CENTER OF ECONOMIC RESEARCH

LECTURE SERIES

13.

SAVING AND INVESTMENT IN GREECE

By

RICHARD M. WESTEBBE

ATHENS, GREECE

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THE CENTER OF ECONOMIC RESEARCH

The Center of Economic Research in Greece was established in the expectation that it would fulfill three functions: (1) *Basic research on the structure and behavior of the Greek economy,* (2) *Scientific programming of resource allocation for economic development, and* (3) *Technical-economic training of personnel for key positions in government and industry. Its financial resources have been contributed by the Greek Government, the United States Mission in Greece, and the Ford and Rockefeller Foundations. The University of California at Berkeley participates in the process of selection of foreign scholars who join the Center's staff on an annual basis. It also participates in a fellowship program which supports research in Greece by American graduate students, as well as studies for an advanced degree in economics of Greek students in American Universities.*

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It is contemplated that the Center will exchange information and results with similar Centers in other countries and will participate in joint research efforts with Greek or foreign public and private organizations.

Finally, one should emphasize that this is one more example of Greek-American co-operation, a pooling of human talent, funds, and efforts, designed to promote the training of economists and help in meeting Greece's needs in the field of economic development.

The final aim is eminently practical: to help in creating a better life for the Greek people.

GEORGE COUTSOUMARIS, Director

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SAVING AND INVESTMENT IN GREECE

I. INTRODUCTION

In studies of the difficulties in raising the living standards of less developed countries the problem of inadequate national savings is usually identified as a critical limiting factor. In the words of the United Nations World Economic Survey, «of the labour, natural resources and capital that combine to determine productive capacity, it is the stock of capital that is in greatest want... The task of raising levels of living in these underdeveloped countries thus, in large measure, resolves itself into the problem of capital accumulation.»[1]

This proposition, however, would not accurately describe the case of Greece. In the past decade Greece has achieved financial stability, relaxed controls, and generated an annual average rate of growth in excess of 6%, increasingly financed from a growing volume of domestic savings. It is thus not capital accumulation in the aggregate sense that is deficient. The real problem is to channel a growing volume of domestic savings into productive private and public uses. It is the purpose of this paper to examine the adequacy of

1. *UN World Economic Survey*, 1960, ch. 2, p. 57.

national savings in relation to investment requirements.[1] In particular, sources of savings and the channels through which savings are transformed into investment will be explored. In the process, we will examine the roles of the banking system and the capital market. While this cannot be an exhaustive treatment of the subject, it is hoped that it will contribute to making clear the critical role of savings in Greece's future economic development.

II. SAVINGS AND INVESTMENT IN RE-PROSPECT*

The most important determinant of the rate of growth is the level of investment. The amount of investment required to achieve a given rate of growth will, of course, depend on the pattern within which investment takes place, since capital output ratios vary widely between sectors. Investment, in turn, is a function of the volume of both domestic and foreign savings.

While it is possible to construct models showing reasonable and desirable rates of growth and investment for the future, such models must also de-

1. See Andreas G. Papandreou, *A Strategy for Greek Economic Development* (Athens: Center of Economic Research, 1962) for a thorough analysis of the feasibility of various investment targets.

*National accounts figures throughout are derived from: *NATIONAL ACCOUNTS OF GREECE* 1960, 1958-61, and 1958-62, nos. 10, 11, 12, (Athens: Ministry of Coordination).

monstrate that adequate savings necessary to match projected investment will in fact become available. A review of Greece's experience over the postwar period will reveal the sources of savings which financed the relatively rapid rates of growth in the past years and some of the obstacles to achieving both a desired volume and a desired pattern of savings for the future.

The rate of investment varied substantially during the postwar years. It was high during the reconstruction period (1948-1952) and then declined following the sharp reduction in American Aid in 1952 and the application of a disinflationary policy in the years 1952 - 53. The rate of investment rose again after 1955.

Agricultural output and incomes show a four-year cycle in Greece. In view of this pattern and the existence of the reconstruction period at the beginning, we have grouped the figures into four-year averages except for 1961 and 1962. In this way it is clearly seen that gross domestic asset formation as a percentage of gross domestic product fell from 21.2 per cent in 1948 - 52 to 16.6 percent in 1953 - 56.

In the first period, foreign saving, principally from U.S. official sources, accounted for 64 percent of gross domestic asset formation, while government saving was negative. In the second period, 1953 - 56, foreign saving declined by more than 50 percent in value and accounted for only 17 percent of gross domestic asset formation. The share of domestic saving rose slightly in 1957 - 60 and more sharply in 1961 - 62. However, the really significant change through 1953 - 62 was in the growing volume of domestic asset formation, which rose from 16.6 percent of the gross domestic product in 1953 - 56 to 19.5 percent in 1957 - 60 and to 23.5 percent in 1961 - 62. This increase was financed principally from the rising volume of private domestic saving.

The composition of gross domestic investment is compared with the composition of gross savings in the following table:[1].

TABLE 1

Gross Asset Formation *

(million drs. at current prices)

	1949-52	%	1953-56	%	1957-60	%	1961-62	%
Gross private investment	3,743	68	6,807	74	10,382	69	14,128	62
Gross public investment	1,800	32	2,400	26	4,665	31	8,724	38
Total:	5,543	100	9,207	100	15,047	100	22,852	100
Gross private savings	2,669	48	6,551	71	10,915	72	17,001	74
Gross public savings	-669	-12	1,118	12	1,924	13	3,218	14
Gross foreign savings	3,543	64	1,538	17	2,208	15	2,633	12
Total:	5,543	100	9,207	100	15,047	100	22,852	100

*Excludes value of ships.

1. According to alternative definitions, the role of private foreign savings can be shown to be of much greater importance. For a discussion of this point, see Appendix B.

In an aggregate sense, after the initial period, the private sector was largely self-financing. The public sector, on the other hand, accounted for 31 percent of gross asset formation in 1957 - 60 but generated only 13 percent of total savings; in 1961 - 62 the public sector accounted for 38 percent of gross asset formation. The balance was made up from foreign sources and an increasing excess of private domestic savings over private investment. As will be shown, the public sector was financed in part from domestic borrowing, while the private sector was financed in part from an inflow of private capital from abroad.

Since gross saving and gross investment include depreciation allowances, it is neccessary to examine savings on a net basis, insofar as the statistics permit, in order to gauge the relative importance of the three main sectors for the growth of the national product. These sectors are private domestic, government domestic, and foreign savings. The following table illustrates this relationship:

TABLE 2

*Net saving by Sector as a Percentage of Gross Domestic Product.**

	1949-52	1953-56	1957-60	1961-62
Private	5.1	6.6	9.0	12.0
Government	-2.9	2.1	2.5	3.3
Net domestic saving	1.2	8.7	11.5	15.3
Foreign	12.8	2.7	2.9	2.7
Total:	14.0	11.5	14.5	18.0

*Excludes value of ships.

Note: Totals may not add precisely, due to rounding.

Although the national income accounts provide a total depreciation figure for only the private sector, and the reliability of this estimate is very questionable, the general picture is clear. Government saving rose moderately from 1953 - 56 to 1961 - 62. On the expenditure side, the main factor limiting government saving was the rise in current civil outlays and in transfer payments to households (including unincorporated enterprises). On the other hand, government investment was not restricted to the level of its savings but continued to rise at a rapid rate. The increase in government revenue from direct and indirect sources more than kept pace with the rise in the national product. Private saving accounted for the bulk of the increase in net domestic saving.

In general, in contrast to most underdeveloped nations in the fifties, Greece managed to generate a substantial increase in the volume of domestic savings.[1]

III. FOREIGN SAVINGS

Foreign saving is defined as the deficit in the balance of goods and services of the balance of payments excluding current transfers to and from the rest of the world. It is calculated by taking the

1. See *UN World Economic Survey*, 1960, ch. 2, pp. 58-83.

sum of capital transfers from the rest of the world plus net lending.

