

RESERVE BANK STAFF

OCCASIONAL

PAPERS



EDITORIAL COMMITTEE

Members : V.A. Avadhani
D.K. Bhatia
R. Nagaraja Rao

Editor : A. Seshan

This bianuual journal contains contributions by the staff of the Reserve Bank of India. Articles/notes published in this journal do not necessarily reflect the views of the Editorial Committee or the Bank. Responsibility for views expressed and the accuracy of statements contained rests with the author(s).

There is no objection to the material published herein being reproduced, provided an acknowledgement of the source is made.

Subscription rates for 1987

- Inland : (i) Rs.50 (for two issues of a volume inclusive of postage)
(ii) Rs.25 (for a single issue of a volume inclusive of postage)
- Foreign : (i) \$16 (for two issues of a volume inclusive of postage by surface mail)
(ii) \$8 (for a single issue of a volume inclusive of postage by surface mail)

There is no special rate for any category of subscribers. For air mail add \$4 per issue. Subscriptions and orders, accompanied by cheques/drafts drawn on Bombay in favour of Reserve Bank of India, should be sent to :

The Director,
DRRP (Sales Section),
Department of Economic Analysis & Policy,
Reserve Bank of India,
Amar Building, (Ground Floor),
Post Box No. 1036,
Bombay - 400 001 (India).

All other correspondence may be addressed to the Editor, Reserve Bank of India Occasional Papers, Department of Economic Analysis & Policy, Reserve Bank of India, Post Box No. 1036, Bombay - 400 001.

RESERVE BANK OF INDIA

OCCASIONAL PAPERS

VOL. 8

No. 1

JUNE 1987

ARTICLES

Page



TANGIBLE WEALTH OF HOUSEHOLD
SECTOR

K.G.K. SUBBA RAO



INSTRUMENTS OF MONETARY AND CREDIT
POLICIES IN SELECTED COUNTRIES

P. ASHA

17



THE BURDEN OF DOMESTIC PUBLIC DEBT
IN INDIA

A. SESHAN

45



REVIEW ARTICLE

ESSAYS ON ECONOMIC PROGRESS AND
WELFARE

M.S. NALINI

79

Published by A. Seshan for the Reserve Bank of India and printed
by him at Karnatak Orion Press, Fort, Bombay-400 001.
Editor : A. Seshan.

TANGIBLE WEALTH OF HOUSEHOLD SECTOR

K.G.K. SUBBA RAO*

The estimates of tangible wealth of household sector, built up on the basis of data available from the decennial sample surveys on debt and investment with a reasonable degree of precision, could be used to cross-check those derived indirectly by other methods. The results of the All-India Debt and Investment Survey, 1981-82, provide information on most of the items required for estimation of tangible wealth of the household sector. The paper presents these estimates for both rural and urban households and deals further with the structure of tangible wealth. The value of stock of tangible wealth per household showed wide variations over the States, with as many as nine States having average values less than that of all-India in respect of both rural and urban households. Land was the most important item in the asset structure of rural households, accounting for more than 60 per cent of the value of stock of physical assets; at the all-India level, the cost of land per acre increased nearly by 4 times between 1971 and 1981.

INTRODUCTION

The estimates of tangible wealth of a sector can be built up by taking the benchmark data for a specific year, and successively adding the net capital formation (NCF) figures for each of the subsequent years, thereby deriving the series for a time period. The estimates obtained through this approach, known as the "Perpetual Inventory Method", suffer from a major limitation in that there will be a spill-over effect of the errors in the benchmark estimates to the subsequent years, apart from those in the estimation

* K.G.K. Subba Rao is Adviser in the Department of Statistical Analysis and Computer Services. The author is grateful to Shri S.P. Gothoskar for his valuable comments on an earlier version of the article. The computational assistance provided by Shri V.M. Doshi is gratefully acknowledged by the author.

2 RESERVE BANK OF INDIA OCCASIONAL PAPERS

of NCF in the intervening period. Added to this, depreciation and price adjustments are to be reckoned for each category of assets, the data in respect of which are of doubtful reliability. Against this background, it would be useful to build up estimates independently for certain benchmark years, which could be derived from sample surveys of households and accepted with a reasonable degree of precision. The estimates so derived may possibly be used to cross-check those derived by other methods. In this paper, an attempt is made to estimate the tangible wealth of the household sector on the basis of the results of the All-India Debt and Investment Survey (AIDIS), 1981-82. Section I of the paper is devoted to a description of the scope of the survey, and the use of these data in the estimation of tangible wealth of rural and urban household sectors. Section II provides the estimates of tangible wealth of rural and urban households. Section III presents a summary of observations.

SECTION I

The AIDIS, 1981-82, formed the main subject programme of the 37th round of the National Sample Survey (NSS) and was organised during the calendar year 1982. The schedules designed for the Survey recorded information on most of the items required for the estimation of tangible wealth of the household sector. The reference period for the collection of data was July 1981-June 1982. In addition to the assets and liabilities of the households at the end of the reference period, data on i) capital expenditure on (a) residential plots, houses or buildings, (b) farm business, (c) non-farm business incurred by the households and ii) sale and loss of assets during July 1981-June 1982, were also collected in the schedules.

A two-stage stratified sampling design was adopted for the Survey. The first-stage units were villages/urban blocks, while the second-stage units were households. The Survey was spread over 7718 villages in the rural sector and 5169 blocks, in the urban household sector. Of this, 3755 villages and 2450 blocks constituting the central sample were surveyed by the National Sample Survey Organisation (NSSO). The remaining villages and blocks constituting the State sample were surveyed by the respective State statistical agencies. Eight households from each of the

sample villages and six households from each of the urban sample blocks were selected for detailed investigation. The required data were collected from the same set of sample households in two visits to each household; the first visit was covered during the period January-June 1982, and the second during the latter half of the calendar year 1982. The processing of data collected in all the samples and the generation of the pooled estimates was undertaken by the Reserve Bank of India (RBI).

The priority tabulations emanating from the results of the first visit of the Survey, provided, inter-alia, detailed data on the stock of assets of both rural and urban households, as on 30th June 1981, which could be used for the estimation of tangible wealth of the household sector.¹ The constituent items of tangible wealth covered in the survey are : 1) Land, 2) Building, 3) Livestock and poultry, 4) Agricultural machinery, 5) Non-farm business equipment, 6) Transport equipment and 7) Durable household assets.²

1. The estimates in respect of urban households are available for the first time in this survey. Though the AIDIS, 1971-72 covered the urban households also in the 26th round of the NSS, the results are not available.

The salient features of assets and cash dues outstanding of rural and urban households, emanating from the priority tabulations, were covered in the article 'Assets and liabilities of households as on 30th June 1981', published in the June 1986 issue of the Reserve Bank of India Bulletin. The present study gives an analysis of the stock of physical capital owned by the households.

2. Durable household assets are covered in the estimation of tangible wealth in some of the countries. In this paper, the estimates of tangible wealth are worked out both ways, i.e., including and excluding durable household assets. In the estimation of tangible wealth in India for 1965-66, this item is taken into account by Gothoskar and Kripashankar. For details, see the article : S.P. Gothoskar and Kripashankar, "Estimates of Tangible Wealth in India", Reserve Bank of India Bulletin, October 1972.

4 RESERVE BANK OF INDIA OCCASIONAL PAPERS

The stock of physical assets at the end of the reference period was derived, taking into consideration the physical assets as on the date of the visit as also the additions to and depletions of the assets during the reference period and the date of visit. The stock of assets at the end of the reference period was evaluated by taking into consideration a) current market price prevailing in the locality on the date of the Survey in the case of assets acquired prior to 30th June 1981 and b) sale/purchase price for the assets sold/purchased after the reference date. In the study of tangible wealth, in addition to the stock of fixed assets in the form of land, building, machinery and equipment, etc., the estimation of stocks of raw materials, work in progress, finished goods and stock-in-trade with the household sector should also be taken into consideration. However, the stock of agricultural commodities with the rural households could not be estimated, as it is difficult to collect such data in a household survey, and hence it was excluded from the purview of the schedules. Also, the inventories with the non-agricultural rural households and urban households were not covered in the schedules. These limitations are to be kept in view, while using the estimates from the survey.

SECTION II

The Survey results indicated that the average value of tangible wealth per rural household, at the end of June 1981, was Rs. 35598 and that of urban household Rs.36088. The estimates for the entire household sector as also for rural and urban sectors are given in Table 1.

The estimated aggregate value of tangible wealth of the household sector was Rs 439230 crores, while the reproducible tangible wealth (excluding land) was Rs.190761 crores. The tangible wealth of the rural households accounted for three-fourths of that of all households. Excluding land, the share of the rural households in reproducible tangible wealth was about 65 per cent of the total. (Table 1).

A comparison of the tangible wealth of all rural households in 1971 and 1981 indicates that it increased four-fold, the increase being relatively more in the case of

cultivator households. The rural cultivator households accounted for 94 per cent of the total tangible wealth of rural households, and about 90 per cent in terms of reproducible tangible wealth in the respective years.

In order to estimate the real growth in the stock of tangible assets over the decade from 1971 to 1981, it is necessary to deflate the value of total stock of tangible assets for the rise in prices. Though it is difficult to make this adjustment in the absence of suitable deflators for each of the assets held by households, the indicators available in the White Paper on National Accounts Statistics (NAS) in respect of 'construction', 'livestock', 'machinery and equipment' and 'private final consumption expenditure' have been made use of for the purpose. Accordingly, the real rate of growth in the stock of all tangible assets during the decade is estimated to be of the order of 4 per cent per annum.

The structure of assets of rural households indicates that land accounted for 63 percent of the total stock of tangible wealth. Next in importance was 'buildings', accounting for 21 per cent of the total stock. Livestock and poultry and farm equipment and machinery together accounted for about 8 per cent, while durable household assets constituted another 7 per cent. The structure of tangible assets of urban households showed a striking contrast, with land constituting 36 per cent and buildings another 40 per cent. Durable household assets formed 17 per cent of the value of total assets. Non-farm equipment and transport equipment together accounted for about 5 per cent, and the other physical assets formed hardly 1 per cent of the total stock. (Table 3)

A comparison of the composition of tangible wealth of rural households between 1971 and 1981 indicates that there was a decline in the share of land from 67 per cent in 1971 to 63 per cent in 1981. This pattern was observed in respect of both cultivator and non-cultivator households. There was a marginal increase in the share of buildings from 19 per cent in 1971 to 21 per cent in 1981. Within the rural sector, there was a small rise in respect of cultivator households, and a decline in respect of non-cultivator households. The other important item was the durable household assets. Though the share of this item showed only a marginal increase from 5 per cent in 1971

to 7 per cent in 1981, the percentage rise was more pronounced in the case of non-cultivator households from 13 per cent in 1971 to 17 per cent in 1981. (Table 4)

Among the States, differences were noticed in the average value of tangible assets per household in respect of both rural and urban sectors. In the rural sector, the average value of tangible assets per household was the highest in Punjab (Rs. 95671), followed by Haryana (Rs.90100). Next in importance were the States of Kerala (Rs. 75178), Himachal Pradesh (Rs.61416) and Jammu and Kashmir (Rs. 58287). In contrast, low average values of tangible assets per household were observed in respect of Orissa (Rs. 17392), Tamil Nadu (Rs.19048), Assam (Rs. 20101) and West Bengal (Rs. 20075). In the urban household sector, Kerala had the highest average value of tangible assets per household (Rs. 107863), followed by Jammu and Kashmir (Rs.80987), Haryana (Rs.53973) and Punjab (Rs. 51984). The average stock of tangible wealth per household was relatively low in respect of Orissa (Rs. 17935), Madhya Pradesh (Rs. 22777) and West Bengal (Rs.23864).(Appendix 1).

Based on the average value of total stock of tangible wealth per household, the States can be classified under two broad categories (Table 5). As many as nine states had an average value of total stock of tangible assets less than that of all-India in respect of both rural and urban households.

In the structure of physical assets of the rural households, land was the most important item, constituting more than 60 per cent of the value of total assets in 1971 and 1981. In this context, it would be relevant to examine the cost of land per acre in each of the States, for which data are available in the respective years.³ The details are

-
3. The important factors influencing the unit value of land are cropping pattern and irrigation facility as reflected in the return from land. For an empirical study on these aspects, reference may be made to the article : R.P. Pathak : Variation in value of land over different agro-economic regions - Journal of Income and Wealth, Vol. 5, No. 2, July 1981.

provided in Appendix 2. At all-India level the cost of land per acre increased by 3.5 times between 1971 and 1981. The position was similar in most of the States. However, the rise was eight times in Kerala and about five times in Jammu and Kashmir.

SECTION III

The main findings of the study are summarised below :

1. The average value of tangible wealth per rural household at the end of June 1981 was Rs.35598 and that of urban household Rs.36088. Taking into consideration all the rural and urban households in the country, the estimated value of tangible wealth of the household sector worked out to Rs.439230 crores, while the reproducible tangible wealth is estimated at Rs.190761 crores. The rural households accounted for 76 per cent of tangible wealth and 65 per cent of reproducible tangible wealth of the household sector. After adjustment for rise in prices, the rate of growth of stock of tangible assets owned by the rural households is estimated to be around 4 per cent per annum.
2. The share of rural cultivator households in the total stock of capital assets of rural households remained broadly the same (94 per cent in terms of tangible wealth and 89 per cent in respect of reproducible tangible wealth) in 1971 and 1981.
3. The structure of assets of rural households indicated that land accounted for 63 per cent of the total stock of tangible wealth. Next in importance was buildings accounting for 21 per cent of the total stock. Livestock and poultry and farm equipment and machinery together accounted for about 8 per cent, while durable household assets constituted another 7 per cent. The structure of tangible assets of urban households showed a striking contrast with land constituting 36 per cent and buildings another 40 per cent. Next in importance, durable household assets formed 17 per cent of the total assets. Non-farm equipment and transport equipment together accounted for about 5 per cent, and the other physical assets formed hardly 2 per cent of the total stock.

8 RESERVE BANK OF INDIA OCCASIONAL PAPERS

4. There was no perceptible difference in the pattern of assets held by rural households as between 1971 and 1981, though there was a marginal decline in the share of land from 67 per cent in 1971 to 63 per cent in 1981. The share of durable household assets in the total stock of capital assets increased from 13 per cent in 1971 to 17 per cent in 1981 in respect of non-cultivator households. The share of this item was relatively low in the structure of assets of cultivator households - 4 per cent in 1971 and 7 per cent in 1981.

5. The average value of tangible assets per rural household was the highest in Punjab (Rs.95671), followed by Haryana (Rs.90100). In the urban sector four States, viz., Kerala, Jammu and Kashmir, Haryana and Punjab, had total assets exceeding Rs. 50000 each. Among the four States, Kerala had the highest average value at Rs.107863. In as many as nine States the average value of total stock of tangible wealth was less than the all-India level in respect of both rural and urban households. Among these States, the rural sector in Orissa, Tamil Nadu, Assam and West Bengal and the urban sector in Orissa, Madhya Pradesh and West Bengal had relatively low average value of tangible assets.

6. As land was the most important item in the asset structure of the rural households accounting for more than 60 per cent of the value of total stock of physical assets, an examination of the cost of land per acre in each of the States would be relevant in making an assessment of the rate of growth of assets. At the all-India level, the cost of land per acre increased nearly by four times between 1971 and 1981. This was true for most of the States. However, the rise was eight times in Kerala and about five times in Jammu and Kashmir.

