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Explanation of the "China Belt & Road Initiative" Effect on Iran's Geoeconomics

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Extended Abstract

1- INTRODUCTION

By reviving the ancient Silk Road as part of the Belt & Road Initiative, one of the largest projects of the century, China intends to challenge the US unipolar international economic system by participation in the global economy. China's purely economic approach has encouraged many countries along the route of the Belt & Road Initiative to participate in this project. This plan will have a great impact on the countries along the plan, including Iran. Since Iran is geographically in the middle of the Belt and Road Initiative map, it can actively participate in this project to restore its former position on the Ancient Silk Road and improve its geographical position toward a geopolitical position. The present study seeks to answer the question of what is the position of Iran in the belt and road initiative project and what consequences this project will have on Iran's geoeconomics.

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2- THEORETICAL FRAMEWORK

Within the paradigm framework of global marine-based and land-based strategies competitions, today two large geostrategic faults have formed on a spherical scale in western and eastern Eurasia, which seems to be the source of current world policies. In fact, the level of global geostrategic confrontation is wide-spreading on both sides of the Eurasian land so that on the one hand in the east (on the surface of the land fault of Eurasia with the Pacific) and on the other hand in the west (on the surface of the fault of the Eurasian continents with Europe and Africa).

These collisions have spread on the one hand in the east (on the surface of the land fault of Eurasia with the Pacific) and on the other hand in the west (on the surface of the fault of the Eurasian continents with Europe and Africa). On either side of each of these faults are major global power actors. On one side of this strategic fault lies China, which claims to be a world power. Although Chinese leaders have repeatedly stated that they have no motive to be the world most power, the China's Road & Belt initiative project shows that China is seeking to expand its spatial influence and the plan will bring many countries under its control.

In the introduction of the plan document, the One Belt-One Road project is introduced as a system project based on consultation and collective interest between China and the countries involved in the project, which integrates the development plans of the participating countries and creates a new kind of mutually beneficial cooperation between the countries of the three continents (Asia, Europe and Africa), and the spirit of the project is "open regional cooperation" that does not seek to limit any country.

3- METHODOLOGY

This research is applied in terms of purpose and descriptive-analytical in terms of research method. The data collection has been done using library resources, internet, researcher-made questionnaire, and interviews with experts. This research uses the Active Geostrategic Faults in the World theory in order to review the Belt & Road Initiative. Academic experts were consulted about the accuracy of the findings and the effectiveness of each of

the variables, and after receiving their comments, the questionnaire items validity was confirmed. The statistical population in this study is foreign affairs experts and specialists in various fields such as political geography, international relations, political economy and so on. The questionnaire was completed by 70 experts from the different fields. Data analysis was evaluated in the first stage using SPSS software and in the second stage using MICMAC software.

4- RESULTS & DISCUSSION

The Belt & Road Initiative is an opportunity for development for Iran as it encourages further cooperation and development with China and other members of this plan. Iran is at the heart of the Belt & Road Initiative, and the path to achieving the goals of the plan will be difficult without Iran's cooperation. Since the Belt & Road Initiative is not just an economic project but also has broader dimensions, it is assumed that China's proposal, given its potential to strengthen regionalism, will be effective shaping the new arrangements of the Eurasian region including Iran and its surrounding region.

This multilateral plan will bring good achievements for Iran, which, in addition to these achievements, will face many threats and harms to Iran. As the most important strategy of this plan, it can be pointed to definition and stabilization Iran's position in the plan, which is the most important and basic strategy for Iran. The issue of proper management for the implementation of this plan is the second most important strategic issue for Iran to prevent the harms of Iran being excluded from the plan and being deprived of the benefits of the plan, and on the other hand, the cost and inconsistency of internal organizations should be prevented and the confusion and damages caused by it should be avoided.

The most important opportunities: expanding the regional both cooperation and convergence and reducing Iran country's geoeconomic isolation, attracting foreign investment and entry of plan involved companies into Iran, establishing infrastructure links between Iran and key Eurasian

countries, increasing Iran's geopolitical weight, and using Iran's transit position etc.

Major threats: China's loans-debts trap, sanctions and pressure from plan rivals, economic dependence, concerns of major powers (US, Russia, India, Japan, EU, etc.), Chinese military (incompatibility with Iran's interests), and increasing regional competition etc.

