

## **SOME COMPARISONS BETWEEN TURKEY AND OECD COUNTRIES: PRODUCTIVITY, EDUCATION AND TAXATION, 1960-2000**

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### ***Abstract***

During the development process, financing the budget expenditures is very important issue. In this process, it is important to increase government revenue without damaging private income and consumption. We propose that an increase in taxes will be convenient for Turkish economy, particularly if it contributes to a better distribution between the tax burden of capital and labour. We will make international comparisons of tax burden and public expenditure of Turkey with developed countries, such as United States, Britain and France and Spain, Greece, Ireland, Portugal.

JEL classification: E6, H2, H5, H6, C32,

*Key words Tax burden, Education, Productivity, Cointegration*

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### **1. Introduction**

Financing the development expenditures is one of the crucial problems of the developing countries. During the development process, accumulated and permanent problems lead to resorting emission and foreign debt, instead of a public finance policy emphasizing upon taxes. While budget deficits have been tried to be removed with short-termed policies, long-termed policies have been neglected. Chronic budget deficit is a long-term problem which should be primarily solved by increasing

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productivity in developing countries. The budget deficits have been expanding by the increasing trend of long-termed expenditure is a problem related to government revenues (Fry, 1990). First, the objective of the tax policy should be higher taxes/ GNP ratio in line with the development level of the country. Second, it must take into account demand and supply sides of real GDP growth and increase the taxes on capital and labor by taking into account of productivity.

The lack of a stable fiscal resource supplying system in accordance with the social and economical goals had an important role in the economic stability of the countries. Neither concerning the financial needs of the economy nor the more appropriate taxing structure, a convenient fiscal policy was not followed in consistence with the economic and institutional development level of the country. Historically, Turkey has had chronic budget deficits which is a structural problem and can be solved by increasing productivity. Regarding the education, productivity, the place of public sector in the economy, we will make various comparisons with the countries, such as Britain, France, United States, Spain, Greece, Ireland, Portugal and Turkey. In section 2 we present a comparative analysis of Turkey with other OECD countries, while in section 3 we present the econometric results. Finally section 5 presents the main conclusions.

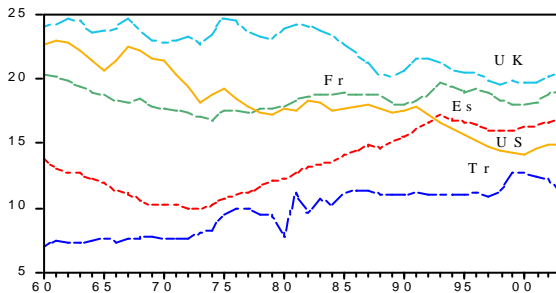
## **2. Comparative Study**

First of all, we compare the evolution of Public Consumption Expenditure, which is at a great extent related with Public Revenue in Turkey and another four OECD countries: Spain, France, United Kingdom and the United States, for the period between 1960 and 2003. We can notice in Graph 1 that this share has increased in Turkey for 1960-2000 and reached a value near the US in year 2000 and similar to that of Spain in year 1980. On the other hand we can notice that the US and the UK have experienced a diminution of this share for 1960-2000 and a slight recovery afterwards, while Spain has increased this share for 1973-93, and diminished it in 1993-2003,

and France shows small variations around a rather stable share, slightly lower in 2003 than in 1960.

Graph 1 shows this share:  $G \cdot 100 / \text{GDP}$ , where G means Public Consumption and GDP is Gross Domestic Product. According to this comparison it seems that public sector has not a low share on Turkish GDP and thus it may be not convenient to increase it, because the negative effects that it may have on demand and supply of private sector. Of course a more even distribution of tax pressure between capital and labour income would be convenient, similarly to that what happens in another OECD countries.

Graph 1. Share of Public Consumption on GDP in Turkey (Tr), France (Fr), Spain (Es), Great Britain (UK) and the United States(US)



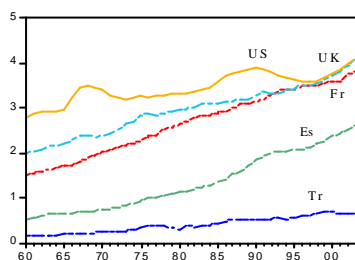
Source: Elaboration from OECD statistics

Secondly, the value of real Public Consumption per inhabitant at 1990 Purchasing Power Parities, PPPs,  $gh90pp$ , is very low in Turkey in comparison with the another 4 OECD countries of Graph 2. This is mainly due not to a lower tax burden but to a lower level of real GDP per inhabitant. Consequently the best way to increase this variable is to increase real GDP per inhabitant, which is favoured both by a high rate of growth of GDP and a moderation in the rate of population growth. Graph 3 shows the comparison of real GDP per inhabitant at 1990 PPPs.

