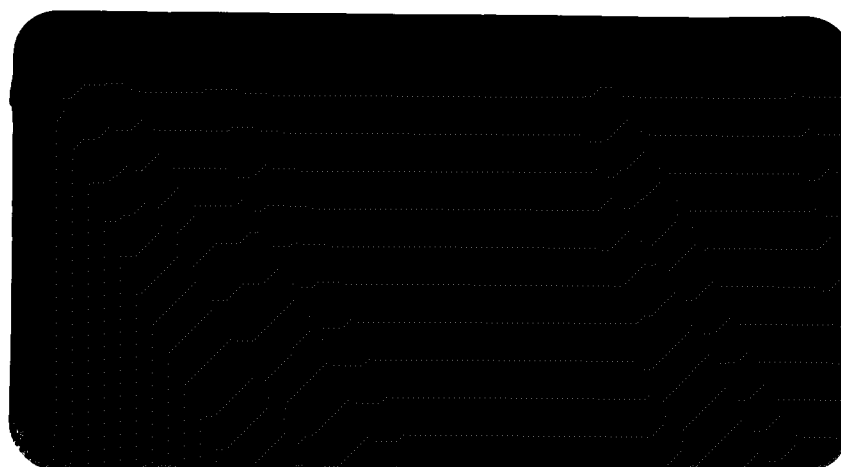
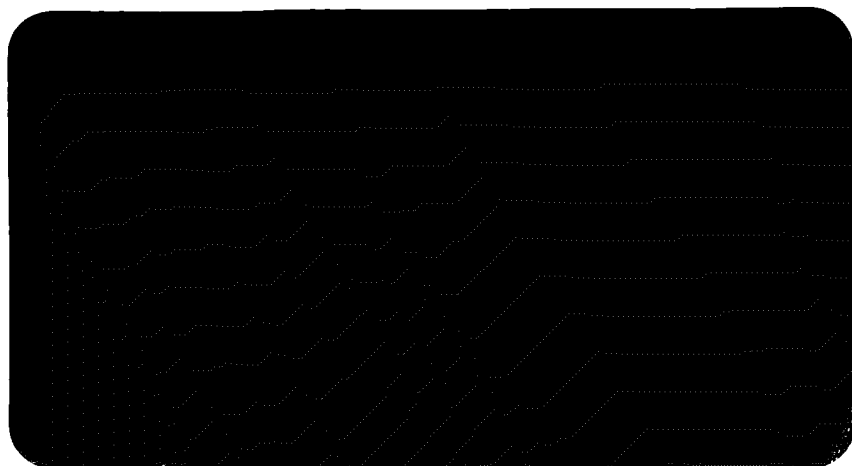


WORKING PAPER



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WORKING PAPER

No. 10

2 THE ROLE OF HANDICRAFTS EXPORTS - PROBLEMS
AND PROSPECTS. BASED ON INDIAN EXPERIENCE†

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† ODI in collaboration with Industrial Development Services, New Delhi, is undertaking a study of Indian handicraft exports and their contribution to Indian economic development. The study is focussing in particular on five products: cotton handlooms, silk goods, handknotted carpets, art metalware, and hand printed textiles.

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SUMMARY

Handicrafts in India have emerged as a significant source of foreign exchange and employment.⁽¹⁾ Under the Sixth Plan substantial expansion of the sector is projected. Initial field work and secondary sources suggest that this expansion may not be as simple as expected, and that its benefits will not be as widespread as intended. This paper reviews these problems and issues, and puts forward some preliminary suggestions as to how they may be resolved, to ensure that the sector lives up to expectations. The paper begins by locating handicrafts goods within the wider context of development and international trade principles. The rural handicrafts sector has traditionally been treated as one which will inevitably decline without substantial protection from more advanced manufacturing processes. Experiences in many countries, and within India, suggest that in part this is true but that there is an important role for handicrafts in international trade, as a labour intensive 'rich man's good'. There follows background information on Indian handicraft (and handloom) exports. An outline is provided of how the production and distribution of handicrafts (and handlooms) is organised, to see if there is a typical form of organisation and how this might have changed with the expansion of exports. Various problems associated with the handicrafts sector are then discussed briefly: (a) the scarcity of working capital; (b) the inadequacy of raw material supplies; (c) the shortage of skilled labour; (d) the inappropriate technology, together with a variety of factors which can loosely be grouped under the term 'marketing problems'; (e) the lack of design innovation; (f) the delivery problems; and (g) the over-dependence on existing markets. This is followed by an examination of some important issues in the development of handicrafts: (a) the conditions of labour; (b) the role of co-operatives; (c) the urban bias; and (d) the choice of technology.

