India: Project No. 2
Economic Development
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Wilfred Malenbaum
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Savings and Investment in India

The information and argument of this paper concern:

(A) limitations on investment imposed by the demand as against the supply of capital in India today,

(B) possible consequences of alternative investment patterns in the next few years upon (a) national product, (b) employment, and (c) subsequent investment. Particular attention here will be given to the present underemployment position in India.

In posing (A) as a real problem, no doubt is implied as to the long-run need for larger amounts of resources for investment in India. We can accept the general conclusion that this need does exist: if national income per capita is to expand, savings-investment ratios of 4-6 per cent of national product are just inadequate for a low-income country with a rate of population growth of almost 1.5 per cent per year. This is not inconsistent with the possibility that use, or effective use, is not now being made of resources available for investment. Special factors may now bear upon the decisions of important investing groups in the society. Some light on these should be thrown by the second part of this paper.

Any conclusions--both as to the facts of the present situation and as to the policies that might be applied--are obviously preliminary. At best, they highlight areas in which more investigation is needed.

A. Investible Resources

An earlier Project paper[1] showed, among other things, that the Indian domestic savings projected by the Planning Commission plus foreign resources already in hand or which could be counted upon, constituted an investible fund which over the five-year period would appear to permit the comfortable achievement of the Government's Five Year Plan's investment targets. More specifically, if you accept (a) the pre-Plan savings ratio, (b) anticipated external assistance, and (c) the Planning Commission's marginal consumption propensities and its capital-output ratios, investible funds for five years should aggregate some 3,500 crores, as against net investment in the Plan of about 1,750 crores,[2] plus organized private investment (net) of about 230-350 crores. The paper, however, also showed that the achievement of the Plan's investment targets in the

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1. The Government in Economic Development in India, October, 1953.

2. The figure of Rs. 1750 crores is in contrast to the familiar estimate of Rs. 2070 crores. The difference is due to the fact that some Rs. 350 crores of investment under the Plan apparently refers to development expenditures in the public sector which are recurring and which are expected to show no counterpart in additional fixed capital. These expenditures are appropriately charged to current account. Hence, it is the government's development program minus some 350 crores which must be offset against net savings and other investible resources available to the economy.

public and private organised sectors need not mean the achievement of the objectives of the Plan. This latter requires that all these Rs. 3500 crores actually go into investment (thus pointing up the importance of the non-organized private sector) and that investment in this residual sector combine with planned investment to bring about the overall capital-output ratio of 3 to 1 (thus stressing the importance of the specific pattern of investment in the non-organised sector.) Finally, I suggested in the earlier paper that, despite the apparent statistical easiness, there was ample evidence that neither the public nor the organised private sector was achieving its investment targets, at least through the early years of the plan period.

The experience of these past years needs to be examined in more detail. Let us first focus on the nature and location of domestic savings and on their flow into investment in the pre-Plan years.

I. The Pre-Plan Period (1948/49-1950/51)

I assume a savings ratio of 5 per cent, and thus annual savings of Rs. 450 crores from a national product of Rs. 9,000 crores.[3] In a pre-Plan year, public savings may be taken as 125 crores. The bulk of this, perhaps 100 crores, represented government surplus on current account, and the remainder consituted the surpluses of such governmental enterprises as railroads and the post and telegraph

3. In current rupees, the 9000 crores is probably a low average for the three years. With respect to the savings ratio, 5% is the usual assumption. However, as the earlier paper pointed out, this ratio is documentable, more or less, for the years 1948/49-1950/51. This is actually so for real capital formation, rather than for the savings flow. A significant part of the savings cannot be traced through financial institutions.

services.[4] The remaining 325 crores are attributable to private savings. Probably all these private savings occur in monetary (as distinct from barter) transactions. Subject to the qualification below, the entire 450 figure has been included (I think) in the official estimates of national income.

a. Some Rs. 40 (of the 325) crores represent corporate savings, i.e. the profits of industrial enterprises after deducting taxes and dividends. These are not distributed and normally move directly into the financing of enterprise, primarily corporate enterprise, although some undoubtedly go into other enterprise, perhaps through the medium of the managing agencies. Under some circumstances and for some period, these corporate savings undoubtedly were used for the purchase of government securities and/or were injected into the banking system. On the whole, however, or at least in the usual pre-Plan year, these savings can be allocated to investment in the corporate sector.

b. There were about 45 crores of private savings mobilized through small savings schemes and through various social security plans. In the pre-Plan years, these could be separated roughly into

4. These estimates of public savings cannot be derived directly from summary budget figures, since these figures do not permit ready separation of non-investment expenditure. They show, for the central government, an average difference between current receipt revenues and expenditures of Rs. 48 crores, and for the Part A States, an average of Rs. 90 crores. Central revenues include the "surplus" from the profits of government enterprises, which surplus is earmarked for renewal and development.

