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Investigating the Effect of Fiscal Variables on Iran's Economic Well-being

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Abstract

Expenditures and tax revenues are among the most important fiscal instruments available to the government to affect the economy. Considering the prevailing conditions in economies, governments can create acceptable economic prosperity by determining and applying fiscal policies. The role of government fiscal instruments on economic welfare has been an issue that, contrary to its importance, has been less considered in domestic and foreign studies. Therefore, the present study aims to calculate economic well-being during the last five decades and analyze its determinants. For this purpose, first, the index of economic well-being has been calculated based on four dimensions of consumption flows, wealth stocks, economic inequality and economic insecurity. The results of calculating the index of economic well-being show that the highest level of economic well-being with 174 is related to 2017, and the lowest level with 71 is related to 1971. Then, the effect of government fiscal instruments and other variables in the form of two models using the autoregressive distributed lag (ARDL) model from 1971 to 2020 has been examined. The long-term results of estimating the research model in two formats show that the size of the government and the ratio of current expenditures to construction have a direct (favorable) and reverse (unfavorable) effect on economic well-being, respectively. Direct and indirect taxes have favorable and unfavorable effects on economic well-being, respectively. However, no significant effect has been found for total taxation. Also, economic growth and real per capita income directly (favorably) and inflation reversely (unfavorably) affect economic well-being. Based on the results of this study, it is suggested that economic policymakers for increasing the level of economic well-being in Iran, implement an expansionary fiscal policy with an emphasis on increasing construction spending (to the extent that it does not replace private investment) and reducing indirect taxes.

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1. Introduction

Governments play a role in various cases such as infrastructure construction, public health, education, etc. in a society where the private sector is less inclined to operate in such sectors (Hajamini & Falahi, 2018). On the one hand, the proportionate increase in government participation using spending tools can have positive effects in various economic and non-economic sectors, such as reducing poverty (Fan et al., 2000; Hidalgo-Hidalgo & Iturbe-Ormaetxe, 2018), improving the quality of the environment (Halkos & Paizanos, 2013; Ercolano & Romano, 2018), and increasing private investment (Wang, 2005; Akinlo & Oyeleke, 2018) for the society. On the other hand, excessive and disproportionate participation of the government for various reasons, such as creating a budget deficit and/or crowding out effect (Bahal et al., 2018; Kim and Nguyen, 2020), can be destructive to society and the economy. Moreover, another important fiscal instrument of the government is tax, which can influence the level of economic activities; for example, an increase in the taxes paid by households reduces their disposable income and welfare.

In studies conducted in Iran, the role of fiscal instruments of the government on social welfare has been mostly investigated, but the role of these instruments on economic welfare has been less considered. Therefore, in the present study, economic well-being is calculated first, and then the impact of fiscal instruments such as taxes and government spending on it is examined from 1971 to 2020. In the following sections, the research model will be explained in detail, and then the results obtained from the model will be discussed. The research findings and suggestions will be presented in section four.

2. Methods

Inspired by the literature and based on the purposes of this article, two scenarios were derived based on the autoregressive distributed lag (ARDL) model. The first scenario is based on Eq. (1), in which ***LnIEWB*** is the logarithm of Iran's economic well-being index, ***LnGS*** is the ratio of total government expenditures to GDP (government size), ***LnTaxR*** is the ratio of total taxes to GDP, ***Inf*** is the inflation rate, ***LnRPCI*** is the logarithm of real per capita income, and ***RGDPG*** represents economic growth.

$$\Delta LnIEWB_t = \alpha LnIEWB_{t-1} + \beta LnGS_{t-1} + \Upsilon LnTaxR_{t-1} + \rho Inf_{t-1} + \theta LnRPCI_{t-1} + \phi RGDPG_{t-1} + \sum_{i=1}^{p-1} \alpha_i \Delta LnIEWB_{t-i} + \sum_{i=0}^{q-1} \beta_i \Delta LnGS_{t-i} + \sum_{i=0}^{r-1} \Upsilon_i \Delta LnTaxR_{t-i} + \sum_{i=0}^{s-1} \rho_i \Delta Inf_{t-i} + \sum_{i=0}^{v-1} \theta_i \Delta LnRGDPPc_{t-i} + \sum_{i=0}^{w-1} \phi_i \Delta RGDPG_{t-i} + U_t \quad (1)$$

The second scenario is based on Eq. (2), in which the same variables have the same definition. The difference between this scenario and the first one is in separating the two variables of the total expenditure ratio and the partition of the total tax. In such a way the total tax ratio is divided into two parts: direct tax ratio (***DirTaxR***) and indirect tax ratio (***InDirTaxR***), and the ratio of total government expenditure (government size) is also separated into the ratio of current expenditure to construction expenditures (***GCRGI***).

