THE PRACTISES OF FISCAL POLICY
FOR ECONOMIC STABILITY IN TURKEY
(AN ECONOMETRİC STUDY: 1985 – 1999)

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Abstract
In order to achieve to main macro aims such as economic stability, economic development and equitable income distribution, the fiscal policy has been used too. Public expenditures, public revenues, public borrowings and budget applications are important tools of fiscal policy to obtain economic stability. In our study which aims to determine whether or not the economic stability is obtained by fiscal policy in Turkey in a time period between 1985-1999; it is revealed that the fiscal policies regarding to internal and external borrowing and interest payments were unable to obtain economic stability and that they have increased the inflation; with another statement, those following fiscal policies for inflation fighting weren’t successful. General view of tax, expenditure and budget policies support this result as well.

Keywords: Fiscal Policy, Economic Stability

I. Introduction

Nearly in every country, economy policy instruments have been used such as fiscal, money, foreign trade, price and employment to achieve specific macroeconomic goals (full employment, production, price stability, payment balance, development and redistribution of income).

Fiscal policy is considered as; “mostly to achieve to macroeconomic policy goals, it is to reconcile of the changes which government modifies in taxation and expenditure programs (Shaw, 1975:624) or “to regulate the full employment price and total demand, to be used of instruments such as government expenditures, taxes and debt management (Hacholiades, 1994:624) or “all of fiscal policy instruments that government uses to effect the economic running” (Tanzi and Elgar, 1991:14).

In another definition it is considered the fiscal policy as; “in an economy, whole necessary regulations regarding in government expenditures and taxes” (Ataç, 1991:27) and it is defined such as; “the fiscal instruments which government holds, are to be used for protection of stabilized economic framework which is purified from cyclical fluctuation and for obtain the price stability, full employment, economic growth and development, redistribution of income and worth.

Consequently, government’s interference to the economy is via fiscal policy, here the government aims to obtain optimum resource allocation, economic stability, payment balance and equal income redistribution (Coşkun, 1988:28). To achieve these goals in the economy, government benefits from government expenditures, incomes, depts and budget as fiscal policies.

II. Economic Stability And Fiscal Policy

The fiscal policy, mainly, has been run by government budget, both the quantity and composition of public expenditures and incomes, and budget deficit or surplus are the important instruments of which the government can use to achieve the goal of fiscal policy to obtain the stability.
In economic stability, the functions of public expenditures are; when the inflation dominates through economy, to equal the total demand to total supply at full employment level, if economy is on balance, to protect this balance, on the contrary if economy is in deflation, to make the demand mass the good and services which economy produced at full employment level.

The tax policies, existing to decrease the demand in short term and to increase the supply in long term in inflation fighting, stimulate the productive investment to support the development, discipline the consumption and give way to applications those forefront the tax rebates, exemptions and exceptions to rise the economy in deflationary period.

III. An Econometric Study

A. Model Definition

In this study, it is examined the efficiency of fiscal policy to obtain the economic stability.

It is a well-known case that the public finance, in economy policy, is one of the instruments which is most affected by political criterions (Atiyas, 1996:16) and that the politicians can increase the government expenditures rather than the resources because the factors such as vote concerns etc in overcompetitive case. And this causes to public deficits and financial problems.

Turkish economy is taken to a vicious circle that is caused by high inflation. Because the inflation is very high, in public borrowing, nominal and real interest rate while is being so high, the borrowing term is very short. By the increasing of interest rate, public deficits rise and cause the inflation rate stands at high level (Kumcu, 1998:18).

It is known that the inflation reduces the real value of public borrowings (McMillin, 1986:257-269). However, with this logic, it can’t deduce the consequences that the public debts are melt in the course of time, consequently, that increasing of public borrowing is an affirmative policy in inflationary periods. Because, at one side the chronic inflation decreases the public incomes, at the other side prevents the reduction of public expenditures. Under those conditions, the public sector borrowing from continuously increasing market interest rate; get into interest-budget deficit-borrowing and interest burden spiral (Önder vd, 1993:42).

