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## An Analysis of Islamic-Political Economy Impact on Sustainable Urban Development (Case: City of Zanjan)

**Rasoul Darskhan\***

Department of Architecture and Art, Islamic Azad University, Tabriz Branch, Tabriz, Iran

**Seyed MohammadHosein Jafari Paybandi**

Department of Architecture and Art, Islamic Azad University, Tabriz Branch, Tabriz, Iran

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**Abstract:** In Islamic-political economy, urban sustainable development seeks to balance economic growth, ecological reconstruction, environmental protection and social progress. With descriptive-analytical method, this research investigates the impact of Islamic-political economy on the indicators of urban sustainable development. Data were collected by field studies and library method. Statistical population includes 386851 people living in the city of Zanjan. 384 of them were selected as sample by using Morgan Table sampling method. Data were analyzed by one-sample t-test, path analysis, and structural equation modeling with SPSS and LISREL software. According to the results, the indicators of sustainable development in the city of Zanjan are desirable with t-statistic of 57.846 and the components of Islamic-political economy with t-statistic of 53.70. According to the path analysis, the effect of the total component of Islamic political economy is 0.306; therefore, the impact of Islamic political economy on sustainable development of Zanjan is desirable and significant. Thus, in order to improve the sustainable development of the city of Zanjan, it is necessary to respect citizenship rights, attempt to protect the environment, prevent renting and land use change and to increase knowledge and awareness of the people and insights of the authorities.

**Keywords:** sustainable development, political economy, justice, Islamic city, Zanjan

**JEL Classification:** O18, P25, Q01, R28, P48

\* Corresponding Author: darskhan.rasoul@gmail.com

## 1- Introduction

Cities as the location of the linkage and spatial organization of natural, social, economic, and physical processes in the context of the geographic environment that shapes the various and diverse relationships of man and the environment based on the paradigmatic framework governing the political system. In the process of transforming the spatial organization of cities, the internal and external forces of the whole city and the periphery interact with each other (Ross, 2001). In traditional urban planning, it was emphasized on the natural, timely or merely morphological conditions of cities. Today in urban geography, the physical conditions dominate the cities, and instead, all urban phenomena are studied in relation to the ideology of the goals of state systems, social and economic conditions, because the built-in urban environment and the construction of the space policy of government systems and human-demographic groups and socioeconomic activities take place at specific urban locations. (Duran & Paucar, 2007). But today in the new urban geography, by analyzing the socioeconomic values of countries, it examines the spatial development of cities, and it is finally seen that social values are influenced by cultural differences, urban morphology and living conditions in large cities in different ways. (Azkia & Mokhtarpour, 2016). One of the forces and factors influencing urban structure and functioning is the economic-political process based on the approach and worldview of the city's cultural, economic, social and political environment. In this regard, based on the interaction between the city and the ruling ideology, political economy is an approach to eliminate the artificial difference

between the economic and political affairs of cities. This approach is based on the linkage and interplay between the political and economic components in shaping all political, economic, security, environmental and social phenomena (Poorahmadi, 2011). Considering that the ideology governing the cities of the country, especially Zanjan, is based on Islamic ideology. Therefore, the effect of political economic factors in the city is based on the Islamic approach. Basically, Islamic political economy is based on the purposefulness of affairs and guided by a ruler with a decree. In addition, the freedom of man in choosing the path and the fate, preserving human dignity is another of Islamic economic concepts in the development of urban justice. Maintaining human dignity is another of Islamic economic concepts in the development of urban justice. In other words, the political economy of Islam is a means to achieve higher goals. And it emphasizes the sustainability of morality and humanity. In this context, the observance of justice and the maintenance of human dignity, both of which are essential for the satisfaction of God, are key (Dadgar, 2004).

Considering that sustainable urban development addresses the balance and balance between humans and the surrounding environment, which also addresses the interests of future generations (Kellehtr & Slauraklin, 2014). It can be said that Islamic worldview also has an approach and attitude consistent with sustainable development of cities. In fact, sustainable development is a process for achieving sustainability in any activity requiring rapid and integrated resources and resources. Sustainable development along with economic growth and human development in a society or an advanced

economy, is trying to study continuous development beyond economic development and aims to move towards justice (Soubbotina, 2014). This approach is aimed at achieving a more sustainable urban future based on the minimum consumption of space (natural resources), the efficient management of urban currents, the protection of the urban population's health, the provision of equal access to resources and services, and the safeguarding of cultural and social diversity (Maoh, 2009).

Considering the above, and the appropriateness and similarities between Islamic approach and sustainable urban development, the role of Islamic political economy in economic development in sustainable urban development is important considering the Islamic and environmental requirements. Because today, the urban biological environment, especially in Zanjan, has more economic and commercial smell, which is more based on personal interests and achieving maximum profits. In this structural-functional framework, paying attention to the interests of others, especially future generations, and environmental protection, can be very complicated and difficult. Therefore, the study of the urban structure based on sustainable development and the role of the Islamic political economy based on the justice and stability of morality and the economy without rents and rituals is very necessary and important. On the other hand, the city of Zanjan, known as a religious city with religious monuments and religious rituals in an Islamic country. While facing a variety of industrial pollution, as well as severe demand for employment and immigration. This is especially important. Therefore, the purpose of this paper is to examine the role of the components of Islamic political

economy in sustainability and sustainable urban development.

In this regard, in order to explain the role and spatial relationships of research variables, we first discuss the theories and approaches related to Islamic political economy and sustainable urban development. To analyze the indicators and the way of explaining the relationships between them through a review of previous theory and studies. In the following, the impact of the indices of Islamic political economy on sustainable urban development will be analyzed through a single-sample t test and path analysis and structural equation modeling. Thus, the main goal and the main output of the research, the method and extent of the impact of urban political economy components on the indicators of sustainable urban development in Zanjan. Finally, the research question is: How much is Islamic political economy affecting the development of urban sustainability? And which side is the most effective?