**Table 1 : Estimates of Tangible Wealth
as on 30th June, 1981**

(Rs in Crores)

	All House- holds	Rural House- holds	Urban House- holds
	1	2	3
A. Total tangible wealth	439230	333279	105951
B. Reproducible tangible wealth (Tangible wealth excluding land)	190761	123367	67394
C. Tangible wealth excluding durable household assets	397204	309284	87920

Note: The estimated number of households for rural and urban areas for 1971 and 1981 are given below in thousands :

	1971	1981
Rural	77035	93623
Urban	Not Available	29359

TABLE 2 : ESTIMATES OF TANGIBLE WEALTH OF RURAL HOUSEHOLDS - 1971 and 1981

	(Rs in Crores)					
	All Rural Households		Rural-Cultivator Households		Rural Non-Cultivator Households	
	1971	1981	1971	1981	1971	1981
	1	2	3	4	5	6
A. Total tangible wealth	86002	333279	80902	314501	5100	18778
B. Tangible wealth excluding land	28083	123367	24734	110723	3349	12644
C. Tangible wealth excluding household durable assets	82003	309284	77565	293663	4438	15621

Table 3 : Average Value of Tangible Wealth per Household (1981) - All-india

(Rs)

Asset	All House-holds	Rural House-holds	Urban House-holds
	1	2	3
Land	20204 (56.6)	22421 (63.0)	13133 (36.4)
Building	9141 (25.6)	7473 (21.0)	14459 (40.1)
Levestock and poultry	1448 (4.1)	1797 (5.1)	338 (1.0)
Farm equipment and machinery	717 (2.0)	890 (2.5)	166 (0.5)
Non-farm equipment	282 (0.8)	109 (0.3)	832 (2.3)
Transport Equipment	506 (1.4)	345 (1.0)	1018 (2.8)
Durable household assets	3417 (9.6)	2563 (7.2)	6142 (17.0)
A. Total tangible wealth	35715 (100.0)	35598 (100.0)	36088 (100.0)
B. Reproducible tangible wealth(excluding land)	15511	13177	22955
C. Tangible wealth excluding durable household assets	32298	33035	29946

(Figures in brackets indicate the percentage shares of of component assets to total tangible wealth.)

Table 4 : Structure of Tangible Wealth of Rural Households - 1971 and 1981

Asset	(Per cent)					
	All rural Households		Rural Cultivators		Rural Non-Cultivators	
	1971	1981	1971	1981	1971	1981
	1	2	3	4	5	6
Land	67.3	63.0	69.4	64.8	33.8	32.7
Building	18.7	21.0	17.1	19.8	43.7	41.5
Livestock and poultry	6.6	5.1	6.5	5.0	6.9	5.6
Farm equipment and machinery	1.7	2.5	1.8	2.6	0.5	0.5
Non-farm equipment	0.2	0.3	0.2	0.2	1.4	1.4
Transport equipment	0.8	1.0	0.8	0.9	1.2	1.6
Durable household assets	4.7	7.2	4.2	6.6	12.5	16.8
Tangible wealth	100.0	100.0	100.0	100.0	100.0	100.0
	(11164)	(35598)	(14517)	(44041)	(2408)	(8452)

(Figures in brackets indicate the average value of tangible wealth per household in Rupees)

Table 5 : Classification of States according to Value of Tangible Wealth per Household

		Rural Households	Urban households
		1	2
			3
Category 1	States with average value greater than all-India average	Punjab, Haryana, Kerala, Himachal Pradesh, Jammu and Kashmir, Uttar Pradesh, Rajasthan and Gujarat.	Kerala, Jammu and Kashmir, Haryana, Punjab, Himachal Pradesh, Karnataka, Rajasthan, Maharashtra and Gujarat.
Category 2	States with average value less than all-India average	Andhra Pradesh, Assam, Bihar, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu and West Bengal.	Andhra Pradesh, Assam, Bihar, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal.
All-India average		Rs. 35598	Rs. 36088

Appendix 1

Average Value of Tangible Wealth per Household (1981)

(Rs.)

State	All Areas All households	Rural areas All households	Urban areas All households
	1	2	3
Andhra Pradesh	26696	25992	29204
Assam	21054	20101	29304
Bihar	31811	32042	30174
Gujarat	36733	36371	37509
Haryana	80766	90100	53973
Himachal Pradesh	60122	61416	48156
Jammu and Kashmir	62733	58287	80987
Karnataka	33991	32454	38300
Kerala	80806	75178	107863
Madhya Pradesh	27870	29318	22777
Maharashtra	34723	34392	35364
Orissa	17464	17392	17935
Punjab	83731	95671	51984
Rajasthan	39604	40466	36482
Tamil Nadu	22853	19048	30464
Uttar Pradesh	42313	44290	34066
West Bengal	21192	20075	23864
All-India	35715	35598	36088

Appendix 2

Value of Land per Acre (All Rural Households)

(Rs.)

State	1971	1981
	1	2
Andhra Pradesh	1599	4414
Assam	2042	4596
Bihar	4290	10612
Gujarat	1324	4330
Haryana	3738	13034
Himachal Pradesh	3718	11157
Jammu and Kashmir	3128	14219
Karnataka	1238	3850
Kerala	6555	52684
Madhya Pradesh	1035	3362
Maharashtra	1287	4463
Orissa	1515	4467
Punjab	6291	19658
Rajasthan	685	2697
Tamil Nadu	2509	7520
Uttar Pradesh	3277	11252
West Bengal	2753	8858
All-India	1985	6933

India's only complete weekly

C O M M E R C E
(Established 1910)

An authoritative source of facts, figures and comments on India's industry, agriculture, trade, banking, commodities and the economy as a whole, with an appropriate focus on international affairs.

All the facets of current development in the Indian economy are continuously and closely studied by the staff of the **Commerce Research Bureau** on the basis of the latest available primary data. The results of these studies are made available to the wider public through the pages of **Commerce**.

This makes **Commerce** an invaluable source of authentic information for colleges, universities and everyone concerned with the academic world.

Acting Editor : SUBHASH CHANDRA SARKER

Annual Subscription

Yearly	...	...	...	Rs. 200
Half-yearly	...	...	...	Rs. 115
Students & Teachers	...	...	...	Rs. 115

Single copy : Rs. 4.00

COMMERCE PUBLICATIONS LIMITED

N.K.M. International House,
5th floor,
178, Backbay Reclamation,
Bombay-400 020.

Telephone : 2024505
2026807
2026392
2026562
2026594

Gram : ECREMMOC

INSTRUMENTS OF MONETARY AND CREDIT POLICIES IN SELECTED COUNTRIES

P. Asha*

The rapid pace of financial innovations sweeping many developed countries during the last decade has brought about a remarkable transformation in their financial structure. This in turn has had far-reaching implications for the formulation and conduct of monetary policy. In response to the changing economic environment and developments in the financial system, monetary and credit policy instruments and practices have also been constantly evolving. A comparative study of the evolution of techniques and instruments of monetary policy in five industrially developed countries during the past decade indicates that recently more reliance has been placed on open market operations, though there is a co-ordinated use of all policy instruments. Further, of late, there is also a move towards interest rate deregulation.

INTRODUCTION

A primary function of a central bank is to regulate the volume of money and credit with a view to attaining various national economic objectives. In pursuing the goals of monetary policy, a central bank has an array of policy instruments at its disposal through which it seeks not only to initiate changes in money supply but also in the quantum, direction and cost of credit. In view of the divergent financial structures and goals, different countries use and emphasize different policy instruments suited for their needs for attaining the policy objectives.

Further, in the wake of financial innovations and other developments, banking and financial structures of several countries are undergoing rapid changes which have far-reaching implications for the design, implementation and

*P. Asha is a Research Officer in the Division of Money and Banking of the Department of Economic Analysis and Policy. The author acknowledges the valuable comments received from Dr. C. Rangarajan and Shri A. Hasib, on an earlier version of this paper, "Credit Control Instruments in Selected Countries". She is also grateful to Dr. S.R.K. Rao and Shri K.N.S. Unni for their encouragement.

18 RESERVE BANK OF INDIA OCCASIONAL PAPERS

transmission channels of monetary policy. In response to the changing economic environment and developments in financial structure, monetary and credit policy instruments and practices have also been undergoing a constant process of evolution incorporating several new innovations and techniques.

This paper is a comparative study of the evolution of techniques and instruments of monetary policy during the last decade in five industrially developed countries, viz., U.S.A., U.K., West Germany, Japan and Australia.

The study is divided into three parts. Section I discusses in brief the general objectives and targets of monetary and credit policies. Section II is a survey of instruments used in selected major industrialised countries and Section III presents a summary of the main conclusions of the study.

SECTION I

OBJECTIVES OF MONETARY AND CREDIT POLICIES

As monetary policy is an essential plank of general economic policy, its final objectives are theoretically to be attuned to those of fiscal, trade and foreign exchange policies. The objectives and targets of monetary policy can be broadly classified into two groups depending upon whether they are ultimate or intermediate. The ultimate targets of policy differ from country to country. In the case of developed countries full employment, price stability, sustained economic growth and favourable balance of payments constitute the main objectives of monetary policy. Monetary policy can also strive at achieving the ultimate targets through **proximate** or **intermediate** targets. Proximate targets are variables which give an early and unambiguous indication of the way in which ultimate objectives behave (Brian Griffiths and Geoffrey E. Ward in Monetary Targeting). Depending upon the differences in financial structure, the intermediate targets differ among countries, but generally the major ones are (i) control over some monetary aggregate, (ii) control over the level and structure of interest rates and yields, (iii) control over the level and structure of private sector credit and (iv) influence over capital movements.

The operating variables or indicators of policy also differ among countries. Generally the operating variables are money market conditions/rates (Japan, U.K. and West Germany), reserve aggregates (U.S.A.), bank reserves (U.K.) and bank credit to private sector (Japan). Some countries have more than one operating variable, e.g., U.K. and Japan. Australia has a 'check-list' of indicators like money and credit aggregates, exchange rates, interest rates, inflation, external accounts and economic activity.

SECTION II

A SURVEY OF INSTRUMENTS

The following survey highlights the fact that the instruments relied upon for attaining the monetary policy objectives have varied widely among countries. This can be directly traced to the differences in the financial structures and the aims of monetary policy. Under the former, the major determinants are the degree of development of money and securities market and the importance of banking sector in the financial system.

In the ensuing paragraphs the use of major instruments of monetary policy in U.S.A., U.K., West Germany, Japan and Australia are described.

Open Market Operations (OMO)

The purchase and sale of securities by central bank is an instrument which is available in all the five countries under review. The objective of OMO, type of securities issued and the technique of issue have, however, varied among them. The major advantage of OMO is its flexibility as the size of operations and timing are at the discretion of the central bank. Further, OMO is not only less discriminatory than direct measures but also has less disruptive impact on the efficiency of the financial system. The disadvantages of OMO are that its effective use calls for the existence of a well-developed securities market as a prerequisite and, further, the scope of OMO in securities is dependent on the structure and management of public debt. This in turn leads to a conflict sometimes as the long-term aim of securing stable conditions in the market gains precedence over the short-term objective of influencing money supply or interest. The extent of success of

OMO also depends on the linkage between fiscal and monetary policies.

In the **United States**, OMO constitutes the most powerful tool of the Federal Reserve System (Fed) for influencing the cost and availability of credit. The OMO directly influences the volume of member banks' reserves and help to offset short-term fluctuations. At the monthly meetings of the Federal Open Market Committee, which is the main policy-making body, the instructions to be issued to the Open Market Manager, who conducts such transactions, is formulated. The trading desk of the Federal Reserve Bank of New York conducts OMO through dealers in Government securities. The securities which are eligible for purchase by the Fed are the U.S. Government securities, securities of Federal agencies, bankers' acceptances, bills of exchange and short-term municipal warrants. Transactions are mostly conducted in government securities and are concentrated at the short-end of the market. Among the various transactions like sales, purchases (or repos) and reverse repos (matched sale-purchase transactions) in which the Fed engages, in recent years repos and reverse repos predominate¹. The bulk of the Fed's OMO comprises **defensive operations** which are undertaken to offset undesirable fluctuations in the components of monetary base. A striking feature of OMO in the U.S. is that the two functions of OMO (those related to monetary policy and debt management) are kept separate with the former conducted by the central bank and the latter directed by the Treasury². Generally, there has been a close co-operation between the Fed and the Treasury to minimize the disturbing effects of Treasury operations on the money market and to time Fed's actions to avoid compli-

-
1. Under repos or repurchase agreements, the Fed buys securities from the dealers, who agree to repurchase them by a specified date. Reverse repos transactions involve a contract for immediate sale to and a matching contract for a subsequent purchase from, each participating dealer; the maturities of such arrangements usually do not exceed 7 days.
 2. Frank M. Tamagna, **Monetary Management** prepared for the Commission on Money and Credit.

cating the Treasury's financing problems³. Both have worked closely together to smooth out the impact of Treasury receipts and disbursements on bank reserves and conditions in the money market. The Fed thus pursues an "even keel" monetary policy and undertakes neither to peg U.S. Government securities nor create artificial market conditions when new securities are issued by Treasury, which in turn prevents abrupt changes in bank credit conditions from interfering with Treasury financing.

In the **United Kingdom**, though OMO is a major instrument employed by the Bank of England (BOE), its purpose is slightly different. The principal object of OMO is to support Governments borrowing requirements and also to influence the money supply and the commercial banks' liquidity⁴. Customarily, the BOE has been prepared to conduct OMO in treasury bills and British Government marketable securities (gilts) of less than one year maturity. While the former aims at making minimum lending rate (MLR) effective in the money market, the latter is used to influence banks' liquidity. The OMO also influence long-term interest rates. The BOE manages the borrowing needs of the Government - both short-term (treasury bills) and long-term (stocks). Since 1971 the BOE has not been obliged to conduct outright support operations in the market for longer maturities, i.e., more than one year. While its dealings in the long-end of the market are with a large number of transactors, its treasury bill operations are largely confined to discount houses, private banks and foreign official institutions. In August 1981, the BOE abandoned the practice of quoting prices for purchase of eligible bills; instead, the discount houses offering their bills for sale had to formulate the price, the BOE being free to accept or refuse the offer. With the adoption of the 1981 money market management arrangements and emphasis on interest rates determined by markets, the only

-
3. Clay J. Andrew, Debt Management and Monetary Policy published in **Money, Banking and Monetary Policy** edited by Harold R. Williams and Henry W. Woudenberg.
 4. The Functions and Organisation of the Bank of England : **Bank of England Quarterly Bulletin**, September 1966.

22 RESERVE BANK OF INDIA OCCASIONAL PAPERS

means available to the authorities to control M_3 was 'funding' through the Government bond (or "gilt-edged" market) which became the main instrument of monetary control⁵.

In recent years, to cope with the risk of bill arbitrage and market reluctance to sell longer paper and also to provide cash to the banking system, two operating techniques have been increasingly used by the BOE. The first is purchase and resale transactions in Government securities or in government guaranteed paper (arising from official schemes for fixed rate lending for financing exports and ship building) directly with banks. The second technique applicable when longer-dated bills are withheld from outright sale to the BOE is to buy such⁶ bills for resale after some shorter period upto one month.

In Germany, the Deutsche Bundesbank can influence the money market by buying and selling certain bills of exchange, treasury bills and bonds officially listed on the stock exchange. An important feature of the Bundesbank's OMO is that it can buy and sell securities only in the open market and it is so designed to check direct intervention by the Bank for financing the public borrowing requirements or supporting the market. Due to the cumbersomeness of the traditional main instruments, the Bundesbank created flexible supplementary open-market instruments like bilateral transactions with the commercial banking system in the money, foreign exchange and long-term securities market, which can be easily used for short-term intervention purposes in the domestic money market. As the Bundesbank cannot effectively fine-tune operations in the domestic inter-bank market as there is

5. The Banks' new arrangements for monetary control implied a change in the techniques of monetary policy which, inter alia, included reduction in London clearing banks' operational balances, abolition of reserve asset ratio, giving up of continuous posting of MLR, etc., which became effective in August 1981.
6. A.L. Coleby, "Changes in Money-Market Instruments and Procedures in the United Kingdom" published in **Changes in Money-Market Instruments and Procedures : Objectives and Implications**, Bank for International Settlements, March 1986.

virtually no short-term securities market in Germany, it was forced to invent "reversible assistance measures" for open market purposes. Such measures include as reserve-absorbing transactions, the sale of 'mobilisation' and 'liquidity' paper issued by the Bundesbank, foreign exchange transactions under repurchase agreements, dollar sales on a swap basis and sale of Bundesbank discount paper with maturities ranging from 6 to 24 months, and as reserve-creating operations day-to-day lending of Federal cash funds to the money market, foreign exchange swaps, open-market transactions in commercial bills and bonds under repurchase agreements and redemption prior to maturity of Bundesbank discount paper. The measures cover a period of less than a week to 1 to 2 months and are used to influence key money-market rates in a manner which is inconspicuous and easily reversible or to effect prompt adjustments in banking systems reserve position. They have made the interest rate and liquidity policy more flexible in the short-run. Since 1984, the Bundesbank has used revolving security-based repurchase agreements to meet long-term refinancing needs of banks.

The Bundesbank has engaged in open market transactions in long-term securities only sporadically as it cannot support public debt management by holding a sizeable portfolio of such securities.

