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STABILIZATION AND ADJUSTMENT POLICIES AND PROGRAMMES

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INDIA

PRONAB SEN

STABILIZATION AND ADJUSTMENT
POLICIES AND PROGRAMMES

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COUNTRY STUDY: **INDIA**

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WORLD INSTITUTE FOR DEVELOPMENT ECONOMICS RESEARCH
Lal Jayawardena,   Director

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PREFACE BY THE DIRECTOR

This monograph is part of a series being published by WIDER on the experience of developing countries with stabilization and adjustment programmes in the 1970s and 1980s. Each study analyzes the package of policies implemented by a specific country; its relations with the IMF and World Bank; the effects of the policies on production, employment, the balance of payments and social welfare; and what other policies might have been followed instead.

The intention of the series is to assist developing countries to devise adjustment policies that would, while accomplishing desirable adjustment and growth objectives, simultaneously remain politically viable in the particular country settings studied.

For this purpose it was thought desirable to explore policy alternatives to the adjustment programmes being implemented. Built into the design of the series, therefore - and constituting indeed its special feature - is the requirement that each study include a 'counterfactual' exercise to illustrate the effects of alternative policies. Utilizing econometric models adapted or specifically developed for each country, the probable effects of alternative policy packages are estimated; the object was to see how far the balance-of-payments adjustment and growth goals of a particular programme might have been achieved at a possibly lower social cost with a different policy mix.

Each country study is written by an independent scholar and expert in the relevant country. First drafts of the studies in this series were discussed at the WIDER conference on stabilization and adjustment policies in developing countries which was held 19-22 August, 1986 in Helsinki. Each study has been reviewed by WIDER's research advisers for the project, Professors Gerry Helleiner and Lance Taylor, and revised substantively by the author as necessary; subsequent editing has been conducted under the overall supervision of Mr Robert Pringle, Senior Fellow, who serves also as editorial adviser on WIDER publications.

A companion volume by Professor Taylor summarizing the experience of the countries surveyed will draw broader implications for the theory and practice of stabilization and adjustment policies; this volume will be published by Oxford University Press. The individual country studies in this series will subsequently be grouped into separate volumes, also for eventual publication by Oxford University Press.

Lal Jayawardena
Director
March 1987

India's first two bouts of orthodox stabilization policy following independence were quite different. The first, prompted by a prolonged drought at home and the wars with China in 1962 and Pakistan in 1965, was relatively mild in form. The rupee was devalued, the elaborate panoply of export incentives and import restrictions was partially dismantled, but no real attempt was made to apply the fiscal and monetary brakes. The author argues that the psychological repercussions were greater than the economic. India had learnt that foreign aid could no longer be relied upon and even greater emphasis must be placed on generating resources internally.

On the second occasion, reactions to the upsurge in inflation generated by the quadrupling of oil prices in 1973-74 and a prolonged agricultural slump at home were accordingly much more vigorous, and the fiscal and monetary brakes were slammed on hard. The author argues that, in the event, the toughness was excessive. The slump in agriculture was followed by a prolonged boom, which quickly punctured the upsurge in inflation; while the external balance was improved by a sustained rise in exports, especially to Opec countries, and a rapid build up in remittances from Indian migrant workers, again mostly in the Gulf. As a result, the main constraint on the Indian economy in the late 1970s was not foreign exchange, agriculture or domestic savings but aggregate demand.

The author argues that this constraint was initiated by the stabilization policies of 1973-75 and perpetuated by the profound changes in income distribution which had been caused by those policies and the shocks which preceded them. These costs India could ill afford. Worse still, the changes had had the effect of increasing the economy's import propensity. The appropriate response to the second oil price shock, and to any future contingency, has therefore to be substantially different. In particular, the author argues the case for an alternative package centred on a multi-tier exchange rate regime.

I.   INTRODUCTION

     This   study   evaluates   India's   experience   of   orthodox
stabilization policies for balance of payments management.
There have been two such episodes in recent years – in
1966-67 and immediately following the 1973-74 oil price
shock. The first episode was the cause of much controversy,
the second raised not even a flutter of interest. The
prevailing view in India and abroad seems to be that, since
the   mid-1960s,   India's   economic   policies   have   been   so
cautious and conservative that there has really never been
any need to adjust dramatically to balance of payments
shocks;[1] and, in any event, the exigencies of India's
domestic   economy   completely   overshadow   her   external
dealings.

     There is certainly some merit to these views, but it
should be remembered that 'high drama' is in the eye of the
beholder. For countries like India with extremely low risk
thresholds and very limited operational flexibility there is
a strong tendency for policy makers not to deviate sharply
from past trends or from 'received wisdom', however
misplaced, in the conduct of policy. In situations where
significant   exogenous   parametric   changes   have   already
occurred, however, the maintenance of the status quo in the
policy variables may itself amount to a major shift. Even
seemingly   small   parametric   changes   can   thus   have
economy-wide repercussions of alarming proportions.

     The purpose of this paper is to argue that, while the
1966 episode had little effect on the structure of the
Indian economy, the post-1973 policy stance led to a
radical, and perhaps permanent, alteration of structural
conditions. As a consequence, despite the superficial
similarities between the conditions existing during the
first oil price shock (1973-74) and the second (1979-80),
the appropriate response to the latter would have had to be
substantially different from that to the former.

The crux of the argument lies in the income distribution changes engendered by the exogenous shocks and the subsequent policy reactions. The issue that India faces today is, or rather should be, whether to accept these distributional changes as 'sunk costs' and behave optimally, or to attempt to reverse them, if only partially, and to accept the possible costs of doing so.

The paper is organised as follows: first, India's orthodox stabilization experiences are described together with the the pertinent issues they raise (section II). In section III, the structure of the Indian economy and the major groups within it are described in some detail. Section IV discusses the growth process in India and how it may be affected by stabilization packages. Section V analyses the post-1973 years. The final section presents alternative stabilization packages for the past as well as for the future.

II.   ORTHODOX STABILIZATION IN INDIA: A REVIEW OF
        HISTORY

As has already been mentioned, India has had two major experiences of orthodox stabilization.[2] In both instances the proponents of orthodox stabilization lauded these efforts and their outcome. It would be well, therefore, to review the two episodes and their evaluations.

1.   The 1966 devaluation

The glorious years of Indian planned development, which started in 1954, came to an abrupt end in 1962 when a fairly major war was fought with China and India had the worse of it. Defence expenditures rose sharply thereafter, leading not merely to reduced resources for development but also to an increased need for foreign exchange for arms purchases. At first aid donors could still be counted on, and so there was little reason or incentive to abandon past strategy. But ideological positions were hardening in the West and there were increasing pressures on India to modify her economic philosophy. The final blow came in 1965 when a war was fought between India and Pakistan. The aid donors reacted by cutting off aid to both warring nations.[3] In 1966 the Aid India Consortium (AIC) led by the multilateral aid agencies offered to resume aid to India but there was a price - India had to open its economy to the rest of the world. The AIC demanded, and got, a substantial devaluation of the Indian rupee (57.5 per cent), partial dismantling of the export incentive system and considerable liberalization of imports.[4]

At around the same time (1965-67) the Indian economy was hit by a two-year drought of unprecedented proportions but the economy fared not too badly: real GDP and consumption grew by 2.7 per cent and 5.8 per cent respectively while the balance of trade improved by more than 11 per cent. These facts have been cited in the literature as providing strong support for the soundness of orthodox policy.[5] But the

seeming orthodoxy was accompanied by some home-grown heterodoxy as well. In particular there was no attempt to clamp on the fiscal and monetary brakes to bring down inflation, which was running at 14-15 per cent a year, or for making the devaluation 'stick'. Government consumption was reduced somewhat, but this was more than offset by increased transfers to the private sector, and both interest rates and the growth of the money supply were maintained at the earlier levels.

This was the first major external shock which India had had to face since independence, and the psychological repercussions were considerably greater than the economic. The crucial lesson learnt during this traumatic period was that foreign aid could no longer be relied upon and even greater emphasis would have to be placed on generating resources from internal sources. A number of changes were accordingly implemented between 1967-68 and 1972-73.

First, several export promotion measures were introduced. These played a significant role in maintaining the growth of Indian exports even after the effects of the devaluation had gradually worn off (by about 1968-69). More importantly, the liberalization of imports induced by external pressure in 1966 was rapidly reversed. This led to a decline in import propensity from 5.8 per cent in 1967-68 to 4.3 per cent in 1972-73.[6] The combination of export growth and import restriction led to a sharp improvement in the trade balance from a deficit of 8,370 million rupees in 1966-67 to a surplus of 1,040 million rupees in 1972-73.

The domestic macro-policy stance too was a fairly liberal one. Real government expenditures rose by 4.5 per cent a year while government revenues rose by only 2.4 per cent. The budget deficit thus grew rapidly. This was financed partly by borrowing internal and external, but mainly through deficit financing. Thus money supply (M 1) grew by about 16.2 per cent a year, allowing interest rates to be held down to pre-1966 levels. Economic growth, despite

all this, remained at the now-famous 'Hindu' rate of 3.4 per cent.

2.   1973-74 and after

The year 1973 marks a turning point for the Indian economy. Two major shocks, one internal and the other external, were experienced. First, the economy was in the middle of a prolonged agricultural slump spanning the years 1972-75 during which agricultural production was on average about five percentage points below trend levels (see table 1). Secondly, the first oil price hike took place, quadrupling international crude oil prices between September 1973 and April 1974.

The fall in agricultural output led to a sharp escalation in inflation which surged from 7.5 per cent in 1970-73 to 20 per cent in 1973-75, much of the increase coming before the oil price rise. The latter in turn fuelled the inflationary process as well as leading to a sharp deterioration in the trade balance. The economy however weathered these shocks surprisingly well. The current account deficit, which peaked in 1974-75, was converted to a surplus in 1976-77 and stayed in surplus until 1979-80 when the second oil price shock occurred. At the same time there was a dramatic reduction in inflation. Prices actually fell in 1975-76 and over the next three years rose by only 2.4 per cent a year.[7]

This turn-round was caused largely by highly favourable exogenous developments, internal and external. To begin with, 1975-76 was a bumper year for agriculture with output rising by 13.8 per cent over the previous year and by 4 per cent over the trend level. Partly as a result the prices of agricultural products fell by over 7.5 per cent. It can further be seen from table 1 that, although in the following year (1976-77) agricultural production dipped again, it not only recovered in the next two years (1977-79) but attained the highest levels ever recorded. Thus between 1973-74 and

1978-79 Indian agriculture posted an average annual growth rate of 4.1 per cent - considerably higher than the 2.8 per cent figure for the preceding decades. This is unquestionably the single most important reason for the dramatic and sustained moderation of the inflation rate in India during this period.

On the external front three favourable developments took place. First, India was able to obtain relatively easy access to external funds to meet the increased trade deficit caused by higher oil prices. Early in 1974-75 India drew Rs.2,930 million (SDR 311 million) from its gold and first credit tranche in the IMF. Later that year it drew an additional Rs.1,940 (SDR 200 million) under the 1974 oil facility. In 1975 it drew another Rs.2,070 million (SDR 200 million) from the 1975 oil facility. Over the two years 1973-75 about 43 per cent of the total trade deficit was thus financed by low or unconditional short-term IMF loans. In addition, there was a substantial increase in total aid commitments after 1973-74 and also faster disbursement of non-project assistance. As a result, gross external assistance grew from Rs.3.42 billion in 1972-73 to Rs.8.34 billion in 1974-75 and Rs.12.2 billion in 1975-76.