## 2- Literature Review

### a) Foreign Researches

Carter (2015) explores the impact of political economy on urban development. He believed that the analysis of urban development constraints required the understanding of various experiences, especially women and girls, young people, rural immigrants, foreign migrants and workers and other sections of urban society. City planning and policy should be in relation to all residents and the constraints and facilities of the urban environment.

Wu et al., (2015) explores the opportunities for rehabilitating a sustainable environmental system based on environmental conditions they paid. They believe that urban decisions are made on the basis of

economic and political benefits. Moreover, environmental conditions are less relevant to economic programs. In this regard, the most important task is to balance economic, political and environmental laws in urban management. Thus, one of the main problems of urban planning is the regulation of human-nature relationships in justifying economic and social programs.

Boucher (2013) in a research entitled "Political Economy in Sustainable Urbanism" addresses an initial survey of key issues of sustainable political economy and urbanization in the three areas of the slum area, urban middle class and main centers of the city. The study also focuses on the scope of local planning related to global environmental conditions and the limitation of capitalist economics.

Lidoqis (2010), in a paper titled Political Economy, Capitalism, and Sustainable Development examines the organization of production and urban capitalism based on the political economy approach. He argues that the characteristics and process of capitalist development are among the main causes of the economic and ecological crisis in cities. In this context, it is important to remove or revise the capital-related rules and norms that affect ethics. They believed that, given the global climate change and the existence of various environmental issues and urban sprawl, in order to achieve sustainable urban development, economic planning should take place in the form of local urban planning.

#### **b) Iranian Researches**

In the context of domestic studies, considering that Islamic political economy and sustainable urban development are not related to each other. Consequently, there is no background in this area. Inevitably, internal studies on sustainable

urban and economic development are presented separately.

Sharif Zadegan & Malekpour Asl (2015) in a study titled "Urban Urban Management of the Islamic era in urban economic spaces and its application in today's cities of Iran", studying the historical background of urban management through trade organizations as well as the study of modern systems in cities European and American, such as business improvement areas, and ultimately structural changes and urban management in the commercial space of cities during the first and second Pahlavi times. The purpose of this study was to investigate the effects of modern urban management models on urban management in Islamic era in the form of conceptual modeling. Their results showed that there are new features for the development of the city's economic spaces based on past experiences and the period of the formation of modernism, which is based on international experience and rooted in the functional characteristics of the history of urban management in the Islamic era.

Tokhmakari (2014) in the study entitled "Sustainable Development and the Islamic City", examined Islamic city definitions and sustainable development and their desirable characteristics. The results of studies on the observance of justice in the use of resources, the elimination of poverty and the division of the class, the consideration of God in all issues of urban planning and development.

Rajabi & Kazemkhah (2014) concluded that the conservation and management of the environment and natural resources, the consideration of security in all its dimensions, the optimal use of critical resources, locating a body in accordance with human needs, paying attention to

justice in all its dimensions, encouraging participation and support, paying attention to rationalism and knowledge, emphasizing health in all aspects, maintaining moderation in all aspects of life, paying attention to human dignity, the responsibility of community members for each other and living environment are part of the shared sustainable urban development and values of the Islamic city.

Ghanizadeh (2006) explores the characteristics of Islamic cities using verses and hadiths. In his view, the most important feature of Islamic cities is the issue of security (social, economic, political and environmental) in urban design and organization. This factor has boosted economic and political common understanding in Islamic cities.

### 3- Theoretical Background

The political economy is part of economic knowledge, which deals with the relationship between politics and economics, in particular the role of power in economic decision-making (Katooziyan & Nafisi, 2016). In fact, the quality of the geographical distribution of capital, income, services, the share of the public sector and the private sector in economic and development programs, allocation of resources, inequality between the city and the countryside, and the establishment of economic laws, all linked together create production organization of a country and the political economy determines the purpose of the organization of production. In the attitude of political economy, ideologies, values and traditions of a society and its economic basis are the focus of attention, and urban issues are analyzed in relation to the dominant mode of production of society and its relations, and it emphasizes much on three factors

including the mode of production, the market economy and social welfare (Shokouyi, 2015).

That is, in this approach, the economic factor and then social ones have priority. For Henri Lefebvre, the main struggle in the capitalist city is the struggle for the liberation of everyday life of the capitalist organization and the acquisition of space management by the people and towards them (Schmid, 2008). In addition, the most important feature of space, especially urban space, is processes based on system order (Elden, 2014). Hence, he emphasizes the role of social factors as the arm of political economy in shaping space.

The praxis theory as one of the approaches of urban political economy tries to identify the factor shaping urban space as the interaction between the socioeconomic structures on one hand and the deliberate and deliberate action of humanity on the other (Falahi, 2016). In the opinion of David Harvey, urban economic policy studies the relationship between the spatial form of the city and its collective behavior within it (Giddens, 2015). In his view, this approach seeks to create a bridge between sociological insight and geographic insight, and its purpose is to tact the mode of production according to the rules formed by urban phenomena. In addition, the city's political ecology theory also believes in the urban political economic analysis that the dependence and interconnection of power relations that leads to the social production of imbalanced environments in relation to social processes, material metabolism, the shape and structure of the spatial eye consider the social dimensions of the contemporary city (Swyngedouw and Heynen, 2013).

### ***Islamic Political Economy***

Islam is a school of justice and moderation, and the Islamic Ummah is a middle-class nation; the Holy Qur'an and the innocent leaders of Islam have ruled to protect the social rights and equality of all people against the law, and the denial of discrimination and exploitation (Laleh Pour & Servur, 2010) The political economy of Islam is a tool to preserve human values (justice, dignity, honor, and proud). The most important issues on which Islam relies on is the issue of protecting the rights and property of the people and, in general, the implementation of social justice. Justice in all aspects of the state, even justice in the distribution of opportunities (Dadgar, 2004).

