

Environment Analysis Model with System Approach in Tourism Planning (Case Study: Maku Township)

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Extended abstract

Introduction

Principles of economic development in each country need to invest in various economic sectors and activities. Without investment in infrastructure and superstructure projects, it cannot be expected to expand production, employment and economic welfare. To understand this, we can see many countries today have found a strong tendency to attract investment. Investment in tourism infrastructure and use of power potential of a region is a good way to attract tourists. Understanding the circumstances and events of Environmental and Tourism Development Planning plays an outstanding impact to raise our awareness and insights of planning process and policies of Tourism development. Therefore, these are the most important issues for successful planning of this industry. This can identify characteristics of different regions and environmental conditions and appropriate planning with their capacity. Tourism industry includes a range of sectors and different services and features. Thus, development and management of tourism should be executed in a controlled, integrated and sustainable manner and based on a rationally program. By adopting such approach, tourists can benefit from many interests in tourism destination without creation of the most serious environmental, social and cultural problems. The purpose of this study is to provide an Environmental Analysis Model With systems approach to Tourism Planning in Maku Township.

Methodology

With respect to the components studied and nature of subject, this research is carried out by a descriptive – analytical method. In terms of aim, this was an applied study and library surveys in section research literature are used for gathering information. The obtained quantitative techniques of logical relationships can provide a reasonable and accurate evaluation of the

characteristics and relationships between phenomena. DEMATEL method is based on the graph separating the two groups of cause and effect factors involved. The mentioned technique is a major 5 step method including direct relationship matrix, normalization direct relations matrix, calculation of total relationships matrix, design of cause – effect diagram and Calculation for each of the factors.

Results and Discussion

The results of the study suggest the strengths, weaknesses, opportunities, threats in tourism industry in Maku Township. In this study, we have used of dematel methods to determine the complex relationships among each of the factors of internal environment and the external environment and also to explore the relationships among them and their impacts on each other. This method also allows the evaluation of the performance of final factors in the planning tourism development in Maku and discovery of gap among them. The combination of these factors for tourism planning in Maku Township has the strengths including historical and cultural rich attractions, convenient geographic position, beautiful landscape and unique natural scene. The opportunities are use of capabilities, potentials and advantages of a free trade zone for marketing and attraction of national and even international investments. There are areas suitable for development of medical tourism, investment potential for sports tourism development provide the reputation for Maku because of its location on the border with Turkey as a gateway to Europe for Iran, Increased interest and motivation for travel on holidays and weekends year. The weaknesses are poor quality and quantity of services and tourist facilities, poor management function responsible for Cultural Heritage and Tourism Organization, lack of a coherent technical program for tourism development due to lack of tourism experts in relevant organizations, low levels of public awareness and capacity of tourism development. The threats are investment and widespread advertising with close tourist attractions at reasonable prices in neighboring countries, centralization in planning and management in national, regional and local levels, possible decline in demand for spending travel and leisure time tourist sites, negative attitudes toward safety and security of the tourism sites outside the range of urban and rural areas. Identification and prioritization of accurate and appropriate strategies to exploit the opportunities and strengths and fade out weaknesses and remove the threats can be achieved by a competent tourism development planning in Maku Township. Among analysis of environment matrix factors, weaknesses with numerical points (R= 11.7) has had the greatest impact on tourism development. Among strengths, S1 (Namely, historical and cultural rich attractions) has high numerical score (R= 6.663). Among weaknesses, W2 factor (Namely, weak management function responsible for Cultural Heritage and Tourism Organization, lack of advertising and marketing to potential and actual tourists, no investment in tourism projects employment and income, poor management, and conservation of historical and cultural attractions) has high numerical score (R= 3.485). Among opportunities, O5 factor (Namely, use of capabilities, potentials and advantages for a free trade zone for marketing and attraction of investments in national and even international levels in the field of important shopping in creation of centers of recreation and tourism collections) has high numerical score (R= 6.723). Among the threats, T4 factor (Namely, negative attitudes toward safety and security of the tourism areas outside the urban and rural range) has high numerical score (R= 3.371). These factors in the four groups have the greatest impact on tourism development planning in Maku Township.

Conclusion

According to the factors affecting tourism planning In Maku Township, some strategies are presented. These are increased productivity, potentials management improvements, tourist

attractions, convergence and integrity in activities planning. Integration of public and private sectors in creation of tourist services and facilities with High Quality and policy can reform tourism development. Design, modification and tourism capabilities optimization reform competitiveness and planning structure to achieve tourism development. Adoption of a development policy can do action as a filter for planning. Investment and improvement in quantity and quality of services use the existing strengths to reduce weaknesses and obtain appropriate available opportunities to deal with possible threats.

Keyword: environmental analysis, Maku, system approach, tourism planning.

Vulnerability Level and Degree of Drought in Rural Areas, the Farmers Perspective

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Introduction

Drought is a deficiency in precipitation over an extended period, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people. It is a normal, recurrent feature of climate that occurs in virtually all climate zones, from very wet to very dry. Drought is a temporary aberration from normal climatic conditions that can vary significantly from one region to another. It is different from aridity, as a permanent feature of climate in the regions where low precipitation is the norm, as in a desert. Human factors, such as water demand and water management, can exacerbate the impact that drought has on a region. Because of the interplay between a natural drought event and various human factors, the drought has different meanings among different people. In practice, drought is defined in a number of ways that reflect various perspectives and interests. It is difficult to be defined precisely, but operational definitions often help define the onset, severity, and the end of droughts. No single operational definition of drought works in all circumstances, and this is why policy makers, resource planners and others have more trouble recognizing and planning for drought than for other natural disasters. In fact, most drought planners now rely on mathematic indices to decide when to start implementing water conservation or measures in response to drought. In this study, the drought can be defined as Agricultural drought links various characteristics of meteorological (or hydrological) drought to agricultural impacts, focusing on precipitation shortages, soil water deficits, reduced ground water or reservoir levels needed for irrigation, and so forth. Drought is not itself a disaster for nature, the disaster occurs when we consider the demand people have for their water supply. Human beings often increase the impact of drought because of high use of water. This cannot be supported when the natural supply decreases. Droughts occur in both developing and developed countries and can result in economic and environmental impacts and personal hardships. All societies are vulnerable to this natural hazard.

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Methodology

Agricultural drought occurs when there isn't enough soil moisture to meet the needs of a particular crop at a particular time. Agricultural drought happens after meteorological drought but before hydrological drought. Agriculture is usually the first economic sector to be affected by the drought. In this study, vulnerability of drought in rural communities was investigated as a problem for agriculture. In this regard, socio-economic drought is what happens when physical water shortage starts to affect people, individually and collectively. In more abstract terms, most socioeconomic definitions of drought are associated with the supply and demand of an economic good. To achieve the goal, literature review and field survey methods have been used. Sulduz rural area in west Azarbaijan was the statistical population of the study. Therefore, ten villages were selected as samples. This selection was carried out by considering the criteria such as information of township disasters, type of agriculture and population. According to Cochran formula, 300 questionnaires were filled randomly. To interpolate drought in rural areas, the levels of vulnerability have initially been studied in the selected villages. Data were analyzed using different statistical methods such as comparison of averages and Analysis Of Variance in SPSS software. Interpolation of drought severity and vulnerability in rural areas has been done by Spline method in GIS.

