The Impact of Economic Factors on Iran's Karaj Sustainable Urban Development: a Path Model

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ABSTRACT
The current study has evaluated the urban sustainable development, emphasizing the economic factors in District 3, Karaj city in Iran. The study is aimed at evaluating the urban sustainable development through economic variables. Research method is survey and the questionnaire was used to collect the data. The sample consists of 395 residents from District 3 of Karaj which has been selected through probability sampling of appropriate classification to size and randomly. To perform descriptive and inferential statistics, SPSS software was used and LISREL software was used to measure the theoretical model. The results indicate that there is a linear and direct model, and also there is a significant relationship between economic factors and urban sustainable development. Employment status, housing quality, and income are the most effective factors on urban sustainable development respectively.

INTRODUCTION

The sustainable development as a concept is responsible for responding the challenges ahead of the urban area such as globalization, decentralization, and population rapid growth. The transformations influence on economic, social situations, and environment cause issues such as social inequality, poor communities or informal colony and climate change. Sustainable development concept of economical, social, environmental, and governmental problems is in an urban framework. However, there is no definition or clear concept of “sustainable development” (which it has more than 200 definitions). A consideration on this word’s definition will assist with clearing up the issues which the above concept should be the responder; however, such factors are so widespread that it is difficult to get the current concept. Saha D & Paterson R G defined four aspects for sustainable development, while they were reviewing Portney K E, Jepson E J, and Conroy M. M works: environmental protection, economic development, social equality, and governance and rule [40].

Various definition of sustainable development has been presented. The most common is Brant Land Commission definition which means “the development which meets the need of current generation without demolishing the future generations to meet ones needs.” [31,25,4].

The sustainable development is an endogenous, systematic and balanced development which put forwards the systematic insight in all disciplines. The first discipline which utilized the concept was environment—the sustainable development following poverty alleviation, keeping balance among the countries and peaceful coexistence, emphasizing peace and better utilization of resources especially renewable resources [18,22].

The sustainable development process of economic, finance, trade, energy, agriculture, industry policy and etc are designed, so that they sustain economical, social, and environmental development. The sustainable development means not to impose economical, social, or environmental damages to the next generations [30].

The sustainable urban development is aimed at keeping equal balance among economical, environmental, social, and governmental aspects in order to construct the cities and village appropriate for better and more effective lives [40]. The sustainable development means to improve the quality of life within the capacity of supportive ecosystem [42,22,21].

In the broad sense, the word means to manage and proper and effective utilization of the natural bade, financial, and human resources to achieve the desired assumption pattern which is possible through using

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technical facilities and appropriate structure and organization to meet the present and future generation needs continuously and satisfactorily.

The sustainable development is a process to achieve the attitude of prospective and continuous satisfaction through recognition the relationship between humans, humans and environment, and components of environment and rational intervention to improve the relationships, employing a combination of new technology, local knowledge, and the rights of human being [49].

As Wolfgang Frax has said: “there wouldn’t be the development without sustainability and sustainability without development since ever” [2]. The sustainable development is the comprehensive approach to improve the human’s quality life in order to achieve economic, social, and environmental prosperity of human settlements [50]. Baryon believes that the sustainable development is the focus on developing to people and do the justice to the present and next generations [6].

The sustainable development is a requisite for improvement as a process—the process which is the foundation of improving the circumstances and annihilator of social-cultural shortcomings of developed society and it should be the engine of balanced, appropriate, and coordinated economical, social, and cultural progress especially in developing countries. The sustainable development seeks to provide the strategies and mechanisms to be able to achieve significant objectives such as the integration of environmental protection and development, supplying the basic needs of human life, Achieving social justice and eliminating poverty and general deprivation, self-determination and cultural diversity, and maintaining the ecological unit [45].

The sustainable development requires the cultural systematic transformation in long-term which underlying the democracy and social capital [46]. The sustainable development is the developmental state which is seeking for balancing approach by holistic view and systematic insight [48].

The most important goal of the study is to evaluate the urban sustainable development, emphasizing the economic factors in District 3 of Karah city (Fardis)

The research questions:
1. The main question: do the economical factors affect the urban sustainable development?
   Sub-questions:
   Does the income quality affect the urban sustainable development?
   Does the quality of employment affect the urban sustainable development?
   Does satisfaction with housing affect the urban sustainable development?