In this way, the formula of the theory of Islamic political economy is based on these principles. 1. The focus of culture (ethics, spirituality) and humanism, in which it emphasizes the preservation of the authenticity of the divine values of humanity and spirituality, namely, transcendental Islamic culture, and the way to achieve goals such as justice is explained in such a way that general welfare and the elimination of the simultaneous poverty 2. Efficiency and holistic because it seeks to simultaneously consider all the cultural, economic, and political needs of the worldly life and the future of mankind and provide operational and comprehensive solutions in this regard; 3. The idealistic and realistic ways of achieving the ideals and transcendental goals of the worldly and afterlife of the Muslim human being in a completely realistic manner can be realized based on different circumstances at a time. In general, the effectiveness of the theory of Islamic political economy is based on the practical and possible response to the material and spiritual

needs of man, the implementation of divine rules and the preservation of ethical and human values, increasing prosperity, progress and economic development along with justice and eliminating poverty (Poorahmadi, 2011).

### ***Analytical Foundations of Islamic Political Economy and Sustainable Development***

Spatial sustainable development has wide and complex dimensions. In this regard, economic, environmental, social and physical factors should be regarded. Thus, sustainable development is not only based on environmental policy and this will not be achieved without solving economic, social, and physical issues (Sarayi et al., 2010). The main focus of sustainable development is on concepts such as improving the quality of life, which is, interacting with the qualitative and social indicators and ensuring social welfare and social justice (Bigdeli, 2013). Thus, the main focus of sustainable urban development is to provide social welfare and social justice among citizens. In fact, the common image of Islam and sustainable development is the concept of justice. In fact, social justice seeks to reduce inequalities, and by eliminating the deep gaps, it can eliminate the harmful consequences that deprivation and poverty entail on the environment and sustainable development. Basically, in societies where injustice and inequality exist, spatial inequalities are matched by socio-economic inequalities and the balance of urban systems; consequently, political tensions and social harm and disorder will emerge in society (Goonewardena, 2012). In this regard, scholars believe that the spatial organization of the city is influenced by the economic, social, political and cultural functions of society, if these

structures lack a justice-based ideology, its impact on urban space and space will emerge (Afrough, 2015). In this regard, Ibn Khaldun considers the development of the city to be dependent on the state of the time and says that if the state collapses, the development of the city will be limited and sometimes it will be destroyed. In addition to political factors, Islamic cities have focused on religious and natural laws in physical design, the principles of designing the law of Shari'a and observing the principles of social grouping from the very beginning of Islam (Ghanizadeh, 2006). In Islamic teachings, in addition to social and economic factors, attention has also been paid to preserving the natural environment and respect for nature (Rasooli et al., 2014).

In general, the criteria for sustainable urban development are: source of income-cost; energy conservation and its effective efficiency; renewable energy technology; building resistant buildings; the proximity of workplace and housing; creating a suitable transportation system, effective use of time; organizing the organic conversion of waste to fertilizer; establishing an appropriate urban metabolism; creating a reserve from the original local source (Warrier & McAlpine, 1992). Meanwhile, many thinkers, including Elkin and McLaren, have proposed justice alongside environmental futures and partnerships as one of the four sustainable development principles of the city (Scott, 2008).

In Islamic-political economy, sustainable urban development not only includes each of economic, social, and environmental sub-systems, but it also tries to balance economic growth, ecological rehabilitation, environment protection, and social progress, it is a major focus of researches in the world, and especially Islamic cities.

Considering the characteristics of sustainable urban development as well as the characteristics of Islamic cities, the most important features and patterns of sustainable urban development based on Islamic teachings and teachings are as follows:

**1. Productivity:** In fact, it is a dynamic exchange, between the natural system and the socioeconomic systems that ensure the production of food and other goods for the people, without being harmful for the system. Productivity measures society's capacity to use or transform natural systems in food and commodity production with optimal returns.

**2. Justice:** It means the community's capacity to distribute equally opportunities and threats that arise from the use or transformation of natural systems around them, as is the case with the development process. This term also applies to the distribution of wealth among people.

**3. Flexibility:** It is the ability of the community to react to natural pressures or to impose sudden impacts. Flexibility is system capability to repair or maintain in short-term or long-term disorders.

**4. Stability:** It is the capacity of society to continue to use or change the process of natural systems without severe transformation (Rasooli et al., 2014).

#### 4- Research Method

In terms of purpose, this research is applied, and it is descriptive-analytical in terms of data collection. Two methods of library and field studies have been used to collect information. In field study, the questionnaire has been used as the most important tool for data collection.

The statistical population includes the residents of Zanjan. According to the population of 386851 in Zanjan, 384

people were selected as the statistical sample using Morgan table sampling method. Considering the fact that Zanjan city consists of three regions, based on systematic sampling, 128 individuals were selected from each region.

Research indicators derived from theoretical foundations and previous studies include two parts, components of sustainable urban development, as well as components of Islamic political economy as presented in Table 1.

