Notes & Comments

Public and Private Savings of Selected Developing Countries in the First UN Development Decade

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Introduction

The developed countries contain about one-third of the world population and they produce more than 80 percent of Gross World Product (GWP). The remaining two-thirds of the population of our Globe who lives in Asia, Latin America and most of Africa produces less than 20 percent of the GWP. A small segment of the population of these countries is wealthy but the overwhelming majority subsists on substandard incomes and is characterised by mass illiteracy, mal-nutrition, bad housing and lack of medical care. Because of these characteristics they have low productivity, which yields low level of income; low incomes, in turn, imply a small capacity to save resulting in an economic situation where there is barely a possibility to moblize resources for development. The question has often been raised: 'Is there way out for the developing countries'?

1960s were declared as the First UN Development Decade and it was hoped that during these years the pre-conditions for a successful development would be established in various developing countries. The present study analyses data on public revenue, public expenditure, public savings and private savings for 12 selected developing countries pertaining to the years of the First U.N. Development Decade. The general conclusion that emerges from the study clearly suggests that with appropriate economic policies resources for development can be mobilized in the developing countries.

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I. Fiscal Performance

Public Revenue

Examination of the data available for selected LDCs (see Table 1) yields the following conclusions:

Domestic revenue as a percent of GNP varies widely, is generally higher in countries with higher per capita incomes, but has no correlation with recent GNP growth rates. Among the 12 countries examined, Brazil, Chile, Tunisia, Morocco and Turkey have the highest revenue ratios (17% to 31% of GNP) and are generally the higher income countries in their regions. Only Colombia has a low ratio (9% of GNP) and a relatively high per capita income. The poorest countries (Indonesia, India, Pakistan and Bolivia) have relatively low revenue ratios equal to 6% to 15% of GNP.

The largest recent increases in revenue ratios have been confined to the high-revenue countries plus indonesia and South Korea. All of these countries collected, as revenue, over 30% of the increase in GNP between 1965-1966 and 1967-1968. Indonesia, with the lowest average revenue ratio (6.3%), had the highest marginal ratio (53%).

Four low-revenue countries failed to increase their revenue ratios during 1965-1968. Ghana had a negative marginal ratio, due to special circumstances, and Pakistan, India and Bolivia all had marginal revenue ratios under 10%. These countries have been short on public (and private) resources for executing development programmes. The apparent deterioration in their fiscal situation promises to compound an already basic problem. The relatively meagre quantity of public resources which they channel into development has been and probably will continue to be a serious constraint on growth. In the long run both improved tax administration and structural tax reform appears necessary.

No correlation between recent GNP growth and recent revenue growth is apparent. Three of the four fastest-growing countries (South Korea, Turkey, Morocco) collected as revenue 31% to 35% of additional GNP, but three of the four slowest-growing countries (Tunisia, Indonesia, Chile) collected 41% to 53% of additional GNP in revenues.

Public Expenditures

Since the main purpose of collecting revenues is to finance government expenditures, it is not surprising that the government revenue and government expenditure are closely related and that the same general conclusions apply to both. Among the four poorest countries, India and Pakistan rank relatively high in terms of total expenditures. With a 91% ratio Chile ranks first in covering total budget expenditures with domestic revenues. Turkey, Brazil and Colombia had ratios around 85%, while Bolivia and Indonesia had the lowest ratios—about 65%, reflecting differences in revenue efforts and the very substantial flow of foreign aid into the two countries. There is no apparent correlation between recent GNP growth and expenditure ratios.

Very little can be said about the *efficiency* of government expenditures. World Bank and International Monetary Fund country reports contain a

Superabundance of recommendations for increasing revenue-collections. Discussion of the effective use of such revenues is less frequent. Measures of the effectiveness of public expenditures have been relatively un-successful, and on a crosscountry basis little is known about their overall efficiency.

Public Saving

Comprehensive data on public saving are available for 7 of the 12 countries examined. The problem is further aggravated by different definitions of public current and capital account expenditures and by the other hidden subsidies in public sector industries. Generally they show that public saving is equal to 3.5% to 6% of GNP and accounts for 25% to 35% of national saving. The ratio of public saving to public investment has a large variation (see Table 2). Public saving is particularly low in Pakistan, equal to 1.5% of GNP, 15% of national saving and 18.5% of public investment. Brazil leads in public saving (6% of GNP) but is last in private saving. Among the 7 countries, there is some association of public saving to revenue effort but there is no apparent positive or negative correlation between public and private saving in this limited sample.

