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FISCAL POLICY AND DEMAND PRESSURES IN GREECE, 1958-1978

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FISCAL POLICY AND DEMAND PRESSURES IN GREECE, 1958-1978

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1. INTRODUCTION

A crucial question to anyone engaged in analysing the inflationary process in a country, is how much has the Government contributed to the generation and maintenance of the high demand pressures. The creation of demand in the economy by fiscal expansionary policies (deficit spending), which promotes the objectives of a rapid growth in income and increase in employment, may create inflationary pressures, depending upon how this deficit is financed and on the initial condition of the economy. In the framework of the conventional IS-LM analysis the effect of a shift of the IS curve on income (deficit spending), depends on the slope of the LM curve, and on whether or not this will shift or remain unchanged, i.e. whether or not the deficit is covered by an increase in the money supply.

The problem of the deficit finance has been associated with the size and the growth of the public sector, in the sense that the rate of inflation, at a popular level, is seen as a function of «excessive» growth in public spending, because of the difficulties involved in financing such spending[1].

In what follows we consider the question: were the various levels of demand prevailing due to Government actions, i.e. deficit spending policy (direct contribution), or were they due to other forces, as a result of which Government action was not needed, i.e. autonomous private investment expenditure (indirect contribution). It should be stressed from the outset, that the relation between budgetary changes, aggregate demand and the price level is much more complicated than what the Keynesian multiplier analysis assumes, leaving aside important monetary effects as well as consequences on costs, resulting from budgetary changes.

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1. A. T. Peacock and M. Riketts, «The Growth of the Public Sector and Inflation» in F. Hirsch and J. H. Goldthorpe (eds.) *The Political Economy of Inflation,* M. Robertson, London, 1978, p. 118.

2. «INDIRECT» CONTRIBUTION OF GOVERNMENTS

It has been argued for the U.K. economy, that the substancial increase of private investment expenditure is the main cause of high demand which kept employment «so much more full, or more nearly full, than it was in the past» in the economy since the war and up to 1968[1]. The role government finance played in this was that

> «...during World War II itself it brought about a once-for-all increase in the level of activity, and that once this has been done cumulative forces were set in train that kept Investment high, so that the Government could then assume a passive or even restraining role without activity falling seriously below Full Employment level»[2].

And this investment boom was kept going as a result of both lack of another investment boom since the beginning of the 20th century and therefore the expectation of very substantial arrears of investment opportunities, and of the acceleration of technical progress. None of it was due to Government policy.

Given now that the percentage of Private investment to GDP in Greece has been high, over most of the period under examination (Table 1) we should examine whether or not this argument holds true in the case of the Greek Economy, i.e. whether or not an increase in private[3] fixed asset formation was the result of a shift in Demand for or Supply of Investments curve. We can consider the marginal efficiency of investment schedule as representing an investment demand function, which shifts because of such reasons as the pressure of demand on capacity and the scope for innovatory investment. The demand on capacity can be the result of either an active governmental policy (deficit spending), or a conjunction of circumstances, which are independent of any government actions, and are the result of the existence of a substantial arrears of investment opportunities and of other demo-

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1. R. C. O. Matthews, «Why has Britain had full Employment since the War?», *Economic Journal,* September 1968.

2. *Op. cit., Op.* 561.

3. We focus attention here on Private Investment. Public Investment has certainly played its part, but is has been a small proportion of total Investment, and its share remained roughly constant, varying from 27% in 1958 to 28% in 1969, 29,9% in 1974, 22% in 1977 and 22,5% in 1978.

graphical and institutional factors. Also, technical innovation cannot be attributed to any demand management on the part of governments. The only role the latter can play to that is by financing technological and educational programmes.

TABLE 1. Private Fixed Asset Formation as Percentage of G.D.P. at Factor Cost. General Government Expenditure and Revenue as Percentage of G.N.P. at Market Prices

YEAR	Fixed Asset[1] as % of G.D.P.	% Change	Revenue as % of G.N.P.	% Change	Expenditure as % G.N.P.	% Change	Annual % Change of G.N.P. (M.P.)
1958	13.82		18.17		20.29		
1959	13.43	2.82	18.22	0.27	22.73	8.49	3.91
1960	14.54	8.26	18.51	1.59	22.73	—	8.22
1961	13.23	-9.00	19.21	3.78	23.02	1.28	12.98
1962	15.29	15.57	20.19	5.10	24.16	4.95	6.27
1963	15.41	0.78	20.65	2.28	23.62	-2.23	11.70
1964	17.44	13.77	21.36	3.44	24.57	4.02	12.32
1965	18.01	3.27	21.18	-0.84	25.57	4.07	13.66
1966	18.35	1.89	22.84	7.84	26.29	2.82	11.17
1967	16.34	-10.95	23.69	3.72	28.76	9.39	8.11
1968	19.61	20.01	24.53	3.55	28.73	-0.10	8.68
1969	20.58	4.94	24.52	-0.04	28.50	-0.80	13.33
1970	19.66	-4.47	24.16	-1.47	28.19	-1.09	12.13
1971	19.92	1.32	24.14	-0.08	29.58	4.93	11.08
1972	22.14	11.14	23.90	-0.99	29.35	-0.77	14.53
1973	22.89	3.39	22.69	-5.06	27.79	-5.31	28.38
1974	17.14	-25.12	23.10	1.81	30.01	7.99	18.04
1975	17.05	-0.53	24.02	7.98	31.10	3.63	18.78
1976	17.60	3.23	25.85	7.62	31.67	1.83	22.71
1977	20.46	16.25	26.33	1.86	32.61	2.97	17.39
1978	20.77	1.52	27.86	5.81	34.39	5.46	18.72

SOURCES: Ministry of Coordination, National Accounts of Greece, 1958-75, No 23, and 1974-1978.

NOTES : Expenditure = Current Expend. on Goods and Services + Interest on Public Debt + Subsidies + Net current Transfers to Households + Public Gross Fixed Asset Formation.

Revenue = Direct Taxes on Households (including contributions to Social Security) and Corporations + Indirect Taxes.

1. It doesn't include change in stocks.

We can define the investment supply function as the willingness to invest at any given expected rate of return, i.e. the creation of more investment opportunities.

This function may shift because of a change in entrepreneurial attitudes. These attitudes can be changed if, first, monetary policy makes finance relatively cheaper; second, tax policy encourages investment; third, the Government has committed itself in preventing a slump in economic activity, and this helps entrepreneurs to improve performance. All these factors result in reducing the level of the real rate of return needed in order to yield a given private post-tax rate of return.