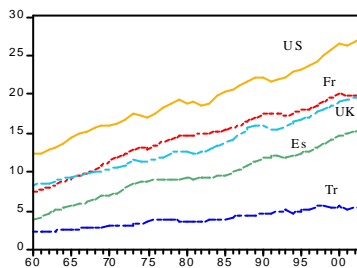
Table 1 shows the ratios of real GDP, Population and GDP per

inhabitant, for each country between 1965 and 1997. Turkey have experienced a higher increase in real GDP but not in real GDP per inhabitant, in comparison with Spain, because the rate of Population growth has been very high in Turkey. With a rate of population growth similar to Spain, Turkey could have multiplied real GDP per inhabitant by 3.71 during that period, and would have reached a value of GDP per inhabitant of 9143 dollars at 1990 prices and PPPs in year 1997 instead of 5573.

Graph 2. Public expenditure per inhabitant (thousand \$90 PPPs)



Graph 3. Real GDP per inhabitant (thousand \$90 PPPs)



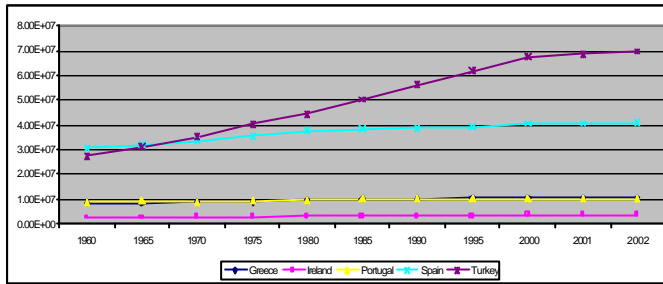
Source: Elaboration by Guisan(2005) from OECD statistics

Table 1. Ratios 1997/1965 of real Gdp, Population and Gdp per inhabitant

Country	Ratio Gdp	Ratio Pop	Ratio Gdp/Pop
Turkey	4.5897	2.0306	2.2603
UK	2.0175	1.0858	1.8581
Spain	2.9196	1.2378	2.3587
France	2.4165	1.1937	2.0244
USA	2.3767	1.4034	1.6935

As it is seen on Graph 4, Turkey and Mexico have had the fastest population growth in OECD countries. For example, in the period 1960-2002, population grew 147 % in Turkey, 183% in Mexico and only 34 % in Spain 39% in Ireland, 31% in Greece and 17% in Portugal.

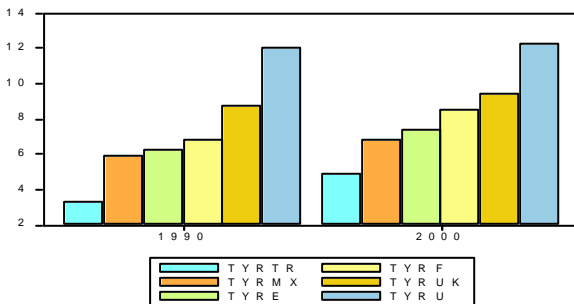
Graph 4: Population Growth



Source. Elaborated from OECD figures

Fourth, industrialized countries have reached their position mainly due to the improvement of education, which have contributed to increase production by inhabitant by two ways: improving real production growth and lowering population rates of growth. As shown in Guisan, Aguayo and Exposito(2001) the increase in average Total Years of Education of Population (TYR), moderates Fertility rates and has an important contribution to the increase of real Gdp per inhabitant. Graph 5 shows the values in 1990 and 2000.

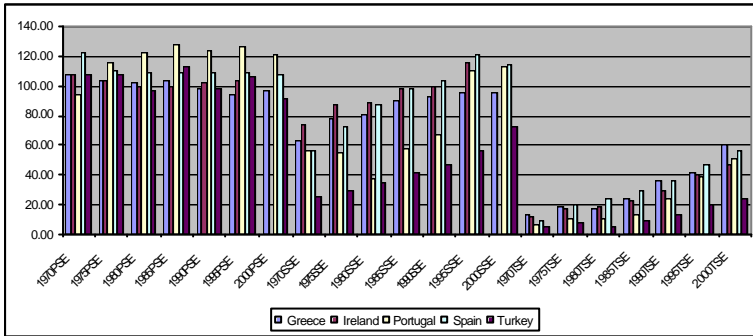
Graph 5. Total years of Schooling in 1990 and 2000



Graph 6 shows school enrollments from 1970 to 2000. As it is seen on Graph 6, Turkey is successful to educate its population at primary level, but not at secondary and tertiary levels. Turkey has the lowest enrollment rates among the countries such as Spain, Ireland, Greece and Portugal. In 1999, compulsory primary education increased from 5 to 8 year in Turkey. But especially there is a lack of pervasive

vocational education, this must be improved and expanded in Turkey.

