SOME ASPECTS OF THE VAT SUBSITUTION IN GREECE

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1. Introduction

Greece is now entering the Common Market and has to introduce the VAT. In this paper I discuss some of the effects the introduction of the new tax will have on the Greek economy.

In the first part I give a short account of the existing system of indirect taxes in the country as well as of some work that has been done in the direction of introducing the new tax. Then I discuss the possible impact of the VAT on prices, income distribution, trade, the level of effective demand and the allocation of resources in the country. Finally, I comment on the administrative aspects of this tax.

2. The existing system of indirect taxes in Greece

Indirect taxes in Greece are very important from the point of view of revenue. In 1975, these taxes brought in about 80 % of the ievenue raised by the Central Government and about 60 % of that raised by all levels of Government.

The system of indirect taxes levied by the Central Government, within which the VAT substitution will be discussed, includes six broad-based taxes, plus a number of special excises and other taxes covering a narrower group of transactions. Table 1 shows the main taxes levied by the Central Government as well as their yield in 1975.

As shown in this table, the broad-based taxes bring-in more than 50 % of the total revenue raised through indirect taxes. Stamp duties is the main tax from the point of view of revenue and brings in about 30 % of total revenue raised through indirect taxes. The tax is cumulative and covers not only the transfer of commodities along the stages of production and distribution, but also a number of other transactions, some of which are not related directly with the production and distribution of commodities, e.g. various contracts, the payment of wages and salaries in the private and public sectors, rents, etc. Some of them, e.g. the duty

Table 1

The yield of indirect taxes raised by the Central Government in Greece in 1975.

Indirect Taxes	in million Dr.	% of revenue from Indirect Taxes
I. Broad - based taxes	44.020	51.1
1. Stamp duties	24.179	28.1
2. Turnover tax	16.983	19.7
3. Wages and salaries tax	372	0.4
4. Special turnover tax on imports	1.870	2.1
5. Luxury taxes	1.761	2.0
6. Special Tax of 1958	725	0.8
II. Special Taxes	23.910	27.6
1. Tobacco tax	7.886	9.1
2. Petroleum products tax /	11.768	13.6
3. Beer tax	1.032	1.2
4. Spirits tax	238	0.3
5. Sugar tax	2.247	2.6
6. Other Special Taxes	256	0.3
III. Inport duties	8.872	10.3
1. Customs duties	8.465	9.8
2. Other special levies	407	0.5
IV. Other Indirect Taxes	9.376	10.8
1. Taxes on entertainment	558	0.6
2. Taxes on transport	5.448	6.3
3. Taxes on transfer of real property	3.293	3.9
4. Other taxes unclassified	77	
Total	86.178	100.0

on wages and salaries, are in fact similar to income taxes rather than to commodity taxes. Stamp duties on invoices are levied at 2,40 %, while in other cases the rates range between 1 % and 3 %.

The second largest broad-based commodity tax is the turnover tax, which covers only manufactured products (produced domestically or imported from abroad) as well as a large number of services, provided for in the law, e.g. banking and insurance, transport, electricity, etc. This tax is somewhat similar to the VAT because it is levied on the value of manufactured products reduced by the value of raw materials already subjected to the tax. The tax is levied at 8 %, but smaller rates apply in certain cases.

The wages and salaries tax is a tax on labour cost and covers the renuneration of labour employed in the manufacturing sector in the Greater Athens Area. The rate of the tax amounts to 6 %, but smaller rates apply in certain cases.

The special turnover tax is supposed to be an equalising tax, it is levied on imports at rates equal to 1/4 of the rates of the turnover tax and purports to equalise the burden levied on domestic production by the wages and salaries tax. A comparison of the revenues raised through these two taxes however, shows that imports are discriminated against.

