Chapter VI

SUMMARY VIEW AND POLICY CONCLUSIONS
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The earlier models by Chamberlin and Joan Robinson, were applicable to firm and industry level situations. Later work relates capacity utilisation to economic growth but at an aggregate level. Recent econometric work has been more pointed to the extent it concentrates on structural analysis of investment prices or foreign trade and relates to capacity use. Also industry level emphasis is welcome. However, the basic problem of structural imbalances at a disaggregated level, a peculiar problem of developing economies, has been ignored. This particular aspect is the main focus of this thesis. (Chapter I).

The upshot is that while the different measures give different levels of capacity use, trends in this variable are caught by all the measures. We, therefore use the potential output method in this study, basically for following three reasons.

First, our study analyses the implication of and reasons for idle capacity (potential) for a short term policy programme, for which this approach
seems more suitable and second for study of Indian capacity under utilisation, examination of supply constraints is important which is more easily captured by the peak output approach. Third, as the textile industry note shows, the method captures trends as well as other measures. (Chapter II).

The number of industries utilising potential less than 50%, increased over a period under the study, while the number of industries in the range of utilisation above 75% decreased through the period particularly after 1966, corroborating stagnant industrial development after mid sixties. Potential Production, Potential utilisation and excess potential in absolute terms have increased in the Fourth Plan as compared to the Third Plan. The growth of potential utilisation (in percentage) is lower in the Fourth Plan compared to the growth of potential expansion (in percentage). The capital goods and intermediate goods producing sectors show a wider gap between increase in potential production and potential utilisation, compared to other groups in the Fourth Plan over the Third Plan. The aggregate potential utilisation in percentage has decreased in the
Fourth Plan compared to the period of Third Plan. This, again reflects the decelerations in industrial development after 1966, more particularly after 1968. (Chapter III).

The examination of the rates at which potential production, potential utilisation and excess potential have increased, sums up the statistical analysis of Chapter III. In all the four groups, the average annual rate of growth (compound) of potential production and potential utilisation have fallen during the second period 1967-73, compared to the earlier period 1960 to 1967. Potential production expanded at the highest rate (compound per annum) in capital goods compared to the other three sectors during the entire period 1960 to 1973. The rate of growth of potential production declined in capital goods sectors during the second period i.e. 1967-1973. The growth of potential production is highest in intermediate goods compared to all other groups during 1967-1973. The higher rate of growth of potential utilisation in capital goods industries (12.51%) compared to other groups of industries in the first period (1960-1967), declines
considerably (4.95%) during the second period of 1967-1973. The growth of potential utilisation is higher in intermediate goods group compared to all other groups during the entire period 1960 to 1973. The growth of potential utilisation (compound per annum), has been higher in consumer goods sectors during the second period as compared to the first period.

Structural Constraints

There is considerable annual variation in additional final demand and there is hardly any systematic trend. Of course, there is no a priori reason for additional final demand ($\Delta F$) to show any time trends and the annual variations in $\Delta F$ suggest, on the basis of very preliminary facts, the vulnerability of the Indian economy to cyclical patterns of change. At the level of disaggregation, total additional final demand showed a systematic increase in trend, contrary to the findings for individual sectors. The successive increase in the magnitude of total $\Delta F$ can be attributed to the increasing volume of $\Delta x$ i.e. excess potential during the period.
Another very important feature of our results is, that the slack in the system from excess capacity was not more in basic goods and capital goods as compared to intermediate goods and consumer goods. There is popular impression that the only culprit is heavy industrialisation dominated by the public sector, is not borne out by the facts as summarised in Chapter IV.

The results of this study has disproved the fear of shortages which would have come from some key sectors like iron and steel, cement and chemicals and chemical products. Our results show some other sectors which might have acted as constraints, such as basic metal industries not elsewhere classified, which contains lead, zinc and other ferrous and non-ferrous metals and alloys. Paints and varnishes and vanaspati which showed negative final demand consistently during the period under the study, while sugar, electrical cables and wires, soaps and glycerine showed shortages during some years. India has been short of non-ferrous metals capacity. However, apart from vanaspati, the domestic constraints of the other
sectors could have been easily relaxed by import planning. For the intermediate goods, paints and varnishes and soaps and glycerine, the explanation for generating negative final demand throughout the period is simple. They are again all vegetable oil based sectors. Electrical cables and wires are again a predominantly intermediate good and link with non-ferrous metals. Thus the most interesting feature of these results is, that among the sectors listed above which might have posed a structural bottleneck in the short run programme for fuller utilisation, the hypothetical possibility about generating a negative final demand after solving the system is present in the analysis, for the vegetable oil based and non-ferrous metal based groups of industries and this would have needed import planning. (Chapter IV).

Leather, might have acted as a constraint during almost all the years in the study. Most of the agricultural sectors would have posed a constraint in catering to the additional final demand, which would have been generated through fuller utilisation during
the year 1972. Foodgrains shortages might be envisaged in the years 1962, 1965, 1968, 1969 and 1972 while in the rest of the years it would have been sufficient to meet additional demand. (Chapter IV).