The theoretical model:

The urban sustainable development

The quality of income

The quality of employment

Housing Satisfaction

The figure1. The theoretical model.

Research hypothesis:
The main hypothesis: the economic factors affect the urban sustainable development.
1-1. The quality of income affects the urban sustainable development.
1-2. The quality of employment affects the urban sustainable development.
1-3. Satisfaction with housing affects the urban sustainable development.

Method:
The research methods used in the study include:
1. Documentary and library method: to understand and recognize the various aspects of topic, the documentary and library methods should be used in order to collect the data and achieve the theoretical
approach and transparency. Therefore, the present study has used the above method to achieve the theory framework, clear up the social reality, and awareness of background and research literature.

2. The survey method: ultimately this method was used to collect the data, classification, description, and analysis.

**Population:**

The population is the results generalizations area and the research findings, thus the population includes the whole individuals under the investigation and the researcher selects the sample unit among them. Therefore the study population is the analysis unit and residents unit in District 3, Karaj city (Fardis).

**Sample:**

The samples are residents at District 3, Karaj city (Fardis). Direct observation was used in the field study. Therefore, in the present study the person is the analysis unit which includes the residents in District 3, Karaj city (Fardis).

**Sample size:**

In the present study, the size and volume of population has been evaluated based on Cochran’s formula.

\[
(\text{The sample number}) \ n=395
\]

\[
(\text{The population size}) \ N=168702
\]

\[
(\text{The attribute probability}) \ P=0.5
\]

\[
Q=0.5
\]

\[
T=1.96
\]

\[
D=0.05
\]

**Sampling method:**

Residents in District 3 in Karaj (Fardis) have been determined through categorized sampling appropriate to the size with regard to the District 3 (Fardis), the used district put in the sample using the sample random method. As such, first their name were written on a paper and then they were selected by lottery from the residential town Arshia, Najafabad, Pasdar town, Naz town, Village town, Hafeziye town, Fardis main street. The target lanes also were recognized by lottery to adopt the samples from the existing neighborhood.

**Data collection method:**

The library and survey method were utilized at the study. The review literature, the records, theoretical framework, the concepts definition, the need to use this method in the form of taking note from books, articles, reports, websites, and statistics based on documentary method, and also the questionnaire are of the resources and data gathering tools in the study. The questionnaire is from 1-5 and has been designed from very low to very high and the used scale in the study is the Likert study.

**The preliminary measurement tools:**

It was referred to the experts to ensure the authenticity or validity of the questionnaire, questions, items, and scaled used in the study. The limited population of the study also were selected and examined before finalizing the questionnaire to eliminate the possible defects in the questionnaire. The reliability test was conducted on the scales based on Cronbach’s alpha and it was taken by 40 reliability samples at the first phase. If a scale was weak in terms of reliability, we attempt to add the reliability by eliminating and modifying the items. The mentioned reliability is in the final reliability table which evaluated by 395. The investigation of measurement scales reliability indicates that the whole variables have appropriate and acceptable reliability. The reliability of income variable (Cronbach’s alpha) equals 0.72, the employment reliability equals 0.68, housing’s reliability equals 0.73, and the total reliability equals 0.71.

<table>
<thead>
<tr>
<th>variable</th>
<th>items</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>income</td>
<td>8</td>
<td>0.72</td>
</tr>
<tr>
<td>employment</td>
<td>4</td>
<td>0.68</td>
</tr>
<tr>
<td>housing</td>
<td>4</td>
<td>0.73</td>
</tr>
</tbody>
</table>

**Statistical methods to analyze the data and test the hypothesis:**

The data were analyzed through SPSS20 and LISREL software. Pearson correlation test and Friedman test was utilized to investigate the study hypothesis.
Results:
Correlations among the all study variables have been reported in table 2. The table variables include: income, employment, and housing. Pearson correlation coefficient and also the significant level of coefficients have been reported in the table. Asterisk by each coefficient is representative for the significant of the relationship. The results demonstrate there is almost a significant relationship between all variables.