Therefore, the investment demand function can be shifted by both Government's fiscal policy and by other exogenous factors, while the investment supply function provides more scope for attributing its shift to government policies.

Many explanations can be given for the high[1] percentage of private investment to G.D.P.: *First,* Private Investment figures include Investment in dwellings. It is well known that the stock market has been in its infancy during most of the period under consideration and other investment opportunities were limited by that time.

On the other hand, the beginning of the period we are examining, coincides with the end of the period of reconstruction of the Greek Economy. Demand for dwellings was a natural outlet for the accumulated demand for durables due to both World War II and the Civil War, and therefore it occupied a high percentage of total private investment demand, especially in the beginning of the period. On the average this percentage was more than 40% of total Private Fixed Asset Formation. Further, this high percentage can be attributed to the institution of dowry, which has become synonymous with some sort of a dwelling unit, due to low confidence in the national currency. Moreover, while population growth cannot be counted as a determining factor to dwellings demand, because it has been quite low, internal migration, can be seen as an important factor. Population movement from rural to urban centres has very much contributed to the demand for dwellings. Greece

1. In comparison to international standards the percentage of total Investment to G.D.P. in Greece was high, amounted to 27% in 1978, while for the same year it was 20% in Spain, 20% in Italy, 19% in U. K., 23% in France, 21% in Belgium 22% in Germany, and 19% in U.S.A.
(See, *World Development Report,* 1980, the World Bank, August 1980, p. 119).

has had a bad experience of this internal migration flow. While the Greek population grew by about 4.5 percent from 1961 to 1971 and 10.7% from 1971 to 1981, the population of the greater Athens region grew by over 37 and 19 percent respectively.

Besides those there are some other reasons of a «pure» economic nature, which can be attributed to the economic policy of the Governments and therefore can be considered as having shifted the Investment Supply curve. These are:

- The great differentiation of the interest rates for housing loans offered by various agencies. These rates have varied from 18% for the common housing loans of the National Mortgage Bank of Greece to 3% for farmers included in the special programs of the Agricultural Bank of Greece.
- The favourable tax treatment of the interest rate payments on housing loans: The interest paid is subtracted from the taxable income.
- The discharge of those buying their first dwelling house (L. 107/880) and those importing foreign exchange for the purchase of a dwelling house, from paying sales tax (11%). Moreover, public employee pay only 3% as sales tax on the value of each house they are buying.
- The favourable tax treatment (a) of the imputed income from owner-occupation of the main house, and (b) of rental income, and the allowance of 25% from the gross personal income for the depreciation of the house.

Second, manufacturing investment demand, the second largest component of total private investment averaged about 19% over the whole period with a lower limit of 12.5% and an upper limit of 29.5%. Over the whole period incentives have been granted in forms of high depreciation rates for tax purposes, tax concessions and subsidisation of interest rates. We could argue that the investment supply function has been subject to some upward shift because of both a change in entrepreneurial attitudes and more favourable government policy. A lowering in the cost of borrowing can be seen to be one of the incentives offered to businessmen to expand investment and production. The difference between the rate of return on capital invested and the cost of borrowing to finance this new expansion shows the profit to the risk entrepreneurs bear by undertaking this investment project. The magnitude of the compensation to entrepreneurs' risk affects the demand

TABLE 2. Breakdown of Gross Private Fixed Asset Formation by Main Category

YEAR	Agricul. Animal Breeding Fishing.	Manufacturing	Dwellings	Services	TOTAL
1958	13.0	17.1	43.3	13.2	100.0
1959	14.8	14.7	42.3	17.5	100.0
1960	14.1	12.5	41.5	19.4	100.0
1961	12.6	12.5	43.8	18.1	100.0
1962	9.3	14.3	43.5	18.9	100.0
1963	9.8	14.9	42.4	19.6	100.0
1964	10.7	17.9	41.2	15.1	100.0
1965	11.0	20.0	41.9	15.5	100.0
1966	8.7	17.8	41.1	16.6	100.0
1967	12.0	17.5	38.8	16.7	100.0
1968	10.9	17.0	42.3	16.3	100.0
1969	8.9	16.4	44.0	15.5	100.0
1970	8.0	19.7	38.3	18.8	100.0
1971	8.1	21.5	40.1	13.6	100.0
1972	7.3	22.7	43.6	13.5	100.0
1973	7.7	21.7	43.6	13.5	100.0
1974	8.3	29.5	31.3	17.8	100.0
1975	9.6	26.1	37.0	14.7	100.0
1976	8.7	23.7	36.5	16.0	100.0
1977	8.6	19.1	39.3	16.9	100.0
1978	6.9	17.0	43.6	15.0	100.0
Average	9.9	18.7	40.9	16.3	100.0

SOURCE: Ministry of Coordination: National Accounts of Greece. 1958-75, No 23, and 1975-1978.

for loans in industry and therefore the rate of investment growth[1]. It has been calculated that borrowing cost and return of capital engaged is as follows: (See Table 3).

The borrowing cost has been calculated as the percentage of all expenses from borrowing during the year to borrowed capital averaged

1. G. Coutsoumaris, *Finance and Development in Industry,* Institute of Economic and Industrial Research, Special Study No 1, Athens 1976, p. 145.

TABLE 3. Difference between borrowing cost and return on capital of Societé Anonymes and Limited Liabilities Companies, 1959-73.

