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Vulnerability of Utility to Economic Shocks: Evidence from Households in Iranian Provinces

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Extended abstract

1- INTRODUCTION

One of the concerns of economists in recent decades has been the issue of shocks and their effects on household behavior. Given the high impact of economic variables on household behavior, which is often measured by the utility; Undoubtedly, these economic shocks will cause changes in this sector.

2-THEORETICAL FRAMEWORK

The idea of utility in economic theories of the 17th and 18th centuries was proposed in Europe, especially in England, by economists such as Adam Smith, John Stuart Mill, and Jeremy Bentham, who believed that people move in order to gain pleasure and avoid pain. But later other economists developed these utility functions. Nowadays, extensive research has been done in the field of utility extraction and depending on the type of study, different utility functions are used that consumption and income are the main basis of these functions. Despite the high importance of this discussion, so far, no studies have been conducted on the extraction of utility functions for the provinces and also how economic shocks affect these provincial utility functions in Iran and the limited studies that have been done in this area are mostly national.

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3- METHODOLOGY

This paper extracts the household utility of each province in the first phase and then examines the effects of shocks from macroeconomic variables on it during the period 2001-2019. To calculate the coefficients required to derive the utility function, the Panel ARDL model in EViews software was used. Also, Bayesian Panel VAR model in MATLAB software was used to analyze the effects of shocks on the utility function.

4- DISCUSSION

The results of the estimate showed that the inflation shock first increases the utility. But over time, its effect on the utility of all provinces decreases. Perhaps one of the reasons that rising inflation has increased household utility in first time is that the utility function is obtained with the help of the consumption function. Therefore, with increasing inflation, the household increases its consumption expenditures, which leads to an increase in utility. But over time, due to the persistence of inflation, the household gradually reduces its consumption, which in turn leads to a reduce in household utility. However, the results of the inflation rate shock on the utility of all provinces except Isfahan, Khorasan Razavi and Mazandaran are significant. Also, the results showed that a positive shock in government spending leads to increased household utility. This increase in utility for most provinces persists after 20 periods, and only for some provinces the effects of this shock disappear. Probably the main reason for the increase in utility as a result of the increase in government spending is that an expansionary fiscal policy stimulates demand and increases household consumption, and since the utility function is obtained with the help of the consumption function; Finally, increasing consumption will increase utility. Also, the results of the government spending shock on the utility of all provinces except Ilam and South Khorasan are significant. In addition, according to the results, the effects of a positive shock on oil revenues in the first place reduce household utility in all provinces. But gradually this diminishing effect on utility disappears. Also, the results of the oil revenue shock on the utility of all provinces are significant. Finally, a positive exchange rate shock

increases household utility in the first period; However, from period 2 onwards, with the emergence of the effects of exchange rate shocks, such as rising inflation and declining purchasing power, and ultimately declining consumption, household utility in all provinces gradually decreases. Also, the results of the exchange rate shock on the utility of all provinces are significant. Also, based on the results of the analysis of variance, with the passage of periods, the effectiveness of the utility variable as a dependent variable has decreased and the effects of other variables have increased over time. Also, the effects of analysis of variance showed that in period 1, all the effects of analysis of variance are absorbed by the variable itself. However, most of the effects of analysis of variance (excluding the effect of self-variable) on utility after 20 periods vary for different provinces between inflation and government spending. Also, the least effects of analysis of variance of different variables after 20 periods on the utility between different provinces differ between exchange rates and oil revenues. In addition, the maximum and minimum effects of analysis of variance on the utility function of the variable itself are for the provinces of Tehran (99.58) and East Azerbaijan (31.53), respectively. Also, for the variables of inflation, government expenditures, oil revenue and exchange rate, the effect of analysis of variance on utility was the highest for Lorestan, Sistan and Baluchestan, Hormozgan and Kurdistan provinces, and the least effect has been obtained for Semnan, Tehran and Kohgiluyeh Boyer Ahmad, respectively.

5- CONCLUSION & SUGGESTIONS

According to the results, it was found that most shocks change the utility of the household. Also, in recent years, the amount of household utility in each province has decreased. One of the main reasons for this decline is the existence of various sanctions and severe fluctuations in macroeconomic variables. One way to prevent welfare decline is for the government to reduce its dependence and indirect household dependence on oil revenues. In fact, since the bulk of the government's revenue is provided in this way, it can easily affect the household by imposing sanctions or international fluctuations in this variable. Therefore, policymakers and planners need to

pay special attention to this issue. Also, according to the results, it was found that over time, the value of e has decreased, which indicates a decrease in government intervention and its policies to reduce inequality and income distribution in low-income provinces. In other words, during this period, policymakers' attention to inequality has decreased and in the implementation of projects, less attention has been paid to low-income groups. Therefore, planners need to reconsider their policies in order to improve the situation and pay more attention to lower-income groups and provinces.

Keywords: Household utility, economic shocks, Bayesian model.
JEL classification: I30, D60, C11.

