need to adapt to the environment in order to be present in the community and urban spaces.

**Keywords:** the right to the city, urban space, age-friendly city, Zanjan city.

# A Study of Geopolitical and Geo-economic Competitions of China and India in Eurasia: Connection Corridors and Geopolitics of Chabahar and Gwadar Ports

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Received: 2019/08/24 Accepted: 2020/01/07

#### **Extended Abstract**

#### Introduction

In the last two decades, China and India, two countries with high economic growth, huge economy, and extensive trade, have emerged as two Asian powers and even global powers. Both countries have great regional and global ambitions. China is pursuing a new system of power relations and international relations through its Belt and Road Initiative, while India is trying to create a new convergence of power relations with its Asian policy, while expanding its sphere of influence. Both countries pursue a policy of connecting and accessing Eurasia's geopolitical areas by adopting a geo-economic strategy. In this context, Pakistan and Iran have become appropriate options for creating connection corridors in Eurasia by China and India, with two main points being Gwadar and Chabahar ports. Therefore, the purpose of this study is to investigate and explain the geopolitical and geo-economic competition between China and India in the China-Pakistan Economic Corridor and the International North-South Transport Corridor and to investigate the role of both Chabahar and Gwadar ports in this competition.

The two major Asian economies and powers have focused on connection corridors to expand their sphere of influence, export surplus products, have access to large consumer markets, secure the supply of sustainable energy, and pursue national interests in peripheral areas. Decision makers and strategists within the Chinese government have proposed China-Pakistan Economic Corridor project, based on the Port of Gwadar. This corridor is an important part of a major Silk Road reconstruction project, called "One Belt One Road" or "Belt and Road Initiative". In contrast, the Indians proposed the "International North-South Transport Corridor" with its focus on Chabahar Port and the land of Iran. China's presence at Gwadar Port and India's presence at Chabahar Port are analyzed and explored in the context of China and India's geopolitical and geo-economics competitions in South Asia and access to Eurasia. Therefore, this study seeks to explain the geopolitical and geo-economics competitions of China and India in these corridors as well as the geopolitical role of Gwadar and Chabahar ports in this competition.

## **Methods and Material**

The study focuses on two China-Pakistan economic corridors and International North-South Transport Corridor in Pakistan and Iran. The two oceanic ports of Gwadar and Chabahar are at

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the heart of this article. The research uses descriptive-analytical method with its data, collected in a library manner.

#### **Results and Discussion**

The starting point of the International North–South Transport Corridor onshore route is Chabahar Port in southeastern Sistan and Baluchistan Province. The closest Iranian city to India, Chabahar is the only oceanic port in Iran. The geographical location and high potential of transit make the Indians pay special attention to Chabahar port. In addition, India's long-standing rivalry with Pakistan in the Gwadar Port as well as massive Chinese investment in that port have increased the Indian government's incentive to develop Chabahar port so as to access Central Asian and Eurasian markets. Accordingly, Chabahar is India's "golden gateway" to the Commonwealth of Independent States (CIS) and Afghanistan with broad potentials for connecting business centers in South Asia (India), the Gulf region (Dubai), Central Asia, and Afghanistan. Therefore, Chabahar port is of particular geostrategic, geopolitical, and geoeconomic importance for India. This is especially evident when the port is seen in the context of the geopolitical and geo-economic competitions of China and India. From this point of view, Chabahar is a focal point and gateway for the Indians who do not want to miss it easily.

The two governments of China and Pakistan signed an agreement in 2013 to activate the China-Pakistan Economic Corridor, whereby the Corridor Development Project will include establishment of a railroad, motorway, and energy pipeline linking the port city of Gwadar in Balochistan Province, Pakistan, to the Chinese city of Kashgar in Xinjiang Province in western China. The Gwadar Port plays a central role in the China-Pakistan Economic Corridor. This port will play a key role in China-Pakistan strategic relationship, being pivotal for the future of China-Pakistan strategic relations and sustainable economy. China's widespread investment in the Gwadar Port, China-Pakistan Economic Corridor, and the Karakoram Highway is more than just an economic issue. China pursues broad strategic, geopolitical, and geo-economic goals in the project in medium and long term. Geopolitically, China's relationship with Pakistan to build the Gwadar Port is a strategic focal point in Belt and Road Initiative. On the one hand, it is a gateway to the Arabian Sea, the Persian Gulf, Western Asia, South Asia, and Indian Ocean, and on the other hand, the starting point for easy access to western China and Karakoram plain as well as easy trade with Central Asian countries.

#### Conclusion

The results show that India is working to improve its geopolitical and geo-economic weight against China and Pakistan through Chabahar Port and Iran's Corridor. India tries to achieve a regional balance of power with China through Iran's space and Chabahar Port.

Keywords: Geo-economics, Geopolitics, Eurasia, Gwadar Port, Chabahar Port, India, China.