YEAR	Borrowing[1] Cost %	Return of Capital[2] Gross %	Return of Capital[2] Net %	Financial Risk Spread Gross %	Financial Risk Spread Net %	Interest Rate on Bank Credit[4] Re discount Rate	Working Cap.	L. Term Loan
1959	4.7	10.0	5.9	5.3	1.2	9.8	8.9	9.7
1960	4.0	9.4	5.7	5.4	1.7	6.5	8	7
1961	2.5	7.7	4.3	5.2	1.8	6.0	8	7
1962	1.7	7.6	4.4	5.9	2.7	6.0	8	7
1963	4.5	9.0	5.9	4.5	1.4	5.5[3]	8.9[3]	7[3]
1964	4.6	8.5	5.4	3.9	0.8	5.5[3]	9[3]	7[3]
1965	3.7	7.7	4.9	4.0	1.2	5.5[3]	9[3]	7[3]
1966	3.9	8.2	5.3	4.3	1.4	5.5[3]	9[3]	7.5[3]
1967	4.6	7.8	4.8	3.2	0.2	4.5[3]	9[3]	7.5[3]
1968	4.5	8.4	5.4	3.9	0.9	5.0[3]	9.8[3]	7.5[3]
1969	4.4	10.7	6.8	6.3	2.4	6.0[3]	8[3]	7.5[3]
1970	4.6	11.1	7.9	6.5	3.3	6.5[3]	8[3]	7.5[3]
1971	4.5	9.4	6.5	4.9	2.0	6.5	8	7.5
1972	4.2	9.5	6.8	5.3	2.6	6.5	8	7.5
1973	4.9	12.3	9.3	7.4	4.4	8.25	9	8.5
1974	5.5	12.9	7.9	7.4	2.4	9.5	12	10.5
1975	6.0	10.3	5.8	4.3	-0.2	10	11.5	10.5
1976	5.8	12.0	5.8	6.2	0.0	10	11.5	10.5
1977	5.9	9.9	5.3	4.0	-0.6	11	12	10.5
1978	6.4	9.6	5.3	3.2	-1.1	11	12	11
Average	4.4	9.9	6.8	5.5	2.4	9.5	12	10.5

SOURCE: CGI, Research on Balance sheets of Manufacturing industry. For the period 1959-73 these are cited in G. Coutsoumaris, *op. cit.*, p. 146.

SOURCE: (For interest rates): Bank of Greece. Monthly Statistical Bulletin (Several), Table 26.

1. Expenses made for obtaining loans, during the year, as percentage of the average loanable funds ar the begining and end of each year.

2. Percentage of average return on capital (profits + paid interest on loanable funds).

3. In respect of credit to industries realising a minimum level of export, interest plus commission amounts to between 4.5 and 6.5 percent (Currency Committee decree 1294/1/13 September 1963).

4. Averages of the changes occured in each year.

from the beginning and the end of the year. The return on capital, on the other hand, is the average return gross or net of depreciation (profits + interest on loans). Table 3, shows that the cost of borrowing in 1973 was almost the same to that in 1959 and the financial risk was spread more widely from 1968 to 1976 although the cost of borrowing has started increasing since 1974. The decrease in the financial risk spread during the last years of the period under consideration resulted in the decrease in the share of manufacturing investment to total private investment expenditure, (Table 2), indicating the sensitiviness of the investment expenditure of this kind to the variations of the cost of borrowing and the return to capital invested. This fact shows that the supply function of investments has been shifted rightwards, resulting to an increase in the share of manufacturing investment to total private fixed asset formation.

It is also known that depreciation rates do not always correspond to actual capital consumption, but they vary due to incentives offered by the authorities and that towards the last years of the period under review they considerably increased to allow for less taxable income higher profits and therefore higher investment expenditure: It has been found that the average elasticity of demand for investment with respect to gross profits for the period 1958-73 in the Greek Industry is 0.73[1]. This has also shifted the supply of investment function rightwards.

Finally, the share of Investment in Services to Total Private Investment has been increased over the period. It can be argued, that the Service Sector is disproportionately large in the Greek Economy, (amounted to more than 50% of the G.D.P. at factor prices over the period under examination), and that the rate of growth of this sector is very elastic to real personal disposable income, the development of internal and external tourism, population increases etc. However, population increases cannot assume, sole responsibility for the growth rate of Services sector due to the low rate of population increase. (4.5% and 10.7% between 1961-71 and 1971-81 respectively). On the other hand, real per capita income has been increasing by an annual rate of 11.6% over the period 1950-78, which by itself can be attributed to

1. G. Coutsoumaris, *op. cit.,* p. 163, 164n. The regression run was $Yi = 1976 + 1.116Xi$, $r = 0.92$, where Yi = Investment demand for fixed capital and Xi = gross profits, taken as a proxy for the flow of internal saving in businesses. The elasticity of investment demand for fixed capital with respect to gross profits is 1.116.

government's demand management. (In 1974 real personal disposable income declined due to the economic recession of the time and this reduced the discounted annual rate of growth of personal income).

It seems, therefore, from the above that Governments have contributed to the prevalence of high investment levels, though not directly through demand management policies. It is more likely the Investment supply curve to have shifted than the investment demand curve, although we cannot exclude the possibility of a shift of investment demand function, due to changes in the exogenous factors referred to above (population movement, institution of dowry, etc.). The view that the Investment supply function has shifted can be supported by the argument that the years of high inflation have very much affected the real rate of return on capital[1] and the financial risk spread was too low to cover effectively the risks businessmen bear undertaking investment projects financed by loans. On the other hand, the Greek industry lacks large productive units (in 1973 93.5% of total producing units employed less than ten people each) and the supply of managerial ability and skilled labour for administrative positions (which can be classified under «technological innovation») is limited, and hence the demand for investment is limited. Further, this can be also proved by considering the low flow of funds driven towards Industry. Professor Coutsoumaris[2] argues that although the banking system's ability to finance has been increased in real terms, the total finance to industry lagged behind. Indeed, the short-run and long-run banking system's finance to industry has been increased by 15.8 and 6.8 times respectively, since 1953 in real terms, while the money supply in real terms has been increased by 16.4 times.

It can easily be deduced then that the boost of Private Fixed Asset formation resulted from a shift in Investment supply curve upwards. And to that the contribution of government was vital. Indirectly though, the government contributed to an increase in demand for investment, and hence total demand. As for the investment demand function, it experienced a smaller shift not owed, though to expansionary governmental policies.

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1. G. Coutsoumaris, *op. cit.*, op. 136.
2. *Ibid.*, pp. 110-113.

3. «DIRECT» CONTRIBUTION OF GOVERNMENT

So far we have been analysing how governments indirectly increased demand pressures by helping private investment expenditure to increase, and we saw that they succeeded quite well in doing so. However, one should think that they were also quite successful in directly creating high demand levels as they were always running a budget deficit accompanied by large increases in money supply. Indeed, Total Expenditure as % of GNP at Market Prices has been always higher than the total Revenue as percentage of GNP at Market Prices, in each year (see Table 1). Expenditure percentage has shown a great variation from year to year and in 1978 it was 69,5% greater that in year 1958. Revenue has also shown a considerable annual variation and in 1978 it was only 53% higher than that in 1958. Clearly therefore there has been a continuous expansion of the public expenditure throughout the period. The main component of Total Expenditure is government expenditure on goods and services. This item amounted to 53,41% of total Expenditure in 1958 but it gradually fell to about 40% in 1973 and rose again to about 45,8% in 1978. In 1974 it equaled 44,32% of total Government Expenditure due to a sharp increase in Defence expenditures, while current expenditure on Goods and Services increased by about 40% in 1974. With respect to the previous year, expenditure for defenc purposes increased by 64%. Transfer payments as percentage to total expenditure showed a slight decrease during the first three years of the period under consideration and then they started rising again. In 1968 they reached their peak, being 27,36% of total government Expenditure. In 1974 this percentage fell to a lower level than that in 1958, and in 1978 it rose again to a higher level. (See Table 4).