Results and Discussion

There are some methods to interpolate randomly the spaced point data. Some of these methods are global while others are local. Global methods utilize all the known values to evaluate an unknown value, while in local methods only a specified number of nearest neighbors are used to evaluate an unknown value. The Spline tool uses an interpolation method to estimate values using a mathematical function that minimizes overall surface curvature. The Spline with Barriers tool uses a method similar to the technique used in the Spline tool, with the major difference that this tool honors discontinuities encoded in both the input barriers and the input point data. This study investigated drought intensity and vulnerability in Sulduz rural district by drought evaluation of the farmer's point of view. Finally, villages of the study area were classified based on the data obtained from the field survey. The results of the present study showed that villages have difference in the vulnerability levels. Therefore, drought impacts will reduce vulnerability in rural through awareness of drought vulnerability levels. In Sulduz rural district, villages were classified in the five ranges from very low to very high. In higher risk villages the Quick and Helbi were recognized as the most vulnerable villages.

Conclusion

Drought is different from tornadoes, hurricanes, and floods. It is more difficult to be detected and it can last much longer than other weather events. We don't have watches or warnings for drought like we do for other natural hazards. But just because drought is different from other natural disasters doesn't mean we cannot plan for it and take steps to help protect ourselves from the effects of that. The social and economic costs of drought require decision makers to improve planning, mitigation, and adaptation strategies to deal with this hazard. The spatial interpolation methods were developed either for specific disciplines or even for specific variables based on the data properties modeled. Each method has its specific assumptions and features. These features are including global versus local, exact versus inexact, deterministic versus stochastic, and gradual versus abrupt. As Geographic Information Systems (GIS) and modeling techniques are becoming powerful tools in natural resource management and biological conservation, spatial continuous data of environmental variables are increasingly required.

Keywords: drought, interpolation, rural farmers, Sulduz Rural Area, vulnerability.

**Analysis of Seismic Vulnerability Factors in Urban Old Texture with the
Approach of Earthquake Crisis Management
(Case Study: Sirius Neighborhood)**

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Extended abstract

Introduction

During the twentieth century, more than 1100 devastating earthquakes occurred in different parts of the world and left more than 1.5 million people dead that 90% was mainly caused by the collapse of the not secure buildings. This research is an analysis - heuristic investigation in methodology and according to nature and inability to control behavior of the variables effective in the problem, this is non-experimental study. An obvious example is Japan that experiences annually several events more than seven in Richter scale. In these events, effects of earthquakes on structures and vulnerable people were very partial and limited. According to the urban infrastructure, these events cannot cause the crisis and disruption in urban systems. This study intends to identify and develop relationships with urban planning and disaster management of earthquake in order to reduce seismic vulnerability of old texture in Sirius Neighborhood of Tehran Municipality, District 12. Through Seismic Vulnerability Analysis of urban old- texture, this situation emphasize on the role of urban planning indicators for the structural parameters of the programs to deal with the earthquakes.

Methodology

This research is an analysis - heuristic investigation in the nature of research methodology. According to nature and inability to control behavior of the effective variables, this study has a non-experimental method. Data collection method has been document and literature review in the first case and review of literature on the subject of earthquake damage in urban areas, especially the old-textures.

Results and Discussion

With the importance of the seismic vulnerability assessment of the cities in geography and urban planning issues, this study tried to use AHP method. The appropriate predictions of the seismic vulnerability of cities using spatial data, a description of behavioral and structural components used to determine the effect of the vulnerability. Using analytical capabilities of GIS representation and earthquake scenarios in different intensities, we consider micro-zonation damage of buildings and human casualties in the neighborhood of cirrus. In this paper, a hierarchical model is used to evaluate the relative importance of the evaluation factors to determine vulnerability. Then, the relationships and various models of vulnerability and Geographic Information Systems (GIS) are used to assess the seismic vulnerability for Cirrus neighborhood.

To evaluate the vulnerability for this study, the weights of criteria using AHP were calculated for each of the weights using GIS layers of the application. It has prepared the vulnerability map of the overall neighborhood Cyrus.

Since the evaluation criteria measured with different scales are presented, they can be converted into a common scale, in need for standardization. In addition, several methods such as fuzzy theory "scale linear transfer function", "function (value)", and "self-insuring possibilities" can be used to standardize the results of AHP modeling. According to the wide range of fuzzy logic membership functions presented in comparison with other standard methods, this model can be a very strong argument for using a method similar to human descriptions and tentative decisions in use of data for approximation. By using analytical capabilities of GIS representation and earthquake scenarios in different intensities, we consider the micro-zonation damage of buildings and human casualties in the neighborhood of cirrus. In this paper, a hierarchical model is used to evaluate the relative importance of the evaluation factors to determine vulnerability. Fuzzy sets are applied in a variety of functions such as linear threshold function, J-shaped and S-shaped. In this study, according to the nature and criteria, we used layers of linear threshold function.

Conclusion

In this study, each of the criteria and sub criteria are examined separately and their individual relationship for the process was clearly explained. Increase in the value of the variables such as population density, age of building, and number of floors is observed. In contrast, increase in the amount of variables such as distance to the fault surface components, based on the width of the access road, consistent user of the neighborhood, and quality of buildings reduce the vulnerability and vice versa. Each of the above mentioned variables have contributed to the vulnerability, but each has a level of importance compared with other factors. They are individually significant and calculate coefficients using the AHP method and Expert Choice. Review and decision making based on one factor is not always consistent and the importance of each of them is to make better decisions. Therefore, the analysis factors in an acceptable level show vulnerability against earthquake hazards due to all the factors. Finally, we can say that the scope and coverage of the population with high and very high vulnerability (in the central part and the core tissue) was severe. This indicates the high susceptibility of all factors of earthquake.

Keywords: crisis management, old- textures, physical and urban planning indicators, seismic vulnerability indicators, Sirus Neighborhood.

Geopolitical Analysis on Strategic Products of Food in Iran, (Case Study: Wheat)

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Extended Abstract

Introduction

Agriculture and food security have always been one of the main human concerns. Food policy must be made for humanity to eradicate extreme poverty and hunger. However, these goals have recently been challenged by emerging forces including climate change, water scarcity, the energy crisis as well as the credit crisis. Indeed, as land and water become scarce, the earth temperature rises, and as world food security is deteriorated, geopolitics of food is emerging.