**Table1. Research Indicators**

|                                      | Indicator           | Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Researchers                                                                                             |
|--------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Sustainable urban development</b> | Moral-Psychological | The attention of the authorities to the health and rights of the citizens; the importance of the authorities to preserve the nature and rights of the next generation; attention to the rights of the people and future generations in the constitution; the number of cases of non-observance of basic human rights in the city by administrative and management bodies; Legal issues with the interests of other areas and other natural systems and the future; controversial activities of management systems in the city such as environmental and economic issues, attention to people's economic and environmental anxiety in the city; attention to the future generation's concern and efforts to reduce it in the future; attention to the beauty of natural and artificial landscapes in the design of the city ; attention to the relative closeness of recreational, religious, and cultural centers (parks, mosques, museums, etc.) | Mahdavivafa et al., (2009),<br>MahmeliAbyaneh (2011),<br>Kanatschning & Gerlind (1998),<br>Scott (1998) |
|                                      | Informational       | Investing in education; investing in people's intellectual and educational issues; attention to people's life plans and planning; considering people's lifestyles in urban management and planning; planning for the spread of all mass media among citizens ; the percentage of people who enjoy the media.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Scott (1998)                                                                                            |
|                                      | Organizational      | Sustainability of inflation in the city; sustainability and improvement of city economic conditions; sustainability and political stability of city; co-operation of organizations for political stability of city; percentage of people's participation in political affairs; officials' efforts to attract political participation of people; officials' efforts for economic sustainability; organizational partnerships for economic stability of the city, city's social stability in terms of immigration; desirable growth rate; sex ratio; urban authorities' efforts for urban social stability; cooperation of organizations for urban social stability; specialization of organizations for planning in urban affairs; decentralization of responsibilities between organizations and city organizations in charge.                                                                                                                    | Mahdavivafa et al., (2009),<br>Kanatschning & Gerlind (1998),<br>Scott (1998)                           |
|                                      | Welfare             | Access to clean and healthy water; crime occurring at the city level; balanced security between different areas of the city; the efforts of authorities to collect and organize beggars; the authorities' efforts to increase the leisure time and entertainment of citizens; percentage of people who spend their days or week on their holiday; pressure on future generations due to excessive current needs; people's ability to meet their needs in emergencies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mahdavivafa et al., (2009),<br>MahmeliAbyaneh (2011),<br>Kanatschning & Gerlind (1998),<br>Scott (1998) |
|                                      | Use Resources       | Per capita use of energy resources relative to other cities of the country; the per capita of using energy resources compared to other cities of the country; the per capita use of metal resources compared to other cities of the country, average consumption of resources and pollution for production or services; the cost of energy relative to total production or services; the rate of consumption of food and essential products compared to the other cities of the country; the degree of dependence of the city on non-renewable resources (oil, gas, etc.); the share of renewable resources in urban development; the rate of                                                                                                                                                                                                                                                                                                     | Poorahmadi, (2011),<br>Kanatschning & Gerlind (1998),<br>Scott (1998)                                   |

|                           | Indicator        | Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Researchers                                                                                                |
|---------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
|                           |                  | recovery and renewal of renewable resources; the per capita of kilometers of vehicle per year compared to other cities; the average transportation distance for key resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                            |
|                           | Livelihood       | City productivity growth rate relative to other cities of the country; the ratio of external costs of economic activity to the value of economic transactions; commercialization of the city's production chain; city unemployment compared to other cities of the country; citizens' incomes relative to living expenses; taxes on income and the cost of living; people's willingness to pay taxes; people's satisfaction of economic conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Mahdaviyafa et al., (2009),<br>MahmeliAbyaneh (2011),<br>Poorahmadi, (2011),<br>Warrier & McAlpine, (1992) |
|                           | Environmental    | The pressure of citizens to the environment due to personal needs; the emissions of greenhouse gases by economic headquarters; changes in key environmental indicators such as pollution and desertification in the urban area; the percentage of healthy and intact ecosystems within the city; changes in ecosystems due to infrastructure, road and traffic load; change in the list of endangered species; rate of change in the amount of contaminated chemical substances resistant to the environment; unpolluted surface water resources in the city; the percentage of unpolluted groundwater in the city; percentage share of environmental degradation from poverty; household waste collection; collection of industrial waste; surface treatment of surface water and sewage in the city; the importance of environmental health by people; the importance of environmental health by the authorities; reducing the useful life of the city infrastructure due to environmental pollution; adaptation of the city to the climate; compatibility and conformance of the city's image with the morphology indicators of the city's headquarters; the adaptability of the city's natural environment material of the region. | MahmeliAbyaneh (2011),<br>Warrier & McAlpine (1992)<br>Scott (1998),<br>Kanatschning & Gerlind, (1998)     |
| Islamic political economy | Economic         | equitable distribution of income among different classes of the society; fair tax payment of different classes of society on its impact on the city economy; creating a healthy and competitive environment between different economic sectors; developing cooperation between organizations for balanced growth of urban economy; developing job opportunities based on the specialized field and relative advantage of the city.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Poorahmadi (2011),<br>Rahimi (2007)                                                                        |
|                           | Social           | Deciles distance status in the city; separation of social classes in the city in terms of neighborhoods and regions; rents in the city and its role in the economic and social structure of the city; the efforts of planners and officials to combat renditions in executive; the affiliation of social groups to the state; balanced physical development of the city based on population needs and detailed plans; per capita of public utilities relative to population need; per capita distribution of utilities and public services between regions based on need and social justice; people's tendency to use public utilities and services; social capital growth and the willingness of the people and government to participate in various issues of the city.                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Dadgar (2004),<br>Poorahmadi (2011),<br>Rahimi (2007)                                                      |
|                           | Legal-regulatory | The impact of legal factors on the stability of land ownership; the impact of legal factors on the prevention of playground and rentiers; the role of legal-political factors in the management of land and housing markets; complaints to legal issues of land ownership and housing compared to other cities; the tendency of people to use the facilities and legal credits; people's satisfaction from the legal process of receiving the facility; people's satisfaction from the legal process of land and housing transactions; the efforts of the authorities to engage the people in solving the claims through legal entities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Dadgar (2004),<br>Poorahmadi (2011),<br>Rahimi (2007)                                                      |

The research questionnaire was designed based on the indicators in Table 1. To measure the indexes, the Likert scale weighing method (very small: 1, low: 2, medium: 3, high: 4, very large: 5) was used. The research questionnaire includes two dimensions of sustainable development and Islamic political economy. Sustainable development has seven indicators and 75 items or questions, and Islamic political economy has three indicators and 23 items or questions. In order to determine the validity of the questionnaire, the opinion of 10 faculty members of urban planning and urban planning were used and indicators were modified according to these faculty members. To determine the reliability of the questionnaire, Cronbach's alpha coefficient was used. For this purpose, the research questionnaire was pre-tested before analyzing the findings and the alpha coefficient for urban sustainable development indicators was 0.78 percent, and the indexes of Islamic political economy equaled 0.84 percent.