Revenue, on the other hand, has increased throughout the period, as expected. Since Total Revenue is the sum of Direct and Indirect Taxes an increase in income raises Tax revenue. The share of direct taxes to total Revenue has been growing throughout the period: in 1974 it was 19,7% higher than that in 1958, while in 1978 it was 15,7%. As income increases the share of direct taxes to GNP at market prices increases as well showing the progressiveness of this Tax. The increase in the importance of direct tax revenue to total tax revenue is an indication of an improvement of the tax system and a more fair allocation of the tax burden. But the increase in tax revenue in general was not able to cover the total amount of government expenditure with the result of a permanent budget deficit.

TABLE 4. Breakdown of Public Expenditure and Revenue as percentage of G.N.P. at Market Prices

	Expend. on Goods and Services		Transf. Paym. to Households		Direct Taxes		Indirect Taxes	
YEAR	% GNP	% Tot. Exp.	% GNP	% Tot. Exp.	% GNP	% Tot. Rev.	% GNP	% Tot. Rev.
1958	11.59	53.41	4.78	22.83	7.17	39.44	11.00	60.56
1959	11.50	50.62	4.90	21.56	7.12	39.07	12.00	60.93
1960	11.49	50.55	4.82	21.19	7.23	39.05	11.28	60.95
1961	11.06	48.06	4.91	21.35	7.56	39.33	11.66	60.67
1962	11.35	46.99	5.61	23.23	8.13	40.25	12.06	59.75
1963	11.03	46.68	6.00	25.38	8.13	39.40	12.51	60.60
1964	11.41	46.43	6.14	24.97	8.52	39.89	12.84	60.11
1965	11.49	44.94	6.68	26.14	8.20	38.71	12.98	61.29
1966	11.58	44.06	6.96	26.46	8.88	38.88	13.96	61.12
1967	12.76	44.37	7.61	26.45	9.34	39.44	14.34	60.56
1968	12.62	43.92	7.86	27.36	9.82	40.02	14.71	59.98
1969	12.48	43.78	7.53	26.44	9.83	40.09	14.69	59.91
1970	12.40	43.98	7.50	26.62	9.90	40.98	14.26	59.02
1971	12.23	41.35	7.51	25.39	10.29	42.62	13.85	57.38
1972	11.86	40.41	7.08	24.12	10.33	43.25	13.56	56.75
1973	11.15	40.13	6.30	22.67	9.65	42.53	13.04	57.47
1974	13.30	44.32	6.59	21.95	10.95	47.22	12.19	52.78
1975	14.75	47.44	6.94	22.30	10.17	42.29	13.88	57.71
1976	14.66	46.27	7.24	22.88	11.79	45.62	14.06	54.38
1977	15.45	47.37	7.96	24.41	11.51	43.71	14.82	56.29
1978	15.75	45.80	8.80	25.58	12.72	45.65	15.14	54.35
Average	12.47	45.76	6.65	24.25	9.39	41.31	13.28	58.69

SOURCE: Ministry of Coordination: National Accounts of Greece, 1958-1975. No 23, Athens 1976, and National Accounts of Greece, 1978, Athens 1979.

It is a concensus among Keynesian analysts that budget deficits increase the demand in the economy having an expansionary effect on economic activity. But the important thing is how this deficit is financed.

Monetarists argue that only if this deficit is covered by new money creation, it can be inflationary. In any other case the deficit spending results in a crowding out effect and changes the mix of output. No net demand pressures are inserted in the economy.

If the government allows interest rates to rise for government bonds to become more attractive and therefore the government is able to finance its deficit by borrowing, this will have a negative effect on Investment demand and therefore a decrease in aggregate demand which affects in part at least, the increase in demand from the government deficit spending. If the government balances its budget by an increase in taxes, the simple balanced budget multiplier suggests that income rises by the same amount of the rise in government expenditure, i.e. the multiplier equals one. If

$$y = c(y - \bar{t}) + \bar{i} + g$$

where y : real national income
c : real consumption expenditure
t : real tax revenue (fixed sum)
i : real Investment expenditure (exogenous)
g : real government spending.

by differentiating we get:

$$dy = c'(dy - d\bar{t}) + d\bar{i} + dg \tag{2}$$

and

$$dy = \frac{c'd\bar{t} + d\bar{i} + dg}{1 - c'} \tag{3}$$

In the balanced budget multiplier we assume that $d\bar{t} = dg$, and setting $d\bar{i} = 0$, (3) becomes

$$dy = \frac{-c'dg + dg}{1 - c'} = \frac{1 - c'}{1 - c'}\, dg \tag{4}$$

$$dy = dg \quad \text{or} \quad \frac{dy}{dg} = 1.$$

3.1 A modified multiplier

This multiplier in its simple form ignores many important leakages resulting from the distributional effects of income coming from government expenditure. Considering further taxes as a lump sum ignores the effects of the prevailing progressive tax system which allows the government to acquire a greater amount of money as income increases

(provided that rates are not indexed). It also ignores different propensities to consume of different categories of income earners. We can reasonably assume that the propensity to consume of taxpayers in less than one. An increase in direct taxes, given a progressive tax system, will reduce disposable income by more than the increase in taxes. But tax-payers will not reduce their real consumption expenditure by the same extent because they are accustomed to a certain standard of living. They will resort to their accumulated savings making their propensity to consume less than one. (We assume here that they have some savings as they belong to higher income classes. Otherwise they sould not pay direct taxes). On the other hand, an increase in government transfer payments to the public will increase disposable income of those receiving transfer payments. As they are usually pensioners, unemployed and sick workers, and others with low incomes, it is very likely that transfer payments increase their real consumption expenditure by the same amount of increase in transfer payments, to cover some unsatisfied wants. Moreover, since sometimes transfer payments consist of payment in kind (war compensation etc.), this fact by itself releases purchasing power to be added to the consumption of other goods. Reasonably, therefore, their propensity to consume can be treated as equal to one, or at least as greater than the MPC of tax-payers.