Luxury taxes are levied on a wide range of products, some of which are not in fact luxurious goods. The rates of the taxes levied on imports range between 10 % and 50 %. In the domestic market these taxes usually take the form of fixed lump sum taxes, paid quarterly. Luxury taxes again discriminate against imports, as one can easily see from the fact that over 80 % of their yield is raised from imports, while only the remaining 20 % comes from domestic production.

The special tax of 1958 is another broad-based tax which is in a sense a complementary tax to the luxury taxes, because it covers a number of goods which are not subjected to luxury taxes. The rates of the tax range between 15 % and 40 %.

Special excises bring in more than 25 % of the total revenue raised by the Central Government through indirect taxes. Besides the traditional excises on tobacco products, drinks and petroleum products, there is a high tax on sugar and some other taxes of lower importance on products like wax, detergents, cinema films, etc.

Import duties also bring in a considerable amount of revenue, though their importance is declining over time because of the gradual reduction of customs duties levied on trade between Greece and the EEC countries. Finally, a substantial amount of revenue is raised through some special taxes on entertainment, on transport (circulation duties plus some special levies on initial registration) as well as on the transfer of real property.

The existing system of indirect taxes is very complicated. The taxable base is usually defined differently for each tax, rates and exemptions vary widely and the administration of the various taxes is sometimes different. This increases the cost of taxation and reduces the capacity of the tax system to be used as an effective

means of promoting the goals of fiscal policy. The picture becomes even worse: when one takes into account the 5-6 hundred taxes levied in favour of third parties. (Social Insurance Organisations or other Public Entities)[1].

3. The harmonisation of the Greek system of Indirect Taxes in view of the Country's entrance into the Common Market : The Value-Added Tax

Greece's entrance into the Common Market makes necessary the harmonisation of her system of indirect taxes. All EEC countries employ today the tax on value-added as their main commodity tax. The tax has been designed on the basis of common principles drawn by the Commission of the EEC, but the systems differ substancially among the various members. All countries also employ a number of excises, which are mainly levied on the traditionally excised products, e.g. tobacco, drinks and petroleum products, but some employ special taxes on other products as well. The Commission sugests the restriction of excis.s to the formerg group of products and has drawn draft Directives for the harmonisation of their structures. However, only in the case of cigarettes the Council has approved a Directive and it is only in the case of this tax that some progress has been done.

Greece has therefore to introduce the VAT. This is a wellcome change in the tax structure in view of the disadvantages of the existing commodity taxes and has been discussed again and again in the past, but has never been put in force, probably because «the old tax» is truly «a good tax», especially in cases where the change involved is substantial, like the one under consideration here.

The Government has recently set up a Committee, which will prepare the draft of the Law Degree for the introduction of the new tax. A few days ago another Committee working for the Five Year Plan, at the Center of Planning and Economic Research, submitted a Report, with the general lines concerning the harmonisation of indirect taxes in this country. The Committee suggests that the VAT should be introduced in place of all general taxes (save for certain stamp duties, which could be retained for some time) plus some of the special excises and the other taxes now in force. It suggests that the VAT be a general tax, covering all stages of production and distribution, including the retail stage. The tax should be restricted only to consumers' expenditure, leaving investment expenditure out. Exports should be freed of tax, while imports be subjected to the tax at the same rates with similar domestic products. The Committee suggests the restriction of the rates to no more than 3; a standard rate, applying on most goods and services, a reduced rate, applying mainly on food and perhaps a high rate, covering certain specific products, which are truly luxuries. The absolute size of the rates is not fixed, but it is provided that their size must be such as to bring in the same yield with the taxes being abolished.

For the purpose of this discussion I will assume that the VAT will be introduced as a general consumption tax, in place of all existing general taxes as well

as some of the excises and the special taxes on entertainment. Tax rates are assumed to be fixed so as to bring in the same revenue raised by the taxes that will be abolished. Two alternative VAT systems are assumed : (i) a single rate VAT, covering all consumers' expenditure at a rate equal to 9 %, which is the equivalent effective rate that the taxes to be abolished would levy on domestic consumption in 1975, were they restricted to consumers' expenditure only; and (ii) a two-rate VAT, applying a standard rate of 11 % in all cases, except for food, which is subject to a reduced rate of 5 %.