# An Analysis of the Challenges of Citizenship Rights in Iranian Cities (Case Study: Qazvin city)

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Received: 2019/07/24 Accepted: 2020/01/11

#### **Extended Abstract**

#### Introduction

Citizenship is seen as an advanced model of "urbanization". According to some experts, urbanites have been promoted to 'citizens' when they respect each other's rights and fulfill their responsibilities to the city and society. Citizenship is a membership that includes a set of rights, duties and obligations, inclusion of an active or inactive individual in the government with specified universal rights, and equality of obligations at a specified level. The concept is a social status, associated with the state with three types of rights, including civil rights, political rights, and social rights. It represents the status granted by law. At the same time, this concept shows that individuals have the right to be credited with their status in society or a political unit. According to this approach, because people share a common life, they also have rights and responsibilities. Therefore, due to the same life together, whether in economic activity or in cultural affairs and in political commitment, they all have ethical obligations to one another. Citizenship is in fact the condition of membership in a political unit (usually the national government) that protects the rights and privileges of those who perform certain duties. Beyond citizenship, its theory is a concept that formalizes the conditions for full participation in a society. The concept of citizenship represents the connecting point between social, cultural, and political geography. Through a broader literature of citizenship, some theories can be found whose definition of the concept share a common ground: a kind of modern social base and role for all members of society, an interconnected set of duties, rights, duties and responsibilities, rights, and obligations. Metaphorical and cultural equality, equal sense of belonging and modern social membership for active participation in society as well as economic, political, social and cultural spheres, just and equitable enjoyment of all society members of social, economic, political, social, and economic benefits and resources, legal and cultural, regardless of class, race, religion and Ethnicity (Sarrafi, 2008: 118-120). The present study tries to present citizenship rights and its challenges in Qazvin as one of the important cities of Iran with different citizens in terms of age, gender, ethnicity, language, literacy, physical health, etc. The

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main question, therefore, is: What is the relationship between the four dimensions of sociocultural, economic, environmental, and civil service development with citizenship rights?

#### Methodology

The present study used an applied, descriptive, and analytical method. According to the content and nature of the research, data collection entailed both documentary and survey methods. Eighteen professors and experts on the most important concepts of citizenship law were interviewed and the key key concepts about citizenship got categorized into 41 parameters. The questions' reliability was confirmed by experts and their validity among the sample citizens turned out to be 0.78. The statistical population of the study was 402,748 citizens of Qazvin, according to the latest census of the country. To determine the sample size, Cochran formula with a 5% error coefficient was used and finally 384 people were collected. Questionnaires were distributed in the form of closed-ended questions and Likert scale in five scales, namely completely appropriate, appropriate, average, inappropriate, and completely inappropriate. Afterwards, the average rating of the collected information was obtained. In order to analyze the research findings, the data collected by SPSS software and Pearson and Friedman correlation tests were used for descriptive and inferential analysis of the findings, and finally the distribution of the phenomenon space (case study) was presented.

#### **Results and Discussion**

The results of the indicators and criteria, examined in Citizenship Law in Qazvin, showed that among the studied criteria the indicators of employment with high averages were about 4 most satisfied. These indicators are:

- Right to choose a job (average 4.06)
- Right to manage and maintain a job (average 4.10)
- Right to Job Creation Services (average 3.96)
- Right to Occupational Safety (average 4.24)
- Right to family living expenses (average 3.92)

In contrast to the index that achieved the highest average, the indicators of social dimension are in poor condition, with the lowest scores being as follows;

- Right to choose friends, companions and companions (average 2.31)
- Right to higher education, vocational training and school education (average 2.60)
- Right to elementary education, guidance, high school (average 2.38)
- Right to religious and traditional rituals (average 2.47)
- Right to preserve and disseminate traditional rituals (average 2.55)

#### Conclusion

In relation to the independent variable of the present study (citizenship law), consisted of four dimensions of social, economic, environmental, and physical rights with utilities and services, the most effective and determining the factors that belonged to the social dimension as well as its related criteria. It can be seen as playing a key role in citizens' satisfaction of the city and urban spaces. Based on the Friedman Test, both parameters of employment and occupational safety measures had the highest score. In descriptive statistics with the criterion of average satisfaction of citizenship rights in the field of employment, job security, and freedom, the pertaining to job had proven the right choice. It can also be noted that the facilities and services of the city were among the least effective factors in creating a sense of citizenship in the citizens of the city under study. Also, based on the results of the research, the problems related to the realization of citizenship rights in the study city can be categorized as follows:

The right to access to court and counsel; the right to equal treatment; the right to choose friends, companions, and associates; the right to freedom from unsafe and violent environment; the right to citizenship; the right to personal and family counseling; the right to primary education, counseling, and high school; and the right to having access to utilities and services.