some 30 crores which took the form of purchases of national savings certificates, treasury savings deposits certificates, postal savings, and the like, and some 15 crores which represent the deposits in various provident funds, to which contributions were made by governments and their employees as well as by private enterprises. An important part of the small savings comes from the rural areas, and, as a result of the efforts of government, these have tended to increase during the Plan years. The savings in provident funds, on the other hand, represent primarily the savings of urban people. Sooner or later, payments from these funds will reduce the surpluses being built up in the early years. Almost all the private savings in this category are available for government investment.

c. Savings through insurance companies aggregated about 40 crores a year. The insurance business is primarily urban. While these companies are important investors in government securities, they also invest in real estate and in the capital market formally.

d. Some 25 crores of private savings go to increase the share capital of cooperative societies and, in pre-Plan years, toward the general purchase of equities in corporate enterprises. The first of these categories, took some 15 crores and represents to a considered extent savings from rural activities. The 10 crores used for direct purchases of various forms of shares on the private market generally come from savings of the upper-income classes, both rural and urban.

e. There thus remained 175 crores of private savings, for which sources and channels (and, to a smaller extent, end use) are less certain. This is essentially a category of savings for direct investment, although some part of it was undoubtedly made available to the banking system. On the whole, it represents that part of domestic savings which are least mobile in the sense that they can be tapped as sources of investible funds by other entrepreneurs, public as well as private. The figure permits rough separation into two general categories:

1. Direct savings-investment in the urban areas. Primarily these accrue in the professions and to the owners of unincorporated enterprises. Important in this latter field are trade, finance and transport as well as small industry. Average savings of such unincorporated enterprises and of people in the professions may have aggregated some 65 crores, some of which, of course, went into the savings flows b-d above. In addition, this category would contain some of the savings of urban workers. Investment is made directly into the unincorporated enterprises and in urban construction. The direct savings-investment flow (urban) is estimated at 100 crores per year in the pre-Plan period.

2. Direct savings-investment in the rural areas. These savings accrue primarily to land-owners and to rural entrepreneurs in cottage and other types of rural small-scale industry. It aggre-

gates some 75 crores and can be taken to represent the bulk of private monetary investment in the rural areas.

This savings-investment picture is summarized in Table 1.[5] While it must obviously be considered a crude approximation, the general structure seems to be commonly accepted; with slight variations--reflecting in part the different situations in the various years 1948/49-1950/51 this breakdown of source and channel can be constructed from statements of the Five Year Plan publication and from the published work of National Income Unit economists.[6] Table II shows the pattern of investments, based largely on the same sources.

One further observation must be made. It seems certain that the above statements and tables understate significantly the net investment in the rural areas, both in agriculture and small-scale enterprise, and in construction. This underestimate may be of the order of 125 crores, thus indicating total investment in the rural areas in excess of 200 crores. A very large part of this is in

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5. There exists some raw material which will permit a rough breakdown of rural and urban savings (and total tax payments) by income categories. It may be worth attempting to put this together--at least as a starting point for later work.

6. See for example the First Five Year Plan (mimeographed), Appendix to Part I, pp. 13-18; see also M. Mukherjee and A. K. Ghosh, The Pattern of Income and Expenditures in the Indian Union, A Tentative Study, Bulletin of the International Statistical Institute, Volume 33, Part III, pp. 63-67. The Planning Commission estimates appeared in the mimeographed edition of the Plan. They are not contained in the printed edition available here.

Table I, Annual Pre-Plan Savings--by "Institution"

(Rs. Crs.)

Savings Institution	Total	General Area of Investment		
		Public	Private	
			Urban	Rural
Govt. (Current Acc't and Operating Surplus)	125	125		
Corporate Savings	40		40	
Small Savings Schemes (incl. Provident Funds)	45	45		
Insurance Companies	40	25	15	
Cooperative Societies	15		5	10
New Issues	10		10	
Private Direct: Urban	100		100	
Private Direct: Rural	75	—	—	75
Total	450	[illegible]	170	85

Table II, Annual Pre-Plan Investment

(Rs. Crs.)