The effective rates at which these taxes are levied on imported and domestic products are shown on table 2, while the corresponding rates at which they are levied on the various groups of final demand are shown on table 3. As shown in table 2, the present structure of indirect taxes discriminates against imports, the over-all degree of discrimination is not however as big as is usually believed in this country..

Table 3 also shows that, besides consumers' expenditure, other forms of final demand bear a large burden. Investment expenditure is taxed at a higher effective rate than consumers' expenditure. Exports are also taxed at an effective rate equal to 3.53 %. On the other hand, export rebates in 1975 amounted to around 1.5 % of the value of exports, which means that the unrebated part of tax on exports amounts to around 2 %. Table 3 shows further that the existing taxes are finally levied at different effective rates on the various groups of consumer goods, the rates ranging between 3 % and 17 %.

Table 2

Effective rates at which the taxes to be abolished are levied on domestic production and imports

Branches of economic activity	Domestic products			Imports
	directly	indirectly	total	
I. Primary Production	1.84	2.41	4.25	6.30
II. Secondary Production	4.36	5.30	9.66	9.86
1. Manufacturing	5.19	5.57	10.76	13.29
2. Other sectors	1.95	4.44	6.39	.10
III. Services	2.23	1.59	3.82	2.70
Total	3.38	3.75	7.13	9.60

Table 3

Effective rates at which the taxes to be abolished are levied on the various forms of final demand as well as on the various groups of consumer goods and services

Groups of final demand	stamp duties	turnover tax	other taxes	total
I. CONSUMERS' EXPENDITURE	2.50	4.51	.72	7.73
1. Food	1.58	6.15	.53	8.26
2. Beverages	2.48	7.70	3.69	13.87
3. Tobacco	0.74	9.22	.06	10.02
Clothing-footwear	4.42	9.00	1.24	14.66
5. Rent and water charges	.43	2.32	.02	2.77
6. Fuel and light	3.76	3.92	.04	7.72'
7. Furniture, furnishings, etc.	6.88	8.30	1.48	16.66
8. Household operation	4.06	4.37	.70	9.13
9. Personal care and health expenditures	3.06	3.15	.30	6.15
10. Transportation	2.96	3.84	.79	7.59
11. Communications	8.70	2.73	.04	11.47
12. Recreation and entertainment	1.73	2.40	.42	4.55
13. Education	2.41	2.64	.41	5.46
14. Miscellaneous services	3.30	5.07	.17	8.54
II. GOVERNMENT EXPENDITURE	1.48	2.42	.17	4.07
III. INVESTMENT	3.03	3.39	1.41	7.83
IV. EXPORTS	1.10	2.24	.19	3.53
TOTAL	2.28	4.09	.47	6.84

4. Some effects of the VAT substitution in Greece

Assessing the impact of the VAT substitution on the Greek economy is a truly difficult task. The nature of the tax change under consideration involves both mef thodological and statistical difficulties. Indeed, the assessment of the effects o- such a wide change in the structure of commodity taxes in the country would per- haps require the use of some general equilibrium model, with production functions, demand equations, income distribution formulae, etc., the construction of which,

especially for a developing country like Greece, is very difficult, if not impossible. I will therefore concentrate mainly on a qualitative assessment, but I will also provide some estimates, based on partial equilibrium models, which will, I hope, give you an idea of the possible size of certain effects. I will concentrate on the impact of the VAT substitution on prices, income distribution, balance of trade, level of effective demand, and allocative efficiency. I will also comment on the administrative aspects of the new tax.