In Japan, the scope for genuine open market operations was limited for long because of the under-development of securities market. Since 1963, the Bank of Japan (BOJ) has more actively engaged in the purchase of long-term government bonds held by financial institutions to provide money for economic growth. In the first half of the 1970s, the short-term money market centred on the call and bill markets (i.e., inter-bank market) while the open market in which non-bank economic agents could participate was limited to the Gensaki market for securities.⁷ Thus, except for the Gensaki market for securities, the open market remained under-developed until around 1980. Since then, many new financial instruments with freely-determined interest rates have been successfully introduced. They are basically in the nature of deposits

7. Gensaki market is the short-term market for purchase and sale of securities with repurchase or resale agreements.

24 RESERVE BANK OF INDIA OCCASIONAL PAPERS

like certificate of deposits (CDs), medium-term government bond funds, money market certificates and yen-denominated bankers' acceptances, etc. Since 1978, the BOJ has resorted to buying operations by tender in government bonds (with limited number of banks and securities companies for small-lot operations), which reflects prevailing market forces. It has also engaged in the sale of short-term government bills (Treasury bills) at market rates since May 1981 which has facilitated interest rate arbitrage between the inter-bank and open markets.

In keeping with the changes in the financial system during the second half of the 1970s, the BOJ has also progressively liberalised the inter-bank market (by abolishing "quotation system" for call and bill rates and through diversification of maturities of instruments traded in the inter-bank market including the introduction of term money in the call market) and encouraged arbitrage transactions between the inter-bank and open markets. The latter was a sequel to the rapid expansion in the open market. Till the recent past, the short-term open markets in Japan dealing in CDs, Gensaki (repurchases and agreements) and bankers' acceptance market were characterised by instruments issued by financial institutions, which were of a deposit nature, as short-term government bills and commercial paper had not developed in Japan. However, short-term government bonds were issued for the first time in February 1986. The new discount bond, with a maximum maturity of six months, is designed to finance the redemption of long and medium term bonds and contribute towards the development of the short-term money market in Japan.

The BOJ has to finance budgetary operations and for this purpose government bonds, with market-related interest rates are increasingly being issued. A public auction system was introduced in 1978 for the issue of medium-term government bonds. On account of the various measures for liberalisation and internationalisation of the Japanese financial system, the domestic and overseas open markets and inter-bank markets have become more closely linked recently.

In **Australia**, OMO is the most important tool of monetary policy. The Reserve Bank of Australia operates in the securities market for regulating liquidity, developing an

efficient secondary market, supporting the primary issue system, improving information flows and assisting small holders. A number of controls are imposed on the rates of government securities, the intermediaries that handle them and the ultimate investors which aim at monetary control and the reduction of government's debt service costs. Market operations are also used for official debt management. As an agent to the Commonwealth Government, the Bank can issue Australian Savings Bonds, treasury notes and treasury bonds. Market operations are mainly conducted in government securities though the Bank is empowered to deal in other assets and has done so on occasions. Participants in the securities market cover a wide spectrum — banks, dealers in short-term money market, life offices, brokers and other large institutional holders of Commonwealth Government Securities (CGS). The Bank has designated nine authorised money market dealers to operate a secondary market in short-term CGS. The two types of trading in marketable CGS in Australia are on charge and off charge. Under the former, the Bank operates through a panel of brokers and trading is limited to bonds, while under the latter it deals only with brokers and authorised dealers in short-term money market and transactions include both bonds and treasury notes. Sometimes the Bank buys very short bonds directly from banks for liquidity management purposes. The bulk of the Bank's transactions are undertaken off charge. The role of the Bank in the securities market has been evolving in keeping with market developments and shift in monetary policy emphasis. Since 1985, the Bank has changed the group with which it is willing to deal in bonds which include market dealers, brokers, authorised money market corporations, banks and life offices.

Central Bank Lending and Official Discount Rate

This instrument is basically designed to limit the access of banks to central bank credit. Generally, the two ways of borrowing from the central bank are either by discounting eligible securities or in the form of an advance against approved collateral. While in U.S.A., Japan and West Germany the central banks lending policy influences the borrowings and thereby the reserve position of banks, in the U.K. changes in the minimum lending rate affect money market funds and help to control money supply. The degree of use of the instrument has varied from

country to country. In most of the countries reviewed in this study, the official discount rate had a great impact on short-term money market rates. Different practices prevail. In some countries the level of lending is decided by the central bank by operating on its cost (i.e. by changing discount rate) while in others it is through availability (i.e. rationing system). Generally the rationing system, which raises the implicit marginal cost of central bank credit, have been used in countries where the basic interest rates on central bank credit facilities remain below the money market rates. Through changes in the discount rate, quota and availability of central bank credit, the central banks induce cost effect and announcement effect and also influence the liquidity position of banks. The main disadvantages of this instrument are that its use tends to be limited compared with open market operations and reserve requirements when the level of lending by the central bank is reduced to the minimum. Further, its effectiveness also depends upon co-ordination with other policy instruments.

In U.S.A., lending policy serves as a complement to open market operations in the implementation of monetary policy. Subject to review and determination by the Board of Governors, the board of directors of each of the 12 Federal Reserve Banks sets its own discount rate. The progressive integration of regional credit markets over the years has, however, produced a national perspective for discount rate determination. The Fed provides temporary funds to member banks at the basic discount rate to help in large and unexpected deposit or portfolio adjustments that individual banks sometimes face and also to member banks as a group during periods of monetary restraint. On rare occasions, credit is given for longer periods to meet seasonal needs (seasonal credit) and to ease severe funding problems (extended credit). Non-member banks can also borrow from the Fed under unusual circumstances in the financial markets, but at a rate higher than that for member banks. Borrowings of banks from the Fed in the U.S. depend upon the relationship between the official discount rate and the Federal funds rate and this in turn has formed the basis for the interest rate stabilisation effect of the borrowed reserve position since 1982. Changes in the discount rate are not automatic but recommended by the Reserve Banks and approved by the Board of Governors. Banks' borrowings from the Fed reflect a combination of cost and rationing effects. Depository insti-

tutions in the U.S. are not entitled to quotas at the discount window as borrowing is regarded as a privilege and not a right. Moreover, discount window credit is supposed to be used sparingly only when other sources of credit are not reasonably available. Any extension beyond the original maximum period (not more than 15 days) brings into operation an increasingly strict surveillance procedure. The administrative restraint by the Fed over member-banks' borrowings aims at maintaining control over their volume of borrowing and thus avoid excessive and unexpected fluctuations in reserves supplied by this means. Member banks can borrow funds from the Fed either by a discount or by an advance, though the latter is more significant now.

In U.K., central bank credit is extended to discount houses which have sole access to the lender of last resort facilities of the BOE in return for the understanding that they would take up in full the weekly offerings of treasury bills. Such lendings are of a very short-term nature and have played a smoothening role in monetary policy. The minimum lending rate (MLR) is the rate at which the BOE is willing to lend to discount market. It has constituted the main instrument at the disposal of BOE to influence short-term rates. The terms and mode of accommodation by the Bank in turn influence the cost of funds and the price which discount houses are willing to pay for short-term assets. The MLR was formerly related to treasury bill rate. This formula, however, ran into bad weather on account of the massive inflow of funds into Pound sterling. In 1978, the market related formula was suspended and MLR was fixed as in the case of the Bank Rate earlier. The MLR thus became fully administered. The continuous posting of MLR introduced in October 1972 was, however, abandoned in 1981 but subsequently revived in January 1985. It has been used on a number of occasions to secure a sharp upward adjustment in interest rates as also to moderate the pace of its decline.

In West Germany, the discount and lombard rates are the linchpin of Bundesbank's interest rate policy⁸. The Bundesbank engages in refinancing under which it lends to

8. Loans granted by the Deutsche Bundesbank to credit institutions at interest against the collateral of certain securities and Debt Register'claims is called Lombard loans and the interest rates charged on such loans are Lombard rates.

credit institutions either through bills rediscounting or granting loans against collateral (lombard loans). The aim of refinancing is to influence the amount of money in circulation and of credit granted. Interest rates are the main parameters of the policy. The Central Bank Council fixes the total amount of rediscount quotas. Its distribution among individual banks is dependant on standard quotas determined on the basis of its liable capital, observance of liquidity norms, etc. In July 1978, for effective use of quotas, its assessment was linked to the size of individual bank's bill portfolio. The lombard facility is designed to bridge temporary liquidity needs of credit institutions and cannot be granted for more than three months. In September 1979, in view of the unusually strong recourse to lombard facility by banks for several months, the Bundesbank imposed quotas on lombard loans. This was, however, subsequently lifted in February 1980. Between 1982 to 1984 the Bundesbank followed a comparatively easy policy posture as banks access to lombard window was not subject to formal quantitative restrictions.

The heavy recourse of banks to lombard facility on a revolving basis in the past few years and the consequent virtual pegging of call money rate at the level of lombard rate (which served as a base rate for the whole structure of short-term money market rates) posed a threat to the Bundesbank's monetary policy by limiting its ability to fine-tune domestic money market rates and influence banks reserve position. In 1984 the Bundesbank, therefore, switched over to more flexible operating procedures under which it employed revolving security-based repurchase agreements at rates below the lombard rates to satisfy the banking systems' longer-term refinancing needs. Further, to avoid abrupt fall in call money rate under temporary excess liquidity conditions, banks were offered treasury bills — mobilisation paper with very short maturities (normally 3 days) — as a "last-resort" investment outlet⁹.

In Japan, lending policy is the most important instrument for monetary regulation which is used for adjusting short-

9. The conversion of all or part of the DM 8 billion equilisation claim on the Federal Government held by Bundesbank as a result of the currency reform of 1948 into treasury bills or treasury discount paper is known as mobilisation paper

term fluctuations of funds. The BOJ provides financial institutions (mainly city banks) with funds by lending at the official discount rate. It announces plural rates classified according to the object of discounting and loans against collateral security. Under the credit control system introduced in 1962, credit lines have been fixed for the major city banks. This is so because the official discount rate is below the call and bill rate. The advantages of lending in Japan are that there is a "repayment pressure" as lending by the BOJ may be withdrawn at any time at the discretion of the Bank. Further, as the official discount rate is calculated according to the "method of both-ends counting, on a discount basis", the effective interest rate becomes higher and acts as a penal rate, the shorter the lending period¹⁰. As a rule, the Bank does not lend in excess of the ceiling but in case excess lending to a city bank becomes necessary penal rate (4% above the Bank Rate) is charged. In order to cope with increased mobility of domestic and foreign funds, a "special lending system" was established in March 1981, which enables the BOJ to provide loans at a rate which is higher than the official discount rate for a maximum period of three months. It has, however, not been put into operation¹¹.

In **Australia**, the (nine) authorised dealers are required to foster the marketing of Commonwealth Government Securities (CGS), particularly short-term, as also provide facilities for investment of overnight and short-term funds based on CGS. The Reserve Bank of Australia, in turn, provides the dealers with a range of banking services and with a line of credit to assist their liquidity. This enables the dealers to borrow from the Bank on the security of CGS in case of need. In order to provide

10. For example, a loan of a week is counted as an eight day loan. Thus, the term amounts to the actual period plus one day.

11. Toshihiko Fukui, "The recent development of the short-term money market in Japan and changes in the techniques and procedures of monetary control used by the Bank of Japan". Published in BIS, March 1986 publication referred to in footnote number 6.

30 RESERVE BANK OF INDIA OCCASIONAL PAPERS

greater flexibility, conditions attached to this facility were changed. Drawings under the facility are now normally repayable between 7 and 10 days (previously 7 and 30 days) after being made. The Bank may also offer fixed term loans for less than 7 days, if conditions warrant. The rate of interest on the loans to dealers is related to market conditions and the last resort nature of the facility.

Changes in Minimum Reserve Requirements

Though variation in the minimum reserve requirements against bank deposits is one of the major instruments employed in all the five countries, the intensity of its use has varied. Differences between central bank's operating procedures are attributable to those in institutional and legal conditions. Besides, technical differences based on the mode of computing, type and volume of deposits included and status of depositor exist. In its classical form when the reserve requirement ratios are applied on the non-interest bearing accounts with the central bank, it has a great impact on the excess and net free reserves of the banks which in turn reduces their lending capacity. The basic purpose of this instrument is to influence the excess reserves of banks and their lending policy. The main advantage is that it neutralises large changes in bank liquidity brought about by uncontrolled sources of reserve creation like external surpluses or budget deficit. The main disadvantages are that sometimes its impact on excess reserves are blunt and open market operations or central bank lending is temporarily needed to offset it. Besides, as reserve deposits usually function as balances to meet daily transactions, excess reserves tend to be reduced to the minimum.

In U.S.A., the Fed is empowered to vary the reserve requirements for member banks within specified limits. Changes in reserve requirements have an immediate impact on bank liquidity and on costs in all parts of the country. It is thus designed to help moderate inflationary or recessionary tendencies in the economy. From 1968, a lagged reserve requirement system was followed in the US and any deficit was subject to penalty. In 1978, different ranges of requirements were prescribed for reserve city and other depository institutions. Between November 1978

and July 1980, a supplementary reserve requirement was also imposed on large time deposits. The national banks chartered by the Federal Government had to be members of the Fed while the state banks (chartered by the States) were free either to join it or not. As the State-administered reserve requirements were lower than the Fed's requirements, the adverse effect of this on profitability led many banks to opt out of it. To counter this, the Depository Institutions Deregulation and Monetary Control Act was passed in March 1980 which extended reserve requirements to all depository institutions and also simplified the structure of reserve requirements. Reserve requirements have largely been confined to transaction deposits since 1983 which has rendered reserve targeting more effective in controlling M_1 , than the broad aggregates. Since early 1984, contemporaneous reserve requirements have been introduced in the U.S., but its impact on interest rate volatility appears to have been limited¹². The change-over was also accompanied by a lengthening of the reserve-holding period from one to two weeks and a liberalisation of the carry-over provisions. Against certain non-transaction deposits and net liabilities to foreign banking offices, additional reserves are to be maintained, though the maintenance period is behind that for transactions deposits by four weeks. In order to make the same schedule of reserve requirements applicable to all types of depository institutions, the reserve requirements of non-member banks are being phased in over an eight-year period ending September, 1987. According to the size of institution and type of liability, reserve ratios would, however, continue to vary.

In the U.K., reserve ratio controls have been designed to serve as a fulcrum which would allow interest

-
12. Required reserves against transactions deposits are based on the average of such deposits over a computation period two weeks long, beginning on a Tuesday and ending two Mondays, later. The calculated reserve requirements must be met on an average over a maintenance period that begins on the first Thursday of the computation period and ends two weeks later on a Wednesday. Twelve of the fourteen days of the computation and maintenance period overlap; the system is, therefore, termed "Contemporaneous".

rate changes to be brought about effectively and rapidly to the extent necessary to achieve the monetary target. Different types of reserve ratios have been employed in UK. All listed banks were required to hold a minimum of $12\frac{1}{2}$ per cent (reduced to 8 per cent by March 1981) of their eligible liabilities in specified reserve assets on a daily basis. This was termed as the Reserve Asset Ratio (RAR) or the Minimum Reserve Ratio. This ratio was based on agreement and not on statutory powers. Under the Special Deposits (SD) requirements, banks had to deposit a specified percentage of their eligible liabilities with the BOE on which interest was payable. The RAR and the SD enabled the authorities to vary bank liquidity and thereby influence the level of short-term rates in the desired direction. Besides these two ratios, there was the "corset" or Supplementary Special Deposits (SSD) scheme under which banks had to place non-interest bearing deposits with the BOE if their interest bearing eligible liabilities exceeded the specified limit. This technique was used to control money supply and to restrain lending to non-priority sectors. Further, London Clearing banks were also required to hold balances (cash requirement) with the BOE amounting to $1\frac{1}{2}$ per cent of their eligible liabilities. The SSD scheme was terminated in June 1980. In order to increase the influence of the money markets on short-term interest rates, major changes were introduced in the monetary control system in August 1981. Thus, the cash and RAR requirements were abolished. Further, all banks and deposit takers with eligible liabilities exceeding a certain limit (£ 10 million or more) are to hold non-operational, non-interest bearing deposits of $\frac{1}{2}$ per cent of their eligible liabilities with the Bank. The clearing banks can in addition hold operational funds with the Bank.