TABLE 3

Foreign Savings

(million drs. at current prices)

	1949-52	1953-56	1957-60	1961-62
Capital transfers:				
U.S. Grants	3,051	1,439	692	705
Reparations	346	96	18	581
Other	4	188	630	1,221
Net Lending:	142	- 185	868	126
Total	3,543	1,538	2,208	2,633
Value of ships	*	*	3,375	4,145

*not available.

Foreign saving rose slightly from 2.7 percent to 2.9 percent of gross domestic product from 1953 - 56 to 1957 - 60 and then declined slightly. However, the composition of the foreign contribution changed significantly. Grants of aid from the U.S. and reparations declined sharply but were more than offset by a rise in private capital inflow and foreign, mainly official, lending. In recent years the rise in private capital flow from abroad has accelerated. Such investment, however, was not induced by any special opportunity to develop raw material resources or agricultutal export crops such as motivates a considerable part of private investment in most underdeveloped nations. In addition, despite the favorable provisions for repatriation of capital and profits allowed under

Law 2687, relatively little foreign capital took advantage of this legislation to invest in industry in Greece.[1] Rather, the inflow of foreign capital coincides with the restoration of internal financial stability after the devaluation of the drachma in 1953. This inflow was further augmented by a flight of Greek capital from the Middle East and Africa following political disturbances in those regions; such funds can best be termed repatriated capital. Private foreign investment rose from 3 percent of gross domestic produce in 1953-56 to 8 percent in 1957-60, excluding ships. In this same period, net domestic private saving rose from 6.6 percent to 9.0 percent. Repatriated capital from abroad finds its way mainly into residential building activities and to some extent into bank deposits.[2] If ships were included, foreign private investment would account for a further 4.4 percent of gross domestic product in 1957-60.

In the fifties, Greece did better than the other underdeveloped countries in acquiring foreign savings as a percentage of gross domestic product. However, private capital imports accounted for about 2/3 of foreign savings from 1955 through

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1. This disappointment was also experienced by other underdeveloped countries who made important concessions to private foreign investment.

See *UN Survey* 1960, ch. 2. p. 57.

2. Confidential source.

1959 and only for about a half in other countries. Reserve gains are counted as net lending abroad and reduce the share of official capital inflows in foreign savings.

TABLE 4

Net Flow of Foreign Funds to Underdeveloped Countries, 1950-1959
By Income Group, Annual Average Ratio to GDP.

Countries with per capita national income of:	No. of countries	Private long term capital	Official grants and long term capital
I. Less than 100 dollars	6	–	2.3
II. 100 to 199 dollars	13	1.0	1.3
III. 200 to 299 dollars	5	1.3	1.1
IV. 300 dollars or more	7	1.7	3.3
Total Underdeveloped countries	31	1.0	1.9

Source: *UN Survey* 1960, ch. 2, p. 65: see footnotes for qualifications. Greece fits into category III of the UN table, which further includes Costa Rica, Mexico, Panama and Turkey.

A detailed examination of foreign saving can only be made by referring to balance of payments figures which, by reasons of definition, are not indentical with those published in the official national accounts by the Ministry of Coordination but which nevertheless are adequate for purposes of this analysis. Appendix Table 4 illustrates how the current account deficit was financed from 1957 through 1963. At least three of the accounts under official financing were directly tied to imports: Shipments under PL 480 Title I, Common

Use (PL 665), and Italian reparations. For the rest, the inflow of capital was less directly tied to specific imports and was available as a current resource or a potential resource by being added to reserves. After 1957, the inflow of private capital exceeded that of official capital—with the exception of 1960, when a $ 16.6 million payment was made for the facilities of the APECO, a British Company in Athens. Repatriation of capital (account 8C in Appendix Table 4) rose from an average of about $ 20 million a year in 1955-57 to nearly $ 50 million in 1959-1961; ships accounted for $ 3 million in 1961 and $ 14 million in 1962. Official financing varied with changes in assistance by foreign governments and with fluctuations in gold and convertible assets. After 1958 long term credits from European sources appeared as sizeable items of official financing and reached $ 35 million in 1961. Throughout the period, the U.S. remained the principal contributor of official finance.

Foreign financing only contributes to savings and investment when it is in fact spent. If gold and convertible assets rise, then Greece is in effect returning capital to the country where assets are held or from whom gold is purchased. Greek gold and and convertible assets in the Central bank and commercial banks rose by over $ 200 million from the end of 1954 to the end of 1963, and the gain may have been higher in view of the large «errors and omission» account in 1963. While a rise in reserves is in effect an export of capital, it can be justified in the case of Greece on several grounds. First, the private capital inflow reflects in large part a restoration of confidence in the drachma. This confidence could be impaired if reserves were to decline or even to show no improvement. Second, the monetary authorities require a certain level of reserves in order to preserve some freedom of action; in selecting policy actions to offset the development of excess internal demand they must have some recourse other than exchange or import controls. Third, and related to the second point, is the desirability of an increasing foreign exchange reserve as a country's value of international transactions rise.

The amount of reserves judged to be adequate does not remain fixed over time. One factor is whether the current account balance is improving or deteriorating; other considerations are tradition and the availability of external assistance from such institutions as the IMF. With a developing country it is logical to assume that imports will rise more rapidly than exports, and hence pressure may be expected on reserves.

In this respect, the Greek balance of payments contains a serious structural weakness. On the one hand, demand for both exports (mainly a few basic agricultural products) and imports (mostly raw materials, food-stuffs, and capital equipment) is relatively inelastic. While, on the other hand, invisible receipts such as shipping and even tourism are subject to wide fluctuations.

By the end of 1963 Greece's reserves amounted approximately to the value of five months' imports, somewhat of a deterioration since 1960. If account is taken of short-term commercial liabilities, Greek reserves were effectively reduced to $ 177 million by the end of 1963, the value of about 2.8 months' imports compared with a net reserve of 3.2 months' imports at the end of 1962. As long as confidence in the drachma remains unimpaired, this situation poses no particular danger.

In the future, although grants for development and defense support purposes are not necessarily ruled out, it is clear that foreign official financing will be made available increasingly on a loan basis. United States official policy now emphasizes development lending, and appropriated funds are largely in this form. Aid contributed from European sources can also be expected to be on a loan basis.

Annual servicing of interest and principal on foreign official debts will require $ 35 million in 1964, a figure which is expected to double by

1971. Thus with a substantial rise in loan liabilities expected, assuming present loans are serviced on schedule and not refinanced, Greece will have to reduce its current account deficit, acquire loans in excess of strictly development needs, greatly increase private capital inflow, or rely on its reserves to find the necessary foreign exchange.

Therefore, it seems rash to speak of excessive reserves in the case of Greece. A sharp reversal in reserve increases could well have adverse affects on the flow of private capital from abroad and would thus be self-defeating. In the future, however, substantial reliance will continue to be placed on official donors of capital. Foreign governments and international institutions will have difficulty in justifying high and increasing amounts of capital assistance to Greece if the apparent result is a rise in reserves by some part of the capital made available.

IV. PRIVATE SAVINGS

In an underdeveloped country, domestic and particularly private saving may be viewed as a function mainly of disposable income, exports, and distribution of income. In the case of Greece, little is known in detail about the distribution o income except that great extremes exist, as reflected by high levels of luxury consumption among the upper income groups and small savings among the lowest income groups.