4.1. Effects on prices

The VAT substitution will affect prices in the domestic market, as well as the prices of the Greek exports abroad. The size of the price changes will, of course, depend upon the degree of shifting, a problem that has not yet been solved satisfactorily. The problem here is more difficult, because it involves the question of symmetry in tax shifting. In other words, the question is not only whether the new tax will be shifted on to prices or not, but also whether the abolition of old taxes will lead to corresponding price reductions or not. The answer here is more difficult and the final outcome seems to depend, among other things, upon the general economic conditions that prevail in the country, at the time the VAT is introduced. I will here assume full shifting of taxes in both directions, which means that firms will make price increases sufficient to pass the additional burden levied on their products to the consumers, or will make corresponding price reductions, in case the new tax levies a lower burden than the pre-existing taxes.

Table 4 below shows the price changes that will follow the VAT substitution, under the above assumption. The table shows that the general price level will increase slightly, because domestic demand will now bear the tax incorporated into the value of exports and borne by foreigners. The consumer price index will increase by around 1.2 %, with the prices of some consumer goods increasing, while those of others falling. In the case of the single-rate VAT, price increases will range between 5 % and 6 % while price reductions will range between - 1 % and -7 %. The price increases will be larger and the price reductions smaller, if the two rate VAT is introduced. The price index for investment goods will fall by around 7 %, while export prices will fall by around 2 %.

Big reductions will also follow the introduction of the VAT in the prices of certain imported commodities subject to high luxury taxes, but relative import prices will also increase with respect to other commodities. Indeed, as I have shown in a recent study for the Institute of Social and Economic Research, the average price of imports will fall in the case of some industrial sectors, while in the case of others, relative import prices will increase. Over-all, import prices will fall relative to domestic prices. The reduction is estimated to around 2.25 %.

Table 4

Price changes to follow the VAT substitution in Greece

Groups of final demand	single rate VAT	two rate VAT
I. CONSUMERS' EXPENDITURE	1.21	1.21
1. Food	.68	—3.01
2. Beverages	—4.28	—2.52
3. Tobacco	— .93	.89
4. Clothing-Footwear	—4.94	—3.19
5. Rent and water charges	6.06	8.01
6. Fuel and light	1.19	3.04
7. Furniture, furnishings, etc.	—6.57	—4.85
8. Household iperation	— .12	1.71
9. Personal care of health expenditures	—2.34	4.22
10. Transportation	1.31	3.17
11. Communications	—2.22	— .42
12. Recreation and entertainment	4.26	6.17
13. Education	3.36	5.25
14. Miscellaneous services	.42	2.27
II. GOVERNMENT EXPENDITURE	—3.91	—3.91
III. INVESTMENT	—7.26	—7.26
IV. EXPORTS	—1.94	—1.94
TOTAL	.40	.40

4.2. Redistributional effects

The introduction of the VAT will affect the distribution of income in the country. All forms of income redistribution (inter-country, functional, geographical, income-bracket, etc.) will perhaps follow the tax change under consideration. I will here deal only with the effects on the size distribution of income.

Table 5 gives a picture of the probable effect of the proposed tax substitution. As shown in this table, the introduction of the single rate VAT will redistribute the tax burden from the middle class to the low and the highest income classes. On the contrary, the introduction of the two-rate VAT will slightly improve the distribution of the tax burden, reducing the burden of people with income below 300 thousand Dr. and increasing the burden of the people in the upper income classess.

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Table 5

Amount of tax paid annually by the average household along the income scale, under the existing and the new hypothetical systems in Greece

Annual income of household in Dr.	existing taxes	single rate VAT	two-rate VAT	Differences	
				2 - 1	3 - 1
below 20,000	2,176	2,275	1,951	99	—225
20,000 - 57,999	4,127	4,340	3,898	203	—229
58,000 - 84,999	6,347	6,454	5,984	107	—363
85,000 - 128,999	8,899	9,084	8,575	185	—324
129,000 - 189,000	12,920	12,793	12,461	—127	—459
190,000 - 287,999	18,102	17,958	18,060	—144	— 42
288,000 - 459,999	25,766	25,693	26,574	— 73	808
460,000 and over	45,277	45,780	49,758	503	4,481