Current global food production comes from 1.5 billion hectares of cultivated land, representing 12% of the total land area. About 1.1 billion hectares are rained with no irrigation systems. Thus, rainfed agriculture is practiced on about 80% of the world physical agricultural areas and generates about 60% of the world staple food. Irrigated agriculture covers only 279 million ha or 19% of cropland. It becomes 400 million ha when multiple crops/cropping intensity is considered, but contributes 40% of agricultural output. It also accounts for about 70% of water withdrawals from global river systems. In the last 50 years, cropland has been reduced by 13% and pasture by 4%. According to the Food and Agriculture Organization (FAO), world agricultural production growth is expected to fall by 1.5% per year to 2030 and then a further reduction by 0.9% to 2050, compared with 2.3% growth per year since 1961. In fact, the growth by 2009 has fallen relative to the growth in 2000. A deceleration in agricultural growth will affect world food security. Future food supply will be determined by prudent management of the global agricultural resources and smart investments in technologies along with reforms in institutions and policies to achieve sizeable increase in food production. Food demand management measures are unlikely to be a major pathway, as human diets and food traditions might be extremely difficult to influence, especially as income grows. However, the development of a strong ethical sense among many people cannot be ruled out, and could lead to radical impact on food demand. Interventions aimed at reducing food wastage from farm to fork can

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also help recover safe and nutritious food that would otherwise be wasted. Agriculture and food security have always been one of the main human concerns, even though food policy should serve humanity by advancing the human goals of eradicating extreme poverty and hunger. It is a fact that wheat is one of the most important strategic products in Iran. Therefore, this study investigates the most influential countries with wheat production around the world as an exporter or importer. Furthermore, the production and consumption of this item in Iran until 2021 and the rank of Iran in the trade of wheat will be studied. In addition, we examine what kind of geopolitical strategies could be more productive for Iranian government to step forward its food security in wheat.

Methodology

The method of research in this scientific paper is definitely descriptive and analytical. Our data have been collected from reliable resources such as Food and Agriculture Organization. It should be mentioned that the data collection have been analyzed deductively and qualitatively. The software of Excel and GIS are used for surveying data and ARIMA model is used to forecast the amount of production and consumption of wheat in Iran from 2012 to 2021. The Analytic Hierarchy Process (AHP) method is used to identify the most suitable countries for importing wheat to Iran. Indeed, all of these data will be tabulated and diagramed to be generalized in scientific literature.

Results and Discussion

Based on the average data from 1992 to 2011 from Food and Agriculture Organization, Iran has had the ranks of fifteenth, thirteenth, fifteenth and forty-fifth, respectively, in production, consumption, import and export of wheat. The rank of Iran in wheat production with 1.8 (tons/hectares) is thirty-second among all countries. The results of the ARIMA model shows that Iran would be a small importer of wheat till 2021, at least. Based on the results, the most important exporters of wheat from 1992 to 2011 have been USA, Canada, France, Australia, Argentina, Russia, Germany, Kazakhstan, Ukraine, and England, respectively. Hence, according to the results of Analytic Hierarchy Process and five factors including political stability, transportation advantages, stability in production and export, economic and political relations with Iran, the best countries to import wheat to Iran are, respectively, Russia, Kazakhstan, Germany, France, Ukraine, England, Argentina, USA, Australia, and Canada.

Conclusion

Global food production has, to date, maintained its pace with population growth. However, the scale of this challenge will be exacerbated in the future as a result of increasingly unpredictable weather events and the changing pattern of disease in crops and livestock caused by anticipated climatic changes.

According to the findings and vast changes in the global food situation, instability between demand and supply in food patterns, we will be witnessing a new era of relations between food exporting and importing countries. Undoubtedly, food as one of the tools of power in the modern age is rapidly becoming one of the main geopolitical issues, and certainly geopolitics is able to provide a scientific framework for food studies and bring beneficial results. This study results show that Iran would be a small importer in wheat currently due to natural and human potential of the self-sufficiency of the country in wheat. Consequently, the Iranian government seeks to have a security accesses in sufficient quantity of wheat in the future, they ought to concentrate on geopolitical strategies to find some reliable countries in order to provide the wheat shortage required.

Keywords: food security, geopolitics of food, self-sufficiency, strategic goods, wheat.

Analysis of the Impacts of Climate Change and its Challenges and Opportunities on Regional Crisis

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Extended Abstract

Introduction

Talking about controversy and conflict over scarce resources among individuals as well as states is an issue that has long been of interest to scholars and experts of economics, politics, psychology, biology, etc. This is clearly evident especially in view of the realism school and thinkers such as Thucydides, Hobbes, Machiavelli and Followers such as Morgenthau, Waltz, and Kissinger. Anarchic international system, state-centered, effort to obtain, maintain and increase the power, rationality and calculation of cost-benefit, struggle to survive and self-reliance are the most important characteristics and components of the realist school in international relations. In this school, states as like as individuals, are looking for their own interests and thus evaluate profits and losses at every action. Then, if the benefits overtake their losses, they will go to war. Since international system is considered as competitive and anarchic, then, chaos, tension, crisis and insecurity will frequently occur around the world. This paper attempts to study the impact of the challenges and opportunities resulting from climate change on the creation and spread of regional crisis between the states around the world. It attempts to answer a basic question namely "What will be the future impact of climate change, particularly in the regional-scale crisis?" The hypothesis that has been proposed in response to the question is "challenges and opportunities rising from climate change allow initially the renewal and intensification of chronic conflicts and crisis in tropical areas around the equator, and on the other hand will create the formation of new tensions and crisis in the areas near the north and south poles."

Methodology

With regard to the purpose of this research that is "analysis of the impacts of climate change and its challenges and opportunities on regional crisis", we have used descriptive and analytical method in this paper. This is completed by tables, charts, maps, statistics and numbers. It is done in the framework of realism theory.

Results and Discussion

Findings suggest that the recent increase in greenhouse gas emissions is resulted from both rapid

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population growths and the intensification of economic and industrial activities. This has caused climate change on a global scale. Temperature rise, sea level rise and change in precipitations, as the main consequences of climate change, have faced human with challenges and some new opportunities. For example, today the shortage of freshwater and food resources, the outbreak of infectious diseases and migration are challenges involved in tropical and developing countries around the equator. These areas are southern, northern and central Africa, southern sections of north America (Mexico and Central America), northern zone of south America and red sea into the Middle East and Mesopotamia where it is connected to Central Asia, including Turkey, Iran, Kazakhstan and western sector of South Asia, East Asia, north of the Tibetan highlands, in Xinjiang and the Gobi desert. In contrast, it is anticipated that in the coming decades, melting massive icebergs and permanent glaciers and also the reduction of extreme cold in the polar regions, particularly the Arctic region will prepare new opportunities and favorable conditions (such as the extraction of valuable mineral sources, undiscovered energy reserves, animals, food, and also the provision of access to virgin lands and new communication ways) for living in these areas. The developed countries located around the North Pole, such as northern sector of North America and Nordic countries such as Denmark (Greenland), Iceland, Norway, Sweden and Finland, Canada and the United States (Alaska) will be beneficent more than other states in Central Asia such as Mongolia, Siberia, Xinjiang, Tibet and northern china and Russia and the areas previously governed by the Soviet Union. Obviously these challenges and opportunities each will result in the intensification of existing hostilities, conflicts and tensions and will cause a new series of hostilities between states, with varying degrees of severity, amplitude and depth. Thus, regional changes will be gendered and international security will face the new challenges with serious threats.