**Keywords:** Citizenship Rights, Social Rights, Qazvin City Social Center.

# The Impact of US-China Regional Competition on Regional Equations and Order in East Asia

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Received: 2019/04/23 Accepted: 2020/01/15

#### **Extended Abstract**

#### Introduction

China has become an important and influential player in Asia-Pacific region in recent years. Economic, political, and military development of this country was introduced in the 1970s via an open-door policy, leading to the country turning into one of the most influential players in the international community. In the meantime, one of the issues that is discussed for nearly a decade is the question of modernizing and expanding China's military capabilities. This has brought the United States to the fore by pursuing two strategies of containment and accountability, an attempt to seek accountability and balance against China. The United States, therefore, has strengthened its ties with China by concluding treaties with India and, on the other hand, has pursued a strategic alliance with Japan, encouraging it to strengthen its militaristic power and play a greater role in the international arena. It tries to balance its power with China. US security alliances and extensive military relations with countries around China, including Singapore, Vietnam, South Korea, the Philippines, Taiwan, etc. can also be assessed. The North Korean missile crisis is also seen as an acute security dilemma in Washington's foreign policy in the East Asia region. In doing so, Pyongyang proves reluctant to carry out nuclear tests.

# Methodology

Being qualitative and practical, the present study is a "descriptive-analytical research" in terms of its method of implementation. Its required information has been collected and used through library studies (documents, books, articles and journals, websites, etc.) and searches on the Internet and databases, specialized journals and journals.

## **Results and Discussion**

During the past four decades, China has become a significant actor in the region, standing at the level of a powerful global player in all major international issues, especially economic ones, where business and business environment are influenced to a large extent. The recent years has seen China's development process expanding from the economic sphere to other areas. One of the most important areas to witness accelerated development and renovation is the military

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domain. The concerns of Washington's military strategies have triggered the efforts of both USA and China inside Asia-Pacific region. In order to prevent Chinese influence in Central Asia region, the United States tries to rely on the countries of this region by deploying military capability (Jozani Kohan and Jozani Kohan, 1396: 37). Washington is trying to reduce China's role and influence by expanding India's military capability and increasing its role in regional relations as well as by engaging it in the Asia-Pacific regional order. Therefore, India views its growing relationship with the United States as an important gateway to becoming a great power (Khazri, 1390: 689). Also, the December 2013 meeting of the Singapore Secretary of Defense and the US Secretary of Defense at the Pentagon underscored the expansion of bilateral military cooperation. Singapore is seeking to counter China's widespread economic and social influence by seeking close ties with the United States. At the same time, Vietnam, which has experienced the bloody war of 1956 to 1973 with the United States, has also renewed its relations with the United States since the emergence of China in July 2011. Only two months later, in September 2011, the two sides signed an agreement to promote bilateral defense cooperation, followed by annual bilateral defense talks. The South Korean-American alliance has also been a powerful component of the Asia-Pacific regional order for the past six decades. With China's economic and military power increasing along with its role in Asia-Pacific in recent years, the United States has also emphasized Taiwan to pressure China and increase tensions in the region to engage China in regional conflicts and diminish its global role (Tabatabai and Ghyasi, 2013: 272). The US government believes that the Chinese state, which has the largest land borders with North Korea, could be the controlling factor of Pyongyang to end the crisis in the region (Swaine, 2017: 6). In pursuit of realistic and pragmatic policy, the American president, Donald Trump, seeks to capitalize on China's influence in resolving the North Korean nuclear crisis and place some of North Korea's containment on China.

#### Conclusion

China's quest for increased military power and funding has received widespread reactions from major powers as well as its Asian neighbors. In the meantime, the United States, as the only superpower left from the Cold War era with widespread interests around the globe, especially in Asia, is concerned about China's rise as an economic and, more importantly, military power more than any other international player. In this regard, the United States seeks to establish broad military and security relationships, increase its presence, and conduct military maneuvers in Asia, not to mention signing military contracts with Japan, India, South Korea, Singapore, and Taiwan as China's competitors and political alliances. A further military contract with Australia and Indonesia, two middle powers in the region, will isolate the country in the end. Moreover, the United States prioritizes managing its relationships with its longtime enemy, Vietnam, to a normal level in order to limit China. Another issue that has challenged Washington's policies in East Asia is the North Korean missile crisis, which the US government seeks to address by pressuring China with Russian cooperation. In this regard, authorities in Washington consider China to be a key element for containment and control of Pyongyang so as to end the missile crisis in the East Asia region. Thus they have been trying to put Beijing under pressure. The end result of a series of US counter-measures against China has so far reduced Chinese economic growth from about 9% to 6%, boosting US economic growth from about 4% to 6%, which could lead to this conclusion that the measures of USA has, in part, inhibited China's unilateral economic-military growth.

