The Role of Taxes as an Automatic Stabilizer: Evidence from Turkey

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Abstract: The purpose of this study was to empirically investigate the interactions between various taxes and GDP, and to detect whether taxes function as an automatic stabilizer in Turkey. Firstly, when using a time series unit-root test as proposed by Dickey-Fuller (1979), econometric findings revealed that taxes and level of GDP are not static. Secondly, upon employing cointegration designed by Johansen (1988), it was found that GDP and taxes are cointegrated. Thirdly, the Granger (1969) causality test showed that a uni-directional causality exists among taxes, and the causal relationship is between GDP to SCT, and from VAT and CIT to GDP. On the other hand, there was a bi-directional causality between GDP and PIT. Empirical findings showed that personal income tax is the most effective tax in stabilizing business cycle fluctuations. Corporate income tax is also important.

I. INTRODUCTION

The role of automatic stabilizers in reducing output fluctuations was an often debated subject in literature during the 1950s and 1960s. However, the large fiscal deficits of 1980s and 1990s in both developed and developing countries have, once again, made automatic stabilizers one of the most debated subjects of fiscal policy. Under the current economic crisis, the debate on the role of fiscal policy as a factor in stabilizing aggregate demand and ultimately employment and output, continues.

There are essentially two ways in which fiscal policy can contribute to aggregate demand stabilization: Governments can use discretionary fiscal policy (thereby cutting taxes and/or increasing expenditure), or governments may rely on automatic stabilizers (Buettnerand Fuest

2010). The first has many shortcomings: it suffers from implementation lags, including a political decision-making process influenced by multiple (possibly contradictory) considerations, crowding out effects, irreversibility, inflexibility, practical problems in measuring and forecasting the state of the economy and determining how much fiscal stimulus is needed at any particular point in time (Swanepoel and Schoeman 2003). Also, fiscal policy is not automatically reversed when the business cycle improves, giving rise to a potential deficit bias. However, the latter does not suffer from any of these shortcomings (Baunsgaard and Symansky 2009).

Automatic stabilizers provide a solution to the problems represented above. Since economic conditions cause government expenditure and revenue to change in response to business cycle fluctuations without any deliberate government action, it ensures that automatic stabilizers can act in a much quicker and timelier fashion compared to the use of discretionary measures.

In recent years, many studies have been conducted on the automatic stabilizers. One of these studies is by Tam and Kirkham (2010). They defined automatic stabilizers as "the variation in the budget balance as a result of an exogenous aggregate demand or real GDP shock." The stronger this automatic stabilizer's effect, the less need there is for discretionary fiscal policy action as a result of the cycle. There is also a widely held view that automatic stabilizers act more rapidly than the other stabilization tools, as they do not involve the "inside lag" that typically accompanies a discretionary change in fiscal policy. Another definition is made by Fatás (2009), who described automatic stabilizers as "changes in government revenues or expenditures due to changes in the cyclical stance of the economy." On the other hand, Fedelino *et al*. (2009) defined automatic stabilizers as "one of the factors that explains changes in overall balances". They implied that the title of automatic stabilizers is deriven from the fact that they both help "stabilize" the business cycle and are "automatically" triggered by the tax code and spending rules.

> As for Dinga and Ionescu (2009), they defined automatic stabilizer as something, which "only has an anti-cyclic impact while discretionary measures of fiscal policy, even if they are anti-cyclic as finality, may also have pro-cyclic consequences (temporarily or concerning some segments of the fiscal matter)."

The European Central Bank (2002) described automatic stabilizers as the reaction of the government budget to business cycle fluctuations in the absence of any government action. Finally, according to Auerbach and Feenberg (2000), automatic stabilizers can be defined as

> "those elements of fiscal policy that tend to mitigate output fluctuations without any explicit government action. "

It is expected, at least theoretically, that automatic stabilizers will smooth fluctuations in output through an automatic response of taxes and transfer system without having any discretionary policy. During periods of recession, less personal income tax and corporate income tax are collected, more unemployment benefits are paid and thus adverse movements in aggregate demand are dampened by indirectly supporting incomes. On the contrary, during periods of economic boom, more taxes are collected, less unemployment benefit are paid, and, as a result, the expansions in aggregate demand are mitigated. In short, these sorts of taxes and transfers automatically give a negative response to changes in the economic situation and therefore lower fluctuations in output.