Secondly, exports grew rapidly. This partly reflected positive external factors and partly domestic policy. In 1972-73 to 1974-75 exports earnings grew by about 27 per cent, but volume growth was only some 7 per cent. In 1975-76 and 1976-77 export earnings rose at an annual rate of 26 per cent with volume growth of about 18 per cent. Much of this latter growth, however, arose from bilateral trading arrangements with the Comecon countries or went to the newly-affluent oil-producing countries of the Middle-east.

Thirdly, a positive side-effect of the oil price rise was the migration of Indian labour to Gulf countries and the resulting remittances back to India. These grew at an average rate of 40 per cent a year for the five years following the oil price shock, eventually reaching about

Rs.20 billion a year. This was a major contributory factor in the rapid build up of India's foreign exchange reserves after 1973-74.

It should be clear from this that in retrospect little stabilization was actually needed, and, moreover, the IMF loans were not of a type for which heavy conditionalities are imposed. It is therefore surprising that Indian policy-makers reacted to the 1973-75 conditions with uncharacteristic vigour. Monetary policy was shifted to a restrictive stance, with the growth rate of M 1 declining from about 16 per cent in 1970-73 to 11.5 per cent in 1973-75. More importantly, interest rates were raised very sharply in 1974-75 (by about 50 per cent) and more or less maintained at the higher level thereafter. This coupled with the low inflation rate, pushed real interest rates up from low, and sometimes negative, levels during 1966-73 to extremely high levels in 1973-79.[8]

Fiscal policies too became more restrictive in that the growth of total real government expenditure dropped from the 4.4 per cent average increase of the previous period to a fall of 0.1 per cent in 1973-75. It should be noted, however, that the only component of government expenditure that was actually reduced was public fixed capital formation. On the other hand, real revenues fell even more sharply from an average increase of 8.9 per cent to a decline of 4 per cent.[9] It is interesting to note that this happened despite the fact that excise duties, including those on petroleum and petroleum products, were raised, commercial banks' interest income was taxed more and railway freight rates raised. In addition, some extra-budgetary measures were implemented in 1974-75 to reduce private disposable incomes. These included freezing all wage increases in the public sector, limiting dividend payments by corporate entities, and a compulsory fixed deposit scheme for income tax payers. It is officially claimed that these budgetary and non-budgetary measures reduced disposable income by about 1 per cent of GDP in 1974-75.

The exchange rate, which in 1972 has been delinked from the dollar and pegged to the pound sterling, depreciated steadily over this period. The real effective exchange rate thus dropped by 8 per cent between 1972 and 1975, despite India's relatively higher rate of inflation.[10] In September 1975 the rupee was pegged to a basket of currencies, primarily to stabilize the exchange rate. While this worked in terms of the nominal rate (which depreciated by only about 2 per cent a year during 1975-79), the real exchange rate dropped by 4 per cent a year.

Oddly enough, despite the oil price rise, higher world inflation, and a depreciating rupee, the implicit import tariff[11] actually fell from 32.15 per cent in 1971-72 to 27.1 per cent in 1974-75, and rose to only 28.98 per cent in 1975-77. Since there is no evidence of liberalization during this period, one may infer that the import structure shifted towards goods with lower import tariffs.

Taken together, the post-1973 period may be characterized as a period of orthodox stabilization. Almost all the ingredients of the stylized IMF package existed: fiscal and monetary contraction, increases in interest rates, currency depreciation, partial de-indexation and so forth. At the same time, the economy fared very well indeed. Real GDP grew very rapidly by Indian standards (4.8 per cent a year), the balance of payments improved dramatically, and inflation was negligible.

3.   Preliminary assessment

From this it should be clear that India's experiments with orthodox stabilization seem to validate the claims made by such a strategy's proponents. But does this apparent consistency stand up to closer scrutiny? Did exceptional mitigating circumstances dominate the policy effects? Were there hidden costs which are not reflected in the macro aggregates and which may have a profound impact on the conduct of future policy?

The 1966 episode has been studied in detail by a number of economists.[12] In a recent article by this author (Sen 1986a) it is argued that, if (a) the non-agricultural sector in India had been demand constrained and (b) the 1965-66 drought had not occurred, then the devaluation would have been severely contractionary. That this did not happen is merely fortuitous, and it would be too much to expect such a coincidence again. A further finding which is of some importance for policy formulation is that, contrary to popular wisdom in India at that time, a currency devaluation does have significant substitution effects in the Indian economy, and hence can be a useful policy device if the contractionary pressures that it gives rise to can be successfully counteracted.[13]

A more important point, however, is that the 1966 episode had no permanent effect on the Indian economy. It appears as an episodic variation on a long-run trend which began in the early 1950s. This can be seen most clearly in figure 1, which gives the behaviour of the sectoral gross product shares in GDP of some important sectors. The primary reason why this episode did not have any permanent, or long-term, effect on the economic structure was that the Indian government, wisely or unwittingly, did not attempt to make the devaluation 'stick' by contractionary fiscal or monetary measures. Thus the economy was left to adjust to the altered relative prices within a more or less unchanged level of aggregate demand.

The post-1973 episode, however, is a different story altogether. As can be seen from figure 1, a profound change occurred in the Indian economy. The agricultural sector, which accounted for roughly 50 per cent of Indian GDP before 1973, dropped to only 37 per cent of GDP in a space of just 6 years. The questions which arise are (a) what caused this change (b) what does it imply about the short and long run costs of stabilization and (c) what are the implications for future adjustments? Unfortunately, the literature has nothing to say on these issues. Consequently, the rest of this paper will be devoted primarily to analysing this period and drawing what lessons are available.

III.   STRUCTURE OF THE INDIAN ECONOMY

A formal model will not be developed in this paper but a
model structure is proposed on which future formalisations
may be based. This structure has its roots partly in the
'structuralist'[14] literature and partly in the dual economy
extensions of the Keynes-Kalecki tradition.[15] To this extent
it forms part of recent efforts at developing an 'Indian'
structuralist position.[16]

Even though the formal structure of the 'Latin American'
and   'Indian'   approaches   are   similar,   they   differ
substantially in the central problem they address. The
primary issue in the Latin American approach is the
explanation of prolonged hyper-inflation whereas in the
Indian it is slow growth and stagnation. Because of this
difference stationary state descriptions are less relevant
for the Indian case where a somewhat longer term view is
necessary.   This   is   of   course   not   to   say   that
inflation/output trade-offs do not exist or structural
instabilities may not appear, but Indian economic history
does not provide any period of sustained disequilibrium
which would make such issues of paramount importance. There
has been inflation along with slow growth, but there is no
real evidence that the behaviour of the price level has
taken on a dynamic which is independent of the underlying
real conditions. Moreover, there are specific historical
phases when inflation has been checked sharply without any
apparent adverse effect on output. Consequently, any
appropriate model should be able to explain both a sustained
but slow growth as well as a fairly variable inflation rate.

1.   Sectors

The standard 'dual economy' framework recognises two
distinct sectors, labelled variously as traditional and
modern, agriculture and non-agriculture, and so on. Recent
writings on the Indian economy distinguish however between
three or more sectors, of which one is agriculture and the

rest are different non-agricultural sub-sectors.[17] The inclusion of additional sectors often adds little to understanding the functioning of a macro-system but in this case it is crucial. In order to keep the analysis tractable only three sectors are distinguished: agriculture, manufacturing and 'non-traded'.[18] This is not a standard classification, but in some ways it is more pertinent.

(i) Agriculture: This is by far the most important sector of the Indian economy for the purpose of economic analysis. It is not only the largest in terms of the population supported (about 70 per cent) and, until recently, its share in GDP[19]; it is also the linch-pin in the overall process of price formation. A few of its important characteristics should be borne in mind.

First, this is the only genuinely flexible-price sector among the three considered.[20] The burden of adjustment in aligning relative prices thus rests almost entirely upon it. Secondly, agriculture is assumed to be supply constrained in the sense that the rate of growth of output is structurally constrained upwards in the medium run, and can therefore be treated as an exogenously determined constant.[21] In the short run agricultural output fluctuates widely because of weather conditions, but these variations are perceived by the economy as transient shocks and are partially protected against by the maintenance of high precautionary stocks, imports, and adjustments in the rate of consumption.[22] The net result of these characteristics is that the sector's real income should, ceteris paribus, exhibit lower variance than its output.

The next point to note is that agriculture, directly or indirectly, accounts for a large proportion of Indian exports.[23] These exports face static world demand however and very low demand elasticities (almost uniformly below unity).[24] Hence prospects of increasing the sector's export earnings at a rate faster than the rate of growth of world demand for this category of goods are remote. Indeed, price

incentives for increasing exports will have perverse effects
on earnings, unless it can be shown that the existing export
taxes are above optimal.

Finally, domestic demand for agricultural output is
assumed to be governed by Engel's Law, that is budget share
drops with increases in income, both for households and in
aggregate. The parameter for the aggregate is however
sensitive to the distribution of income, particularly
between agriculture and other sectors. This is intuitively
obvious from the far higher per-capita income in sectors
other than agriculture, but there is an added dimension in
the Indian case because of the public distribution system,
which operates asymmetrically in favour of the urban sector.
Thus, urban households consume more food than rural
households having the same level of real income at market
prices, and consequently have a lower income elasticity of
demand.

(ii) Manufacturing: This is the smallest of the three
sectors, accounting for less than 18 per cent of GDP over
the entire period. It is however extremely important in
Indian exports, both in volume and in growth.[25] Despite
India's minute share of world exports, and therefore the
tendency to model it as a 'small' economy, the price
elasticity of demand for India's manufacturing exports is
not infinite. Reasonable estimates place the figure at
around 3.5.[26] This sector is also the most import intensive,
having an import content (7.39 per cent in 1972-73) about
half as much again as the national average (5.06 per cent).

Having developed in a highly protected environment
against both foreign and domestic competition, the
manufacturing sector exhibits oligopolistic characteristics
- mark-up pricing and capacity under-utilization. The
mark-up pricing hypothesis has been the cause of much
controversy but in the Indian case the weight of empirical
evidence is firmly in its favour.[27] Several Indian
economists argue that the mark-up rate exhibits a rising

secular trend determined primarily by growing concentration
and a high rate of monetary growth.

In modelling this sector, therefore, it is convenient to
characterise it as demand constrained. Domestic prices are
determined by the product of a mark-up term (which may be a
function of the difference between the rates of growth of
money supply and real GDP) and an unit cost term. The
components of the latter are wage rates, domestic prices of
imports, and interest rates on short-term commercial loans.
The unit-cost term is not accepted as a standard one even in
the mark-up pricing literature. In India, however, as a
consequence of uncertainties created in the economy by the
variability of agricultural output, the manufacturing sector
tends to hold larger inventories than in more stable
economies. This causes working capital costs to be
sufficiently high so as not to be ignored.