A reduction in income inequalities might at first glance be presumed to lead to lower savings as income becomes more concentrated in classes which are supposed to save a smaller proportion of their incomes. In fact, the reverse is probably true. In the first place, it depends on what kind of high income group one is dealing with. Landlords, speculators and merchants are not the same as entrepreneurs, who can be expected to invest their savings voluntarily in productive enterprises. The former group will be likely to indulge in conspicuous consumption. On the other hand, as a genuine entrepreneurial class comes into existence, the flow of voluntary savings from upper income groups may actually increase, even though there is a general tendency towards greater equality in the distribution of income. The phenomenal rise in private savings in Greece during the fifties, when the inequality of income distribution certainly must have been reduced, tends to confirm this. Further, the development of institutions capable of channelling savings to investors will in itself increase the flow of savings regardless of what happens to income distribution. In addition, the recent adoption of consumption as a criterion for levying taxes may increase savings—either through the public sector or through increases in voluntary savings on the part of the upper income classes. Reducing inequalities does not mean that all incomes become equal. During the process of development a large middle income class is created which in all probability has a larger propensity to save than the more conspicuous-consumption minded upper income class dominant at an earlier stage of development. Finally, there is the political and social aspect of extreme income inequalities which, if not corrected, may conceivably cause a large segment of the population to lose interest in growth itself.

In Greece, business firms are generally small, and the corporate sector is relatively unimportant; both these factors are basic to the low level of savings. The corporate sector contributed to the financing of gross asset formation only 3.1 percent in 1957, 1.2 percent in 1958, 2.4 percent in 1959, 4.6 percent in 1960, and 4.1 percent in 1961. Nevertheless, private domestic savings increased sharply during the latter part of the fifties, mainly in the household sector (separate figures for this sector are available only for 1957 through 1962).

Although private saving is generally correlated with disposable income and exports, in Greece it is the rising level of per capita disposable income which is primarily responsible for the increasing private savings (see Table 5)[1]. Exports appear to be a relatively unimportant factor in influencing either the level of private savings or disposable income. Throughout the period, exports accounted for less than 10 percent of the gross domestic product. Since 1957, export income has been relatively stagnant while savings rose at a rapid rate. Furthermore, variations in the level of exports incomes have had little effect on the rise in disposable income.

An important aspect of the private savings phenomenon in Greece was the halt in price inflation after 1955 and the consequent increase in monetization of the economy as confidence in the value of the drachma returned. With stable prices, wage and salary earners generally gain in income relative to profit earners. Futhermore, savers of all classes are induced to keep their assets in the form of money rather than goods. This policy was deliberately encouraged by the interest rate policy of the monetary authorities, although reductions in interest rates in recent years have not interrupted the flow of savings into bank savings and time deposit accounts. (Table 6).

The banking system absorbed on the average

1. Private savings were reportedly increased in 1960 and 1961 by large Bank of Greece purchases of gold sovereigns from the public.

about 35 % of savings directly in the form of new private savings and time deposits; as will be shown, a greater portion of the savings went into the process of increasing the money supply. Since the public sector is largely financed from its own savings and from foreign financing, we can only conclude that a good part of private savings is channelled directly into private investment without the aid of intermediary institutions. This conclusion would seem to be inescapable despite the difficulty of comparing banking statistics with national income data.

Greece's lack of a capital gains tax constitutes an indirect encouragement to speculation in real estate and building. In Greece, there are also strong sociological reasons for real estate investment-i.e., the dowry system and prestige considerations. Investment in building is also regarded as relatively inflation proof. In the period 1960-62 buildings still accounted for over 40 percent of total private fixed investment, excluding ships. From 1955 to 1958 a significant rise occurred in investment in the agricultural sector but this began to level off after 1958 and declined in 1962. A striking phenomenon was the decline in real terms in private investment in manufacturing which, from the peak of 1958 fell drastically in 1959 and continued low through 1962. Preliminary estimates indicate that private investment in manufacturing rose by some 10 percent in 1962, still below 1958 levels. Such investment accounted for only 10.7 percent of total private fixed capital investment (excluding ships) in 1962 compared with 11.7 percent in 1960 (see Appendix A, Table I). It is clear that private investment in manufacturing failed to respond to either rising domestic incomes or the challenge of the Common Market. In fact the sharp rise in direct foreign investment under Law 2687 indicates perhaps among foreign entrepreneurs a greater awareness of Greece's potential than among most of their counterparts in Greece. On the basis of this performance, it does not appear likely that the goals of the current five year plan can be met in the industrial sector.

The problem of increasing the level of industrial entrepreneurship is complex. In part, the solution lies in the development of institutions to channel an increasing level of private savings into uses which will contribute to the goals of the national plan. The experience of the recent past makes it clear that in the private sector a tremendous savings potential exists which is directly related to rising per capita income levels. The real problem is thus not lack of savings but rather the finding of a technique to use available saving in an appropriate manner.

TABLE 5

Disposable Income, Savings & Exports
(million drs.)

	1. Disposable[1] Income	2. Private[1] Consumption	3. Private[1] Saving	4. 3 as a % of 1 Savings ratio	5. Exports[2]
1948	16,222	17,601	-1,379	-8.5	—
1949	22,614	20,852	1,762	7.8	—
1950	24,926	24,091	835	3.3	—
1951	29,705	28,552	1,153	3.9	1,524
1952	31,433	30,493	940	3.0	1,798
1953	42,748	39,711	3,037	7.1	3,396
1954	49,173	47,239	1,934	3.9	4,556
1955	55,913	51,480	4,433	7.9	5,484
1956	65,534	59,927	5,607	8.5	5,698
1957	70,367	63,864	6,503	9.2	6,588
1958	73,375	66,955	6,420	8.6	6,953
1959	76,106	67,801	8,305	10.9	6,127
1960	80,251	72,946	7,305	9.1	6,096[3]
1961	91,106	80,598	10,508	11.4	6,700[3]
1962	96,554	85,541	12,013*	12.4	7,503[3]

1. Ministry of Coordination, National Accounts Division (Excludes income from property and entrepreneurship. See Consolidated Account 4 for households and private non-profit institutions).

2. Source: Exports (FOB) *Statistical Yearbook of Greece*, 1959, 1960, p. 275.

3. *Monthly Statistical Bulletin.* National Statistical Service of Greece.

* Estimated.

TABLE 6

Saving & Deposits
(million drs)

	Deposit Interest Rates: Saving up to 100,000 Drs.	Deposit Interest Rates: Time Individuals (3 months to 2 years)	(1) Private Saving	(2) Net Annual Increase Total Private Deposit[1]	Increase in Private Deposits as % of Private Saving 4/3
	(1)%	(2)	(3)	(4)	(5)
1951	10	10	1,153	151	13.1
1952	8	8	940	275	29.3
1953	8	8	3,037	239	7.9
1954	7	7	1,934	747	38.6
1955	7	7	4,433	909	20.5
1956	10	10	5,607	1,195	21.3
1957	9	10	6,503	2,898	44.6
1958	8	9	6,420	2,973	46.3
1959	6.5	7	8,305	2,981	35.9
1960	4.5–5	5.5–6.0	7,305	2,692	36.9
1961	4.5–5	5.5–6.5	10,508	2,885	27.5
1962	4.5–5	5.25–6.5	12,013	5,316	44.3
1951-1962	—	—	—	—	34.6

1. Includes time and savings deposits held by the public; based on annual averages.

Sources: Bank of Greece;
Ministry of Coordination, National Accounts Division

V. PUBLIC SAVINGS

Government or public saving may be defined as the difference between gross public current revenues and gross public current expenditures. In Greece, government savings rose from minus 2.9 percent of the gross domestic product to plus 2.5 percent and 3.3 percent in the succeeding two periods 1957-60 and 1961-62. Despite this rise, public savings were inadequate to finance the rapid rate of increase in gross public investment.

The development of current public revenues and expenditures are given in Appendix A, Table 3. The public sector did not achieve positive savings until 1953, the year of the devaluation of the drachma. Thereafter, public savings rose, except when affected by the agricultural business cycle downturns. In recent years the tendency for long postponed current civil outlays to rise has caused the rate of increase in the surplus to decline, and in some years absolute declines have occurred. The dilemma posed for the Government in financing its increasing public investment with uncertain surpluses has for the moment been solved by recourse to the banking system and to an increasing extent to the public capital market. Foreign credits continue to finance a large and increasing part of the budget.