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Determination of the Integrated Water-Economy-Environment Index for Regional Water Resource Allocations in Iranian Provinces

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Extended abstract

1- INTRODUCTION

Sustainable development is defined as a form of development process that meets the current human requirements without affecting the ability of future generations to cover their needs. Water is considered an essential resource for food and industrial productions, environmental protection, and a key irreplaceable requirement to sustainable development. Accordingly, policymaking for water sector in any region requires taking into account the principals of sustainable development and integration in allocation of the water resources. Integrated water resource allocation is usually defined as a process that promotes the coordinated development and allocation of water, land and related resources, in order to meet the resultant economic and social welfare without compromising the sustainability of vital ecosystems. A review of the history of water policymaking and allocation of water resources proves that Iran like many countries around the globe is suffering

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from a multidimensional complex socio-economic and environmental drought that is the consequence of mismanagement, hasty, and uncoordinated water policymaking as the result of a misunderstanding of sustainable development and integration concepts. A review of studies conducted in Iran indicated that there are still no quantitative and analytical criteria for assessing the situation and decision-making in the form of an integrated system for the allocation of regional water resources. Water policymaking and allocation of resources in Iran is conducted without considering the capability and capacity of water resources in different provinces and also without paying any attention to the inseparable connection between water and other socio-economic, agricultural, technology, transportation, and environmental elements. In order to achieve regional water security as well as to achieve regional sustainability, there is an urgent need to develop an integrated water-economy-environment system as a mechanism for the regional integrated allocation of water resources in Iranian provinces.

2- THEORETICAL FRAMEWORK

One of the solutions to water shortages which is introduced by Allan (1998) for west of Asia was the virtual water strategy which is usually known as "virtual water trade" in the literature. The virtual water trade is originally rooted in Heckscher- Ohlin- Samuelson relative advantage theory. This strategy believed that the main solution to water scarcity is to import grain instead of growing grain regionally. Although the idea of virtual water trading is inherently an economic concept; many economists have criticized the virtual water strategy as fallacious failing to take socio-economic, environmental sustainability into account. In response to the critics, many studies believe that there is an urgent need for an integrated water-economy-environment index system in allocation of regional water resources. This evaluation index system takes into account the co-relationship among various components of the economy, society, resources, technology, transportation, and environment as well.

3- METHODOLOGY

The purpose of this study was to determine the integrated water-economy-environment index for regional policymaking using a comprehensive fuzzy evaluation system and Shannon entropy weighting method in Iranian provinces. For this purpose, after determination the water-economy-environment index based on the latest theoretical and experimental foundations in the field of water resources, the integrated water-economy-environment index was estimated for 31 Iranian provinces. The integrated water-economy-environment index has five main components including water resources, technology, transportation, economy, society, and environment, respectively. Finally, the radar diagrams and geographic maps were used to analyze the spatial distribution of the total water-economy-environment index and its main components.

4- RESULTS & DISCUSSIONS

According to the results of the study Ardabil, Kerman, South Khorasan, Semnan, Sistan and Baluchestan, Fars, Qazvin, Markazi, and Yazd had slightly poor status in the water resource component. Moreover, from the social perspective of the water-economy-environment index South Khorasan, Zanjan, and Hormozgan were classified as slightly poor while North Khorasan, Kermanshah, and Lorestan were poor provinces. On the other hand, most of the Iranian provinces had slightly poor and average situations in the economic component of regional integrated water-economy-environment index. Besides Ilam and Kohgiluyeh and Boyer Ahmad were identified as slightly poor in the technology and transportation component while South Khorasan, Sistan and Baluchestan, Qazvin, and Kermanshah were classified as slightly poor provinces in the environment component of the integrated water-economy-environment index. In addition, based on the results of the total water-economy-environment index, Gilan, Mazandaran, Chaharmahaal & Bakhtiari, and Khuzestan provinces can be suggested as the most suitable provinces for implementation of the virtual water strategy. In other provinces of the country, depending on the situation of the main components and sub-indicators in each of the dimensions of

integrated water- economy-environment index including water resources, technology, transportation, economic, social, and environmental components there is a vital need to adopt an appropriate water policy in consistence with the specific conditions in that province.

5- CONCLUSIONS & SUGGESTIONS

Based on the results of the study the integrated water-economy-environment index can be suggested as an effective instrument for allocation of water resources in Iranian provinces. Virtual water strategy in provinces with scarce water resources can be considered as a potential alternative for facing regional water scarcity in Iranian provinces. Due to the scarcity of water resources and budget constraints as well as various situations in Iranian provinces the integrated water-economy-environment policymaking should be conducted regionally and based on the weakness or strength of each province in water resources, economic, social, technology, and environment components. On the other hand, weak provinces in Iran should prohibit water intensive economic activities and persuade the development of second and third-hand water intensive activities and service sector. Finally, it is recommended to policymakers to use regional integrated water-economy-environment index based on regional components and provincial capacities in Iranian provinces. It is also recommended to researchers to examine more detailed assessments of the integrated water-economy-environment index on longer periods in Iranian provinces.

Keywords: Integrated Index, Regional water resources, Shannon Entropy, Fuzzy Comprehensive Evaluation Method, Iranian provinces.

JEL classification: Q25, R58, Q56, Q01, O24, O13, F18, C02.

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Identifying Information and Communication Technology as a Key Factor in the Development of the Infrastructure Sector of East Azerbaijan Province: A Multisectoral Analysis (MSA) Approach

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Extended abstract

1-INTRODUCTION

Economic theories and experiences of different countries show that there are different paths for economic growth and development, and the rate of growth and development depends on what sectors of the economy to invest in. the growth rate also varies according to the sectors in which it is invested. for this reason, the production system is usually divided into two parts: production and consumer goods, and it is often said that the productive goods sector is the driving force of growth. therefore, in the long run, maximizing growth depends on allocating as much investment as possible to key sectors of the economy.

