



## Investigating the long-term effects of tax collection and economic policy uncertainty on taxpayers' defensive behaviors with the PMG approach: A case study of selected Tehran stock exchange companies\*

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Type of Article: **Research**

10.22126/pse.2023.8516.1012

Received: 01 December 2022; Accepted: 09 January 2023

P.P: 333-354

### Abstract

Uncertainty about economic policies has negative effects on the performance of macroeconomic variables as well as uncertainty in many other investment behaviors. Examining the factors affecting the tax burden, including the uncertainty of economic activities, has a wide range of transient policy implications in this area. Due to this issue, the purpose of this study was to investigate the effect of tax collection on the relationship between uncertainty of economic policies and corporate tax burden during the period 2012-2020 in selected companies of Tehran Stock Exchange with the ARDL panel (PMG) approach. The results of this study showed that tax collection reduces the relationship between inflation uncertainty and corporate tax burden. The coefficient of the error correction model was also significant at the level of 95% confidence. Other results of this study showed that the ECM coefficient was around -0.265, which indicates that if a shock is applied to the dependent variable, it will take about 3 to 4 periods for this variable to return to its long-term trend.

**Keywords:** Tax Burden , Stock Exchange, Tax Collection, PMG Method, Inflation Uncertainty.

**JEL Classification:** G38, F44, C23.

\*. This paper extracted from Ph.D thesis of Derakhshan Heidari with Dr. Kiomars Sohaili as the thesis supervisor in Razi University.

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**Citations:** Heydari, D.; Sohaili, K. & Falahati, A. (2024). "Investigating the long-term effects of tax collection and economic policy uncertainty on taxpayers' defensive behaviors with the PMG approach: A case study of selected Tehran stock exchange companies". *Public Sector Economics Studies*, 3 (9), 333-354.

**Homepage of this Article:** [https://pse.razi.ac.ir/article\\_2477.html?lang=en](https://pse.razi.ac.ir/article_2477.html?lang=en)

## 1. Introduction

Due to the importance of tax revenues in the economy of any country, it is necessary to identify the potential factors affecting the tax revenues of governments, and therefore, it is of interest to economists. A typical developing economy collects only 15% of GDP as taxes; While compared to the 40% collected by a typical advanced economy, it is a small amount. The ability to collect taxes commensurate with a country's capacity to finance social services such as health and education, critical infrastructure such as electricity and roads, and other public goods is critical. Considering the vast needs of poor countries, this low level of tax collection puts economic development at risk. Tax collection is a variable that affects many variables and is also affected by macro variables. Governments tend to implement economic policies, laws and regulations that are in line with the goals and guidelines of companies. When governments change or modify these economic policies and laws, they respond by changing their business operations. This is done in order to maintain a strong and healthy economy by adapting to the changes that are made for the benefit of the company. Global experiences indicate that due to the way decisions are made, policy and implementation process, economic policies usually cause uncertainty to a great extent, which can have a great impact on the financial market and the behavior of companies, such as Understatement or exaggeration impose a decision.

Uncertainty is a vague yet broad concept that exists in the mind of a wide group of people such as customers, company managers, and policy makers about the possible future prospects. Uncertainty is a problem that people in all countries face; But in developing countries, due to the sudden and more severe changes in economic policies, the existence of some structural problems such as the lack of necessary financial resources, the lack of transparency of the information system, and the lack of efficient markets, there is an expectation that there will be uncertainty compared to developed countries. be at a higher level. If future changes in economic variables consist of the sum of predicted and unpredicted changes, then the uncertainty of an economic variable will include the unpredictable change of that variable. With the increase of uncertainty in economic policies, the tax burden of companies will increase and when the tax quotas increase, their effect will also increase.

In addition, the weakening of the economic policy strengthens the tax collection by increasing the financial pressure of the government and as a result increasing the tax burden of the companies. The results show that the effect of economic policy uncertainty on the tax burden of companies is significant, primarily in state-owned companies or enterprises, non-technological companies, and companies active in the service industry; Therefore, it can be said that uncertainty about economic policies has negative effects on the performance of macroeconomic variables as well as investment behaviors.

## 2. Methodology

The purpose of this study is to investigate the effect of the amount of tax collection on the relationship between uncertainty about economic policies and the tax burden of companies. In other words, the main goal of this research is to investigate the uncertainty of economic policies on the defensive behavior of taxpayers in companies listed on the Tehran Stock Exchange with the PMG approach. The approach of this article is to estimate the long-term effects of the amount of tax collection and uncertainty of economic policies on the tax burden of companies with a panel approach. The data used in this study includes 83 companies during the period from 2010 to 2018 including 747 observations for each variable.

## 3. Conclusion and Suggestions

The results of the present study showed that tax collection had a negative and significant effect on the relationship between inflation uncertainty and the tax burden of companies. The coefficient of the error correction model was negative and significant at the 95% confidence level. The ECM coefficient was equal to -0.265, which shows that if a shock is applied to the dependent variable, it will take about 3 to 4 periods for this variable to return to its long-term trend. The results of estimating long-term effects have shown that inflation uncertainty, as a measure of economic uncertainty, has positive and significant effects at the 95% confidence level on defensive behavior in the investigated companies. Also, based on variable results, tax collection also had a positive and significant effect (at the 95% confidence level) on defensive behavior. Similar results have been obtained for the variables of company size, leverage, return on company assets and Tobin ratio. These results indicate that the greater the attempt to evade tax, the more leverage the company has, the larger the size of the company or the higher the return on the company's assets, the effects of these variables on tax evasion will be greater. These results are consistent with what was stated in the theoretical literature and research background. The results showed that the long-term impact of inflation uncertainty on taxpayers' defensive behavior was positive and significant. Based on other results of this study, the amount of tax collection has reduced the relationship between inflation uncertainty and the tax burden of companies. These results show that when governments adjust economic policies to stimulate the economy, they should consider the negative effects of economic policy uncertainty caused by frequent changes in economic policies and maintain the transparency and stability of economic policies. Considering this issue, policymakers should reduce policy uncertainty to ensure that the effects of tax reduction policies are not neutralized by the effect of tax increase uncertainty.

Also, Iran's tax system needs corrective solutions. In order to achieve the set revenues, the tax administration should take strong measures in the field of tax

collection and implement the correct management of value added tax, including improving research methods and creating mixed types between financial services. The office can also seek efficiency through local communications and educate our business and administrative partners on real tax issues. This helps to provide the best quality of service to users, evaluate the potential of different regions and effectively support the Ministry of Economic Affairs and Finance and provide financial and educational support to partners.

#### **4. Ethical Considerations**

##### **4.1. Compliance with ethical guidelines**

The present study has followed the scientific principles of research.

##### **4.2. Funding**

This paper is an extract from a PhD thesis of the first Author at Razi university and it does not have the financial support of any organization.

##### **4.3. Authors' Contribution**

According to the authors, this paper is an extract from a PhD thesis. As a result, the first author wrote the article with the guidance and supervision of the second author and the consultation of the third author.

##### **4.4. Conflict of Interest**

The authors declare no conflict of interest.

##### **4.5. Acknowledgments**

Here, I need to express my thanks and appreciation for the valuable efforts and guidance of Dr. Kiomars Soheili and Dr. Ali Flahati.