Among main reasons of PSBR (Public Sector Borrowing Requirement) which is the one important issue of Turkey, are economic intervention of government and excessive extent of public sector, rapidly population growth rate, underdevelopment and savings gap because government determines development rate become high, present of non-financial public enterprises, inconsistency between tax system and socio-economic status (Akalın, 1994:5).

In a study (Akat, 2000: 265-282) where maintained that the high inflation prevents public sector having a wide dimension, it is stated that high inflation rate worsens income inequalities further, rises the unemployment rate in urban and rural areas and along this process, causes an erosion on society’s moral and ethic values in last two decades, in Turkey.

Furthermore, the hypothesis would be advantageous for economic development, is refused by empirical findings (Fisher, 1996:34)and; economic results has shown that there is a negative correlation between inflation rate especially with double digit and economic growth.

There are some studies which show there is an affirmative relationship between interests and budget deficit in a literature (Dua and Arora, 1995:23-31), (Ewing and Yanochik, 1997:199-201), (Cebula, 1999:489-495); suggest the budget deficits are increased due to interests (Cebula and Saltz, 1997:19-27) and state the increment in budget deficits which occur because of over-borrowing, would increase the interest rate (Cebula and Belton, 1993:188-209).

Continual increasing public deficits have significantly limited the benefits from liberalization and extrovert of economy. Especially, entering of public policy into an expansionary tendency contrary to expectations, causes to occur an unstable structure based on domestic demand and the increased price increments to become chronic.
In an empirical study (Özmen and Koğar, 1998:107-127), which is done about sustainability of budget deficits in our country, where we are accustomed to chronic budget deficits, it is pointed out that the strong sustainability condition of public policy based on budget deficits wouldn’t be obtained, on the contrary, weak sustainability condition would be; however in the case of to insist on this fiscal policy, would be live the issues.

In some studies which research the relation between inflation and interest rate (Podkaminer, 1998:583-596) and (Calvo, 1992:55-71), it is put forward that efforts of high inflation reducing are generally related to the policies which occur at positive real interest rates; contrary to this, nominal interest rates often reaches to exorbitant levels.

Besides, it is claimed that an adequate high interest rate can be resulted in the unlimited price increment; whereas the gradual discounting in interest rates, by prompting the increase in production, would assist in reduction of inflation, on time (Calvo, 1992: 55-71).

Into direction to these datas, the answer of following questions are investigated. Namely;

Has it been obtained the economic stability with fiscal policies followed in Turkey during 1985-1999? In another manner, has the fiscal policies which followed through inflation fighting been successful?

To seek answer to those questions (taking into account the point of achieve to thirth montly datas), following hypotheses are set up and tested:

Hypothesis-1. Over-borrowing (external and internal borrowing, especially because of internal borrowings being short-term, unable to run in investments) policies increase the inflation.

Hypothesis-2. Progressive expenditure policies (especially transfer expenditures and debt interest payments inside it) increase the inflation.

To test these hypotheses:

\[ Y_t = \beta_0 + \beta_1 X_{it} + \beta_2 X_{2t} + \beta_3 X_{3t} + u_t \]  \hspace{1cm} (1)

Like this a linear inflation model is formed. Where \( Y_t \) is the wholesale price index representing the inflation, \( X_{it} \) is the external borrowing, \( X_{2t} \) is the internal borrowing, and \( X_{3t} \) is the servicing in transfer expenditures.

B. Data and method

This study which aims to determine whether the economic stability is obtained or not by fiscal policy in Turkey in a time duration of 15 years between 1985-1999, is based on third montly data between 1985: 1-1999: 4.

The “Econometric Views” package program is used in analyses. The series which are tested in order to get econometrically meaningful relations among variables used in the model, must be stagnant series. Which is because of estimation of a regression equation without examining the characteristic of time series models, can cause misleading results, this case is called as “false regression” in econometrical literature (Granger and Newbold, 1974: 111-120), (Madalla, 1992:238) or it is called “falsified regression” (Gujarati, 1999: 724-726); before estimated the inflation model formed in equality (1), the characteristics of time series models of data belongs to variables in the model are investigated. Thus, stagnant test is executed to each one variables.