TABLE 7
Financing the State Budget
(million drs.)

	1958	1959	1960	1961	1962
Transfers and loans from abroad	1,130	1,530	2,190	2,286	1,556
Domestic loans total	815	1,303	1,008	1,140	2,437
of which:					
Treasury bills	545	1,196	995	380	1,084
Bonds	—	2	13	760	996
Other (including public entities funds).	270	105	—	162	357

Source: *Monthly Statistical Bulletin* (Bank of Greece, May 1964) provisional figures.

While public savings were inadequate to finance public investments, the tax burden as a percentage of national income has increased considerably. The following table compares gross domestic product in current prices with total direct and indirect taxes in four periods since 1949.

TABLE 8

G D P and Taxes
(million drs.)

	1949-52	1953-56	1957-60	1961-62
Gross domestic product.	28,621	55,513	76,951	97,281
Gross taxes	5,703	11,724	17,879	23,882
Percentages of taxes to GDP	19.9	21.1	23.2	24.5

The rising percentage is even more impressive when considered against the background of current expenditures. Presumably, if most of the increased revenues had been returned to tax payers in the form of higher transfer payments, the burden of increased tax yields would have been easier to bear. As Appendix A, Table 3 makes clear, transfer payments decreased as a percentage of total current outlays in recent years and, in absolute terms, absorbed about 30 percent of the total rise in revenues since 1958. Civil outlays (education, health, welfare, etc.) also rose sharply, taking about 40 percent of the rise in revenue, although individual taxpayers probably found small comfort in increased government outlays for such purposes, however desperate the need. In general, there are few objective guides to an appropriate tax structure for developing countries. The best criteria appear to be the political circumstances and the effect on economic incentives in the particular country under discussion.[1] Further rises in tax yields relative to national income may be expected as a result of improved tax collection procedures and increasing incomes, especially in the agricultural sector.

It is particularly in the field of direct tax collection that improved methods are likely to yield the greatest returns, as numerous official statements have made clear in recent years. Direct taxes, excluding social security contributions, as a percentage of total direct and indirect taxes, fell from 24.6 percent of total revenue in 1958 to 23.8 percent in 1962 (National Accounts Data). As one authoritative source analyzed the situation, the failure to tax adequately the rising money incomes of businesmen allows a valuable portion of national savings to be directed into luxury consumption which is mainly satisfied through imports.[2]

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1. For a discussion of this problem see Benjamin Higgins, *Economic Development*, Chapter 22 «Tax Policies», pp. 493-508.

2. Xenophon Zolotas, *Monetary Stability and Economic Development* (Athens: Bank of Greece, 1958) pp. 19, 20.

VI. PROSPECTS.

The revised five-year program of the Ministry of Coordination for the period 1961 through 1966 envisages a rising growth rate with an annual average 6 percent increase in the Gross Domestic Product.[1] In order to achieve this, gross investment is projected to rise by 9.4 percent a year, of which the increase in private investment is forecast at 11.6 percent and public investment at 7.5 percent. The program projects an overall rise of 8.5 percent in domestic savings (14.8 percent in public domestic savings). The private sector is expected to produce a surplus in savings over private investment. Since the annual rate of increase in public investment is forecast to fall from 19.8 percent in the period 1955-1961 to 7.5 percent in the period 1961-66, the public sector will cover an increasing proportion of its investment requirements. The plan makes provision for a more rapid rise in current revenues than in current public consumption despite the fact that expenditures for education and welfare will have to increase considerably. The achievement of projected levels of public savings may therefore prove to be difficult.

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1. *Memorandum on the Greek Economic Development Programme.* Submitted by the Greek Delegation to the OECD, June 1962.

On balance, the experience of the fifties supports a projected domestic savings rise of 8.5 percent annually with a 6 percent growth rate.[1] However, since gross investment is forecast to rise from 23.4 percent of the Gross Domestic Product in 1961 to 27.5 percent in 1966, a crucial factor in the achievement of the national economic plan will be the availability of increasing amounts of foreign capital on terms consistent with the Government's investment plan.[2] After 1966, however, increasing domestic availabilities and basic improvements in the balance of payments will, it is forecast, reduce sharply the need for foreign capital. There are, nonetheless, few signs of the hoped for structural improvements in the balance of payments, and the performance of the industrial sector in investment and exports has been disappointing.

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1. An independent analysis of the feasibility of growth rates of between 6.5 percent and 6.8 percent in Gross Domestic Product through 1966 supports the view that adequate domestic savings will be available to achieve investment targets assuming foreign savings will amount to 4 percent of the GDP for a minimum program. See Andreas G. Papandreou, *op. cit*, pp. 77-87.

2. It is interesting to note that, according to some criteria, Greece has already reached the state of self-sustained growth. As Higgins puts it, «steady growth requires that both the amount of investment and the ratio of investment to income should continue for some decades until a level equal to 15 or 20 percent of national income is reached».

Higgins, *op. cit.*, p. 471.

TABLE 9

Projected Gross Asset Formation 1961-1966

(million drs.)

Investment	1961	% *of total*	1966	% *of total*
Fixed Investment	20,140		32,500	
a. Private	12,110	55.6	21,000	61.4
b. Public	8,030	36.9	11,500	33.6
Changes in stocks	1,650	7.6	1,700	5.0
Total	21,790		34,200	
Savings		% *of GDP*		% *of GDP*
Public	2,893	3.11	5,770	4.63
Private	16,413	17.64	23,530	18.90
Foreign	2,484	2.67	4,900	3.93
Total	21,790	23.42	34,200	27.47

VII. THE BANKING SYSTEM AND THE CAPITAL MARKET.

A substantial part of savings is channelled through the banking system and, to a much smaller extent, through the capital market. It is not possible, with the available data, to match a flow of funds analysis with the national accounts data on savings. However, by using money flow data relating to the banking system, the approximate order of magnitude of savings used to finance the public and private sectors can be indicated.

The banking system mobilizes savings by two principal means: first, individuals increase their deposits; second, the banking system as a whole may increase the money supply. In a country with a fractional reserve system the Central Bank can usually control the process of increasing the money supply. Under noninflationary conditions, i.e. where the price level is relatively stable, the increased money created by the banking system in effect mobilizes idle funds. That is to say, the banks can lend the funds they have created while individuals who have saved (not spent) simply hold idle cash balances outside the banking system. A rise in idle balances is the same thing as a fall in the velocity of circulation. In Greece there has been since 1953 a sharp rise in the money supply accompanied by a fall in the income velocity of circulation. Between the end of 1950 and 1960 the money supply, including savings deposits, rose from 2.6 billion drachmas to 26.3 billion drachmas, an average annual increase of 25.6 percent, far in excess of the rate of increase in the gross national product. Currency circulation increased from 1.8 billion drachmas to 10.5 billion—an annual average rise of some 19 percent. Apart from the rising demand for money for transaction purposes, the most important feature of the rise in the money supply was the increasing preference for liquidity shown by the public after confidence in the drachma was restored by the devaluation of 1953. This increasing preference may be seen in the fall of the income velocity of circulation by over two thirds from 1950 to 1962. Velocity is obtained by dividing the gross national product at market prices by the average level of the money supply, including savings deposits, in a given year (Table 11). Since 1956 this rise in money supply has continued with a high degree of price stability. From 1952 through 1956 the wholesale price index (Athens-Piraeus) rose by 50 percent. From 1956 through 1963 the rise was only 11 percent.[1]

An important stimulant to private savings was the introduction of differential higher rates of interest on savings and time deposits as opposed to sight deposits in May 1956. Before this time, savings went to a large extent into hoarding of commodities and gold sovereigns. This rise continued despite later reductions in the level of interest rates. In fact the largest increases took place