$$\Delta LnIEWB_t = \alpha LnIEWB_{t-1} + \delta LnGCRGI_{t-1} + \eta LnDirTaxR_{t-1} + \Omega LnInDirTaxR_{t-1} + \rho Inf_{t-1} + \theta LnRPCI_t + \phi RGDPG_t + \sum_{i=1}^{p-1} \alpha_i \Delta LnIEWB_{t-i} \sum_{i=0}^{q-1} \delta_i \Delta LnGCRGI_{t-i} +$$

$$\sum_{i=0}^{d-1} \eta_i \Delta LnDirTaxR_{t-i} + \sum_{i=0}^{r} \Omega_i \Delta LnInDirTaxR_{t-i} + \sum_{i=0}^{s} \rho_i \Delta Inf_{t-i} + \sum_{i=0}^{v} \theta_i \Delta LnRPCI_{t-i} + \sum_{i=0}^{w} \phi_i \Delta RGDPG_{t-i} + \epsilon_t \quad (2)$$

3. Results

The long-term result of the estimation of the first scenario shows that the total size of the government has a direct (favorable) effect on economic well-being; a one percent increase (decrease) in the size of the government, it is expected that the economic well-being will increase (decrease) by 0.452 percent. It seems that the favorable effect of the government size on economic well-being is due to the superiority of the favorable effects of the increase in construction and current expenditures (caused by the increase in employment, consumption, economic security, and salaries and advances) over the unfavorable effect of the increase in current expenditures (caused by the increase in inflation). Similar to the short-term estimation, the total tax ratio has no significant effect on economic well-being in the long term. In addition, economic growth and per capita income have a direct (favorable) effect on economic well-being, so with a one percent increase (decrease) in economic growth and per capita income, economic well-being grows (reduces) by 0.01 and 0.72 percent, respectively. The favorable effect of economic growth on economic well-being can be the result of job creation, increases in income of individuals and households (increase in consumption and savings), and increases in economic security (Osberg & Sharpe, 2002; Osberg & Sharpe, 2005; Agrawal, 2007; Lee & Sissons, 2016; Dougherty & Escobar,2019; Mussurov, 2019; Montero-Moraga et al., 2020). As expected, inflation has a reverse (unfavorable) effect on economic well-being; with a one-percent increase (decrease) in inflation, the economic welfare decreases (increases) by 0.01%. The reverse effect of inflation on economic well-being can be due to the adverse effect of inflation on the consumption of individuals and households (Osberg & Sharpe, 2002; Khan & Gill, 2010; Jalil et al., 2014). According to the results of the Bounds Test, the long-term relationship in the research model is confirmed in the first scenario. In addition, diagnostic tests demonstrate that the problem of autocorrelation, heterogeneity of variance, and non-normality of residual sentences does not exist. Moreover, according to the Ramsey RESET Test, the first scenario has a suitable form, and the results of the Cumulative Sum of Residuals and Squared Residuals tests indicate the absence of structural failure.

The long-term estimation results from the second scenario reveal that the ratio of current spending to government construction expenditures has a reverse (unfavorable) effect on economic well-being; with a one percent increase (decrease) in the ratio of current expenses to government construction expenditures, economic well-being declines (boosts) by 0.39 percent. It seems that the inflationary consequences of the increase in the government's current expenditures have been the reason for the adverse effect of this variable on economic well-being (Osberg & Sharpe, 2002; Khan & Gill, 2010; Jalil et al., 2014), while the increase in the government's construction expenditures has improved economic well-being by strengthening consumption, employment, and economic security (Del Monte & Papagni, 2001; Osberg & Sharpe, 2002; Osberg & Sharpe, 2005; Agrawal, 2007; Cavallo& Daude, 2011; Abiad et al.,2016; Lee & Sissons, 2016; Dougherty & Escobar,2019; Mussurov, 2019; Montero-

Moraga et al., 2020). The ratio of direct tax favorably, and the ratio of indirect tax unfavorably affects economic well-being; a one percent increase in the ratio of direct taxes raises economic well-being by 0.324 percent, and a one percent increase in the ratio of indirect taxes is associated with a decrease of 0.259 percent in economic well-being. Similar to the previous estimate and also similar to the short-term period, inflation affects economic well-being reversely (unfavorably), and per capita income and economic growth affect economic well-being directly (favorably). Like the first scenario, all diagnostic tests were performed in the second scenario and no problem was found.

4. Conclusion

According to the long-term results of estimating the research model under two different scenarios, the total government size and the proportion of current spending to construction expenditures have a direct (favorable) and reverse (unfavorable) impact on economic well-being, respectively. The effects of direct and indirect taxes on economic well-being are also favorable and unfavorable, respectively. For total tax, however, there has been no significant effect. Economic growth and real per capita income directly (favorably) and inflation reversely (unfavorably) affect economic well-being. Based on the results of this study, it is suggested that increase the level of economic well-being in Iran, economic policymakers implement an expansionary fiscal policy with an emphasis on increasing construction spending (to the extent that it does not replace private investment) and reducing indirect taxes.

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Authors' contribution

The authors contributed equally to the conceptualization and writing of the article. All of the authors approved the content of the manuscript and agreed on all aspects of the work.

Conflict of interest

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