With this purpose, it is determined that whether the variables in the model are stagnant through “Augmented Dickey-Fuller Test Technic” (Dickey and Fuller, 1979: 427-431; 1981: 1057-1072). The process in ADF test technic is pointed out in following equality:

\[ \Delta Y_t = \beta_1 + \beta_2 \text{trend} + \delta Y_{t-1} + \alpha \sum_{i=1}^{m} \Delta Y_{t-i} + \varepsilon_t \]  \hspace{1cm} (2)
In ADF unit root test which is used in that whether is $\delta = \theta$ in estimated number (2) regression equation, in case of zero hypothesis is rejected, it is considered that it is stagnant at level value of variable Y, on the contrary it is not.

Considering the first differencies of a serie which is determined as whether stagnant or not at level value, above test process has been repeated for these values. This test is implementing for second or third differencies as well until the series are determined as stagnant. Consequently in second equation, comparing the tradational $t$ statistic accounted for $\delta = \theta$ regression equation, with critical values which are given by MacKinnon (MacKinnon, 1991: 90-94) and testing to general alternatives, provide the determination of the variable whether is stagnant at its tested level.

It is required for ADF test to give affirmative results, being far from the autocorrelation problem of estimated regression equation. In the given equation, resolving the autocorrelation problem, requires the delay for m-term. In this study, delay number (m) of variables taken to ADF test, is determined according to Akaike Information Criteria (AIC).

According to the Engle and Granger’s presentation theory (Engle and Granger, 1987: 251-276), on condition of antistatic variables being integral at the same grade, if linear components form a stable period, it is said that these variables are cointegrated. According to this theory, the first condition in investigation of cointegration is investment that whether the variables are integrated at the same grade. Thus, Engle-Granger method is used for.

By this method, regression model is estimated and error terms are found. Afterwards ADF test is applied to these error terms found. If those error terms were found static, then it arrives at a conclusion that there is a long term relation among these series. With an another expression, it is deduced that those series move together; on the contrary, those series aren’t cointegrated, namely they don’t share the same stochastic trend (Yamak and Kucukkale, 1997:9).

C. Results of Estimation

The first step in analysis is to investigate the integration grades of variables in number (1) inflation model. By this porporse, the results of ADF unit root test applied are given in tablo-1.

As seen in table, two of ADF $\tau$ (tau) statistics ones existed meaningful at the 10 % level of significance and others at 1%. Therefore, ADF unit root test results have shown that all of variables were cointegrated, namely I (0), at their original levels.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Without statical Term and Trend</th>
<th>With statical Term</th>
<th>With Statical Term and Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Y_t$</td>
<td>6.9015 (6)$^a$</td>
<td>6.8950 (6)$^a$</td>
<td>7.1061 (6)$^a$</td>
</tr>
<tr>
<td>$X_{1t}$</td>
<td>3.9821 (0)$^a$</td>
<td>2.7984 (6)$^b$</td>
<td>3.2271 (0)$^b$</td>
</tr>
<tr>
<td>$X_{2t}$</td>
<td>-3.6858 (0)$^a$</td>
<td>-4.2197 (0)$^a$</td>
<td>-5.8168 (0)$^a$</td>
</tr>
<tr>
<td>$X_{3t}$</td>
<td>7.6203 (6)$^a$</td>
<td>7.4767 (6)$^a$</td>
<td>7.1377 (6)$^a$</td>
</tr>
<tr>
<td>MacKinnon Critical Values</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%1</td>
<td>-2.6072</td>
<td>-3.5598</td>
<td>-4.1420</td>
</tr>
<tr>
<td>%5</td>
<td>-1.9470</td>
<td>-2.9178</td>
<td>-3.4969</td>
</tr>
<tr>
<td>%10</td>
<td>-1.6191</td>
<td>-2.5964</td>
<td>-3.1772</td>
</tr>
</tbody>
</table>