Public			
Irrigation (including Multi-purpose Program--Agriculture and Power)	75		
Railways, Roads, Communications, etc.	40		
Construction (residence and other)	40		
Industries	15		
Other (including Social Capital)	25		
			195
Private			
Agriculture, Rural Industries	35		
Rural Construction	40		
Rural Transport	10		
		85	
Urban Transport	15		
Corporate Industry (indlucing Mining)	60		
Other Industry	40		
Urban Construction	55		
		170	
			255
Total			450

various forms of construction activity. The additional Rs. 125 cr. is essentially non-monetary investment, in the sense that its largest inputs are labor and "free" lumber, cement, thatch, mud, etc. Its order of magnitude is derived primarily from spot village studies and from the findings of the Sample Survey. Unresolved is the question of whether this additional capital formation should really comprise an increment to current national income estimates, or a reduction from current estimates of personal consumption in existing national income totals. It has great significance. On the one hand, it suggests the quantitative importance of the investment that could somehow be mobilized and channeled perhaps through organized community development activities. On the other hand, it may help to explain past changes in the growth of capital (and income) in rural areas, despite the low level of "official" savings estimates. Finally, it should be noted that the computations of the Planning Commission do not make use of these 125 crores of non-monetary investment. The Commission does, however, count upon the direct savings-investment (in item d above)--the 40 per cent of India's monetary savings which I have termed as relatively immobile.

II. The Plan Period

In the original plan for the public sector, some Rs. 1260 crs. were to be provided from domestic savings, while at least 200 crs. more would be needed from the same source for the organized private sector. "Mobile" savings at our pre-Plan rates (275 crs.) would provide 1375 crs. over the five years. This suggests that the program implied at least one of the following during the plan period:

(1) direct expansion of mobile savings above the pre-Plan levels,

(2) a shift from the immobile to the mobile category,

(3) a higher level of foreign aid or deficit financing than was originally proposed.

In addition, the closeness of these figures must have provided the basis for the oft-expressed concern about the competition between private and public demand for the savings rupee.[7]

The public program (2068.7 crs.) was divided into development expenditure by the Centre (1240.5 crs.) and by the States (828.2 crs.). In response to pressures arising from growing unemployment during 1953, the Plan was expanded in January, 1954, by 150-175 Crs. to a total of some Rs. 2225 crs.[8] Overall performance for the first two years is

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7. These possibilities would be mitigated if the Plan of 2070 crs. really required new savings of only 1750 crs., as was indicated above. I cannot be explicit on this point, since there is no way of examining the Plan expenditures in the requisite detail. Until I learn more about this, I propose to treat the whole Plan as new investment which makes demands upon net savings.

8. Details on this expansion are not available. The allocations indicate a general increase of 70 crs. in the Centre's program of 25 crs. in those of the States. The residual involves funds for a series of loans--40 crs. of which are expected to be taken up by 12 States for work projects in important food deficit areas, and 15 to 40 crs. more of which are being allocated for special projects in high-unemployment urban centres.

indicated by the following data (crores of rupees).

	1951/52 Total	1951/52 % of 5-Year (original)	1952/53 Total	1952/53 % of 5-Year (original)
Center	133.5	10.7	165.4	13.3
States	128.0	15.4	157.2	19.0
Total	261.5	12.6	322.6	15.6

For 1953/54, budget estimates anticipated outlays of 236.9 crs. and 176.1 crs. for Centre and States respectively. This is essentially the average rate originally required in each of the years. While the overall Plan was not explicitly phased (at least for public information) the performance of less than 30% for the first two years is generally considered to constitute a short-fall. Comparable data for the fiscal year ending April 1, 1954 are not yet available. The recent Budget message indicated revised (current and capital) expenditures for 1953/54 which were down more than Rs. 110 crs. from the estimates of a year ago. If it is assumed that lower expenditures on the Plan accounted for Rs. 50 crs. of this decline, we have total outlays in the public sector of just under Rs. 950 crs. In the first three years, 46 per cent of the original program (43 per cent of the expanded Plan) has been achieved. Budget estimates for 1954/55 call for outlays of 600 crs., a significant rate of expansion from the average rate for 1953/54.

In the private organized sector, new investment of 233 crs. was called for, in addition to specified levels of maintenance expenditures and working balance increases. Performance here is not known, and the estimates are controversial. The Government's report on the first two-years of the Plan listed total new investment of 52 crs., about 22.5% of the five-year figure. It seems clear that much of the shortfall was due to the slowness with which major projects in petroleum refining and iron and steel were launched. These industries accounted for almost half of the planned new expansion in this sector, and achieved actual investment of only 8 crs. in 1951-53. Hence the remaining industries were probably meeting their average rate of investment for the five-year period. It could be expected that iron and steel and petroleum would accelerate rapidly in the years ahead. While this makes the apparent shortfall more understandable, it has some bearing upon the supply and demand of investible resources during the early Plan years. Data for private investment in the organized sector over the past 12 months are not available here, as yet. (Through the middle of calendar 1953, the investment goods available in India, both through imports and domestic production, continued to decline. Given the general upward course of public investment, this would suggest that the private sector had not, at least as of July 1953, increased its consumption of such products.)

