

Consumer Goods and Disposable Income

Do They Balance in the Second Plan?

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The principle of commodity balance as applied to consumer goods means that the supply of consumer goods during a plan year must be equal to the demand for such goods arising from the income distribution resulting in that year from planned investment during that and preceding years. Has this principle been observed in the Second Five-Year Plan ?

The Draft Outline as well, as the final Plan are silent on the question how the targets for the production of consumer goods were arrived at.

The author attempts a statistical estimate of the demand for foodgrains likely to arise in the Plan period, from the data on family budgets in the third round of the National Sample Survey. The results suggest that the target has been fixed, rather on the high side and this leads him to the conclusion that disposable income in the last Plan year may be made larger without any fear of foodgrains prices rising in consequence.

THE importance of ensuring commodity balances is beyond question; only recently we experienced the bad effects of falling agricultural prices and then, immediately after, prices have been shooting up, giving rise to widespread fears of inflation. This sort of price fluctuation is nothing but an indication that the problem of the commodity balance for consumer goods has not received due attention. The Second Five-Year Plan, both in the Draft and in the final version, is conspicuously silent as to how the targets were set for the consumer goods. Sometimes one gets the impression that some amount of money was set aside for a sector and specialists were asked to work out how much increase in production could be expected if that much money was spent. There are however references to consumer demand from time to time. Especially, in the case of food grains, it is stated that the rate of food grains consumption is expected to rise to 18.3 ounces per adult and the target of increasing production by 10 mn tons, it is indicated, was based on this calculation. Nothing is said, however, as to how the figure 18.3 oz is arrived at. As a matter of fact, it is indicated that some detailed calculations lie behind at least the food production targets. Thus, it is mentioned that the factors to be considered in this connection are

- (1) increase in the total population;
- (2) increase in the urban population;
- (3) the need to improve per capita consumption;
- (4) the need to counter possibilities of inflationary pressures resulting from the implementation of the Second Five-Year Plan; and
- (5) effects on food consumption incomes in national and income and

changes in its distribution.

While we do not see how (4) differs from (5), we have to admit that if all these factors were incorporated in the calculation of all the consumer goods production targets, the Plan would indeed be balanced at least in this particular respect. One would only ask that the calculations be repeated for all the intervening years between 1955-56 and 1960-61,

Widely Differing Targets

One feels a bit doubtful however whether these factors were really taken into consideration quantitatively. For one thing, it follows from the very definition of a balanced plan that if one part of the plan is changed, all its other parts are affected. Yet, we find that food grains target has remained unchanged at 10 mn tons increase through all the vicissitudes suffered by the Plan in its eventful journey from the Frame stage to the Final stage; and then, only recently we have witnessed a most interesting triangular controversy between the Agricultural Ministry who wants the Plan target to be 8½-mn tons additional production, the Planning Commission, who wants it to be 10 mn tons and the Chairman and the Vice-Chairman of the Planning Commission, who want it to be 25 mn tons. Surely, no demand calculation could be behind these widely differing targets.

It will be pointed out that consumer demand is not the only thing that is to be taken into account in setting production targets; a part of the volume produced will be kept in stock and a part may be exported; and of course there can always be imports. In other words, the equality to be observed is not

$$\text{Production} = \text{Consumption}$$

but $\text{Production} = \text{Consumption} + \text{addition to (or — reduction from) stock} + \text{export (or — import)}$. (1)

Production Potential Determines

If it be so, then it follows that a change in the production target does not necessarily imply a change in consumption target and vice versa. This is quite correct, but it only means that the planners in setting production targets must also keep in view all the three, namely, consumer demand, quantity to be exported or imported and to be stocked. If estimates for all these have been kept in view by the planners for all the chief consumer commodities, it has not been explicitly stated anywhere. On the other hand, if these calculations have not been made, then, whether the production targets are realised or not, there are bound to be unpredicted price changes and or fluctuations in stocks, all of which are undesirable and inconsistent with the idea of planning. As a matter of fact, it seems more likely that in setting up the targets, what the planners actually took into account were the possibilities from the production point of view, as appears from the following passage about the food production targets:

"These estimates are in the nature of first estimates derived from calculations of the production potential expected to be added as a result of various developmental programmes"

Difficulty of Predicting Demand

It must however be admitted that the task of the planners is exceedingly difficult. The statistics of production, consumption and stocks in India are faulty, especially with regard to food items. It is well known that the information available from independent sources about the four variables entering into the equality

(1) differ so much in their coverages, their modes of calculations, accuracy etc that the relation (1) can hardly ever be made to hold. Apart from that, the task of predicting consumer demands is itself a difficult one, especially in a developing economy.