**Employment Implications**

Our estimated additional employment generation ($\Delta n$) would have reduced roughly 40% of the estimated backlog through fuller capacity utilisation in the manufacturing sectors. The objective of fuller utilisation should not be underrated as it has a major positive implication for employment generation. Most of the sectors which have a higher value of employment coefficients, belong to the group of consumer goods industries such as sugar, vanaspati, flour milling, beverages and tobacco, soaps and glycerine. Estimates of percentage loss of employment by a sector to the total loss of employment, also leads to the same conclusion. Among the engineering industries, petroleum products, electrical equipment, cement and non-ferrous metals, showed higher value of employment elasticity with respect to capacity
utilisation, leading to the conclusion that the percentage increase in output in those industries would have generated the employment at higher rate compared to other industrial sectors, which have lower value of coefficients. Sugar, flour milling, other rubber products, salt, glass and glass ware and vegetable oil were the sectors which have a higher value of employment coefficients as well as wage coefficients, so they might would have succeeded in providing effective employment with fuller utilisation of capacity in those sectors. It should also be noted that among all these six sectors except in salt refining, in all other sectors there was large unutilised capacity during the period under observation. (Chapter IV).

**Wage fund implications**

This leads to the conclusion that though the traditional industrial sectors, which are mainly consumer goods sectors have greater potential to provide more employment which is supported by the present study, but they are low wage paid industries
as the values of their wage coefficient are low, while other industries have greater potential to generate additional wage income through fuller utilisation as the value of their wage coefficient is higher but can employ fewer people with an increase in output i.e. with more utilisation. In all these industries there was considerable excess potential during the period under study (Chapter IV).

Primary Sectors Implications

In absolute terms the additional demand ($\Delta c$) was seen to be increasing in each successive years for which estimates of $\Delta c$ could be obtained. The additional wage increase was tending to rise due to the increasing volume of excess potential. Out of the total additional income ($\Delta w$) the highest proportion would have been spent on clothing followed by items under the group of other non-food and milk and milk products. The expenditure elasticities for those products were higher, compared to other items. Though, the real and expected expenditure pattern are at constant prices, the estimates show a proportionate
increase in consumption pattern with additional 
expenditure in favour of semi-luxuries items rather than 
on basic necessities such as food grains. This change 
in consumption pattern may be attained to the reason 
that the larger proportion of additional income 
which was expected to be generated with fuller capacity 
utilisation would have enhanced the income of those 
already employed rather than the additional 
employment for fuller utilisation. Since the extra 
demand for various commodities by various income 
receivers depend on behavioural coefficient, the fiscal 
and other public distribution policy measures can be 
used to balance demand and supply. It is however, 
interesting to judge whether the primary sectors 
produce most of the wage goods, would have been able 
to satisfy the extra demand generated. A clear cut 
test is very difficult as the potential for these 
sectors is difficult to estimate, but only very rough 
judgement are possible with this data, since we are 
estimating additional demand. In any case, for 
commodities like clothing additional production slack 
lay in the system on account of unutilised capacity. 
(Chapter IV).
Foreign exchange implications

The highest loss of additional export earnings is seen in intermediate groups products. This is due to the larger excess potential in this group of industries. The next comes consumer goods industries which also show a higher loss of exports due to unutilised capacity. Here it may be argued that the value of export/output ratios is higher in this group of industries. Most studies tend to indicate that in consumer goods and intermediate sectors, the marketability of Indian goods abroad is high. To the extent that such a somewhat generalised empirical statement is correct, the loss of output was doubly damned. Excess capacity and consequential loss of output and income at home was accompanying with scarce foreign exchange income in a period of severe balance of payments constraints. India's major traditional exports are jute textiles, tea and cotton textiles. Exports earnings declined from 44 percent in 1965-66 to 27 percent in 1970-71, for jute and tea inelastic world demand and quota restrictions abroad have often been cited as the reasons.
Given the imperfect nature of world markets for these commodities, straightforward conclusions are not easily possible on loss of quantity exports and also of foreign exchange earnings lost.

The capital goods industries which are mainly import intensive industries would have performed better in utilising capacity, with a double advantage of the export subsidisation scheme as well as availability of maintenance imports. (Chapter IV).

Economic variables described as technical characteristics did not prove the most effective variables in explaining variation in capacity utilisation in Indian industries. Domestic availability of major inputs mainly non-agricultural inputs were the major constraints in capacity utilisation in the sectors under study during 1960 to 1973 (Chapter V).

The last remark on the regression analysis (Chapter V) may be that with the limitations of data and level of aggregation of sectors of the study, the major constraints in utilising capacity during the period under observation seem to be
supply factors i.e. availability of major inputs. So policies which assure the timely and adequate availability of scarce inputs would have helped in utilising the unutilised potential during the period 1960 to 1973.