	Public Saving/ GNP Rank	*Domestic Revenues/ GNP Rank*	*Private Saving/ GNP Rank*
Brazil	1	1	7
Chile	2	2	2
Colombia	3	7	1
South Korea	4	6	4
Tunisia	5	3	5
Morocco	6	4	3
Pakistan	7	5	6

Source : Table 2

Brazil, which ranks highest in revenue effort and public saving apparently does so at the expense of private saving. Colombia, which taxes and spends at a relatively high level has top ranking in private saving and manages a creditable ranking in public saving, high public savings seem to be the expense of current account development expenditures. For example, expansion of Colombia's inadequate education system, with the recurring expenses involved, would be among the country's best use of resources, public or private.

Policy Implications

Countries with low average and marginal revenue ratios (such as Bolivia, India, Ghana and Pakistan) need a revenue structure highly responsive to development, such as in South Korea and Chile where automatic response to recent growth of GNP has been a more than proportional increase in taxes. In Pakistan the automatic response to increases in GNP has been a less than proportionate increase in taxes and continuous "tinkering" has been necessary

merely to maintain the current ratio to GNP. Increase attention must be focussed on this problem, which often is highly sensitive politically. Where the political decision has been made, technical assistance for tax administration and tax reform would appear desirable for the lagging countries.

In general among LDC's the correlation between domestic revenues and public saving has not been strong. Stanley Please, a World Bank economist, questions whether increasing taxation has been very successful mode of increasing domestic savings and investment (whatever effects it has had on other development expenditure):

> The gloomy record of inadequate budget surpluses, despite increased tax performance over the years, suggests that those who argued for a development strategy based on increased compulsory savings, underestimated and, more frequently, ignored the effect that the increase in taxation might have on public consumption. In these circumstances there is a danger that those who recommend increased taxation in the interests of economic growth may be looking at a mirage.[1]

on the other hand much current expenditure has very important development effects and some of it is a *sine que non*, for any kind of development whatsoever, *e.g.*, education and general administration. Some countries now divide their public expenditures into developmental and other expenditures, but the division is somewhat arbitrary.

For most countries public revenues are still relatively scarce, and the "traditional" emphasis on their increase is needed. Given the substantial improvement in revenue collection of the last decade, it is likely that an equally important issue is what is done with the resources. This involves coming to grips more than hitherto with issues such as subsidies to producers and consumers, the price of output of public enterprises, the maintenance of infrastructure, government staffing and payroll policies. It may be desirable to make the quality of public expenditure a basic issue for the 1970s. Little development results when channeling resources through the public sector merely means exchanging one form of consumption for another.

II. Private Saving

Private saving accounts for about 70 percent of total domestic saving in the five selected LDCs for which we have public and private saving data.[2] Private saving has amounted to 9.3 percent of GNP in the three most recent data years and public saving for 4.0 percent (unweighted averages). During 1966-69 the private saving rate has been falling in three of the five, and public saving has been growing faster than private in all but Morocco.

This relatively poor recent performance of private saving raises important questions both for future levels of domestic saving and investment and for the control, structure and efficiency of investment decision. We know relatively little about the nature of private sector saving decisions in developing countries

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[1] "Saving Through Taxation—Reality or Mirage?" Finance and Development, IV, No. 1. March, 1967.

[2] Brazil, Colombia, Pakistan, South Korea and Morocco.

and several case studies suggest that the effects on savings in developing countries of factors such as interest rates on bank deposits may be very different than in developed countries. Other important questions include the extent to which the decline in private saving may be the unintended result of increased taxes and other steps to increase public saving, the by-product of other policies or economic trends that may discourage private saving, or even part of official LDC intentions to discourage private saving in order to increase government control over investment resources.

It is important to note that there need be no relationship between the sector in which the saving is generated and the investment made, or the control of the investment decisions. In five of the seven countries for which we present data in Table 3, private saving has been greater than private investment. In these five countries the goverment has been a net borrower of private savings either directly through bonds or through the banking system. In South Korea and Colombia, however, private investment has exceeded private saving because of government surpluses and foreign capital inflows.

