FISCAL AND MONETARY POLICIES AND INFLATİON IN TURKEY

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1. Introduction

The Turkish economy experienced great difficulties in the late 1970's as a result of petroleum crisis and of the general recession in the world economy. Inadequate and sometimes wrong economic policies, then applied, also countributed to the economic crisis in Turkey in the late 1970's. Basic economic problems, which Turkey faced then, can be summarized as follows.

a. There was extensive direct government intervention in the economy. Especially, the large price controls, which were strictly implemented by the government, created black markets and speculation in the economy. As a result, efficiency of the economy and the productivity of firms declined.

b. There were strong inflationary pressures in the economy, which adversely affected the distribution of economic resources and national income. The rate of inflation were 53.6 per-cent in 1978 and 79.2 percent in 1979. Inflation caused savings to decline to a large extent since the rate of interest was kept lower that the market determined rate by the government.

c. An important bottleneck developed in the balance of payments which limited the Turkey's capacity to import necessary raw materials and capital goods. The basic causes of the balance of payments problem were huge increase in the petroleum prices which deterioreted Turkey's terms of trade and the implementation of the fixed exchange policy despite the high rate of inflation.

As a result of these problems production and investment in Turkey declined in the late 1970's. Industrial production went down 5.6 per-cent in 1979. The growth rate of gross national product was minus one per-cent in 1980.

In order to cure the economic crisis in Turkey a new economic program has been put into effect since January 1980.

Before presenting our economic analysis on the subject of inflation it is useful to explain briefly the main aims of the new economic program.

2. Main Aims Of The New Economic Program

I believe that the basic aims of the new economic program could be explained as follows.

a. The main philosophy and the long term target of the new economic program are to minimize the intervention of the government to the economic life and to implement necessary measures for the operation of the free market economy. It should be pointed out that in a free market economy, even though a guding plan could be applied to indicate the equilibrium levels of macro economic variables and the priority sectors to be encouraged in micro basis, the distribution of economic resources should be mainly realized by the price mechanism. However, in order to achieve the efficient distribution of economic resources through the price mechanism, it is necessary that the prices of good and services and of the production factors should reflect the degree of their scarcity. Starting from this economic fact, the following measures were implemented.

– Price controls were abolished and the determination of interest rate has been left to the market to a great extent.

– The exchange control system was liberalised and realistic and flexible exchange rate policy has been initiated.

– The quota system was abolished and more liberal foreign trade policies have been put into effect.

– State Economic Enterprises have been given more freedom to decide their production, prices and investments.

b. With the application of the new economic program the industrialization strategy has been changed from the former one, which was depended on the import substitution and supported by the expending volume of domestic demand and financed through cheap credit and cheap foreign currency policies, into a new strategy based upon the comparative advantages theory and characterized as export oriented and open to foreign markets. Cheap credit and cheap foreign currency policies have been stopped and domestic demand has been taken under control. The change of strategy from the import substitution industrialization to export oriented industrialization made it necessary to create structural change in the industrial sector. The aimed structural change in the industrial sector has been achieved through the free market mechanism.

c. Since one of the major problems in the Turkish economy was the foreign currency botteleneck in the late 1970's, the new economic program has emphasized the increase of exports as one of the main targets. In order to realize this aim flexible exchange rate policy and export encouragement measures such as tax rebates and cheap export credit have been implemented. As a result of these measures there have been very important increase and structural change in the Turkey's export. The average yearly increase of exports between 1980-1985 was 24.5 per-cent. The share of industrial goods in total exports has risen from 34.7 per-cent in 1980 to 75.8 per-cent in 1985. Providing price stability through controlling inflationary pressures in the economy was underlined by the new economic program. It was indicated that in order to control inflation tight monetary policy and balanced budget policy will be applied. It should be stressed that the control of inflation is very important for the successfull implementation of the new economic program. The reason is that the new program has emphasized the price mechanism for the efficient allocation of economic resources. The price mechanism could perform this function effectively if there is a price stability in the economy. In other words, inflation need to be controlled.

3. Inflation And Economic Growth

The important question should be answered is that there is any detrimental effect of inflation on the growth of economy. This is a controversial subject in the theory of economic growth. However, the researches made in various countries showed that the high rate of inflation generally affects savings, investments and the growth rate infavourably. In Turkey, inflation gaining speed from the year of distribution on the other hand. Infact, the marginal propensity to saving, investments and the production in the manufacturing industry began decreasing in 1978 and had continued to do so until the second half of 1980.

Above explanations show that inflation has detrimental effects on the efficient allocation of economic resources and on the growth of the economy. Therefore, the implemented economic policy should give top priority to the control of inflation. In order to have effective policy measures against inflation we need to briefly investigate the causes of inflation. There are two view points in explaining the inflation theoretically in the developing countries like Turkey.

a) The Structural View

According to this view, in the developing countries, the inflation arises from the bottlenecks which appear during the development process and from the inelasticity of supplies in the markets of goods and services. Therefore, in this countries to overcome the inflation by fiscal and monetary measures is not possible.