T-test, path analysis, and structural equation modeling were used to analyze the data. First, using a single sample t-test, the status of indicators of sustainable development and Islamic political economy

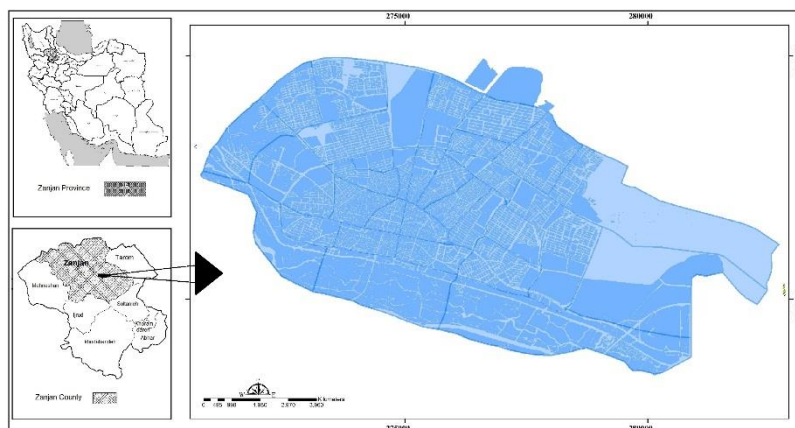
of Zanjan city and the generalizability of the results of the analysis to the whole population was studied.

Then, using the path analysis, the extent and impact manner of the components of political economy on sustainable urban development was analyzed. This method is a kind of regression analysis that is used to understand causation and display the pattern of causal relationships among a set of related variables (Hafeznia, 2016).

Finally, using structural equation model with confirmatory factor analysis, the relationship between indicators and research variables for modeling and modeling the effect of political economy on sustainable urban development was analyzed. For data analysis, Excel, SPSS, Lisrel and GIS software have been used.

### *The Studied Area*

Zanjan is located as the capital of Zanjan province in the northwest of the country between Tehran-Tabriz transit routes. The geographical location of the city is 48 degrees and 29 minutes long and 36 degrees and 40 minutes north latitude. The population of the city is 386,851 people and covers an area of 81 square kilometers (the legal limit is 4950 hectares).



**Fig1. Location of the city of Zanjan in the country**  
Reference: (Detailed Plan of Zanjan City, 2012)

## 5- Results

The most important part of the research is its inferential findings. In the inferential findings, the researcher uses the sample values of the statistics and then, by means of estimating or testing the statistical hypothesis, generalizes the statistics to the parameters of the society. In this section, the inferential statistics method of the T single-sample test is used to analyze the data. The most important weights in this section are the value of the T-statistic and the significant level (P-value). The results of the survey on the status of sustainable development indicators in Zanzan indicate that the average of sustainable development indicators is 3.46. This amount is above the average. In addition, the value of t test is 57.846 (Table 2) and it indicates that the status of the indicators is higher than the average. Given that the value of the significant level is 0.000 and the hypothesis is zero ( $H_0: \mu \leq 0.05$ ), it is rejected. It can be said that in terms of statistical population, the status of indicators of sustainable development in Zanzan is acceptable and developing, and the result of the analysis can be generalized to the entire city of Zanzan. Another point is that in the analysis of indicators separately, in all indices, the level of significance is less than  $P0.05$ , and the hypothesis zero ( $H_0: \mu \leq 0.05$ ) on the lack of development of sustainable development indicators of the city of Zanzan is rejected.

Regarding the rejection of  $H_0$  through the significance level statistic, we can compare and analyze the indices through the T-statistic. At this stage, it can be determined which index is better than

other variables. According to the results of Table 2, the "organizational" indicators with t statistic, 48.392, and "information" with t statistic, 40.646, have been developed more than other indicators, respectively.

The organizational index includes the performance of authorities and government agencies in developing sustainable development indicators and improving the city's living status. Moreover, the information index is also related to the educational situation and public awareness of urban issues. In this regard, in terms of statistical population, the function of authorities and administration, as well as knowledge and awareness of people in the context of urban living environment, is based on sustainable development, desirable and acceptable. In addition, given that the standard deviation of these indices is also low, it can be said that the statistical population gave a similar score to these indices. Moreover, the "resource use" indices with the score ( $t = 22.336$ ) and "environmental" with the score ( $t = 12.859$ ) had the lowest score. The index of resource use includes the per capita consumption of energy types, and the city's degree of dependence on renewable and non-renewable energies, and the environmental index also addresses issues such as pollution, environmental health, and urban adaptation to the natural environment. In this regard, the performance of the people and the city authorities is not acceptable and is in an unfavorable position compared to other research indicators. This is especially worse in the environmental field.