Notes: 1. Being the values in the first parenthesis as delay numbers in ADF equations, are determined by using Akaike Information Criteria (AIC).
2. $a$ is meaningful at 1% level of significance
3. $b$ is meaningful at 10% level of significance

Because of whole variables are integrated at the same grade, the long-term cointegration relation can be tested. By this purpose, it is tried another method testing cointegration between the variables in number (1) equation. Thus, through applying Engle-Granger method, ADF $\tau$ statistic is found as
\(-1.9704\) \((3)\). And relevant MacKinnon critical value at 1%, 5% and 10% level of significance is, in turn, \(-2.6072\), \(-1.9470\) and \(-1.6191\). At the 5% level of significance, because of ADF \(\tau\) statistic is higher than MacKinnon critical values have put forward that there was a meaningful cointegration between the variables in inflation model.

When the cointegration vector which gives long-term inflation function is estimated through “Ordinary Least Squares Method”, following results were obtained:

\[
Y_t = -9522.197 + 0.0239 X_{1t} + 0.0003 X_{2t} + 0.005 X_{3t} \quad (3)
\]

\[
s: (1848.100) \quad (0.034) \quad (0.0001) \quad (0.0004)
\]

\[
t: -5.152 \quad 6.925 \quad 2.856 \quad 11.601
\]

\[
p: (0.000) \quad (0.000) \quad (0.006) \quad (0.000)
\]

\[
n = 60 \quad R^2 = 0.9324 \quad \bar{R}^2 = 0.9286 \quad F = 252.569
\]

These estimation results, both statistically and econometrically are meaningful according to econometric criterias, and verifies both of hypotheses which revealed in the study as well. Thus, both the increment in internal and external borrowings and the increments in payments of borrowing interests have increased the inflation during 1985-1999 in which we examined. Therefore, it has played a role demolishing the economic stability.

By estimation results, both parameters severally and being a model integral have been found meaningful. In addition, when \(R^2\) value is taken into consideration, it is seen that approximately as a part of 93% of the variation in inflation rate is revealed by external, internal debts and debt interest redemption together.

It is known that the public deficits in Turkey, traditionally have been financed with external, internal and Central Bank’s resources. Especially in case of using the internal borrowing as a weighted financial instrument, does the real interest rate increases up and this causes inflationist pressure (Sönmez, 1998: 62).

As known, when government finances the public expenditures applying to internal borrowing (issuing of treasury bonds and bills, short term advance from Central Bank and so on) reduces the interest rates in short term; this situation causes economics of production to be decreased and evaluation of founds which can be transferred to investments, into economics of rent of which has no any contribution to national income and significantly increases the costs of credit use of entrepreneurs. Briefly, application of government to internal borrowing, leads to negative results on economics of production. In long term, the issue of the tax burden of next generations come to order. In this respect, the over internal borrowing has been fairly a disadvantageous fiscal policy in respect of real economy (Aktan, 1996: 25).

Therefore, in the factors which support inflation rate, it is possible to mention about the disparities of income-expenditure, budget deficits, over growing of expenditures in which especially being high transfer expenditures and dept interest payments inside it.

It has been appeared that following fiscal policies were successful in the direction of have increase the export, however because of the export is mostly based on import, an increase in export caused to import to rise and thus it hasn’t an affirmative effect on reducing the trade deficit. Furthermore, being parallel with private sector investments to decrease, the share of investment goods import in total import have been declined. From all these issues, it can be state that the following fiscal policy was unable to obtain a structural changing which would carry on the export growing and decrease its import dependence (Savaş, 1997: 10).

Ongoing analyses have shown that the fiscal policies oriented to internal and external borrowing and debt interest payments couldn’t obtain the economic stability in Turkey during 1985-1999; with another statement, those following fiscal policies for inflation fighting weren’t successful.
IV. General Conclusion

Recently, Turkish economy has been enrolled with the effect of hard money policy based on high interest rate-low exchange policy and rent economics consists of a high-coupon stocks and bond borrowing.