**Keywords:** USA, China, East Asia, Regional order, Threat balance.

# The Geopolitical Role of Middle Eastern and North African Countries in Regional Security (Case Study: Iran and the Arabs)

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Received: 2019/04/26 Accepted: 2020/01/19

#### Extended abstract

#### Introduction

Throughout history, the often presence of "power" and "wealth" alongside "ideology" and "competition" has led to the formation of hostile relations between countries. Among the regions of the world, the Middle East and North Africa have more complicated relationships to achieve security due to the presence of countries with special characteristics. In this situation, if wrong strategies are adopted by the powers in this region, the result will be unsolvable. As we approach the third decade of the twenty-first century, headlines from the Middle East are dramatic and worrisome, often characterized by upheaval and change. The MENA are sensitive areas of security and energy in the world, which have witnessed many tensions and conflicts. Some contemporary examples of this are Palestinian occupation, Iran-Iraq War, invasion of Kuwait, the United States' invasion of Afghanistan, the United States' 2003 invasion of Iraq, the Arab Spring, and the emergence of Islamist groups like Taliban and ISIL. Middle Eastern and North Africa countries have very complex relationships with each other. In order to secure their interests and security, each of the countries in the region seeks political and security cooperation with other countries. On the other hand, countries with higher geopolitical weights will be more influential. Therefore, in order to reveal the reciprocal and constructive relationship between the countries of the region on the one hand and security on the other, the concepts of "region" and "security" must be opened. Finally, this paper evaluates the interaction between the security of the Arab countries and Iran, one of the most influential poles in the region, which has led to major changes in the geopolitical relations of the region. In so doing, it looks at the security situation in the region in light of these developments, trying to find out what historical, social, and economic factors explain these similarities and the differences.

#### Methodology

The descriptive-analytical research method and the reliability of the research were evaluated through quasi-Delphi's questionnaire, while the reliability of its assessment tool was measured via Cronbach's alpha test. The situation of security discourses in Iran and Arab countries in the region was assessed with three values: solidarity (1), negative solidarity (1), and non-solidarity (0). Ten countries got selected through the questionnaire and the numerical weighting of the Likert scale (between 0 and 5) was performed, resulting in the coefficients of "geopolitical weight in the region" and "communication with Iran". To measure the reliability of the

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statistical test questionnaire with Spearman-Brown's prediction of 0.75, Cronbach's alpha coefficient of 0.72 (acceptable) was achieved. All findings were analyzed with Excel, then to convert to a concept model in the form of a diagram by iThoughtsX and Ps 2018 software programs. Statistical population included experts and students, giving a sample community of 10 professors and 20 students for "Convenience Sampling" method with a questionnaire (engaging 5 professors and 10 students) and "non-structured interview" (involving the remaining 5 professors and 10 Students).

#### **Results and Discussion**

Since 1979, Iran has reduced poverty, expanding its middle class and literacy rates, which has boosted its power. Iran, as a growing power, and Saudi Arabia may remain two powerful and influential states in the region that are grappling with instability. However, they are at odds with each other on a variety of issues. Recent developments in the Middle East are a manifestation of the "conflict" pattern. As another pole, Saudi Arabia alone cannot play a geopolitical role due to its low geopolitical weight, compared to Iran. Given the combination of communication and geopolitical weight, this description correctly shows that there is a weak connection between the two influential poles of the region, namely Iran and Saudi Arabia. On the other hand, it should be noted that according to Buzan's theory, poles in the Middle East and North Africa determine the direction of the region. This means defining the region's borderlines by two conflicting powers. In this regard, Iran can take into account its geopolitical weight and national strength and recognize its true position in order to have a realistic assessment of the existing threats and opportunities.

#### Conclusion

Unfortunately, pieces of evidence show that the region's political systems do not work for collective security. The geopolitical limitation of the region can be seen in lack of sufficient attention to the "position" and "role" of Iran by the Arab countries of the region. In other words, the countries of the region are aware of the influential geopolitical role of Iran, but are weak in terms of their relationship with this role. The key to achieving this security in the region is realization of convergence and the growth of the positive correlation coefficient with Iran in both groups of countries with "negative" and "cross-sectional" interactions which paves the way for convergence and access to regional security in the Middle East and North Africa security complexes. If this happens, it will lead to a further convergence with Europe and the international community. The results show that Saudi Arabia, the United Arab Emirates, Bahrain, Jordan, Egypt, and Morocco are in the same group. Also, Kuwait, Qatar, Oman, Libya, Tunisia, and Algeria are present in a cross-sectional communication group. At one time, these countries were pro-Iranian and at other times pro-Saudi. Generally, they follow the "principle of national interests" and the "principle of ideology". Finally, there are counties like Iraq, Palestine, Syria, Lebanon, and Yemen, which in most cases have aligned themselves with Iran's goals.