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1. To fully understand the role of monetary expansion in an open economy such as Greece it would be necessary to produce a model of the past which identified internal credit monetization, external credit monetization, and the relative contraction of liquidity in relation to increased money required for production growth, for price increases, and for financing the excess of imported over exported goods and services. Such a calculation was made for Pakistan, which, of course, has had a greatly different experience from Greece. In Pakistan, velocity declined during a period of import controls and forced saving and rose with the development of inflationary pressures and growth of production. See Parvez Hasan. *Deficit Financing and Capital Formation. The Pakistan Experience* 1951-59. (Karachi: The Institute of Development Economics, Jan. 1962).

in the category of savings deposits which are in effect withdrawable on demand. The reasons for the spectacular rise in deposits after 1956 must also be sought in the restoration of confidence in the stability of the drachma. By 1956 the post-devaluation price increases had been absorbed, and imports were being freely licensed while the foreign exchange position was strong. The fact that the public still kept a large share of its savings in the form of highly liquid deposits may indicate a residual fear about the permanency of the stability of the drachma (See Table 10). Despite this, the rise of private deposits removed an important inflationary pressure from the economy and permitted a relaxation of monetary controls. Prior to this time, Central Bank credit was required to provide adequate financing.[1]

There are, of course, other important explanations for a rise in money in relation to national income or a fall in income velocity. Reference has already been made to the increasing monetization of the economy. In a developing economy, as the importance of the monetary sector grows vis-à-vis the subsistence sector, the requirement for greater stocks of money increases. These greater stocks should be regarded as working balances rather than idle balances. In addition,

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1. Zolotas, *op. cit.*, pp. 9-11.

it has been suggested that, as the number of productive stages increases in the course of development, changes in income expenditure periods and payment intervals also cause the need for working balances to rise.[1]

In the future there is no certainty that increases in the money supply will be accompanied by continued reductions in the velocity of circulation. It would be reasonable to assume that at some point the public's desire to hold money either as cash or bank deposits will be satiated and that further increases in the money supply will have to approximate, more closely, the increases in national product. The alternative of permitting increases in money supply in excess of this rate would be inflation. When this point of saturation is reached, the problem of mobilizing savings through the banking system will be more difficult and the problem of developing alternative financial institutions to channel savings into investment will become critical.[2]

The role of the banking system in channelling funds into productive uses can be seen from the following figures, derived from a few of the main

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1. Howard S. Ellis «Some Fundamentals in the Theory of Velocity» in *Readings in Monetary Theory* (London: Allen and Unwin, 1952).

2. The decreasing ratio of currency to total money supply will also permit greater scope for credit creation through the banking system and will complicate the problem of credit control.

accounts of the consolidated balance sheet of the Bank of Greece.

TABLE 10

Changes in Selected Assets & Liabilities of the Monetary System

(million drs.)

Assets	1956 to 1957	1957 to 1958	1958 to 1959	1959 to 1960	1960 to 1961	1961 to 1962	1962 to 1963
Claims on Government	–1,711	1,024	1,845 [1]	2,594	751	71	1,760
Coins in circulation	22	–18	37	316	229	54	80
Treasury bills	—	116	1,285	1,310	192	562	480
Credits & Advances	–1,738	931	531 [1]	869	291	–674	–558
Securities	5	–5	–8	99	39	129	642
Claims on Private Sector	3,736	3,020	2,326	3,548	3,221	5,352	6,181
Credits	3,707	3,043	2,273	3,380	3,056	4,870	5,910
Securities	29	–23	53	168	165	482	217
Liabilities							
Money supply							
(Currency & sight deposits)	1,618	951	1,823	2,478	2,302	2,677	3,114
(Savings deposits)	2,345	1,668	2,773	2,292	2,034	2,652	4,316
	3,963	2,619	4,596	4,770	4,336	5,329	7,436
Time & blocked Deposits	580	594	475	197	759	2,060	1,345

1) Excludes 1,877 mill. drs. for the Government's contribution to the IMF.

TABLE 11

Income Velocity
(million drs.)

Year	Money Supply	Savings Deposits	Sum (Money Savings)	G N P** (marked prices)	
1948	1,289	24	1,313	22,046	16.79
1949	1,710	40	1,750	28,879	16.50
1950	2,360	51	2,411	33,889	14.05
1951	2,800	69	2,869	40,192	14.00
1952	3,152	82	3,234	41,044	12.69
1953	4,093	141	4,234	53,074	12.53
1954	5,395	234	5,629	63,031	11.19
1955	6,397	373	6,770	70,062	10.34
1956	7,956	1,059	9,015	83,115	9.22
1957	8,903	3,048	11,951	89,462	7.48
1958	10,341	4,899	15,240	94,977	6.23
1959	11,263	7,076	18,339	99,509	5.42
1960	13,658	9,913	23,571	110,392	4.68
1961	15,911	11,830	27,741	120,850	4.35
1962	18,188	14,211	32,399	124,476*	3.84

* Estimate based on a 3 percent rate of increase over 1961.

** Defined as Gross National Product plus net borrowing and net transfers from the rest of the world.

The growth of new issues on the market is set forth in the following table:

TABLE 12

New Issues – Capital Market

(million drs.)

Bonds	1957	1958	1959	1960	1961	1962	1963
PPC 8 %	90.0	490.0	—	—	—	—	—
» 7.5 %	—	—	210.0	—	—	—	—
» 7.5 %	—	—	90.0	—	—	—	—
» 7.0 %	—	—	—	580.0	—	—	—
» 7.0 %	—	—	—	—	740.0	—	—
» 6.5 %	—	—	—	—	—	500.0	—
Government Economic Development loan 5 %	—	—	—	750.0	—	990.0	1,500.0
Piraiki-Patraiki Textile Co. loan 8 %	—	—	—	—	—	49.5	—
Titan Cement Co. loan (convertible) 7 %	—	—	—	—	—	60.0	—
Greek Electric Railway Co. (EIS)	—	—	—	—	—	—	22.0
Shares							
Increase in capital of Bank for Commercial Credit	—	—	—	—	—	16.5	—
Increase in capital of Bank of Army Share Fund	—	—	—	—	—	19.5	—
Increase in capital of National Bank	—	—	—	—	—	506.0	—
Increase in capital of Mortgage Bank	—	—	—	—	52.0	—	—
Copper Aluminum Co.	—	—	—	30.0	30.0	—	—
Lampsas (Hotel. G.B.)	—	3.3	3.7	—	7.0	—	7.0
Greek Paper Manufacturing Co.	—	—	—	20.7	—	—	—
Weaving Mill Co.	—	—	—	—	—	—	9.0
Greek Electric Railway Co. (EIS)	—	55.0	—	—	—	—	—
ETMA (Rayon Mnfg.)	1.7	—	—	—	—	—	—
Kambas (Wine Mnfg.)	2.6	—	—	—	—	—	—
Electric Bulb Co.	—	—	2.1	—	—	—	—
IRIS Chocolate Co.	—	—	1.0	—	—	—	—
IRAKLIS Cement Co.	—	—	—	—	—	44.0	—
BERMION (Refrigeration Plant)	—	—	—	—	—	4.0	—
TITAN Cement Co.	—	6.0	—	—	12.1	—	—
PIRAIKI - PATRAIKI Textile Co.	—	—	—	—	37.5	—	15.0
BIO (Metal) Industry	—	—	—	—	0.7	2.0	—
Agricultural Mng. Co.	—	—	—	—	—	—	7.0
Total	94.3	554.3	306.8	1,380.7	879.3	2,191.0	1,560.0

The bonds of the State and the PPC have consistently sold above par since their issuance, due to their high coupon rate, the guarantee against devaluation, and continuous reductions in the domestic interest rate.

The striking fact about the bond issues of the State and the PPC is that they were oversubscribed and were purchased almost entirely by the nonbank private sector. From this and the fact that share prices have risen over three times from 1948 through 1961, it must be concluded that conditions for the mobilization of private savings on a large scale do exist.[1] The fact that yields are relatively high compared with the US and Europe and that dollar clauses were included until last year reflects the wariness of the private investor (who recalls the financial chaos of a decade ago) and also perhaps the fact that gains from speculative investment in real estate have been high. Evidence that the long-term interest rate is declining can be seen in the reduction from 8 to 6.5 percent from 1958 to 1962 in the coupon rate on PPC bonds.