5- CONCLUSIONS & SUGGESTIONS

Iran must define and consolidate its special geopolitical and geostrategic position and economic advantages for China and the world in such a way that it can play a pivotal role in the road & belt initiative. If the plan is successful, it will increase economic cooperation in the region, revive Iran's geoeconomic position and make Iran more active in non-Western cooperation. And if the one belt & one road initiative in Iran fails, it will cause serious damage to the environment, create double pressure from China on Iran, impair Iran's stability due to increased debts arising from the plan, make rates competitive in Iran, and lack of Iran government control on the rates, the excessive import of cheap Chinese goods and the inability of Iranian goods to compete, the surplus of Chinese economic output toward Iran and unemployment and factory closures.

Keywords: Belt & Road Initiative, Geopolitics, Geoeconomics, China.

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Privatization in Iran; New Regional Economic and Financial Challenges with Data Foundation Theory (grounded theory)

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Extended Abstract

1- INTRODUCTION

While more than 4 decades have passed since the drafting of this constitution, the results of recent research show that privatization in Iran has progressed very slowly and its implementation has not had a positive effect on the profitability of divested enterprises and instead, Debts and their risks have increased, and a study of various aspects of privatization, including financial and economic issues, can shed light on the angles and components influencing its proper implementation.

2- THEORETICAL FRAMEWORK

Article 44 of the Constitution deals with the need to implement privatization in Iran, which indicates its high importance in the country's

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economy, and according to it, the economic system of the Islamic Republic is based on three sectors: public, cooperative and private with regular and proper planning. Privatization is a means of improving the performance of economic activities by increasing the role of market forces. Privatization policy is a way to reduce the financial pressure of state-owned enterprises on government budgets and increase their efficiency, empower the private sector, increase competition through the transfer of ownership and management of state-owned enterprises to the non-governmental sector.

3- METHODOLOGY

In the first phase of this study, preliminary data were collected using meta-analysis method. The result of reviewing the background of studies on privatization was that using previous studies, an appropriate understanding of the space and challenges of privatization that had previously been faced by researchers was obtained. This data led to a better and clearer view of the implementation of the data-based method and the design and promotion of interviews with elites. After performing the foundation data method, a model was obtained which was evaluated by Delphi method for further validation, the details and results of which are presented below. Archival data was not used to make the sources more reliable and traceable.

4- RESULTS & DISCUSSION

The findings showed that the main economic and financial factors affecting privatization are: 1. Economic causes including the structure and economic environment of the country, the power of the private sector and economic corruption, and 2. Causal financial and accounting conditions including intra-organizational issues of companies, issues external organization of companies is the problems related to calculations and estimates and motivational factors that have made the implementation of privatization difficult due to the executive context and the cases of the mentioned interveners. At the same time, the abundance of expert opinions shows that the most important factor influencing the privatization process is economic factors.

5- CONCLUSIONS & SUGGESTIONS

As the findings show, various factors affect the privatization and the quality of implementation of Article 44 of the Constitution, in fact, all of these cases, even in the most detailed part, can prevent privatization and move the economy forward and implement strategies. It can improve its speed and quality, which indicates the need for sensitivity of all elements of society, including the three forces and the people in removing these obstacles and paving the way for privatization in the country.

Reforming the country's economic structure, which is strongly influenced by the global oil situation, exchange rate fluctuations, lack of support for production and employment, and the dominance of quasi-private or so-called private sectors over other sectors is the first step in implementation of privatization. If the monopoly trend of the market continues in many cases, it will not be possible to escape from the dark and dusty atmosphere of rent and underground economy and the weakness of the private sector will increase day by day.

According to experts, the use of accounting information in decision-making in Iran has not yet become a culture. Privatization executives should be well-informed about financial and accounting issues, or at least benefit from the presence of capable accounting experts in their executive team. Reducing the cost of representation in companies, increasing transparency in financial reporting, access to complete and quality information, creating information symmetry, improving the internal control system, improving the corporate governance system, identifying risks, meeting the information needs of users, weakening the underground economy, reducing corruption and rent-seeking, efficient management, increasing the effectiveness and efficiency of economic and financial, increasing public trust, protecting the treasury and strengthening the financial and capital markets, the results of which are vital for economic prosperity and improving the business environment.