**Keywords:** Regional Security, MENA, Iran, Arabs, Geopolitics.

# **Explaining the Role of Geopolitical Factors in Oman's Foreign Policy**

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#### **Extended abstract**

#### Introduction

The political relations and actions of governments in the foreign arena are a function of their geopolitical position. Oman, despite its presence in the Middle East crisis zone, has a different foreign policy. Its foreign policy is a successful model for a country with a turbulent presence. Similar to Middle East, which has avoided entering the region's sectarian strife and tension in the international system, the country has been effective in reducing tensions between Arab and non-Arab countries in a positive neutrality policy by maintaining good relations with influential regional and international powers. In its interactions it has been able to balance the conflicting interests of its neighbors and regional and trans-regional powers. The main purpose of this article is to find out what geopolitical factors affect Oman's foreign policy. In response to this question, the author assumes that geographical location, Abbasid religion, border geopolitics, weak military forces, lack of population and energy resources, and the need for foreign investment affect Oman's foreign policy. The present study is descriptive-analytical, based on library resources and the "positive neutrality" theory is used to explain Oman's foreign policy.

#### Methodology

The research is descriptive-analytical, having a geo-political approach to geography. Data collection and analysis in accordance with the type of research, are based on library and documentary method, using written and important internal and external authoritative works (e.g. books, articles, reports, etc.) as well as electronic sources (websites and electronic articles).

#### Result and Discussion

In response to the research question, the findings show that the geopolitics of Oman's borders with Saudi Arabia, Yemen, and especially the United Arab Emirates play a very important role in its behavioral pattern. Oman's territorial disruption has created the need to establish and expand relationships with regional and trans-regional poles in terms of territorial security, military operations, and control of the Strait of Hormuz. Oman's followers have mostly built on their interactions with other religions and are advocates of Muslim unity. Oman has religiously sought to keep its foreign policy away from religious currents while still maintaining good relations with all countries in the Arab and Islamic world. When facing most of sectarian tensions and fundamentalism in the region, it preferred to adopt neutrality and call for a peaceful

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way. The army in Oman is very weak and despite great powers like Iran, Pakistan, and Saudi Arabia, its aggressive and deterrent power is not noticeable. Like other countries in the region, Oman has been extremely cautious in moderating its political relations with regional and international powers by handing over military bases to world powers and recruiting military advisers. In addition, the country's very small population, more than one-third of which are immigrants, is the most significant security-economic threat that will change Oman's demographic structure. The low population has led to moderation in its foreign policy and ultimately synergize with the region's top and most influential neighbors and powers. Limited and expiring oil resources, high costs of extraction, and its need for gas, as well as pursuing policies to reduce oil dependency and launching macroeconomic projects has led to Oman's need for regional countries and foreign investment.

#### Conclusion

Oman's main goal for its domestic and foreign policy is to provide stability, security, and economic recovery, based on the security in the region and peaceful resolution of events. Ensuring the national interest has made neutrality and diversification of foreign communications an integral part of its foreign policy. The basic premise of this type of behavior is based on numerous geopolitical factors that have so far shown Oman as a calm and stable country. The results show that the geopolitical boundaries of Oman's borders with its neighboring countries especially the UAE, the geographical location of the Strait of Hormuz, its long coasts, the religion of ibadiyyah and other regional religions, the weakness of military forces, population's small size which is significantly comprised of immigrants and non-natives, lack of energy resources, pursuit of a policy of reducing oil dependency, and the need for foreign investment, affect Oman's foreign policy towards positive neutrality. The amount of investment and current economic situation indicate some stability, based on a policy of positive neutrality, which has been achieved over the past five decades.

**Keywords:** Oman, Geopolitics, Foreign Policy, Positive Impartiality, Middle East.

# **Spatial Determination of Urban Poverty Zones** (Case Study: Tehran Metropolitan District 12)

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Received: 2019/08/16 Accepted: 2020/01/30

#### **Extended abstract**

#### Introduction

Poverty in developing countries is rapidly urbanizing, as it is referred in such terms as "urbanization in the face of poverty" and "urbanization under poverty". According to the statistics, issued by the Ministry of Roads and Urban Development, more than 20 million people live in slums in Iran, eleven million of whom are resettled in informal settlements with the remaining 9 million, residing in worn-out tissues. Most urban slums are located in Tehran province, forming a crescent around Tehran Metropolis from Karaj to Varamin. Meanwhile, like many largest metropolises in the world, Tehran has experienced significant growth over the last five decades. The population of the city has increased from 2.7 million in 1966 to 8.8 million in 2011. Also, it has grown from 4,600 hectares to more than 61,000 hectares. In other words, the extent of Tehran has increased more than 13 times over a period of seventy years. As a consequence of this situation, urban poverty zones has grown inside and around the city. According to the surveys, there are 3,269 hectares of worn-out tissues in Tehran, 593 of which is located in central Tehran. District 12 and adjacent districts such as 11, 13, 15, and 16 are in this area. Accordingly, the present research tries to determine urban poverty zones of Tehran Metropolitan District 12 so as to empower the inhabitants, organizing and enhancing the quality of their lives and living spaces.