Table 2: Correlation matrix of variables.

<table>
<thead>
<tr>
<th></th>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income status</td>
<td>1.00**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Employment status</td>
<td>0.68**</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Housing status</td>
<td>0.41**</td>
<td>0.41**</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Friedman test:
To prioritize (ranking) the sustainable development factors, Friedman test was utilized. Friedman test results are given in table 3. According to the findings, it can be expressed that regarding the chi square value which equals 912.30 and it is significant at error level less than 0.01, it should be said that there is a significant difference among three factors of urban sustainable development economic and respondents have three ranking at these three factors and the mean of respondents rate are different. Based on the interpretation of the test about sustainable development factors, it should be said that the highest rank means that factor have developed the most and the respondents have the most satisfaction.

The results showed that respondents ranking are in order as: the employment status on average 4.45, and the income status on average 3.95 are determination factors of urban sustainable development in Karaj (Fardis) respectively. Friedman test results for the effective economic factors in urban sustainable development

<table>
<thead>
<tr>
<th>Rank</th>
<th>Factors</th>
<th>Rating Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Income status</td>
<td>5.23</td>
</tr>
<tr>
<td>2</td>
<td>Housing status</td>
<td>4.45</td>
</tr>
<tr>
<td>3</td>
<td>Employment status</td>
<td>3.95</td>
</tr>
</tbody>
</table>

The hypothesis test:
The main hypothesis: the economic factors affect the urban sustainable development.
1-1 The quality of income affects the urban sustainable development. Based on the given results the path which links the two variables is positive and significant (t=12.90). Therefore, the quality of income affects the urban sustainable development directly and the hypothesis is accepted.
1-2 The quality of employment income affects the urban sustainable development. Based on the given results the path which links the two variables is positive and significant (t=8.88). Therefore, the quality of employment affects the urban sustainable development directly and the hypothesis is accepted.
1-3 The satisfaction with housing affects the urban sustainable development. Based on the given results the path which links the two variables is positive and significant (t=12.81). Therefore, the satisfaction with housing affects the urban sustainable development directly and the hypothesis is accepted.

Conclusion:
The research main and secondary hypothesis results suggest that there is a direct relationship between independent and dependent variables. In other words, the social factors affect the urban sustainable development, so that:

The quality of income affects the urban sustainable development. Based on the given results the path which links the two variables is positive and significant (t=12.90). Therefore, the quality of income affects the urban sustainable development directly and the hypothesis is accepted.

One of the factors affecting the income distribution is the financial development index, as the studied indicate that appropriate function of financial system can be a potential factor to increase the accumulation of physical capital, increase the economic efficiency, and thus the long-term economic growth. Since the effective financial system causes the added value to be directed in its best utilization way (Batuo et al., 2010:1).

The satisfaction with housing affects the urban sustainable development. Based on the given results the path which links the two variables is positive and significant (t=12.81). Therefore, the satisfaction with housing affects the urban sustainable development directly and the hypothesis is accepted.
Housing quality is primarily related to the physical and social ground of the surrounding area on which the house is located. There is a strong relationship between housing and the general development. Construction, development, and sale the house create the employment, income, and income tax. The housing part has always been a key part of urban economical.

Hekmatniya & Ansari [16] in an article titled programming the housing of Meybod city by sustainable development approach indicated that Meybod has been faced the residential area expansion, especially in 1375-1385s and since the passage and execution comprehensive and detailed plans, fortunately it has been developed pretty well in terms of quantity and quality in the current decade. So, it can be said that it has had a significant relationship with the urban sustainable development. Maliene & Mayls [24] in the research titled quality housing—the key to achieve the sustainable societies—have noticed the quality housing features and the role of housing in the community attractiveness and health. The housing has been considered the key tool in creating the sustainable societies.

Zamani et al [53] in their research titled the housing development analysis in the old texture of Kordabad, Esfahan, by sustainable development approach indicated that enhancing the financial capacity of households, standardization the housing, organizing the users, and increasing the monitoring of the municipality on developing the housing are of the effective strategies to achieve the housing sustainable development in Kordabad.

REFERENCES