Policy Options

There are four ways LDCs have attempted to increase private saving in the monetary sector of the economy. These are:

(1) to attract more saving into financial institutions by offering higher interest rates or other inducements (lotteries, borrowing privileges);

(2) to increase the availability of saving institutions and instruments;

(3) to increase enterprise and farm profits;

(4) to curtail availability of consumer goods.

Interest Rates

Interest rates high enough to offer a sizeable real rate of return after inflation have proven very effective in increasing private saving and in channelling those saving through financial institutions. A recent outstanding case has been South Korea, where doubling of nominal interest rates produced an after-inflation interest rate on one-year deposits of between 15 and 20 percent. As a result, the constant-price value of time and saving deposits rose more than 8-fold between 1965 and 1968, and bank credit was consequently able to expand by 80 to 100 percent annually. The major proportion of these deposits reflected new savings according to conventional national income definitions (as household hoarding and real estate speculation was reduced), and private saving rose from 3.9 percent of GNP in 1964 to 12 percent in 1969.[3]

Brazil, Indonesia, and Iran also used sharply increased interest rates in recent years to increase private saving, expand credit and curb inflation. In Indonesia, the deposit interest rate was raised to 6 percent per month in October, 1968, and then successively lowered to 2 percent by January, 1970, as time and saving deposits had risen to more than one-fourth of the total money supply and inflation has waned. In Brazil, tying of certain bank deposit interest rates to the rate of inflation has raised time and saving deposits from 3 percent of the

[3]Figures adjusted to exclude changes in private inventories of agricultural products.

money supply in 1965 to 14 percent in June 1969.[4] Private saving in Indonesia and Brazil has risen and consumer hoarding reduced. Iranian data also show a significant rise in saving deposits following a rise in interest rates in September, 1969.

The prototype of these more recent interest rate reforms, and one which was studied very closely by South Korean authorities before introducing their 1965 reform, was that of Taiwan in the 1950s. In April, 1950, with an annual rate of inflation of nearly 100 perccnt, the banks offered one-month time certificates paying 7 percent per month, with the result that about 5 percent of the total money supply was shifted into such deposits and the annual rate of inflation dropped to between 10 and 20 percent. Interest rates were then adjusted to rates 12 to 17 percent annually in excess of the rate of inflation for the next decade and played a crucial role in maintaining financial stability and generating private savings to finance new investment.

Some of the funds attracted into banking systems by higher interest rates come from private money markets such as bazaars or other private money lender channels, but much is new saving that would otherwise have gone into hoarding consumer goods, and/or industrial raw materials. Even when banks merely collect funds that would have been saved in other ways they are frequently put to more productive uses than they otherwise would have been.

Certain other potential benefits of high real interest rates are suggested by Table 4. Two of the countries with the highest real rates of interest on deposits (South Korea and Taiwan) have also had the highest 1966-69 GNP growth rates. Chile and Ghana, by contrast, the two countries in our sample with the slowest GNP growth, both had negative real interest rates. High interest rate policy seems to have forced better investment decisions and contributed to rapid growth by increasing the efficiency or productivity of investment as well as by increasing saving. Of the seven countries in our sample with positive deposit interest rates, only Morocco and India had incremental capital-output ratios (ICORs) of more than 2.5. Of the four countries with negative deposit rates, however, all but Turkey had ICORs of more than 4.0. The statistical relationship of the interest rate to the marginal private saving rate is not as clear-cut as for the ICORs, but this appears due to special factors and the time periods involved, such as severe droughts in South Korea in 1967 and 1968.

Colombia provides a typical example of the results occuring when interest rates on bank deposits are less than the rate of inflation. Low interest rates on deposits are combined with government regulations restricting over half of the portfolios of commercial banks to designated assets with low yields. Thus those activities benefitting from subsidized bank loans are not required to cover the opportunity costs of the capital they use, banks are not able to compete for private funds on a market interest basis, small savers find it difficult to get a positive real interest rate on financial savings, and private savings have been stagnating. The national income accounts show a decline in private saving from 14.4 percent of GNP in 1965 to 12.3 percent in 1968. The Monetary Board submitted legislation to Congress requesting authority to change both the level of interest rates for saving accounts and forced investment by banks in low interest assets.