II. a. Investible Resources: 1951/52

Domestic product in current prices (total and per capita) continued to move upward from the pre-Plan years (See Appendix I). With the exception of food prices, all other groups of commodities had higher average prices in 1951/52 than in any earlier postwar year. However, prices reached peak levels in the early part of the financial year. Over the 12-month period, prices in all categories staged a marked decline, particularly so in agricultural raw materials (in contrast to foodstuffs) and in related processing industries. In general, prices either did not fall (or fell least) in food production proper, and in the industries which were given highest priority for expansion in the organised private sector (steel, petroleum, engineering, etc.).

There is no direct information on what happened to savings. The "industrial origin" breakdown of the domestic product estimates (Table II, Appendix I) suggests (money) increases in domestic product in all sectors but that of small-scale industrial enterprises, the most marked increases occurring in large-scale industry and in services. Officially reported "taxed income from business and professions" was significantly above the levels of earlier years, with increases from 1950-51 particularly impressive in the trade and transport field as well as in manufacturing.[9] There would seem to

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9. Taxed income from business and professions:

	(Rs. crores)
1949/50	361.7
1950/51	337.7
1951/52	455.9
1952/53	408.4

These figures are of course gross of taxes, dividends and proprietory income (of unincorporated enterprises).

be some evidence of a shift of income to groups which were proportionately higher savers. The Planning Commission's "model" had assumed that the savings rate for 1951/52 would be above the 5% of the pre-Plan years. Expanded government revenues (and surplus on public account) would suggest movement in that direction. At the old rate, money savings would be in excess of 500 crs.

An outstanding aspect of the savings flow in 1951/52 is the high level of savings on public account. The total (Centre and States, including operating surpluses of the railways) was Rs. 227.6 crs., as against the 125 crores figure for the pre-Plan years (and 145 for 1950-51).[10] These were abnormal receipts, primarily through increases in export and excise duties. They were short-lived, and

10. While these data are from official sources (Reserve Bank), "savings of public authorities", (the 227.6 crore figure for 1951/52, for example) is not readily related to the surplus of the actual revenue (and capital) accounts of the Centre and the States. In general, this is a classification problem: the revenue account includes certain development expenditure, etc. A special tabulation has been made by the Government in order to set forth the public savings available for the Five-Year Plan and these are the figures quoted. I raise this matter here only because of our concern about the possible inclusion of current outlays in the Five-Year Plan figures. Thus, in another tabulation (for Colombo Plan purposes) the GOI gives the current surplus available for public development expenditure as 259.5 crs. for 1951/52. I think these figures are consistent, the latter assuming that certain railway rehabilitation outlay (of 30 crs., roughly) are "development expenditures". If they are--if railway depreciation is included in the 2068 crs. Plan figure--then some current expenditures are properly offset against the development plan. In any precise study, this classification problem will have to be gone into.

were not maintained in 1952/53, for example. The bulk of the increase in 1951/52 was in the indirect tax category. Customs receipts alone were up 75 crs. from 1950/51 while corporation and income tax yields were up only 15 crs. over the previous year. Furthermore, the government's anti-inflation policy placed a restraint on public expenditures.

In the private sector, the small savings program yielded 48.6 crores. (This is significant, given the usual source of these funds and the suggestion above that these may have been income shifts adverse to the lower-income groups.) From information on tax rebates for profits which are not distributed, these may have amounted to 20 crores in 1951/52.[11] (This corresponds fairly well with the volume of private investment in the organized sector mentioned earlier.) I have no information on other savings channels. It is generally recognized that new issues were negligible. However, there is no reason to believe that savings mobilized through insurance companies fell drastically. In any case, public savings plus the two components of the private flow for which some data are available already aggregate Rs. 300 crs. If direct savings-investment was near the pre-Plan figure of 175 crs., this would suggest that savings in 1951/52 were not completely out of line with earlier experience.

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11. In contrast to a higher figure for 1950/51, and a much higher one for 1952/53.

On the investment side, firm information is available for the public sector. Public savings (227.6 crores) fell short of development expenditure by 33.8 crores. This deficit was financed as follows:

Domestic borrowing (net)	- 41.6
Foreign borrowing (and grants)	+ 61.7
Decrease in cash balances	+ 13.7
Deficit	33.8

It should be noted that foreign borrowing (and grants) reflects, more or less, the actual use of foreign resources; that is, they were associated with part of India's import surplus of that year. Hence, public investment attributable to (real) domestic resources was Rs. 199.8 crs. (261.5 minus 61.7). This is essentially the same as the comparable figure in the pre-Plan period. If our conjecture on savings for 1951/52 is a reasonable one, private investment, however financed, would have been possible at least to its pre-Plan level, without inflationary consequences. Since, as was indicated above, there was significant lending of private savings to the government (by small savers) there was room for a significant expansion in commercial credit for investment. Indian banks do little long-period lending however.*

One final point: the return flow from the government took the form of substantial reductions in both long-period loans and in the

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* There is a gap in the (monthly) statistics available in my files and hence I cannot give the change during 1951/52 in advances by the scheduled banks. I think the most marked expansion was in "inland bills discounted."

floating debt. Despite the decrease in government cash balances (which occurred only in the States, not in the Centre), there were substantial increases in various "funds" (including the government's Special Development Fund).