#### Methodology

This research was an applied one, using a quantitative approach with regard to the investigated components. The research statistical population was the 12<sup>th</sup> district of Tehran metropolitan in 2016. Necessary information was extracted from statistical blocks of IRAN in 2016. Indexing was done by means of the database information in Arc / GIS software, Arc / View. Then, the outputs got extracted from the indices and transferred to Excel. Once the above steps were performed, the indices were transferred to SPSS software program, where they got classified into 4 factors through factor analysis model. Eigenvalues, percentages of variance, cumulative variance, as well as coefficient of difference (gap between blocks) were calculated for each factor. Considering each of the extraction factors, the city blocks were classified into five groups: very wealthy, wealthy, moderate, poor, and very poor.

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#### **Results and Discussion**

Based on the study findings, the first factor got classified into 9 indices, namely net residential density, total residential density, residential population density, area population density, net residential per capita, employment rate, task coefficient, population burden, and economic participation. This factor had the most influence among the four factors. As for the second factor, ten indices were loaded, while in case of the third and fourth factor, there were only 4. According to the first factor, there were 137 very poor blocks, 337 poor, 390 moderate, 173 wealthy, and 24 very wealthy. In other words, the spatial distribution of urban poverty in terms of economic-physical factors in District 12 was as follows: 13% very poor, 32% poor, 37% moderate, 16% wealthy, and 2% very wealthy. As for the second factor, this district had 76 very poor, 277 poor, 444 moderate, 232 wealthy, and 32 very wealthy blocks. Therefore, the spatial distribution of urban poverty from the perspective of socio-economic and cultural factors in this district was as follows: 3% very wealthy, 22% wealthy, 42% moderate, 26% poor, and 7% very poor. According to the third factor, 55 blocks were very poor; 372 blocks, poor; 393 ones, moderate; 188 blocks, wealthy; and 53 ones, very wealthy. This means that 5% of the blocks were very wealthy; 18%, wealthy; 37%, moderate; 35%, poor; and 5%, very poor. According to the fourth factor, fifty blocks were very poor; 220 blocks were poor; 490 ones, moderate; 276 wealthy; and 25 ones, very wealthy. As a result, 2% were very wealthy, 26% wealthy, 46% moderate, 21% poor, and 5% very poor, from a socioeconomic perspective. By combining the above four factors together as a combined index, the results weould be as follows: 53 blocks (5%) were very wealthy; 277 ones (26%), wealthy; 401 blocks (38%), moderate; 257 ones (24%), poor; and 73 ones (7%), very poor.

#### Conclusion

Results from this research showed that 31% of the population of District 12 were poor, while 38% belonged to the middle class. Thus, the social polarization phenomenon has occurred in District 12. In fact, inequality has been formed among the city blocks and social, economic, and physical differences among them is clearly visible. These results are in line with the findings of Rustaii and Karbasi (2017), Farhadikhah et al. (2017), and Bozorgvar et al. (2017), according to whom cities such as Maragheh, Mashhad, and New City of Hashtgerd have moved towards social polarization. In addition, the results of this study are in agreement with the findings of Anderson (2004). To a large extent, geographical polarization has been formed in terms of combining different economic, social, and physical characteristics in the 12<sup>th</sup> district of Tehran. In geographic polarization, individuals or households are concentrated in particular neighborhoods. Indeed, certain neighborhoods are clustered as the focus of the poor. Poverty in the neighborhoods of District 12 has intensified geographically. Poverty is most prevalent in central, southern, and northern neighborhoods such as Sirus, Shush, Pamnar Ark, Baharestan Saadi, and Ferdowsi-Lalehzar. In other neighborhoods such as Amin, Kowsar, Mokhtari Takhti, Ghiam, Sangli, and Shemiran, it has also taken root less severely. The important point is that there is a direct correlation between poverty and worn-out tissue indices. The highest concentration of worn-out textures could be found in neighborhoods such as Shush, Sirus, Mokhtari Takhti, Sanglaj, Pamnar, Amin, Baharestan, and parts of Shemiran. Therefore, the poor zones overlap with the worn texture zones.