2-THEORETICAL FRAMEWORK

In general, growth and development theories are classified into three main groups in order to identify the importance of economic sectors and how resources are allocated: balanced growth theory, unbalanced growth theory and growth pole theory. Rosenstein-Roden (1943), the founder of the theory of balanced growth, argues that one sector alone cannot provide

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economic development, but if several sectors start producing with increasing and related returns, so that each demand for the product provide another, economic development will be possible. due to the skepticism of the theory of balanced growth, the theory of unbalanced growth was proposed in the economic literature by Hirschman (1958). according to this theory, investment should be made in sectors so that the benefits of this investment penetrate into other economic sectors and investment conditions are provided in these sectors. in this theory, Hirschman (1958) believes that in order to achieve development, we have to choose one or more projects from different investment plans, according to our possibilities. other categories of theories for providing a path to development are known as growth pole theories. other categories of theories for providing a path to development are known as growth pole theories, first proposed by Peru (1968) in the economic literature. Peru's innovative concept is actually derived from Schumpeter's idea that growth is a direct and indirect product of innovation. in Peru's theory, simultaneous growth does not occur everywhere, but at points or poles of development that have high gravity. these points spread development through channels and affect the entire economy.

3- METHODOLOGY

The aim of this study is to identify the key core of the infrastructure sector of East Azerbaijan province with the multi-sector analysis (MSA) approach. In the first step, this research extracts information and communication technology as the key subdivision of the infrastructure sector of the province using MSA analytical model and Excel software and extracts the most important criteria in this sector. In the next step of this study, the SWOT method examined the strengths and weaknesses, opportunities and threats of the key core extracted from the MSA analysis, and using the Quantitative Strategic Planning Matrix (QSPM) method, the proposed strategies were prioritized.

4- RESULTS & DISCUSSION

The results indicate that at the level of subsectors, ICT as a key core with 0.72 points and at the level of criteria, creating high added value, improving production capacity (process, equipment and technology) and absorption. Foreign capital is the most important, respectively. On the other hand, information and communication technology is also known as the most influential and influential sub-sector. Research findings show that information and communication technology has not found its proper place in East Azerbaijan province.

5- CONCLUSIONS & SUGGESTIONS

Findings show that information and communication technology in East Azerbaijan province has not found its proper place and if the province wants to progress in this area, the strategies of the Defensive Group (WT), which is based on reducing weaknesses and avoiding threats, should be given priority. According to the results, the strategy of providing a suitable platform for e-businesses and creating a provincial unit for empowering Internet businesses to increase information security and empower ICT professionals and business idea owners in East Azerbaijan Province is recommended.

Keywords: Information and Communications Technology, MSA Analytical Model, East Azerbaijan Province.
JEL Classification: R10, R0.

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Analysis of Afghanistan's Economic Growth Response from The Economic Growth of Selected Neighboring countries

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Extended abstract

1- INTRODUCTION

In today's world, economic growth and development is more of a regional phenomenon than a national one. Countries, especially neighboring countries such as Europe or Southeast Asia, grow together; Because the proximity of countries in a region, due to shorter distances and reduced transportation costs on the one hand, and other commonalities such as culture, language, religion, etc., on the other hand, can achieve different economic integration for countries around the world. And made them more interested in economic and trade cooperation. Trade is the starting point of this economic cooperation. When a country's economy grows, an economic overflow occurs, and when an economic overflow is created, the economies of the surrounding countries practically change.

As Afghanistan is a drug producer and a hub for smuggled goods, Afghanistan's underground economy and war have transformed the legal economy throughout the region. This underground economy has led to the financing of terrorist groups in this country. Thus, lasting peace in Afghanistan requires not only political agreement, but also the transformation of the regional economy. Therefore, this study tries to measure the impact of economic growth of Afghanistan's neighbors and most important business partners on its economic

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growth by using annual GDP data (2002-2007) and self-regression model (VAR) and identify which one of the neighboring countries, it has the greatest impact on the economic growth of Afghanistan, according to which, through tariff policies and the expansion of trade, to provide the basis for further economic growth for the people of Afghanistan.

2- THEORETICAL FRAMEWORK

Many economic thinkers believe that a country's economic situation is not only influenced by its economic performance and behavior; It is also influenced by the performance of neighboring countries. Ignoring these relationships and ignoring spatial factors can have very negative effects on a country's performance. Because in international trade, spatial dependence can be justified in the course of trade through the overflow effects of neighboring countries. In such a way that some structural changes in the trade flow of a region affect the trade flow of the neighboring country. Because the structural changes that occur in a country, affect the flow of trade in that country and will also affect the flow of trade of geographical neighbors. Thus, in the real world, when a country's expenditures and incomes change, that change is transmitted to other countries through a change in that country's imports. When reactions occur in other countries, feedback is generated in the original country. Experience has also shown that the countries of the world are dependent on macroeconomic activity, and the income level of one country is positively dependent on the income level of other countries. Therefore, Afghanistan's economic growth is also subject to the economic growth of other countries. This was also seen in the global economic downturn that began in 2007-2008. When a boom or bust occurs in one country, it returns to the original country after being transferred to other countries.