Further, the multiplier derived above ignores some monetary effects which can change its value. A change in government expenditure increases GNP directly as a first impact and then indirectly through the multiplier process. But the increase in output, even with unchanged price level, will increase the transactions demand for money and as people, facing a constant supply of money, try to economise balances for transaction purposes by selling bonds, they push interest rates up and reduce investment expenditure. This affects part of the original increase in government expenditure. But if international money is sensitive to interest rate changes, the increase in the latter will attract foreign capital offsetting in part the impact of interest rate increase on investment expenditure.

Considering all those elements we can construct a modified multiplier which can take all the above mentioned leakages and injections into account. First, we split Total Government Expenditure into two parts: Expenditure on Goods and Services and Expenditure on current Transfer Payments to households. Each kind of expenditure is subject to a different marginal propensity to consume. Second, we split, Total Tax revenue into revenue from direct taxes and revenue from indirect

taxes. The more a taxation system depends on direct taxation, the more progressive it is. And the more progressive it is, the higher the part of income taken by direct taxes as income increases and therefore the higher the leakage from a given increase in autonomous expenditure.

We start from the IS equilibrium equation:

$$\Upsilon = G + I + Gg + X - M - Tt_2 \tag{5}$$

The consumption function is:

$$C = c\Upsilon + c_1GR - c_2Tt_1 \tag{6}$$

We assume that imports depend on income, investment on interest rate, while exports are autonomously determined.

$$M = my \tag{7}$$

$$I = i(r) \tag{8}$$

$$X = \overline{X} \tag{9}$$

Finally we introduce the money market equilibrium equation, the LM function:

$$\overline{M} = l(r) + u(\Upsilon) \tag{10}$$

where $\overline{M}$ is the given supply of nominal money balances. By substituting (6), (7), (8), (9) in (5) we get:

$$\Upsilon = c\Upsilon + c_1GR - c_2Tt_1 + i(r) + Gg + \overline{X} - m\Upsilon - Tt_2 \tag{11}$$

Where: Υ = GNP at factor cost
C = Consumption expenditure
I = Private fixed asset formation
G = Total Government Expenditure
g = Share of expenditure on Goods and Services to Total Expenditure
T = Total Tax Revenue
R = Share of Transfer payments of Total expenditure
t_1 = Share of Direct Taxes on Total Tax Revenue.

t_2 = Share of Indirect Taxes on Total Tax Revenue.
X = Exports
M = Imports
c = Relation of Total Consumption to income for economy as a whole
c_1 = Relation of consumption out of Transfer payments to Transfer payments
c_2 = Relation of consumption of Tax payers to Total Direct Taxes
r = Interest rate
i = Relation of Investment to interest rate.

We now differentiate (10): $dr = \frac{u'}{l'} dy$ (12)

Since $\left(\frac{\bar{M}}{P}\right)' = 0$, and then

$0 = l'dr + u'dY$ and substitute it to (11), differentiate to obtain

$$dY = c'dY + G'(GdR + RdG) - c_2'(Tdt_1 + t_1dT) + i' \frac{u'}{l'} dY + gdG +$$

$$+ Gdg - m'dY - Tdt_2 - t_2dT \quad (13)$$

Collecting terms in dY:

$$dY(1 - c' + \frac{i'u'}{l'} + m') = c_1'(GdR + RdG) - c_2'(Tdt_1 + t_1dT) +$$

$$+ gdG + Gdg - Tdt_2 - t_2dT \quad (14)$$

Where: c' = marginal propensity to consume of economy as a whole
c_1' = MPC of Transfer Payments Beneficiaries
c_2' = MPC of tax payers
$-\frac{u'}{l'}$ = The slope of the LM curve, i.e. how much r should change after a change in income for the money market to be in equilibrium
m' = Marginal Propensity to import

Equation (14) gives the impact on economic activity (level of income) resulting not only from the change in the level of Total Government Expenditure and Total Tax Revenue, but also from the changes in the relative shares of expenditure on goods and services and Transfer payments to Total Expenditure, on the one hand, and of direct and indirect taxation to Total Tax Revenue on the other. The initial incidence (to use a term from taxation theory) on the level of income from a change in any of the variables on the right hand side of the equation (14) is:

$$dY = c'_1(GdR + RdG) - c'_2(Tdt_1 + t_1dT) + gdG + \\ + Gdg - Tdt_2 - t_2dT \qquad (15)$$

while the final effective incidence is:

$$dY = \frac{c_1'(GdR+RdG)-c_2'(Tdt_1+t_1dT)+gdG+Gdg-Tdt_2-t_2dT}{1-c'+\frac{i'u'}{l'}+m'} \qquad (16)$$

The term $\frac{i'u'}{l'}$ in the denominator shows the decrease in investment that comes from an interest rate increase as Y and r rise along the LM curve. It is positive, since both i' (the change in investment resulting from a change in r) and l' (the change in demand for real balances resulting from a change in r) of equation (10) are negative. Also m' is positive. The denominator of the multiplier (3) has been increased by two positive quantities, and therefore (16) is smaller.

Since we are interested in year-to-year changes in total Expenditure and Taxation Revenue, i.e. in the shortrun changes of these variables, we can reasonably assume that the relevant shares of their components remain constant and that only the Total amounts of Expenditure and Taxation change. In other words, the levels of expenditure and taxation are much more likely to change from year to year than is the structure of expenditure and taxation, and therefore we assume that dR_1 dg_1 dt_1 and dt_2 are all equal zero. Under this assumption (14) becomes:

$$dY(1 - c' + \frac{i'u'}{l'} + m') = dG(c_1'R + g) - dT(c_2't_1 + t_2) \qquad (17)$$

This equation can be used to estimate how much Total Tax Revenue should change after a given change in Total Expenditure to maintain economic activity undisturbed. It also shows that the level of income changes not only after a change in Expenditure and Revenue but also after a change in the composition of them.

By dividing both sides of it by dG, we get:

$$\frac{dY}{dG}(1 - c' + \frac{i'u'}{l'} + m') = (c_1'R + g) - \frac{dT}{dG}(c_2't_1 + t_2) \qquad (18)$$

If a change in government expenditure is accompanied by a certain change in Taxation Revenue and/or a change in its composition, it can have a neutral effect on income, i.e. a zero government expenditure multiplier. In this case:

$$(c_1' \ R + g) = \frac{dT}{dG} (c_2' \ t_1 + t_2) \qquad (19)$$

and

$$\frac{dT}{dG} = \frac{(c_1' \ R + g)}{(c_2' \ t_1 + t_2)} = \bar{a} \qquad (20)$$

which is the required ratio of Tax Revenue change to total Government spending change for a zero net impact on income level. Or, how much the budget deficit or surplus should change to leave a neutral effect on economic activity.