As far as manufacturing exports are concerned, given the
oligopolistic nature of the domestic market, there is no
reason for export prices to be the same as domestic. The
data available suggests that the fob export price for a very
large number of manufacturing export items is systematically
lower than the comparable domestic price. It has therefore
been suggested that exports of such products arise primarily
out of market segmentation strategies adopted by firms in an
imperfectly-competitive market. Under such circumstances
movements in the two prices also will not behave in a
proportional manner.[28] Given these considerations, the
appropriate specification of exports from the manufacturing
sector would relate it to the ratio of unit costs to some
measure of competitors' prices.

Finally, it is sometimes convenient to distinguish two
sub-sectors within manufacturing. In the Indian official
accounts they are termed as 'registered' and 'unregistered',
the distinction being based on size. There is however an
important difference between them in terms of product
composition. The registered sector produces almost all

'luxury' articles, most capital goods, and only a relatively
small fraction of mass consumption items. The unregistered
sector, on the other hand, produces mass consumption goods
and acts as an ancillary supplier to the registered. The
pattern of demand generated by income distribution affects
these two sub-sectors differently, therefore. Another
important distinction is that the 'unregistered' sector is
not bound by some labour laws, and thus has a labour force
which is relatively non-unionised. Consequently, this
sub-sector not only is more labour intensive, its output
elasticity of employment is considerably higher.[29]

(iii) Non-traded: This is a residual category, which
includes a wide range of economic activities such as
government, para-statals, transport, financial
intermediation, trade, etc. As can be seen from figure 1,
this sector is not only the largest, but has been the most
dynamic since the mid-1970s. Being a catch-all category,
which includes a wide range of urban and semi-urban
activities, it is difficult to characterize. By and large,
however, these activities share two common characteristics:
(a) they generate no direct export; and (b) the outputs are
determined almost entirely by government action, either
because the government is itself the producer, or because it
is the dominant consumer. Thus, an approximate
representation of this sector would be as one for which both
prices and outputs are determined by government policy.[30] It
should also be noted that this sector's import intensity is
the second highest, after manufacturing.

Although this is a very unsatisfactory approximation, it
is better than clubbing this sector with manufacturing. The
primary reason is a 'class' one. The sector represents the
primary source of income and employment for the Indian urban
middle-class. The share of profits[31] is less than 7.5 per
cent compared with 30 per cent in manufacturing, and the
wage bill has a far higher salary component. For these
reasons, incomes generated by this sector will affect the
demand patterns of the economy in a very different way from

those of either agriculture or manufacturing.

2.   **The socio-economic groups**

The economy is viewed as being comprised of eight socio-economic groups:

(A) Agriculture
A1 - Landlords/traders, large and middle-farmers
A2 - Small-surplus-producing farmers/tenants
A3 - Marginal farmers/landless labour

(B) Non-agriculture
B1 - Registered manufacturing non-wage earners
B2 - Registered manufacturing wage earners
B3 - Unregistered manufacturing non-wage/non-trade-wage earners
B4 - Unregistered manufacturing wage earners
B5 - Informal sector/urban unemployed

Thus the class composition of the Indian economy is represented by the rural 'kulak' (A1), the rural poor (A2 and A3), the urban capitalist (B1), the urban bourgeoisie (B3), the emergent middle-class (B2), and the urban poor (B4 and B5).

It is necessary to first set out the savings/consumption behaviour of these classes. Empirically established facts are unfortunately few, and some assumptions will have to be made. The one established fact is that the marginal propensity to save of the non-agricultural sector is in the short run considerably higher than that of the agriculture.[32] In the longer run, however, the difference is not as large.[33] The within-sector propensities can only be inferred. It is assumed that the following inequalities hold in the marginal propensities to save of these classes.

A2 > A1 > A3

B1 > B3 > B2 > B4 > B5

The first set of relations have theoretical support from Friedman (1957) and Modigliani and Brumberg (1954), and some empirical validation from Blyn (1976), but the second set is based entirely on popular wisdom.

The second issue that needs to be specified is these groups' asset holdings . Again some information is available here, but much has to be assumed.[34] Four classes of assets are considered:

1. Money, which is assumed to be held by all groups, with A2, A3, B4 and B5 holding almost their entire savings in this form.

2. Land, which is held primarily by A1 and A2 although B1, B2 and B3 also hold fair amount.

3. Commodity stocks. Almost all groups hold some precautionary stocks, but speculative stocks are held almost entirely by A1. This asset substitutes with money depending upon price expectations.

4. Financial assets, which are held primarily by B1 and B3 although their acquisition among B2 has gone up in recent years.

3.   Income determination

Now to discuss the stylized facts of income determination and the relationship between sectoral prices. The basic price level for the entire economy, as mentioned earlier, is the agricultural price. But a distinction needs to be drawn between wholesale and farm-gate prices. The former are determined by a variable mark-up over the latter. The change in the mark-up clearly reflects monopsonistic influences in agriculture, increasing more than proportionately during poor harvests and decreasing less than proportionately during bumper crops. The trend behaviour of the margin has changed since 1976-77. Until

then, correcting for cyclical fluctuations, the margin increased secularly; since then it has steadily declined. The primary cause has been the increasing credibility of the agricultural price support system since the latter half of the 1970s.[35]

The incomes of agricultural groups A1 and A2 are assumed to be determined by the wholesale and farm-gate prices of agricultural goods respectively. The incomes of group A3 are assumed to have two components - cash and in kind - both of which are assumed to be fixed in the short run. Although there is no concrete evidence to justify this assumption, it forms a standard part of the accepted stylized facts of the Indian economy.[36] A partial justification may be deduced inferentially from the constancy of nominal wage rates in the urban unregistered sector (as argued later), and the fact that it is probably this wage rate which enters migration decision. Hence, almost any form of price rise tends to have a negative impact on the welfare of this class.[37]

The two wage earning classes in the manufacturing sector (B2 and B4) clearly have very different wage formation processes. This can be seen from the fact that since 1970-71 the nominal wage per unit output has grown at an annual average rate of 7.2 per cent for the registered sector and by only 3.9 per cent for the unregistered (this can be computed from the data given in tables 2 and 3). Since, over the same period, the consumer price index rose by 7.2 per cent a year, and assuming that labour enters production with fixed co-efficient, it would appear that registered sector labour has its wage-rate fully indexed, against only 50 per cent in the unregistered sector. But this is not entirely correct. Output elasticity of employment in the Indian manufacturing sector (registered plus unregistered), is only 0.55. Therefore, even assuming that this elasticity applies to both sub-sectors, it would be safe to say that registered sector labour wages are more than 100 per cent indexed to the cost of living, but unregistered sector wages are

practically fixed in nominal terms. For modelling purposes, therefore, wage rates in the unregistered sector may be treated as being fixed in nominal terms à la Keynes, while wage rates in the registered sector are determined by a bargaining process in which the central issue is not the real wage-rate, however defined, but the share of labour.[38] This is a clear indication of the fragmented nature of the Indian labour market and has important implications for policy formulation.

Given the very different wage formation processes, it is only to be expected that the labour employment response of the two sub-sectors to changes in the cost of capital would also be very different. Specifically, the unregistered sector can be expected to be very responsive, since it would treat both wage and interest rates as exogenous and independent. Thus a change in the cost of capital would move the wage/rental ratio predictably, and entrepreneurs can be expected to react to it more or less along standard neo-classical lines. The organized sector, on the other hand, should theoretically be almost entirely insensitive, because the wage rate cannot be presumed to be independent of the interest rate, and thus the wage/rental ratio may not be predictable ex ante. The reason for this is that the decisions regarding the capital/labour ratio are predicated primarily on the nature of the bargaining process and the strategic responses within it, where increased capital costs can be used for holding down the real product wage rates. Under stable or rising real interest rates, therefore, the output elasticity of employment will tend to be far higher in the unregistered sector than in the registered. Thus the use of interest rates as a device to induce more labour-intensive production would seem to be of limited applicability to Indian manufacturing, particularly if one recognizes that higher interest rates may actually retard production and capacity creation in the unregistered sector.

Employees in the non-traded sector, being primarily a salaried class, have a very different wage formation

process. Wage increases here occur through two distinct arrangements: first a time-linked increment system which raises the wage-rate annually, independently of the inflation rate; and, secondly, a less-than-100-per-cent indexation scheme linked to the consumer price index. This 'wage' formation process can be depicted by the following function:

$$Y(t) = (1 + a + bi)Y(0) \qquad (1)$$

Where: $Y(t)$ = nominal income at time t.

a = time-bound increment rate.

b = level of inflation indexation.

i = inflation rate.

This 'wage' equation has an interesting implication: there exists a particular inflation rate below which the real 'wage' rate of this class secularly increases and above which it falls. This 'critical' rate (i^*) may be computed from equation (1) by solving for i when the real incomes in the two periods are equal i.e. $[Y(t)/P(t)=Y(0)/P(0)]$. This yields the relation:

$$i^* = a/(1-b) \qquad (2)$$

Evaluating equation (2) at parameter values of: a = 0.025 and b = 0.6,[39] gives i^* = 0.06, or a 6 per cent annual rate of inflation.

The non-wage classes (B1 and part of B3) are residuals. For the urban unemployed and the informal sector agents, whose income prospects rest mainly on finding employment in one of the urban sectors, the differential employment behaviour of the three sectors, registered, un-registered and non-traded, implies that their welfare is linked to a relatively faster growth of unregistered manufacturing activities.

IV.   GROWTH PROCESS

The primary objective of policy for countries like India should be the maximizing of the growth rate within the constraints set by the economic and political structure. Adjustments to short-run shocks and disturbances need to be viewed within this context. More often than not, however, 'crisis management' becomes the dominant characteristic of policy making, sometimes with most unfortunate results. In this section, some observations are made on growth processes and the appropriate response to transient shocks.

1.   Constraints: conceptual issues

In the literature three major constraints to growth are recognised:

(a) savings
(b) foreign exchange
(c) agriculture

The last two are considered as 'structural' constraints, in the sense that they originate from rigidities in specific production sectors. The operation and characteristics of these constraints are well covered in the literature, and there is no need to go into these details.[40] A few points about policy-making under different operative constraints may, however, be in order.

First, issues of resource generation and allocative efficiency are much less important for structurally constrained economies than for savings constrained ones. The primary objectives of medium to long-run policy-making for the former should be to first stabilize the output of the constraining sector and then to maximize the growth of the other sectors, within the limits set by either the acceptable level of inflation or by the balance of payments. If doing so requires that allocative efficiency be sacrificed, it must necessarily be accepted.[41]

Second, the effects of one-off aid and foreign borrowing are very different under the three constraints. With the savings constraint, foreign resource inflows do not cause output to be higher in the short to medium run, but allow extra capacity to be installed for higher output in later years. With structural constraints, however, foreign funds can have a more immediate impact by allowing the imports of constraining goods, if the resources are so used. These 'windfall' foreign exchange receipts, therefore, cause only step changes in output levels under structural constraints, with very little growth effects, but have the potential for a more sustained growth raising effect under the savings constraint.