In **Germany**, the banks have to hold a specific percentage of their liabilities and short and medium-term borrowings (other than inter-bank liabilities) as non-interest bearing balance on giro accounts (minimum reserves) with the Bundesbank. Certain specialised institutions granting long-term loans are exempted from maintaining minimum reserve ratios (MRR)¹³. The MRR is differentiated

13. Banks are required to hold a specific percentage of their liabilities arising from sight, time and savings deposits as well as from short and medium-term borrowings, with the exception of their liabilities to other banks subject to MRR, as balances on giro accounts with the Bundesbank which is known as minimum reserve ratios.

according to the type, origin and amount of each type of liability. The Bank may set a percentage of upto one hundred for liabilities to non-residents. In March 1977, a technical change for calculating MRR was introduced whereby reserve class for banks with different volumes of liabilities was replaced by a progressive scale of reserve requirements identical for all banks. Penal rate of interest is charged on MRR shortfalls. In Germany, besides the impact on liquidity, the MRR also has repercussions on interest rates. In the last few years, this instrument has been less frequently used by the Bundesbank for short-term adjustment of bank liquidity in view of its considerable undesirable signal effects.

In **Japan**, designated financial institutions are obliged to hold cash reserves in non-interest bearing current accounts with the BOJ at certain prescribed rates determined according to the financial institutions and the volume and type of deposits held by them. The upper limit of the reserve requirement is set by law. The legal maximum limit of the reserve ratio is 20 per cent (100 per cent on resident foreign currency deposits and liabilities relating to non-residents) and within the limit, the Bank fixes different ratios for different categories of designated accounts and also of financial institutions. A semi-lagged reserve accounting system is followed¹⁴. Deficits in reserve requirements attract penal provisions. A progressive structure of rate has been adopted whereby a higher reserve ratio is applied to the entire amount of deposit liabilities when it exceeds a certain limit. As some institutions intentionally reduce deposits outstanding at the end of a business year, the BOJ is examining the possibility of introducing a new reserve requirement system under which higher reserve ratios would be applied only to that portion of deposit liabilities which exceeds a certain amount.

In **Australia**, the Reserve Bank of Australia directly influences the liquidity of the trading banks through the dual mechanism of Statutory Reserve Deposits (SRDs) and the convention governing liquid assets and government

14. Under it reserves held from the 16th of one month to the 15th of the next month count against deposits held in the earlier month.

securities (LGS)¹⁵ Under the former, each trading bank has to maintain a certain proportion of the Australian deposits in interest-bearing SRDs with the Reserve Bank. The SRD ratio is uniform for all major trading banks. For each of the prescribed banks, a separate SRD ratio is fixed, though it cannot be higher than that for trading banks and need not be uniform¹⁶. Neither a minimum nor a maximum level is prescribed by law for SRD ratio. If the SRD ratio does not exceed 25 per cent, the Bank can change it with a minimum of one day's notice, while a 45 day's notice is required for ratios greater than 25 per cent. Quarterly information regarding expected policy on SRD ratio, etc., is provided to banks in confidence. The LGS ratio is the ratio of LGS (liquids and government securities) assets to the Australian deposits of banks. LGS assets are defined as coins, deposits with the Bank, Treasury notes and Commonwealth Government Securities. The LGS convention had no statutory basis but was based on an agreement. Under it, the major trading banks undertook to conduct their affairs so that their LGS ratio did not fall below an agreed (uniform) minimum (18 per cent since 1977) and, if necessary, to borrow from the Reserve Bank to maintain it. The rates of interest charged on such loans were at the discretion of the Bank. The minimum LGS ratio was not changed often. The Reserve Bank had an agreement with other trading banks who were not parties to the LGS convention about their holdings of certain liquid assets.

In May 1985, the Prime Assets Ratio (PAR) arrangement replaced the LGS convention which had operated since 1956 between the Reserve Bank and the major trading banks. Under the PAR system major trading banks agreed to hold, at all times, a minimum tranche of high-quality

15. Trading banks include Commonwealth Development Bank, Australian Resources Development Bank and the Primary Industry Bank of Australia.

16. There are three prescribed banks in Australia, viz., the Bank of New Zealand, the Bank of Queensland and the Banque Nationale De Paris.

liquid assets (prime assets)¹⁷. Through it the Bank aimed at ensuring that sufficient funds are available to the banking system in the market to meet their need for liquid assets without recourse to it. Assistance provided by the Bank under the new arrangement would be at its discretion.

The three main instruments which have been described above are the only measures which have been used in all the five countries under review at one time or another. Besides, there are a few other instruments of monetary policy which have been used in some of the countries.

Regulation of Lending by Banks

Control over lending by banks can assume two forms -fixing of ceilings on lending or restrictions on flow of credit to certain sectors or for certain purposes (i.e., qualitative control).

(i) Ceiling on Bank Lending

Ceilings on lending aim at improving the precision and the speed with which the monetary authorities can influence both bank lending and money supply. Credit ceilings have an edge over indirect instruments. This instrument is not without disadvantages; it can lead to rigidity in the financial system by limiting competition and lead to disintermediation of funds or hidden lendings to financial institutions not covered under the regulation. It is also inadequate for implementing an easy monetary policy. Further, this instrument could work only in conjunction with other orthodox instruments of monetary policy.

17. The PAR is a prudential standard under which each trading bank agreed, in May 1985, to hold a tranche of high quality liquifiable assets (prime assets) equivalent to 12 per cent of its total liabilities in Australian currency (other than shareholder's fund). Prime assets include notes and coins, balances with the Reserve Bank, Treasury notes and other Commonwealth Government securities, and loans to authorised money market dealers secured against CGS. The ratio was extended in November 1985 to apply also to foreign currency liabilities used to fund Australian dollars assets.

36 RESERVE BANK OF INDIA OCCASIONAL PAPERS

The experience of countries reveals that this instrument has not been used in U.S.A. and Germany. Japan and Australia have extensively used the instrument.

In **U.K.**, the BOE does not have any statutory powers to impose credit ceilings. The Bank relied on voluntary co-operation for implementation of its credit control programmes. Quantitative restrictions on bank lending were removed in September 1971 under the "Competition and Credit Control" reform. The supplementary special deposit (SSD) scheme or 'corset' scheme introduced in December 1973, however, helped to restrict the level of lending by banks. As under the scheme, SSD had to be placed with the Bank on a sharply progressive scale if banks' interest bearing liabilities grew by more than the stipulated rate, the effective cost of obtaining additional funds for further lending of a bank exceeded the market interest rate. The corset technique was employed by the BOE several times during the 1970s for controlling the rate of monetary expansion and restraining lending to non-priority sectors. However, as the technique led to disintermediation and the flow of funds into uncontrolled channels, it was terminated in June 1980. By 1981, no controls remained either over the extension of credit by banks or over the increase in liabilities needed to finance it.

In **Japan**, the BOJ frequently relies on direct quantitative control as an adjunct to the conventional measures to achieve monetary restraint. This instrument is used to adjust the availability of credit to non-banks. Specific limits on the growth of bank lending are put forth before the banks. The ceiling control is not based on any legal provision; the BOJ relies on its power as central bank and the creditor of financial institutions.

In **Australia**, besides the control which it has on lending by banks by varying the level of their LGS assets, the Reserve Bank also has statutory powers to influence the volume of advances by banks (quantitative advance policy) and the distribution of advances among various industries and purposes (qualitative advance policy). Quantitative guidance, which was often given in the past, specified the level of aggregate lending, though allocation of credit was left to the discretion of the banks. The form of guidance on lending has varied over the years; at times it was

expressed in terms of volume of approvals for new lending or growth in outstanding advances or the desirable course to be followed by banks in the provision of finance or some combination of these.

Though the Reserve Bank has statutory powers to determine the lending policies of savings banks, it has not invoked this power so far.

ii) Qualitative Credit Control

In U.K., as mentioned earlier, the corset technique, inter alia, purported to check the flow of credit to non-priority sectors.

In Japan, window guidance on bank lending primarily aimed at regulating quantitatively the total volume of bank credit and not controlling the direction of individual lendings.

In Australia, the Reserve Bank in the past resorted to qualitative controls by asking banks to disburse credit to particular classes of borrowers like primary producers or exporters or to avoid lending for purposes like speculative stock building. This technique has been little used in recent years though the Bank has sometimes informed the banks about its views on the volume of lending for housing. The experience with qualitative guidelines, however, proved to be unsatisfactory as it was ineffective and difficult to administer.

Control over Interest Rates

Administrative controls over selected interest rates is purported to supplement the indirect influence exercised through instruments like purchase and sale of securities and variations in bank rate. The purpose of use of these controls is to either influence general interest rate or to keep rates lower for certain purposes/borrowers. The disadvantages of interest rate control are that it may lead to choking off of funds to those borrowers, for whom lower rates are prescribed or it may lead to disintermediation of funds in the case of deposits or it may lead to inefficiency in the financial system as a whole. Further, administrative controls on interest can be rendered ineffective in the wake of financial innovations and

developments in the financial market.

In U.S.A., while the Board of Governors is responsible for fixing the maximum interest rates on savings and time deposits (Regulation Q) of member banks, in the case of non-member commercial and savings banks and insured savings and loan associations, similar responsibility is vested with the Federal Deposit Insurance Corporation and the Federal Home Loan Board, respectively. Ceiling rates are fixed only after consultation among these agencies. The interest rates so established contribute to equitable competition among banks and thrift institutions for the public's interest bearing deposits. The late 1970s was marked by a sharp increase in market rates above the ceiling rates on deposits which in turn led to the diversion of deposits from banks and thrift institutions to money market securities. In response to this development, limited measures were taken to lift ceilings on some categories of time and savings deposits of \$ 100,000 or less. Further, banks were also permitted to issue Money Market Certificates (MMCs) and Small Saver Certificates (SSCs) with ceiling rates linked to the yield on 6-month Treasury bills in the case of the former and market rates in the case of the latter. As interest rate ceilings caused financial disintermediation, discriminated against small savers and failed to increase the supply of residential mortgage credit, the Monetary Control Act was passed in 1980 which aimed at phasing out Regulation Q over a period of six years. By March 31, 1986, all interest rate ceilings were eliminated, except for the requirement that no interest be paid on demand deposits.

In U.K., it is the interaction between the market and the monetary authorities that determines the level of short-term interest rates at any time. Discretionary changes in minimum leading rate carried out through money market operations by discount houses was the main instrument at the disposal of the BOE to influence short-term rates. Banks generally responded to the rise in the MLR and consequent increase in cost of funds by raising their lending and deposit rates. The ability of the monetary authorities to fine tune money supply in recent years has been reduced on account of large swings in short-term rates brought about by factors like unexpected swings in central government revenue or expenditure or official foreign exchange or gilt-edged market transactions.

Interest rate became a central policy weapon during the late 1970s and early 1980s when the Government tried to substantially reduce money supply and inflation by permitting MLR-led interest rate to rise to extremely high levels. In August 1981, when the publication of MLR was discontinued, BOE decided to keep short-term rates within an undisclosed band through open market operations. This aimed at keeping interest rate structure consistent with market sentiment. One of the factors for reintroduction of MLR in January 1985 was to push up short-term rates in the London money market.

In **Germany**, competition in the setting of interest rates was encouraged way back in 1967 on account of its expected beneficial impact on the efficiency of the banking sector.

In **Japan**, the Policy Board of the BOJ is, inter alia, entrusted with the task of fixing, changing or abolishing the maximum rates of interest of the financial institutions. The Temporary Interest Rates Adjustment Law (TIRAL) sets out the maximum limits for principal interest rates of private financial institutions. As regards lending rates, in the case of short-term rates though TIRAL is applicable to many financial institutions, its regulation over lending rates is restricted only to banks, insurance companies and Norinchukin bank (The Central Co-operative Bank for Agriculture and Forestry) and that too for lending with a term of less than an year or an amount more than 1 million yen. In the case of other lendings, the interest rates are free from regulation. Within the legally prescribed rates, which are relatively high, individual banks fix their own rates. The standard (prime) interest rates is related to changes in official discount rate of the BOJ. TIRAL is not applicable to long-term lending rates which are fixed individually by bank/trusts.

Interest rates in the money markets are exempt from TIRAL. Interest rates in call and bills discounting market and on negotiable certificate of deposits have been liberalised. In May 1979, commercial banks were authorised to issue time certificates of deposit (CD). The interest rate on CD was freed from regulation. Further, in October 1979, an agreement was reached between the BOJ and participants to short-term money markets to discontinue the practice of setting posted rates on 2-month bills, thus

leaving the determination of all call and bill discount rates in Japan to market forces.

The TIRAL prescribes the ceilings not only for ordinary bank deposits but also for deposits with other financial institutions. The BOJ provides detailed guidelines for each of the nine categories of deposits. But the rates which are actually applied are determined by individual banks within the guidelines and they generally coincide with the upper limits. In October 1985, interest rate ceiling on inter-bank time deposits in large denominations was liberalised.¹⁸

In Australia, with the Treasurer's approval, the Reserve Bank makes regulations relating to interest rates payable to/by banks or others in the course of their banking business. The regulations also relate to rates of discount chargeable by banks and others and may specify the period for which banks/others may pay interest on deposits. Maximum interest rates for some types of lending by banks are fixed and, within these ceilings, banks establish their rates.

As regards interest rates on lending, trading banks observe a uniform maximum rate which is determined by the Reserve Bank for fixing their rates on overdrafts drawn against limits of less than Australian \$ 100,000. Within this maximum, banks have freedom to fix rates for particular borrowers or categories of borrowers although at times certain categories were given preferential treatment. Some specific forms of lending involving higher risks like bridging finance, leasing and personal instalment loans are exempt from this maximum rate stipulation. Interest rates on term and farm development loans are slightly higher than those on overdrafts of comparable amount.

-
18. The deregulation of large-lot deposit rates has been implemented in steps. After banks were allowed to sell money market certificates (MMCs) from March 1, 1985 (April 1, for city banks), the interest rate ceiling on deposits exceeding ¥1 billion was removed on October 1, 1985; and the minimum amount was reduced to ¥500 million in April 1986. The minimum lot of these deposits were to be reduced further, while the ceiling on the issue of CDs and MMCs was to be raised in 1986.

Interest rate controls on small business and personal loans were removed in April 1985 and ceiling rates on banks' housing loans of less than \$ 100,000 were removed in April 1986.

Since 1973, no restriction has been placed on the interest rates payable by banks on CDs. In December 1980, ceilings on interest rates on fixed deposits of trading banks and all deposits of savings banks were removed. In the light of the recommendations of Campbell Committee and Martin Report, the government removed deposit controls on trading and savings banks from August 1, 1984¹⁹.

Maturity controls on interest-bearing deposits which existed earlier in Australia have been removed.

Other Instruments

Besides the above instruments of credit control, moral suasion is used in U.S.A., U.K. and Japan (where it is known as 'window guidance') for controlling banks' lending policy. U.S.A. also uses the technique of margin requirements to regulate the use of credit for purchasing or carrying securities. Germany pursues a deposit policy for strengthening liquidity and influencing money market in the short-run by transferring public funds held by the Federal and Lander Governments, etc., with it temporarily to the banking system.

SECTION III

CONCLUSION

The country-wise survey of experience of five countries highlights the fact that though the central objectives and the main instruments—open market operations, reserve requirements and discount rate policy—of monetary policy are about the same in all the countries, the management and application of these instruments differ widely from country to country. Besides the three major instruments, the other instruments used in some of the countries are credit ceilings for central bank lending (West Germany and Japan), administrative controls on interest rates, maturity controls on deposits (Australia) and qualitative credit control techniques like selective credit control

19. Final Report of the Committee of Inquiry on the Australian Financial System (Campbell Committee Report), (September 1981).

42 RESERVE BANK OF INDIA OCCASIONAL PAPERS

(U.S.A. and Australia). In addition, moral suasion is also resorted to in U.S.A. and Japan.

Of late, the financial system in all the developed countries have become more complex due to financial innovations and deregulation. This has, inter alia, led to financial dis-intermediation thereby rendering monetary and credit management complicated and difficult. In keeping with the changes in the financial structure and economic conditions the use of all the above instruments has been undergoing transformation from time to time.

The study reveals that recently reliance has been placed on open market operations in one form or another to a larger extent than before though there is a co-ordinated use of other policy instruments. Another point highlighted by the study is that there is a move towards interest rate deregulation in almost all the countries.