**Keywords:** Urban poverty, poverty zones, spatial determination, worn textures, District 12.

# **Knowledge-Based Urban Development Stakeholder Analysis** (Case Study: Isfahan City)

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Received: 2019/05/09 Accepted: 2020/02/01

#### **Extended Abstract**

#### Introduction

Nowadays, cities are the focus of development. It is mostly in cities that knowledge is produced and published. Therefore, they play a fundamental role in knowledge-based development and by evolving the development concept as well as knowledge-based value, which is the driving force of urban development, and changing the spatial structure of cities, the Knowledge City (KC) and Knowledge-Based Urban Development (KBUD) have been proposed as an attitude for competitiveness and sustainable development of urban economics and their compatibility to the strategies of knowledge economy through creation of opportunities for the production and exchange of knowledge and innovation among citizens.

Because KBUD activities are related to the stakeholders in the field of learning and innovation, the use of capacity building and networking tools based on the institutional framework and through the expansion of local stakeholder engagement can underlie and become the driving force of institutional changes for integrated urban development. According to the emergence of city knowledge studies and the lack of systematic development of its theoretical foundations, there has been few reports on the success or failure of KBUD policies and their challenges in the cities of developing countries. Recent studies have shown that the most important requirement for the realization of KBUD is institutional development. In order to create interaction as well as integrated compatibility between urban resources and stakeholders, the need for good governance and strong political leadership is a pioneer in science and technology that addresses the weakness of institutional arrangements and the inadequacy of the governing tools. The most important aspect of knowledge-based urban development is its institutional one, since it regulaes the relation among economic, social, and environmental aspects of the city, performed based on political will, strategic view, strong relationships, and KBUD stakeholders' confidence. Recent empirical studies on the requirements for the realization of KBUD show that the most important one that ensures a knowledge city's success, is institutional development. The results of the above-mentioned empirical studies on the feasibility and realization of KBUD show that all of these studies consider the most important

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challenges, facing the realization of knowledge cities, are governance weaknesses, inefficient institutional frameworks, low institutional capacities, poor KBUD stakeholder cooperation, and low trust among them. Hence, building capacity, strengthening the trust, cooperation, and relation network cohesion of the main knowledge-based urban development stakeholders are considered a suitable tool for paradigmatic changes towards the knowledge-based urban development. In this regard, it is inevitable to identify and analyze key stakeholders as an effective primary step for this important issue.

# Methodology

The present research was carried out under a case study framework. It involved four steps, having a general functional goal and an operational-descriptive-exploratory purpose. For so doing it employed a combined method as well as quantitative and qualitative approaches. In the first step, using a snowball sampling method and referring to the experts in the field of knowledge-based urban development of Isfahan, a preliminary list with 83 potential stakeholders was prepared which was in accordance with the requirements of knowledge-based urban development and got regulated by 23 experts theoretically. In the second step, using the power-interest matrix model and completing the closed questionnaire by the experts and statistical analyses, fourteen key stakeholders whose average power and interest rates were more than 3, were identified. In the third step, again by completing a closed questionnaire by the experts and statistical analysis, the type of power and interests of the main stakeholders of knowledge-based urban development were determined. Finally, in the fourth step, using the semi-structured interview method, the way of applying the key stakeholders' power in knowledge-based urban development got analyzed based on their type of interest and the use of open source coding and axial coding.

#### **Results and Discussion**

It is of high account to make capacity and implement networking tools. This can be done by expanding the interaction of local stakeholders, which creates institutional changes and in turn realizes knowledge-based urban development of Isfahan. Also, as the results of empirical studies on feasibility and realization of knowledge-based urban development of Isfahan shows, the most important challenges that face realization of knowledge cities are weakness of governance and inefficient institutional frameworks, low institutional capacity, poor cooperation of stakeholders in knowledge-based urban development of Isfahan, and low trust between them. Making capacity, building trust and cooperation, and network cohesion of main stakeholders of knowledge-based urban development is an appropriate tool for a paradigm shift towards knowledge-based urban development. In this regard, identification and analysis of key stakeholders as an effective primary step for this important issue is inevitable. Therefore, through a systematic review of texts related to the requirements and factors of Isfahan's knowledge-based urban development success, the present study worked on the concept of stakeholder and stakeholder analysis as well as the processes and models to identify and analyze the stakeholders. What is more, it used power-interest matrix model of key stakeholders to identify and analyze the knowledge-based urban development of Isfahan, evaluating the extent and type of power and interest and the way of applying their power according to their type of interest.

#### **Conclusion**

The results of this research showed that without any broad participation and engagement of all key stakeholders, it is very difficult to achieve knowledge-based urban development of Isfahan.

Thus, the framework, developed for analysis of key stakeholders in the knowledge-based development of Isfahan, provides a good understanding about the types of power and how to apply it based on the types of interests that each key stakeholder has. Through building capacity and networking, it is possible to make policies on how to promote participation and interaction between them in the process of achieving knowledge-based urban development in Isfahan.