The required ratio is higher if the share of expenditure on goods and services to Total Expenditure (g) and the share of direct taxes to Total Tax Revenue (t_1) are high. In other words, the higher the expenditure diverted to goods and services and the more the government relies on a progressive tax system, the higher the budget surplus must be to obtain a zero net impact on the level of Income. Therefore, the size of the change in the budget surplus or deficit depends on how governments allocate its expenditure between goods and services on the one hand and Transfer payments to the public on the other, and on how much government's tax receipts are dominated by direct or indirect taxes.

By comparing now this required ratio ($\bar{a}$) to the actual one (a),

we are able to assess whether or not the deficit spending has contributed to the creation of demand pressures in the economy. If $(\bar{a})$ is greater than (a) then the change in the budget surplus should have been greater than what it has been actually, and therefore, government exerts a net expansionary effect on the level of income. The required ratio $(\bar{a})$ should have been found in terms of the marginal propensities to consume of Transfer payments beneficiaries and of taxpayers. But there are reasons to assume for the Greek Economy that the marginal propensities c_1' and c_2' equal the marginal propensity to consume for the economy as a whole, c'. The latter has been found to be equal to 0,763[1].

Although there has not been any systematic study dealing with the estination of c_1' and c_2' we can use some indications which attribute to the equality of c_1' and c_2'.

As it can be seen in Table 5 only the first income group (8,2% of Total households) experiences a negative net tax burden, and their income contributes by 1,22% only to total income.

All other income groups experience a positive net tax burden, which means that they cannot be considered as being transfer payments beneficiaries. Therefore, even if there is a difference in the M.P.C. between transfer payments beneficiaries (income group 1) and tax payers (income groups 2-8), this difference peters out, because, as we have said only 8.2% of the households belong to the first group contributing only 1.22% of total Income.

The estimated values of $(\bar{a})$ show quite a difference from the actual ones. As we can observe from Table 6, the actual ratio (a) shows a greater year to year variation from the required $(\bar{a})$. This is to be expected as the year-to-year changes in Total Tax Revenue and Expenditure are greater and can be more easily changed than the year to year changes in the composition of Total Revenue and Expenditure.

3.2. Some comments on the validity of results

We have said above that the difference of (a) from either $(\bar{a})$ gi-

1. This has been estimated, by using the Least Square Method, regressing disposable private Income deflated by the private Consumption deflator, on the real private consumption of the period 1953-74: $c' = 18320.992 + \underset{(0.029)}{0.763}\ Yd$, $R^2 = 0.996$. See G. Provopoulos, *Public Expenditure and Economic Activity,* Institute of Economic and Industrial Research, Athens 1981, p. 268n.

TABLE 5. Taxes and Transfer Payments as a Percentage of Total Income by Income Groups, 1974

Income Groups (Thousand Drs)	No of House-holds	Total Taxes	Transfer Payments	Net Taxes	Income after Taxes and Transfer Payments
1. under 22.9	8.2	31.89	62.40	-30.51	1.22
2. 23.0- 64.9	22.7	29.24	19.70	9.54	7.45
3. 65.0- 93.9	15.2	28.14	13.17	14.97	8.62
4. 94.0-139.9	18.8	27.90	11.20	16.70	15.53
5. 140.0-209.9	15.5	27.22	8.09	19.13	18.50
6. 210.0-314.9	11.0	26.31	7.69	18.62	19.45
7. 315.0-499.9	6.0	26.48	7.63	18.85	15.92
8. 500 and over	2.6	29.03	7.55	21.48	13.32
Total	100.0	27.71	10.48	17.23	100.00

SOURCES: a) Household Survey for 1974, N.S.S.G.
b) Statistics of Taxable Income of Personal Income Tax for 1974, N.S.S.G.
c) National Accounts of Greece, Ministry of Coordination.
Cited in D. Karayiorgas: The Distribution of the Tax Burden by Income Groups in Greece, in SPOUDAI, No 2, 1977.

ves the net primary impact of each change in Total Government Revenue and Total Expenditure on the level of income and hence economic activity. Using Maynard's and van Ryckeghem's technique[1] modified to capture changes in expenditure and revenue we can have a precise estimate of this primary impact as a percentage of the change in GDP at factor cost. We have seen that the net primary impact of each change in expenditure or revenue is given by the formula:

$$Np = dG(c_1'R + G) - dT(c_2't_1 + t_2) \qquad (21)$$

If V is the inverse of the multiplier:

$$V = \frac{dG}{dY}$$

1. Maynard and van Ryckeghem, *op. cit.*, p. 133 and footnote.

TABLE 6. Actual and Required Ratios of Total Revenue to Total Expenditure, 1958-1974

YEAR	Actual Ratio a	Required Ratio ā	n_p	n_T
1958	0.67	0.78		
1959	0.28	0.74	30.85	62.93
1960	0.97	0.74	-6.25	-12.75
1961	0.98	0.71	-7.34	-14.97
1962	0.84	0.72	-5.85	-11.93
1963	1.29	0.73	-11.66	-23.79
1964	0.84	0.72	-4.12	-8.40
1965	0.60	0.71	3.79	7.73
1966	1.15	0.71	-15.96	-32.56
1967	0.58	0.71	8.47	17.28
1968	1.21	0.72	-16.83	-34.33
1969	0.91	0.71	-5.79	-11.81
1970	0.82	0.71	-2.88	-5.88
1971	0.57	0.68	4.74	9.67
1972	0.82	0.66	-4.59	-9.36
1973	0.83	0.64	-4.27	-8.71
1974	0.60	0.69	3.59	7.32
1975	0.79	0.72	-2.96	-6.04
1976	0.99	0.71	-9.97	-20.34
1977	0.77	0.74	-1.26	-2.57
1978	0.82	0.73	-4.17	-8.51
Average	0.83	0.71	-2.62	-5.35

