intervention can facilitate growth and
the context of the current global debate
ers of growth the exercise may even be
lience beyond those interested in the

Strategy

d as the model for the Second Five-Year
nic of the economics of the Nehru era
means adopted to pursue its goals than
The famed model had first appeared in
e polymath. The model was intended to
indation for the project of raising the
rialisation already deliberated upon in
ommittee of the Congress which was
equest of Subhash Chandra Bose in his
l party president. For this reason it is
hru-Mahalanobis strategy.[4] This was a
of rapidly raising the level of income
vth, as raising the level of income was
liminating poverty.

eived of an economy with two sectors,
d consumer goods, respectively. Being
nomy without government, their out-
o GDP or national income. The capital
luction of the consumer good and of
eparture from the economic theory of
subjected to diminishing returns. This
ial allocation of investment to the pro-
vould leave the economy with a higher
uture. With these capital goods being
f investment, a higher initial allocation
on enables a higher investment in the
thus feasible investment is undertaken,
t – in the context no more than "putting
to work" – is actualised. Now future-
n what would have been the case were
wed more towards the production of
too would be the rate of growth of the
he starting point. Now the planner's
e share of investment to be allocated to
given the target level of income. I have
es description of the model and its logic.
vhen trying to understand the economic
cognise that, even for its architect, the

1979]. The means of bringing about a fast-growing heavy-goods sector was to invest disproportionately in these machine-building complexes. It was implicitly recognised that as the sector was characterised by long gestation lags in the production of output the rate of growth inherent in the Mahalanobis model would be lower in the short-run than that which would result from a strategy of investing disproportionately in consumer goods production. However, the long-run rate of growth resulting from the Mahalanobis strategy of shifting the investment allocation towards heavy goods would be higher,[6] even for the consumer goods sector, as it enhances productive capacity across the economy.

In a sense the underlying idea of the model is a kind of accounting. It estimates growth prospects based on current investment allocation, and chooses the allocation that maximises the rate of growth for any given investment outlay. It is not entirely value-free of course, in that it implicitly adopts a lower social rate of discount than could have been the case. It has been castigated as having been based on ideology.[7] This criticism begins to make sense only when one is told that the model had been inspired by the Feldman model from the Soviet planning literature, even though Mahalanobis has stated[8] that he was not aware of the work of Feldman at the time of formulation of his own model. Presumably, the criticism justifies itself by identifying any choice based on the Soviet experience as ideological. However, in the light of the quite spectacular expansion demonstrated by the former Soviet Union of that time, such a criticism would be ideological of itself, even though into the 21st century we were to have the hindsight to deduce that whatever was happening there was not sustainable. In the 1950s, however, newly independent countries with ambition could hardly have been faulted for aspiring to what the Soviets had achieved, namely rapid industrialisation and the consequent increase in income within a remarkably quick time. It is not as if the entirely compromised politics of the Stalin regime, even without the gulag and the genocides, was overlooked. Only that Nehru was clear that India would avoid them at the cost of aiming at a lower rate of growth. It was clear that neither forced collectivisation as a route to raising the agricultural rate of growth or the suspension of democracy as a way of quelling dissent on the chosen strategy were even conceivable to the Indian leadership. So a relevant criticism of the strategy would only be of its economic logic and what it leaves out rather than of its provenance. Here the comment by Desai (2007) that Mahalanobis' model has in it no unemployment, inflation or balance of payments is far more to the point. But once again, it is

on the drawing board Mahalanobis' plan had hung together a little better than anything else that was on offer[12] for India at that stage in history as it demonstrated an eye for the big picture.

Finally, and as an aside, one might observe that critics of Indian economic policy in the 1950s who saw the Mahalanobis plan as violative of economic freedoms due to its reliance on controls [notably Shenoy 1955] are unlikely to have taken much comfort from the Vakil-Brahmananda plan as its authors had placed it squarely in the field of planning. Indeed, once employment rather than output is targetted it is difficult to conceive of reallocation of labour without envisaging forced migration, Brahmananda's vision of cottage industry notwithstanding. Direct force in shaping development was ruled out of court by Jawaharlal Nehru who held firmly to the belief that the only kind of economic progress worth having was "progress by consent".

Link between Agriculture and Industry

Returning to the question of agriculture, not only was Mahalanobis acutely aware of its role in the scheme of things but he had incorporated this awareness into his strategy, if not so fully into his model. He had instantly recognised that in the 1950s Indian agricultural growth was severely constrained by the availability of the most basic kind of industrial inputs. Thus agricultural growth was itself linked to industrialisation even though the extent could have been debated; that is, while brick and mortar were clearly essential, it is certainly not true that aircraft and automobiles were. Nevertheless the suggestion of a role for industrialisation in launching the transformation of Indian agriculture is not so entirely far-fetched.

