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In the Name of God

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## Monetary Shocks Effects on Different Economic Sectors: Using the FAVAR Approach

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Received: 2017/10/22 Accepted: 2017/12/24

### Abstract

According to economic conditions, the central bank in monetary policy decisions considered not only information over the economy but also the situation various economic sectors. The purpose of this article is to examine the impact of various economic sectors of a monetary shock on the economy of Iran. Therefore this connection has been reviewed by using the Factor-Augmented VAR (FAVAR) with 215 data variables, during the period 1990:02 to 2017:01. The results suggest that the added value of different sectors show different responses facing a monetary shock. In a way that So that the service group has a higher sensitivity to monetary shocks than the mining and agricultural sector and the oil sector does not show a significant response to monetary shocks. According to the different impact of different economic sectors, central banks and monetary authorities should consider all sectors reaction when the monetary policy actions, in order to be more precise in planning the national economy.

**Keywords:** *Monetary policy, Factor-Augmented VAR, Reaction of various economic sectors, Monetary transmission mechanism.*

**JEL classification:** *C30, E40, E50.*

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## A Comparative Study of the Efficiency of Optimal Monetary Policy in Iran

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### Abstract

Since achieving low and stable inflation alongside economic growth considered as the ultimate goals of central banks and success in macroeconomic performance, on this paper effectiveness of monetary policy in Iran is investigated. In other words, the aim of this study is to determine optimal monetary policy rule to stabilize output gap and inflation deviation. In this way, using Dynamic Programming, monetary policy maker's loss function with respect to monetary transmission mechanism constraints will be minimized and optimal monetary policy rule is extracted. In this paper, to evaluate optimal rule changes during the 1994-2015, the total time period is divided into two periods 1994-2004 and 2005-2015 and the efficiency monetary policy changes in two periods examined and compared. The results of optimization and achieving optimal monetary rule in the first and second period shows the sensitivity of policy makers to deviations of inflation and output gap in the second period has increased than the first period. And also, the reaction of money supply growth rate to output gap was more severe than inflation deviation in the whole period. According to the estimated results, policy makers could increase economic growth in the short term by monetary expansion but should accept higher inflation and lower long-term growth during 2005-2015. In the other words, policy makers obtain benefits by monetary contraction in the form of lower inflation and long-term economic growth.

**Keywords:** *Monetary policy, Dynamic programming, Optimal monetary rule, Iran.*

**JEL Classification:** *C41, C61, E52, E58.*

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## Investigation of Producers Financial Challenging's with Emphasis on the Role of Monetary Policy and the Banking Sector Credits: Application of DSGE Model

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### Abstract

This study has investigated the challenges of financing of Iranian manufacturing institutions, considering the function of monetary policy and banking sector's credits in the form of a DSGE model. For this, the real per-capita of seasonal data of 1995 to 2014 that have been detrending by Hodrick-Prescott Filtering and the calibration method were used to extract the parameters. After modeling and explaining the equations of each section, in relation to optimization and simulation of the model using variable moments were performed. The results obtained confirmed the relative success of the simulated model with the realities of Iran's economy. Afterwards, the functions of the instant reaction to productivity shock and the shock of growth in money volumes were reviewed. The results showed that the positive shock of productivity and the growth of the volume of money increased the production via the channel of increasing investment and lowering interest rates respectively. That the results were consistent with the theoretical expectations and economic realities of Iran.

**Keywords:** *Monetary policy, Financing, Banking sector, DSGE model.*

**JEL Classification:** *E23, E52, G17, L10.*

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## **A Proposal of Price Regulation Plan for Telecommunication Company of Iran**

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### **Abstract**

In a monopoly, monopolist because of the market power –if consumers desire to pay- can charge high prices for its products or services, and consequently can supply the low quality productions in high prices. So, the intervention of a regulator to protect the consumers' interests is necessary. Because of the monopoly structure of the Iranian Telecommunication Industry -even after transferring to private sector- this study offers a price cap regulation plan for regulating the Telecommunication Company of Iran. In fact, presenting a classification for its services, this study determines a price cap for services baskets of Telecommunication Company of Iran, so that diminish its monopoly power and propel its prices to fair prices that are the aim of economic regulation. The aim of this study is no calculation, but proposing a model. Regulator can use the model via substitution of data. However, an example is represented to understand the model.

**Keywords:** Price regulation, Natural monopoly, Effective competition, Rate of return, Price cap, Telecommunication Company of Iran.