Sustained inflows of aid or debt receipts, on the other hand, have the potential of raising growth rates in structurally constrained economies. The magnitude of these effects, however, is very different between agriculture - constrained and foreign-exchange-constrained situations. The output response of the economy to additions in import capacity in any year depends upon the foreign exchange multiplier. With the foreign exchange constraint, imports are required only for the 'non-competitive' forms of imported goods. With the agricultural constraint, however, marginal requirements of agricultural goods also have to be provided. As a result, the foreign exchange multiplier in any given country and at a given constrained level of output is always less in an agriculture-constrained than in a foreign-exchange-constrained scenario.

Finally, domestic incomes policies which attempt to bring about desired income distributions also have very different effects depending upon the operative constraint. With the savings constraint, if marginal propensity to save is positively related to real income levels, all other considerations apart, greater (lesser) inequality of incomes will ceteris paribus result in a higher (lower) rate of growth. In the short run, however, the effects are asymmetric, in that increased savings may well result in the

demand constraint becoming effective such that the level of current output falls, whereas decreased savings will have no output expanding effect since the problem is one of an overall supply constraint. With the foreign exchange constraint, where the bottle-neck is a shortage of producer goods or relative luxuries, both of which are demanded more out of non-wage incomes than wages, a more (less) egalitarian incomes policy will increase (decrease) the constrained growth rate. In case of the agricultural constraint, however, where the bottle-neck is in necessities which are primarily wage goods, increased egalitarianism will tend to reduce the rate of growth.

2.   Operative constraints

The most detailed and comprehensive study of this issue is in Sen (1981). Here his findings are summarised. He uses two models (a multisector model to determine the terminal year equilibrium and a macro-economic model to work out constraints on capacity growth) to evaluate the 1964-65 to 1975-76 period. The results of this exercise are then compared with the actual behaviour of the Indian economy over the same period.

The results are striking. The agricultural-constrained growth rates derived by him are consistent with the actual outcome not only for GDP but for the nine sectors considered. His GDP estimate is only 2.7 per cent greater than the actual, and the largest discrepancy is 11 per cent. The import (or foreign exchange) and the savings constrained rates, on the other hand, are at least 145 per cent higher in all cases.

Thus, he observes, 'the savings constraint dominates the import constraint and is, in turn, dominated by the agricultural constraint'. The difference between the import-constrained rate of GDP growth and the savings-constrained rate is however small, 5.63 and 5.34 respectively. The agricultural constrained rate (3.03 per

cent) and the actual (2.95 per cent) are considerably lower. This implies then, that up to the early 1970s at least there was a considerable resource slack in the Indian economy.

3.   Instabilities and structural constraints

Having established that the binding constraint on Indian economic growth up to the early 1970s was structural – namely agricultural – we turn to the problem of stability along the constrained growth path for an economy with the characteristics described in section III.

Consider first the general problem of aggregate demand management in a structurally-constrained economy. By the very fact that the savings-constrained rate is greater than the structurally-constrained one, the investment necessary to attain maximum constrained growth must be less than the ex ante savings. This is not a serious problem in centrally-planned economies, where either consumption or planned investment in long gestation projects can be easily adjusted, but it creates complications in a mixed economy like India's where private investments are large. Regardless of the nature of the investment demand function, if private investors are not willing to tolerate increasing capacity under-utilization, ex ante private investment demand is likely to fall considerably short of ex ante savings. Thus a generalised aggregate demand problem arises whereby the actual demand-constrained growth rate falls short of even the structurally-constrained one. Moreover, depending upon the specification of the investment demand function, the system may well become unstable or, at the very least, display large cyclical swings around a low trend growth rate.[42] In this scenario public expenditure becomes crucial in order to avoid problems of current demand.[43]

The question of course is what level of public expenditure is necessary? It should be remembered that the savings constrained growth rate can be approximated by the Harrodian 'warranted' rate:

$$g(w) \quad = \quad s/v \hspace{4cm} (3)$$

where s = marginal propensity to save

    v = incremental capital/output ratio corrected for capacity under-utilization.

If 'g' is the constrained growth rate, then 'vg' is the growth in capacity required to maintain the constrained rate. If the private sector left to itself increased capacity by 'i', then the government must spend at a rate of (vg-i) in creating capacity and at (s - vg + t), where 't' is the marginal propensity to tax, on non-capacity creating expenditure on domestic goods and services so as to avoid aggregate demand problems and the resulting instability.[44]

A serious problem exists however in determining the precise level of necessary government expenditure. Unlike the Harrodian case where the 'warranted' and the 'natural' growth rates are assumed to be determined by stable parameters (s and n, the marginal propensity to save and the growth rate of population), the relevant parameters in this case are likely to vary over time. Consider a simple characterization of the agriculturally-constrained growth rate:

$$g(y) \quad = \quad n + [g(a)-n]/E \hspace{3cm} (4)$$

where g(y) = constrained rate of growth of GDP

   g(a) = exogenously given growth rate of agriculture.

    E   = income elasticity of demand for agricultural output

The term 'E' is clearly determined by income distribution and the consumption patterns of different income groups in the economy. Moreover, aggregate marginal propensity to save is also determined by income distribution when the savings propensities of different groups vary from each other.

All other considerations apart, it is clear from this equation that the share of agriculture in GDP will fall secularly if the economy grows even at the constrained

rate.[45] Therefore, if the marginal propensity to save and
the consumption pattern of the agricultural sector differ
from those of the non-agricultural, then both 's' and 'g'
will vary over time. The rate of growth of necessary
government expenditures will thus not be a stable one and
would have to be monitored carefully.

In the model described earlier, where agricultural
prices are determined in a competitive market and
manufacturing prices are mark-ups based on unit costs, and
indeed in almost any sensible two-sector model, a rise in
aggregate demand will, ceteris paribus, raise the price of
agricultural goods relative to that of other sectors. This
of course does not apply to sectors which have administered
prices, that is the 'non-traded' sector in India. Thus, a
convenient rule of thumb for judging the adequacy of public
expenditure is provided by the agriculture/manufacturing
terms of trade. So long as this figure, on a trend basis,
does not move against agriculture, public expenditure levels
may be deemed to be adequate.[46]

The distribution of public expenditures between
capacity-creating and non-capacity-creating activities,
although theoretically determinate over the longer run, as
discussed earlier, may not be amenable to short-run fine
tuning because of the lumpiness of capital, unavailability
of appropriate institutions, time-consuming bureaucratic
procedures, and so on. As a consequence, it is more than
possible that capacity under-utilization will periodically
arise in public enterprises and the parastatals. This should
not be a matter of any grave concern, since it arises as an
inevitable consequence of the structural constraint and the
inherent rigidities of a system. The only cause for worry is
that, if such under-utilization persists for extended
periods, it may be perceived as a tacitly permissible laxity
in production discipline by both management and labour. This
attitude may cause serious problems at times when full
capacity utilization is both feasible and desirable. To
minimize such dangers, a more careful and sensitive planning

framework becomes necessary.

This sort of expansionary government behaviour contains however a danger. Given the downward rigidity of non-agricultural prices, because of a ratchet effect in wage formation and mark-up pricing, an improvement in agricultural terms of trade can come about only through an inflationary process. In addition, if the government is unable to finance its required expenditure levels through taxation and has recourse to deficit financing, the resulting monetary expansion can also have inflationary consequences.[47] These two sources of inflation are, however, very different and policy prescriptions must take cognizance of this difference. The first is a necessary cost of maintaining growth levels under uncertainty, and should not be a cause for concern. The second, on the other hand, has the potential for destabilizing the economy. Under normal conditions, and with widely-dispersed holdings of cash balances, this form of inflation is unlikely to arise. If, however, the additional cash balances created by monetary expansion are held by a few, or if the economy is disturbed by exogenous shocks which lead to a switch in portfolios from money balances to speculative real commodity stocks, then an inflationary cycle may be triggered off.

In the Indian case such a possibility is, or rather was, in fact unlikely. Given that a very large part of the Indian economy - the agricultural sector and 'labour' in the unregistered manufacturing and 'non-traded' sectors - are unable to protect their real incomes, such inflation can be of only short duration. But even this would be a matter of some concern in terms of equity.

What of transient shocks? The primary source of short-run fluctuations in India is weather-related agricultural failure. As has been mentioned earlier, mechanisms exist within the economy for coping with it. In the process, which involves keeping the consumption of non-agricultural goods unchanged, price can rise. If the

agricultural failure is prolonged, some inflation does take place. But what is the proper response? It is important to bear in mind the fact that relative price adjustments in an economy like India's can take place only with some inflation. Such inflation should, therefore, be viewed not as a disequilibrium, but as an adjustment phase in which relative prices are adjusting to changed supply condition within a 'competitive' market framework.[48] One very important outcome of this process is that income terms of trade of the agricultural sector fall less than proportionately than the fall in output.

Efforts at curbing such inflation by contractionary means are distinctly counterproductive. In the first instance, it can be achieved only by reducing non-agricultural output - which simply means adding output contraction to output contraction. Moreover, the massive reduction in the income terms of trade of the agricultural sector caused by this may trigger off hardship selling of assets, and consequently lead to an unalterable structural change within the sector.

The alternatives to contraction are either to impose a wage and price freeze on the non-agricultural sector as a whole, which reduces non-agricultural real incomes at a given output level, or simply to allow inflation to continue and make what necessary adjustments are required. The first option, although widely applied in other countries, would have fairly serious political and administrative problems in India. To this extent it is not a very credible option. As far as the second is concerned, the major problem lies in the balance of payments implications. The rise in the domestic price level will, ceteris paribus, lead to increased non-competitiveness of domestic products vis à vis foreign, and thereby to a deterioration in the trade balance. The subsequent price decline which will occur with the recovery of agricultural output does not in itself solve the problem since non-agricultural prices would have settled at a permanently higher level. As a result, financing the

increased trade gap by drawing down resources or by foreign borrowings is at best a temporary measure, and some form of real effective exchange rate adjustment must be implemented. The obvious remedy is to devalue the currency but even this has problems. The rise in the domestic price of imports caused by a devaluation will simply add to the stagflationary effects of the agricultural failure, and hence may make matters even worse. What is needed, clearly, is some method by which the price received by exporters is raised without raising import costs - in short, some form of dual exchange rates.

V.   ASSESSMENT

Having done the conceptual groundwork, we can now turn
to the main substance of this paper - an evaluation of the
post-1973 period. This is considered in three parts. The
first describes the distributional changes engendered by the
shocks and the adjustment policies. The macroeconomic
performance of the economy is then reviewed. Finally, the
implications of the distributional changes for the future
prospects of the economy are discussed.

1.   Shocks, adjustments and distribution

In an earlier paper (Sen 1986b), I described in some
detail the distributional changes caused by the shocks and
the policies. The details of these changes can therefore be
omitted and only a brief description given as a basis for
further analysis.

Several forms of redistribution occurred between 1973-74
and 1975-76:

(i)   from   the   agricultural   sector   to   the
       non-agricultural;

(ii)   within   the   agricultural   sector,   asset
       redistribution   from   the   small-surplus-producing
       peasants and tenants to the trader/landlord class;

(iii) in the non-agricultural sectors, from labour as a
       class, including the salariat, to capitalists;

(iv)   from urban unorganised labour to the salariat and
       organised labour; and

(v)   from   the   unemployed   and   underemployed   to   the
       employed.