As to this last, econometricians have tried two approaches; the time series approach and the family budget approach. The time series approach is to treat the problem in terms of multiple regression. Thus, the national consumption (say C) of a particular commodity, is supposed to depend on several other macro variables like the national income Y, prices of a few selected commodities p_1, p_2, \dots, p_k etc. The job is to establish an approximate relation between the dependent variable, that is the volume of consumption and the 'independent' variables. Prediction therefore consists in inserting known or targeted values for these independent variables Y, p_1, p_2, \dots, p_k etc and thus obtaining a value for the dependent variable C. Assuming prices to remain constant and ignoring all other factors, the relation boils down to one between the dependent variable C and the national income Y. It is often found empirically that C and Y are related in the following manner:

$$C = aY^b \quad (2)$$

If this be so, it can be seen that if Y increases to Y' , C increases to C' such that $\frac{C'}{C} = \left(\frac{Y'}{Y}\right)^b$ (3)

If Y is greater than Y' by $\frac{Y' - Y}{Y}$, it can be seen that C' is greater than C by roughly $b \%$. This formula is thus extremely convenient. When this relation holds, b is often called the income elasticity of the commodity.

This approach is not possible in India because of lack of adequate data. If the demand for a certain commodity is to be expressed as a function of the national income, prices of a number of commodities etc, parallel series of values of these variables will have to be there over a long period of time. These are however not available and hence it is impossible to say empirically whether such a relation as (2) holds in India or not.

But whether (2) holds or not, the convenient formula (3) can be made use of under certain assumptions and this result is reached through the family budget approach. This approach is as follows:

Let there be N consumption units

in a community. They are broken up into a number of classes according to some variable X attached to each unit. (The unit may be a household or an individual or a number attached to an individual consumer according to some considerations, eg: adults getting 1.0, younger people getting 0.9, 0.8 etc according to age. The variable X may be household income, per capita household income, per consumption unit household income etc.) For each class, the amount consumed of a particular commodity per consumer unit during a given period (called the 'basic period') is calculated. Let them be C_1, C_2, \dots, C_k . If the number of units in each class be n_1, n_2, \dots, n_k , then obviously, the total consumption of the commodity by the community during the base period is

$$\sum_{i=1}^k n_i c_i = C \quad (4)$$

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$$\sum_{i=1}^k n'_i c'_i = C' \quad (5)$$

period is a simple formula. The difficulty here is that one cannot know the average X values for the corresponding groups on the basis of some which are ascertained. One cannot know the demand effect of this demand curve calculated on the basis of family budget data for each base period in such a proportionate increase in average value of X. The period from which the relation is to be changed then the degree of inequality in consumption has changed frequently and in a large number of units as is often found empirically to be true. Thus, if there are now n'_1, n'_2, \dots, n'_k consumption units in the same classes as before as a result of population growth and planned income genera-

demand curve is reasonably well fitted by the equation $y = saX^b$ (6) then the difference $C' - C$ equals approximately $C \frac{a}{b} \frac{ex\%}{100}$ where $ex\%$ is the proportionate increase in the average value of X for the whole community.

When X stands for per capita income and the consumption unit is the individual person, we have, as when (2) holds, the simple and convenient formula:

proportionate increase in the per capita demand for the given commodity \sim proportional increase in the per capita national income x, b (7) It is important to remember however that the formula (2) has nothing to do with formula (6). One deals with national income and national demand, the other with the individual person's income and the individual person's demand.