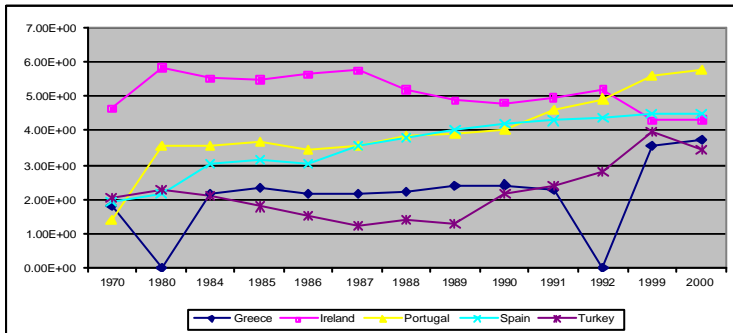
Graph 6: School Enrollments (primary, secondary, tertiary)



Note: TSE School enrollment, tertiary (% gross) PSE School enrollment, primary (% gross). SSE School enrollment, secondary (% gross).

The share of education in public spending as percentage of GNP is seen on Graph 7. Portugal has the biggest share in public spending for education. For Turkey, the share of education in public spending is slowly increasing after 1969. But, Turkey and Greece are left behind Spain, Portugal and, Ireland.

Graph 7: Public Spending on Education, total (% of GDP)

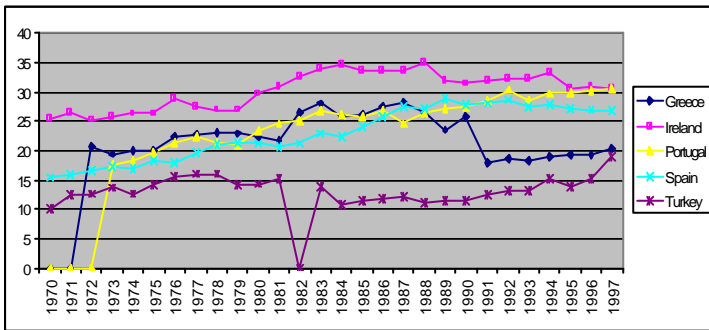


Turkey should increase the share of education in public spending and must reorganize the education systems for fostering development.

*Tax Structure:*

The lack of a stable fiscal resource supplying system in accordance with the social and economic goals had an important role in the economic development of the country since the foundation of the Republic. Neither, concerning the financial needs of the economy nor, the more appropriate taxing structure, a convenient fiscal policy was not followed in consistence with the economic and institutional development level of the country. From 1970 to 2000 the share of tax revenues in GNP did not increase. Turkish budgets have had structural deficits depended on insufficient utilization of the domestic resources of the country. A convenient and effective relationship between tax policy and capital accumulation could not be established, tax regulations could not be formed in consistence with the level of economic growth in GNP (Bulutoglu, 1971; Asim, 1973). As it is seen in Graph 8, Turkey has had the lowest tax revenues/GNP ratio among the countries, such as Spain, Greece, Portugal and Ireland. There were small increases until 1978, but there-after this turn into decreases until 1996.

Graph 8: Tax Revenues/GNP

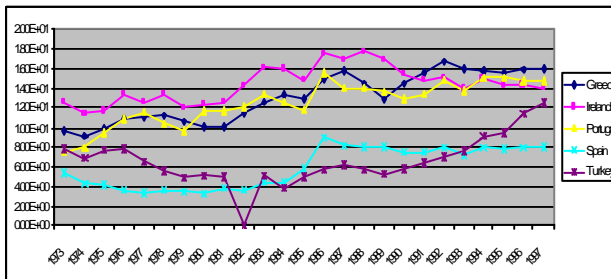


Despite the enlarging taxing capacity, adequate tax effort could not be performed in political and administrative areas. One of the crucial facts is that tax reforms remained as a permanent problem on the agenda of Turkish politics. The tax reforms applied in 1960, 1971, 1980 could be put into effect only during military regimes, while in the 1990s International Monetary Fund (IMF) has been the main factor behind the tax reform proposals in Turkey.