Conclusion

It seems that the type and intensity of conflicts and wars caused by climate change in different regions is not the same and especially countries located in the Arctic regions are benefited from the opportunities and benefits of global warming more than other regions. However, the higher the temperature, the greater is the threats and damage and the less the opportunities. Therefore, these threats and damage will not remain an opportunity to take advantages of opportunities. Eventually, most of the world will involve in crisis and then tensions will be universal. Some regions will be safe of its lethal effects and consequences.

In fact, the occurrence of natural disasters such as the devastating earthquake in Bam in 2003, the Indian Ocean Tsunami in 2004, American Katrina Hurricane in 2005, the Myanmar Cyclone in 2008, Pakistan floods, record heat wave in Russia, Vesuvius activity in Iceland, Congo, Guatemala, Ecuador and Philippines, all in 2010 and the recent earthquake and then tsunami in Japan in 2011 proved that even developed countries cannot be resistant against the threats of climate change. These are just a few examples of natural disasters that have occurred as a result of global warming and have transformed the concept of security in the 21st century into a new concept. Because today, unlike the past, the concept of security in the international system is not defined with boundaries, ranges and borders, and it is not only supported by military also the threat against it comes from our own not others. Therefore, fight against this enemy to eliminate this threat will require broad cooperation between states. It is especially necessary that superpower and developing states cancel many large industrial and commercial projects. Otherwise, you should look forward the crises and conflicts resulted from climate change in most regions of the world.

Keywords: climate change, global warming, international security, realism, regional crises.

**Measurement and Analysis of Effective Factors on Public Participation in
Rural Management Process, with an Emphasis on Councils
(Case Study: Asalem District)**

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Introduction

Today, creation of local institutions represents the levels of participation. Local institutions and community organizations are a mechanism to attract the public participation and collaboration and also a context to incorporate the people collaboration in the management process of their settlement environment. Participation in rural development management process is not done in a vacuum and must be representative of the decision-making bodies. The institutionalization of participation is possible only through institutions. These institutions are considered as a mechanism to integrate public participation in local communities and participation of local people in social life by the organization is an identity (Abdullahi et al., 2010: 29). Rural management is a multilateral process, which consists of three pillars, people, government and public institutions. In the process of public participation and through rural organizations, the rural development plans has been formulated and implemented and the monitoring and evaluations have also been undertaken (Rezvani, 2005: 211). In other words, rural management indeed is the process of organizing and conducting the rural society through shaping organization's and institutions involved in the management of rural areas. These organizations and institutions are tools to provide the goals of rural society and play an important role in achievement of development goals (Roknodin Eftekhari et al., 2008: 8). To explain the importance of participation in the rural management and its emergence by the social institutions, it should be noted that the rural residents integrated in participatory institutions and encouragement of their participation is explained by the influence of structural, institutional, social and economic processes. Furthermore, the micro-level variables such as personal characteristics and mental traits are also effective in public participation (Saidi, 2004: 171). The people are explained in the forms of rural organization. In general, the participation is resulted

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from a social interaction. Conditions and social space is unique to the social system and also unique to the individual. In other words, for a complete and correct understanding of social action, one must first identify the economic- social and cultural external factors that affect the individual action. Second, the factors unique and important to the individual are examined (external factors and internal factors) (Moghadasi, 2010: 4). One of the internal factors that play an important role in facilitating and limiting people's participation in local institutions is individual characteristics. External factors to attract the public participation in local institutions in rural areas are structural. Empirical evidence from the study area indicated a low level of public participation in the field of rural management institutions and people's participation in management institutions. Generally, the purpose of this article is to answer these fundamental questions: what is people participation in rural management institutions (village council)? What indicators are related to the participation? Which dimension has the greatest impact on people participation?

Methodology

This study is a type of applied research with descriptive - analytical methods for data analysis. The data in this study were collected by questionnaire and survey. The research population is 15 villages in Asalem District. Based on measurements of Cochran sampling method, 209 individual residents were selected as the sample. In this article, data analysis and hypothesis testing were by inferential statistics such as frequency distribution, correlation coefficient and regression t- test using SPSS software.

Results and Discussion

The results show a correlation between gender and participation as a meaningful relationship. Generally, participation is resulted from individual social action. Such a feature makes it necessary to study and survey social space (participation). The results of correlation show that among the individual indicators there is just correlation between the gender and participation. According to the independent Samples Test, average participation in women is 2.926 and in the men 3.493.

Conclusion

We can express that there are significant differences between average of participation in women and men. This point can be because of this reason that in rural communities women are less involved rural affairs than are men. There is no relationship between the place indicators and participation. Unlike previous studies that there is a relation between the economic conditions with participation, this is not true in Asalen and there has not been any relationship between economic indicators and the participation. In order to measure the participation rate, we have used one-sample T- test. Thus, we indicated that average of participation is equal to 3.33 and average test value) is equal to 3. Therefore, we can say that participation in community sample is located in the average level. Average participation in each of the studied villages indicate that Klasara and Chakharamahale villages have the highest level of participation with 3.84 and 3.69, respectively, and Ershadmahale and Gharibmahale with 2.71 and 2.96 have the lowest level of participation. Between individual, place and economic indicators there is correlation only between the gender and participation. The results of regression show that the greatest impact on configuration of the social participation between the components has the social trust with Beta rate (0.346). On the other hand, the social trust can affect 34.6% of the variation of the participation.

Keywords: Asalem, cohesion, Islamic council, participation, rural management.

Suitability Assessment of Success Factors of Regional Development Competitiveness in Iran

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Extended Abstract

Introduction

Globalization and advances in information and communication technologies and also emerging knowledge based economies can fundamentally alter the policy approaches of the countries relying on "comparative advantage" to the "competitive advantage". This trend has raised the concept of "Territorial Competitiveness". Competitiveness is a concept that was previously meaningful only at the level of activities and firms, in the mid-1990s. It coincides with the increasing importance of place, caused by the movement of human resources and capital, enjoyed spatial manifest and came into the discourse of regional science and spatial development planning.

Hence, the aim of this research is to address two questions in the context of regional development competitiveness: First, the nature of competitiveness in the region and the other one, the reason of being more competitive in some regions relative to others. Responding these two questions would reveal how to achieve a competitive position in the region relative to the others, and also to develop the "spatial development competitiveness frameworks".

Current approaches are imperfect to answer the questions, to address the issue from the perspective or discipline, to assume the same importance quotient for all of the known drivers in achieving regional competitiveness, and to ignore or regard the role of mediator variables as the least importance in formulation of the causal relationship. These are all the factors that make the available approaches imperfect. On the other hand, the impossibility to generalize available regional development competitiveness models, which is being used in developed countries, has put recognition of the specific and most suitable drivers for yielding regional competitiveness in Iran on agenda of this research. This is as the main step to formulate theoretical model of regional development competitiveness in territory.

