



## An investigation the impact of Factors affecting the optimal tax rate in Iran's economy

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Type of Article: **Research**

10.22126/pse.2024.10527.1119

Received: 23 April 2024; Accepted: 11 June 2024

P.P: 271-300

### Abstract

The public sector and its role in the implementation of financial policies for Iran are of special importance for two reasons. On the one hand, the main source of government income is the foreign currency income from oil exports, which is strongly affected by international shocks, and on the other hand, due to the prominent role of the government in Iran's economy, the government's financial behavior in the form of annual budgeting and policies Government finance, like tax collection, has a great impact on other productive sectors. Therefore, it is necessary to follow the implementation of financial policies with special care. In this regard, tax is one of the most stable government revenues and can be used as a tool to implement social justice and encourage investment. Tax collection in an optimal way can have an effect on economic indicators in addition to its positive effects. The purpose of this article is to determine the effective factors on the optimal tax rate in Iran's economy during the period of 1981-2016 with the help of the optimal control method. The results of the research show that the consumption ratio of the private sector to the public sector and the depreciation rate have a negative effect, the ratio of public sector investment to the private sector, capital stock, technical progress coefficient, the elasticity of production compared to the investment of the public and private sectors have a positive effect on the optimal tax rate. are Among the mentioned factors, the ratio of private sector consumption to the public sector and the elasticity of production compared to private sector investment have the greatest impact on the optimal tax rate. Depending on the value of the mentioned variables, the optimal tax rate in the economy is between 22.88 and 25.5 percent. The average tax rate in the period under review was about 14% at constant prices. One of the reasons for the low tax rate is the existence of tax exemptions, the exclusion of taxes on some activities, and the dependence of the government budget on oil. Therefore, for the optimization of taxation in the economy, it is necessary to expand the tax bases, prevent tax evasion in the economy, collect taxes in a targeted manner from activities, reduce the government budget deficit, especially the current budget, remove dependence on oil revenues, and downsize and reduce the administration of the government. The attention of policy makers.

**Keywords:** Tax, optimal control, government, financial policy, Optimal control method.

**JEL Classification:** H21, G18, H30.

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**Citations:** Fatemi, M.; Zayandahroodi, M.; Fatemi Zardan, Y. (2024). "An investigation the impact of Factors affecting the optimal tax rate in Iran's economy". *Public Sector Economics Studies*, 3 (8), 271-300.

**Homepage of this Article:** [https://pse.razi.ac.ir/article\\_3097.html?lang=en](https://pse.razi.ac.ir/article_3097.html?lang=en)

## 1. Introduction

Different approaches have been proposed regarding how the government intervenes in the economy. The view of classical economists is based on the non-interference of the government in the market. On the other hand, Keynesian economists believe that the duty of the government is not only to guard the market economy, but the government can help economic growth and development through financial policies. Financial policies are particularly important for Iran for two reasons. On the one hand, the main source of the government's income is the foreign exchange income from oil exports, which is strongly affected by international shocks, and on the other hand, due to the strong role of the government in Iran's economy, the government's financial policies, such as collecting taxes on other production sectors, have a great impact. Therefore, it is necessary to follow the implementation of financial policies with special care. In this regard, tax is one of the most stable revenues of the government and can be used as a tool to implement social justice and encourage investment. Taxation in an optimal way can have an effect on economic indicators in addition to its positive effects.

## 2. Theoretical Framework

Governments need income to perform their duties, and for this reason, they get help from political tools such as tax collection. By using taxes, the government can provide financial support in addition to political use. But these taxes should not be suboptimal. Because they cause irreparable effects on the economy. Therefore, it is necessary to calculate the optimal tax rate. In this field, studies have been carried out, which can be referred to Wangsa et al (2023), Niyazmetov et al, (2023), Hadian et al (2023), Tian et al (2023), Massoud Saadat Mehr (2022), Kalani Mahabadi and colleagues (2021), Nasirabadi et al. (2021), Aghaei and Madah (2019), Karimi et al. (2019), Ghaffari et al. (2015), Rajabi et al. (2013) and Dadger et al. (2012).

## 3. Methodology

In this research, first, the subject was studied through previous studies, and then the data needed to estimate the model was extracted. Data collection was done in three ways: 1- Some data were collected through websites and statistical centers such as the website of the Iranian Statistics Center and the Central Bank of Iran. 2- Some data were extracted through previous studies and calculations done by other researchers. 3- Some other information was obtained by the researchers' own calculations. The purpose of this article is to determine the factors affecting the

optimal tax rate in Iran's economy. For this purpose, the optimal control method and data of the period 1981-2019 have been used.

#### **4. Discussion**

The results of the research show that the consumption ratio of the private sector to the public sector and the depreciation rate have a negative effect, the ratio of public sector investment to the private sector, capital stock, technical progress coefficient, the elasticity of production to the investment of the public and private sectors have a positive effect on the optimal tax rate. Among the mentioned factors, the ratio of private sector consumption to the public sector and the elasticity of production to private sector investment have the greatest impact on the optimal tax rate. Depending on the value of the mentioned variables, the optimal tax rate in the economy is between 22.88 and 25.5 percent. The average tax rate in the period under review was about 14% at constant prices.

#### **5. Conclusion and Suggestions**

As the results showed, during the past years, a large part of the government's income was obtained through the sale of oil, and the share of tax income was less. Unfortunately, the price of oil experiences a lot of fluctuations and this variable is beyond the control of the government. Therefore, reducing dependence on oil and improving the tax system is one of the most important solutions that can be considered as a way to provide income in the economic sanctions situation. Also, since the inflation rate has increased very much in the last few years, increasing the real tax rate and bringing it closer to the optimal tax rate can act as a contractionary fiscal policy and reduce inflation. However, it should not be forgotten that an excessive increase in the tax rate will cause adverse effects such as a decrease in production, decline in investment and capital flight. Therefore, in order to optimize the economy, expansion of tax bases, targeted taxation of activities, reduction of the government budget deficit, especially the current budget, should be taken into consideration by policymakers.

#### **6. Ethical Considerations**

##### **6.1. Authors' contribution**

The authors of the article, while complying with the publication ethics, have contributed equally to this research.

## **6.2. Conflict of interest**

The author declares that there is no conflict of interest in this research.

## **6.3. Acknowledgments**

This study does not have the material and spiritual support of any university or organization.