SOURCES: See Text

and (a) the ratio: $$a = \frac{dT}{dG}$$

equation (21) becomes:

$$N_p = \frac{dG}{dY} dY(c_1'R + G) - \frac{dG}{dY} dY \frac{dT}{dG} (c_2't_1 + t_2) \qquad (22)$$

and finally:

$$N_p = VdV\ [(c_1'R + g) - a(c_2't_1 + t_2)] \qquad (22a)$$

Since (a) gives the actual ratio of dT to dG and $(\bar{a})$ the required one for a zero net impact on economic activity, i.e. $N_p = 0$, the actual net primary impact (initial incidence) of dT and dG will be measured by:

$$N_{po} = VdY\ [(c_1'R + g) - a(c_2't_1 + t_2) - (c_1'R + g) + \bar{a}(c_2't_1 + t_2)] \quad (23)$$

which equals:

$$N_{po} = VdY[(\bar{a} - a)\ (c_2't_1 + t_2)] \quad (24)$$

and:
$$n_p = \frac{N_{po}}{dY} = V[(\bar{a} - a)\ (c_2't_1 + t_2)] \quad (25)$$

The ratio (n_p) is also shown in Table 6. In more than half of the years the period we are examining, the government pursued a net contractionary policy by allowing Tax Revenue to change more than the change in Total Expenditure. Since (n_p) is the ratio of the proportion of net primary effect of the change in Expenditure and Taxes on the level of Income, to the change of GDP at factor cost, we can assess, by using this ratio, the magnitude of the impact resulting from the governmental actions with respect to the size of total change in economic activity. (n_p) shows great variations from year to year. The highest expansionary impact of the governmental policy amounted to 30% of the whole change in GDP. On the other hand the highest contractionary effect appeared in year 1968, where it amounted to almost 17% of the whole change in income. In other words, the change in income would have been greater by about 17% if fiscal policy had remained neutral.

Of course these results should be treated with caution, as they bear some weaknesses: 1) The ratio (n_p) is very much influenced by the value of (a). (a) shows the ratio of actual changes in Government Tax Revenue to changes in Government Expenditure. This is an *ex post* ratio and does not indicate any intentions on the part of Governments to follow a certain policy. All we can say is that the difference between the *ex post* (a) and $(\bar{a})$ indicates that the government fiscal policy had an expansionary or contractionary effect on economic activity. 2) On the other hand, the numerator of the ratio moves directly with the changes in the level of income. The higher the income the higher the Tax Revenue will be. (n_p) clearly shows an expansionary effect on the level of income in year 1959 and a contractionary effect in 1968.

TABLE 7. Levels and year-to-year changes in Private Investment and Total Revenue and Expenditure

YEAR	Private Investment	% Change		Total Revenue	% Change	Total Expenditure	% Change
		Money	Real				
1958	11.572			17.305		19.956	
1959	11.702	1.12	-2.90	18.030	4.19	22.496	12.73
1960	13.552	15.81	13.57	19.824	9.95	24.346	8.22
1961	13.879	2.41	2.28	23.269	17.38	27.854	14.41
1962	16.954	22.13	12.75	25.970	11.61	31.077	11.51
1963	19.033	12.29	10.54	29.659	14.20	33.935	9.20
1964	24.179	27.04	25.53	34.464	16.20	39.641	16.81
1965	28.448	17.64	13.77	38.841	12.70	46.901	18.31
1966	32.078	12.76	4.38	46.560	19.87	53.609	14.30
1967	30.784	-4.03	-6.27	52.207	12.13	63.393	18.25
1968	39.745	29.11	27.82	58.761	12.55	68.822	8.56
1969	47.137	18.60	16.48	66.581	13.31	77.368	12.42
1970	50.737	7.64	-0.69	73.545	10.46	85.813	10.91
1971	57.251	12.84	8.63	81.624	10.98	100.031	16.57
1972	73.043	27.58	16.33	92.550	13.38	113.677	13.64
1973	98.010	34.18	12.59	112.804	21.88	138.172	21.55
1974	87.775	-10.44	-27.58	135.585	20.19	176.141	27.48
1975	101.130	15.22	2.86	166.283	22.64	215.028	22.08
1976	128.100	26.67	8.71	219.298	31.88	268.694	24.96
1977	173.200	35.21	15.45	262.230	19.58	324.778	20.87
1978	208.800	20.55	4.50	329.360	25.60	406.590	25.19

SOURCE: Ministry of Co-ordination: National Account of Greece, 1958-75, No 23 and 1975-78.

From Table 7 we see that in 1959 total expenditure rose by almost 13% while the total tax revenue by only 4.2%. On the contrary, in 1968 total tax revenue increased by 12.55% while total expenditure by only 8.50%. Immediately after the peak in the expansionary effect in 1959 total tax revenue rose by 10% and the year after by about 17.4%. Revenue kept increasing at high rates in the following two years 1962 and 1963 and this exerted a net contractionary effect in income. In all those years the rate of change in total expenditure lagged behind the rate of increase of total revenue. In 1968, when fiscal policy exerted the biggest contractionary effect in the level of income the rate of change of tax revenue was higher by 46% than the rate of change in expendi-

ture. A year before however, the rate of growth of expenditure was about 50% higher than the rate of growth in taxes, exerting a net expansionary effect on the level of income. Further, in 1971 a net expansionary effect was exerted by fiscal policy, where the growth rate of total expenditure was about 51% higher than the growth rate of total revenue. In the subsequent years the growth rate in the latter was about the same as the growth rate in the former.

It is clear, therefore, that (a) and hence (n_p) is very much influenced by the level of economic activity in the previous year since tax revenues change with income and Government tries to keep a certain relationship of spending to income according to the fiscal policy followed. 3) But (n_p) contains influences from other factors as well. A change in the private investment expenditure changes the level of national income (denominator in the (n_p) ratio) and therefore, the ratio (n_p) itself. Part of the high proportion in the expansionary effect in 1959 to the change in GDP at factor cost can be attributed to a small change in the latter due to a small change in total net private investment expenditure (1.12%). (See Table 7). Also, in 1967 when the value of investment expenditure fell in absolute terms resulting in a very small change in the level of GDP, the expansionary effect amounted to about 9% of this change in income. The same line of argument applies for the year 1977. The high increase in the value of Investment in 1976 and 1977 (26.7 % and 35.2 % respectively) caused considerable changes in Y and therefore small values in the index of the fiscal impact.