Methodology

Seeking a comprehensive spatial development framework to make the regions more competitive

in Iran, with least shortcomings in the available approaches mentioned above and the best fit to the Iran context, would be met by a procedure that is scheduled in some steps in this research.. According to the purpose of the study, the most suitable definition would be selected and accordingly appropriate index would be defined. In next step, we try to extract all of the drivers mentioned in different disciplines literature. These drivers or success determinants for regional development could be traced in seven main theoretical visions: new economic geography theories, strategy point of view, evolutionary theories or Neo-Schumpeterian point of view, new growth theory, endogenous growth theories, creative capital theory, consumer city theoretical view and last one cognitive-cultural industries theory. In this step, after definition, these success determinants would be indexed to enter into the casual relationship model as independent latent variables. Then, the importance quotient of the drivers to yield RC would be measured by means of Path Analysis method. The strength of this model is its ability to eliminate linearity between drivers and to consider the role of mediator variables. Accordingly Iran casual model of regional competitiveness would be formulated.

Accessing formal required information and statistics limited the scope of this research to the province level of Iran. Besides, addressing the issue from the perspective of spatial development planning and the study scope and responsibilities of regional science disciplines kept away this research from logging into the macroeconomics issues. Those drivers or success determinants would be analyzed and are within the scope of the place related issues.

Results and Discussion

The first step in casual analysis and design of structural model is dedicated to indexing of seven latent variables recognized in previous steps. After indexing, correlation quotient of each driver would be defined by means of correlation analysis. The results show that cognitive cultural activities and cluster development are two drivers have direct and most important impact on regional competitiveness in Iran. These correlations are significant at level of 0.05. After defining the direct and indirect impacts of drivers on each other and on the competitiveness as dependent variable and eliminating the linearity, by means of measuring the intersectional correlations, the path model would be designed as structural model.

As the model shows, specialization based on relative advantages such as oil in Iran would not be a good driver to yield competitiveness unlike its advantages in increasing wealth. It would not be leaded to innovation and does not have flexibility in meeting changing needs in global market. Even, American creativity capital theories, is not applicable in Iran C.C activities and clustering are the most suitable drivers for Iran context. These activities must be placed in top of the RC agenda since they are able to occupy niche markets.

Conclusion

The proposed theoretical framework to yield regional competitiveness in Iran, in this research, shows that most of the available models in the world are not directly applicable in the context of Iran. Each context needs innovative solutions in proposing the best fitted model. The proposed model in this research needs to be tested by means of structural equation modeling methods in future researches. This method would approve this theoretical model by empirical data. Therefore, more researches are needed for formulating the best framework for Iran regional development. Up this way, we would be able to respond correctly to the emerging needs of regional policy takers and policy maker to find best solutions for making their regions competitive.

Keywords: cluster development, cognitive-cultural activities, consumption region, creativity capital, regional competitiveness.

Analysis of the Geomorphologic Features Effective on Establishment and Formation of Settlements in North West Guilan

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Extended Abstract

Introduction

The establishment and emergence of a city, more than anything else, depends principally on the natural environment and geographical location because the natural effects and phenomena have strong impacts on localization, distribution, influence, physical and morphological development of urban areas. Some of the natural phenomena are plateaus, mountains, craters, valleys, plains and beaches, alluvial fans, slopes, rivers, seas, lakes, and etc. (Zomorrodian, 1995: 8). Therefore, one of the most important studies in basic planning of settlements is to identify geomorphological phenomena and to display them on a map of the same title (geomorphology). In fact, geomorphic and topographic features of a geographic place are not only effective on the dispersion or concentration of human activities, but eventually, it is also one of the factors influencing the shape and physical appearance of spatial structures (Ramesht, 2005: 102).

The purpose of the geomorphologic maps is to record information about the forms of surface materials (soils and rocks), surface processes, and in some cases, the age of land on these maps. The most successful approach to prepare such maps is the combination of field studies with the aerial photographs (Hosseinzadeh, 2007: 37). The first geomorphologic map of Iran, in a scale of 1:2500000, is among a set of maps of the near East in the University of Tübingen in Germany in 1990. This was produced and released by Servati, in collaboration with Bausch and Grounret; of course, some maps have been prepared by some colleagues in University of Tehran, with the scale of 1:250000 and 1:50000 (Jamshid Jedari Eivazi, Farajollah Mahmoudi). The point which must be mentioned in this section is that this is the first large-scale geomorphologic map (1:25000) prepared in the vast eastern part of Guilan province (Sarvar, 2002: 1-79). This study is part of a research project conducted by the author in the West of Guilan (Shahmari, 2002: 1-45).

Methodology

This study is a descriptive-analytical study in the purpose and can be functional. Overall, the research process is as follows: the preparation, experience and knowledge about the area, collection of large-scale topographic maps (1:25000) as the base maps, field visits and observation of objects and phenomena on the earth, production of primary map of landforms, geology and slope maps, data analysis, aerial and satellite image analysis, and, finally, analysis

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of the results and production of the final geomorphologic map. Topographic map of 1:25000 and 1:50000, Guilan Faults' Map 1:250000, Geological map of Rasht-Qazvin 1:100000, Geological map of Ardebil province 1:100000, satellite images of the west Guilan 1:100000 and Aerial photos of the West Guilan 1:20000 from the organization of Geological Survey of Iran (published in 1994).

Results and Discussion

The study area is in the West of Guilan province and starts from the zero point of the border between Iran and Azerbaijan (the town of Astara) and includes the southern parts of Astara city, Talesh, Rezvanshahr, and Masal. It is located between $37^{\circ} 15' 00''$ to $38^{\circ} 27' 00''$ north latitude of the equator and $48^{\circ} 35' 00''$ to $49^{\circ} 14' 00''$ east longitude (topographic map 1:25000). This area has 3839.6 square kilometers. This includes about 26.1% of the total area of Guilan Province. The minimum height of the area is 28 meters in Astara coast, and a maximum altitude is about 3197 meters in Baghrouda Castle. The area under study is composed of four distinct morphology sections including:

Mountainous Areas: some of the restrictive geomorphologic factors in development of settlements in the study area are including average altitude of 1500 meters above sea level, steep slopes, deep valleys and different streams on the slopes, existence of fault cliffs across the highlands of Talesh. Geomorphologic map of the mountainous area shows that the distribution of settlements of Aq Masjid (White Mosque), Baskem Chal, Chamlar, Haji Amir, Vonabin, Heiran, Degarmankshi, Damiroughlikesh, Giladeh, Mashand, Dash Dibi, Baharestan, and Latoun is influenced by the geomorphology (shape of the land). The properties which are clearly visible in most areas are lack of flat land for the development and expansion of settlements.

Foothill Areas: the foothill areas have lower elevation than the surrounding mountainous areas, but, compared with the plain areas, they have higher elevation. With a relatively gentle slope, the landforms extend a distance from mountains and connect to the plain. The main geomorphic elements of foothills can be alluvial fan, concave and convex slopes, valleys and streams, cliffs, and the water path. Physical expansion of settlements usually encounters an obstacle while developing from one side. In top of the plains, the existence of mountain, high steep rocks and boulder debris, and sediments are the major obstacles for spatial development.