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[4]International Monetary Fund, International Financial Statistics, (July, 1970).

Saving Institutions

Expansion of the number of financial institutions has often been suggested as a means to substantially increase private saving, but experience in this area has been disappointing. Compared to the level of interest rates, the local availability of financial institutions appears to be a less significant factor. This is hardly surprising. The lesson is that the mere availabilities of new outlets, to supplement available depositories such as post offices or agricultural cooperative offices (as in Taiwan and South Korea), will not induce citizens to deposit their funds with the banking system.

Stock and bond markets are usually small in developing countries. Brazil, Taiwan, and South Korea all have stock markets, but the significance of these markets is now limited by deficiencies such as lack of a respected certified public account system and published company data in which the public has confidence. Debt instruments of several years duration are currently much more effective ways to raise capital, and have been used successfully in a number of countries. In India, nationally known private companies issue their paper in a form analougous to the certificates of deposit offered by U.S. banks, at interest rates two to three times those offered to depositors in Indian banks. However, remedial action on the problems of capital markets holds out the prospect of attracting new capital as well as broadening equity base.

Enterprise and Farm Saving

Business enterprise profits always constitute an important part of total private saving, but available data are very limited. In South Korea, higher prices charged by the government-owned electric power and railroad companies provided enough profits to finance two-thirds of the new investment requirements of these enterprises at a time of very rapid growth. Furthermore, these higher prices curtailed low-priority consumption and thereby lowered capital equipment and petroleum imports. Private firm case histories are more difficult to document, but private business profit rates are regularly substantially higher than in government firms and account for most private savings in most developing countries. The ratio of saving and reinvestment from business profits generally exceeds the 5 to 15 percent marginal saving rates out of personal disposable income in most developing countries. One of the serious problems in the case of public sector enterprises in many countries continues to be an unwillingness to charge commercial prices and consequently failing to generate an appropriate level of savings for expansion or investment elsewhere in the economy.

Curtailment of Consumer Good Supplies

Increasing private saving through curtailing availability of luxury private consumption goods is a common justification for import restrictions on such goods in many countries. Where the ban is merely on imports, however, the effect is usually to create highly profitable businesses in either smuggling luxury imports or producing high-profit domestic substitutes. The preferable solution is a high excise tax on such consumables whether imported or produced (or assembled) locally—an outright ban, on both imports and production is rarely feasible given the lubricating capacity of money. Expansion of such commodity

taxes in South Korea has added to available saving by increasing government revenues, and has not distorted the comparative advantage of domestic versus imported production.

III. Concluding Remarks

The findings and policy implications with respect to government revenues, government expenditures, public savings and private savings were presented at each step of the analysis. A consolidated summary is nevertheless useful. The selected sample of developing countries presents a mixed record in regard to government revenues and savings. In Pakistan, India and Ghana, government revenues had increased by only a small fraction of the growth of GNP and the low levels of domestic savings were restraints on growth in these countries. The fastest growing countries in the sample (South Korea, Turkey and Morocco) had registered a large increase in the ratio of government revenues to GNP. Three of four slowest growing countries in the sample (Tunisia, Chile and Indonesia) had also registered a large increase in government revenues. No clear evidence of the significance of the increased government revenues for accelerating the growth rate has emerged. Factors other than government revenues are also important determinants of growth in any economy. There is no clear evidence that high taxes or high public savings have reduced private savings in developing countries. Very little is known about the efficiency of government expenditures in producing increased growth in the developing countries.

Private saving has been fairly stagnant in most developing countries. This may reflect a concentration of efforts on expansion of government sector savings as well as some ignorance of how to increase private savings. Several countries—most recently South Korea, Indonesia and Brazil—have found that high interest rates in real terms have led to large increases in loanable bank funds, increased private investment and a considerable lessening of inflationary pressures. Removal of price controls in several countries has also increased profits and savings by both government and private enterprises. Expansion of bank branches has not proved to be an effective way to increase private savings, unless interest rates have been high.

