The Effect of Term of Trade's Shocks on Private Saving in Iran

Badrzade, F.[1], Barghi Oskooee, M. M.[2*]

Abstract

The term of trade's shocks, as one of the main sources of economic fluctuations in developing economies that affects macroeconomic variables, including private saving, is one of the important factors determining capital formation and economic growth and development of countries. Iran is one of the countries that earn a large part of its export revenues from the exports of oil resources. Therefore, considering the dependence of Iranian economy on oil revenues and the important role of private saving in economic growth and development of the country, investigating the factors affecting private saving, including the effect of term of trade volatility, is of great importance. Few studies have examined the effect of term of trade's shocks on private saving and, to date, no study has been carried out on this issue in Iran. Therefore, the present study uses the time series data of 1360 to 1396 (1981-2017) to study the effect of term of trade fluctuations on private saving in Iran. In this study, using GARCH model, the amount of fluctuations of the country's term of trade relationship was calculated for for these years. The effect of the effect of term of trade's shocks on private saving was investigated using the ARDL and Error Correction Model self-explanatory pattern. In order to study the stability of the model's coefficients, Cumulative Residual Tests (CUSUM) and Cumulative Waste Squares (CUSUMQ) were used. The results revealed a negative relationship between effect on the term of trade's shocks and private saving in the period under study.

Kaywords: Term of Trade's shocks, Private saving, GARCH-ARDL.

JEL Classification: F32, F40, F4.

1. Introduction

Term of trade's shocks, is one of the main obstacles to economic growth today, and an important factor in worsened income distribution and economic instability of countries, especially in developing countries whose economies depend on the income from oil resources. Therefore, Iran's economy is highly dependent on changes in oil prices, and with the fluctuations in world oil prices, the country's Term of Trade's relationship also fluctuates and becomes unstable. Therefore, exchange rate fluctuations can have significant effects on macroeconomic variables, including private sector savings in capital formation and investment and economic growth in the country. Also, given the international oil markets and the forecasts related to it, the future environment is not likely to provide the ground for public sector savings. Therefore, according

1. Master of Economic Sciences, Tabriz University   **Email:** fatemeh.badrzadeh66@gmail.com

2. Associate Professor of Economics, Tabriz University   **Email**: Mahdi_oskooee@yahoo.com

to the general policies of Article 44 of the Constitution to strengthen the private sector and explain the aims set out in the 20-year development plan of the country, the main action to be taken for achieving savings should be to recognize the factors affecting private sector savings, strengthen national savings and provide the necessary financial resources for investment.

2. Method

The proposed model for investigating the relationships between the variables in the present study is as follows (1):

$$LPS_t = a_0 + a_1 LGRPY + a_2 LEXR + a_3 TV + DU \tag{1}$$

$LNPS_t$ is the log per capita savings in year t, which is obtained by dividing private sector savings by the total population private savings per capita. $LEXR$ is the log of the official exchange rate in year t. TV represents the term of trade's shocks in the year t. In the present study, as in the studies by Kazeruni (2001) and Ikenna Mattew (2016) study, GARCH model was used to calculate it for Iran. Du: is the dummy variable (DUMMY), an imaginary variable for the war years. U_t shows the Disturbance Term.

All the statistics and information related to the model variables were obtained from the Central Bank of the Islamic Republic of Iran in the National Accounts section, annually for the period 1360-1386 (1981-2017).

The present study is an applied research in terms of purpose and descriptive-analytical in terms of method. The main research model was estimated by Autoregressive Distributed Lag Model (ARDL). For this purpose, first the short-term dynamics, and then the long-run relationship dynamics and the Error Correction Model (ECM) factor were investigated.

3. Findings

The results of estimations confirmed the effect of term of trade's shocks in the short run; it was found to have a positive and significant effect on private sector savings per capita in Iran during the years under study. This shows the stability of consumer behavior. Also, the results of long-term estimation showed a negative and significant relationship between these two variables. In the long run, due to the economic and political conditions of Iran and due to the dependence of the country's exports on raw materials, increased relationship between trading and consumption of imported consumer goods and non-commercial goods led to reduced savings. Also term of trade's shocks in a fixed exchange rate system with real exchange rate adjustment led to exchange rate instability lack of internal and external balance in the country's economy. It reduced investment and domestic production and increased inflation. According to the existing financial system in Iran, with the increase in inflation and

decrease in real interest rates, people increase their consumption and, consequently, decrease their savings.

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