Plain Regions: the plains have higher rank than other units regarding the expansion and the number of urban and rural settlements. Spatial distribution of these kinds of settlements is more regular compared with the mountainous areas, but less regular compared with the foothill ones. The most important cities in the study area, such as Astara, Lavandavil, Choubar, and Haviq are formed in plain units. Among the most important effects of geomorphology on plains of the study area we can mention Kanroud, Lavandavil, Cholvand, Choubar, and Haviq. As most of these rivers pass through the city, they have left some traces in cities, some of which are river signs around Choubar, Haviq, and Keshli.

Coastal Areas: the shores of the Caspian Sea are among the lowland shores and beaches (sand and gravel). The recession and advancement of sea water and high water levels in aquifers are bottlenecks and geomorphologic obstacles of the area and they are changed into environmental problems in releasing urban and industrial wastewater in the city of Astara. It is recommended to prevent the construction of residential houses and structures contributing to this waste.

Conclusion

The diversity of natural features and geographical positions has caused the heterogeneity and

inconsistency in the creation, distribution, and density of urban and rural settlements in the study area. Thus, at the first glance, it is likely that there are more settlements in the East (toward the sea) region compared with those in the West (toward the mountains). Study on the topographic maps of 1:25000 and analysis of the statistical data of the villages at different levels (Organization of Management and Planning, 2005, 37) suggests that, according to the increase in the height from the east to the west, the number of urban and rural settlements will be increased in a way that, from among the total villages of 692 in the study area, 179 villages are on the shore (height of below zero meters).

Keywords: geomorphology map, physical development, settlements, town and village, west Guilan.

Modeling the Decisions of Segzi Plain Farmers Based on Cultivation Type Using the Multi-Variant Logistic Regression Model

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Extended Abstract

Introduction

Complex interactions between human decision-makers and their biophysical environment can be observed in land-use systems. These complexities are due to the differences between biophysical and socio-economic variables. To Model human decision-making, we need to know the interactions between landscape, community, and ecosystems. In reality, humans make decisions using a variety of strategies. We need to simplify the complex interaction between all individual agents and their environment by formulating an agent typology. In this paper, given the complexity of the decision-making in agent based models, the agricultural land use changes are simulated by the multi-variant logistic regression model to determine the socio-economic and environmental factors. The proportional random rules are used to implement the bounded rationality law for unique individual decision making. The particular environmental conditions of the region and the severity of the risk of desertification, the economic, social, and physical factors and the chemical parameters of soil were investigated with other environmental factors in the decision-making processes.

Methodology

Diverse data (including GIS and household data) were used to initialize the coupled human-landscape system and farmer household decision making simulations. GIS data is consisted of landscape agents (grid cell or patch) including Land use/cover (based on Landsat 8), soil Physico-chemical properties (EC, SAR, pH), texture, and moisture), institutional variables (i.e.

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ownership, village territory), and topography. Household data are socioeconomic attributes including labour force, educational status, income structure, and land properties. They were derived from an intensive household survey conducted in Segzi plain in Isfahan province (central Iran) during the spring 2013. The agent-based decision-making method has been presented by Le (2005). To determine decision-making approach, a mechanism of livelihood group dynamics was considered as follows. At first, Principal Component Analysis (PCA) was used to identify key factors differentiating household characteristics. These factors were then employed to classify the population into certain household groups using K-Means Cluster Analyses. The identified agent groups were interpreted and the types specified. Regression logistic multinomial model (M-logit) was employed for land-use choices modeling in each typological household agent group. The dependent variable of the model is land-use choice by farming households (P_{use}). The independent variables of the M-logit model include two groups of spatial variable and socioeconomic characteristics of farming households. Environmental features of lands were defined including P_{wet} (soil moisture), P_{slope} (derived from Digital Elevation Model), P_{elev} (elevation), P_{EC} (Electrical conductivity as salt factor), $P_{groundwater}$ (measuring the reduction of ground water), P_{PH} (PH), P_{SAR} (Sodium Absorption Ratio). Socioeconomic characteristics of farming households influencing farmers' decisions are including H_{age} (the age of the household head), H_{edu} (education of farmers), $H_{income/pers}$ (annual gross income per capita), $H_{holding/pers}$ (land holding per capita), $H_{cultivation/pers}$ (land cultivating per capita), H_{labor} (number of workers of the household), and H_{depend} (family members of the workers).

Results and Discussion

We reduced the dimensionality of 14 potential criteria by using PCA. The six principle components were extracted with total eigenvalues greater than 1.0, explaining 77.4 % of the total variance of original independent variables. The PC1 was strongly correlated to land variables: $H_{holding}= 0.911$, $H_{cultivation}= 0.925$. The principle components 2 (PC2), 3 (PC3), 4 (PC4), and 5 (PC5) were most weighted by percentage income from other off-farm activity factors ($H_{inothor}= 0.843$), household size ($H_{size}= 0.833$), percentage income from grain ($H_{inGrain}=0.773$), and percentage income from wheat ($H_{inWheat}= 0.898$), respectively.

The K-means run extracted three groups. The group I consists of households which are rich regarding both land resources and income. The group II includes households with average livelihood standard and the group III comprises the poorest households with the lowest amount of land and income. After the typological livelihood group determined, the variables affecting the decision-making were identified using the M-logit model. The effect coefficients were estimated with respect to the fallow land, i.e., the base case. The chi-square test shows that the empirical M-logit model is highly significant ($P<0.01$) to explain land-use choice by farmers of the group.

The M-Logit analysis of land use choices for household type I indicate that P_{slope} (-) and $H_{holding/pers}$ (-) inversely are effective variables for every land use option and have statistical significance at the 0.05, 0.1 level, respectively. A similar M-logit regression was also applied for the group II (figure.1). With regard to the choice of grain and wheat, effective factors were $H_{age}(+)$, $H_{labor}(-)$, $H_{depend}(+)$, $H_{cultivate_per}(+)$, $P_{SAR}(-)$, $P_{PH}(+)$ and $H_{edu=0}(-)$. The variables that significantly influence selection of other cultivations are $H_{labor}(-)$, $H_{depend}(+)$, $H_{cultivation_per}(+)$, $P_{EC}(-)$, $P_{Slope}(-)$ and $P_{groundwater}(-)$ For household type III, the results demonstrated that $P_{EC}(-)$, $P_{Slope}(+)$, $P_{wet}(+)$ were effective on each land use choice. In final, these coefficients are used to obtain the probability of selection for each land use according to the location of the plot in the process of implementing the model as follows:

$$P_i = \frac{\exp(\sum_K X_{ik} \beta_{ik} + \beta_{i0})}{\sum_j \exp(\sum_K X_{jk} \beta_{jk} + \beta_{j0})}$$

where β_{ik} is preference coefficients, X_{ik} dependent variables, and I is number of land use.