The   mechanisms   through   which   these   changes   occurred

began in 1973-74 when the economy was in the middle of a three-year agricultural slump which resulted, as described earlier, in a fairly high rate of inflation. The government applied the monetary and fiscal brakes. Concurrently, oilprices quadrupled. This had the effect of simultaneously raising the price of non-agricultural products and depressing the level of aggregate demand through an 'excise' tax type effect. To compound the problem, the depreciation of the rupee against most currencies other than the pound sterling drove up the domestic prices of imports even further. As to be expected the terms of trade shifted against agriculture (see table 4) and the rate of growth of the manufacturing sector slowed down (this can be seen from table 2). For the organised manufaturing sector, however, the increase in exports permitted by the depreciation of the rupee mitigated this effect to some extent.

For the agricultural sector, the deteriorating terms of trade in 1974-75 - a less than normal year - was a serious set-back. The final crunch came in 1975-76, a year of record harvest. This, combined with the huge speculative stocks that had been built up in the previous year, led to a severe glut. This was precipitated by a substantial increase in interest rates (from 10 per cent to 15 per cent) in 1975-76 which made stock-holding an expensive proposition. For the first time in the history of independent India a record harvest had the effect of reducing the income terms of trade for agriculture. Small peasants, with limited staying power, had now been buffeted by adverse conditions for four continuous years - much too long for their reserves. The end result was massive asset redistribution.

In the non-agricultural sector, the combination of higher prices and a reduced rate of output growth weakened the position of labour whose interests are linked largely with employment growth (see figure 2). The non-wage classes, however, whose incomes are positively linked with prices, gained. Of these the most fortunate were those in the organised manufaturing sector who could take advantage of

the growing export market.

The dramatic decline in inflation after 1975-76 came as a distinct boon to the salaried classes in the 'non-traded' sector, which in any case had maintained its rate of growth during the contractionary phase. With its non-inflation-linked wage and price increases, this sector gained considerable ground on the others. By the time the policy stance was revised in 1976-77, and huge increases in public investments were made, it was too late. The distributional changes had led to a radical alteration of demand patterns. As a result, even though real public expenditures rose at a rate of 18.7 per cent, the terms of trade continued to move against agriculture. The rest of the economy, however, responded with outputs rising at around 5 per cent, compared with 3.8-4 per cent in the previous period.

2.   Consequences of the distributional changes

The distributional changes described above, coupled with the stylised facts of the Indian economy, had two major effects. First, consumption shifted towards non-agricultural products, thereby lowering the income elasticity of demand for agriculture. Secondly, the marginal propensity to save rose sharply. The basic data on savings behaviour in the Indian economy is given in table 5. Column 3 shows the savings rate which would have existed had the 1966-73 marginal propensity to save continued thereafter. A comparison of this series with the actual savings rate (column 2) clearly demonstrates the substantial increase in the marginal propensity to save that occurred in the years 1973-80 .[49] Therefore both the savings and the agricultural constraints eased considerably over this period.

But what of the foreign exchange constraint? The large increase in the average ex post savings rate implies that the volume of investments relative to consumption rose. This can be seen in table 6. As a result, the structure of

aggregate demand in the economy changed in two important ways: (a) the share of investment demand relative to consumption was higher, and (b) the share of non-agricultural goods in consumption was greater. The entire structure of aggregate demand thus shifted towards the more import intensive categories. That this occurred can be seen in table 7 where the imported input intensity of the Indian economy is seen to double between 1973-74 and 1979-80.[50] Thus, from the demand side, the foreign exchange constraint became more binding. Until 1979-80, however, a combination of rapid export growth, increasing remittances by Indian workers, and a liberal aid regime kept the foreign exchange constraint fairly relaxed. As a result, the Indian economy grew rapidly.

It should however be clearly noted that this improvement occurred solely because of the relaxation of the agricultural constraint which had held back industrial growth in the past. The easing of this constraint was caused by two factors: (a) a vastly improved performance by the agricultural sector, which was completely exogenous to any stabilization policy; and (b) a reduction in the demand for agricultural products, which arose out of the stabilization effort, both directly and indirectly via the income distribution changes that were engendered. The issue that needs to be resolved, therefore, is whether or not the worsening of the income distribution was a necessary factor for generating faster growth.

In order to answer this question we return to equation (4) on page 24. For the period 1967-68 to 1972-73 Sen (1981) computed the value of E as 0.5, of g(a) as 2.8 per cent a year and of n as 2.2 per cent. With these values equation (4) yields a growth rate of real GDP g(y) of 3.4 per cent a year, which is more or less what it actually was. Now, if in 1973-79 the agricultural constraint had remained binding, and if relative income distribution had remained unchanged (thereby implying a constant value for E), then the spurt in g(a) from 2.8 per cent to 4.1 per cent and a reduction in n

from 2.2 per cent to 2.1 per cent would have permitted g(y) to rise from 3.4 per cent to 6.1 per cent a year. In actuality, however, g(y) was only about 4.8 per cent. This implies that the Indian economy was unable to take full advantage even of the improvement in the supply side. The worsening of income distribution thus contributed nothing to the growth performance and should be considered to be an entirely regressive outcome.

It is apparent from this that in 1973-79, all three supply-side constraints - savings, agriculture and foreign exchange - eased quite considerably, and the binding constraint to industrial growth was aggregate demand. The operation of the demand constraint was initiated by the stabilization policies of 1973-75, and perpetuated by the distributional changes that were triggered off. This had two major macroeconomic effects. First, the share of agriculture in GDP dropped faster than it would have if the agricultural contraint had remained operative. This can be seen from the following expression (derived from equation (4)):

$$\hat{A} = (E-1)[g(a)-n]/E \qquad\qquad (5)$$

where A = share of agriculture in GDP = PaXa/Y and ($\hat{\ }$) represents percentage change.

Evaluating (5) at parameter values E = 0.5, g(a) = 0.041, and n = 0.021, yields a value of $\hat{A}$ = -0.02, or -2 per cent a year for 1973-79. The actual rate of decline in agriculture's share (which can be calculated from table 8) was 5.1 per cent a year. From this it may be concluded, by stretching the point a bit, that the value of E dropped from 0.5 in 1967-73 to a mere 0.29 in 1973-79.

Second, and perhaps more importantly in welfare terms, domestic consumption grew far more slowly than what was possible after meeting required investment needs. To see this, consider the behaviour of the share of investments in income (GDP)(θ)[51]:

$$\hat{\theta} = (v-k)g(y)/k \qquad\qquad\qquad (6)$$

where k = capital/output ratio corrected for capacity utilisation.

At reasonable parameter values of v = 5, k = 4, and g(y) = 4.8, equation (6) yields a value of $\hat{\theta}$ = 1.2 per cent. This figure represents the rate of growth in the share of investment necessary for given growth rate of output at constant capacity utilisation levels. In contrast, the actual figure for $\hat{\theta}$ was 3.6 per cent a year in 1973-79. Thus, the share of investment rose three times faster than was needed. This excess represents the totally unnecessary, and unproductive, loss of consumption possibilities that was borne by the Indian people as a result of the distributional changes.

3.   Longer-run consequences

The short to medium-run effects of the 1973-75 stabilization are only part of the story. The long-term consequences arising from the distributional changes are perhaps even more serious. Here we try to describe them.

As has been said already, the foreign exchange constraint became more binding from the demand side in 1973-79. Then, in 1979-80, came the second oil price shock and, in 1980-81, the world economy went into a recession from which it is only just emerging. As a result, on the one hand India's import bill rose by leaps and bounds; on the other the rate of growth of exports fell from 9.4 per cent in 1973-79 to only 3.6 per cent. Remittance flows rose for a little while but stagnated from 1983-84 onwards. The aid outlook too became much less comfortable as developed countries started to adjust to recession. Because of all these changes the foreign exchange reserves that India had built up dried up fairly rapidly. That this did not happen even faster is due in no small measure to the fairly rapid growth of India's indigenous petroleum output which occurred

as a result of the steps taken during the mid to late-1970s.

The problem was further compounded by the fact that the import liberalisation process began in 1977-78 was extended further and on a more systematic basis. As a result the import intensity of Indian production again rose. In view of these developments, there seems to be little doubt that since 1981-82 the foreign exchange constraint has become binding. A simple way of characterising the foreign exchange constraint for an economy in which consumer goods and other competitive imports are excluded by government policy is:

$$g(y) = [\hat{P}(x) - \hat{P}(m)] + [\hat{X} - \hat{\mu}] + \partial[\hat{F} - \hat{P}(x) - \hat{X}] \quad (7)$$

where: P(x) = 'dollar' price of exports
P(m) = 'dollar' price of imports
X = volume of exports
μ = import intensity of domestic output = M/y
F = all net financial inflows including invisibles, remittances, private and public borrowings, and aid, all in 'dollar' terms.
∂ = F/P(m).M.

Equation (7) may be viewed as a decomposition containing three terms: (a) the terms of trade effect, (b) the quantum effect, and (c) the financial flow effect. Unfortunately, the data needed to solve this equation are as yet incomplete for India, particularly with respect to P(m) and μ. But it seems quite clear that with $\hat{X}$ at 3.6 per cent (and even less in recent years), the value of g(y) will not be very much more than 4 per cent a year.

India's response to foreign exchange pressure was to approach the IMF in November 1981 for an Extended Fund Facility arrangement of SDR 5 billion over three years. This was a high conditionality facility, but the conditions laid down by the Fund were fairly generous. No currency depreciation was demanded, and restrictions on fiscal and

monetary growth were not very different from what they were in any case. What were ruled out, however, were any efforts to reverse the liberalisation of multiple exchange rate and bilateral trading arrangements. The government's reaction to this shock was thus considerably more muted than to the first. Most of the adjustment was made by financing the deficit, and not by contraction.

The common reading of this episode among centre-left economists and other observers in India was that the previous import liberalisation and macro-economic stringency were either informally dictated by Bank/Fund advisers, or that the Indian government undertook them voluntarily in a gesture of good faith and intention as a prelude to approaching the Fund for the EFF loan. This view may have some merit, but an alternative explanation is available from the pattern of distributional changes arising from the 1973-75 stabilization. Since the dominant gainers were the urban capitalists, bourgeoisie and emergent middle-class, it seems very likely that the pattern of demand that emerged was such that it could not be met without the inflow of imported capital and intermediate goods which had been restricted earlier. The liberalisation efforts should thus be viewed as being determined by specific class pressures to which the government succumbed.

Some other consequences of the post-1973 adjustment effort are also noteworthy. First, the increased political power of the large farmer lobby which emerged from the 1975-76 asset redistribution has changed the process of agricultural price formation in a fundamental way. Not only has the price support programme been made more credible, in the sense of bringing procurement prices closer to market prices, but procurement prices have also been linked to the cost of production. This has had the effect of introducing a direct link from non-agricultural to agricultural prices which did not exist earlier. The possibility of sustained inflation has thus been enhanced and will continue to become more so over time as 'modern' agriculture, with its greater

reliance on non-farm inputs, spreads.[52]

Secondly, the rapid expansion of both the economy and the money supply in the latter half of the 1970s and the already skewed income distribution, created large idle cash balances in the hands of the urban capitalists and the middle-class. Such concentration of cash balances, as already discussed, raises the possibility of inflation. In addition, these classes' political clout has caused the government to exchange the idle money balances for interest-bearing government securities. A spiral of public debt servicing leading to monetary expansion, which in turn, because it accrues to the same classes, leads to further public debt, has apparently been triggered off.