**Table2. The status of sustainable development of Zanjan city with single sample T test**

|                     | Mean | Std. Deviation | Test Value = 3 |     |                 |                 |                                           |       |
|---------------------|------|----------------|----------------|-----|-----------------|-----------------|-------------------------------------------|-------|
|                     |      |                |                |     |                 |                 | 95% Confidence Interval of the Difference |       |
|                     |      |                | t              | df  | Sig. (2-tailed) | Mean Difference | Lower                                     | Upper |
| Environmental       | 3.06 | 0.3714         | 12.859         | 383 | 0.000           | 0.245           | 0.208                                     | 0.282 |
| Informational       | 3.76 | 0.2554         | 40.646         | 383 | 0.000           | 0.533           | 0.507                                     | 0.558 |
| Organizational      | 3.89 | 0.2332         | 48.392         | 383 | 0.000           | 0.579           | 0.556                                     | 0.603 |
| Use resources       | 3.17 | 0.2834         | 22.363         | 383 | 0.000           | 0.325           | 0.297                                     | 0.354 |
| Livelihood          | 3.39 | 0.3872         | 23.188         | 383 | 0.000           | 0.461           | 0.421                                     | 0.500 |
| Welfare             | 3.24 | 0.1978         | 23.49          | 383 | 0.000           | 0.238           | 0.218                                     | 0.258 |
| Moral-psychological | 3.68 | 0.3752         | 35.067         | 383 | 0.000           | 0.675           | 0.637                                     | 0.713 |
| Total               | 3.46 | 0.1582         | 57.846         | 383 | 0.000           | 0.470           | 0.454                                     | 0.485 |

According to the findings of Table 3, the average components of the Islamic political economy were 3.54. This value is higher than average. In addition, the value of t test is 53.70, indicating that the status of the indicators is higher than the average. Considering that the significance level is 0.000 and the hypothesis is zero ( $H_0: \mu \leq 0.05$ ), it can be said that according to the statistical population, the status of components of Islamic political economy in Zanjan is acceptable and developing and the analysis result can be generalized to the entire city of Zanjan. Another point is that in analyzing the indices separately, in all indices, the level of significance is less than  $P < 0.05$  and the hypothesis is zero ( $H_0: \mu \leq 0.05$ ) indicating that undeveloped

components of Islamic political economy is rejected. In addition, an independent review of the components shows that the legal-regulatory component with the highest score (t -42.484) had the highest score. Consequently, the implementation of Islamic law in the field of rentier ownership, stability of ownership, participation, legal litigation, etc. has had a significant positive effect. As a result, the implementation of Islamic law in the development of social issues such as class distances, distribution of per capita use and services, balanced population growth and physical structure of the city, the struggle of organizations and socio-economic disadvantages than other components was not desirable.

**Table3. The status of the components of Islamic political economy in Zanjan City with a single-sample T test**

|                  | Mean | Std. Deviation | Test Value = 3 |     |                 |                 |                                           |        |
|------------------|------|----------------|----------------|-----|-----------------|-----------------|-------------------------------------------|--------|
|                  |      |                |                |     |                 |                 | 95% Confidence Interval of the Difference |        |
|                  |      |                | t              | df  | Sig. (2-tailed) | Mean Difference | Lower                                     | Upper  |
| Legal-regulatory | 3.83 | 0.23935        | 42.848         | 379 | 0.000           | 0.52605         | 0.5019                                    | 0.5502 |
| Economic         | 3.6  | 0.32127        | 36.48          | 379 | 0.000           | 0.60121         | 0.5688                                    | 0.6336 |
| social           | 3.18 | 0.36373        | 9.084          | 379 | 0.000           | 0.61739         | 0.5807                                    | 0.6541 |
| Total            | 3.54 | 0.20321        | 53.87          | 379 | 0.000           | 0.56158         | 0.5411                                    | 0.5821 |

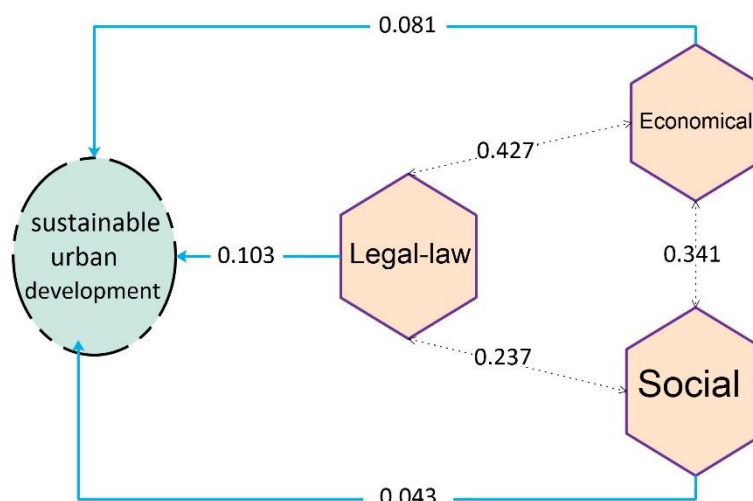
***The Impact of Islamic Political Economy Components on Sustainable Development of Zanzan City by Path Analysis***

The path analysis method is used to determine the causal relationship between the independent variables and the function. In this paper, through correlation analysis and standard statistical beta analysis, the relationship between sustainable development indicators and the components of the political economy of Zanzan is determined. In this method, the relationship between the independent variables and the function is determined with the one-way arrow, and then the coefficient of each path is calculated as the beta value ( $\beta$ ). Sustainable Development Index is an independent variable and the components of Islamic political economy (legal-regulatory, economic, and social) are dependent variable. The results of the study are presented as direct effect, indirect effect, total effect and structural equation model. The total effect as the most important path analysis parameter is the sum of direct and indirect effects. The total effect value should be higher than 0.3, so that a significant relationship can be established between the dependent and independent variables. If the total effect is between 0.3 and 0.6, then the correlation is significant and desirable, and if it is more than 0.6, the correlation is strongly

desirable. In the city of Zanzan, according to the results of Table 4, the total effect of the total component of Islamic political economy is 0.306. Given that, this value is higher than 0.3, it can be said that the impact of Islamic political economy on sustainable development of Zanzan is desirable and significant. In addition, the total effect of the components of the Islamic political economy in isolation, for legal-regulatory component is 0.530, economic 0.422, and social 0.280. Thus, the effect of the overall legal-regulatory and economic component is desirable and a significant correlation, but the overall effect of the social component is weak and less than expected. In addition, the significance level of the component is 0.000, which rejects the zero hypothesis ( $H_0$ ) and the results of the research can be generalized to the whole city of Zanzan. Moreover, in examining the direct effect of the components that are obtained by using beta statistics in multiple linear regression tests, the impact of the indicator is "legal-regulatory" is more, and then "economic and social." As a result, the impact of the indices by mediating and without intermediary follows almost a certain ranking, and the legal-regulatory indicator is prioritized than the other indicators.

