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Investigating Dynamic Relation between Tax Structure and Economic Growth in Iran with Emphasis on Uncertainty

Sameti, M[1*]., Mohamadi, V.[2], Shamsi, M[3]., Asadi, F.[4]

Abstract

The structure of the tax system and the various sources of tax revenues are one of the most important pillars of countries' economic development. Taxing and expanding tax bases is one of the tools used by governments to play a leading role in economic policies. In this regard, the stability and assured sustainability of the tax structure and revenues is an important issue that needs to be examined and analyzed. Therefore, one of the most important issues in the structure of the tax system is to examine the effect of uncertainty in tax revenues on economic growth or GDP. Due to the volatility in tax revenues in Iran, investigating the relationship between types of tax revenues and GDP is of great importance in the area of government fiscal policy-making. Therefore, using GARCH model and ARDL approach, this study investigates the extent and the impact of uncertainty in the Iranian tax structure on GDP from 1978 to 2017. According to the results, tax uncertainty in Iran can have both positive and negative impacts on economic growth. Thus, the variables of Uncertainty in Tax on Goods and Services (UTGS), Uncertainty in Tax on Imports (UTIM), and Uncertainty in Tax on Wealth (UTW) have had a negative impact on economic growth in Iran. Nevertheless, the variables of Uncertainty in Tax on Legal Entities (UTLE) and Uncertainty in Tax on Revenue (UTR) have had a positive impact on Iranian economic growth. In addition, the variable of Budget Spending had a positive but insignificant impact on Iranian economic growth. Finally, GDP has been influenced by a positive, significant and considerable impact of its first lag.

Keywords: Tax structure, Tax uncertainty, Direct tax, Indirect tax, Economic growth.

JEL Classification: H25, H71, O47, D80

1. Introduction

Due to the economic volatility, uncertainty in the government tax revenues of the Iranian economy is one of the important factors that always lead to some uncertainties in acquiring these revenues. In general, tax policies pursue a

1. Associate Professor of Economics, University of Isfahan **Email:** majidsameti@ase.ui.ac.ir
2. M.A. in Oil & Gas Economics, Petroleum University of Technology **Email:** v.mohammadi@tfp.put.ac.ir
3. M.A. in Economic Sciences, Islamic Azad University of Isfahan (Khorasgan) Branch **Email:** mozafari.h1988@khuisf.ac.ir
4. M.A. in Economic Sciences, Islamic Parliament Research Center **Email:** fasadi2007@gmail.com

variety of political goals. One of these tax policies is to maintain stability, predictability and reduce the volatility and uncertainty in tax revenues. Tax policies seek not only to increase the financial resources necessary for government spending but also help income redistribution, economic stability, and optimal resource allocation, and, at the same time, contribute to economic growth (Desislava Stoilova, 2017). In Iran, reforming the tax system and structure and expanding tax bases have always been one of the issues that are at the forefront of important economic issues. Since the Iranian economy is resource-based and has always faced international sanctions and uncertainties (volatility) in tax revenues, attention has been paid to expanding sustainable sources of tax revenues, reforming the tax structure, and reducing tax uncertainty, especially in recent years. In this regard, four questions arise: 1) What is the contribution of the tax structure, or in other words, different sources of tax revenues (direct and indirect taxes) to the total government tax revenues? 2) Are there any uncertainties in the contribution of tax resources? In other words, has the contribution of different tax resources during the years under review been highly volatile or a stable trend? 3) How is the impact of tax revenue resources and volatility on Iranian economic growth, and how much is it?, and 4) What reforms should the government make to the tax structure to increase tax revenues, accelerate economic growth, and reduce tax volatility? Therefore, to answer these questions, this study seeks to measure the presence or absence of uncertainty (volatility) as well as the extent and quality of effect of each of the sources of revenue on GDP in the Iranian tax system.