Part of the reason for private enterprise's fail-

1. Psilos points out that, despite the fall in interest rates on deposits, the yields on bonds and shares were not high enough to compensate investors for the greater risk and lesser liquidity of such investments in recent years.

Diomedes D. Psilos, *The Choice of Financial Assets in Greece* (Athens: Center of Economic Research, 1964) p. 28.

ure to take greater advantage of the capital market lies in the availability of short-term bank credit mentioned earlier, even though such capital entails relatively high costs. In large part, the answer seems to lie in a lack of entrepreneurial initiative related to the closed family character of many business.[1]

The small size of much of Greek enterprise also inhibits firms from going to the capital market. It is noteworthy that even those firms whose size permits them to have access to the market do not issue shares but rather rely on bonds. This practice increases their long-run fixed charges and deprives the saver of an opportunity to participate in ownership of industry. Since income from such bonds is tax free in contrast to dividends from shares, bonds have an important advantage for both outside investors and for owner operators who would buy more shares.

In order to stimulate the growth of a sound capital market, the Bank of Greece advocated that the banks as well as such intermediate public institutions as the Economic Development Financing Organization and the Industrial Development Corporation undertake on a large scale to support floating of issues by the private sector.[2]

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1. Galanis, *loc. cit.*

2. *Bank of Greece Annual Report for 1960*, p. 59. A wider mobilization of long-term funds would also be assisted by the creation

For this purpose, the Currency Committee has permitted the banks to invest up to 5 percent of their total deposits in the share capital of productive enterprises with the intention that these shares will ultimately be sold to the public. It has also been suggested that the creation of private investment houses be permitted with the objective of «holding the share and bond capital of new and/or expanding enterprises». Such institutions would not only create a market for securities but would provide the channel through which foreign capital and entrepreneurs could participate in Greek industry.[1] The recent settlement of Greece's prewar U.S.–held foreign debt should be of considerable help in this respect.

In 1962 banks increased their share capital by 500 million drachmas in order to improve their capital structure. In addition, the Government issued a new 990 million drs. State lottery issue. In the same year two private bond issues of unusual importance took place. The Piraiki-Patraiki cotton works floated a 10-year 8 percent tax free issue of 49.5 million drachmas with a dollar

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of guarantee facilities for some part of the long term productive loans which the banks are willing to make. This could be done by EDFO. In addition EDFO and IDC could be permitted and encouraged to undertake joint financing of productive enterprises with existing financial institution in Greece.

1. Galanis *op. cit.*, pp. 9 and 10.

clause. Further, the Titan Cement Corp. issued a 60 million drachmas 10-year 7 percent convertible bond issue with the same tax free and dollar clause provisions.

In 1962 the total capital market subscribed to over 2,100 million drachmas in new bond and share issues compared with total flotations of 2,500 million in the preceding 5 years, A very small proportion of these issues were sold to the banks. In 1964 new issues, mainly Government and PPC, are expected to exceed the 1962 total.

VIII. CONCLUSION

A review of the past decade demonstrates that Greece has broken out of the classic dilemma of the underdeveloped country. In brief, this dilemma may be stated as a case of inadequate incomes leading to inadequate savings with the consequent level of investment too low to lead to self-sustained growth and rising per capita incomes. In contrast, Greece has achieved real annual growth rates in excess of 6 percent. This result is attributable to a rising rate of gross asset formation financed mainly by rising private domestic savings but supplemented in important respects by rising Government savings and an increasing inflow of foreign capital. In fact, if income remitted by Greeks from abroad is considered as foreign, then Greek investment may be said to be still heavily dependent on foreign, albeit private, savings.

The authorities appear to be approaching the limit of their potential to extract savings from the stream of national income in order to finance the public investment program. Improved methods of tax collection may be in order and perhaps also changes in the tax structure. However, it is doubtful whether such measures can yield a greatly increased share of the national income for public savings, especially in view of the long postponed requirements for current civil expenditures. The cost of national defence imposes an extraordinary burden on the public sector in excess of that borne by most underdeveloped countries. The decreased reliance on the potentially inflationary treasury bill sold to the banks and the success of the authorities in selling long-term bonds directly to private savers augur well for the future sound financing of state investment budget deficits.

The chances for domestic savings to reach the targets of the the 5-year investment program are good. However, domestic savings must be supplemented by increasing net capital inflows from abroad if the programmed level of investment is to be attained. Whether this foreign capital will be available in the form appropriate to, and on terms consistent with, the country's investment needs will depend upon the willingness of official institutions in Europe and the U.S. to assist Greece.

Unlike the typical underdeveloped country, Greece has experienced a relatively low rate of population growth; population has increased by less than one percent a year after taking into account large emigration. This has permitted rises in income to be reflected more directly in higher living standards and therefore has increased the margin of resources available for savings rather than consumption. In addition, the country has benefited from a successful financial stabilization program which restored foreign and domestic confidence in the drachma and created the basic conditions necessary for savings on a large scale. This confidence in the currency has also resulted in an important flow of both flight and investment capital from abroad.

The structure of investment has been deficient in terms of the long-run objectives of Greek development. While private savings are high and show every prospect of increasing in the future, the pattern of investment is too heavily concentrated in building and not enough in industry, where the major tranformation of economy is planned to occur. This, in turn, is related to the speculative gains to be made in real estate, to the lack of entrepreneurial talent in the industrial field, and to institutional problems of channelling savings to industrial borrowers.

Despite the success in attaining and preserving internal monetary stability, the financial mechanism is not yet adequate to channel an increasing flow of private savings into productive uses. The capital market is only beginning to become a source of capital for the development of industry. Specialized institutions created in part for this purpose have not yet begun to fill the gap. A significant part of private savings finds its way into credit for enterprises through the medium of mainly short-term bank loans; another part flows directly into investments of all kinds without the intervention of intermediaries. The problem of channelling savings into appropriate uses in order to achieve national goals will be a primary problem facing policy makers in the coming decade.

APPENDIX A
TABLES

APPENDIX TABLE 1

Private Fixed Capital Formation by Sector

(million drs. at 1954 prices)

	1955	1956	1957	1958	1959	1960	1961	1962*
Agriculture, etc.	409	482	838	1,292	1,467	1,490	1,350	1,110
Mining, etc.	63	141	186	209	81	78	71	83
Manufacturing	904	904	1,205	1,862	1,378	1,228	1,162	1,307
Energy, etc.	161	566	184	131	186	193	80	116
Transportation-Communication (excludes Ships)	603	689	901	1,460	1,159	1,595	1,980	1,938
Dwellings	3,439	3,402	3,199	4,039	3,952	4,440	5,388	5,802
Other, incl. Buildings	901	1,071	846	967	992	1,437	1,751	1,913
Total	6,480	7,255	7,359	9,960	9,215	10,461	11,782	12,269
Ships	496	747	907	2,374	4,866	9,334	6,650	3,260

* Provisional estimates.

Source: Ministry of Coordination, National Accounts Division.

APPENDIX TABLE 2

Gross Domestic Asset Formation

(excluding Ships)

(million drs.)

	1958	1959	1960	1961	1962*
1. Agriculture-Animal Breeding, Forestry	1,981	2,234	2,720	2,878	2,576
2. Mining, etc.	218	87	86	92	106
3. Manufacturing	1,886	1,405	1,456	1,630	2,177
4. Electricity, Water, etc.	1,012	1,392	1,188	1,145	1,545
5. Transportation, Communications	2,747	2,741	3,591	4,207	4,490
6. Dwellings	4,539	4,252	4,683	5,544	6,024
7. Public Administration and other Services Industries	1,325	1,620	2,042	2,442	2,555
Gross Fixed Asset	13,708	13.731	15,766	17,938	19,473

* Provisional Estimates.