Keywords: Privatization, Article 44 of the Constitution, meta-analysis, grounded theory.

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Investigaton of the Effect of Environmental Efficiency on The Value Added of Selected Economic Sectors of Iran During the Years 1997-2019 With Using Two Approaches DEA and Panel- ARDL

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Extended abstract

1- INTRODUCTION

The goal of sustainable development is to maximize the value added of various economic activities while preserving the environment. On the other hand, economic growth requires energy consumption. With the increase in energy demand, the emission of polluting gases such as CO2 also increases. Emission of greenhouse gases is one of the important factors of global warming. Therefore, different governments are looking for ways to achieve sustainable development.

Since 1885, CO2 emissions have been steadily increasing worldwide. In Iran, carbon dioxide emission follows an upward trend. On the other hand, due to Iran's oil-rich nature and the high energy loss in most of Iran's economic sectors, conducting studies on environmental efficiency in Iran is very important and necessary. Therefore, the aim of this study is to investigate the effect of environmental efficiency on the value added of selected economic sectors of Iran. For this purpose, firstly, the environmental efficiency of selected economic sectors (agriculture, oil, industry, transportation and household, commercial and general sectors) has been calculated by using the DEA method during the period 1997- 2019. After calculation of the environmental efficiency, the effect of this

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efficiency on the value added of selected economic sectors of Iran has been estimated by using the Panel- ARDL method.

2- THEORETICAL FRAMEWORK

There are different views and studies about the relationship between environment and economic growth. A group of studies with dynamic optimization models seek to maximize consumers' utility, focusing on the effects of pollution and environmental degradation on the growth. Some of these studies focus on the natural resource curse. A group of studies considered pollution as one of the production factors. Some studies also analyze the relationship between pollution and economic growth through the Kuznets environmental curve.

3- METHODOLOGY

In recent years, DEA is widely used to evaluate the performance of different units in various fields. The DEA method is a management method based on economic concepts that measures the efficiency of units relatively and compares units with each other. Equation (1) is presented to evaluate the environmental performance of selected economic sectors with a desirable output and an undesirable output (considered as input). The following model is an input-oriented model with constant returns to scale (CCR).

$$\text{Min } \theta$$

s.t

$$\sum_{i=1}^{5} \mu_i L_i \leq \theta L_i$$
$$\sum_{i=1}^{5} \mu_i k_i \leq \theta k_i$$
$$\sum_{i=1}^{5} \mu_i CO2_i \leq \theta CO2_i$$
$$\sum_{i=1}^{5} \mu_i Y_i \geq Y_i$$
$$\mu_i \geq 0 \quad \text{I=1,2, 3, 4, 5.} \qquad (1)$$

In the above equation, I: index related to each sector, L: Labor, K: capital, Y: value added and CO2: CO2 emission. The reason for using the CO2 emission as polluting, is that the relatively high share of this environmental pollutant compared to other polluting gases in selected economic sectors.

After calculation of the environmental efficiency, the Panel-ARDL approach is used to achieve the desired goals and examine the effect of environmental efficiency on the value added of selected economic sectors. First, by using different theories and experimental studies, the factors affecting the value added of selected economic sectors have been considered in the form of the following regression relationship:

$$\ln Y_{it} = \beta_1 L_{it} + \beta_2 K_{it} + \beta_3 E_{it} + \beta_4 EF_{it} + \varepsilon_{it} \quad (2)$$

In the above equation, ln: represents the natural logarithm. i and t show the economic sector and time, respectively. Y: is value added, L: labor force, K: capital, E total energy consumption and EF environmental efficiency calculated by DEA method.

By explanation of the functional form of the model of factors affecting the value added of selected economic sectors of Iran, equation (2) examines the short-term and long-term relationship between variables in the ARDL format and in the panel framework.

$$DY_{it} = f_{i,t-1} + \beta_i^* X_{it} + \sum_{j=1}^{p-1} l_{ij}^* DY_{i,t-j} + \sum_{j=0}^{q-1} g_{ij}^* DX_{i,t-j} + m_i + \varepsilon_{it} \quad (3)$$

In the above equation: i= 1, 2, ..., N represents the number of sections, t = 1, 2, ..., T represents the time period. Y_{it}: dependent variable and X_{it}: explanatory variables of the model.