BIBLIOGRAPHY

1. **The Federal Reserve System : Purposes & Functions**, Sixth Edition, September 1974.
2. Tamagna, Frank M. : **Monetary Management**, Prepared for the Commission on Money & Credit, Prentice-Hall Inc., Englewood Cliffs N.J. (1963).
3. Simpson, Thomas D. : **Money, Banking & Economic Analysis**, Prentice-Hall of India Pvt. Ltd., New Delhi (1976).
4. Ritter, Lawrence S. and Silber, William L. : **Principles of Money, Banking & Financial Markets**, (4th Revised Edition). Basic Books Inc. Publication, New York (1983).
5. **Federal Reserve Bank of St. Louis-Review**, February 1986.
6. **Report of the Committee on the Working of the Monetary System** (Radcliffe Committee) (1959).
7. **Monetary Control**, Review presented to the Parliament by the Chancellor of the Exchequer (1980).
8. Clayton, G., Gilbert, J.C., Sedgwick, R. : **Monetary Theory & Monetary Policy in the 1970s** - Proceedings of the Sheffield Money Seminars, Oxford University Press, London (1971).
9. The Functions & Organisation of the Bank of England, Reprint from the **Bank of England Quarterly Bulletin** (September 1986).
10. **First Report from the Select Committee on Nationalised Industries** (Session 1969-70), Bank of England, Her Majesty's Stationery Office, London (1970).
11. Wilson, J.S.G.: Recent changes in London's Money Market Arrangements, Reprinted from **Banca Nazionale del Lavoro**, Quarterly Review, March 1983.

44 RESERVE BANK OF INDIA OCCASIONAL PAPERS

12. **The Deutsche Bundesbank - Its Monetary Policy Instruments & Functions**, Deutsche Bundesbank Special Series No. 7, October 1982.
13. **Final Report of the Committee of Inquiry on the Australian Financial System** (i.e. Campbell Committee Report), (September 1981).
14. Gruen, F.H. : **Surveys of Australian Economics**, The Academy of Social Sciences in Australia, Sydney, George Allen & Unwin (Ed), London (1978).
15. **Reserve Bank of Australia Report & Financial Statements - June 30, 1983.**
16. **Reserve Bank of Australia Bulletin - February, 1985.**
17. **Reserve Bank of Australia - Functions & Operations**, Fourth Edition, National Library of Australia (1983).
18. **Money & Banking in Japan**, The BOJ Economic Research Department (Translated by S. Nishimura).
19. **Banking System in Japan** (1984).
20. **Annual Reports** of various central banks.
21. **OECD Economic Surveys** for U.K., U.S.A., West Germany, Australia & Japan - various issues.
22. **SEANZA Lectures : (1978 & 1982).**
23. **Changes in Money Market Instruments & Procedures: Objectives & Implications**, Bank for International Settlements, (Monetary & Economic Department) Basle, (March 1986).

THE BURDEN OF DOMESTIC PUBLIC DEBT IN INDIA

A. Seshant⁺

A definite rising trend is discernible in the internal liabilities of the Government of India from 1969-70. A change in the pattern of liabilities, rising interest rates and the lengthening of maturity periods of Government securities have contributed to a fast rise in interest payments. Given the current trends it appears that by 1992-93 a point may be reached when the market borrowings may not be adequate to meet even interest payments.

**Blessed are the young for they
shall inherit the national debt.**

- Herbert C. Hoover

1. Objective

Recent years have seen a burgeoning of domestic public debt in India, particularly of the Central Government. This has led to a concern that the country may be heading for an "Internal Debt Trap", i.e., a situation in which borrowings have to be resorted to more and more just to keep up with the servicing of debt. ".....a situation is fast approaching even without raising the interest rates on government securities and treasury bills when the Centre would have to borrow money just to pay for amortisation of debt and interest on domestic borrowings. Unless the Government controls its level of borrowings, it would enter into the debt-trap situation. I may define the internal debt trap as a situation when the capacity of the market to respond to the Government's borrow-

⁺ A. Seshan was Director of Division of Fiscal Analysis in the Department of Economic Analysis and Policy at the time of preparation of the study. He expresses his gratitude to Dr. C. Rangarajan, Shri A. Hasib and other colleagues for their comments on an earlier draft and to Dr. Anupam Basu, Shri K.G. Patkar, Shri K.L. Deshpande and others who participated in a departmental seminar on the subject. He is grateful to Dr. S.R.K. Rao for suggesting this subject to him and for the discussions he had with him. Statistical assistance received from Shri R.K. Patnaik, Shri V.T. Hedavkar and Shri D.C. Patra is acknowledged with thanks.

als being limited, the amount borrowed might be just sufficient to meet with the debt servicing burden. After that threshold, the country would enter into an internal debt trap, i.e., the borrowings would not be sufficient enough to meet even the debt servicing charges".¹ The Fourth Pay Commission has also sounded a warning that increasing reliance on borrowing for Plan financing could lead to serious budgetary problems in the future. The manner of borrowings has monetary implications. The Long-Term Fiscal Policy has taken cognisance of the problem. It has projected the levels of market borrowings and budgetary deficit as proportions of Gross Domestic Product during the Seventh Plan period and stated: "The projected Seventh Plan shares for these two components are noticeably lower than the actual corresponding averages for the Sixth Plan and reflect our concern that the Government's recourse to bank credit be contained to levels consistent with reasonable price stability."² It is the objective of this study to review the trends in the **internal liabilities of the Government of India** and find out what they portend for the coming years. Such analytical issues as the concept of debt burden, gross and net debt, gross and net interest burden and real and nominal liabilities are dealt with. However, operational matters of debt management are outside the purview of the study. The study consists of five sections. Section I deals with the objective of the study and the concept of 'Debt Burden'. Section II is on internal liabilities of the Centre while Section III is on interest payments. Section IV examines the question of "Internal Debt Trap". Concluding remarks are given in Section V.

Debt Burden

The concept of debt burden has been an area of intense controversy in Public Finance. By drawing an analogy between private and public debt the classical economists (Adam Smith, Ricardo and Pigou) considered all public debt as a burden. They postulated that taxes reduced mainly consumption while internal borrowing led to a reduction

-
1. Dr. S.R.K. Rao, **Bank Economists' Meet 1986**, Punjab National Bank, New Delhi.
 2. **Long-Term Fiscal Policy**, Government of India, December 1985.

in private capital formation. To quote Pigou: "Finance by loans does hit capital and, through this, the economic fortunes of future generations somewhat more hardly than finance by taxes."³ The underlying assumption was, of course, one of full employment. Denying this assumption the early Keynesians regarded the choice between the two means of financing as a matter of controlling the level of aggregate demand and employment.⁴ Given the level of public expenditures, governmental commitment to the maintenance of full employment and the stability of price level eliminates the freedom to choose the level of taxation and borrowing and thus the possibility of influencing investment in this way. The analogy between private and public debt is inappropriate in view of certain unique characteristics of Government as a sovereign authority and their macro-economic implications. There is a stabilisation aspect to public debt when the idle savings of the community are activated through public borrowing and investment in order to augment aggregate demand and maintain full employment. Redistributive effects of public debt may result in a real burden due to a disproportionate relationship between the payment of taxes to service the debt and the receipt of goods and services provided with the debt-created funds.

A fundamental distinction needs to be made between internal debt and external debt. When internal debt is incurred resources are just transferred from one sector to another within the country. It does not imply any additional real resources. On the other hand, external debt facilitates the use of additional real resources imported from foreign countries. This dichotomy is meaningful from the point of view of repayment also. The servicing of the internal debt does not involve any reduction in the real resources within the country. It is a mere transfer from Government to the bond-holders. On the other hand, the servicing of external debt necessitates the export of goods and services and does connote a transfer of resources outside the country.

3. A.C. Pigou, *A Study in Public Finance*, 2nd Edition Macmillan, London, 1929.

4. Anibal A. Cavaco - Silva, *Economic Effects of Public Debt*, Martin Robertson, London, 1977.

One should also keep in view the distinction between nominal debt and real debt. Inflation benefits borrowers and affects lenders adversely, whether they are in the private or public sector. The loss in real value of Government IOUs tantamounts to an inflation tax.

In his celebrated article entitled "The 'Burden of the Debt' and the National Income" Domar showed that the problem of debt is essentially a problem of achieving a growing national income.⁵ The faster the income grows the lighter will be the burden of debt. In other words, one should be concerned not with the absolute level of debt but its ratio to national income.

There is, however, a popular view that the national debt is a burden in some way and acts as a drag on the economy's performance. The burden arises because debts of the Government are ultimately debts of the tax payers. However, the national debt is mostly a debt that we owe to ourselves. Looking at all the people together, on average they both own national debt and owe it to themselves. Thus on this basis it cancels out except that part of the debt owed to foreigners.

But there are two reasons why the debt may be a problem.⁶ Some owning a Government bond, for example, could have owned stocks. It is possible that debt displaces other forms of assets that people might hold. People may save by holding national debt rather than physical capital. It would mean that the stock of physical capital is lower than it would be without debt. Therefore, there is less physical capital available for production. This argument may be considered by some as being not applicable to India in view of the negligible ownership of Government securities by the public other than Government-owned institutions. The market for Government securities is narrow and captive. It is confined to institutional investors, mainly Reserve Bank of India, Commercial Banks, Life Insurance Corporation of India, General Insurance Corporation of India, Provident Fund Schemes and other trust

5. Evsey D. Domar, **Essays in the Theory of Economic Growth**, Oxford University Press, New York, 1957.
6. Stanley Fischer and Rudiger Dornbusch, **Economics**, McGraw-Hill International Book Company, New York, 1983.

funds. While the Bank holds the securities on its own account for conducting open market operations and for maintaining them as an asset in the Issue Department and the Banking Department, other investors invest in order to comply with the provisions of the statutes governing their operations.⁷ At the end of March 1982 individuals owned 0.2 per cent of the outstanding Central and State Government securities.⁸ Notwithstanding this one may argue that if Government had not borrowed a certain amount it would have become available to the private sector for investment purposes. To the extent that Government borrowings are used for current consumption purposes this argument will be relevant from the point of view of capital formation in the economy as a whole.

The second reason is that interest payment on a rising debt can become very large. It builds a very large outlay into the budget and makes the expenditure policy of the Government somewhat inflexible. If the Government cannot raise resources through taxes and instead resorts to borrowing from the public a vicious circle merges. "The debt is large and therefore interest payments are high. But because interest payments are high the Government has to borrow to pay them. That means the debt is increasing, and therefore interest payments are increasing."⁹

This situation may mean trouble. Unless the Government can raise taxes it has to find some other way of financing its outlays. One way is to borrow from the public. Another way is to print money to finance the debt. There is the possibility that a large deficit and debt may ultimately lead to the Government's printing money and thereby creating inflation that is at the bottom of popular fears about deficit. A ceiling on public debt has been prescribed in law in U.S.A. where there is a

7. **Functions and Working**, Reserve Bank of India, R.B.I. 1983.

8. "Ownership of Government (Rupee) Debt: March 31, 1982 and Preliminary Trends in 1983 and 1984," Reserve Bank of India Bulletin, January 1984.

9. **Economics**, *op. cit.*

statutory debt limit which, by the Act of October 13, 1984, was established at \$ 1,823,800 million.¹⁰

In the Sir Chintaman Deshmukh Memorial Lecture James Tobin portrayed the long-term consequences of ever-rising public deficits and debt.¹¹ He also pointed out the vicious circle of higher interest rates accelerating the growth of debt as the rates cannot be taken to be constant while the debt grows relative to the economy.

In the literature on public debt there has also been an intense discussion about the inter-generational transfer of debt burden. The orthodox position is that a debt burden rests largely on the present generation which creates the debts and that it may be shifted to future generations only if the present generation reduces its rate of saving as a result of the debt creation.¹² On the other hand, opponents of this view have contended that taxes for the servicing of debt are an actual net burden passed on to future generations since they would not have been collected from them if the present generation had met its expenditure through taxation while the bond-holders of the present generation would have received income any way from whatever other assets in which they might have invested their savings. However, even though the inter-generational transfer of the financial burden of debt may occur, the later generations are likely to consume some of the real benefits from the earlier Government investment financed by debt. Failure to use a comprehensive approach to inter-generational debt equity, taking a total view of primary and secondary costs and benefits, has been a weak point in the literature on public debt.

II Internal Liabilities of Government of India

The internal liabilities of the Government of India may be classified into two categories, viz., "Internal debt" and

-
10. **Report of the Committee to revise Public Debt Act 1944, Public Debt Rules 1946, etc.**, Reserve Bank of India, 1986.
 11. James Tobin, "Central Banks and Government Budgets", Reserve Bank of India Bulletin, January, 1985.
 12. Bernard P. Herber, **Modern Public Finance**, Richard D. Irwin Inc.

"Other liabilities". Internal debt consists of (i) Market Loans, (ii) Treasury Bills, (iii) Special Securities issued to RBI, (iv) Special Bearer Bonds and (v) Balances of expired loans, Prize Bonds, Premium Prize Bonds, Compensation Bonds, etc. (Annuity Certificates are excluded from here and included under Small Savings). "Other liabilities" comprise: (i) Small Savings, (ii) State Provident Fund, (iii) Public Provident Fund, (iv) Postal Insurance and Life Annuity Fund, (v) Hindu Family Annuity Fund, (vi) Borrowings against Compulsory Deposits, (vii) Income-tax Annuity Deposits, etc. and (viii) Deposits.¹³ All liabilities owed within the Central Government by one ministry to another are not considered as liabilities for the purpose of this study. Non-negotiable and non-interest bearing securities issued to International Financial Institutions like IMF, IBRD and IDA are also not considered as liabilities.

In reviewing trends in the internal liabilities one has to keep in mind the distinction between gross liabilities and net liabilities. Just as the Centre has debt obligations to others, the latter too have similar obligations to the former. For example, the Central Government issues loans to the States, public enterprises, etc. Such outstanding claims within the country have to be netted out of the gross liabilities to arrive at a meaningful measure of the internal debt burden on the Centre. Another point to be borne in mind is the change, if any, in the composition of debt. Generally, "Other liabilities" carry a higher rate of interest than internal debt. The change in interest burden over a period will depend on the relative composition of debt in terms of these two categories as also on change in interest rates.

Gross Aggregate Liabilities - Trends

The Fourth Plan commenced from 1969-70 after three years of Plan Holiday. Further between 1950-51 and 1968-69 net aggregate internal liabilities moved within a narrow range, i.e., between Rs. 1,662 crores and Rs. 1,848 crores. A definite rising trend is discernible from 1969-70 onwards. Hence 1968-69 is taken as the base year for analysis.

13. "Reserve Funds" are shown under Other Liabilities in the budget documents but are excluded here.

Data are presented in Table 1 on the Gross and Net Aggregate Internal Liabilities of the Government of India. Gross Aggregate Internal Liabilities (GAIL) rose from Rs.10,134 crores in 1968-69 to Rs.138,213 crores in 1986-87 (RE). According to the budget for 1987-88 they are likely to go up to Rs.161,029 crores at the end of the year. The annual compound growth rate works out to 15.6 per cent up to 1986-87 (RE) and 15.7 per cent up to 1987-88(BE). If the dues receivable from others are excluded the Net Aggregate Internal Liabilities (NAIL) can be arrived at. NAIL rose from Rs. 1,662 crores in 1968-69 to Rs.67,788 crores in 1986-87 (RE) with an underlying compound growth rate of 22.9 per cent. If the budget estimates for 1987-88 are taken into account NAIL will be Rs. 82,267 crores and the compound growth rate since 1968-69 would be 22.8 per cent. One point emerging from the table is that NAIL as a proportion of GAIL has shown a rising trend from 16.4 per cent in 1968-69 to 49.0 per cent in 1986-87 and 51.1 per cent in 1987-88. In other words the liabilities of the Centre are contracted for its own use at a faster rate than for lending to others. It is this feature which has resulted in NAIL showing a higher growth rate than GAIL as mentioned above and the consequent interest burden.

Composition of GAIL

GAIL consists of a number of liabilities other than internal debt. Generally it is the other liabilities like Small Savings which carry a higher rate than market borrowings and other instruments of internal debt. The rising interest burden on Government is a result of two factors - the increase in the interest rates over the years, a point referred to later, and the increase in the proportion of the high-interest bearing liabilities in GAIL. Hence a reference to the composition of GAIL is appropriate at this stage. For obvious reasons this cannot be attempted for NAIL.

There has been a distinct rising trend in the proportion accounted for by other liabilities to GAIL. This is revealed also by the data for the years between 1968-69 to 1985-86 which are not included in Table 2.

Change in Maturity Pattern of Loans

Even though the proportion of market loans to GAIL has declined since 1968-69 it is worth examining as to how the maturity pattern has changed. The dated securities with long maturity carry a higher rate of interest than others. Data are available on maturity pattern up to 1986 which are presented in Table 3.