2. Introducing Research Pattern and Data

According to the research objectives, using Desislava Stoilova's (2017) model and variables, this study seeks to estimate the relationship between variables according to the following equation:

$$LGDP_t = \beta_0 + \beta_1 LTLE_t + \beta_2 LTR_t + \beta_3 LTW_t + \beta_4 LTIM_t + \beta_5 LTGS_t + \beta_6 LBS_t + \varepsilon_t \quad (1)$$

As seen in the equation, all variables of the research pattern are logarithmic. In the above equation, LGDP is the logarithm of the Iranian GDP (in constant prices in 2004) in billion Rial, LTLE is the logarithm of tax on legal entities (in billion Rial), LTR represents the logarithm of tax on revenue (in billion Rial), LTW denotes the logarithm of tax on wealth (property) (in billion Rial), LTIM indicates the logarithm of tax on importing goods and services (in billion Rial), LTGS is the logarithm of tax on goods and services consumption (in billion Rials) and LBS (Budget Spending) represents the logarithm of the sum of current payments and appropriations of capital assets[1] in government budget (in

1. In the new structure of the government budget, the number of resources paid by the government for various purposes is derived from the sum of current payments and the acquisition of capital

billion Rials). Since tax revenues in Iran for many years are usually received with delays, and because of the uncertainties and volatility they have, they often have an impact on the economy through interruptions. Therefore, in the present study two econometric methods were used, namely GARCH and ARDL, to assess the quality and extent of the effects of tax volatility or uncertainties on Iranian economic growth (GDP). All required information on variables was obtained from the Central Bank Time-Series Website from 1978 to 2017. All estimation steps were also performed using Microfit 5 software as suitable software for estimating time-series data.

3. Analysis of Findings and Conclusions

In the Iranian economy, given the priority of resistance economy policies, the move towards reducing economic reliance on oil revenues and the importance of establishing sustainable and equity-based tax revenues, investigating the effect of uncertainty in tax revenues on economic growth (GDP) is of high importance to the government and economic policy-makers. Hence, this study measured the impact of uncertainty in the fivefold tax revenues of the government on Iranian economic growth (GDP) from 1978 to 2017 using GARCH and ARDL models. Before estimating the model, the variables were analyzed before and after the uncertainty estimation. Since there was a combination of stationary and non-stationary variables in the model, the ARDL estimation method was used. After estimating the short-run dynamic relationship, diagnostic tests were used to ensure the accuracy of the model estimation. Moreover, considering the long-run relationship between the variables, the error correction model (ECM) was used to estimate the short-run to long-run deflator. For the Iranian economy, the results of the model estimation showed that the uncertainty in tax on legal entities and tax on revenue has a positive and significant effect on economic growth. Besides, the uncertainty in the tax on goods and services, tax on imports, and tax on wealth has a negative impact on the Iranian economic growth. According to the results, the number of government payments from the budget had a positive but statistically insignificant effect on Iranian economic growth. Besides, during the period 1978-2017, GDP was directly and significantly affected by its first interruption. Thus, assuming other conditions are stable, 1% of GDP growth this year will lead to a 0.5% growth in the next year.

Studies in this regard have shown that direct taxes such as tax on revenue, tax on legal entities, and tax on wealth are in line with the principle of payment. This has a positive effect on economic growth because of the progressive tax systems in place. Taxation is, therefore, the participation of the people in providing part of the public expenditure and the most important means of organizing the economy of any country. Thus, if tax on revenue is coupled with

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assets. This variable is available in the old structure as budget spending on the Central Bank Website.

the encouragement of taxpayers, greater clarity on the quality of the cost of tax revenues and incentives not to conceal the revenues of individuals and companies can provide economic growth and reduce unproductive activity. In addition, the role of the tax on imports in supporting domestic production was significant. There are certain reasons for this. First, with an increase in the tax on imported goods, further domestic production can be boomed. Second, by supporting and enhancing domestic production, it generates significant sources of government tax revenues and promotes economic growth. According to the results and the negative impact of UTGS on economic growth, one simple way to increase the efficiency of these taxes is to set different and planned tax rates on consumption goods for low-income and high-income individuals because the current implementation method of this law is more in favor of high-income individuals. Furthermore, based on the quantitative results and the negative impact of tax uncertainty in the tax on imported goods and services on economic growth, it can be stated that the Iranian economy is affected by the volatility of foreign trade volumes, especially imports, and consequently, the tax revenues obtained thereof. Thus, planned imports, reducing unnecessary imports, and supporting domestic production in line with the policies of Resistance Economy can indirectly contribute to reducing uncertainty and improving Iranian tax structure. In general, given the negative impact of tax revenue volatility, including uncertainty in tax on wealth, tax on imports, and TGS, it is suggested to identify the source of tax volatility of the country (intermittent changes in tax bases, tax exemption, etc.) to improve the economic growth process using tax revenues. It is also suggested to reduce volatility by implementing stable and predictable policies for long periods.

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