**Table4. Analysis of the Influence of Islamic Political Economy Components on Sustainable Development of Zanzan City by Path Analysis Method**

| Total effect | Indirect effect | Direct impact | Total                     |
|--------------|-----------------|---------------|---------------------------|
| 0.53         | 0.427           | 0.103         | Legal-law                 |
| 0.422        | 0.341           | 0.081         | Economic                  |
| 0.28         | 0.237           | 0.43          | social                    |
| 0.306        | 0.219           | 0.87          | Islamic political economy |

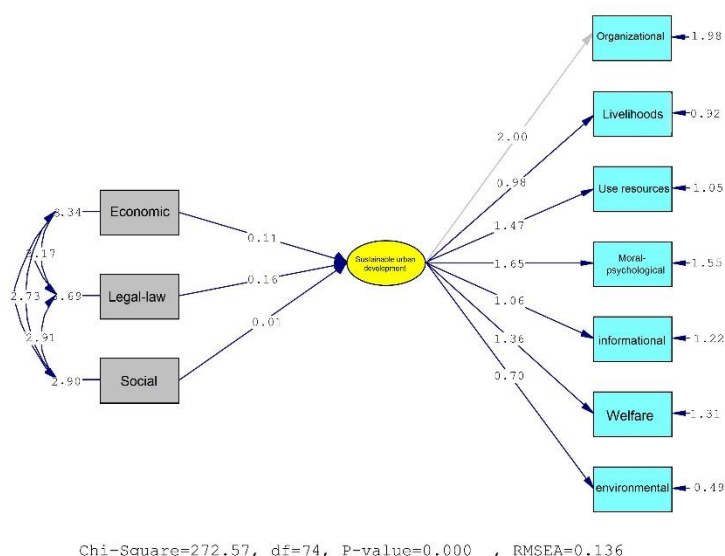


**Fig2. Components of Islamic Political Economy and Sustainable Development of Zanjan City with Path Analysis Method**

#### *Structural Equation Modeling of Effective Components on Sustainable Development of Zanjan City*

Based on the findings of theoretical literature, the indicators of sustainable development in 7 indicators and 75 and the components of Islamic political economy were classified into 3 components and 23 items. Firstly, the non-standard factor load of each component of political economy and sustainable development indicators were calculated (Fig.3). In addition, factor coefficient ( $R^2$ ) of each component was estimated relative to sustainable development. Thus, the non-standard factors of the economic-political components are legal-regulatory, 3.69, economic 3.39, social 2.9, and non-standard load factor indicators of sustainable development are for the organizational index of 1.98, ethical 1.55, 1.31 welfare, 1.31 informational, 1.10 sources of resources, 0.92 livelihoods and environmental 49.9. Thus, the concept and rank of organizational and ethical indicators as well as legal-regulatory

components are more than the others are. Furthermore, the legal-regulatory factor ( $R^2$ ) is equal to 0.16. As a result, Islamic political economy can account for 0.16% of the changes and developments of the sustainable development index based on the legal component. In the meantime, the level of organizational and ethical indexes of explanation is higher than other indicators. Additionally, a standard beta coefficient has been used to examine the impact of each of the indices. Basically, in the computational conditions of the standardized beta coefficient, all the items and components are assumed to be a causal network in the model, which is a coherent whole. In this case, the severity of the impact can be measured by the condition of the significance of the paths. The value of the standard beta coefficient of each indicator is organizational 2, ethical 1.65, use of resources 1.47, welfare 1.36, information 1.06, livelihood 0.98, and environmental 0.71 respectively (Figure 3).



**Fig3. Structural Model of Islamic Economic Components on Sustainable Development of Zanjan City**

Finally, the goodness of fitting analysis in Table 5 shows that according to the criteria of each indicator, the indicators of the conceptual model of research are well fitted; therefore, the relationships between the variables of the research are well explained. Given that the chi square is affected by the amount of correlations in the model, the more correlated these correlations, the weaker the fit. In this regard, some researchers

considered the ideal value of the Chi-square ratio to be 1 to 3 degrees. Therefore, the result of this criterion indicates that the Chi-square index is not well fitted. To reject this contradiction, it can be said that due to the low sample size (about 74 samples), the  $K_2$  index is not significant. In addition, with significant, of other important indicators such as RMSEA, GFI and CFI, it can be ignored.