Maturities have lengthened remarkably over the years. While the proportion of securities with a remaining life of 5 years and below to the total declined from 44.0 per cent to 10.2 per cent, that of the securities with a remaining maturity of 15 years and above rose from 26.0 per cent to 64.3 per cent. The weighted average maturity period of security issued under the borrowing programme for 1968-69 was 18.1 years which rose to 19.2 years in 1981-82 and further to 25.8 years in 1985-86.

The lengthening of maturities observed in Table 3 has certain serious implications. In the first place it means a rising interest burden in as much as Government debt with long maturities carry a higher interest rate than that with short maturities. The position is further aggravated by the across-the-board rise in interest rates effected by Government in recent years. Secondly, there is the question of the quantum of debt burden being passed on to the future generations. While referring to the 'crowding out' effect of public borrowing Tobin said: "The burden of public debt on our children and our children's children is that we collectively bequeath them smaller stocks of the assets on which their living standards will depend"¹⁴ Whether public investment which, *inter alia*, is one of the reasons for public borrowing in India results in crowding out private investment is a matter of controversy. While Krishnamurty finds that Government investment crowds out private investment in the short run Pani has shown the substantial stimulating effect of the former on the latter.¹⁵ This is a matter which needs a separate study by

14. op. cit.

15. (i) K. Krishnamurty, **Inflation and Growth, A Model for India**, 1961-80, Institute of Economic Growth, Delhi (Mimeo). (ii) P.K. Pani, "A Macro Model of Indian Economy with special Reference to Output, Demand and Prices (1969-70 to 1981-82)", **Reserve Bank of India Occasional Papers**, December 1984.

itself and cannot be covered here. However, it is possible to look ahead and estimate the nominal debt burden that will be passed on to the next generation. For this purpose though it may be arbitrary, we may select the beginning of the 21st century which will be reached 13 years from now. Of the GAIL of Rs. 1,61,029 crores as on March 31, 1988 internal debt will constitute Rs. 93,045 crores (57.8 per cent) and "other liabilities" Rs. 67,984 crores (42.2 per cent). It is not possible to find out how much of the other liabilities (Small Savings, Provident Funds, etc.) would be maturing for payment in the year 2000. However, one can determine the amount of the current outstanding market loans that would be carried over to that year. Thus, of the total internal debt of Rs. 93,045 crores, as on March 31, 1988, Rs. 37,798 crores, or 40.6 per cent would still be outstanding at the beginning of 2000 as the loans would be maturing for repayment between 2000 and 2015. In the remaining years of this century many more loans would be floated which would be due for repayment in the next century. Thus the nominal internal debt carried over to the beginning of the next century would be more than Rs. 37,798 crores mentioned above. Further there would be other liabilities also about which we cannot have any estimate. At the same time the net liabilities of the Centre (NAIL) may be well below the gross liabilities. However, considering that NAIL has been increasing as a proportion of GAIL it is evident that the amount of all (net) liabilities carried over to the next century would be substantial. To have a total view of the debt burden on the future generations one needs to study the combined liabilities of the Centre and the States netting out the intra-governmental debt transactions. However, this is not done for two reasons, viz., (i) it falls outside the scope of the study and (ii) data on the liabilities of others owed to State Governments are not readily available from the budget documents.

Trends in Net Liabilities

The trends in NAIL are reviewed in Table 4 in relation to both nominal and real values.

NAIL increased from Rs. 1,662 crores at the end of 1968-69 to Rs. 53,546 crores at the end of 1985-86 recording an annual compound growth rate of 22.7 per cent. In the Fourth Plan period (1969-74) the growth rate was 21.4 per cent. It accelerated to 29.4 per cent in the Sixth Plan period (1980-81 to 1984-85). The acceleration

is also brought out by the proportion of NAIL to GDP at market prices (current prices). It rose from 5.0 per cent in 1968-69 to 22.0 per cent in 1985-86. Between 1968-69 and 1975-76 the proportion varied in a range of 4.6 per cent and 7.7 per cent. Although it fell in 1978-79 and in 1983-84 the underlying trend is one of increase since 1977-78.

Due to the rise in prices during the period covered the burden of real NAIL has not increased to the same extent as nominal NAIL. Thus the annual compound growth rate of aggregate real debt was 13.7 per cent between 1968-69 and 1985-86 against 22.7 per cent in nominal debt.

The trends in per capita NAIL are presented in Table 5. Over the period 1968-1986 per capita nominal NAIL grew at a compound rate of 20.0 per cent. However, the rate for per capita real NAIL was 11.2 per cent. These rates may be compared with the growth rates in the nominal and real aggregates, viz., NAIL, which were 22.7 per cent and 13.7 per cent, respectively. Thus the per capita growth rates were lower than those of aggregates due to the population growth. However, more recently during the Sixth Plan period, the per capita nominal and real NAIL were growing at a rate of 26.7 per cent and 16.5 per cent, respectively, against 29.4 per cent and 19.0 per cent, respectively, in the NAIL proper. The per capita growth rates are still lower than those for the aggregates but the rising trend should be noted.

III Interest Payments

The trends in interest payments relating to aggregate liabilities considered earlier are presented in Table 6.

As in the case of Aggregate Internal Liabilities one has to keep the distinction between Gross Interest Payments (GIP) and Net Interest Payments (NIP). Otherwise, a distorted view of interest payments may be obtained. The Centre receives interest on the loans advanced to States and others and they are sizeable. One has to net out the interest receipts to arrive at NIP.

In finding out the net interest burden the question arises as to the treatment to be accorded to the interest paid to the Reserve Bank of India which holds a large proportion of Government securities. The income of the RBI is

to a large extent traceable to its operations in the financing of Government. One may argue that the interest income of the RBI from holding Government securities should also be deducted from GIP to arrive at the net position. However, in view of the monetary implications of the holding of the Government securities by the RBI any adjustment for interest received by it would present a distorted picture of the Government's interest burden. In fact one may argue that the cost of RBI's financing of Government deficit is not represented only by the interest received by it; it has wider ramifications in terms of the impact on money supply and prices.

From Table 6 it is evident that until 1973-74 the interest receipts of the Centre exceeded its payments. In fact negative payments started in 1963-64 when the Centre received Rs. 32.6 crores more by way of interest than what it paid. NIP has been rising at a fast pace since 1978-79. The annual compound growth rate of NIP is 52.1 per cent for the period 1978-79 to 1985-86. As a result NIP as a proportion of revenue receipts, tax receipts and revenue expenditure has gone up from 1.4 per cent, 1.8 per cent and 1.4 per cent respectively, in 1978-79 to 9.8 per cent, 13.5 per cent, and 8.2 per cent, respectively, in 1985-86. The rising interest burden is brought out more dramatically by the rising trend in recent years in the proportion of interest payments on market borrowings to net market borrowings. In 1986-87 nearly two-thirds of net market borrowings were pre-empted by interest payments.

Interest Rates

In addition to the fact that the proportion of high interest-bearing sources of borrowings has gone up in total liabilities there has been a distinct rising trend in the rates of interest also.

Data presented in Table 7 show that both the minimum and maximum in the range of interest rates payable on dated securities have risen by a large number of points. As a result the range which was 4.50 to 5.50 per cent in 1968-69 became 9.00 to 11.50 per cent in 1985-86. In 1986-87 the minimum went up to 10 per cent. Further the highest rate of 11.50 per cent which was paid for a

30-year loan in 1985-86 was available for a 20-year loan in the market floatations of 1986-87. As a consequence of the general across-the-board rise in interest rates the weighted average rate of interest of 5.07 per cent in 1968-69 more than doubled to 11.08 per cent in 1985-86.

In the loan tranches for 1987-88 floated so far rates of interest of 11.50 per cent, 11.00 per cent and 10.50 per cent have been announced for 20-year, 15-year and 10-year loans, respectively. Similar increases in the rates are observed in respect of other liabilities also (Table 8).

The rates of interest on only such liabilities as are available are presented in Table 8. The rate of interest of 4.26 and 8.22 per cent on market loans in 1968-69 and 1985-86, respectively, refer to the weighted rate of interest on all such liabilities **outstanding at the end of these years**. (In Table 7 the rates of interest refer only to loans **floatated during the year** mentioned in Col. 1). While the rates on Treasury Bills rose only by a small amount the increase in respect of Small Savings and Provident Funds is large. As a result the weighted average rate went up from 4.17 per cent in 1968-69 to 7.85 per cent in 1985-86. This hardening in the rates has contributed to the acceleration in the net interest payments of recent years.

The Government of India has also been raising its interest rates on the loans issued to the States and Union Territories. Details are not available on all the loans. The limited data presented in Table 9 give some idea about the trend.

One additional factor that should be borne in mind is the compounding nature of interest liabilities in respect of some instruments of borrowing. Provident Funds and certain schemes under Small Savings have provisions for the compounding of interest. The compounding effect gets reflected in the growth of both GAIL and NAIL. To the extent interest rates are further raised or the proportion of such instruments in the total increases the compounding effect on the interest burden will get aggravated.

IV Internal Debt Trap

The question whether we would reach a situation when even the annual interest payments will exceed the annual borrowings can be answered in a limited context. If one were to look at the trends in net market borrowings and interest payments on such borrowings one finds that they were growing at annual rates of 15.3 per cent and 25.7 per cent, respectively, between 1979-80 and 1986-87. These growth rates are the end result of the fiscal operations of Government. Thus they sum up in a nutshell the overall trends in fiscal pressures. If this trend continues the annual interest payments on market borrowings will exceed annual net market borrowings by 1992-93. One may argue that different reference periods with different growth rates may give different results. But there will not be any change in the basic situation portrayed by interest payments *vis-a-vis* market borrowings. It could, at best, mean a postponement of the day of reckoning. It is to be noted here that the normative ratios mentioned in the Long-Term Fiscal Policy between net market borrowings and Gross Domestic Product have been exceeded in the last two budgets - a symptom of the emerging fiscal crisis.

The scope for market borrowing by the Government of India is characterised, among others, by four factors which would lead to an internal debt trap situation. Firstly, although funds are spent from a common kitty one may say that, to a significant extent, the amount borrowed goes towards non-developmental expenditure. Consequently, such expenditure does not result in asset creation and contribute to the growth in the economy. From the beginning of the 6th Plan till 1986-87 non-developmental expenditure has been growing at 19.2 per cent per annum against 17.4 per cent for developmental expenditure. This is to be seen in the context of the argument made by some that since debt is contracted for financing development its growth is not a matter of concern. Secondly, even if it is presumed that fiscal deficits are incurred for capital formation, the time-lags in the flow of output from the newly-created assets have to be taken into account. The inordinate delay in the fructification of investment slows down the growth process in the economy. Thirdly, Government securities have a captive market in that nearly 99 percent of their value

is held by Government or quasi-Government institutions. Hence the assumption that large-scale mobilisation of household sector savings into Government securities is possible does not appear to be realistic. Lastly, even within the captive market the Reserve Bank of India usually absorbs any residuary portion of the loan tranches. However, consequent on Government accepting monetary targeting proposed by the Report of the Committee appointed to Review the Working of the Monetary System this might not be possible in the future¹⁶

V Concluding Remarks

The study of trends in public debt has revealed that both nominal and real (net) internal debt of the Government of India have blown up enormously although, due to inflation, the rate of growth of the latter is not as sharp as that of the former. Another worrying aspect is the rising proportion of debt to national income. NAIL as a proportion of GAIL has been rising indicating the need for the Centre to borrow more and more for its own use rather than for lending to others. The maturity pattern of securities and the composition of liabilities are tilting towards the long end of the interest range. There has been a general hardening of the interest rates. As a result the growth in interest payments on market borrowings was such that they accounted for 62.7 per cent of the net market borrowings in 1986-87. Calculations based on the current trends reveal that a point of no return may be reached by 1992-93 when **net market borrowings may not be sufficient to pay even interest on market borrowings.**

It is difficult to lay down a satisfactory level for public debt. For it depends not only on the quantum of debt but also on the manner in which it is raised. The basic problem is one of raising resources for financing the Plan. Taxes could be raised or money printed or wasteful expenditure cut down. The scope for raising direct taxes is limited in the country given the narrow income base. Any increase in indirect taxes has an adverse effect on the price level. It is also inequitable given the regressive

16. Dr. S.R.K. Rao, Bank Economists' Meet, 1986 Punjab National Bank, New Delhi.

nature of indirect taxes in general and the large proportion of the population living near about the subsistence level. Deficit financing or printing money does not create real resources; it aggravates only the price rise particularly in a country vulnerable to the vicissitudes of the monsoon. Also it adds to the debt owed to the Central Bank by the Government. If the Government wants to avoid recourse to created money or the banking sector it has to pay higher interest than what is now offered to attract subscriptions from the public. Such higher interest rates will further exacerbate the interest burden on the Government making it necessary to borrow even more for servicing the debt. The suggestion for paying real rates of interest on Government bonds or Treasury Bills needs to be examined in relation to the interest burden already faced by Government. Large interest payments build inflexibility into the revenue budget. The alternative is to cut down wasteful expenditure for which admittedly there is large scope. The recent proposals of Government for a thorough review of expenditure policies is a step in the right direction. In this connection a few points may be made. An in-depth analysis of subsidies needs to be done to find out their economic rationale, their beneficiaries and the real cost to the exchequer (including hidden costs, if any) Such a study should help in eliminating subsidies which do not serve the purpose for which they are meant. Secondly, there is a need to take effective measures to avoid cost over-runs in public enterprises which eventually recoil on the Central finances. If they generate resources expected of them it would relieve, to some extent, the Central budget of its financial burden. Thirdly, the medium-term loans issued by the Centre to the States periodically to clear their overdrafts with the RBI or to cover their budgetary gaps are also a drain on the Central resources. To the extent the States practise financial discipline the need for such loans will be eliminated.

While the macro-economic issues of public debt are somewhat intractable there is a need to tidy up project appraisal procedures. If at the micro-level project formulation, appraisal and implementation are done on proper lines it can to some extent mitigate the adverse effects of the rising debt. The effects of Government borrowing on resource allocation in the economy need to be studied in depth to know the extent of 'crowding out', if any, of

the private sector, which has a definite share in the implementation of the Plan. One should also remember that much of Governmental expenditure has an element of complementarity. Thus Government may have to incur expenditure within the country when it spends abroad for the implementation of projects. The direct and indirect effect of Government expenditure on domestic prices and the trends in capital-output ratios also need to be investigated.

Since budget formulation is an annual feature there is scope for a continuous review of the issues raised in this article. Internal debt trap is no less serious than external debt trap from the point of view of macro-economic management. External borrowings may not be just another option to the problem of mobilisation of resources.

If borrowed funds are used productively with a good return servicing the debt should not be a problem. However, the general inability of many public enterprises to earn an adequate return in the past has been one of the factors for the emergence of deficits on the revenue account in recent years. Hence any improvement in the working of these enterprises should help in alleviating the problem of debt service.

It is obvious that while Government can determine the level of market borrowings it is not easy for it to have control on such sources of finance as Provident Funds or Small Savings unless fiscal incentives are modified. Thus market borrowings will have to be moderated keeping in view the growth in other liabilities outside its control. It should also be seen in the total context of other aspects of economic policy including monetary policy. As the Radcliffe Committee Report said: "For the debt ought not be regarded as a given total, whose structure alone can be manipulated. If all possible courses in manipulating the structure threaten serious disadvantage, this can be a reason for aiming at a bigger Exchequer cash surplus (or smaller deficit), so as to lessen the difficulties of management of debt.... The debt is not, that is to say, to be regarded as a residual among quantities of economic policy.... Thus debt management can be regarded neither

as something to be, as it were, left to the last and adjusted to all other policy decisions, nor on the other hand as a consideration which should override all other policy decisions; it has to be integrated with a variety of measures in the pursuit of the broad aims of economic policy."¹⁷

17. Committee on the Working of the Monetary System - Report, Her Majesty's Stationery Office, London, 1959.

TABLE 1 : GROSS AND NET INTERNAL LIABILITIES OF THE GOVERNMENT OF INDIA
(Rs. crores)

Year	Gross Aggregate Internal Liabilities (GAIL)	Amount due from Pakistan on account of pre-partition debt	Loans advanced by the Central Government	Net Aggregate Internal Liabilities (NAIL) (2-3-4)
1	2	3	4	5
1968-69	10,134	300	8,172	1,662 (16.4)
1969-70	10,648	300	8,644	1,704 (16.0)
1970-71	11,811	300	9,253	2,258 (19.1)
1971-72	12,888	300	9,752	2,836 (22.0)
1972-73	15,323	300	11,354	3,669 (23.9)
1973-74	16,856	300	12,180	4,376 (26.0)
1974-75	18,741	300	13,522	4,919 (26.2)
1975-76	20,806	300	15,125	5,381 (25.9)
1976-77	22,952	300	17,269	5,383 (23.5)
1977-78	29,041	300	19,081	9,660 (33.3)
1978-79	31,624	300	22,777	8,547 (27.0)
1979-80	37,748	300	26,154	11,294 (29.9)
1980-81	45,544	300	29,351	15,893 (34.9)
1981-82	53,023	300	33,311	19,412 (36.6)
1982-83	68,213	300	39,431	28,482 (41.8)
1983-84	76,751	300	45,120	31,331 (40.8)

TABLE 1 : GROSS AND NET INTERNAL LIABILITIES OF THE GOVERNMENT OF INDIA (Concl'd.)