The fact that collected taxes was not adequate to meet even the basics of the budget expenditures in Turkey. Neglecting revenue side of the budgets stands as one of the most significant reason that curbs the development and leads the economy to crises and recessions. We propose that there is a convenient tax capacity to finance the budget expenditures. Effective tax system is also very important to increase productivity in the economy. First, replacing the taxes with seigniorage, debts put pressure on government expenditures, and cause to reductions in social expenditures, such as education and health services. After 1985, government utilized more and more internal borrowing instead of seigniorage put more pressure on budget deficits and external debts.

Second, the growing unrecorded economy and a lack of efficient tax administration, governments have concentrated on the indirect taxes. The structure of the Turkish tax system has shifted from direct taxes to indirect taxes which made tax system less elastic to changes in the economy. From 1984 to 2002 share of value added tax in total taxes increased from % 24.8 to % 34.2 ([www.maliye.gov.tr](http://www.maliye.gov.tr)) Income tax decreased from % 33.7 to 23 in 2002, Corporate tax, from % 14.9 to 9.3. Graph 9 shows the taxes on goods and services on industry and services since 1994. Greece, Ireland, Portugal have highest taxes on goods and services. While in Turkey and Spain, it is lower than those countries. After 1987 Spain kept these taxes on a certain level, but there is a increasing tendency in Turkey. In 1997, it was quite close to Ireland and Portugal.

Graph 9: Taxes on goods and services (% value added of industry and services)





Third, the elasticity of Turkish tax system is low with respect to other OECD countries. The elasticity of the Turkish tax system is low and unstable. Between 1973 and 1997, elasticity is approximately 1,3 for the other countries, for Turkey it is 1,0. In spite of expanding taxing capacity, tax effort is voluntarily and automatically insufficient in Turkey. Automatic elasticity of Turkish tax system is low where tax evasion and tax avoidance are quite common, exemptions and exceptions are wide. There is a huge unrecorded economy. This shows that, tax system could not provide enough revenue for public sector with respect to growing needs of the economy. We propose that a lack of tax effort in order to increase revenues was one of the crucial reality of the former economic policies in Turkey.

### **3. Data and Model result**

#### *a. Data*

In this research, we use time series covering the period 1968-2003. Budget deficits, growth rates of tax burden, changes in tax revenue and per capita GNP, the shares of economic sectors in GNP (agriculture, industry and services) and tax burden were basic variables of our analysis. The data is collected from DIE, DPT, TCMB and ministry of finance. Budget deficit variable was budget deficit/GNP. Tax burden variable was tax revenue/GNP. Economic sector variables were measured the growth in the percentage of agricultural sector, of industrial sector, and of services in GNP.

#### *b. Model Results*

In this section of the study, three steps will be followed. First, the relationship between budget deficit and growth will be tested. Second, the long-term relationship between tax burden and per capita GNP will be tested. Third, the relationship between the development of economic sectors (agriculture, industry and services) and tax burden will be tested by utilizing cointegration analysis.

In the first step, by using cointegration analysis the relationship between budget deficits and growth is tested in the long run. The stationary of variables was checked by using the augmented Dickey-

Fuller (ADF) unit root, Philips–Perron (1988) test and KPSS test techniques. The optimal lag number of series was determined by AIC criteria. In Table 1, Level indicated that null hypothesis for variables must not be rejected. It is seen that first difference is stationary and that null hypothesis can be rejected. In the next step, The Engle-Granger’s two-step procedures is used for testing a direction of the interaction. In order to obtain a t-value the 5 % critical value, ADF test is applied.

Table 2. Unit Root Test for the Variables

Variables	ADF (F. Dif.)	PP(F. Dif.)	KPSS(F. Dif.)
ΔBudget Deficit/GNP	-5.28	-7.38	.025
ΔTax Burden	-4.59	-7.62	.032
Δ Agricultural Sector/GNP	-4.68	-7.70	.10
Δ Industrial Sector/GNP	-12.46	-11.99	.013
Δ Services/GNP	-8.94	-9.01	.094
ΔGrowth Rate	-5.68	-8.98	.068

\* F.Diff is first difference

Table 3. List of Eigenvalues of Budget Deficit and Growth Rate  
Eigen value: 0.475 0.272 0.065

Null	Max-Eigen Statistic	5 Percent CV	Trace Statistic	1Percent CV
$r=0^*$	25.84	29.68	41.28	35.65
$r \leq 1$	12.71	15.41	15.403	20.04
$r \leq 2$	2.71	3.76	2.71	6.65

\* Denotes rejection of the hypothesis at the 5% (1%) level

Trace test indicates no cointegration at both 5% and 1% levels

Table 4. Error Correction Specification  
Dependent variable: Δ Budget Deficit\ GNP