4.3. Trade effects

The effects of the VAT substitution on the balance of trade have been given heavy emphasis in the discussions on the introduction of this tax. It has been repeatedly claimed that the VAT substitution will lead to an improvement in the balance of payments from both the export and the import sides. The argument is that, under the cumulative turnover taxes, tax authorities cannot estimate the actual amount of tax incorporated into the value of exports, with the result that exports be underrebated. On the contrary, under the VAT, exporters can be fully compensated for taxes incorporated into their exports, which will result in a reduction in export prices and an increase in exports. From the import side, the VAT substitution will again improve the balance of trade, because it will lead to an increase in relative import prices. This is due to the fact that cumulative turnover taxes, usually levy a higher burden on domestic production than on imports, while the VAT levies the same burden on both sources of supply.

The above argument seams to exagerate the advantage of the VAT from the point of view of the balance of trade. As I have shown elsewhere, export rebating cannot improve the balance of trade, unless price elasticities are very high [1]. The argument is that since exports are not wholly procuded domestically, but they

1. Th, Georgakopoulos, Tax rebating of exports and the balance of payments, European Economic Review, 1974.

also use imported materials, the price elasticity of exports must be higher than unity, in order for the increase in the volume of exports to result in an increase in their value. How much higher depends on the import component of exports. For countries like Greece with an import component of about 20 %, export rebating will improve the balance of trade only if the price elasticity of exports is higher than 1.25, which is not very far from the possibly true value of this elasticity. Anyway, using hypothetical values for the price elasticity of exports, ranging between 1.3 and 2.0, we have estimated the change in the value of exports which will follow the VAT substitution to range between .1 % and 1.0 % of their pre-substitution value.

Coming to imports, we can again argue that the VAT substitution will not, most probably, affect the balance of trade materially. The above argument that the possible increase in the relative import prices following the VAT substitution will reduce imports is correct, but it is only a partial view of the matter, because it takes into account only the substitution effect of the price change, while it neglects the income effect. Indeed, when one takes a more general equilibrium view of the matter, one can see that the structural change in import prices will lead to compensatory trade changes through income effects. These last effects will partly counter-balance the direct substitution effects, so that the total effects of the VAT substitution on imports will be smaller than the direct substitution effects. As, a result, one should not expect a substantial improvement in the balance of trade from the import side, as a result of the VAT substitution. Indeed, some ex-post evidence concerning the impact of the VAT substitution in Europe shows that imports have not probably changed materially, after the introduction of this tax[2].

For Greece, of course, the VAT substitution will lead to an increase in imports, since the existing tax structure discriminates against imports and favours domestic production. The size of this change however will, most probably, not be very high when one takes into account both the substitution and the income effect of the VAT substitution. Indeed, under probable values for the price elasticity of imports, ranging between 1.0 and 2.0, the increase in imports has been estimated to range between 0.8 % and 15 % of the pre-substitution value of imports.

4.4. Effects on effective demand

The introduction of the VAT in Greece will further affect the level of demand, and consequently the level of economic activity in the country. The size of the effect will, of course, depend upon the revenue raised through the new tax compared with that raised through the old taxes. Under the equal yield assumption used in

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2. Th. Georgakopulos, Tax Structure Changes and the Balance of Payments, European Economic Review (forthcoming).

this paper, the VAT substitution will bring about the following effects on effective demand.

First, since exports are not fully compensated under the existing taxes, the Greek economy will bear the extra burden which is now borne by foreigners, which will tend to reduce effective demand in the country.

Second, the VAT substitution will redistribute the tax burden from investment and government expenditure on to consumers' expenditure. If spending propensities differ among the three groups of spenders this will also affect the level of effective demand.