1	2	3	4	5	
1984-85	92,880	300	51,575	41,005	(44.1)
1985-86	114,919	300	61,073	53,546	(46.6)
1986-87 (RE)	138,213 *	300	70,125	67,788	(49.0)
1987-88 (BE)	161,029 *	300	78,462	82,267	(51.1)

(Figures in brackets under Co. 5 are percentages to Gross Aggregate Internal Liabilities under Col. 2)

*Assuming Rs. 1,607 crores and 1,757 crores as outstanding Reserve Funds, for 1986-87 and 1987-88, respectively, which are excluded from GAIL.

Source: 1. Union Government Finance Accounts for the years 1968-69 to 1985-86.

2. Government of India, Receipts Budget, 1987-88.

TABLE 2 : COMPOSITION OF GAIL

		(Rs. crores)			
		1968-69	1985-86	1986-87 (RE)	1987-88 (BE)
(1)	(2)	(3)	(4)	(5)	
A.	Internal Debt	6,176 (60.9)	67,951 (59.1)	80,989 (58.6)	93,045 (57.8)
	Of which:				
i)	Current market loans	3,928 (38.8)	35,241 (30.7)	40,540 (29.3)	46,840 (29.1)
ii)	Treasury Bills	2,244 (22.1)	26,014 (22.6)	33,864 (24.5)	39,874 (24.8)
B.	Other Liabilities	3,958 (39.1)	46,968 (40.9)	57,274 (41.4)	67,984 (42.2)
	Of which:				
i)	Small Savings	1896 (18.7)	21,449 (18.7)	26,349 (19.1)	31,749 (19.7)
ii)	State Provident Funds	686 (6.8)	4,001 (3.5)	4,435 (3.2)	4,915 (3.1)

TABLE 2 : COMPOSITION OF GAIL (Concl'd.)

(1)	(2)	(3)	(4)	(5)
iii) Deposits				
	591 (5.8)	10,109 (8.8)	11,786 (8.5)	13,366 (8.3)
Gross Aggregate Internal Liabilities	10,134 (100.0)	114,919 (100.0)	138,213 (100.0)	161,029 (100.0)

(Figures in brackets are percentages to Gross Aggregate Internal Liabilities)

Source: 1. Union Government Finance Accounts.

2. Government of India, Receipts Budget, 1987-88.

TABLE 3 : MATURITY PATTERN OF CENTRAL
GOVERNMENT SECURITIES

	(Rs. crores)		
	End- March 1.	Amount 2.	Percent to total 3.
Up to 5 years	1969	1,573.0	44.0
	1982	2,458.1	13.2
	1986	3,600.9	10.2
Above 5 years and upto 10 years	1969	388.4	10.9
	1982	3,052.9	16.4
	1986	5,468.9	15.5
Above 10 years and up to 15 years	1969	423.5	11.9
	1982	2,018.4	10.9
	1986	3,286.7	9.3
Over 15 Years	1969	930.4	26.0
	1982	10,791.8	58.1
	1986	22,696.1	64.3
Non-Terminable	1969	257.8	7.2
	1982	257.8	1.4
	1986	250.7	0.7

Source : 1) 'Ownership of Government (Rupee) Debt',
March 31, 1982 and Preliminary Trends
in 1983 and 1984, **Reserve Bank of India
Bulletin January 1986.**

2) Derived from the Material in Report on
Currency and Finance, R.B.I. for 1986.

TABLE 4 : TRENDS IN NET AGGREGATE INTERNAL LIABILITIES

End-March	Net Aggregate Internal Liabi- lities (NAIL) (Rs.crores)	GDP at market prices (current prices) (Rs.crores)	Proportion of Col. 1 to Col. 2	GDP Defla- tor (1970-71 prices)	Real internal debt (NAIL) Rs.crores (1 ÷ 4)
	(1)	(2)	(3)	(4)	(5)
1968-69	1,662	33,276	5.0	0.931	1,785
1969-70	1,704	36,851	4.6	0.969	1,759
1970-71	2,258	40,263	5.6	1.000	2,258
1971-72	2,836	43,367	6.5	1.053	2,693
1972-73	3,669	47,919	7.7	1.171	3,133
1973-74	4,376	58,994	7.4	1.390	3,148
1974-75	4,919	69,674	7.1	1.638	3,003
1975-76	5,381	74,344	7.2	1.588	3,389
1976-77	5,383	80,198	6.7	1.695	3,176
1977-78	9,660	89,815	10.8	1.756	5,501
1978-79	8,547	97,860	8.7	1.791	4,772
1979-80	11,294	107,542	10.5	2.071	5,453
1980-81	15,893	127,453	12.5	2.305	6,895
1981-82	19,412	147,684	13.1	2.520	7,703

TABLE 4 : TRENDS IN NET AGGREGATE INTERNAL LIABILITIES (Concl.d.)

	(2)	(3)	(4)	(5)
1982-83	28,482	17.2	2,718	10,479
1983-84	31,331	16.1	2,963	10,574
1984-85	41,005	19.1	3,153	13,005
1985-86	53,546	22.0	3,370	15,889

Source : GDP data are taken from National Accounts Statistics, Central Statistical Organisation, 1987, January.

TABLE 5 : PER CAPITA NET AGGREGATE INTERNAL LIABILITIES
(NOMINAL AND REAL)

Year	Net Aggregate Internal Liabi- lities (Nominal) (Rs. crores)	Net Aggregate Internal Liabi- lities (Real) (Rs. crores)	Population (Million)	Per Capita Debt (Nominal) (Rs.)	Per Capita Debt (Real) (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)
1968-69	1,662	1,785	518	32.08	34.46
1969-70	1,704	1,759	529	32.21	33.25
1970-71	2,258	2,258	541	41.74	41.74
1971-72	2,836	2,693	554	51.19	48.61
1972-73	3,669	3,133	567	64.71	55.26
1973-74	4,376	3,148	580	75.45	54.28
1974-75	4,919	3,003	593	82.95	50.64
1975-76	5,381	3,285	607	88.65	54.12
1976-77	5,383	3,176	620	86.82	51.23
1977-78	9,660	5,501	634	152.37	86.77
1978-79	8,547	4,772	649	131.69	73.53
1979-80	11,294	5,453	664	170.09	82.12
1980-81	15,893	6,895	679	234.06	101.55
1981-82	19,412	7,703	694	279.71	110.99
1982-83	28,482	10,479	709	401.72	147.80
1983-84	31,331	10,574	724	432.75	146.05

TABLE 5 : PER CAPITA NET AGGREGATE INTERNAL LIABILITIES (Concl.d.)

1	2	3	4	5	6
1984-85	41,005	13,005	739	554.87	175.98
1985-86	53,546	15,889	754	710.16	210.73

(Population data are taken from National Accounts Statistics, Central Statistical Organisation, New Delhi).

TABLE 6 : GROSS AND NET INTEREST PAYMENTS OF GOVERNMENT OF INDIA AND
RELATION TO REVENUE RECEIPTS, TAX RECEIPTS, REVENUE EXPENDITURE AND
NET MARKET BORROWINGS

(Rs. crores)

	Internal Interest Payments on all Liabilities		Interest Payments on Market Borrowings	Revenue Receipts	Tax Receipts	Revenue Expendi- ture	Net market borrowings
	Gross	Net					
	1	2	3	4	5	6	7
1968-69	368	-146	159 (206. 5)	2,760	2,019	2,781	77
1969-70	397	-195	170 (122. 3)	3,067	2,201	2,942	139
1970-71	434	-153	191 (142. 5)	3,342	2,451	3,179	134
1971-72	490	-107	203 (69. 3)	3,972	2,928	4,128	293
1972-73	571	-141	233 (53. 8)	4,578	3,443	4,593	433
1973-74	669	-66	267 (56. 7)	5,073	3,900	4,836	471
1974-75	826	55	292 (59. 1)	6,558 (0. 8)	5,097 (1. 1)	5,793 (0. 9)	494 (11. 0)

TABLE 6 : GROSS AND NET INTEREST PAYMENTS OF GOVERNMENT OF INDIA AND
RELATION TO REVENUE RECEIPTS, TAX RECEIPTS, REVENUE EXPENDITURE AND
NET MARKET BORROWINGS (Contd.)

	1	2	3	4	5	6	7
1975-76	1,021	90	339 (74.8)	8,075 (1.1)	6,010 (1.5)	7,188 (1.3)	453 (19.9)
1976-77	1,135	32	377 (44.6)	8,739 (0.4)	6,581 (0.5)	8,440 (0.4)	845 (3.8)
1977-78	1,275	-153	442 (37.1)	9,792	7,060	9,362	1,192
1978-79	1,566	152	556 (33.6)	11,240 (1.4)	8,568 (1.8)	10,948 (1.4)	1,654 (9.2)
1979-80	1,931	571	671 (34.2)	11,340 (5.0)	8,568 (6.7)	12,034 (4.7)	1,961 (29.1)
1980-81	2,323	534	808 (31.0)	12,829 (4.2)	9,388 (5.7)	14,544 (3.7)	2,603 (20.5)
1981-82	2,889	679	1,016 (35.0)	15,574 (4.4)	11,573 (5.9)	15,865 (4.3)	2,903 (23.4)
1982-83	3,588	760	1,194 (31.4)	18,091 (4.2)	13,056 (5.8)	19,346 (3.9)	3,800 (20.0)
1983-84	4,392	1,748	1,567 (39.2)	20,493 (8.5)	15,477 (11.3)	22,890 (7.6)	4,001 (43.7)
1984-85	5,460	1,506	1,991 (48.6)	24,384 (6.2)	17,694 (8.5)	27,881 (5.4)	4,100 (36.7)

TABLE 6 : GROSS AND NET INTEREST PAYMENTS OF GOVERNMENT OF INDIA AND
RELATION TO REVENUE RECEIPTS, TAX RECEIPTS, REVENUE EXPENDITURE AND
NET MARKET BORROWINGS (Concl'd.)

	1	2	3	4	5	6	7
1985-86	7,454	2,866	2,465 (48.3)	29,206 (9.8)	21,180 (13.5)	34,771 (8.2)	5,101 (56.2)
1986-87	..	..	3,322* (62.7)	35,153* (..)	24,207* (..)	42,386* (..)	5,300* (..)

(Figures in brackets are percentages of net interest payments to revenue receipts, tax receipts, revenue expenditure and net market borrowings, as the case may be, in the case of Cols. 4,5,6, and 7. Under Col. 3 the percentage of interest payments on Government borrowings to net market borrowings is given,

Source : Figures in Col. 1 and 2 are taken from Union Government Finance Accounts, Col. 3 to 6 are derived from the Budget Documents of Government of India and Col. 7 from Report on Currency and Finance, Reserve Bank of India.

.. Figures are not available.

* Relate to the revised estimates and are taken from Budget Documents of Government of India.

**TABLE 7 : RANGE AND WEIGHTED AVERAGE OF
INTEREST RATES ON MARKET BORROWINGS OF
CENTRAL GOVERNMENT**

(Per cent per annum)

Year	Range of interest on loans offered during the year		Weighted Average
1	2		3
1968-69	4.50	- 5.50	5.07
1969-70	4.25	- 4.25	4.89
1970-71	4.50	- 5.50	5.37
1971-72	4.75	- 5.75	5.32
1972-73	4.75	- 5.75	4.97
1973-74	4.75	- 5.75	5.25
1974-75	5.00	- 5.75	5.71
1975-76	5.50	- 6.50	6.22
1976-77	5.50	- 6.50	6.35
1977-78	5.50	- 6.50	6.35
1978-79	5.50	- 6.75	6.51
1979-80	5.75	- 7.00	6.68
1980-81	6.00	- 7.50	7.02
1981-82	6.00	- 8.00	7.29
1982-83	6.25	- 9.00	8.36
1983-84	7.75	- 10.00	9.30
1984-85	7.75	- 10.50	9.97
1985-86	9.00	- 11.50	11.08
1986-87	10.00	- 11.50	..

(Derived from the material in Report on Currency and Finance, Reserve Bank of India)

.. Not Available

TABLE 8 : RATES OF INTERST ON
OUTSTANDING LIABILITIES

End- March	Market loans and bonds	Trea- sury Bills	Small savings	State Prov- Funds	Public Prov- Funds	Weighted rate for all (Col.1 to Col.5)
	1	2	3	4	5	6
1968-69	4.26	3.00	4.99	5.25	4.80	4.17
1984-85	7.65	4.60	10.35	10.50	10.00	7.64
1985-86	8.22	4.60	10.59	10.50	10.00	7.85

Derived from the material in **Report on Currency and Finance**, Reserve Bank of India and **Explanatory Memorandum of the Budget of the Central Government**.

TABLE 9 : RATES OF INTEREST ON LOANS GIVEN BY CENTRE TO STATES

Type of loans	Rate of interest (in per cent)
1. Pre - 1979 consolidated loans	4.75
2. Loans advanced during 1969-84 consolidated for terms ranging from 15 years to 30 years	6.00 to 6.75
3. Small Savings loans advanced	
i) prior to 1.4.1974	4.75 (effective rate)
ii) during 1.4.74 to 31.5.81	6.25
iii) during 1.6.81 to 31.5.82	7.25
iv) during 1.6.82 to 31.5.83	7.75
v) during 1.6.83 to 31.5.84	8.75
vi) during 1.6.84 to 31.5.85	9.75
vii) during 1.6.85 to 31.5.86	10.25
viii) from 1.6.86	12.00

Source : Government of India, Receipts Budget, 1987-88.

OXFORD BULLETIN OF ECONOMICS AND STATISTICS

**Edited by David F Hendry, J B Knight, K Mayhew
and S Nickell**

The **Oxford Bulletin of Economics and Statistics** is largely devoted to applied economics, but articles on statistical and econometric methodology are also included. It features a regular Practitioners Corner, with brief methodological notes to explain new techniques of statistical analysis for application to economic problems.

Volume 49 Number 1 (1987) is a Special Issue entitled *Wage Determination and Labour Market Inflexibility* and will include the following articles:

Structural unemployment

R. JACKMAN and S. ROPER

How inflexible are negotiated wages in Britain?

DEREK ROBINSON

A two-sector analysis of the UK labour market

SEAN HOLLY and PETER SMITH

Pay settlements in manufacturing industry, 1979-84: a micro-data study of the impact of product and labour market pressures

MARY GREGOR, PETER LOBBAN and ANDREW THOMAS

Oxford Bulletin of Economics and Statistics is published in February, May, August, November

Subscription Rates Volume 49, 1987

Individuals: £20.00 (UK) £24.85 (overseas) US\$45.00 (N. America+Japan)

Institutions: £38.00 (UK) £48.00 (overseas) US\$84.00 (N. America+Japan)

☐ Please enter my subscription to Oxford Bulletin of Economics and Statistics/
send me a sample copy

☐ I enclose cheque/money order made payable to Basil Blackwell

☐ Please charge my Access/American Express/Barclaycard/Diners Club/
Mastercharge/Visa account number:

Card expiry date

☐ For payments via the National Giro Bank, the Basil Blackwell account number
is 236 6053

Address

Please return this form together with your payment if applicable to:

Basil Blackwell • Journals Dept., 108 Cowley Road,
Oxford OX4 1JF, or, Journals Dept., Box 1320, Murray Hill Station,
NY 10156, USA.