This brief account does suggest that neither funds nor resources need have accounted for any shortfall in private investment in 1951/52, despite the unusual levels of public savings and public investment. Government was not bidding savings away from the private sector. On the other hand, such a presentation in no way implies that (other) actions of government were not a deterring force upon private enterprise. Whatever the cause, the investment side of the Indian economy contributed to the general deflationary picture of that year.

II.b. Investible Resources: 1952/53

My estimates suggest a reduced national product in current rupees in this year. In real terms, it was the best post-war year(Appendix I). Prices were reasonably stable, and for all major sectors of the economy. In particular, favorable weather (and to a smaller extent more irrigation and fertilization, improved seeds and cultivation) yielded the first good postwar crop. Despite the reduction in average prices (and the apparent reduction, relative to other sectors, of the domestic product originating in agriculture), it was undoubtedly a period of considerable improvement in the real incomes of at least the lower-income groups in agriculture.

Again, direct evidence on savings is incomplete. The small savings program heavily dependent upon rural areas, was at least maintained at 1951/52 levels.[12] While professional and business incomes showed declines (mostly in trade and services), undistributed profits of corporate enterprise were apparently much higher than in 1951/52. An estimate, based again on the tax rebates, gives 92 crs. compared to about 20 in the previous year. The most notable change in recorded savings was in the public sector, where surpluses from current revenues and from certain government operations were about Rs. 82 crs., about one-third the previous year's figure. The decline arises from a number of changes, notably the very large reduction in customs receipts and some expansion in defense expenditures. The decline was concentrated almost entirely in the Centre, as against the States.

Public investment totaled Rs. 322.6 crs., indicating a deficit of Rs. 260.8.[13] In sharp contrast to the previous year, the government development program depended heavily upon domestic borrowing:

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12. "Revised estimates" for 1952/53 showed a large increase (to 54.4 crores). However, the actuals, available in the recent Budget statement, showed only 48.7 crores. Without the complete budget material, I don't know that these are comparable. All data for 1952/53 presented here will therefore require some modification, but not such as to change the general picture.

13. This is somewhat exaggerated, since the new data for 1952/53 seem to show smaller expenditures.

Domestic borrowing	+ 128.6
Foreign loans (and grants)	+ 44.4
Decrease in each balance	+ 87.8
	+ 260.8

During the year, Government securities held by the Reserve Bank, and the volume of treasury bills (and other forms of floating debt) outstanding declined by more than the small increase in holdings of these assets at the commercial banks. Domestic borrowing reflected primarily lending by the public.[14] If, as seems probable, the net borrowings did represent actual private savings, 1952/53 was again a year in which governments were able to use for investment some 200 crs. of national savings.

While part of the deficit was financed by the use of past reserves, the effect of this upon the economy may have been countered by a reduction in lending by the commercial banks. (Indeed, revised figures for the change in reserves during 1952/53 may be about 60 crs., the amount by which scheduled banks reduced their advances, primarily to the private sector.) Finally, foreign financing was accompanied by imports, although the current foreign exchange account as a whole

14. Loan issues by both States and Centre were successful. There were special selling efforts, attempting in particular to reach rural savings. Thus two separate issues by Madras, one in 1952/53 another in the following year, were oversubscribed.

showed a small surplus for the year. There was an almost steady decline of the quantum of total imports for 9 months of 1952/53, with only a small expansion during the first quarter of 1953.

Despite the governmental deficits and the trade surplus, prices did not rise, and total money supply continued to decline, there was certainly little evidence of a general resource limitation which deterred private investment. Unemployment was increasing, foreign exchange reserves were expanded--despite the Plan's anticipation that they would be drawn down by more than 55 crs. annually over the five-year period and while it is not known just how the specific savings of different groups were utilized, there is no reason to doubt that the savings level would have permitted maintenance (and expansion) of the rates of private investment which took place in the pre-Plan years.

II.c. Investible Resources: 1953/54

Absence of information on State budgets and the summary nature of the material at hand on the Centre's accounts prevent a comparable presentation for the year ending April 1, 1954. In general, however, an increase by about 30 crores in development expenditure on the Plan coupled with negative savings on current account (at least for the Centre) meant that the "deficit" expanded significantly. It may have been about Rs. 300 crores, as compared with our calculations of 33 crs. and 260 crs. for 1951/52 and 1952/53 respectively. In general, private savings mobilized through bond sales to the public and through small savings programs played a much smaller role than in 1952/53. Actual use of foreign loans and grants may have fallen well below the 44 crs. level of that year. Most important were drawings from special funds,[15] a large expansion in Treasury bills, and a reduction by about 50 crores in cash balances. Thus, distinct from earlier years, emphasis was placed on methods of financing which would tend on the whole to be inflationary. Very roughly, these three categories for Centre and States together may have contributed the following amounts to a 300 crs. deficit: public borrowing, (net) 75; foreign loans and grants, 25; other, 200.