3- METHODOLOGY

This research is performed by using annual GDP data (2017-2002) and self-regression vector model (VAR); Because contemporaneous equation models are based on an approach that assumes some variables are endogenous and some are exogenous. Defining variables into "endogenous" and "exogenous" may have theoretical underpinnings or may be a matter of taste. Even when it has

theoretical support, doubts are raised about it, and the experimental results may contradict its theoretical foundations. However, the self-regression vector (VAR) model is used in cases where there is no certainty whether the variables are endogenous or exogenous.

4- RESULTS & DISCUSSION

The short-term results show that there is no causal relationship between Afghanistan's GDP growth and the economic growth of Tajikistan and Turkmenistan. But the relationship between Iran's and Afghanistan's economic growth is a one-way causal relationship on Iran's economic growth. Because Iran's exports to Afghanistan are often intermediate-capital goods that lead to production and economic growth; But Afghanistan's exports to Iran are mostly agricultural products, which are considered as consumer goods and have no effect on Iran's economic growth. The results also show that the relationship between the economic growth of Afghanistan and Pakistan is a causal two-way relationship. Because Afghanistan's exports to Pakistan are agricultural and livestock products. These goods are considered as consumer and final goods that due to the lack of necessary infrastructure for storage of agricultural products in Afghanistan, they are exported to Pakistan cheaply in the harvest season and re-enter Afghanistan in the winter. Pakistan exports to Afghanistan (compared to Iran) are mostly final and consumer goods. Hence, Iran's economic growth has a greater impact on Afghanistan's economic growth than Pakistan's. Long-term results based on the Johansson test also show that the growth of Afghanistan's GDP depends on the GDP growth of Iran and Pakistan.

The results obtained from the shock response functions for shocks to Afghanistan from Iran, Pakistan, Tajikistan and Turkmenistan show that shocks to Afghanistan from Iran, Tajikistan and Turkmenistan disappear over time and destabilize the Afghan economy. It is not possible; But the shock from Pakistan to Afghanistan is further destabilizing Afghanistan's economy. This is quite clear in the comparison between the graphs. The results of analysis of variance also show that in the short run, most of the changes in Afghanistan's GDP are self-sustaining. But in the long run, most of the changes are explained by Iran's GDP and the least by Tajikistan's GDP. In other words, Iran's economic growth compared to other countries has the greatest effect on Afghanistan's GDP growth.

5- CONCLUSIONS & SUGGESTIONS

The results of this study show that there is a positive and long-term relationship between the economic growth of Afghanistan and the countries of Iran and Pakistan. The results in the short run also show that there is a one-way causal relationship from Iran's GDP to Afghanistan's GDP. But there is no two-way causal relationship between Afghanistan and Iran GDP growth. There is also a two-way causal relationship between Afghanistan and Pakistan's GDP. While there is no causal relationship between the GDP of Afghanistan, Tajikistan and Turkmenistan. In addition, the long-term results show that Iran, Pakistan and Turkmenistan play a major role in explaining the fluctuations of Afghanistan's GDP, with Iran accounting for the largest share.

According to the results of the study, it is suggested that in order to ensure Afghanistan's economic growth, tariff barriers to the import of Iranian goods to Afghanistan should be removed or reduced, and in contrast, customs tariffs for other neighboring countries should be increased.

Keywords: Economic Convergence, Regional Growth, (VAR) model, Afghanistan Economy.

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The Interaction of Economic Freedom and Entrepreneurship on Economic Growth in Selected Countries

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Extended abstract

1- INTRODUCTION

The recent global crisis and the emergence of widespread unemployment and declining economic growth in many economies have increased the importance of self-employment and entrepreneurial activities. in addition, in order to alleviate the government's responsibility in elimination of unemployment and developing entrepreneurship, various measures and policies have been considered to ensure the success of entrepreneurs, the most important of which is to establish an appropriate institutional framework to ensure the success of entrepreneurs. when formulating institutional policies support entrepreneurship then entrepreneurship can play an important role in national economic growth and development (Bjørnskov & Foss, 2013; Baumol & Strom, 2007; Levie et al., 2014). it should be noted, that in order for entrepreneurial activity to lead to economic growth, entrepreneurs must operate freely without worrying about government or others violating private property rights. entrepreneurs in a free market react to market incentives and price signals, and this leads to an efficient market trend. thus, just as countries provide more economic freedom by protecting private property, reducing regulations and taxes, and limiting rent-seeking opportunities. this leads to better institutional quality, which in turn promotes productive entrepreneurship

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and enhances economic growth and development (Gwartney & Lawson, 2009; Wiseman & Young; 2013). in fact, it can be concluded that the decision for entrepreneurial activity depends to some extent on whether the institutions support economic freedom or not. in other words, where there is no rigid government control, the conditions are right for an entrepreneurial business culture to emerge. however, this is not the case in many economies because the institutions that are supposed to promote entrepreneurial activities, on the contrary, restrict entrepreneurial activities. therefore, the main purpose of this study is to investigate the impact of economic freedom and entrepreneurial activities on economic growth in selected developing and developed countries.