Variables	Coefficient	t
C	172.55	2.67
ΔGrowth Rate	-8.73	2.44
ΔTax Burden	-1.49	2.62
$U_{t-1}$	-1.48	8.7

$$R^2 = 0.61 \quad DW \ 2.12; \quad RSS = 0.016; \quad SE = 0.012; \quad X^2_{SC}(1) = 0.056; \\ X^2_{FF}(1) = 0.256; \quad X^2_N(2) = 1.5; \quad X^2_H(1) = 0.056$$

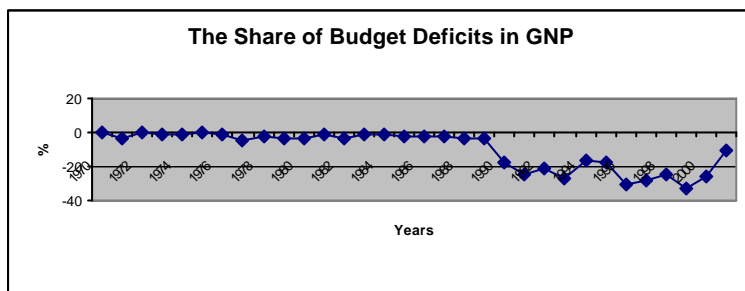
*Note:*  $R_a^2$  is adjusted  $R^2$ ; RSS is residual sum of squares; SER is the standard error of regression; DW is the Durbin- Watson Statistic;  $X_{SC}^2$  is the Lagrange Multiplier test of residual serial correlation;  $X_{FF}^2$  is a functional form test (Ramsey's RESET test) using the square of the fitted values;  $X_N^2$  is the normality test based on skewness and kurtosis of residuals;  $X_H^2$  is a heteroscedasticity test based on the regression of squared residuals or squared fitted value;  $e_{t-1}$  is the lagged values of the residuals obtained from cointegration regression

To prove the robustness of the cointegration results, Johansen estimation procedure is carried out which uses full information maximum likelihood framework. First, the long term relationship between budget deficits and growth rates; growth rates and tax burden will be tested. Table 2 shows the result of the cointegration analysis. Testing the restriction of no more than  $r$  cointegration vectors against the alternative of  $r+1$  such vectors, the trace statistics test restriction of no more than  $r$  cointegration vectors against the alternative of  $r=0$ .

The hypothesis must not be rejected by both the maximum eigen value and the trace statistic values at the 95 % level. Cointegration test between the growth and budget deficits and tax burden indicates one cointegration vector. Based on the results obtained from the Johansen's and the Engle-Granger's approaches, we can now conclude that growth and budget deficits and tax burden are cointegrated. This shows that, under the hypothesis of cointegration, the series tie together by some long-run equilibrium relationship. Further, we used error correction model to search a long-run relationship between tax burden, growth and budget deficits, Table 4 shows the results;

Model is approved with the statistical tests. At this point, we are able to propose that when GNP increases, budget deficits will be narrowed. In the process of economic development GNP has increased and the proportion of budget deficit in GNP has expanded in Turkey. Graph 10 shows the share of the budget deficits in GNP between 1970 and 2001.

Graph 10: The Share of Budget Deficits in GNP



Especially, the proportion of budget deficits in GNP has increased dramatically since 1989. Several variables influenced the factors behind this tendency. In this process, the increase in revenues was imperative for balancing the public budget under conditions of growing expenditure (Hershlag, 1966). Since 1986, the revenue increases have been imperative for balancing the public budget in order to roll over the government debts. Raises in taxes were important for financing development expenditures in the 1960s and 1970s, while in the 1990s this was imperative, not for the development, but for rolling over the government debts. In this part of the study, we emphasized on revenue aspect of the budgets; specifically on tax revenues.

*The Relationship Between Per capita GNP and Tax Burden:* First, we looked for a relationship between per capita GNP and tax burden. Table 5 shows that there is not any relationship between per capita GNP and tax burden.

According to test results, there is not any cointegration vector between tax burden and Per capita GNP. In Turkey, per capita GNP has increased since 1950, but tax burden was not cointegrate with per capita GNP. In other words, although the increases in Per capita GNP, tax revenues did not follow the growing Per capita GNP.

Table 5. Per capita GNP and Tax Burden  
Eigenvalue: 0.113196 0.044799

	Max-Eigen Statistic	5 Percent CV	Trace Statistic	1Percent CV
r =0	4.324	15.41	5.97	20.04
R≤ 1	1.65	3.76	1.65	6.65

\*(\*\*) denotes rejection of the hypothesis at the 5%(1%) level  
Trace test indicates no cointegration at both 5% and 1% levels

*GNP Growth Rates and Tax Burden:* Second, we searched the relationship between GNP growth rates and tax burden. Table 6 shows the results of the test.