Table 1

Revenue and Expenditure Ratios (1965-1968)[1]

	(1) GNP growth		(2) 1965-1968 GNP per capita		(3) dom. revs to GNP		(4) marginal dom. revs to GNP		(5) current expenditure to GNP		(6) Total expenditure to GNP		(7) dom. revs to total expenditure	
S. Korea	.110	1	173	9	.130	9	.321	5	.067	9-10	.174	8	.741	7
Turkey	.072	2	333	2	.174	5	.306	6	.091	8	.200	6	.869	2
Morocco	.065	3-4	191	7	.187	4	.353	4	.146	4	.236	4	.792	6
Pakistan	.065	3-4	117	10	.133	8	.056	10	.067	9-10	.185	7	.718	9
Brazil	.057	5	320	3	.314[2]	1	na		.191[2]	2	.327[2]	2	.864	3
Bolivia	.049	6	176	8	.108	10	.097	8	.097	7	.168	10	.643	12
Colombia	.047	7	187	4	.091	11	.191	7	.047	12	.109	11	.837	4
India	.046	8	83	12	.153	6	.068	9	.108	6	.206	5	.739	8
Chile	.031	9	602	1	.247	2	.409	3	.156	3	.272	3	.910	1
Indonesia	.030	10	94	11	.063	12	.533	1	.060	11	.097	12	.645	11
Tunisia	.011	11	220	6	.240	3	.458	2	.193	1	.334	1	.717	10
Ghana	.010	12	242	5	.137	7	.386	11	.115	5	.169	9	.815	5

Sources: IBRD Country Reports and computations.

[1]Definitions of Column Headings:

(1) Compound average rate of growth of GNP for average of 1965-66 against average of 1967-1968.
(2) GNP per capita, in 1968 dollars, average of 1966 through 1968.
(3) The ratio of domestic revenue to GNP, average of 1966 through 1968.
(4) Marginal domestic revenues: the increment in domestic revenues (averge of 1967-1968 minus average of 1965-1966) divided by the increment in GNP (average of 1967-1968 minus average of 1965-1966).
(5) The ratio of central (general) government current expenditures less defense expenditures to GNP, average of 1966 through 1968.
(6) The ratio of total expenditure to GNP, average of 1966 through 1968.
(7) The ratio of domestic revenues to total expenditure.

The fiscal data are for consolidated public sectors in India, Pakistan, Brazil, South Korea and Turkey. The remaining countries include primarily central government accounts. In these countries local and provincial self-generated revenues are minute relative to the central government, so that the resulting bias is small. Social insurance accounts are excluded for all countries. Government enterprises are included net of their operating expenditures/receipts.

[2]1968.

Table 2

Ten Countries, Savings Ratios 1966-1968[1]

	(1) Public savings to GNP		(2) Private savings to GNP		(3) Foreign financing to GNP		(4) National savings to GNP		(5) National savings to invest		(6) Public savings to public investment	
S. Korea	.041	4	.090	4	.095	2	.131	4	.581	8	.801	2
Turkey	na		na		.012[2]	8-9	na		na		na	
Morocco	.035	6	.092	3	.017	7	.127	5	.886	3	.415	5
Pakistan	.015	7	.087	6	.046	3	.101	9	.688	7	.185	7
Brazil	.059	1	.077	7	.012	8-9	.136	3	.922	2	.733	3
Colombia[3]	.048	3	.119	1	.030	4-5	.167	2	.852	4-5	1.027	1
India	na[4]		na[4]		.030	4-5	.112	8	.789	6	na[5]	
Chile[5]	.056	2	.116	2	.011	10	.172	1	.939	1	.727	4
Tunisia	.037	5	.089	5	.119	1	.126	6	.520	9	.209	6
Ghana	na		na		.021	6	.119	7	.852	4-5	na	

Sources: IBRD Country Reports and computations.

[1]Definitions of Column Headings:
(1) The ratio of gross public savings to GNP, average of 1966 through 1968.
(2) The ratio of private savings to GNP, averge of 1966 through 1968.
(3) The ratio of foreign financing (balance of payments, current account deficit including net factor payments) to GNP, average of 1966 through 1968.
(4) The ratio of gross national savings to GNP, average of 1966 through 1968.
(5) The ratio of gross national savings to gross investment, average of 1966 through 1968.
(6) The ratio of public savings to public investment, average of 1966 through 1968.
[2]1966-1967 average.
[3]1966-1967 average.
[4]According to IBRD World Tables, all national saving took place in the private sector.
[6]1965-1966 average.