If the level of development expenditure was actually below the 360 figure I assumed, this would reduce the inflationary (other) sources of funds. I make this obvious point only because Reserve Bank data through February 1954 give little indication of an increase in floating debt, or decrease in cash balances of an order of magnitude at all consistent with what would be needed, by the end of March, if "other" financing were to reach the 200 crs. figure. There may have been a smaller deficit, and a smaller development contribution.

15. These are mostly listed under "Other Deposits and Advances" in the Budget. This includes a Discount Sinking Fund, funds covering prepayment and refunds of taxes, and a so-called "Government's Cash Balance Investment Account", among others.

In any event, there were few external evidences of inflationary developments in the economy. This was true again despite the excess of government outlays above real income, and despite the fact that foreign exchange reserves may have increased (by as much as 40 crs.) during the year as a result of international transactions. Domestic savings mobilized by government fell below pre-Plan levels. There is little evidence of what happened to investment in the private organized sector, but there is little reason to believe that it expanded above the low levels of the early Plan years.

III. Some Observations

Plans for the present year involve a very large expansion in public development expenditures. They must average at least 600 crs. in the next two years to approach fulfillment of the program. This total exceeds significantly the pre-Plan levels of savings in the economy, to say naught of those savings which tended to flow through public or private institutions. If it is to be accompanied by fulfillment of programs in the private sector for which plans have been announced, the investment drain on national product will be even larger. In addition, the requirements of savings, or of resources, for public and private organized investment have not been so great during the past three years that shifts were required from the less mobile savings categories. There is no reason to question ~~why~~ that much of this self-financed investment, in urban and rural housing, for example, will not continue. This means a total net investment in the Indian economy of perhaps 900 crs. each year, i.e. at least 8 per cent of national product. Fulfillment of the Plan and of its total investment objectives therefore requires a new spurt in private investment, during a period when savings and resources are apt to be tighter than in the earlier years. It also places new importance on large import surpluses, whether financed by foreign aid or by a reduction in sterling balances.

For the increased government expenditures, emphasis is being placed upon inflationary forms of financing. Treasury bills will be issued in an amount almost double what was planned ("revised estimate," though probably not achieved) in 1953/54. The Finance Minister expects this in part to provide a "corrective to deflationary trends" now evident in India; it may provide an environment more conducive to private investment.

The doubling, or near-doubling, of public investment over a three-year period was in itself a tremendous achievement. Targets may have been too high, if not relative to the need, then at least with respect to the possibility of implementation. Even though resources for investment, both of domestic and foreign origin, might have permitted a greater volume of capital formation, this was not anticipated in advance. Concern about the shortage of domestic savings and possible competition with the private sector--and the general inflationary environment of the postwar period--can themselves explain caution on the part of Government. In addition of course there is the fact that the public program is implemented not only through Central government departments and institutions, but also through the governments and administrative units of more than 20 states. Problems of implementation may be more acute when they are compounded by problems of resources that seem to lie ahead.

It appears that the real short fall in investment over the past three years was in the private sector, and most probably in the organized part of the private economy. Here, the levels were low both with respect to targets and pre-Plan performance. While earlier explanations of this tended to center around the nature of the "mix" in the Indian economy, more emphasis is now placed upon the apparent unattractiveness of the investment opportunities, and more specifically upon the "limitations of the market". Given the need for higher levels of consumption and of investment in India, does this problem actually exist, and, if so, how can its effects be minimized?

B. Patterns of Investment

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Appendix I Variation in Indian Domestic Product

I have constructed some rough estimates of Indian domestic product from 1948/49, the year for which an official estimate is available, through 1952/53. The National Income Committee has completed its final report, which is said to concentrate upon 1950/51, the last pre-Plan year. This report is not yet available here, and I do not know whether the 1948/49 estimates, perhaps altered, have been carried forward, or whether improved methods, etc., were applied only to 1950/51. Until better series (or better bases for construction of a series) are made available to us, the present estimates may be helpful for work currently in progress here. They are obviously not suited for broader distribution.*

The results (Table I) are given both in current and in 1948/49 prices. (The official General Index of Wholesale Prices was used to convert to constant prices.) The constant price series has been transferred to a per capita basis, using the population data of the 1951 Census with yearly adjustments on the assumption of a rate of population growth of 1.35 per cent per annum.