2- THEORETICAL FRAMEWORK

The importance of the role of institutions in the relationship between entrepreneurship and economic growth has been studied in many studies (Acs et al., 2018; Bjørnskov & Foss, 2016). The findings of these studies indicate that the quality of institutions is a factor in encouraging productive entrepreneurship and a barrier to unproductive entrepreneurship; this, in turn, leads to higher economic growth. Market-supporting institutions (such as economic freedom and competitiveness) lead to higher rates of entrepreneurial activity, and increased entrepreneurial activity leads to greater economic growth (Urbano & Alvarez, 2014). Furthermore, the results of the research indicate that some of these differences are due to the diversity of types of entrepreneurships, the characteristics of the macroeconomic environment or the different institutional conditions in which entrepreneurs operate. On the one hand, in an economy with higher levels of institutional quality, the rate of entrepreneurship as one of the main factors increases economic growth. But on the other hand, in economies with low institutional quality, unproductive entrepreneurial activities take shape. That will have little or no negative impact on economic growth. Therefore, this insight can be used to understand and explain why entrepreneurial activities in some countries have strengthened economic growth but in some other countries have not encouraged economic growth.

3- METHODOLOGY

The purpose of this study is to investigate the interaction between entrepreneurial activities and indicators of economic freedom on economic growth in selected developing countries for the period 2010-2018. the statistical population consists of 33 developed countries and 33 developing countries. the selection of countries is based on the availability of data .

One of the main challenges in the empirical test of the impact of institutions on economic growth is the endogenous nature of institutional variables. one of the suitable econometric methods to solve or reduce the problem of endogeniety of institutional indicators and correlations between institutional variables and other explanatory variables is model estimation using gmm approach of dynamic panel data. therefore, in the present study, GMM modeling has been used to examine the relationship between entrepreneurship, economic freedom and economic growth.

4- RESULTS & DISCUSSION

The results generally indicate that the interaction between entrepreneurship and indicators of total economic freedom, rule of law, efficiency of laws and regulations and open markets on economic growth in both groups of selected countries has been positive and significant. also, the interaction between government size and entrepreneurship in developed countries has been positive and significant, but has not been significant in developing countries. also, according to the model results, economic freedom in developing countries has had a greater impact on economic growth, but this effect has been weaker in the group of developed countries. because in developing countries with less economic freedom and more unemployment potential, improving freedom indicators will increase people's motivation for entrepreneurial activities and thus higher economic growth. in addition, the results indicate that the impact of entrepreneurship on economic growth has been positive in developed countries and negative in developing countries.

5- CONCLUSIONS & SUGGESTIONS

In this study, the interaction effect of economic freedom entrepreneurship on economic growth in two selected groups of developing and developed countries was investigated. according to results, the following suggestions are presented:

Government policy should be taken to improve the index of economic freedom by enacting appropriate laws to facilitate investment, encourage foreign direct investment, remove restrictions on access to foreign currency, reduce tariffs appropriately, and remove non-tariff barriers .

Given the different impact of entrepreneurial activities in the two groups of countries under study, in expressing the belief that entrepreneurship always encourages economic growth, the aspect of caution should be considered. in fact, since most of the entrepreneurial activities in developing countries are of the necessity type, entrepreneurship has a negative relationship with economic growth in these countries. as a result, policymakers need to promote opportunity-based entrepreneurial activities by implementing policies such as improving institutional quality, providing the right business environment, and increasing the convenience of businesses.

Keywords: Economic freedom, Rule of law, Government size, Regulatory efficiency, Open markets.

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The Effect of Natural Resources Income on the Economic Freedom Index in Selected Countries at Different Levels of Corruption in the Framework of a Dynamic Panel Threshold Model

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Extended abstract

1- INTRODUCTION

The Heritage Foundation has developed the Economic Freedom Index since 1995. Over the past 25 years, the global average score of this index has grown by 2.3, and many countries worldwide have joined the group of free countries on average. Many countries abundance of natural resources has become a curse due to their weak institutional structure. The high revenues from the sale of resources have led to rent-seeking, corrupt and repressive governments. Evidence shows that economic freedom in these countries is not in a good situation. In this regard, we test the following two hypotheses: First, Corruption undermines economic freedom. Second, in addition to directly impacting economic freedom. Corruption can also affect the impact of natural resource income on economic freedom so that the impact of natural income on economic freedom is different at any level of corruption. for this purpose, using the data of forty-nine selected countries with abundant resources during the period 2002-2017, the effect of corruption on the impact of natural income on the economic freedom of these countries has been studied.

2- THEORETICAL FRAMEWORK

Countries with natural resources create corruption and rent-seeking. One of the measures taken by the rentier government to solve problems in the manufacturing sector and protect investors is to keep bank interest rates low.

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Since this interest rate is usually lower than the market equilibrium rate, it creates an excess demand for loans, and the government is forced to either implement the credit quota or subsidize the production sector. The implementation of any of these policies is defined in the context of financial repression. Another feature of resource-rich countries is subsidies and price suppression. Suppression of prices is one of the factors reducing economic freedom through the component of monetary freedom. Monetary freedom is a measure of price stability combined with price control assessments. Both inflation and price control disrupt the market; price stability without economic interference (at the micro-level) is ideal for the free market. From the entrepreneur to the consumer, all economic factors need a stable and reliable currency to use as a means of exchange, a unit of counting and storing value. Without monetary freedom, it will not be easy to create long-term value for capital. Inflationary policies destroy the wealth of individuals in society and act as an invisible tax. In addition, distorting prices leads to inadequate resource allocation and increases business costs. Although no single monetary policy can be recommended for all countries, most monetary theories support low inflation and central bank independence. It is also accepted that price control disrupts market efficiency and leads to surplus or shortage. Therefore, natural income can hurt economic freedom.