Table 3

Saving and Investment Ratios 1966-69 Averages

	Savings	Investment	Net Dissaving[1]	
Pakistan[2]				
Private	5883	4417	1466	(millions of current
Public	605	4926	—4321	rupees)
Foreign	2855	—	2855	
Total	9343	9343	—	
Chile[3]				
Private	1732	1651	81	(millions of current
Public	830	1205	—375	escudos)
Foreign	294	—	294	
Total	2856	2856	—	
Morocco[4]				
Private	1283	833	450	(millions of current
Public	473	1157	—684	dirhans)
Foreign	233	—	233	
Total	1990	1990	—	
S. Korea				
Private	128.76	227.58[4]	—113.44[5]	(billions of current
Public	71.99	65.53[4]	—11.09[5]	won)
Foreign	145.73	—	145.73	
Total	346.47	346.47	—	
Tunisia				
Private	53.4	36.5	16.9	(millions of current
Public	16.7	92.8	—76.1	dinars)
Foreign	59.2	—	59.2	
Total	129.3	129.3	—	
Colombia[6]				
Private	8198.4	9975.1	1776.7	(millions of current
Public	2899.4	2706.3	193.1	pesos)
Foreign	1583.7	—	1583.7	
Total	12681.4	12681.4	—	
Brazil[7]				
Private	4180.6	3382.2	798.4	(millions of current
Public	3086.3	4337.5	—1251.2	new cruzieros)
Foreign	452.8	—	452.2	
Total	7719.7	7719.7	—	

Sources: Issues of *International Financial Statistics*, International Monetary Fund, and calculations.

[1]Underestimates private dissaving because of assumption that all foreign savings are used to finance public investment.

[2]1965-66—1968-69

[3]1963-66

[4]1966-68 only

[5]1966-68 only—69 figures NA.

[6]1964-67

[7]1965-68

Table 4

Economic Data, 1966-1969 *Except as Indicated*

	GNP Annual Growth (%)	Rate of Inflation[1]	Deposit Real Interest Rate[2]	Average Domestic Saving Rate (%)	Marginal Saving Rate (%)
S. Korea*	12.5	10.6	12.2	13.1	24
Taiwan	10.0	4.9	4.8	23.0	24
Brazil	7.3	25.0	5.0[3]	13.6	15
Morocco	6.4	0.1	4.1	12.7	16
Turkey	6.4	8.2	—1.8[4]	17.1	28
Pakistan	6.0	3.2	2.8	10.1	15
India	5.7	5.3	0.2	11.2	18
Colombia	5.4	8.0	—1.0	16.7	22
Indonesia	3.8	20.0	13.0	8.4[5]	n.a.
Chile*	2.8	25.0	—2.6	17.2	15
Ghana	2.5	4.3	—0.8	11.9	— 2

	Public Saving Rate (%)	Private Saving Rate (%)	Marginal Private Saving Rate (%)	ICOR[6]	Time and Saving Deposits as Percentage Money Supply
S. Korea	4.1	9.0	4.1	1.6	217.4
Taiwan*	6.2	16.8	13.2	2.2	136.5
Brazil	5.9	7.7	6.0	2.5	14.0
Morocco	3.5	9.2	39.8	3.4	8.7
Turkey	n.a.	n.a.	n.a.	2.5	134.6
Pakistan	1.5	8.7	15.8	2.4	52.4
India	n.a.	n.a.	16.2	5.5	48.5
Colombia	4.8	11.9	9.2	4.1	30.0
Indonesia	n.a.	n.a.	n.a.	n.a.	26.0
Chile*	5.6	11.6	6.1	4.4	78.0
Ghana	n.a.	n.a.	n.a.	9.0	34.2

Sources: Issues of *International Financial Statistics*, International Monetary Fund and Calculations.

*Not concentration countries.

[1]Consumer price index, annual average.

[2]Recent nominal interest rates for longer term deposits (up to one year) minus the 1966-69 average rate of consumer price increase.

[3]Brazil has introduced a system wherby certain deposit interest rates are adjusted for the rate of inflation. This particular interest rate is that received by investors in bills of exchange.

[4]Interest rates in Turkey before the August 10, 1970 devaluation, at which time the one-year deposit interest rate was increased to 9% from 5 and 6%.

[5]1965-1968.

[6]Calculated as sum of gross investment divided by sum of increases in GNP four years 1966-1969.