APPENDIX TABLE 3

Current Revenue and Expenditure of General Coverntment

(million drs.
at current prices)

	1948 Abs. Numb.	1948 %	1949 Abs. Numb.	1949 %	1950 Abs. Numb.	1950 %	1951 Abs. Numb.	1951 %	1952 Abs. Numb.	1952 %	1953 Abs. Numb.	1953 %	1954 Abs. Numb.	1954 %	1955 Abs. Numb.	1955 %
1. Direct taxes on households (1)	890	25.8	1.087	26.0	1,553	29.6	2,481	38.4	3,008	39.7	3,429	37.2	4,192	38.6	4,955	37.0
a. Total contributions to Social security	402	11.7	595	14.2	785	15.0	1,039	16.1	1,488	19.6	1,526	16.6	1,891	17.4	2,515	18.8
b. Other direct taxes	488	14.1	492	11.8	768	14.6	1,442	22.3	1,520	20.1	1,903	20.6	2,301	21.2	2,440	18.2
2. Direct taxes on corporations (1)	....		...		...		...		...		...		...		...	
3. Indirect taxes	2,287	66.3	2,885	69.1	3,414	65.0	3,824	59.3	4,387	57.9	5,463	59.2	6,303	58.0	7,498	56.1
4. Income from property and enterpreneurship	251	7.3	189	4.5	218	4.2	143	2.2	250	3,3	332	3.6	398	3.7	487	3.6
5. *Minus*: Interest on Public dept	1	—	14	–0.3	8	–0.1	25	–0.3	89	–1.2	9	–0.1	49	–0.4	76	–0.5
6. Current transfers from the rest of the world	20	0.6	30	0.7	70	1.3	26	0.4	20	0.3	11	0.1	24	0.1	513	3.8
Total current revenue	3,447	100.0	4,177	100.0	5,247	100.0	6,449	100.0	7,576	100.0	9,226	100.0	10,868	100.0	13,377	100.0
7. Current expenditure on goods and services	2,601	75.5	3,161	75.7	3,739	71.2	5,062	78.5	5,370	70.9	5,806	62.9	7,396	68.1	8,048	60.2
a. Defence	1,245	36.1	1,546	37.0	1,816	34.6	2,713	42.1	2,446	32.3	2,721	29.5	3,391	31.2	3,730	27.9
b. Civil	1,356	39.3	1,615	38.7	1.923	36.6	2,349	36.4	2,924	38.6	3,085	33.4	4,005	36.9	4,316	32.3
8. Subsidies	55	1.6	299	7.1	717	13.7	196	3.1	446	5.9	222	2.4	97	0.9	184	1.4
9. Current transfers to housebolds (net)	1,107	32.1	1,744	41.8	1,720	32.8	1,488	23.1	2,172	28.7	2,368	25.7	2,606	24.0	3,490	26.1
10. Current transfers to the rest of the world	1	—	1	—	1	—	4	—	4	—	18	—	28	0.2	25	0.1
Total current expenditure	3,764	109.2	5,205	124.6	6,177	117.7	6,752	104.7	7,992	105.5	8,414	91.2	10,129	99.2	11,747	87.8
Saving of general Government	- 317	–9.2	–1,026	–24.6	–930	–17.7	–303	–4.7	–416	–5.5	812	8.8	739	6.8	1,630	12.2

	1956 Abs. Numb.	1956 %	1957 Abs. Numb.	1957 %	1958 Abs. Numb.	1958 %	1959 Abs. Numb.	1959 %	1960 Abs. Numb.	1960 %	1961 Abs. Numb.	1961 %	1962* Abs. Numb.	1962* %
1. Direct taxes on households (1)	5,348	34.9	6,001	34.9	6,455	35.1	6,784	36.0	7,469	36.1	8,722	36.3	9,804	36.6
a. Total contributions to Social security	2,886	18.8	3,296	19.2	3,510	19.1	4,017	21.3	4,613	22.3	5,343	22.2	6,143	22.9
b. Other direct taxes	2,462	16.1	2,703	15.7	2,945	16.0	2,767	14.7	2,856	13.8	3,379	14.1	3,661	13.7
2. Direct taxes on corporations (1)	394	2.6	428	2.5	418	2.3	329	1.7	355	1.7	462	1.9	530	2.0
3. Indirect taxes	8,708	56.8	9,804	57.0	10,460	56.8	10,592	56.2	11,517	55.6	13,323	55.4	14,914	55.7
4. Income from property and enterpreneurship	576	3.8	671	3.9	716	3.9	1,073	5.7	1,406	6.8	1,644	6.8	1,686	6.3
5. *Minus*: Interest on Public dept	71	–0.6	51	–0.2	–53	–0.3	–171	–0.9	–286	–1.4	–365	–1.5	–507	–1.9
6. Current transfers from the rest of the world	384	2.5	335	1.9	410	2.2	240	1.3	258	1.2	265	1.1	346	1.3
Total current revenue	15,339	100.0	17,188	100.0	18,406	100.0	18,847	100.0	20,719	100.0	24,051	100.0	26,773	100.0
7. Current expenditure on goods and services	9,780	63.8	1,900	60.3	10,559	57.4	11,669	61.9	12,309	59.4	13,285	55.2	14,843	55.5
a. Defence	4,640	30.2	4,460	25.9	4,451	24.2	4,642	24.6	4,912	23.7	5,114	21.2	5,141	19.2
b. Civil	5,140	33.5	5,696	34.3	6,108	33.2	7,027	37.3	7,397	35.7	8,171	34.0	9,702	36.3
8. Subsidies	127	0.8	264	1.5	375	2.0	555	2.9	446	2.1	718	3.0	407	1.5
9. Current transfers to housebolds (net)	4,062	26.5	4,478	26.1	5,208	28.3	5,508	29.2	5,984	28.9	6,949	28.9	8,034	30.0
10. Current transfers to the rest of the world	74	0.5	74	0.4	72	0.4	71	0.4	56	0.3	72	0.3	80	0.3
Total current expenditure	14,043	91.6	15,172	88.3	16,214	88.1	17,803	94.4	18,795	90.1	21,024	87.4	23,364	87.3
Saving of general Government	1,296	8.4	2,016	11.7	2,192	11.9	1,044	5.6	1,924	9.3	3,027	12.6	3,409	12.7

(*) The figures of the Central Government for the years 1961 and 1962 are provisional.

(1) For the years 1946-1955 the figures for direct taxes on household include also direct taxes on corporations.

Source: NATIONAL ACCOUNTS OF GREECE, MINISTRY OF COORDINATION.