Third, the new tax will, as we have seen above, perhaps be less regressive than the taxes being abolished and it will therefore redistribute the tax burden in favour of the poor. If propensities to spend differ between the various income classes this will increase effective demand.

Fourth, the VAT will affect the balance of trade and this will have an impact on effective demand. Indeed, the increase in exports will increase effective demand, while the increase in imports will reduce it.

The VAT will therefore affect demand in both directions and there will be some compensation between the two opposite effects, so that the over-all impact of the VAT on demand will not be very big.

4.5. Allocative efficiency aspects

The most celebrated argument for the VAT is its neutrality, both in the domestic market and in international transactions. Our system has a big negative score from this point of view. The existing system causes all kinds of misallocation one could expect. No tax covers all stages of production and distribution and therefore they all probably affect the location of certain functions along the production-distribution chain. Stamp duties, which is the main tax in this country, is a cumulative tax and it probably affects the degree of concentration of industry. The wages and salaries tax falls only on labour and it probably intervenes with the optimal use of factor mix. Oddly enough it is levied only on labour used in manufacturing.

All taxes are levied at different effective rates and they all therefore interfere with optimal consumer choice. The difference in effective rates is not only due to the different nominal rates and the exemptions granted, but also to tax evasion as well as to the fact that taxes strike investment and therefore final products bear an indirect burden through depreciation, which differs among the various products. The taxes are not also neutral with international trade because they differentiate the burden between imports and domestic production and they are not fully rebated on exports. Therefore the introduction of the VAT will improve the allocation of resources in the country.

5. Administration aspects

Tax administration in Greece is poor. Evasion is high not only in income taxes but also in product taxes and it is high not only in the domestic market, but even at importation. The VAT has a big advantage in this respect, because of the well-known built-in automatic mechanism of the tax credit method, but other ways of evasion seem to come up in the Common Market.

Whether the Greek tax authorities will be able to administer a general VAT, covering all stages of production and distribution including the retail stage remains a question. Tax authorities in Greece have of course a wide experience in levying indirect taxes, but the enourmous increase in the number of tax-payers which will follow if the VAT applies to the retail stage, with all small business, lacking or keeping poor accounts, will certainly create big problems.

6. Conclusions

In conclusion, the VAT will affect the Greek economy in many ways. The effects will mainly be structural, while the over-all effects on the economy at large will not be very big. The administration of the tax will however, meet with problems and must carefully be designed.

APPENDIX

1. Price changes have been estimated through the formula :

$$\frac{dP}{P} = \frac{t_1 - t_0}{1 + t_0}$$

where t_0 and t_1 stand for the effective rates of the old and the new tax respectively. It is derived by defining :

$dP = P_n (1 + t_1) - P_n (1 + t_0)$, where P_n is the net of tax price.

2. Import changes have been estimated through the formula :

$$\frac{dM}{M} = e^m_p \frac{d\hat{P}}{P} (1-mk)$$

where : $e^m_p =$ price elasticity of imports

$$\frac{d\hat{P}}{\hat{P}} = \text{percentage change in relative import prices}$$

m = marginal propensity to import

k = the country's multiplier

This has been derised by adding the income effect to the price effect i.e.

$$dM = dM_1 + dM_2$$

$$\text{where } dM_1 = e \frac{m}{p} \frac{dM^E}{P^m} M$$

and $dM_2 = 1mk \ dM_1$

3. Export changes have been estimated through the formula :

$$dV^n = (P_o^x - v)dQ^x - Q_1^x dP$$

which has been derived as follows :

The change in the volume of exports is given by

$$dQ^x = e^x \frac{dP^x}{P^x} P_o^x$$

The change in the value of exports is given by :

$$dV^x = Q_1^x P_1^x - Q_o^x P_x^o = P_o^x \ dQ^x - Q_1^x dP^x$$

The net change in the value of exports is given by

$$dV^x = P_o^x \ dQ^x - Q_1^x dP^x - v^x \ dQ^x$$

where vx is the import component of exports.