Table 6. Growth and Tax Burden  
Eigen value: 0.34 0.009

Null	Max.Eigenvalues	5 % CV	Trace Stat.	1% CV
r=0*	31.8	15.41	39.008	20.04
r≤ 1	7.16	3.76	6.16	6.65

\*(\*\*) denotes rejection of the hypothesis at the 5%(1%) level Trace test indicates no cointegration at both 5% and 1% levels. % is percent.

Table 7. Error Correction. Dependent variable:  $\Delta$  Growth Rate

Variables	Coefficient	T
C	1.395	2.34
$\Delta$ Tax Burden	-0.08	1.09
$U_{t-1}$	-1.02	2.7

$$R^2 = 0.81 \text{ DW } 3.12; \text{ RSS}=0.014; \text{ SE}=0.010; X^2_{SC}(1)=0.059; \\ X^2_{FF}(1)=0.234; X^2_N(2)=1.7; X^2_H(1)=0.045$$

The test restriction of no more than r cointegration vectors against the alternative of r+1 such vectors. The trace statistics test restriction of no more than r cointegration vectors against the alternative of r=0 . The Hypothesis must not be rejected by both the maximum eigenvalue and the trace statistic values at the 95% level. There is one cointegrated vector between growth and tax burden. Based on the results obtained from the Johansen's and the Engle-Granger's approaches, under the hypothesis of cointegration, the series tie

together by some long-run equilibrium relationship. In order to search a long-run relationship between tax burden, growth, we used error correction model. Model result is shown that model is justified by statistical tests.

*The Relationship Between Growth Rates of the Shares of Economic Sectors in GNP and Tax Burden:* Third, one of the important indicator for the development level of the country is to determine the shares of the economic sectors in GNP. Taxing all sectors of the economy upon their development level (capacity) is necessary for setting up a stable and efficient tax structure. To see the relationship between the growth of the shares of economic sectors in GNP and tax burden, we searched a cointegration shown in Table 8.

In table 8, the test restriction of no more than  $r$  cointegration vectors against the alternative of  $r+1$ ,  $r+2$  and  $r+3$  such vectors. The hypothesis must not be rejected by both the maximum eigenvalue and the trace statistic values at the 95% level. There are four cointegration vectors. Now, we estimate a long-run relationship by using the error correction model in Table 8.

In Table 10, testing the restriction of no more than  $r$  cointegration vectors against the alternative of  $r+1$  such vectors, the trace statistics test restriction of no more than  $r$  cointegration vectors against the alternative of  $r=0$ . The hypothesis must not be rejected by both the maximum eigen value and the trace statistic values at the 95 % level.

There is one cointegrated vector between growth and tax burden and between economic growth and rate of sectors in GNP. Based on the results obtained from the Johansen's and the Engle-Granger's approaches, under the hypothesis of cointegration, the series tie together by some long-run equilibrium relationship. In order to search a long-run relationship between tax burden, growth, we used error correction model in Table 11.

Table8. List of Eigenvalues Eigen value: 0.676 0.589 0.352 0.215

Null	Max.Eigenvalues	5 % CV	Trace Statistic	1 % CV
R=0 **	46.28	47.21	110.55	54.46
r ≤ 1 **	36.50	29.68	64.27	35.65
r ≤ 2 **	17.84	15.41	27.78	20.04
r ≤ 3 **	9.94	3.76	9.937	6.65

\*(\*\*) denotes rejection of the hypothesis at the 5%(1%) level Trace test indicates no cointegration at both 5% and 1% levels

Table 9 . Error Correction Specification

Dependent variable:  $\Delta$  Tax Burden

Variables	Coefficient	t
C	-82.83	3.90
$\Delta$ Agriculture/GNP	-345.68	9.00
$\Delta$ Industry/GNP	11.40	37.80
$\Delta$ Services/GNP	69.15	2.15
$U_{t-1}$	-2.42	-3.36

$R^2 = 0.70$  DW 3.32; RSS= 0.011; SE= 0.014;  $X^2_{SC}(1)= 0.041$ ;  
 $X^2_{FF}(1)= 0.23$ ;  $X^2_N(2)= 1.63$ ;  $X^2_H(1)= 0.042$

Table 10: Economic Growth and Sectors of List of Eigenvalues

Eigen value: 0.406 0.29 0.227 0.019

Null	Max.Eigenvalues	5 % CV	Trace Statistic	1 % CV
r=0 **	40.18	47.21	94.42	54.46
r ≤ 1	26.95	29.68	24.24	35.65
r ≤ 2	19.89	15.41	17.29	20.04
r ≤ 3	7.40	3.76	5.40	6.65