4- RESULTS & DISCUSSION

In this research, the environmental efficiency of selected economic sectors of Iran has been calculated by using linear programming. The results of the DEA model estimation show that the highest environmental efficiency is related to the agriculture and oil sectors and the lowest environmental efficiency belongs to the transportation sector. In the next step, the effect of environmental efficiency on

the value added of selected economic sectors of Iran is evaluated with the Panel-ARDL approach.

The results of the Panel-ARDL approach show that the effect of labor on the value added of selected economic sectors in the short term is positive and significant. There is no significant relationship between labor force variable and value added of selected economic sectors in the long term. Due to the movement of economic sectors towards more use of new and advanced technologies, the total workforce will not have a significant effect on the growth of economic sectors.

The effect of capital variable on the value added of selected economic sectors in the studied period is positive and statistically significant in the long term. The growth of economic sectors to increase efficiency, use new technologies, increase capacity to reduce costs, etc., requires capital in the first place.

The variable effect of energy consumption on the value added of selected economic sectors is positive and significant in the long term, because energy consumption is required to perform any economic activity.

The variable effect of environmental efficiency on the value added of selected economic sectors in the short and long term is positive and significant. The findings of this study show that increasing the efficiency of the environment and efficient use of resources will help economic growth.

5- CONCLUSIONS & SUGGESTIONS

In this study, in order to investigate the effect of environmental efficiency on the value added of selected economic sectors of Iran during the years 1997 to 2019, DEA and Panel-ARDL approaches have been used, focusing on CO2 emissions due to its high weight compared to other greenhouse gases. The results of the DEA model estimation show that the agricultural and oil sectors are efficient during the period under review. The transportation sector has achieved the lowest level of environmental efficiency compared to other selected sectors. The results of econometrics show that with the increase of capital and energy consumption, the value added of selected sectors also increases. In addition, the results indicate that by increasing the environmental efficiency of the selected economic sectors, the value added of the said sectors will increase in the long

term. Therefore, if the selected sectors move towards sustainable development, in addition to environmental benefits and conservation of resources and environment, their value added will also increase.

This study offers suggestions to reduce pollution and preserve the environment, such as changing production methods, using superior technologies by inefficient sectors, using low-carbon light fuels instead of heavy fuels, using non-conventional low-carbon fuels, and using incentives and punishments by the government.

Keywords: Environmental Efficiency, Value added, Sustainable Development, DEA, Panel- ARDL.

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Regional Differences in The Primate City Changes of Iran: 1976-2016

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Extended Abstract

1- INTRODUCTION

In the urban economics literature - which does not have much history in Iran - it has been shown that the performance of cities depends on their structure. In other words, there is a significant relationship between the performance of the city and its structure. Accordingly, despite such a relationship, the future performance of cities can be predicted based on their structural changes. Therefore, this study is designed to investigate the trend of structural changes in Iranian cities as well as the regional differences of the urban system and based on the first urban position.

2- THEORETICAL FRAMEWORK

Although there have been many studies examining primary urban indicators in each region, based on the research conducted in this study, a study examining primary urban indicators by city in all provinces of Iran for the period leading up to the 2016 census, have not been observed. This makes this study different from other studies in this field. Thus, this paper is innovative in comparison to previous studies in two respects. First, it used the nine primate city indicators individually to realize the primary cities of all cities in the country, as well as all cities in each province in the country, and compared them among them. In addition, the rank-size rule has been

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used to measure the balance or imbalance in population distribution. However, in previous studies, primary cities have been calculated only for cities across the country or in specific regions, and only a few of these indicators have been used, with no comparison between them. Second, the survey period in this study covers the year 2016, based on the most recent information available in the field. However, primate city surveys of cities across the country (to the knowledge of the researchers in this study) have not been conducted until the last census period.

3- METHODOLOGY

This study is designed to investigate the trend of structural changes in Iranian cities as well as the regional differences of the urban system and based on the first urban position. To achieve this goal, this paper have been used nine Primate City indexes Including primate city Index, Two City Index, Ginsberg Index, Mehta's Four City Index, Moomaw & Alwosabi Index, Herfindahl Concentration Index, Herfindahl Deconcentration Index, Entropy Index and Mousavi urban domination. The data of this study are extracted from the census in Iran of 1976 to 2016.

