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The World Bank  
1818 H Street NW  
Washington DC 20433  
Telephone: 202-473-1000  
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Course 7: Industrial Development

Session 11: Thursday, March 14

Topic: Small-Scale Industry: The Indian Textile Industry

Speaker: Mr. Krishnaswamy

Outline: Attached

1. A lively debate has developed around the programme for the cotton textile industry in India, principally because of the reliance placed on the handlooms for increased output during the Second Plan period. The basic elements of the programme are:
  - (i) Textile production should be stepped up from about 6,500 million yards in 1955/56 to 8,500 million yards in 1960/61.
  - (ii) Of the additional output of 2,000 million yards, 1,500 million yards are to be supplied by handlooms and the rest by mills. This implies doubling the output of handlooms in the five-year period, while mill production is to increase by about 10%.
  - (iii) The relatively larger increase in handloom cloth is to be subsidized in various ways, including the levy of a cess on mill cloth.
  - (iv) The restriction on mill output is to be enforced by confining additional investment in mills to schemes of gradual modernization and to expansion projects licensed prior to 1956/57.
2. The Indian programme is clearly of both theoretical and practical interest. It is a case of deliberate choice of a labour-intensive technique of production, despite certain obvious disadvantages, such as higher unit costs of production and greater difficulties of marketing. The question naturally arises whether the Indian economy would be better off in the short-run as well as the long-run for preferring more employment in the textile industry to lower costs of production. There is, secondly, the practical question: would the handloom industry be in fact able to produce enough cloth in 1960/61, to satisfy the demand?
3. We might, to start with, set down briefly the basic factors that have influenced judgment on this issue:
  - (i) For social as well as economic reasons, it is necessary that greater use than so far should be made of the relatively abundant manpower in India.
  - (ii) Capital resources in general and foreign exchange resources in particular are scarce, and need to be allocated in substantial amounts to basic and capital goods industries in respect of which labour-intensive methods of production are not a practical possibility.

- (iii) There is in India considerable pressure for decentralization of economic activity and power, especially in the private sector.
4. These are factors which could be considered as justifying a bias in favour of small-scale, labour-intensive methods of production. That they are being applied to cotton textile production is due to certain additional elements which, at present at any rate, deserve consideration. These are:
- (i) On conservative estimates, there are about 2 million handlooms of various types in existence in India. Of these about 1.5 million are looms installed and operated for commercial purposes.
  - (ii) The 1,500 million yards of cloth produced by handlooms in 1955/56 meant an average output of 5 yards per day per loom, working for 200 days in the year. Both the rate of output per day and the number of working days in the year can be increased without much difficulty.
  - (iii) Weavers to operate these looms have not to be trained afresh, and therefore there need not be any great delay in increasing output on that account.
  - (iv) Nearly half the operating handlooms are organised through cooperatives, and the rest could over a period be similarly organised for more effective production.
  - (v) Replacement of looms as they wear out involves little or no foreign exchange expenditure; also, the large number of throw-shuttle looms could gradually be replaced by fly-shuttle or semi-automatic looms, so as to increase the output per loom or worker.
  - (vi) Despite competition by mills, hand-looms have held their own in the semi-urban and rural markets, particularly in respect of cloth made from yarn of lower counts, and saris. In recent years, they have, despite higher prices, competed in certain portions of the urban markets also.
  - (vii) The mills are in fact working nearly at capacity, and any sustained increase in their annual output will require additions to installed capacity.
5. Against this background, it could with some justification be argued that the handloom programme is, in effect, a way of utilising existing productive capacity and, therefore, is advantageous. However, for this argument to be truly valid, it has to be proven that such a policy will

in the aggregate provide the economy with a larger investible surplus than would be possible otherwise; or, alternatively, any diminution in the investible surplus attributable to dependence on handlooms is more than off-set by the benefits of larger and widely dispersed employment. Some of these benefits are admittedly non-measurable and there is room for divergence of views on their relative importance. But the quantitative aspects of the alternatives, viz. mill production and handloom production, have to be worked out before assigning values to the non-measurable elements.