**Keywords:** Knowledge-based urban development, stakeholder analysis, power-interest matrix model, Isfahan.

# Expansion of NATO Territory in the Baltic Region, the Black Sea, and Eastern Europe, and its Consequences for Islamic Republic of Iran

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Received: 2019/04/16 Accepted: 2020/07/30

#### **Extended Abstract**

### Introduction

Following the foundation of the North Atlantic Treaty Organization (NATO) in 1949, while trying to keep the Russians in a anticipatory limbo, the Americans deeply involved, and the Germans neutral, NATO has so far shifted its security priorities twice. The first shift took place in 1999 when Warsaw Pact's priority shifted to identifying new threats, cooperation opportunities, and associations with former enemies, and the second happened in 2010, resulting in its concurrent accompaniment by the priorities of collective defense, crisis management, and common security. This recent shift led to the establishment of the third generation of NATO, causing the organization to be present outside its traditional region more than before. By providing the most comprehensive interpretation of its existence, NATO is present in all parts of the world and engages in various military, security, political, social, cultural, environmental, scientific, and even sports activities with various political units. This trans-geographical presence of NATO, accompanied by the creation of formal organizational structures, has made the organization to be directly and indirectly present in all borders of Iran, a presence that has irreparable impacts on national security as well as the regional role of the country, not only in the short term but in the future also.

Accordingly, this article tries to examine the quality in which the boundaries of this organization are expanding in the geopolitical regions in the far north of Iran, where the authors are trying to proceed using the concept of geopolitical territoriality. The main question of the research is "How is NATO expanding its territory in the Baltic Region, the Black Sea, and Eastern Europe?" Post-Soviet Union power vacuum, enormous sources of energy, and racial and ethnic diversity in these areas, have given them double-fold importance. In response to the present question, the authors believe that "NATO is trying to preserve and extend the sovereignty of liberal values of democracy and free market as the driving force of contemporary global order by utilizing the strategies of expanding official political boundaries, expanding unofficial political boundaries, humanitarian missions, defense and security cooperation, and expansion of its organizational and administrative offices. In this way, it can further expand its territories through a long-lasting presence in the Black Sea, Russia, and the geopolitical regions

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of the Baltic Sea and Eastern Europe in the far north of Iran." It is noteworthy to mention that regarding the research background, in spite of a general shortage of geopolitical studies on NATO in domestic literature, a lack of research and studies focusing on its new approaches based on different regions and states is strongly felt.

#### Methodology

The research is fundamental, collecting its data collection via library resources and documentary research. The data analysis method is deductive reasoning and the data evaluation approach is based on critical rationality.

#### **Results and Discussion**

In a geopolitical clarification, NATO is expanding its territory. In other words, NATO is trying to expand its geographical value outside its original region to preserve and expand the sovereignty of liberal values of democracy and the free market, as a driving force behind contemporary global order. This means territoriality. Accordingly, a review of NATO's documents and performance as well as its leaders' speeches show that they have adopted some approaches to this end, which include:

- A: Expansion of official political boundaries
- B: Expansion of participatory political boundaries
- C: Defense and security cooperation
- D: Expansion of organizational and administrative offices

#### Conclusion

The planning and operation of NATO's territorialization and territoriality projects as a military-security institution that pursues the protection of liberal values of democracy and the free market clearly contradicts the slogans and objectives of the Islamic Revolution of Iran. These agendas are manifestly in conflict with the discourse of the Islamic Republic as well as the geopolitical territorialization of our country. It is evident that neighboring this organization, which is not only present on the northern borders of Iran, but also on the eastern, southern and western borders, has its consequences for Iran's national security. Given these interpretations, the expansion of NATO's sphere of influence in the geopolitical areas of Russia, the Baltic Region, the Black Sea, and Eastern Europe, though without any common border with our country, poses challenges to our country's national security in different dimensions such as:

- Political consequences
- Trade and economic consequences
- Military and security implications
- Cultural and social consequences

Finally, the authors recommend that a great deal of attention should be paid to the national security of the country and pertinent authorities have to show more attention and supervision to the consequences of the organization's geopolitical territorialization. Therefore, the following operational proposals are offered in this regard:

- Bilateral and multilateral talks with NATO official and unofficial members located on the northern borders of Iran on the subject of "the damages of NATO's expansive territorialization to the national security of Iran and the challenges lying ahead of the bilateral or multilateral relations",
- Strengthening our security and intelligence presence in the countries of the northern region of Iran, in which NATO is active, with the aim of monitoring and observing the

activities of this organization,

- Holding specialized and international conferences on the issue of the damages of NATO's
  territorialization in the northern borders of Iran and its contribution to increased crises of
  Central Asia, the Caucasus, and the Caspian region, and
- Further efforts to introduce NATO and its multiple scientific, cultural, political, economical, military, social and artistic elements in Iran's scientific and academic literature which has been seriously neglected so far.

Keywords: NATO, Territoriality, Iran, Russia, Baltic, Black Sea and Eastern Europe.