4- RESULTS & DISCUSSION

The results show that the primate city phenomenon in the urban system of Iran has existed throughout this period. Also, the primate city indicators in these years show the move towards more balance in the urban system of the country. However, the primate city rate has decreased during the studied years and the decreasing trend in the studied indicators is consistent with each other. However, according to the available evidence, the results show the creation of prime cities in the Iranian urban system instead of a prime city. Also, based on the results of this study, the majority of the studied indicators up to 2006 show that the highest and lowest urban prime rates were in Tehran and Mazandaran provinces. Qom province has the highest urban prime in the urban system of Iran since 2006. Accordingly, it can be expected that the change in the structure of Iran's urban system will provide the way for future functional changes in them.

5- CONCLUSIONS & SUGGESTIONS

The status of primate cities in different regions is influenced by situational characteristics and urban location. The study of regional primate cities during the study period, using Mehta's Four City Index, showed that border regions and regions close to border points have shifted from a predominant primate city status to a desirable or minimal status. This is because the flow of domestic goods and services moves from larger centers to smaller centers, and as this flow passes through different regions to reach the center, its impact is felt in intermediate regions, causing the primate city phenomenon in some domestic states (especially those close to other regions from the center of domestic goods and services).

Keywords: Urban system structure, Primate city, Regional distinctions, Urbanization, Urban hierarchy

Jel Classification: R23, R12, N09

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Spatial analysis of housing prices in 22 urban districts of Tehran

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Extended abstract

1- INTRODUCTION

Consideration of the importance of the role of housing in the economy, especially in metropolitan areas such as Tehran, the analysis of house pricing and identifying the factors affecting housing prices is very importance. A noteworthy point in the study of housing price changes in the metropolis of Tehran is that the rate of price growth in different areas of Tehran has not been the same. Experience shows that price changes start in one district and then spread to other districts. Therefore, we should consider proximity and spatial dependence of housing prices in urban districts.

2- THEORETICAL FRAMEWORK

In the analysis of housing price data, the spatial dependence between observations must be taken into consideration. Accordingly, many experimental studies have shown strong evidence of spatial dependence in the housing market between urban areas. Spatial dependence on

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housing prices is also referred to as the wave effect, implying that housing prices in a district cause changes in neighboring districts' prices. Behavioral economics is a theoretical basis that can express the phenomenon of spatial dependence between urban districts. Regarding the theories of behavioral economics, nearby urban areas have the same culture, history, environment, and policies. Other phenomena that express the spatial dependence in the housing market of urban districts include migration theory, capital transfer, arbitrage, and spatial patterns.

3- METHODOLOGY

A critical issue in studies using spatial econometric techniques is the choice of the type of spatial model. Depending on the type of spatial interaction, we will encounter a variety of spatial models. To select spatial models, we can first consider the general spatial model and with the relevant tests to ensure the existence of the type of spatial interaction factor. Then, the appropriate type of model can be selected. According to Elhorst (2014), using the spatial lag fixed-effect model, we have modeled the housing prices in 22 districts of Tehran city in this study. Some variables affecting housing prices are related to the demand side of the housing market, and some are related to the supply side. Here, the explanatory variables in the model are the annual population growth rate of the districts, and the annual growth rate of the real disposable per capita income, which shows the demand side influencing the housing price, as well as the number of building permits and the annual unemployment rate as the supply-side variables that affect housing prices. The dependent variable is the districts' average annual real growth rate of housing prices.

4- RESULTS & DISCUSSION

According to the spatial specification results, the dynamic SAR model has been selected as the appropriate model. The estimated coefficient of the spatial lag of the dependent variable with a time lag is 0.033, which is statistically significant and indicates a positive effect. It

implies that the spatial lag of the dependent variable with a time lag has influenced the growth rate of housing prices in the 22 districts of Tehran. Among the explanatory variables affecting the growth rate of housing prices in the 22 districts of Tehran, it is observed that, except for the unemployment rate variable, the other variables have a significant effect on the growth rate of housing prices in Tehran districts. The analysis of the local Moran scatterplot demonstrates that the spatial correlation of the housing price growth rate in the northern districts of Tehran is different from the southern districts.