Conclusion

In this research, the preference coefficients for household decision-making are proposed by M-Logit model. These coefficients were applied to the process of implementing agent-based model at later stages. Multi-variant logistic regression model is useful to reduce challenges in modeling farmers decision and to simplify real world and it also indicates the effective factors and its rate that predict farmer decision using empirical data. All this suggests that the presented agent typology has been able to capture the diversity of land-use decisions and strategies in rural landscapes. Regarding the sensitive areas to desertification, as expected, soil chemical factors have a key role to determine type of culture. In general, recognition of the effects of soil physical and chemical factors in the decision, terms of regional strategy in Isfahan province, agricultural sustainability policy in this area and the attempts to avoid deserted villages can be applied for the planning and management of policies and programs in the future.

Keywords: agent based model, decision making, land use/cover, multi-variant logistic regression model.

Analysis of Spatial Pattern and Domain of Smuggling in the Border Areas of the Country (Case Study: General Food Smuggling in Bushehr Province)

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Extended Abstract

Introduction

Smuggling, in violation of the law, especially without payment of legal duties, is one of the complex and challenging criminal behavior in the country. This criminal behavior causes irreparable material and spiritual damages to the country each year. Avoiding regulatory controls, the criminals behind these activities typically peddle often-dangerous goods with a complete disregard for the health and safety of the consumers. The phenomenon has grown into an unprecedented level, posing tremendous risks to society and the global economy. Much smuggling occurs when enterprising merchants attempt to supply demand for a good or service that is illegal or heavily taxed. As the smugglers are faced with significant risk of civil and criminal penalties if caught with contraband, they are able to impose a significant price premium on smuggled goods. The profits involved in smuggling goods appear to be extensive. The profits are also obtained from avoiding taxes or levies on the imported goods. The problems associated with smuggling include loss of revenue, distortion of market prices, collapse of local industries and unemployment. In Bushehr, in the southern area of Iran, due to the extensive water boundaries and geographical and strategic features, high rate of goods smuggling is one of the most important issues of the province.

Methodology

This paper aimed at analysis of the spatial pattern and the domain of general food smuggling in the Bushehr province. In order to identify and analyze the spatial patterns of crime in this area, some statistical and graphic models have been applied in Geographical Information Systems (GIS). This study is based on analytic-comparative method and the essential data and information have been collected from documentary and survey. All the good smuggling events occurred in Bushehr province in 2010 were studied in this research. The spatial patterns of crime distribution in Bushehr Province have been identified using some statistical methods, including Mean Center, Standard Deviation Ellipse, Network Analysis and Quartic Kernel Density Estimation. The mean center point can be used as a relative measure to compare spatial distributions of different crime types or the same crime type for different periods. Levels of

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dispersion can be presented using standard deviation ellipses. The size and shape of the ellipse help explain the degree of dispersion and its alignment helps explain the orientation of crime type. The most suitable method to visualize crime data as a continuous surface is quartic kernel density estimation. The quartic kernel density method creates a smooth surface of the variation in the density of point events across an area.

Results and Discussion

The Mean Center points for goods smuggling events indicate that this type of crime shows a greater tendency to occur in the central part of the study area. Levels of dispersion can be presented using Standard Deviation Ellipses. The north-west and southeast orientation of drug-related crimes helps to describe the general direction toward which these crimes have a tendency to be patterned. The most suitable method for visualizing of crime data as a continuous surface is Quartic Kernel Density Estimation. Based on this method, the major drug hot spot has been identified in Bisim District. The crime maps produced by the network analysis are one of the common methods to identify crime hotspots. In these maps, crime density has been calculated according to the area or population within each grid cell, independent of defined political and administrative boundaries. The results of this study show that the highest discoveries of food smuggling in Bushehr were in Kangan and the lowest were in Dashty. However, based on the network analysis and Quartic Kernel Density Estimation, central part of the Deilam has the highest density of food smuggling crimes. The findings of the present research show that the most important origin of food smugglings was located in Bushehr and Hormozgan provinces and the main destinations were Bushehr and Fars provinces. Temporal analysis of crime occurrence shows that food smuggling occurs more in the middle of the week, and during the day, it was more in the middle of the day.

Conclusion

The phenomenon of smuggling in Bushehr province is affected by geographical, social and economic factors and conditions. In fact, the most important factors in shaping spatial patterns of smuggling in Bushehr province are geographical location as a narrow strip along the shore in 475 kilometers and natural facilities including estuaries, tide, dark or stormy nights. In addition, some social and economic characteristics affected the high rate of smuggling such as unemployment and lack of appropriate employment opportunities, and low quality of life of residents. There are some causes of smuggling in the national level. The causes are including the profits of smuggling activities, the existence of the market and the demand for foreign goods, instability in export and import regulations, monopolies and exemptions in the exports and imports field, the difference in the market price in the domestic market with neighboring countries. In order to decrease goods smuggling these suggestions should be considered as a priority for the authorities and the people in charge. These suggestions are selection of police station in the strategic entry and exit of the cities, updating database of control centers, comprehensive and integrated databases of smuggling events, application of new technologies in the field of crime analysis. The other important issue to control crime occurrence and prevent smuggling is to consider the situational crime prevention strategies and analysis of crime events with crime hotspots. Criminal activity tends to be spatially localized in the regions called crime 'hot spots', where high criminal activity is surrounded by low criminal activity. The use of hotspots to identify the problematic areas in urban environments and to determine policing and crime prevention strategies has grown over the recent years. Crime hotspots have appealed both crime prevention practitioners and police managers.

Keywords: Bushehr, goods smuggling, spatial pattern.

Reasons for the Wane of Spatial- Quantitative Perspective in Political Geography Studies

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Extended Abstract

Introduction

Following the emergence of spatial perspective and quantitative revolution in human geography, both the “idea” and “methodology” were transformed in the discipline. In 1950s and 1960s, other branches of human geography, except for historical and cultural fields of geography focused mainly on spatial school in their researches and published many scientific works. However, political geography did not manage to adapt itself to these transformations. The result was separation of political geography from the main stream changes of geography in the 1950s and 1960s. The present study tries to find answer to the following question: why did spatial perspective entered political geography with delay, and afterward, in the 1970s, was removed from the center of political geographical studies?

Methodology

The present study is a basic research conducted through descriptive-analytical approach. The data were gathered using library and computer research, and then, were analyzed in a qualitative approach.

Results and Discussion

The following reasons can be put forward for the question why political geographers applied this perspective late in their studies:

Incongruity of basic researches with positivist method in political geography. Basic researches in the realm of politics cannot be adapted to positivist perspective. Hence, quantitative revolution led to a disturbance in political geography, as quantitative works were of limited use in political geography and, initially, had little to offer research for “spatial laws” except for the case of election.

Inappropriateness of basic theories of spatial – quantitative perspective with problems of political geography. Quantitative geography developed as a response to the current challenges, particularly economic stagnation of Western countries. One outcome of spatial-quantitative was focus on Location Theory. However, this theory was primarily applied in urban and economic geography and did not have much relevance in political geography.