**JEL Classification:** L43, L51, L96.

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## Investigating the Effects of Different Kinds of Infrastructures on Income Distributions of Provinces in Iran: A Generalized Method of Moment Approach

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### Abstract

One of the main subjects, all governments are facing is the just distribution of income, and trying to improve it; because of the consequence of unjust distribution of income studying different aspect of it is very important. In this regard, we have studied the effects of different kinds of infrastructure; economic (energy, water, ICT), social (health, education), on the inequality of the Iranian provinces for the period of 2006-2016. We have used the Dynamic Panel Data and GMM models. The results show that enhancement of social and economic infrastructures will reduce the inequalities. According to research findings, the increase in social and economic infrastructures has reduced the income inequality in society. As infrastructure of healthcare, information and communication technology, energy and water have the most impact on income inequality, respectively. Therefore, in order to reduce inequality in deprived areas, the combination and optimal allocation of economic and social infrastructures should be considered.

**Keywords:** *Economic and social infrastructures, Inequalities, Dynamic Panel, GMM.*

**JEL Classification:** *C23, H54, O15, R58.*

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## Extraction of Optimal Fiscal and Monetary Policy Rules in Framework of Game Theory: Application of Dynamic Stochastic General Equilibrium Model

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### Abstract

In the recent decades, implementation of fiscal and monetary policies between the government and the central bank has been one of the interesting topics among economists. Many researchers believe that implementation of fiscal and monetary policies based on the rule and commitment can smooth the access path to a sustainable level of economic variables. Also, different methods have been studied by researcher for this subject. Game theory and Dynamic Stochastic General Equilibrium (DSGE) models are two instruments and methods for considering this issue. Hence, in this current study in framework of Game theory and DSGE Models, optimal rule for monetary and fiscal policy-maker in Iran economy are obtained. The result of this study shows that the value of social welfare is more, when government and central bank behave in framework of cooperative than non-cooperative. On the other hand, in cooperative than non-cooperative case, a larger share of oil revenues as foreign reserves is kept at the central bank.

**Keyword:** *Game theory, Cooperative and non-cooperative games, Optimal policy rule, Dynamic stochastic general equilibrium model, Iran economy.*

**JEL Classification:** *C71, C72, E52, E62.*

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## The Effects of Real Exchange Rate on Economic Growth in Iran: New Findings with Non-Linear Approach

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### Abstract

Exchange rate is one of the most important macroeconomic variables that affects on many other economic variables. Because of importance the exchange rate, determining the exchange rate has been one of the most challenges of exchange policy in Iranian economy. The goal of this article is to investigate real exchange rate how affects on economic growth in Iran during 1975-2015. For do it, by using Markov Switching method and non-linear specification of real exchange rate, threshold value of real exchange rate has been calculated, so that when the real exchange rate is less than the threshold level, there is a significant positive relationship between real exchange rate and economic growth but after this threshold value and staying in high real exchange rate regime, there is a significant negative relationship between real exchange rate and economic growth. The threshold value of real exchange rate estimated about 14000 Rials. In the estimated growth model, other effective factors on economic growth are the growth of physical capital and the first lag of economic growth.

**Keywords:** *Real exchange rate, Economic growth, Threshold exchange rate, Markov switching method.*

**JEL Classification:** C50, F31, O24, O40.

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## The Effects of an Increase in the Investment and the Total Factor Productivity of the Mining Sector on the Value Added and Export of Different Economic Sectors in Iran

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### Abstract

The mining sector is able to accelerate the economic growth and development in countries by providing raw materials of production, employment, value added and tax revenues. This is possible by adopting correct policies in this sector and through understanding its importance in the economy and assessing the effects it may have on the other economic sectors. In this regard, this study by using a dynamic computable general equilibrium (DCGE) model and social accounting matrix (SAM), analyzes the effects of an increase in the investment and total factor productivity of the mining sector on the value added and export of economic sectors in Iran. According to the findings, an increase in the mining sector's investment, positively affects the value added and export of all economic sectors in Iran. In addition if the total factor productivity and the investment of the mining sector increase simultaneously, by assuming the stability of the other conditions, the resources including the labor force and capital will be absorbed and reallocated from other sectors to the mining sector. Although according to the backward and forward spillover effects, the value added and export of the other sectors in comparison to the basic scenario will increase, but the growth of the value added and export of the mining sector will be far more than the other economic sectors of the country. The results also reveal that the development in the mining sector in Iran has the least effect on the agricultural sector and the most effect on the energy sector.

**Keywords:** *Mining, Investment, Productivity, Computable general equilibrium.*

**JEL Classification:** *E22, O33, Q32.*

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