3- METHODOLOGY

The data used in the present study are the economic freedom index, natural resources revenue as a percentage of GDP, the index of corruption perception, and the index of political stability. Regarding the corruption perceptions index, it should be added that this index shows corruption in the public sector of one country compared to other countries and is ranked between 0 and 100. the higher the rank of a country, the less corruption there is in that country. Samti et al. (2006), Graeff and Mehlkop (2003), Jichi and Cabro (2019), and Alsarhan (2019) have also shown that economic freedom affects Corruption. Therefore, due to the possibility of endogenous problems in the model, the framework of the dynamic panel model is used. However, in some cases, the regression function may not be the same for the whole observation, and the regression can be divided into different parts based on a specific threshold value. In this regard, Hansen (1999) has proposed a threshold non-dynamic panel model. However, in this model, the endogenous bias between the dependent and

independent variables is not considered. In order to consider endogeny, Caner and Hansen (2004) developed Hansen (1999) model by adding endogenous variables and exogenous threshold variables. Nevertheless, the model proposed by these researchers also cannot be used for dynamic panels. Finally, a model that can be used in a dynamic panel model is introduced by Kremer et al. (2013).

4- RESULTS & DISCUSSION

The results of the study show that corruption hurts economic freedom. This result is consistent with the results of studies by Emerson (2006), Apergis et al. (2012), Yamarik and Redmon (2017) and Jichi, and Cabro (2019). In addition, the second hypothesis of the research is also confirmed; The results show that if the corruption perception index is less than 32, the income from the sale of natural resources hurts economic freedom. However, for countries with a corruption perception index above the threshold (countries with a lower level of Corruption), natural income cannot significantly affect economic freedom. countries with abundant resources have a very favorable ground for the formation of corruption and rent-seeking activities.

5- CONCLUSIONS & SUGGESTIONS

The present study results suggest that if a resource-rich country has Corruption above the threshold, natural income will be spent on repressive economic policies and reduce economic freedom. However, if the level of Corruption is controlled to some extent, the negative and positive effects of the abundance of resources on economic freedom will neutralize each other. In general, the effect of natural income on economic freedom will be insignificant. Overall, the results indicate that the improvement of the weak economic freedom of selected countries with abundant resources depends on the improvement of Corruption in these countries. However, many of these countries have a long way to reach the Corruption Perceptions Index threshold level. Thus, the policy recommendation for these countries is to strengthen the regulatory components, both on the activities of the government and those who have a key role in the resource management system, to provide the basis for accountability of these actors and thus, the formation of corruption restricted.

Keywords: Economic Freedom, Resource-Rich countries, Perception of Corruption, Dynamic Panel Threshold Model.

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Impact of Tax Structure on Income Poverty of the Selected Middle East and North Africa (MENA) Countries

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Extended abstract

1- INTRODUCTION

The World Bank defines poverty as deprivation of the level of welfare and well-being. Inequality is defined as the difference between individuals in society in accessing economic resources that can appear in the distribution of income, wealth, consumption, wages, and savings of society. Equal distribution of income is always one of the most important issues in the economies of different countries and if we express the concept of poverty, and insufficient income, the challenge of more equitable distribution of income and wealth would be more important economic issues and is an important indicator of economic development which is considered by economic policymakers. At present, the existence of poverty and its severity in society is a sign of unhealthiness, poor economic system performance and failure of social justice programs and it is necessary to improve the situation of low-income people and below the poverty line appropriate monetary and fiscal policies affecting the improvement of the income distribution.

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2- THEORETICAL FRAMEWORK

Poverty and income inequality the issue of poverty and poverty alleviation due to income inequality has always been the focus of economic planners and this feature of developing countries is one of the problems of human society that has not only not been controlled, but continuously despite the progress made in various economic fields intensified. Given the need to deal with the poverty crisis, this phenomenon should be studied and evaluated from both theoretical and practical aspects. Theoretically, poverty and its components should be carefully defined and identified, and from a practical point of view, the level of poverty in the country or society should be measured. The unbalanced distribution of income in society is one of the problems that in the short term, although it may not be reflected in the daily problems of the country, its continuation in the long run, in addition to creating widespread poverty, can create political tensions and lead to crises. Income redistribution can be achieved through tax policies, government transfer payments, and social spending.

3- METHODOLOGY

To examine and analyze the research hypotheses on the effect of tax structure on income inequality in a selection of the Middle East and North Africa (MENA) member countries including Iran, Egypt, Jordan, Turkey, Tunisia, Morocco, Cyprus, Rwanda, Zambia, Palestine. They are occupied and the data panel model for the years 2005-2018is used. The source of international data collection is the World Bank website and the International Indicators System. In this study, the Gini coefficient variable is used as an indicator of the income distribution, and the dependent variable is studied as an indicator of economic development in selected countries. Factors in the form of independent variables include the tax structure and other variables include economic factors such as inflation and per capita income. In this study, Gini coefficient variables have been used as an influential variable for the income inequality index. Following the existing theoretical foundations on the effect of tax structure on income inequality, the model of this research is specified as:

$$Gini = \alpha + \beta_1 INCT + \beta_2 GT + \beta_3 GDPP + \beta_4 EDU + \beta_5 UNEP + \beta_6 INF + Uit$$