Disregarding of the factors of power and politics in spatial perspective. The positivist political geography was faced with cognitivist shortcomings. This perspective was political and independent of the politics. Location theory was largely spatialization of neoclassic economy of those days. In common economy and, hence, location theory, the problem of power can easily be ignored. In other words, with focus on the neoclassic economies as a self-regulative system, the problems of conflict and unequal distribution are ignored. Thus, a real political geography could not flourish within such perspective; as political geographers had to ignore the agent in their studies and investigate the “processes” rather than “causes”.

Although political geographers joined to spatial perspective too late but they did valuable contribution, especially in election geography. Study of urban politics experienced changes in administrative areas during 1970s. After 1970s, spatial perspective went out of the centrality of studies. Regarding the decline of spatial perspective in the studies of political geographers, two reasons can be put forward.

Paradigm shift in the science of geography. Evidently, the existing ideas in political geography are always (of course, with some delay) a function of thoughts in other branches of geography. By the emergence of economic and political crises in many western countries in the 1960s, most of the geographers inclined toward radicalism-Marxism and structural perspective since 1970s. Also, since 1970s, the humanist school of geography has been established and developed. The main criticism of humanists from positivist was that in the positivist methodology and spatial thought school, sufficient attention has not been paid to explanation of humanist problems. In the 1980s and 1990s, the thought framework of geographers shifted significantly and the development of perspectives since 1970s entered into humanist geography led to the formation of trends such as critical geography, post-structuralist and post-modern geography.

Changes in international system. Clearly, the ending years of the 1960s, due to changes in the international system, political geography was gradually recovered. Some of these changes are including emergence of new actors in the international stage due to decolonization, emergence of nationalism in the third world, Cuban revolution, and the growth of evolutionary movements in other regions of the world. By the changes in the national system, political geographers were no longer obliged to hide themselves behind the shield of positivism which claimed to be positive and impartial, and remove the problems of power and politics from their writings.

Conclusion

Spatial perspective affected sub-branches of geography in varying degrees. Meanwhile, political geography was one of the branches least affected by the perspective and had the most traditional orientation in 1950s and 1960s. The main factors which, during 1950s and 1960s, prevented political geographers from adapting to the major thinking school of the spatial perspective are incongruity of basic researches with positivist methodology in political geography, inappropriateness of basic theories in spatial-quantitative perspective with the issues of political geography, and ignoring power and politics in spatial perspective. But the reason for the decline in the importance of spatial perspective in the 1970s in the studies of political geographers is the paradigm shift in the science of geography and changes in the international system. At the end,

it must be pointed out that despite all challenges and deficiencies of spatial-quantitative perspective; this perspective has had useful reflections, i.e. the expansion of behavioral geography. Agnew believes that spatial perspective paved the way for recovering political geography, as the new political geography was developed in a critical context of spatial-quantitative revolution. According to Cox, spatial perspective is one of the three main traditions of studies in geographical science. Also, Agnew believes that spatial analysis is of the three main thinking trends entered political geography since the 1960s, and that it has been placed successfully in landscape of this discipline. In fact, nowadays, we witness pluralism in political geography in terms of both subject and methodology, and spatial-quantitative perspective is one of those numerous perspectives used by political geographers, since sometimes, it is the only approach to investigation of a problem.

Keywords: quantitative method, political geography, spatial perspective, spatial science approach, systemic approach.

Stability Analysis of the Relationship between Family Farming Systems and Food Security in Ghani-Bigloo Rural Areas, Zanjan

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Extended Abstract

Introduction

To achieve the objectives of food security and sustainable agriculture, effective role in strengthening national independence requires fast and accurate transition from production stage of traditional livelihoods to the industrial production and trade stage. On the other hand, the pursuit of sustainable agriculture today as an approach to agriculture made it possible to begin commercial production and food security of rural households. Family uses, accounted for about 80% of total agriculture uses. Therefore, the relationship between their tersest is collected and food security in rural is of utmost importance. In this regard, this study also analyzes their relationship between the food security and sustainable agriculture. Generally, this study consisted of three parts: theoretical perspective, methodology and hypotheses testing.

Methodology

According to the order of study to identify the relationship between food security and family farming systems in Ghani-Bigloo district, we have used the functional approach. This study is a descriptive research that is carried out using the correlation-analysis method. This research has two documentary and survey parts. In documentary part library research is used to collect previous and theoretical research, and a small section to analyze the data. Basic data on the status of food security and sustainability of family farming system in the Ghani-Bigloo rural was measured by a questionnaire. The questionnaire is consisted of three parts: descriptive questions such as age, gender, education, food security status. Second part of questions is related to sustainability of family farming systems in sustainable agriculture and household food security operation. In the third part, it is concerning to check the status of household food security and requirements according to standard food basket of ministry of health. According to

different studies, the authors of 10 social indicators, economic indicators and 9 environmental indicators to identify the factors affecting the economic, social, environmental and food security in the lives of beneficiaries were selected in the district of Ghani-Bigloo. Since the total study population included 1324 family farmers in 8 rural areas, among them, 300 farmers were selected to complete the questionnaire using Cochran formula and table sample. The data necessary to navigate the desired 8 villages were selected in random and were carefully collected. SPSS.21 software was used for data analysis and one-sample t-test for analysis of the stability of family operation. Turkey's test and Pearson's chi-square tables were also applied to examine the relation taking advantage of the family and the general index correlation test for the relationship between sustainability and social and economic characteristics of interest.

Results and Discussion

Descriptive findings indicated individual characteristics of the users of family farming systems, within average age of 44.6 years for men and just 5.2% of women. Average family size is 4.3 persons per household operation. In terms of education, about 19.6% were illiterate, about 29.9% had primary education, about 17.5% had secondary education, about 11.5% high school education, about 12.8% diploma, and about 8.7% of the remainder had a bachelor's or higher graduated education. The findings in relation to food security status of households in the rural study area are demonstrated. Among commodity basket standard items, there was only a poor person's consumption and the highest level of poverty was among foods items such as meat, fish and vegetables. The findings demonstrated in statistical community show 20.13% with absolute poverty and 41.91% with relative poverty.

Conclusion

Analysis of hypothesis and the results demonstrated relation between food security and sustainable family farming systems in Ghani-Bigloo rural in Zanjan City. This is not a positive and significant correlation and is not acceptable condition for stable operation of this system. In addition, average family size in three dimensions of sustainability including economic, environmental and social requires assessment of desirability. In the second analysis, the results indicated statistically significant differences between the dependent variables of food security in rural households of farmers and sustainable agriculture is independent variable. The following results are based on sustainable agriculture. The rural farmers have no significant differences in household food security. Therefore, we can say that increase in the sustainability of agricultural systems exploit a rich family in Ghani-Bigloo district, food security at the household will increase proportionally.

Keywords: food security, Ghani-Bigloo district, rural development, sustainable agricultural.