At this juncture I quote from the late Raj Krishna, an economist who having placed himself at an obtuse angle vis-à-vis the establishment that had donned the Nehruvian mantle is unlikely to have ever been in thrall to it. Yet he has stated,

> In a subcontinental economy with a very large market, abundant natural resources of every kind, and vast reserves of unskilled and skilled manpower, the building up of a strong and diversified capital-goods base was a historical necessity. If today we can boast of a large measure of self-reliance, it is because considerable capacity has been created in the metallurgical, mechanical, chemical, power and transport sectors. These sectors are basic precisely because they are equally indispensable for defence, for large-scale consumer goods production, for small-industry development and rural development. The technical linkages between agriculture and industry are such that even a 4 per cent rate of growth in agriculture is not possible without a high rate of growth in industries which supply the input requirements of a growing agriculture in the form of cement, bricks, pipes, pumps, electric power generation and transmission equipment, agricultural implements, diesel oil, fertiliser, pesticides, roads, vehicles, etc. And a 7 per cent growth in industry is not possible without a high rate of agricultural growth, because nearly half the modern industrial sector either processes agricultural output or supplies agricultural inputs [Krishna 1982:59].

Notice that the links conceived of between agriculture and industry in India at that early stage of development were both rudimentary and fundamental at the same time, and, for that very reason, recognition of it would have been central to any serious growth strategy. It would be difficult to credibly argue that the Nehru-Mahalanobis strategy had ignored, by design or by default, these links. To emphasise, I quote [Mahalanobis 1960:96] from the Second Five-Year Plan document,

> It was appreciated that, in India, surplus is the key to industrialisation. It is not only essential to grow enough food and fibres for our own requirements but it is also necessary to produce a surplus in the form of either industrial or food crops. In India agriculture and manufacturing industries are completely interlocked. Economic progress depends on the advance of both. Advance of one step in agriculture would supply food and raw materials for advance of one step in manufacturing industries which again, in its turn, would speed up irrigation and increase the supply of fertilisers and pesticides and help in the promotion of scientific research, which would lead to further advances in agriculture.

Increase in Income Levels

While the raising of the level of income is widely recognised as the main objective of planning in the Nehru era, Mahalanobis himself was additionally engaged with another one, a feature that is not widely known. This was to release India "permanently" [ibid:74] from the balance of payments constraint. Indeed, in his view this was the very logic of planning for industrialisation. This feature is seldom recognised, but it needs to be and when it is we are given an internal criterion, so to speak, by which to judge the economic policy of the Nehru era. After all, autonomy was at the core of the Nehruvian vision of economic development, not to mention of post-colonial India, and nothing would epitomise this more than a strong balance of payments position. Indeed, if an independent development was the objective this would never be achieved if India were strapped permanently to a balance of payments deficit. Having flagged this I return to the more recognisable objective of the economic policy of the time, namely the accelerated growth of income.

So a rapid increase in the level of income was the objective and this was to be brought about via greater investment in heavy industry. We have also seen that this was central to the plan for the transformation of Indian agriculture, a process that would require increased industrial inputs. But how was this to be resourced? The planners were fully aware that the step-up in investment envisaged in the Second Five-Year Plan was very substantial. Indeed, in retrospect, they appear to have had a better sense of the role of resources in a credible economic plan than is found in the public discourse on growth today when the issue of the "policy regime" is given much too important a role. This is apparent from two elements of the plan to raise the level of income. First, no major foreign assistance was envisaged. This was in keeping with the idea of an independent development, a project incompatible with excessive reliance on foreign aid or, even, foreign direct investment. Taking the Second Plan as a case, foreign assistance was put down at less than 5 per cent of total public expenditure in the proposed plan budget [Planning Commission 1956] for 1956-57 to 1960-61 even as the investment rate was to be raised by over 50 per cent from 7 to 11 per cent of GDP. Of course, what the actual achievement with respect to foreign savings was we shall have occasion to study later. The second point to note is that the envisaged contribution of the public enterprises was significant, revealing the Indian state's understanding of their role in the economy. The item "additional taxes and loans and profits from state enterprises" along with the "contribution from the railways" together equalled "loans from the public" and were over twice what was to be taken

important to separate out the model from the strategy, and most of these except perhaps inflation were addressed by Mahalanobis in his writings on the Second Plan.

Supply-side Model

There was, however, a flaw in the model that is indeed related to where it had originated but this is far from having been constituted by ideology. As more or less an accounting scheme the Mahalanobis model was exclusively a supply-side model. There was no recognition of a possible demand constraint to capital accumulation and little scope for slackening demand growth to subvert the growth process. A model based on the purely physical relationship between inputs and outputs made sense in the Soviet Union, the classical "command economy" where investment can be decreed by planners and enforced by commissars. Not so in India with a ubiquitous private sector that invests only in response to growing profits or its anticipation. Demand is now the lubricant. In the command economy the surplus could be constantly reinvested irrespective of market signals, thus maintaining a more or less constant growth dynamic, at least for some time. In the language of "growth economics" the savings are always invested, which since Keynes we recognise as a fiction at least for a market economy which India mostly was then. The only constraint to a seemingly endless growth in a command economy would be a declining investible surplus, which of course could also arise for entirely non-economic reasons such as political disaffection.

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The Institute of Economic Growth, Delhi is organizing a two-day International Conference o
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programme implications of population and health transition towards social and economic de
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1. *National Rural Health Mission:* The potential impact of the Mission on health and
especially children, women and other weaker sections of the society.

2. *Population and Health Policy Evolution:* Evolution and paradigm shifts in India's