Where the introduced variables of the research model are:
Gini: Gini coefficient
INCT: Income tax
GT: Tax on goods and services (consumption tax)
GDPP: Gross Domestic Product Per Capita
EDU: Number of people registered in the second stage of education
UNEP: Unemployment rate
INF: Inflation index rate

4- RESULTS & DISCUSSION

According to the research results, the effect of tax structure on income distribution, which in this study is examined by separating two types of taxes, one is goods and services tax and the other is the income tax. The results showed that rising inflation reduces income inequality. Although this result contradicts the common view of the relationship between inflation and income distribution, it can reinforce the part of economic theories that the existence of inflation in proportion to economic growth increases per capita income, which leads to improved distribution. Regarding the education variable, the results indicate that income inequality will decrease as government spending increases. Because labor wages are determined by their relative productivity, education can increase labor productivity by increasing literacy and knowledge levels and thus increase their wages, thereby helping to reduce inequality.

5- CONCLUSIONS & SUGGESTIONS

According to the results, growth strategies must be considered along with income distribution. Establishing a strong tax system to prevent tax evasion as well as prevent illegal activities leads to the optimal size of government and the economy. If government interventions, if they are at their optimal level and social and educational programs are carried out to the extent that they improve social indicators, in addition to reducing the

problems related to income inequality, reducing People's inclination and entry into the economy will have a great impact and will help to improve the situation and reduce income inequalities. In proportion to the results obtained, for taxes to play an effective role in income distribution, in addition to increasing the tax base, unnecessary tax exemptions should be avoided. For example, it is proposed to reduce the corporate tax rate and increase the wealth tax due to the transfer of the tax burden from the corporate tax.

Keywords: Income Poverty, Tax Structure, Developing Countries, MENA, Panel Data.
JEL Classification: E21, H21, I24, I38

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Investigation of the Relationship Between Life Insurance Growth and Economic Growth in Selected Countries of MENA Region

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Extended Abstract

1- INTRODUCTION

Insurance is one of the useful tools of risk management to ensure the peace and comfort of people in the community. Considering the role of life insurance in helping people save and invest and its effective role in economic growth, we can understand the importance of this field of insurance in the economy of countries (impact on household economy in developed or developing countries). the purpose of this study is to investigate the relationship between growth of life insurance and economic growth in selected countries in the MENA region. Since there was no access to uniform statistics for all countries in the MENA region, the study was used on 13 selected countries in the region using balanced data for the period 1994-2017. In this study, in order to investigate the causal relationship between the growth of insurance industry activities and economic growth, the Demteresco and Herlein (DH) causality model has been used for the data panel.

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2- THEORETICAL FRAMEWORK

Considering the important role of the insurance industry, especially life insurance in the economies of countries, the study of the impact and also the impact of life insurance on economic growth in previous research were studied, which are divided into two categories.

2-1- The Impact of Life Insurance on Economic Growth

Four factors (population, natural resources, investment and technology) play an important role in the process of economic growth, the most important of which is capital or financial resources. for this reason, access to financial resources is very important to increase economic growth. one of the most important prerequisites for economic growth in all countries is financial resources for productive investments. access to financial resources can be provided through various means such as foreign borrowing, sale of bonds, etc. but the best way to provide it is to use people's savings. insurance is one of the important channels of savings and important financial institutions, which in addition to providing security for economic activity, also plays a key role in providing investable funds.

The insurance industry leads to the development of investments in economic systems in two ways. on the one hand, by guaranteeing the coverage it provides, it reduces the effects of investment threatening factors that result in the expansion of investments, and on the other hand, insurance companies participate in various economic and commercial activities as investors from the resources at their disposal. this way in paving the paths that lead to the development of the country play an important role. the greater the share of insurance in the economies of countries (insurance penetration rate), the greater the impact on economic growth.

2-2- The impact of economic growth on life insurance

Studies have shown that there is a two-way relationship between economic growth and the growth of the insurance industry. in most studies, the per capita income index is considered as a proxy for economic growth. one of the factors that has a strong impact on increasing the demand for life insurance is the income of individuals. demand for life insurance increases

as economic growth increases and, consequently, per capita income increases and, as a result, purchasing power increases. inflation also affects the demand for life insurance in two ways. first, inflation causes life insurance capital to be paid at a much lower real value than at the commencement date of the contract. in the context of inflation, if the insurance companies do not neutralize the negative impact of inflation on the real purchasing power of the insured capital by applying some appropriate methods, the purchase of life insurance policies will decrease day by day. as a result, it diverts people from the demand for life insurance and leads to safer or shorter-term investments. unemployment will have a negative impact on the demand for life insurance and, consequently, the growth of the insurance industry. according to research, one of the main motivations for buying life insurance is to protect family members against the early death of the breadwinner, and the amount of life insurance sales depends on the number of dependents on the breadwinner, which is called the dependency ratio (Campbell, 1980). With increasing population and increasing dependence on the breadwinner of the family, the risk of financial crisis of the family in the event of the breadwinner's death is felt more, so the need for insurance coverage in this area becomes more apparent.