5- CONCLUSIONS & SUGGESTIONS

Among the explanatory variables affecting the growth rate of housing prices in Tehran districts, except for the unemployment rate, other variables have statistically significant impacts. Two variables of the growth rate of income per capita and population growth rate have positive effects. However, the number of building permits has negatively influenced housing prices' growth rate. The statistically significant estimated coefficient of spatial lag of the dependent variable in the model implies the spatial effects of the housing price growth rate. All the necessary tests indicate that the null hypothesis, which indicates the lack of spatial autocorrelation, has been rejected, and a spatial correlation among the housing price growth rates of districts has been confirmed. The local Moran scatterplot illustrates that the Spatial correlation of housing price growth rate in the northern districts of Tehran is entirely different from the southern areas of Tehran. It is recommended that urban policymakers should not ignore the spatial relationship between housing prices in 22 districts of Tehran. Also, it is recommended to the policymakers, due to the different spatial correlation rate of the housing price growth rate in the southern areas of Tehran city compared to the northern districts of the city, for each of the northern and southern areas of Tehran, they should make different policies.

Keywords: Housing prices, Spatial dependence, Fixed-effect model, Dynamic spatial panel data model.

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Identification of critical success factors of ICT companies using the Fuzzy AHP method

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1- INTRODUCTION

Information and communication technologies and their role in the economic growth of the country are one of the important concepts in sustainable development. In fact, information and communication technology are the motivation of globalization in the fields of culture, politics, economy, and society. This has a considerable effect on the advent of network society and inter-country awareness and it is the driving factor of global markets. According to the growth and development of academic research in the field of high technologies, SMEs play an important role in encouragement of entrepreneurship and economic prosperity in countries. Therefore, it is necessary to answer the question of what factors will lead to the growth and success of these companies in the field of information and communication technology.

2- THEORETICAL FRAMEWORK

Information and Communication Technology (ICT) is the consequence of the interaction of three distinct parts of a computer: information, communications, and telecommunications. The computer sector is

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considered the hardware and supplier of equipment and tools for ICT. Data and information flow as other pronouns and raw materials within the network. Telecommunication is the third part, which is responsible for establishment of communication between the other two parts. What is ultimately the combination of the three parts is called "information," which is used in different areas. Critical Success Factors (CSFs) are essential tools for identification of the set of activities that need to be done in order to achieve your business goals and missions. (CSFs) are a limited number of key factors in which achieving results guarantees the competitive performance of the organization, and if the results obtained in them are not satisfactory, the efforts of the organization in the desired period of time will not be satisfactory. The organization's strategic goals and missions focus on the goals and what needs to be achieved; CSFs, on the other hand, focus on the most important factors influencing what and how to achieve.

3- METHODOLIGY

This paper discusses "success" in information and communication technology (ICT) standards setting. The Fuzzy Analytical Hierarchy Process (FAHP) method was used to analyze data and prioritize the factors effective in the success of ICT's companies. In this respect, 21 criteria in 5 different categories were extracted by using the expert's opinion and previous research, and then were evaluated in the vicinity of the capital of Iran (Qom).

4- RESULTS & DISCUSSION

Focusing on internal organization management and establishing cordiality atmosphere among the employees to enhance teamwork and increase trust between them are the most basic and the most important factors in critical success of a company. Broadly speaking, development from the technical, high financial income and marketing aspect is the consequence of correct organization and management of corporation and its employees that if focused, can be helpful for the business. One of the major differences between this research and the previous ones is using native effective factors

and comparing them with general key factors in other countries. Results showed that in-company management factors, technological and marketing factors, financial costs, governmental policies, and native features were the most important main criteria. The employee involvement and team work, focus on the customer's needs, the state of the economy, conflict of interest between governmental and private sectors, and industrialization of the province were chosen as the most important sub-criteria effective on the success of the ICTI's companies.

5- CONCLUSIONS & SUGGESTIONS

Intra-organizational factors are more important than external ones, such as the government's policies, rules, and native features. It is worthwhile for the managers and founders of ICT firms to consider and prioritize these factors to be able to achieve success. For future research, the effect of the components on each other can be studied using ANP, and different methods such as SAW, TOPSIS, and ELECTRE can be used to prioritize the criteria. The results could be compared with each other. Studying the effects of local factors in other provinces of the country can also lead to different results.

Keyword: ICT, Economic growth, Fuzzy analytical hierarchy process, Critical success factors.

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