**Table5. The goodness of fit of conceptual model**

| GOF indicators       |             | Index value | Criterion        | Result          |
|----------------------|-------------|-------------|------------------|-----------------|
| CMIN                 | $\chi^2$    | 272.57      | -                | Undesirable fit |
|                      | Df          | 74          | -                |                 |
|                      | p.value     | 0.000       | Larger than 0.05 |                 |
|                      | $\chi^2/df$ | 0.136       | 1 to 3           |                 |
| RMR, GFI             | RMR         | 0.112       | Less than 1      | Good fit        |
|                      | GFI         | 0.43        | Larger than 0.9  | Average fit     |
|                      | AGFI        | 0.39        | Larger than 0.9  | Average fit     |
|                      | PGFI        | 0.49        | Larger than 0.5  | Average fit     |
| RMSEA                | RMSEA       | 0.000       | Less than 0.05   | Good fit        |
| Baseline Comparisons | NFI         | 0.75        | Larger than 0.9  | Average fit     |
|                      | NNFI        | 0.75        | Larger than 0.9  | Average fit     |
|                      | CFI         | 0.93        | Larger than 0.9  | Good fit        |
|                      | RFI         | 0.76        | 1-0              | Good fit        |
|                      | IFI         | 0.81        | 1-0              | Good fit        |

## 6- Conclusion and Discussion

One of the forces and factors influencing urban structure and function is the political economic process based on the approach and worldview governing the cultural, economic, social and political space of the city. Given the ruling ideology of the country is based on the religion of Islam; as a result, the political economy of the country follows this ideology. Meanwhile, today, in a cosmopolitan, the majority of development theories and programs, especially in the area of urban development and planning, have embraced sustainable development thinking and a balance between humans and the environment for all future generations. Basically, Islamic political economy is based on the purposefulness of affairs and guided by a ruler with a decree. Considering that sustainable urban development also emphasizes the concept of justice and balance between generations, it can be said that Islamic worldview also has an approach and attitude consistent with sustainable development of cities. In fact, sustainable urban development is a process that seeks to improve economic, social, cultural, and technological conditions for justice, and the common theme of Islam and sustainable development is the concept of justice. Indeed, social justice seeks to reduce inequalities, and in societies where injustice and inequality exist, spatial inequalities are matched by socio-economic inequalities and the balance of urban systems collapses; consequently, political tensions and social disorders will arise in society. In this regard, sustainable urban development in Islamic political economy as a urban development strategy embraces not only the sustainable development of each of the economic, social, environmental

subsystems, but also strives for economic growth, ecological reconstruction, environmental protection, and social progress, and the difficulty of the challenge has made it a major focus in research worldwide, especially in Islamic cities. In addition to the findings, the results of quantitative and statistical findings in Zanjan indicate that the status of sustainable development indicators in Zanjan with an average of 3.46 is higher than average.

In addition, the t test value is 57.846. This value also indicates the good performance of the indices. Furthermore, the average components of the Islamic political economy are equal to 3.54 and the value of t test is 53.7 that are also above the average. Given that the significance level of both components is 0.000, (Tables 2 and 3) and the  $H_0$  ( $H_0: \mu \leq 0.05$ ) are rejected. According to statistical population, the status of components of Islamic political economy and sustainable development in Zanjan are acceptable and developing, and the result of the analysis can be generalized to the entire city of Zanjan.

In relation to the first question of the research, how much is the political economy of Iran affecting the sustainable development of Zanjan? It should be stated that, the results of the study of the effective factors on sustainable development of Zanjan city through structural equation model based on factor ( $R_2$ ) of each component in relation to sustainable development showed that the legal-regulatory factor ( $R_2$ ) is equal to 0.16. As a result, Islamic political economy, based on the legal component, can account for 0.16% of the changes and developments of the sustainable development index. Meanwhile, the degree of clarity of the

organizational and ethical index is more than other indicators.

According to the theoretical studies on economic-political role on sustainable urban development, most foreign studies on were based policy on the comprehensive relations of the urban population and the surrounding environment (Carter, 2015), balancing the economic, political and environmental laws in urban management in order to regulate human-nature relationships (Wu et al., 2015), local planning related to global environmental conditions and limiting the capitalist economy (Boucher, 2013), the emphasis on economic planning in the form of local urban planning (Liodakis, 2010) whereas most of domestic studies have emphasized on use of international experiences in the development of city economic spaces and sustainable development (Sharifzadegan & Malekpur Asl, 2015), observance of justice in the use of resources, elimination of poverty and the division of the class, the consideration of God in all matters of urban planning and development (Tokhmkari, 2014), attention to rationalism and knowledge acquisition, emphasis on health in all aspects, maintenance of moderation in all aspects of life, attention to human dignity, the responsibility of community members towards each other and the environment, part of the shared sustainable urban development and the values of the Islamic city (Rajabi & Kazemkhah, 2014), and the issue of city security socially, economically, politically and environmentally (Ghanizadeh, 2006). In this regard, the results of field studies also show that political economy based on Islamic ideology in Zanjan has a significant impact on the sustainable development of the city, and most of the laws and regulations of urban development

and management are developed from Islamic legal issues and regulations, and also urban managers, in the field of social, economic, political and environmental planning and policy-making are influenced by Islamic principles, particularly in legal aspect. In other words, the legal component by preventing renting, determines the limits of ownership and economic damage and it has the greatest impact on sustainable urban development, and this component can account for 16% of the changes in the indicators of sustainable development, especially in the context of the organizational index, i.e. the performance of government departments and the moral index.

Based on theoretical and analytical findings, to improve the status of indicators in Zanjan, it is recommended to consider the following:

- Obligating the administrations to handle crimes and complaints in the field of environmental protection and urban health, rendering and changing the use of the area of the city and the surrounding area, and extending the cooperation between organizations in this regard

- The efforts of officials and people to respect the law and the privacy of each other and to pay attention to the rights of citizens

- Trying to use renewable sources and fuels, replacing it with non-renewable fuels and reducing the share of urban dependence on fossil fuels and non-renewable resources

- Developing welfare and social services and efforts to reduce class distance and ecological, social and economic separation in the city

- Increasing people's knowledge and awareness about the environment, environmental protection, citizenship rights

and the duties of every citizen and authorities towards the development and future of the city

- Formulating strict laws to protect the environment around the city and determining the city's protective radius and obliging the polluting industries to maintain the environment within this specific radius

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