On the other hand, the increased political power of the salaried middle-class (termed as the 'Babu Raj' in India) has made the Indian government even more sensitive to inflation (particularly above 5-6 per cent).[53] Because of the increasing possibilities of sustained inflation and lower tolerance for it, economic management has become much more difficult. In particular, there is a grave danger that the government may resort to strong deflationary policies at the least hint of an inflationary tendency, even if it arises out of real imbalances caused by agricultural failure.

A few additional points of clarification need to be made about the period after the second oil-price shock. First, as a result of the government's more muted reaction, the economy shows distinct signs of stabilising at the new economic and political alignments.

Secondly, the savings rate has declined somewhat and has stabilised at this lower level. This clearly calls for an explanation. Madhur (1984) has shown that, although the urban sector's short-run marginal propensity to save is nearly three times that of the rural, the long-run propensities are roughly equal. This implies, then, that

while redistributions are taking place, the aggregate marginal propensity to save will rise rapidly. Once the distribution stabilises in a new equilibrium, the marginal propensity to save will drop towards the long-run level. This is what has apparently happened.

Finally, there is evidence that the rate of growth of agriculture in the early 1980s has started to decline. This is an expected outcome of the changes in land distribution discussed earlier. All evidence in India and elsewhere points towards the greater dynamism, in terms of productivity, of the small farmer relative to the large. Whatever the cause, if the agricultural growth rate does fall sufficiently, the agricultural constraint will reappear, and the equity costs borne by the Indian economy will have been in vain.

VI.   ALTERNATIVES

It is clear from all this that India paid a heavy price for its experiment with orthodoxy in 1973-76. But it is hard to fault the government for its actions. Such policies are fairly appropriate for economies which are savings constrained, a belief that has dominated Indian thinking for a long time and continues to do so.[54] The distinction between a general supply constraint and a sector-specific one is sometimes subtle, and hindsight has 20-20 vision. Moreover, it is not enough to criticise. For the criticism to carry conviction, an alternative must be presented. This section atempts to do so.

1.   For 1973-74

The most inappropriate policy in this period was the fiscal and monetary contraction aimed at curbing inflation. As mentioned earlier, the proper step in such a situation is to do nothing to control inflation but to take the necessary steps to adjust. To this end the currency depreciation that occurred was correct, if only partially. In order to hold down the domestic price of imports either a dual exchange rate policy should have been employed or the import of non-competitives should have been liberalised. The rise in oil prices ruled out the second option because of the tremendous foreign exchange outflow it would have entailed. It is sometimes claimed that in a regime of quota restrictions a devaluation does not lead to a rise in the domestic price of imports, and hence has very little cost-push effect. This is true only in the case of competitive imports. With non-competitive imports, particularly when either the quotas are held monopolistically or confer monopoly powers, a devaluation will affect the domestic price, albeit to a lesser extent than the change in parity. Therefore some form of a dual exchange rate was inevitable.

But this would not have entirely covered the

deterioration in the trade balance caused by the oil shock. With the agricultural constraint binding, however, there existed at least some foreign exchange slack. A cut-back in import-intensive public investment, coupled with an increase in other public expenditure to the extent of the domestic resources content of the abandoned projects, would have served to reduce India's borrowing needs substantially, without jeopardising output levels. Nothing more really needed to be done.

Having already committed the initial error, the post-1977, and even more the post-1979, liberalisation of imports was a most risky step. Some relaxation of quota limits would have been tolerable, but to remove quotas for some items was somewhat extreme. The whole objective of policy-making under structural constraints is to minimise the variability of the constraining sector, and quotas play a very crucial role in this for the Indian foreign trade sector.

2.   Future policies

Given the situation prevailing in India today, what should be done if yet another exogenous shock affects the balance of payments? To answer this without fully specifying the nature of the shock would be to commit the same error that is committed by the proponents of an immutable orthodoxy. A few general observations, however, may be made based on the foregoing analysis. These suggestions relate more to the overall macro-economic policy framework than to the exigencies created by specific shocks.

The basic assertion made in the preceding section is that the Indian economy continues to be 'structurally' constrained, although the operative constraint has changed from agricultural output to foreign exchange. This has a number of implications, which shall be taken up in order.

First, since the binding constraint is not savings, the

danger of Harrodian instability continues to exist. In order to tackle this effectively, it is absolutely necessary that domestic fiscal policy be autonomous so that it can be utilized for maintaining aggregate demand levels. For such autonomy to be achieved, however, it is imperative that imports be restricted through quantitative restrictions as far as practicable. In recent years a large volume of literature has been developed on the 'rent-seeking' or 'directly unproductive (DUP)' activities that are created by quota restrictions. The argument is that in a quota-restriction regime real productive factor are used, not for production, but for cornering the quota rents and that this represents a net loss to the economy.

It should be remembered, however, that this above argument applies only when the resources used in the DUP activity are the constraining factors, so that they command significant shadow prices. Thus, for structurally-constrained economies, DUP activities are unlikely to have a very significant impact unless it can be shown that the constraining factor is directly utilised for DUP purposes. It is nobody's case that in India agricultural goods have ever been utilised in gathering quota rents, and it seems highly improbable that foreign exchange is being currently utilised for the same purpose. It would therefore be fallacious to use the 'rent-seeking' argument against quota restrictions in India, particularly if it is possible to prevent the use of foreign exchange in such activities.

Second, with the foreign exchange constraint biting, there is a need to conserve the foreign exchange available and to ensure that it is used as productively as possible. This of course subsumes the use of foreign exchange in DUP activities. In the past, the exchange control regime has played a key role in ensuring that the available foreign exchange is used for the purchase of real goods and services and not for financial investments. This need is even greater today. Thus, the exchange control mechanism not only needs to be maintained, but made even more effective. Quota

restrictions play an extremely important role in this regard. And so the circle is completed.

Third, the need to conserve foreign exchange also implies that the allocation of foreign exchange between capacity creation and capacity utilisation has to be determined with great care. All too often far more resources are devoted to capacity creation than is dictated by the operative constraint. This point has been made earlier in the study but in a foreign exchange constrained economy there is an additional dimension. Over-investment in capacity creation not only reduces current consumption and welfare, to the extent that the present value of the net consumption stream is virtually always negative; it may also have strong negative growth effects through a reduction in private investments if capacity under-utilisation occurs as a result of the non-availability of essential imported intermediate inputs. Indeed, depending upon the nature of the behavioural assumptions, this process may also be unstable. Unfortunately in India this analysis is not currently carried out, and the Planning Commission needs to take account of this possibility if such problem are to be successfully averted.

Fourth, all-out efforts to raise the growth rate of foreign exchange earnings are certainly called for, and immediate steps need to be taken to correct existing anomalies in the system. In particular, the effective rate of protection to exportables must be brought at least to parity with that for importables and the non-tradeds. Given the existing situation, this would require either a rather substantial enhancement of export incentives, or a more liberalised import regime. In view of the need to conserve foreign exchange, the latter option is not particularly viable but it is possible to combine some of its attributes in an export incentive system.

Incentives for export may be provided in various ways: (a) through larger direct export subsidies, (b) exchange

rate adjustments, and (c) export-linked import licences, much like the existing 'import replenishment' licences. Of these, direct export subsidies have the least likelihood of immediate acceptance by the Indian government given its inability to raise adequate tax revenues and its growing sensitivity to the size of the government budget deficit.[55] What little is possible, would probably not be anywhere near the extent that is necessary for realigning relative protection rates. Some degree of exchange rate adjustment will certainly have to be made. The conceptual issue here is not the extent of the adjustment, but the mode. In the course of the study, repeated references have been made to the need for and desirability of multiple exchange-rates for coping with exogenous shocks, both internal and external. The question is what should be the structure of the multiple exchange rate system, and what factors should go into its administration?

To start with, consider the characteristics of an exchange-rate system that are desirable for a country such as India. First, it should impart a certain degree of automaticity to the level of incentives given to exporters of price-elastic products. Second, it should protect price-inelastic exports from undue erosion of their total foreign exchange earnings. Third, it should allow international relative prices to be reflected in the prices of the domestic import-substituting sector. Fourth, it should not impart a cost-push inflationary impetus to the economy through the prices of imported intermediates. And finally, it should permit the government some discretionary leeway for coping with unforeseen contingencies.

Keeping those considerations in mind, consider a three-tier exchange-rate system in which one exchange-rate (e_1) applies to price-elastic exportables (by and large equivalent to the existing category of 'non-traditional' or manufactured exports), to all imports excluding 'universal' intermediates and imports on government account, and to all other items on the expenditure side of the current account.

Imports of 'universal' intermediates and, on government account, 'traditional' exports, and government capital account transactions face a second exchange-rate (e_2). Finally, all other items on the earnings side of the current account and private capital transactions have a third exchange-rate (e_3) applied to them.[56] The precise levels of these rates and their initial relative positions vis-a-vis each other is beyond the scope of this study. But, while these are important policy issues, they are conceptually less so than the operation of the exchange-rate regime.

The scheme that is visualised is as follows: e_1 is the central exchange-rate which is to be directed towards increasing the competitiveness of India's exports and providing the stimulus for import-substitution. To this extent, it is precisely analogous to the exchange-rate concept which the 'orthodox' school has in mind in its analyses. In conformity with 'orthodox' precepts, this exchange rate is linked to the ratio of a domestic and a foreign price index. What these indices should be is still a matter of some debate into which it is not necessary to enter. Suffice it to say that, as far as the domestic price index is concerned, an index of the price of manufactured goods is probably the best. Given the function of this exchange rate, there should be virtual automaticity in its movement as the relevant price-ratio changes over time. The only choice variable that may be retained by the government is the periodicity of the changes.

The other two exchange-rates (e_2 and e_3) are non-standard, and have been introduced for minimising the well-known negative effects of exchange-rate adjustments. They also reflect the contradictions that are inherent in a single exchange-rate system, particularly from the point of view of developing countries. Under normal conditions both these rates are linked to the agriculture/manufacturing terms of trade, but operating in opposite directions. That is, when the terms of trade move in favour of (against) agriculture, e_2 depreciates (appreciates) whereas e_3

appreciates (depreciates). The logic behind this scheme is that in India the agriculture/manufaturing terms of trade are probably the single best indicator of the adequacy of aggregate demand, and hence this form of exchange-rate movement provides a compensating mechanism which is more sensitive than autonomous changes in government expenditures.[57]

But, in times of exogenous shocks, the behaviour of these rates would have to be very different indeed. Take for instance an agricultural failure which leads to upward pressure on domestic prices and has the potential for triggering off inflation. In this circumstance, when the terms of trade move in favour of agriculture for purely supply-side reasons and when the rate of depreciation of e_1 will tend to accelerate, there is reason for e_2 to be held constant, or even allows to appreciate mildly, both to hold down the extent of price rises and to give a stimulus to demand. This logic can easily be extended to cover other contingencies. The main point, however, is that both e_2 and e_3 should behave more or less as fixed exchange rates, with a fair degree of discretion retained by the government regarding their movements.