3- METHODOLOGY

The main purpose of this study is to evaluate the causal relationship between economic growth and life insurance growth and their effectiveness. therefore, in order to investigate the causal relationship between the growth of life insurance activities and economic growth, the Demteresco and Herlein (DH) causality model has been used for the data panel. We first determined the effect of the economy and the insurance industry by examining the Demetresco Herlin causality test. then, in order to determine the effect of variables on each other, we used the pattern of simultaneous equations of panel data. to solve problems such as heteroskedasticity and heterogeneity, the research equations are estimated in three modes of primary model, resistant to heterogeneity and clustered (resistant to

heterogeneity and heteroskedasticity) and in each of the mentioned models by two methods of estimators of instrumental variables (IV) and torque. Generalized Momentum (GMM) is used.

4- CONCLUSION & SUGGESTION

Undoubtedly, the economic growth of countries leads to higher per capita incomes. this increase in per capita income will increase the demand for life insurance and consequently the growth of life insurance will have a new impact on economic growth. in other words, with the increase in per capita income, we will see a double impact on economic growth. another indicator that affects the growth of life insurance is the level of education. the higher the level of education will cause the higher growth of life insurance. of course, this positive connection can be due to the increase in public awareness and, as a result, the effort to secure their families' future, as well as possibly the greater demand for urbanization. population growth, which has a positive effect on economic growth, can also be affected by per capita income index, life expectancy and education level. one of the important indicators that has a positive effect on the growth of life insurance is the good governance index. this index includes the index of accountability and the right to comment, political stability, the absence of violence / terrorism, the quality of regulation, the rule of law, the effectiveness of government and the control of corruption. undoubtedly, if the governments of this region pay attention to these indicators, we can expect them to face the growth of demand for life insurance as well as the growth of the economy.

Keywords: Economic Growth, Life Insurance, MENA, Causal Relationship.

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Comparing the Effect of Exchange Rate Shocks on Activities of Housing Sector in Tehran and Mashhad Cities

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Extended abstract

1- INTRODUCTION

The exchange rate is a linkage between domestic and foreign economies. Exchange rate shocks are the main cause of economic fluctuations in commodity-exporting countries like Iran. Considerably, the housing sector has played a crucial role in the urban economy. The housing sector boom drives the urban activities and prohibits unemployment and marginalization in advance. Hence, the effect of exchange rate shocks on the activities of the housing sector could be supportive for policymakers. But different cities have dissimilar features so would be studied separately. To address this, the main aim of this study is to estimate the effect of exchange rate shocks on the housing sector in Tehran and Mashhad.

2- THEORETICAL FRAMEWORK

The macroeconomic situation may affect the housing sector paradoxically. There are several theories elaborating the effect of exchange rate shocks on the housing sector. On one side, the pull hypothesis says the inflationary condition move the housing sector toward a boom and vice versa. It emphasizes the positive effect of the exchange rate rises on the activities in the housing sector. According to this theory, when the assets price hikes, people tend to buy assets

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and save themselves from currency depreciation. Hence, this procedure pushes activities in all sectors including buildings. On the other side, the push hypothesis points that in the recession period, entrepreneurs would find the product input cheaper and it stimulates activities in subsectors of economy.

Another theory about the causality between the exchange rate and housing sector is the dutch disease and rational bubbles. This phenomenon leads to bubbles in housing (non-tradable goods) prices. Precisely, every exchange rate shock directly pushs up the price of buildings; therefore, building new houses grow up.

3- METHODOLOGY

This essay uses Factor-Augmented Vector Auto Regression (FAVAR). FAVAR is suggested for solving the limited information problem in VAR models and more variables can be used in these models. Our estimation is based on quarterly data during 1991-2018 for the housing sector of Tehran and Mashhad, also Iran macroeconomics variables.

4- RESULTS & DISCUSSION

According to the impulse-response functions, the exchange rate impuls cause the similar response in the most of the variables, but size and duration of responces differ gentely among the citites. In both Mashhad and Tehran, the land price grows more rapidly in the short –as a consequence of inflation expectation- and after some quarters, this growth is lost. It is noteworthy that the growth of land price and apartment price in Tehran is roughly two times greater in comparison to Mashhad. It indicates the Tehran housing market responde faster and greater to exchange rate shocks and inflationary situations. When it comes to the apartment price, the growth of this variable is less in comparison to the land price in these cities which is rooted in the inherent scarcity of land in metropolises.

The IRFs show a considerable difference between citities in response of the number of finished buildings and the area of finished buildings. While the number of finished buildings in Mashhad remained unchanged in the long run, the area has increased. Its illustrations that investors in Mashhad have a significant propensity to bigger apartments. It stemmed from increasingly huge

construction costs and cheaper land prices in marginall and new areas of Mashhad. In this regard, Tehran face to an adverse situation. The growth of finished buildings numbers is more than the growth of area confirming that the investors will invest in smaller apartments in Tehran. Hence, outcomes elaborate that investor are willing to build bigger apartments in Mashhad city and smaller apartments in Tehran.

5- CONCLUSIONS & SUGGESTIONS

Exchange rate has an influence on biuliong sector and an impact on all of the urban activities through it. This essay trys to estimate this effect using FAVAR model and quartlerly data of Iran macroeconomic variables and also Tehran and Mashahd housing sector data during 1991-2018. Results show exchange rate shock, propogate housing sector prices and acrtivities in both cities, but there is dissimilarity in the timing and size of effects. Study lay stress on the differences, and emphasize that distinctions should be considered by local policy makers and they should not imitate the capital city programs.

Keywords: Housing Sector, FAVAR Model, Exchange Rate Shocks, Mashahad Metropolis.

JEL: O18, C38, F31, N95.

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