\*(\*\*) denotes rejection of the hypothesis at the 5%(1%) level Trace test indicates no cointegration at both 5% and 1% levels

Table 11. Error Correction Specification  
 Dependent variable:  $\Delta$  Economic Growth

Variables	Coefficient	T
c	-0.51	2.1
$\Delta$ Agriculture/GNP	3.92	8.47
$\Delta$ Industr/GNP	0.49	2.41
$\Delta$ Services/GNP	-1.66	2.6
$U_{t-1}$	-2.11	-3.6

$$R^2 = 0.75 \quad DW \ 3.2; \quad RSS = 0.010; \quad SE = 0.011; \\ X^2_{SC}(1) = 0.051; \quad X^2_{FF}(1) = 0.26; \quad X^2_N(2) = 1.52; \quad X^2_H(1) = 0.046$$

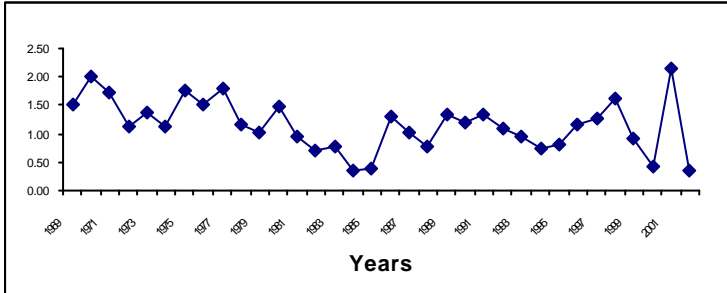
*The Elasticity of the Turkish Tax System:* A tax system whose yield increases as rapidly as national income, or more rapidly is termed a buoyant system. Buoyancy can be attained by introducing and increasing new taxes that become feasible and productive as the economy develops and by emphasizing elastic taxes, the yield of which increases automatically in response to economic growth (Goode, 1984, p.244). At this stage, we are going to analyze the elasticity of the tax system.

Figure 3, shows the elasticity of the Turkish tax system from 1969 to 2003. Between 1969 and 2003, average tax elasticity of the Turkish tax system is at 1.10. In general, there is a tendency to drop in elasticity of Turkish tax system since 1970. The elasticity shifts year by year, for example, between 1969 and 1979, it was average 1.47; between 1980 and 1990 it declined to 0.92; from 1991 onwards it has gone up to 1.06. There were some ups and downs, for example in 1974 it was greater than 1.5, in 1979 it went down to 1. The 1985 is an important year for tax arrangements, Value Added Tax was introduced and stimulative arrangements for private sector was expanded, as a result of these arrangements tax revenues declined and the elasticity dropped below 0.5. In 1989 tax elasticity dropped below 1; from 1990 onwards with the expansionary economic policies and high growth rates, tax elasticity stood around 1. In 1996, it was over 1. Especially, after 2001 tax elasticity has increased in line with the IMF's stand-by arrangements. IMF monitored the Turkish economy closely and put pressure on governments to increase



the taxes for the purpose of rolling over the debts. In 2001, Turkish government raised the taxes although the growth rates decreased, that increased the elasticity of the tax system to 2.13, but following the year it went down to 0.34 which was lower than that the level of 20 years ago.

Graph 11: Elasticity of the Turkish Tax System



*Evaluation of the Tax Policy of Turkey:* In spite of the ratio of tax revenues to gross national product (overall tax burden) has not changed, but relatively declined in line with the economic growth. The change in the tax burden does not depend on the changes in gross national product. Moreover, there is not any relation between per capita gross national product and tax burden. The tax burden did not increase in parallel with the growth of economic sectors in economy (agriculture, industry, services and trade sectors) which are the indicators of the level of economic development. The purpose of tax policy must have been to provide sufficient resources for the budget. R.Goode (1984, 243-4) summarized one of the important points in formulating tax policies suitable for a strategy of general growth is an adequate and growing amount of revenue is essential to finance the heavy responsibilities that governments must assume. Tax effort is voluntarily and extremely low in Turkey. Measures taken to increase tax revenues remained quite marginal, tax structures are chosen which are not suitable for country's economic structure. As a result of the subsequent regulations in tax system, especially after 1980, tax system became incomprehensible and complicated; resource allocation aspect of taxes was given importance at the