I. Method Used

The estimates were obtained by applying national price and/or quantity indexes to basic magnitudes derived from the NIC work for

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* See note at end of Appendix I

1948-49. In general, the procedure involved:

(1.) Reconstruction of gross values corresponding to the "values added" in the different sectors of the economy. The sectors are those used on page 31 of the NIC study; at best, I reconstructed an approximation of what must be obtainable more precisely in NIC files. (See Table III.)

(2.) Extension of gross values (by sector) over time by the use of basic price and quantity indexes. This was possible for agriculture, with the crop and livestock components treated separately, and for large-scale industry (i.e. for 58 per cent of gross value in 1948/49). Small-scale industry, trade and services for other years were estimated from various sources, but were particularly influenced by component series used by the *Eastern Economist*.

(3.) Extension of costs (by sector) over time by the use of the same series. Here, however, some "judgment" was used to take account, at least in a rough way, of stickiness and such.

(4.) Taking the differences between 2 and 3 as domestic product estimates at market prices. (See Table II.)

It should be noted that the estimates can readily be extended back at least one year, maybe two, and carried forward for 1953/54. I simply have to find pertinent indexes, which are or will soon be available.

II. Some Observations on the Results

Where there is overlap, the series do correspond with other estimates available (1949/50, in current prices by Mukherjee; 1950/51,

Table I

Rough Estimates, Indian Domestic Product

	In Current Prices (billions of Rs.)	In 1948/49 Prices Total (billions of Rs.)	In 1948/49 Prices Per Capita (Rs.)
1947-48			
1948-49	91.6	91.6	268
1949-50	96.8	94.5	272
1950-51	100.3	92.1	262
1951-52	101.4	87.8	246
1952-53	97.4	96.2	266
1953-54			

Table II

National Product Estimates by Industrial Origin

(Market prices, billions of current rupees)

	1948/49	1949/50	1950/51	1951/52	1952/53
Agriculture	42.8	46.7	48.7	48.6	43.2
Industry					
Factory (and Mining)	7.4	7.6	7.8	9.5	9.7
Small Enterprise	9.2	9.2	9.0	8.4	8.9
Trade	18.1	18.8	19.4	18.8	19.4
Services	14.1	14.5	15.4	16.1	16.2
Domestic Product	91.6	96.8	100.3	101.4	97.4

Table III

Gross Product and Costs, 1948/49

(Billions of Rs.)

I. Costs Incurred in:	Agriculture	Industry	Trade	Services	Total
For goods and services from:					
Agriculture	10.27	9.50	.72	.35	20.84
Industry	2.08	5.20	1.40	.70	9.38
Trade	.46	6.50	2.11	.28	9.35
Services	.03	.30	.20	.01	.54
Total	12.8	21.5	4.4	1.3	40.0
II. Value Added:	42.8	16.6	18.1	14.1	91.6
III. Gross Product:	55.6	38.1	22.5	15.4	131.6

presumably in 1948/49 prices, used by the Planning Commission). It is generally accepted that 1952/53 was a "good year". This is also suggested by our estimate, at least in real terms.[1] While this is comforting, I have real doubts about the usefulness of the series. As of the moment--and subject to wiser opinion--I attribute these doubts less to the crudeness of my own estimates (at least for years pretty close to my base year) than to the limited value of a total national income figure for analysis of many problems I'm interested in with respect to India.

The following comparisons may be of interest.

	Wholesale Prices General Index	Wholesale Prices Food Articles	Cost of Living All-India Working Class Urban-Industrial
1948/49	100	100	100
1949/50	102.5	102.4	103
1950/51	108.9	109.0	103
1951/52	115.5	104.5	106.7
1952/53	101.2	93.4	106.0
1953/54 (10 months)	105.7	101.2	110 (8 months)

The general index was the one used for deflating the domestic product figures. The food index is a component of this series. The

1. The Eastern Economist series is available for all five years shown. With respect to level and/or year-to-year fluctuations, these do not correspond with other estimates (including the NIC's for 1948/49, as well as those shown here.) While the Eastern Economist figures are available in detail (on a "net value of output" basis), the procedures used are not known. In particular, the most variable component of the series--the fluctuations in which are of prime importance in the fluctuations of the Eastern Economist national income estimates--is what the Eastern Economist terms "the tertiary sector", i.e. government salaries, earnings in commerce and insurance, in house property, and net income from abroad. While the internal evidence suggests caution in the use of their estimates, I have taken refuge in a few of their component series for obtaining some of my estimates. Note: [illegible] also Note to this Appendix.

cost-of-living series is a combination of 24 indexes which are maintained for individual industrial centers. Food constitutes over 50% of urban consumer expenditures, and a larger proportion of urban working-class expenditures. (Prices of other components of the general index declined even more during 1952/53, for example.) 1952/53 was a year of relatively large urban unemployment. It is suggested that at least the urban working class group benefited little from the general improvement reflected by the expanded real domestic product of that year. One might add to this the fact that agriculture's contribution to national product declined sharply from 1951/52 to 1952/53.[2] Agriculture is of course the main source of income for India's rural population. This line of thought can lead to conclusions about income shifts in favor of savers and investors. Perhaps this was the case, and the evidence in terms of bank deposits, government securities sales, etc., is corroboration, but more work is needed on the actual income flows, certainly for the rural areas.