APPENDIX TABLE 4

GREECE BALANCE OF PAYMENTS ON A CALENDAR YEAR BASIS

(million dollar equivalents)

	1957	1958	1959	1960	1961	1962	1963
1. EXPORTS	219.2	243.1	212.5	208.4	234.4	242.6	295.9
2. IMPORTS C & F (TRANSACTION BASIS)	530.3	542.0	470.2	520.4	583.3	659.8	750.0
a. Private flow	443.3	467.2	417.1	453.7	506.2	587.5	673.4
b. State flow	72.0	55.0	40.5	56.7	61.5	45.7	65.1
c. State Investment (Central Budget)	15.0	19.8	12.6	10.0	15.6	26.6	11.5
3. TRADE BALANCE (1 - 2)	-311.1	-298.9	-257.7	-312.0	-348.9	-417.2	-454.1
4. NET SERVICES	121.5	98.5	107.8	122.1	148.1	176.8	229.2
a. Shipping remittances (gross)	66.6	60.4	60.3	76.5	102.1	108.7	125.3
b. Tourism receipts (gross)	41.5	36.2	41.7	49.3	62.5	76.0	95.4
c. Remunerations for services rendered abroad (gross)	—	1.3	1.3	4.1	12.6	24.3	41.6
d. Government services (gross)	18.2	23.8	24.1	30.5	22.3	28.2	25.9
e. Miscellaneous (net)	- 4.8	- 23.2	- 19.6	- 38.3	- 51.4	- 60.4	- 59.0
5. BALANCE ON GOODS AND SERVICES	-189.6	-200.4	149.9	-189.9	-200.8	-240.4	-224.9
6. DONATIONS							
Emigrant remittances	74.9	76.6	88.6	90.4	98.3	117.2	128.5
7. CURRENT ACCOUNT BALANCE	-114.7	-123.8	- 61.3	- 99.5	-102.5	-123.2	- 96.4
8. PRIVATE CAPITAL (NET)	62.2	65.0	50.8	36.5	67.0	105.4	112.1
a. PL 2687 —Direct Investment	10.7	13.6	4.3	5.6	7.0	14.4	28.5
b. PL 2687 —Bank deposits			1.2	- 4.9	3.9	6.3	3.4
c. Other inflow	20.7	30.1	49.8	28.0[1]	50.1	52.9	57.0
d. Change in foreign suppliers credit	30.8	21.3	- 4.5	7.8	6.0	31.8	23.2
9. OFFICIAL LONG-TERM CAPITAL & GRANTS:							
a. *Grants:*							
(1) *U.S.*							
PL 665—Defense Support (90%)	10.7	7.5	21.4	17.7	18.5	8.8	14.1
Pl 665—Other Material (Common Use)	—	8.0	8.0	10.0	11.0	10.0	8.0
Special grant for the nuclear center «Democritus»	—	—	—	—	0.4	—	—
PL 480—Title I grants (Sect. 104c)	—	—	—	—	—	1.4	5.9
US Technical Cooperation	0.5	0.6	0.5	0.6	0.4	0.5	0.1
Grants to US sponsored schools	—	—	—	0.1	0.1	1.0	1.4
PL 480—Titles II & III gifts	10.6	12.9	7.4	7.9	8.0	11.0	7.0
	21.8	29.0	37.3	36.3	38.4	32.7	36.5
(2) *Other countries*:							
Italian Reparations	0.1	—	—	—	—	11.1	—
German Restitution	—	—	—	—	—	25.4	5.0
Rumanian Restitution	—	—	—	—	0.9	0.9	0.8
Yugoslavian Restitution	—	—	—	—	—	0.1	0.1
Australian Restitution	—	—	—	—	—	0.5	—
United Nations for Refugees	—	—	0.6	0.7	0.6	0.7	1.2
Canadian DefenseAid	—	—	—	—	—	—	1.0
	0.1	—	0.6	0.7	1.5	38.7	8.1
Total Grants	21.9	29.0	37.9	37.0	39.9	71.4	44.6
b. *Loans*							
(1) *Drawings*:							
U.S. loans:							
AID /DLE	—	—	8.4	2.4	0.6	1.2	7.3
PL 480—Title I	0.6	7.5	3.4	7.6	6.7	1.6	0.4
Ex-Im Bank	—	—	—	—	—	2.4	3.0
	6.0	7.5	11.8	10.0	7.3	5.2	10.7
Other:							
German State loan	8.0	—	12.7	11.1	24.4	—	—
Old EPU credits	1.7	10.3	5.6	0.1	—	—	—
European Council development loans	—	—	0.8	0.8	—	1.3	1.0
European credits for the fertilizer project	—	—	—	—	9.3	5.5	0.4
Manufacturers Hanover Trust Co. credits	—	—	—	—	—	6.0	4.6
Mobil Oil loan	—	—	—	—	1.0	—	—
German credits for the Sugar factory	—	—	—	3.2	—	—	—
European credits to PPC	5.0	8.0	5.0	—	—	—	—
All other	—	—	—	—	0.1	0.1	—
	14.7	18.3	24.1	15.2	34.8	12.9	6.0
Total Drawings	20.7	25.8	35.9	25.2	42.1	18.1	16.7
(2) *Repayments*:							
U.S.	- 2.9	- 3.3	- 4.4	- 5.2	- 4.8	- 5.8	- 5.9
Other	—	- 1.3	- 6.6	- 6.8	-10.3	- 9.3	-12.5
	- 2.9	- 4.6	-11.0	-12.0	-15.1	-15.1	-18.4
Loans Received, Net	17.8	21.2	24.9	13.2	27.0	3.0	- 1.7
c. *Other Official Capital*:							
Contribution to IMF	—	—	- 15.0	—	—	—	—
Special Aid to Cyprus	—	—	—	—	- 4.8	—	—
Gold sovereigns stock transfered to a Special Fund	—	—	—	—	—	-28.8	—
Change in private commercial banks assets	—	—	n.a.	n.a.	- 2.7	- 7.4	-27.5
	—	—	- 15.0	—	- 7.5	-36.2	-27.5
Total Official Long-Term Capital and Grands (a+b+c)	39.7	50.2	47.8	50.2	59.4	38.2	15.4
10. ERRORS & OMISSIONS	- 6.0	- 1.6	- 0.3	4.8	-10.7	2.8	-26.8
11. TOTAL OF ALL ABOVE (7+8+9+10)	-18.8	-10.2	37.0	- 8.0	13.2	23.2	4.3
12. CHANGES IN OFFICIAL GOLD AND SHORT-TERM CAPITAL:							
a. Gold and convertible assets (+=increase)	-22.6	-20.6	49.7	18.0	25.3	21.5	7.4
b. Non-convertible clearing and barter balances (+=increase)	9.9	17.4	- 7.4	-16.0	- 3.2	6.0	6.1
c. Local currency deposits for US Account (— = increase)	- 6.1	- 7.0	- 5.3	-10.0	- 8.9	-4.3	- 9.2
Total	-18.8	-10.2	37.0	- 8.0	13.2	23.2	4.3

SOURCE: U.S. EMBASSY, Mr. J. GENNIMATAS

1) Includes $ 16.6 payment to APECO

APPENDIX B

The definitions used for foreign and domestic savings are those of the National Accounts Division of the Ministry of Coordination. However, if emigrants' remittamces and gifts to the state are considered foreign, in view of the fact that the income remitted is part of the GNP of a foreign country, then the picture changes greatly. Foreign savings finance in this case 27 % of gross asset formation. In an aggregate sense this means that total and particularly public investment is largely dependent on foreign private savings while private investment in Greece is barely financed with private domestic savings. In fact, of course, the matching of investment by category with savings by category involves a number of variations.

Gross Asset Formation 1961 /62 adjusted.
Million of drs at current prices

	National Value	*Accouts data %*	*Adjustments*	*Derived Value*	%
1. Gross private Investmet	14,128	62	—	14,128	62
2. Gross public Investment	8,724	38	—	8,724	38
3. Total.................	22,852	100	—	22,852	100
1. Gross private savings ...	17,001	74	– 3,231a	13,770	60
2. Gross public savings ..	3,128	14	– 230b	2,988	13
3. Gross foreign savings ..	2,633	12	3,461	6,094	27
4. Total.................	22,852	100		22,852	100

a). Emigrant remittances from the rest of the world.
b). Gifts to the State (mostly in form of goods).

In addition it should be noted that during 1961/62, on an average basis, about 990 million drs. from remunerations and salaries (mostly remittances of Greek workers in Western Europe) were treated as net income from services rendered abroad instead of emigrant remittances. Therefore, if a similar amount is subtracted from private savings, the real contribution of domestic savings to the total financing is reduced from 13,770 million to 12,780 million (56 % of the total), and gross foreign resoures is increased from drs. 6,094 million to drs. 7,084 million (31 % of the total). Finally ship-owners remittances are also included as income from abroad, a fact which further understates the foreign contribution to savings[1].

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1) I am indebted to Mr. T. Gennimatas for pointing out the importance of foreign private savings by Greeks abroad.