The high level of debt interests, elasticity of budget and fiscal policies have largely been decreased and failured the economy policies concerning to obtain economic stability and budget equilibrium.

By these data whose we have used in this study, as to the results of period of 1985-1999 that we have examined;
- Following fiscal policy instruments have generally been consist of the taxes, expenditures, borrowings, State Economic Enterprises’ prices and fonds.
- Fiscal policy has been contractionary used for to reduce the public investment expenditures in real terms during 1985-1999.
- The biggest share in public sector borrowing requeriments, has been belonged to consolidated budget, together with transfer expenditures and internal and external debts and interest payments inside it, earthquake disasters have affected the growing of budget expenditures as well.
- It has been revealed that the investment expenditures were continually decreased, on the contrary, the current especially transfer expenditures were increased.
- The ratio of consolidated budget expenditures with GNP has been continually increased and the reason of this increasment has been the debt interest payments.
- It is seen that the following piscal policies, especially the tax-oriented export promotions’ measurements were in favour of the export; however because of the dependence on import, the import was increased as well and it hasn’t shown the continuity in reducing the foreign trade deficit.
- In expenditures, the personell expenditures especially debt interest rates have been currently increased, recently debt interest has reached to 70% of the tax revenue
  - We have seen that in financing of liquidity deficit, the external borrowing wasn’t applied, on the contrary the internal borrowing was prefered, recently short term borrowing ( bound weighted ) was used.
  - During 1985-1999, in borrowing where the bond and advance were in the forefront, it is occued that the banks had big resources and lending to public was accepted by the banks.
  - In the budgets of 1996 and 1997, although it had been stated that in the financing of public deficits, the obligation financing would be increased and short term financing resources would be decreased; the public sector was mostly applied to short term borrowing in 1996 too. In spite of partially returning to long term internal borrowing in 1997, the short term internal borrowing again has pull ahead of long term borrowing in 1998.
  - In 1999, long term internal borrowing ( obligation) had been prefered. In recent months, forward borrowings over a year had been applied.
  - However, at the end of examining the nature of bond date which is used for as a borrowing instrument, recently ( except the last terms of the end of 1999 ), it is understood that in general long term bonds ( a year and below ) were mostly prefered. Whereas it is a well-known fact that the shortness of internal debt and its interests term were an important factor at the point of inflation rising and affected the economy negatively in short term.

Related to the crisis, it is seen that following contractionary fiscal policies in 1994 and early 1995s were left at the end of 1995 and in 1996. In addition, in 1997 and 1998 governments had carried out the expansionary fiscal policies. In 1999 and 2000, serious some policies and measures concerning to reduce the inflation rate are on the agenda.
The important issue is that, recently the budget without interest and fiscal policies applications have been contractionary affecting the total demand; but fiscal policy has been showing an expansionary effect because of internal and external debt burden and high interest expenditures.

The main purpose regarding to inflation fighting in fiscal policy is to increase the ratio of primary surplus in GNP.

Contrary to targeting contractionary fiscal policies, in practise its entering into an expansionist trend caused to forming an unstable growing structure domestic demand-based and a chronic inflation to form. Thus;

In our econometric study too, it is suggested that the fiscal policies regarding to internal and external borrowing and interest payments were unable to obtain economic stability and they have increased the inflation.

In conclusion, by purposing to prevent the chronic inflation during 1985-1999, while it was required to reduce the public expenditures, to increase the revenues, to attach importance the contractionary fiscal policies to decrease the moneteral expansion or borrowing use for financing to income and expenditure difference; on the contrary, in practise it has been seen that those aims above were unable to achieve, both expenditures and deficits weren’t collected and recently progressive short term borrowing and Central bank sources were used; that case shows that over internal borrowing and especially its term structure, as a fiscal policy tool, needs to be refrain for our economy; the view of tax, expenditure, borrowing and budget policies claim that the fiscal policy is not effectively used for economic stability.
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