It should be clearly noted, however, that this exchange-rate mechanism is meant to be a transitional one for the period in which the Indian economy is structurally constrained and countervailing powers have not developed against existing asymmetries. In the longer run, once the structural barriers have been crossed, the three exchange-rates would eventually have to be merged. It is important, therefore, that e_2 and e_3 should not be allowed to get very far out of line with e_1, except under exceptional circumstances.

One method that may be fruitfully used both to hold down the gap between e_1 and e_2/e_3 and to make the domestic prices sensitive to international relative prices is to extend and liberalise the existing import replenishment licence scheme.

This proposal involves the introduction of two types of import replenishment licence, each given as a fixed percentage of export earnings. The first would be very much like the existing licence, in that permitted imports are specified on the basis of the input needs of the product, but in addition would also permit the import of any of a pre-specified list of 'universal' intermediates. The second type of licence, which would necessarily have to be of a lower relative quantity, would be much more general in the sense that it may be used to import virtually any good except those on a pre-specified list. Both types of licences should be freely tradeable so that their market premia represent the subsidy element to exporters. Given the level of these premia, appropriate adjustments may be made to the level and rate of change of e_1.

Fifth, with the foreign exchange constraint binding, the stage is now set for foreign capital inflows, both aid and debt, to be productive enough to justify the servicing costs. This was not the situation earlier, and the Indian government was wise in minimising such inflows. The implication of this is that it is now very much preferable to finance balance-of-payments deficits arising out of transient external shocks than to adjust by domestic policy actions.

Finally, if all else fails, and the balance-of-payments gap remains unbridged, then consideration should be given to the package of reduced import-intensive public investments and increased domestic resource-using investments that has been mentioned earlier. By this method, although growth prospects may be somewhat reduced, the net effect on current aggregate demand, and so on current output, is kept unchanged, while directly reducing total imports.

A last word of caution. As has been explained, the conditions for sustained inflation are more in evidence today than ever before. Great care must therefore be taken to ensure that episodic shocks do not translate into

sustained price disequilibria. The costs if this happens are
large, and the costs of correction even larger, as the Latin
American experience has shown.

FOOTNOTES

1. The late 1950's and early 1960's, on the other hand, are considered to be periods of some profligacy in the conduct of economic policy.

2. There was a stabilization episode in 1949, but it is a difficult one to evaluate given the serious political instability that existed in the aftermath of the independence of India in late 1947.

3. The cessation of aid was with regard to future commitments. The disbursement of past commitments was continued, and hence there was only a mild reduction in actual aid flows.

4. Bhagwati and Srinivasan (1975) have estimated the net devaluation to be 43.2 per cent for imports and 22 per cent for exports.

5. See Bhagwati and Srinivasan (1975) for such an argument.

6. The import propensity is defined as the ratio of tariff exclusive value of import to GDP.

7. Price here refers to the implicit GDP deflator.

8. For instance, the real short-run commercial lending rate by the banking sector rose from about -7 per cent in 1972-73 to about +16 per cent in 1976-77.

9. The open deficit of the government, however, narrowed, which is reflected in the decline in the growth rate of money supply.

10. See Verghese (1983).

11. The implicit import tariff is defined as the ratio of import tariff revenues to the c.i.f. import bill.

12. For an extensive bibliography see Sen (1982).

13. This theme is further elaborated in Sen (1986c), where it is argued that the necessary condition for success is that the effective devaluation should be higher for

exports than for imports, without reducing the level of effective protection for the import substituting industries.

14. See Sunkel (1960), Cardoso (1981), and Taylor (1983).

15. For instance, Rakshit (1982).

16. As a sampling of this literature, see Sen (1981), Bose (1986) and Sarkar (1986).

17. For instance, Bose (1986) distinguishes 4 sectors: investment goods, luxury goods, industrial wage goods and agricultural wage goods. Sarkar (1986) considers 3: agriculture, industrial wage goods and industrial luxury goods.

18. Although in later discussions further disaggregations of the manufacturing and non-traded sectors will sometimes be used.

19. See figure 1.

20. There is a large body of literature on price formation in Indian agriculture, and the concensus is that the prices are set in a competitive market, although monopsonistic influences are not insignificant in a localised sense.

21. This medium-run growth rate may infact not be achieved if the necessary maintenance inputs are either not available or priced too high. Further, Sen (1981) argues that even in the long-run, improvements in agricultural infrastructure will have only marginal effects on the growth rate of this sector, since the dominant constraints are institutional.

22. The upward adjustment of the aggregate consumption rate during periods of harvest failure can be seen in table 6. This point has been extensively discussed in Sen (1986a).

23. In 1973-74, food and beverages plus jute and cotton manufactures accounted for almost 50 per cent of total export value. See Wolf (1983).

24. For estimates of the price elasticity of demand for Indian exports see Da Costa (1965) and Houthakker and Magee (1969).

25. In 1973-74 the manufacturing sector (even excluding jute and cotton manufacture) provided over 50 per cent of India's export earnings, and almost the entire increase in exports thereafter originated in it.

26. See Banerjee (1975).

27. For evidence of this see, among other, Chakravarty (1977).

28. If the mark-up were constant, then although the domestic price and export price may differ, they would move in proportion. With variable mark-up, however, even this does not follow.

29. This can be seen from table 5, and has been discussed futher in Sen (1986b).

30. In particular, the prices for para-statals are determined by administrative fiat as a part of the government's macro-economic policies.

31. Profits here being defined as inclusive of rents.

32. This result has appeared in a number of studies such as Krishnamurthy and Saibaba (1981), and Madhur (1984).

33. Madhur (1984).

34. See Mody (1983).

35. See Sen (1986b) for detailed discussion of these issues.

36. See, for instance, Rakshit (1982).

37. Measured real income of households of this class may infact not be affected because of higher labour force participation by women and children.

38. It would appear, therefore, that the Kaleckian assumption of a target real wage rate, which is widely used in the Indian literature, does not really apply to India, except perhaps in the long-run for the unregistered sector.

39. These values have been computed from data given in Gupta and Gupta (1986).

40. One of the most lucid and illuminating discussion of the constraints to growth is available in Sen (1981), Ch.1, which is well worth reading.

41. It may be argued, as is apparently done by Little, Scitovsky and Scott (1970). and implicitly by Bhagwati and Srinivasan (1975), that an increase in allocative efficiency through a more liberal trade policy would lead to a sufficiently high growth of exports that the 'structural' constraint barriers may be crossed and the savings constrained rate attained. For this to happen, however, a rather extreme form of export optimism has to obtain. A more likely outcome of such efforts is that the economy will grow at a rate lower than the structurally constrained, and with a much larger requirement of foreign investible resources during the adjustment phase, which may infact be prolonged.

42. Whether the process is completely unstable or shows cyclicity, would depend upon whether the savings rate falls faster or slower than the investment rate with decreases in real output and incomes.

43. This problem is almost precisely analogous to the well known instability problem in growth theory which arises when the Harrodian 'warranted' rate exceeds the 'natural' rate.

44. These rates of growth are with respect to the level of existing capacity.

45. The conditions under which this will happen are: (a) $g(a) > n$, and (b) $E < 1$. The first is empirically verifiable, and the second will always be true if Engel's Law holds.

46. Some corrections would of course have to be made for the effects of world inflation, exchange rate changes, and changes in the interest rate.

47. Through an increase in the mark-up rate.

48. In this discussion it is being assumed that destabilising commodity speculation does not occur.

49. Computing the mps in the second period (1973-75) from the equation mps (2) = mps(1) x [(aps(2)/aps(1))-1] [(Y(2)/Y(1))-1] gives the result that mps(2) = 0.35 as compared to mps (1) = 0.19.

50. This increase in the import intensity was permitted largely by a liberalisation of imports, which was begun in 1977-78 and carried further in 1979.

51. Since the analysis is with respect to ex post figures, the investment share is equivalent to the share of domestic savings plus foreign capital inflows. To this extent it is a better measure of consumption foregone than the savings ratio.

52. With this sort of feed-back mechanism, an inflationary process can continue even with rapidly increasing agricultural stocks with the government. The only device that can address this problem directly is a more credible public distribution system - something that will take time to develop.

53. The maximum tolerable inflation rate of 6 per cent has been publicly acknowledged by the Indian government. Note that this is precisely the same figure obtained in this study as the 'break even' inflation rate for the salaried class. It would be too much to explain this similarity as a pure coincidence.

54. Strangely enough, even the foreign exchange constraint, although recognised, is treated as if it were synonymous with the savings constraint during policy deliberations and debates. It is likely that the distinction between the ex ante and the ex post equality of the Saving-Investment gap with the BOP deficit is not drawn by Indian policy makers.

55. A rather peculiar blinker exists regarding the inflationary consequences of export subsidies financed by deficit financing and equivalent currency depreciations - the former is believed to be more inflationary. The fact is that insofar as the export side alone is concerned, the monetary effects of the two are identical. The only difference perhaps is a psychological one, whereby an announced deficit has

greater impact on expectation formation than unannounced money creation through an adjusted exchange rate.

56. 'Universal' intermediates are defined as those goods which enter, directly or indirectly, into the production of virtually every product in the economy. Standard examples are petroleum, electricity and steel.

57. Note that the depreciation of the exchange-rate applicable to 'universal' intermediates acts as an excise tax, whereas that applicable to private financial flows acts as a subsidy.

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Table 1: <u>Volume Indices - 1970 = 100</u>

Year	Agricultural production	Per capita agricultural production	Trend agricultural production	1÷3	Industrial production (crude index)
	1	2	3	4	5
1970-71	100.0	100.0	94.0	106.4	100.0
1971-72	99.7	97.6	96.6	103.2	105.0
1972-73	91.7	88.0	99.4	92.3	109.2
1973-74	100.8	94.7	102.2	93.0	110.1
1974-75	97.6	89.8	105.0	93.0	113.6
1975-76	112.1	101.0	107.8	104.0	121.8
1976-77	104.2	92.0	110.6	94.2	133.5
1977-78	119.1	102.9	113.4	105.0	137.8
1978-79	123.7	104.7	116.2	106.5	148.2
1979-80	104.8	86.9	119.0	88.1	146.2
1980-81	121.3	98.5	121.8	99.6	152.0
1981-82	128.0	101.8	124.6	102.7	165.2

<u>Source</u>: National Account Statistics (CSO)

Table 2 : Volume Indices for Major Sectors

Year	Agricultural Production	Manufacturing			Non-Traded
		Reg.	un-reg.	Total	
1970-71	100.0	100.0	100.0	100.0	100.0
71-72	99.7	110.7	104.7	102.8	103.9
72-73	91.7	106.1	109.2	107.3	106.6
73-74	100.8	114.0	113.2	113.7	108.3
74-75	97.6	117.9	119.2	118.4	112.4
75-76	112.1	118.2	123.8	120.3	122.3
76-77	104.2	131.6	128.1	130.8	130.2
77-78	119.1	140.4	137.1	139.1	139.2
78-79	123.7	155.7	150.9	153.9	148.8
79-80	104.8	152.7	148.2	151.0	150.4
80-81	121.3	153.9	150.9	152.8	159.6
81-82	128.2	163.7	154.6	160.3	170.7

Source : Computed from National Account Statistics, CSO

TABLE 3 : Wages and Employment in the Manufacturing Sector.