II

6. It will readily be agreed that (a) the direct cost of production is higher per yard of handloom cloth and (b) the direct employment afforded by handlooms is much higher than what is possible under mill production. For a reasonable appraisal of the merits and demerits of the handlooms, it is however necessary to know the extent of variation in these as between the handlooms and mills. Calculation of these variations is not easy because (a) there is scope for choice in the method of production within each of the sectors and (b) data on a variety of costs are not readily available for either of these sectors. Any quantitative evaluation has therefore to be based on averages, estimates of unit costs and so forth. Some plausible estimates in respect of the two sectors are set out in the annexure and in the paragraphs below.
  
7. It may, at this stage, be useful to set down as precisely as possible the alternatives that are compared. The range of possible techniques varies from hand-spinning and hand-weaving with the crude-throw-shuttles at one end to mill-spun yarn woven by automatic looms at the other. Some composite textile mills in India are, in fact, equipped with automatic looms, and the textile industry is moving in that direction. On the other hand, there is strong pressure in certain quarters in India to introduce modified spinning-wheels operated by hand for obtaining the additional yarn necessary. That is to say, the controversy in India is not only between handlooms and weaving factories but also between hand-spun yarn for handlooms and spinning mills. The yarn controversy represents in a sense the "pure" case - in that equipment for the hand-spinning industry will have to newly installed, unlike in the case of hand-weaving where the equipment exists. There is, therefore, reason to believe that hand-spinning will not "save" any capital; its attraction is principally on the employment side. Since the problem is similar in that regard to the handloom vs. mills case, we shall concentrate on choice of techniques in the field of weaving: We assume that, by and large, yarn for both the sectors is provided by spinning mills - as indeed is the case today. Thus capital investment in spinning mills to provide the additional yarn necessary for stepping up cloth output is considered here as inevitable; and this comes into the picture only in a limited sense.

8. What then are the implications of handlooms as compared with weaving mills, in terms of capital, employment, costs, etc?

A. Capital Requirements:

- (i) The principal item of cost is likely to be that of converting a good proportion of the throw-shuttle looms into fly-shuttle or semi-automatic looms. This would mean an increase of output per loom from an average of 4 yards per day to around 8 yards a day for fly-shuttle looms and 10 yards or more a day for semi-automatic looms. The cost of conversion of enough looms so as to enable the handlooms to reach an aggregate output of 3,000 million yards in 1960/61, would be of the order of Rs. 30 million. On the other hand, the cost of additional looms to be installed in the factories would vary from Rs. 90 to Rs.125 million, depending on whether they are "plain" or "automatic" looms. The major part of this outlay would be in foreign currencies.
- (ii) For factory production, additional outlay on land, buildings, ancillary equipment, etc., would be another Rs.30 to Rs.40 million. Such outlay would be smaller in the case of handlooms.
- (iii) Additional working capital will be required in both cases. Since the handloom industry is scattered and not well organized as the mills, it is likely that its working capital requirements will be larger. How much larger, it is difficult to say; but in the initial stages, it may well be of the order of Rs.50-75 million.
- (iv) Establishment of spinning mills to feed the handlooms instead of composite spinning and weaving mills would perhaps mean an additional outlay, and this will have to be imputed to the handloom project. What the magnitude of this will be, it is difficult to say.
- (v) To re-equip the handlooms and replace the units as they wear out; the productive capacity of industries contributing to the manufacture of looms will have to be stepped up. But this will probably mean more a reduction of unused capacity in the numerous carpentry units and smithies in the handloom areas than investment in enlarging capacity.

On balance, it would appear that the handloom project will mean less "fixed" investment, almost no foreign exchange expenditure and somewhat greater outlay on "working" capital than would be required by the mills.