Review Article

ESSAYS ON ECONOMIC PROGRESS AND WELFARE

(In honour of I.G. Patel)

Edited by S. Guhan and Manu Shroff

Oxford University Press, 1986

This book presents a collection of essays contributed by distinguished economists, civil servants and politicians on diverse issues relating to India's economic development. It has been prepared in honour of Dr. I.G. Patel, who has been one of the influential participants in policy making in India. The essays have been divided into four broad topics, viz., (i) "Indian Perspectives" which presents six essays on India's performance, (ii) "Theory and Policy" which has six essays on the wider issues of development theory, (iii) "International Environment" which consists of three essays on problems of adjustment and growth faced by developing countries and (iv) "Economists in Government" which reflect on the role of economists in Government in India.

The first set of essays on "Indian Perspectives" begins with B.N. Datar's paper on "Planning in India 1951-66". It presents the background to planning and the difficulties faced in the process. It traces the establishment of the Planning and Development Department in 1944, the National Planning Commission in 1950 and the various departments which assisted the planning process. It then moves on to a discussion of the Five Year Plans, the strategies adopted by various Plans and the problems that arose. However, the discussion stops with 1966 though the reader would have benefitted by a coverage of the later developments especially in the eighties.

The essay on "Planning without Policy" by Kirit S. Parikh gives a lucid account of the limitations in the planning process in India. He brings out the essential point that planning in India has evolved to ensure efficiency in the allocation of resources to different sectors but not to ensure the operational feasibility of Plans. He discusses the various Plan models such as Harrod-Domar Model, applied to the First Plan which emphasized the importance of savings for growth. The Second Plan adopted the Mahalanobis Model which recognised that savings had to be converted into investment goods and emphasised the importance of allocation of investment between sectors. The Third Plan was based on a multi-sectoral Leontief input-output system and ensured consistency of material

balances across all the sectors in the terminal year of the Plan period. The Fourth Plan was largely similar to the previous one except for the fact that the consistency of material balances was ensured for the intermediate years also. However, the Fifth Plan methodology reverted to the target year instead of explicitly accounting for material balances over individual years. The Sixth Plan adopted a combination of the methodologies applied in the preceding three Plans. The Plans contain very little evidence of the necessary economic analysis to show that the available policy instruments can lead to realisation of the targets. Prices and income generation are not endogenous to the models. With emphasis on reduction of poverty, this is a serious limitation. Production is not related to income and since there are no prices in the models, changes in income distribution due to transfers such as public food distribution cannot be related to prices. The models thus do not provide guidance as to what policies, if any, can fulfil the major objectives of planning, reduction in poverty and non-inflationary development. There is also a fundamental flaw in that the models neglect the behavioural response of private economic agents. What is needed is a planning model which recognises such responses and makes sure that a specific set of policies will fulfil the planners' expectations. He presents an interesting simulation study which incorporates the farmers' responses to various policies pursued by the Government regarding pricing and fertiliser availability. The model demonstrates that the farmers' responses to relative prices of output and input are significant and that these affect the level of food prices and trade. He emphasises the need to identify effective policy instruments which can be integrated into a general equilibrium framework. This study brings out certain interesting issues and provides plausible explanation as to why certain well conceived developmental programmes failed to have the expected results. It rightly recognises the need to incorporate behavioural responses while outlining policy models and shows how they can be developed in the case of agriculture and can be extended to other sectors also.

The next essay "India's Regression in the World Economy" by Surendra J. Patel presents the development scenario in the rest of the world and India's performance *vis-a-vis* other countries. While the author rightly recognises that serious conceptual and statistical difficulties exist in

making international comparisons, he goes on to present six comparable indicators for India, the Third World and the World as a whole. The period covered is 1950-80 and the indicators are expressed in annual percentage rates of growth and index numbers with 1950 as the base. The analysis indicates that India has retrogressed in the world economy in terms of most indicators like GDP, per capita GDP, industrial activity, exports and imports. However its population growth was only slightly higher than the rest of the world. India's share in the world economy came down during 1950-80. Its share in foreign trade declined from 2 per cent to 0.5 per cent, national output from 2 per cent to 1.4 per cent and industrial output from 1.2 per cent to 0.7 per cent. He goes on to give an interesting international comparison of productivity levels and concludes that productivity per person in India is lower than one-fifteenth of that in Western countries and it is less than half that in developing countries as a group. The sharpest contrast is with China. The essay presents certain significant aspects of India's development relative to other countries but it would have been informative to know why India retrogressed in the international economy.

The article "The Monopolies and Restrictive Trade Practices Act 1970-83" by H.K. Paranjape gives the background to the Act and its working. It observes that an overall review of the MRTP Act suggests that the Act has not had much impact over a period of thirteen years. Among the reasons for the failure of the Act and the related Commission, one is that no administrative plan to ensure that the objectives of the Act could be really achieved was prepared when the Act was passed and the Commission was appointed. It also brings to light the fact that there was no implementation of the recommendations made by the Sachar Committee in 1978. On the contrary, the discretionary powers of the Government had been increased *vis-a-vis* the Commission. The result was that the concentration of power in the hands of large industrial and business groups had been increasing. The author pleads for greater powers to be given to independent bodies such as the Monopolies Commission.

The next essay on "Data Improvement and Policy Makers" by A. Vaidyanathan is an exercise very relevant in the context of the gaps in data base in the Indian economy. He discusses the inadequacy of data in relation to

reliability, timeliness, lags in processing and in dissemination and avoidable waste in the collection and use of data. He gives a few interesting examples of deficiencies in data. For example, the national income statistics are arrived at by estimating two-thirds of national income on the basis of production data and deriving the rest indirectly on a variety of assumptions and partial information. Much the same is true of estimates of savings, capital formation and their sectoral distribution. Equally striking are the lacunae in data for monitoring the progress of various programmes which are included in Plans and the impact of various policy measures introduced from time to time in achieving their objectives. Another problem has been the failure to make effective use of data already being collected. The author observes that considerable improvement in data base is possible with a better allocation of personnel and budgetary resources between collection of data and their processing, especially at the State level and if the concerned agencies have more computer and printing facilities at their command.

The second topic on "Theory and Practice" begins with V.V. Bhatt's essay on "Institutional Framework and Public Enterprise Performance". He attempts to derive, on the basis of available literature on successful enterprises, some conjectures with regard to the strategic factors and in particular, the characteristics of the decision-making processes that account for good public enterprise performance. It is not the existence of multiple goals that is the problem with public enterprises but the lack of an institutional mechanism which provides for a creative dialogue between the Government, the enterprises and top management. Such a mechanism would stimulate the learning process and avoid ad-hoc and unprincipled Government intervention relating to operational and technical matters. The reason for non-institutionalisation of decision-making structure in most countries seems to be the conflict between development imperatives and distributional pressures. However, where the former dominate the latter as in the case of South Korea or Austria, institutionalisation of decision-making has led to satisfactory public enterprise performance. In this context, it would have been useful if the author had indicated process of institutionalisation in these countries. He concludes in the final analysis that, among other factors, the role of ideology that motivates individuals and groups within enterprises and ensures the

convergence of goals and expectations is important for good public enterprise performance.

The next essay is by Deena Khatkhate on "Measuring Expected Real Interest Rates". It begins with a theoretical discussion of the real rates of interest, the distinction between money rates and real rates as outlined by Irving Fisher and the factors which influence real interest rates. He discusses the problems involved in measuring expected real interest rates due to the inadequacy of an appropriate price index which can be used for deflating nominal rates. In this context, the choice between CPI and WPI is beset with problems in that, if the changes in both price indices for a sample of developed and developing countries are observed, the divergence in the rates of change in the two indices is so glaring both in magnitude and direction that estimates of real rates derived from each of these price indices will totally confound the policy makers. The same holds true of GDP deflator. Apart from the choice of price indices, the estimation of expectations to arrive at an expected real interest rate causes problems. He has estimated the real interest rates for some LDCs such as Brazil, Korea and India. He observes that it is not necessarily futile to estimate the real expected interest rates provided a more practical approach is adopted by viewing the conventionally derived expected interest rates in a range on evidence from stock and commodity markets. The authorities in LDCs should aim to attain a certain desired real interest rate equal to the growth target and then set the money rate of interest equal to the growth target plus the targeted rate of inflation in the medium-run. This would at least have the merit of ensuring realistic interest rates in a developing economy with imperfect financial and product markets which will not impinge on the growth potential of the economy. The paper has interesting implications in the context of the present policy of offering a positive real rate to investors. However, it also involves a huge cost of debt servicing which has to be considered while framing policies regarding interest rates.

The first among the next set of essays on agriculture and poverty is Paul Streeten's paper on "What Price Food" which explores the role of food pricing policies in develop-

ing countries. Herein policy makers are confronted with a fundamental dilemma in that they want high prices for encouraging agricultural production, on the one hand, and low prices to protect poor buyers of food, on the other. A secondary dilemma is that between the role of agricultural sector as a producer of food and its role as a provider of resources for the rest of the economy. He outlines five proximate objectives of allocational efficiency, accelerated balanced growth, socio-economic objectives of poverty alleviation, income redistribution and national food security and the political objective of avoidance of political disturbance. The two constraints are the budget and the balance of payments. He presents the supply responsiveness of foodgrains which is divided into four distinct responses viz, additional land use, fuller utilisation of land with technology through multiple cropping, application of new technology and changing pattern of crops of higher value both by yield and prices. He observes that not in all cases is it desirable to increase agricultural production. Where crops are in surplus in the world and an inelastic demand can be used to raise revenue by supply restrictions, incentives should be set to restrict output and simultaneously raise receipts and free resources for other uses. As regards the use of price policy towards achieving greater production, he observes that raising prices without adoption of other measures to remove social, administrative and physical barriers may even be counterproductive. For instance, introduction of higher supply prices, without an appropriate scale-neutral technology and without institutions, has accelerated the transfer of land from small to large farmers in Bangladesh and violated the objectives of equity and removal of poverty. In regard to guidelines for determining agricultural prices, the prime consideration could be international prices. For example, in the case of cereals, a good rough guideline would be to keep domestic cereal prices in line with an estimated trend of future world prices, calculated in some major convertible currency plus 15-20 per cent to allow for uncertainties in world markets. While discussing the incentive system, Streeten brings in the role of subsidies. He outlines an ideal system of combining low consumer prices with high producer prices wherein farmers receive subsidies according to the value of their output. In an effort to raise producer prices, care must be taken that the higher prices are not communicated to the rest of the system through higher wages and higher mark-up on industrial goods. He recognises the income distribution problem of a rise in food prices which leads to a reduction in real income of

poor food buyers. Therefore policy makers embarking on a course of raising food prices must pay special attention to protecting the poor in transition. These may be through gradual and small price rises, selective subsidisation of vulnerable groups or food staples consumed by the poor or provision of income subsidies to the poor. Subsidies could be combined with rations so that the very poor are guaranteed a minimum level of food. However, the basic difficulty of such targeted programmes is that they should reach only the poor and that is extremely difficult.

The essay on "Food Aid, Agricultural Production and Welfare" by Jagdish Bhagwati presents a very interesting theoretical exercise verifying the Shultz thesis. He examines the proposition that food aid, except when addressed to famine situations, is harmful to domestic agricultural production and hence to the recipient. With the help of production possibility curves and utility curves, he shows how food aid results in a decline in agricultural production, though it leads to an increase in welfare. The models are then extended to analyse the impact of food aid when the donor imposes additional requirements on imports of food and when the aid is finally withdrawn. The distortion of food aid could lead to immiserisation effects. He points out the complications which arise when there is a grant element in the aid and when intervention exists. For instance, the PL 480 sales of wheat to India affects Thailand's markets for rice or the sale of long-staple cotton to India impinges on the world markets for Egyptian cotton. The various inter-relations involved in food aid programmes have been well portrayed in the article.

The next essay on the "Concept of Well-Being" by Amartya Sen raises certain fundamental issues of the ends of various policies. He argues that the dominant approaches to the idea of well-being in welfare economics have limitations. He outlines five notions of (1) a good (2) its characteristics or uses, (3) functioning of the consumer (4) capabilities of the person and (5) utility. While the utility approach concentrates on the last item, opulence approach emphasises the first. Focusing on the third and fourth items has more relevance. According to his theory, capabilities include initial endowments, entitlements in all forms, social arrangements, sex and

age structure and quality of life approach which looks at infant mortality, expectation of life and literacy. Some of the recent practical debates on policy issues become easier to assess in the light of these. For example, in the case of nutritional issues, rather than concentrating on food intake figures only, it is important to work on direct observation of nutritional requirements and this can be used both to assess general progress as well as for measuring inequality between classes, income groups, regions and sexes. Thus a proper conceptualisation of well-being is an important part of welfare economics.

In the essay on "An Economic Theory of Malnutrition" Partha Dasgupta and Debraj Ray develop a theory that links poverty and malnutrition to involuntary unemployment, output and distribution of income and assets. According to their model, it is the inequality in the distribution of assets which is the cause of poverty and malnutrition and involuntary unemployment. Thus even if an economy is in principle productive enough to employ and feed all adequately, it will not do so under pure competition if the distribution of land is very unequal.

The next set of essays on "The International Environment" begins with T.N. Srinivasan's article on "Development Strategy : Is the Success of Outward Orientation at an end?" As the title suggests, he suggests, on the basis of simulation of empirical General Equilibrium Models, that gains from trade liberalisation are very small as a proportion of GDP and that an equilibrium with freer trade need not be Pareto-superior to that with trade restrictions. In other words some countries can be hurt in global free trade regime as compared with the *status quo*. Further, the terms of trade of developing countries deteriorate enough to offset any gains from their growth, were their rate of growth to be faster than that of developed countries. Trade liberalisation without tackling infrastructural shortages and inefficiencies can bring only limited gains. In an environment of slow growth and high unemployment, protectionist pressures will mount. The appropriate response of developing countries should be not to retreat into self-fulfilling export pessimism but rather to attack such protectionist impulses in developed countries by taking an active part in GATT negotiations and by reducing some of their own protectionist barriers.

The next two essays pertain to international finance. Jean Aneth in "Development Debt and Dollars" brings out the

role played by the growth of lending to developing countries by financial markets. Though developing countries had benefitted from such lending in the seventies, they had to apply restrictive demand management policies and bring about a contraction of international reserves in the eighties. Developing countries started financing their development through recourse to commercial loans in the early seventies and the cost of funds then were reduced by the relatively low interest rates prevailing during the period. However, as the number of debtors increased, the growth of new debts had to slow down and gradually level off. A combination of record real interest rates and a sharp recession caused this ceiling to be reached rather abruptly and this happened at a time when trade was transmitting depressive external influences to developing countries. He sums up by saying that developing countries will not be able to rely on short or medium-term commercial bank loans in the 1980s and beyond to obtain substantial net resource transfers. They may have to do without such resources at the cost of slower growth and political instability. Alternatively other means may be found for transferring capital to developing countries in forms appropriate to their use. These can consist of longer term bonds or other forms of private lending. He concludes that the Bretton Woods system cannot be put together again. Unless a substitute is found which can equally well satisfy all interrelated monetary and financial needs, the development of the world economy may also falter. However one wonders whether any alternative system is feasible in the present international environment. In his "Conceptions and Misconceptions of Adjustment" Sidney Dell poses a key question as to how far the kind of adjustment now being undertaken by developing countries is appropriate in the light of their own economic situation as well as that of the world economy as a whole. There is a conflict between the usual demand management and supply-oriented adjustment policies.

The book concludes with a set of essays presented by eminent economists and civil servants on "Economists in Government" which brings out the role of economists and how they can be effectively integrated into the decision-making process of Government. The book thus has succeeded in bringing together the essays of renowned economists on major issues and provided a very good insight both into the theory and practice of the developmental process

88 RESERVE BANK OF INDIA OCCASIONAL PAPERS

in India. It provides a wealth of information and raises important issues relating to welfare and progress. It contains a very good exposition of the problems of poverty, malnutrition, agricultural production, food aid, planning, international finance and welfare. However, the emphasis given to industrial development is perhaps inadequate. Some ideas about Indian experience with industrialisation, apart from the MRTP Act and institutional framework for public enterprises, would have been informative in a book of this type. Also some issues on monetary policy could have been included considering that the volume is in honour of one who, among other posts, had held the position of the Governor of the Reserve Bank of India. However, one recognises the limitation that the problems of economic progress and welfare are so vast and diverse that no single volume could do full justice to them in terms of coverage.

+ M.S. Nalini

+ M.S. Nalini is a Research Officer in the Division of Money and Banking of the Department of Economic Analysis and Policy.