On another matter, it is interesting to note that the domestic product series shows, if anything, an inverse relationship to imports. It is frequently argued that income increases in an under-

	Real Domestic Product	Imports (quantity)
1948/49	100	100
1949/50	103	94
1950/51	101	83
1951/52	96	108
1952/53	105	74

2. From Table III. The domestic terms of trade turned against agriculture.

developed area (with its relatively inelastic supply relationships) spill over disproportionately into imports. This suggests either grave errors in the income series, or the inapplicability of the general argument to India at least in these years. The inverse relationship might of course be due to the fact that agriculture looms large in the national product.[3] When income is high, it is usually associated with favorable agricultural conditions. There is then less need for imports of food, which bulks large in India's total import picture. The income elasticity of expenditures, at least for the large low-income component of India's population, needs direct investigation. There is some suggestion that working class groups maintain consumption patterns identical with those of their rural brethren, despite the shift to the cities.

In general the economy of India is ridden with institutional rigidities. I refer not only to the broad scope of production for direct consumption in rural (and to some extent in the household activity of urban) areas, but also to the role of intermediaries, tradespeople, moneylenders, landlords, etc.--in "absorbing" variations in output and prices. For a very large component of India's rural population (even for those producing "for profit") the system of short-period advances for consumption or production purposes

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3. Import controls played some role in the level and pattern of imports. Examination of the detailed data--and for years with different degrees of restrictions--does not suggest that they explain the relationship observed.

assures that agriculture's gains tend to be absorbed by the middle-men; agriculture's losses are partly reflected in increases in peasant debt. It seems clear that if we are to trace variations in income over time, and in the consumption and investment uses to which income is put, some form of sectoral breakdown of the total product is essential. With the possible exception of the relatively homogeneous "factory enterprises" and perhaps "government" components, use of domestic product breakdown by industrial origins does not advance us too far either. Some functionally-meaningful components must be found—at least for the rural areas—and their output, consumption and investment behavior studied. For this, the national account material helps little (except in allowing one, through footnotes, etc., to return to the original data). The nonexistence of a price (which was imputed) or of a distributive margin (which was added) is of basic importance. Such adjustments, to make the data "comparable", may have some value for per capita international comparisons, or for general statements that income in real terms has grown or declined. They may also serve to conceal the forms in which transactions occur, and the different groups which participate in them.

Note to Appendix I

Since writing this appendix, I received a summary account of the final N.I.U. estimates (Indian Trade and Industry, Vol. V, No.23, April 9, 1954). The earlier 1948/49 figure has been revised and the estimates for 1949/50 and 1950/51 added. The comparable data are (billions of current rupees):

	N.I.U.	W.M.
1948/49	90.6	91.6
1949/50	94.6	96.8
1950/51	100.3	100.3

In view of the fact that the 1948/49 figure has been altered, I would have to change my estimates for subsequent years. The correspondence would be closer for 1949/50 and less so for 1950/51. On the whole however, the comparison is encouraging with respect to preliminary use that might be made of my estimates for years subsequent to 1950/51. Indian Trade and Industry reports that the estimates were also provided in terms of 1948/49 rupees. I am particularly interested in the deflator used. The observation that "per capita incomes in real terms show no appreciable change during the period" is generally consistent with my figures, I suppose.

Comparisons can also be made of components by industrial origin. The official estimates are at factor cost; mine at market prices (billions of current rupees).

Again, these differences reflect (in addition to indirect taxes) the revision of the estimates for 1948/49. Of general

	1949/50		1950/51	
	Official (factor cost)	W.M. (market price)	Official (factor cost)	W.M. (market price)
Agriculture	44.9	(46.7)	48.9	(48.7)
Industry				
Factory (and Mining)	6.0	(7.6)	6.2	(7.8)
Small enterprise	9.0	(9.2)	9.1	(9.0)
Trade, etc.	16.6	(18.8)	16.9	(19.4)
Services, etc.	13.8	(14.5)	14.4	(15.4)
Domestic Product				
Factor Cost	90.3		95.5	
Market Prices	94.6	96.8	100.3	100.3

interest may be the fact that the new official series increases the importance of agriculture and small scale enterprise, reduces the contribution of factory enterprise.