expense of fiscal resource loss, especially after 1985. From 2000, indirect taxes are increased, and some specific taxes were levied. Tax base is narrow and for the certain and very limited number of tax payers tax burden is increasing. Besides, Turkey is among the countries that have the worst income distribution in the world. Distribution of income is one of the determining variables of tax capacity. 20 % of the population who has the highest income, gets 50 % of GNP. The highest income groups get the half of the National Income and pay less than 1 % of the total taxes. 3.5 % of total tax revenues comes from annual declarations on income and corporate taxes, while 16 % is collected by stopage sources (Vural, 2004, p.17). Workers got 20 % of National Income and paid more than half of the total taxes (Temizel, 2003, p.23). For example, Hershlag (1966, p.243) noted that during the period 1953-1962, the average per capita GNP for assessed in cover (i.e. excluding wages and salaries) increased by 3 % annum, while GNP (minus agriculture) increased 12 % Per annum, all in current prices. This, coupled with relatively greater increase in profits than in wages and salaries during that period, shows lenient fiscal policies towards capital revenues. From 1984 to 2002 share of value added tax in total taxes increased from % 24.8 to % 34.2 ([www.maliye.gov.tr](http://www.maliye.gov.tr)) Income tax decreased from % 33.7 to 23 in 2002, Corporate tax, from % 14.9 to 9.3. Since, the growing unrecorded economy and a lack of efficient tax administration, governments have concentrated on the indirect taxes. The structure of the Turkish tax system shifted from direct taxes to indirect taxes which made tax system less elastic to changes in the economy. Taxes are focused on a certain tax payers and a narrow tax base creates great dissatisfaction in the society. All these statistical data and econometrical results are shown that, although a wide taxable capacity existing in Turkey, tax effort is low and inadequate both voluntarily and automatically. Since 1980, The purpose of Turkish budgets is converted from the economic development to the roll over the debts. Government expenditures are closely monitored by the IMF. For increasing any government expenditures, government has to show the financial source. In order to get out of this vicious circle, government has to formulate effective tax policy in order to set up reliable, visible, legitimate and fair tax system. According to the program 'Strengthening the Turkish Economy,

2001' regarding public revenues, the main problems have been the insufficient tax collection stemming from the high tax rates and narrow base leading to unequal distribution of the tax burden. The use of tax identification numbers be widened to expand the tax base. Tax audits be increased to minimize tax evasion and losses. Government continued to implement this program but, tax arrangements have been inadequate to overcome the weaknesses of the Turkish economy.

#### **4 . Conclusion**

Since the beginning of the 1980s successive governments have made significant efforts to change the structure of the tax system. The aim was to increase real Gdp and Public Expenditure for per inhabitant in Turkey. But the results were not that it had expected. Turkey must rearrange its financial markets and public finance system. Because of the expanding budget deficits and growing borrowings and its interest payments left nothing behind to implement social projects in Turkey. Turkey should set up fiscal discipline and should take care of real rate of growth for per inhabitant. It is only possible to increase education expenditures. Any increase in education level affects real Gdp and productivity which closely related to the fertility rates, also. These are important for balanced growth and stability of developing countries.

Second part of this paper is aimed at examining the empirical relationship between growth of the economy and tax burden. From 1950, GNP has constantly increased except for the short terms, which indicated expanding tax capacity. Increasing GNP, Per capita income, the share of economic sectors in GNP are some of the basic indicators of the growing economy. Even though the economy has grown, the elasticity of the Turkish tax system has been low and unstable in order to meet the growing needs of the government spendings. Moving from this point revenue aspect of the Turkish tax system was examined by using cointegration tests and some statistical tools.

The decline of budget deficits was seen as the main factor for stability, however only the expenditures were restricted to achieve this aim, but the reforms in revenue side was neglected which sustaining the same problem: a lack of revenue. The review of the literature and our empirical results suggest that growing the economy and expanding the taxable capacity does not always resulted in increases in tax revenues in Turkey. Although, an available wide taxable capacity in Turkey, tax effort is low and inadequate both voluntarily and automatically. Turkish tax system did not provide sufficient revenue for the state budget. As the fiscal function of taxing was neglected, its encouraging and stimulating functions were emphasized to increase private savings and investments. The fact that fiscal policies did not used as an instrument to increase aggregate national savings since 1950 (Türel, 1987). The finance of budget deficits should compensated in a long term by increasing tax revenues and establishing an appropriate tax system in line with the economic structure of the country. The promotion of tax system to such a level so as to provide a financial source depends much on the realization of tax reform, and this is a matter of political preference and political democracy (Önder, 1987). A fairer and more efficient taxing, as a matter of political democracy, is the most urgent problem on the agenda with its stabilizing and accelerating effects upon the growing economy.

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