Streessing the monetray measures will create stagnation in the economy, the investments will be slowed down, so, there will be breaks in the development process 1). It has been verified by the researches that structural factors create inflationary pressures, though limited, in developing countries 2). However, this type of inflationary pressure should not be overrated. The fact that the applications of correct economic policies could largely remove the structural bottlenecks should be kept in mind. We should accept after all that an inflation of 5-8 percent is a natural result of development process in the developing countries.

b. The Monetai View

This view, based on the quantity theory, explains that the rising impetus in overall price level is dependent on the increasing volume of money supply. The increase in money supply is immediately transferred in the form of "demand" to the goods and services market as the capital market has not sufficiently been developed particularly in developing countries. Therefore, the period of lag in effecting the increase of money supply to over all price level is rather short in the Turkish economy. According to the various studies, while time lag is around 12-18 months in the American Economy, it is 3-9 months in the Turkish economy. Though, the increase in money supply is transfered to the goods and services market in the form of demand in a short period of time, the increasing volume of demand largely effects the overall price scale depending upon the low level of elasticity of supply due to the insufficiency of infrastructure, energy and foreign exchange sources. However, as is known that when the growth rate of real GNP is high, then the effects of the increase of money supply upon the aggregate price level will be limited.

4. Inflation and Monetary Policy

The Turkish economy has been in inflationary process since 1977. There has been large increases in the supply of money since 1977 except in 1981 and 1982. There has been several studies which explains inflation in terms of the increasing volume of money supply based on the quantity theory3).

In the Turkish economy the relation between the changes in aggragate price level and the changes in money supply, gross national product and price expectation is shown in the regression equation below.

$$dP_t = -2.007 + 0.466\ dM_t + 0.367\ dM_{t-1} - 0{,}893\ Y_t + 0.295\ dP_{t-1}$$

$$(3.06) \quad (0.189) \qquad (0.172) \qquad (0.314) \qquad (0.165)$$

$$R^2 = 0.628$$

The above equation shows that the increase in aggregate price level could largely be explained by the money supply, expectations related to prices and real gross national product. When we place the figures for the increase in money supply, GNP growth rate and the previous year's price increase that indicates the price expectation we get the estimated inflation rates which are very close to actual inflation rates. Therefore, we may conclude that the inflation in Turkey can be explained by monetary factors.

The above analysis indicates that the rate of inflation in Turkey depends mainly on the changes of money supply. An important question to be raised of this stage should be what are the determining factors of money supply in Turkey In various econometric studies relating to the Turkish economy it was concluded that the most important variable determining the money supply is the base-money which is defined as the volume of cash money in circulation plus cash in the bank's safes1) The regession equation that indicates the functional relation between base money and the money supply in the Turkish economy, is shown below.

$$d\log M_t = 1.11\ d\log BM_t \qquad BM = \text{Base Money}$$

$$R^2 = 0.860 \qquad SEE = 0.013$$

The above regression equation shows that the 86 per-cent of changes of the supply of money is determined by the base money. Therefore, the control of the supply of money depends largely on the Central Bank's ability to limit the printing of cash money. Thus, we need to examine the subject of what are the determinants of the changes in the amount of the "base-money". Before examining this subject, it should be indicated that the Central Bank in Turkey has not been successful to limit the printing of cash money, hence, the Central Bank has not been successful in controlling the supply of money in the Turkish economy in the last ten years except the years of 1981 and 1982.

At this point it should be pointed out that with the implementation of the new economic program the rate of interest is employed as an important instrument of monetary policy to contral the inflation. Before the implementation of the new economic program the rate of interest was kept at a low level to provide cheap financial resources for the industrial firms. This policy was changed in order to use the interest rate policy for the control of inflation. After 1980 real interest rate policy was put into effect and the rate of interest has been kept above the rate of inflation. It was thougth that the rate of interest has two important functions in the free market economy.

a. The first function of the interest rate mechanism in the economy is that it is one of the important variables which determines the volume savings in the economy. Financing of the investments, without causing an inflationary pressure, is possible by the use of savings created in the economy. Thus, the interest mechanism is an important factor which provides saving / investment balance in the economy.

b. The second and important function of the interest mechanism in the market economy is to provide efficient allocation of capital. Turkey's past experience shows that to keep the interest rates in the low levels during the period of accelerated inflation encouraged the speculative stock investments on the one hand and caused to initiate hundreds of investment projects both in public, and private sectors without rational economic calculations on the other hand, and consequently the capital factor was wasted.

After this brief explanation of the interest rate policy we may new examine the factors that determine the amount of base -money in the Turkish economy. For this we need to consider the fiscal policy in Turkey.