Experience shows that the formula (6) fits data well very often and that even if the mode of generation of new income differs somewhat from that postulated above, the formula (7) may hold true approximately. What is crucial however is the assumption that the demand curve remains unchanged between the two periods. The demand curve changes over time for several reasons; firstly, it is inevitably affected by price changes; then the very change in the frequency distribution from n_1, n_2, \dots, n_k is likely to change the curve. Thus a consumption unit changing over from a group A to a group B as a result of new income generation may take some time before conforming to the average consumption pattern of the adopted groups. As to the effect of price changes, the family budget approach cannot take account of it. All that can be done is to predict for a period, assuming that the prices in that period will be the same as in the base period. This in itself may be made into a consideration as to the choice of a base period.

As to the other effects, all that can be done is to ensure the choice of the consumption units and the classifying variable X such that the average members of the different groups do not differ between themselves in consumption habits due to any other factor excepting differences in the values of X. Thus, if X be the total household income and the consumption unit the household, the units in the different groups are not comparable, for household size in India is very strongly correlated with household income. If

a household goes up from a lower income group to a higher income group, among the many reasons why it cannot be expected to conform to the average consumption pattern of that group is that it will have a smaller household size than the average household size of the group. Elasticities calculated on the basis of household income and household consumption may as a result be very much exaggerated and yield demand predictions erring seriously on the high side. From experience we find that a reasonable combination is to take as consumption units the individual consumers and as the classifying variable X the per capita income of the households to which they belong. At a time when saving does not behave as a function of income but is itself made into a target it is more appropriate to take as the classifying factor the total monthly or annual expenditure in place of income.

But whatever the choice of the unit of consumption and the classifying variable, the fact remains that the assumption that an individual moving over from one group to another will take over the group averages may go wrong by unpredictable amounts. Prediction in the

family budget approach therefore always involves an uncertain margin of error.

Pattern of Family Budgets

In considering the consumer goods targets it is useful to have before our eyes the relative importance of various components of the average family budget. We find the following picture from the report on the third round of the National Sample Survey: -

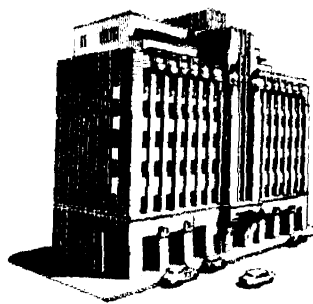
	% of total expenditure.
Food articles;	
Food grains ..	30.8
Other than food grains ..	26.4
Non-food articles:	
Intoxicants, tobacco, silk, ornaments, etc, non- essential items ..	4.8
Clothings, bedding, furni- ture, fuel, light etc ..	15.5
Services:	
Education and health ..	2.6
Housing ..	1.5
Transport ..	1.4
Other services ..	4.1
Amusements, 'Ceremonials and tax ..	6.9
Total	100.0

Thus, the most important item of consumption, food, covers more than 60 per cent of the average family budget. This together with the other most important item of consumption, cotton textile, covers about 70 per cent. These two groups of commodities have therefore to be studied very systematically and thoroughly. The services group covers items about which studies, if made, will have to have a very different purpose. For in planning for house construction, education and health services, 'consumer demand' is hardly a useful concept. The investment in these fields will depend on very many factors, but certainly not on what might be the amounts being spent by consumers on them at present. Similar arguments are relevant with respect to the group intoxicants, tobacco etc.' After this we are then left with items covering about 8 per cent of the total national consumption. They include several items which are produced by very small industries and either planning for them is difficult (as in the case of furnitures) or information about their demand is meagre, so that it is difficult to make demand calculations for them, In so far as cal-

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culations are possible, they should always be done; for no production should take place wastefully. It can however be safely guessed that no such demand calculations are to be found behind commodities belonging to this group for which production targets have been set in the Plan e.g. sewing machines, hurricane lanterns, electric lamps, radio receivers, electric fans, matches etc.

We shall here concentrate only on the two chief items, food and clothings.

Target for Food Grains

The target for food grains is to increase production by 15 per cent over the 1955-56 level. As the national consumption is targetted to rise only by 20 per cent it implies that elasticity (with respect to total consumption) of food grains consumption has got to be 0.75. It is assumed to equal consumption both in 1955-56 and 1960-61. For, the population goes up by 6.5 per cent during the five years, so that the increase in the per capita total consumption is 12.8 per cent and increase in the per capita consumption of foodgrains is 8 per cent. This of course means, according to the formula (7), that the elasticity is about 0.75. But this is a fantastically high figure for food grains.