Finally it should also be noted that since there is not any negative growth rate in both revenue and expenditure through the period under study, an inspection of Tables 5 and 7 should suggest that an increase in expansionary effect is the result of an increase in expenditure and not a decrease in taxation, while a decrease in this effect (or an increase in a negative expansionary effect) is the result of an increase in taxation and not a cut in spending[1]. This is to be expected. The overall taxation system in Greece lacks progressivity, as it is dominated by indirect taxes which are regressive in structure in their majority. This results in the fact that the growth of tax revenues lags behind the increasing needs of the Government for public expenditures, so that

1. This result is in line with what Maynard and van Ryckeghem, *op. cit.*, have found for the several OECD countries.

policy-makers have to continuously adapt tax rates upwards[1]. A further result is that the whole system lacks a built-in stabilization ability.

3.3. Calculation on final effective net impact

As we have said before, equation (25) gives the net primary effect of a change either in Government expenditure or in total tax revenue or both. But the final net effect should take into account all the leakages and injections resulting from a change in expenditure or taxation such as marginal propensity to import, other monetary factors and the overall marginal propensity to consume. The net final effect as proportion to the change in GDP at factor cost is given therefore by the formula:

$$n_T = \frac{V[(\bar{a} - a)\ (c_2't_1 + t_2)]}{1 - c' + \frac{i'u'}{l'} + m'} \qquad (26)$$

We recall that $\frac{i'u'}{l'}$ shows the decrease in investment resulting from an interest rate increase as Y and r rise along the LM curve. This will offset any increase in expenditure. But in the case of sensitive international money, the increase in interest rates will attract inflows of capital offsetting in turn for all of investment reduction resulting from the increase in interest rates.

The Greek experience in this field of activity is quite «remarkable»[2]. The prevailing general economic conditions and, more important, the special protection in the forms of favourable taxation measures and incentives for the foreign capital flowing for investment purposes increases this inflow of capital at a significant extent during the years under study[3]. Since the institution of Law 2687/1953 about a thousand applications for Investment have been accepted amounted to 3 billion

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1. For an evaluation of the Greek taxation system, see T. A. Georgakopoulos, *The Value-Addex Tax in Greece,* Centre of Planning and Economic Research, Athens, 1976, p. 157, and D. Karageorgas, *op. cit.*

2. The inflow of foreign capital has been always uncritically praised by economic policy makers and the real costs to the Greek Economy of providing incentives and other favourable terms to foreign investors have never been adequately assessed.

3. Hellenic Industrial Development Bank: *Investing in Greece,* Information Sheet No. 1.

U.S. dollars. 70% of these concerned investment in manufacturing. Direct foreign investment has been mainly flowing to sectors with advanced technology like Chemicals, Non-Ferrous metals, Transportation equipment and finally electrical appliances, and this Investment represented a high percentage of total Investment in these branches.

Besides this inflow of long-run capital, the differentiation in interest rates with respect to deposits in foreign exchange has attracted massive inflow of capital. This resulted in a rapid increase of deposits in foreign currency with Greek Banks, (from 643.8 mil. drs. in 1958, they became 111,830.5 mil. in 1978). Therefore, by taking all these into account we can argue that the inflow of international capital offsets the reduction in Investment after the increase in interest rate and $\frac{i'u'}{l'} = 0$. Equation (26) now becomes:

$$n_T = \frac{V[(\bar{a} - a)\ (c_2't_1 + t_2)]}{1 - c' + m'} \tag{26a}$$

After these adjustments have been made, we can estimate the total final effect on economic activity by multiplying the n_p by the multiplier. The latter has been found to be 2.04. For its calculation we used the average value of M.P.C. equal to 0.76, and the average MPM (= the year-to-year change in total import value to the change in GDP at factor cost) equal to 0.25. The average (n_T) has been found to be -5.35. This means that the government has been exercising a contractionary policy on the average over the whole period under review. Income have been increased but not as much as it would have been in the absence of this contractionary policy. The contractionary effects have been about 5.4% of the total change in Income. In other words, the change in income would have been higher by 5.4% in the absence of this government intervention.

4. CONCLUSIONS

Now coming back to the question we set at the begining of this paper, we ask again: How much have governments contributed (if at all) to the creation of demand pressures in the economy? Considering the results cited in Table 6 we cannot claim that Governmental deficit spending policy as such has contributed to the prevalence of high demand

levels in the economy. It is rather obvious from the discussion of section 2 above that Governments exerted an indirect influence to the level of economic activity by helping the private Investment Demand to be at high levels. In other words, Governments by providing a favourable environment to the economic agents through several tax allowances, increases in depreciation rates etc. influenced real Investment demand, while they themselves did not manage to create demand pressures, by undertaking deficit spending. This fact reflects the unwillingness of the Public Sector to expand itself at the expense of the Private Sector. Although the size of the Public Sector has been increasing in absolute terms, its relative size has been kept smaller than that in the EEC countries, using as criterion the ratio of Total Tax Revenue of General Government to GDP at factor cost[1].

Therefore, one could be led to false conclusion if he tries to correlate the net fiscal impact as a proportion of GDP with the prevailing demand and inflation rates, without taking into account the behaviour of the private sector of the economy.

SUMMARY

This paper examines the influence of the net fiscal impact on the aggregate economic activity in the Greek economy. More specifically, it considers the question: were the various levels of demand prevailing during the period 1958-78 due to Government actions, i.e. deficit spending policy (direct contribution), or were they due to other forces, as a result of which Government action was not needed, i.e. autonomous private investment expenditure (indirect contribution)? By examining

1. See T. A. Georgakopoulos, *Indirect Taxes and Industry in Greece.* Institute of Economic and Industrial Research, Athens 1977, p. 4. For the year 1974 he has estimated the following ratios of Tax Revenue to Total GDP at factor cost.

COUNTRY	*% to GDP*	*COUNTRY*	*% to GDP*
Belgium	39.3	Italy	31.6
France	36.4	Luxembourg	40.4
Germany	38.1	Netherlands	46.3
Denmark	44.5	U.K.	36.7
Ireland	33.4	Total EEC	37.3

For Greece this ratio was 26.3%.

the determinants of the various components of the expenditure for private fixed asset formation, which has been kept at relatively high levels during most of the period under consideration we are led to the conclusion that Governments have «indirectly» contributed to the prevalence of high investment demand, i.e. not through demand management policies (deficit spending) but rather by providing a favourable environment to the economic agent through several tax allowances, increases in depreciations rates etc.

Further by modifying the simple Keynesian multiplier to consider many important leakages and injections resulting from the distributional effects of income coming from government expenditure as well as some monetary effects, we realise that Governments have, on the average, followed a contractionary deficit spending policy. Therefore, not only the deficit spending policy but also the behaviour of the private sector should be taking into account for the explanation of the prevailing high demand levels, during 1958-1978.