5. Inflation and Fiscal Policy

In Turkey the Treasury has a strong control over the Central Bank. In another words, the Central Bank is not independent to manage the monetary policy in the Turkish economy. The Treasury owns the 54 per-cent of the shares of the Central Bank. Therefore, the fiscal policy operations of the Treasury strongly affects the monetary policy decisions of the Turkish Central Bank. Especially, the government budget deficits have been largely financed by the Central Bank sources.

The relation between budget deficite and supply of base money is shown by the following regression equation.

$$BM_t = 1280 + 6.24\ BD_t \qquad BD = \text{Budget Deficits.}$$
$$(19.30)$$

$$R^2 = 0.944 \qquad F = 372$$

1) *Maxwell Fry, Finance and Development Planning in Turkey, Leiden E.S. Brill, 1972, pp.78—90.*

The figure in the parenthesis in the above equation indicates the value which shows that the relation between dependent and independent variables is statistically meaningful. The value of coefficient shows that the 94 per-cent of the changes is the amount of the base money could be explained by the amount of the budget deficits in the Turkish economy.

The above analysis brings us to the point that the rate of change in the supply of money is mainly determined by the fiscal policy actions in the Turkish economy. This conclusion reinforced by the fact that the changes in the foreign currency reserves has not been an important variable in determining the base money.

Thus, it can be said that there has been close relation between the rates of inflation and the amount of budget deficits as a percentage of the Gross National Products. The inflation rates and the budget deficits as a percentage of the Gross National Products in the period of 1976 and 1985 are shown below.

Years	% BD/GNP	Inflation Rates
1976	2.0	17.3
1977	6.0	28.5
1978	4.7	53.6
1979	6.1	75.1
1980	5.6	90.3
1981	2.0	34.1
1982	1.6	25.5
1983	2.2	30.3
1984	5.3	53.6
1985	3.4	43.2

Sources: Orhan Morgil, Monetary Growth Models and Monetary Policies, p.106. Hasan Kazdağlı, Wealth Effects and the Budget Restraint in Macro Economic Models: Theories and Policies. (Unpublished Ph.D. Thesis) p.219.

From the above table it can be understood the high rate of budget deficit as a percentage of the Gross National Product causes the supply of money to increase. The rise in money supply enters as a demand in the goods and services market in a short period of time since the time lag is rather short, around 3 to 9 months, in the Turkish economy as indicated by various studies. Additional large demand in the goods and services market creates inflationary pressures in the economy.

The important conclusion derived from the above analysis and explanations is that the controlling of the inflation and pulling it down to a reasonable level largely depends on the removal of the budget deficits. It could be said that in order to control the inflationary pressures in the Turkish economy the budget deficit should be kept below two per-cent of the Gross National Product. Thus, effective fiscal policy measures need to be implemented to decrease the budget deficit and in turn to pull down the rate of inflation. The government applies the policy of financing budget deficits by selling bonds and treasury notes to the people and the banking system rather than printing money in the recent years. It is expected that this type of policy will limit the supply of the base money in the economy. The amount of securities issued by the government in the period of 1980 and 1985 is shown below.

Years	1980	1981	1982	1983	1984	1985
Amount of Securities (Billion T.L.)	75.8	135.0	74.7	249.0	1028.9	2607.1

Source: The Central Bank of Turkey: The Bulletins of Statistics and Evaluations.

As is shown in the table, in the last two years the budget eficits were largely financed through the government debt. In this point an important question should be asked. What is the effect of financing the budget deficit by selling government bonds to the people? Some economists claim that the rise in the volume of governmentbods increases the amount of wealth people own. The icrease in the amount of wealth induces the people to increase their consumption expenditure 1). Therefore even if the budget deficit is financed through selling government bonds to the people it will still create inflationary pressures in the economy. The latest studies on this subject concerning the Turkish economy indicate that there has been wealth effect of rapidly increasing government bonds which causes consumption expenditures to increase.

In addition, the payment of the large amount of interest creates additional expansionary effect in the economy. If the 1986 and 1987 government budgets are considered, it can be seen that the transfer expenditures increased 58 per-cent and 67 per-cent respectively even though the overall increase of the government budgets were 45 percent and 50 per - cent in the same years.

6. Conclusion

Our analysis showed that the high rate of inflation in the Turkish economy in the recent years could be largely explained by the monetary factors. The most important determinants of the money supply has been the budget deficits. Thus, it could be concluded that the controlling of the inflation and pulling it down to a reasonable level largely depends on the removal of budget deficits. It should be indicated that the finance of the budget deficit by selling government bonds to the people does not decrease the inflationary pressures in the Turkish economy sufficiently Thus, the control of goverment spendings through program budgeting and through cost-benefit analysis of every Turkish lira spent by the government are necessary to control the inflationary pressures in the Turkish economy.

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2. Hasan Kazdağlı, Wealth Effect and the Budget Restraint in Macro Economic Models: Theories and Policies, Unpublished Ph.D. Thesis, pp. 210–248.

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