Experience suggest that the elasticity for foodgrains cannot be so high. It cannot exceed 0.3 or 0.4 for the whole of India; it is likely to be very much less for urban consumers. It is obvious that our calculations are not the same as the calculations of the Planning Commission. Perhaps the Commission has chosen a unit of consumption and a classifying variable different from ours. We have already noted that certain choices are likely to give very much exaggerated predictions.

Dangers of Prediction

It is our opinion that if indeed disposable income rises only by 20 per cent and the targets are realised, there is going to be over production of food grains. (This is not to say anything about shortages that may occur as a result of the targets not being reached, or artificially created by speculation, smuggling and other antisocial activities, etc.) We do not of course suggest that the production target should be lowered. We have already seen that predictions on the basis of family budget studies contain an uncertain margin of error and it is more so with res-

pect to foodgrains. For example, unemployed workers getting an increase in income do not increase their expenditures on cereals and on cultural pursuits and others in a proportion conforming with the demand curve. Probably they increase their cereals consumption at a very much faster rate. It is always safe, therefore, to give some allowance to the prediction based on family budget studies. Yet the target appears to us to be on the high side; to put it in a more positive way, we suggest that the target of additional disposable income in 1960-61 could be made higher without fear of foodgrains prices rising.

Another disconcerting feature about the Plan is that there is no evidence that the agricultural planners are taking into account demand patterns of consumers in planning for the very long future. Thus, it is known that the demand curve for rice over income reaches an asymptote much earlier than that for wheat. This means that demand for rice will grow at a slower rate than for wheat. If this fact be not kept in mind right from now in crop planning, there is going to be serious imbalance in the grains market in the future: not necessarily a shortage of food grains, but a relative shortage of wheat and a relative superabundance of rice.

Non-Cereal Foods

In considering the other targets for food production also, we discover similar inconsistencies between the implied elasticities and what we think is reasonable. As for instance, it is targetted that the supply of vegetable oils for edible purposes (including Vanaspati) will go up from 1398 thousand tons to 1622 thousand tons, which means a per capita increase in consumption of 9 per cent. This implies an elasticity of about 0.70 which seems to be a bit of an under-estimate.

For sugar however about 40 per cent increase in total consumption or about 30 per cent increase in per capita consumption is targetted. This would mean an elasticity of more than 2.01. This seems to us to be quite off the mark, and there is likely to be overproduction if the target is realised.

It is only for cotton textiles that it is explicitly stated how the target of production for 1960-61 was arrived at. The Kanungo Committee arrived at the target of 8500 million

yards production for 1960-61 by assuming an elasticity of 1.25 referring to total national consumption. (This in our opinion is a reasonable estimate of the elasticity referring to per capita income.) It is however not made clear how population growth was taken into account.

Conclusion

A Government planning to undertake deficit financing on a grand scale should have at its disposal very detailed data about consumption habits of different classes of consumers. As the time series approach has to be ruled out in India, the family budget, with all its defects, has to be depended upon. It is necessary that detailed studies are undertaken and not only on all-India basis, but on the basis of much smaller communities of consumers. We think it important that studies be undertaken on the basis of geographical regions and secondly of economic classes. The consumption habits of the working class in Bombay are likely to differ largely from that of the rent receivers of Bengal. If consumption targets are fixed for such relatively small and homogeneous communities on the basis of their consumption habits and income flowing to them, and the national target is built up from them, the results are likely to be much more satisfactory.

Price Policy and Marketable Surplus

At least one classification is absolutely indispensable and that is between the agricultural and the non-agricultural population. The rate of development will depend to a very great extent not only on how much the agricultural population produces but more on how much they bring to the market. It is therefore important to know the consumption habits of the agricultural population as distinct from those of the nation as a whole. The agricultural population consumes very much more cereals than urban workers and it may not be all necessary for it from the point of view of nutrition, even after making allowance for the arduous manual labour that agriculturists have to do. This means that, increase in production is not the only way of increasing the supply of grains to the urban market. A suitable price policy can go a long way. But family budget studies, even based on different time periods and therefore different prices, cannot give

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