(Rs lakhs)

| | Employment[a] (lakhs) | Nominal Wage Bills (Rs lakhs) | | Real consumption Wage Bill[b] | |
		Registered	Unregistered	Regis- tered	Unregis tered.
1965-66	45.30	107197	33134	77120	23837
1966-67	44.45	118858	37809	75706	24082
1967-68	44.41	130210	43433	74406	24819
1968-69	45.27	142290	46141	81776	27667
1969-70	46.82	158575	52517	89590	29671
1970-71	47.61	178243	56449	95830	30348
1971-72	48.62	198666	62820	103472	32719
1972-73	50.66	200015	69011	106287	33339
1973-74	52.06	260366	76680	104146	30672
1974-75	51.30	318859	85365	100586	26929
1975-76	52.71	357190	92117	114118	29430
1976-77	53.91	372749	97359	123837	32345
1977-78	56.76	434907	108012	134231	33337
1978-79	59.49	479700	116446	144622	35180
1979-80	59.63	550427	133315	152897	37032
1980-81	60.47	612846	148945	152829	37143
1981-82	62.53	707068	167290	156778	37093

NOTES: a) Total employment in manufacturing, both public and private sectors.

b) At 1960 prices.

SOURCE: 1) NAS (CSO), various years.

2) Economic Survey, various years.

Table : 4 : Implicit NDP deflators for major sectors

Year	Agriculture	Manufac turing	Non-traded	Ag/ Non- traded	Ag/ Manufac turing
1970-71	100.00	100.00	100.00	100.00	100.00
1971-72	104.34	107.14	105.82	99	97.4
1972-73	123.32	114.07	113.06	109	108.1
1973-74	155.14	129.30	127.47	122	120.0
1974-75	171.36	164.25	154.45	111	104.3
1975-76	142.90	169.19	163.54	87	84.5
1976-77	156.37	172.68	171.82	91	90.6
1977-78	159.70	180.68	180.08	89	88.4
1978-79	158.35	187.03	184.85	86	84.7
1979-80	187.73	218.90	203.83	92	85.7
1980-81	203.56	246.01	229.63	89	82.7
1981-82	213.72	264.78	257.86	83	80.1

Source : Computed from National Account Statistics (CSO).

TABLE 5 : <u>The Behaviour of the Savings Rate in India 1970-82</u>

Year	Gross Pvt.Savings / Gross Disposal Y	Corrected for* / Income Growth	Household Savings / Personal Disposal Y
1970-71	11.97	11.97	10.70
1971-72	12.39	12.15	11.48
1972-73	11.25	12.08	10.47
1973-74	14.94	11.00	13.85
1974-75	13.67	11.90	11.16
1975-76	15.30	13.35	13.20
1976-77	17.62	13.24	15.47
1977-78	17.28	14.00	16.05
1978-79	19.76	14.41	18.16
1979-80	17.76	14.22	15.55
1980-81	17.31	14.31	16.32
1981-82	17.25	14.84	15.48
1970-73	11.87	12.07	10.08
1973-75	14.30	11.93	12.51
1975-76	16.50	13.30	14.34
1977-790	18.50	14.20	17..11
1979-82	17.40	14.47	15.70
1973-79	16.43	13.14	14.65

<u>Source :</u> National Account Statistics (CSO)

* Taken from Sen (1986 b)

<u>Table 6 : Composition of Aggregate Demand(%)</u>

	<u>Govt. Cons.</u>	<u>Public Inv.</u>	<u>Private Cons.</u>	<u>Private Inv.</u>	<u>C + C</u>	$I_p + I_c$
1970-71	9.3	6.8	72.8	11.2	82.1	17.9
1971-72	3.9	7.0	71.4	11.7	81.3	18.7
1972-73	9.8	7.4	72.6	10.2	82.4	17.6
1973-74	8.6	8.1	72.3	11.0	80.3	19.1
1974-75	8.5	7.8	71.5	12.2	80.0	20.0
1975-76	9.6	10.0	68.9	11.4	78.5	21.5
1976-77	10.3	10.7	67.6	11.4	77.9	22.1
1977-78	9.7	8.3	69.7	12.3	79.4	20.6
1978-79	9.6	9.7	67.4	13.3	77.0	23.0
1979-80	9.9	10.7	66.4	13.0	76.3	23.7
1980-81	9.8	10.5	66.6	13.1	76.4	23.6
1981-82	9.9	11.4	66.1	12.6	76.0	24.0

Table 7 : <u>Import Intensity of the Indian Economy.</u>

| Year	Import Share in GDP	Import Intensity	Imported Input Intensity
0	1	2	3
1970-71	4.45	4.45	3.71
1971-72	4.64	5.09	4.15
1972-73	4.31	5.06	3.94
1973-74	5.49	5.84	4.47
1974-75	7.13	5.57	5.70
1975-76	7.90	4.71	5.76
1976-77	7.08	4.32	5.74
1977-78	7.44	5.15	7.16
1978-79	7.81	5.49	7.53
1979-80	9.35	5.81	9.06
1980-81	11.02	6.45	10.69
1981-82	10.48	-	9.94
1982-83	9.86	-	-
1983-84	9.16	-	-
1984-85	8.76	-	-

Source : Computed from International Financial Statistics, Yearbook 1985 and RBI Report on Currency & Finance, Various years.

Table 8 : Sectoral Shares(%)In GDP.

year	Agriculture & Allied	MANUFACTURING			Non-traded
		Reg.	Unrg	Total	
1960-61	49.82	8.45	5.72	14.17	34.99
1961-62	48.71	8.77	5.91	14.68	35.59
1962-63	46.79	9.44	6.11	15.55	36.51
1963-64	47.45	9.69	6.07	15.71	35.74
1964-65	49.24	9.14	5.59	14.73	35.04
1965-66	46.52	9.69	5.55	15.15	37.25
1966-67	47.90	9.12	5.18	14.30	36.78
1967-68	50.43	8.10	4.94	13.09	35.51
1968-69	48.14	8.56	5.10	13.66	37.14
1969-70	47.74	9.39	5.01	14.39	36.80
1970-71	47.43	9.27	4.95	14.22	37.32
1971-72	45.81	9.65	5.25	14.90	38.30
1972-73	46.10	9.48	5.26	14.74	38.17
1973-74	49.82	9.12	4.96	14.08	35.19
1974-75	45.91	10.05	5.53	15.58	37.41
1975-76	41.95	10.01	5.62	15.63	41.08
1976-77	39.88	10.58	5.54	16.12	42.59
1977-78	40.45	10.33	5.59	15.92	42.25
1978-79	38.59	11.06	5.90	16.96	43.05
1979-80	36.43	11.62	6.23	17.85	44.12
1980-81	37.16	11.14	5.91	17.05	44.23
1981-82	35.07	11.12	5.57	16.69	45.85
1982-83	33.73	11.38	5.32	16.70	46.60
1983-84	35.66	10.82	5.08	15.91	45.50

Source : National Account Statistics,CSO(Various years)

Figure 1: Sectoral Gross Product Shares in GDP.
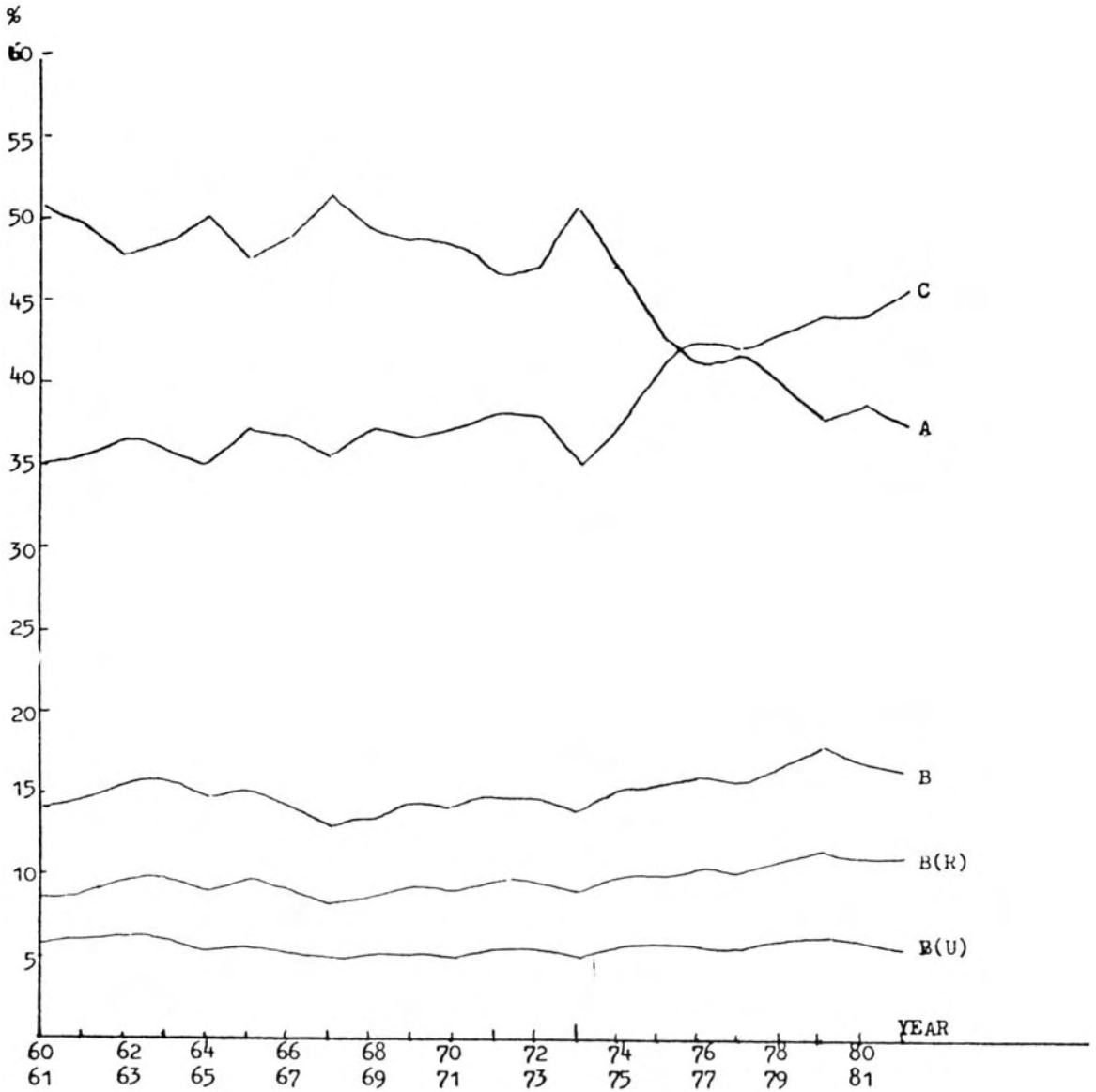
A = Primary Sector   B(R)= Registered Manufacturing
B = Total Manufacture   B(U)= Unregistered Manufacturing
C = Non-traded sectors

Figure 2 : Wage share in Manufacturing