9. B. Labour Requirements:

- (i) Much the greater part of increased employment in the handloom sector would be due to fuller utilisation of the looms. That is to say, looms would be working 300 days a year as against 200 days a year at present. This will keep the weavers fully occupied; it will also mean an increase in the number of "helpers". In terms of full-time work, production by handlooms will add 1 million or more to the category of "gainfully occupied".
- (ii) On the assumption the mills work two shifts per day on the average, additional employment in the mills could vary from 25,000 to 60,000 - depending upon the types of looms installed and rationalisation of handling and processing techniques.
- (iii) Equipment for the mills will have to be imported, whereas the handlooms are manufactured locally. We have therefore to reckon with additional employment in other industries in respect of handlooms. However, this will be partly offset by the "loss" of employment in construction and maintenance that would be associated with the mill sector.
- (iv) Employment on the marketing and distribution side will be more in the case of handlooms, because of its decentralised character.

In the aggregate there is no question but that employment will be higher with handlooms.

10. C. Costs:

Data in this regard are most unsatisfactory. But handloom cloth tends to have higher costs of production, because both the wage costs and raw material costs per unit of output will be higher. This, together with higher distribution costs, more than offsets any saving there might be on "overheads" at the manufacturing stage. (It should be noted that handloom equipment wears out faster than a weaving mill, so that annual depreciation and maintenance costs will be pretty high, though not higher than in the mills.) The fact that handloom cloth has had to be subsidised in various ways to enable it to compete with mill cloth is adequate proof of the cost-disadvantage in respect of handwoven fabrics in general.

- 11. We have so far been concerned with "costs" in the usual sense. What the position will be in terms of "shadow" or "accounting" prices of factors of production, it is difficult to say. In this context, the following factors are relevant.



- (i) The "shadow" price of weavers and helpers for the handloom sector is probably nil, if it is granted that with the same aggregate of capital and other resources, they cannot be absorbed productively elsewhere.
- (ii) This will not be true of men engaged in organising the production and distribution of handloom cloth.
- (iii) The "shadow" price of capital for the handloom sector will probably be high, at least in the present juncture.

How these will add up is more than anyone can say. It might, however, be noted that the "shadow" prices of factors of production in the handloom sector tend to be high because of the long and inefficient supply and sales channels and the high inactivity rate of capital.

### III

12. We might now turn to the wider aspects of the problems briefly, In terms of resource utilisation, the "cost" of the handloom project is the excess of resources used in that method over the "costs" of the cheapest alternate method possible. This calculation is confounded by the difficulties of depriving and estimating the relevant "costs." However, the following general points arise

- (i) Since production costs in handlooms are higher, the consumers have to pay higher prices, or the Government has to bear the difference between handloom and mill costs. If the handloom project is abandoned, (a) either cloth will be cheaper for the consumers or (b) Government will have more to spend on other projects. The net effect on employment will then be: employment in the mills plus employment in other industries due to larger consumer or Government spending. Will this be large enough to compensate for the displacement of weavers etc. in handlooms?
- (ii) Despite the higher costs of production, the average annual earnings per employee in the handlooms will be smaller than that in the mills. But since so many more will be employed in the handlooms, the annual wage-bill will be larger. What effects is this likely to have on consumption and investment in the economy?
- (iii) Even with dispersal of factories, there would be concentrations of producing units near large towns with transport and power facilities, and this would add to outlays on civic facilities in several areas. Is this likely to be reduced or avoided by reliance on handlooms?

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- (iv) The demand for textiles is bound to increase very substantially in the long-run, creating a need for a big increase in looms and output per loom in both mill and handloom sectors. Would it be possible or profitable for India to plan for continued expansion of the handloom sector?
  - (v) With the growth of heavy industries, transport, etc. the process of urbanization will probably be accentuated and contribute to a change in the demand for cloth of different varieties and fineness. Will the handlooms be able to adapt themselves quickly to such changes in the demand pattern?
  - (vi) Finally, if, as seems necessary, India has to earn more foreign exchange through export of textiles, will the reservation of the domestic market to handlooms at this stage help or hinder the attainment of that objective?
13. These are some of the questions which inevitably arise in appraising the program for the textile industry. Since value judgments enter into each of these, they can be discussed endlessly - according as one evaluates the amount and impact of the additional employment generated by handlooms.