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- (1) There is a need to clear up some inevitable semantic confusion here between various overlapping categories. Handicrafts industries are distinguished by a developed and specialised art and complex processing; markets are limited but usually widely dispersed. Cottage industries are concerned with articles of household or local village use and are commercially unimportant. Village or rural industries subsume both cottage and handicrafts industries and others carried out in villages, possibly on a sub-contracting basis; handicrafts are, however, only a small part of the total and are not confined to villages.

SECTION 1 HANDICRAFTS EXPORTS: LABOUR INTENSIVE 'RICH MAN'S GOODS'

This paper is concerned with goods whose essential characteristics are that they are hand rather than machine made, incorporate substantial elements of craft skill, and are luxury rather than essential items. Their particular role in the international economy derives from the fact that they are items for which there is a growing demand in Western countries but which require such highly labour intensive production that - even in competition with machine made items - Indian low wages represent a powerful source of comparative advantage (given that the goods may only be acceptable to consumers if the hand-crafting element is visible in the product).

The recent rapid growth of handicrafts exports from developing countries (ldcs), and especially from India, can be treated - on one level - as an interesting oddity; but there are possibly more general points of note, in the realms of trade theory. The more modern explanations of patterns of trade between rich and poor countries have tried to integrate two strands of argument. The first is the idea that specialisation depends upon factor proportions, defined to include 'human capital' - high technology and skill intensity - as well as physical capital - machinery. As a general rule it has been established that richer industrial countries have a comparative advantage in manufacturing trade with ldcs for goods with a high technology and skill content (such as non-electrical and electrical machinery, motor vehicles, aircraft and instruments). This is almost certainly still true of India's trade with industrial countries, though it is less apparent than for most other ldcs because of India's skill resources in engineering, and the extent of subsidies and other government influences. There is rather more controversy about the advantages of industrial countries in purely capital intensive industries (as distinct from those in which human capital augments the importance of machinery) and whether the Leontief Paradox still holds good.(1)

The second argument derives from the nature of the products themselves. The so-called 'neo-technology' theories have drawn attention to the mechanism by which industrial countries develop a comparative advantage in 'new' products independent of factor endowments. (2) Rich countries have advantages here both on the supply side - relatively abundant technologists, with companies and governments able to make large R&D outlays - and, in terms of demand, a ready market for new products. Ldcs acquire a comparative advantage, on this interpretation, in the 'mature' phase of the cycle, since at this stage technology is widely diffused and price competition, of standardised items, gives an advantage to low labour cost producers (whether or not the production

(1) H.G. Johnson, The State of Theory in Relation to the Empirical Analysis, in E. Vernon (ed), The Technology Factor in International Trade, Universities National Bureau Conference Series 22, New York, 1970.

(2) R. Vernon, 'International investment and international trade in the product cycle', Quarterly Journal of Economics, 1966.
S. Hirsch, Location of Industry and International Competitiveness, Oxford, 1967.

methods are relatively labour intensive). However, this 'product cycle' hypothesis deals only with cases of product innovation and its predictive power is weakened somewhat by widely varying lengths of time for the diffusion of technical knowledge.

A somewhat wider approach to product characteristics is to divide them into 'rich man's', 'poor man's' and 'everyman's' goods. Using this classification - which is based primarily on the income elasticity of demand for the products - Hirsch is able to show that there is a strong correlation between product characteristics and comparative advantage as revealed through trade and as predicted by factor endowments. (1) Rich countries tend to have a comparative advantage in 'rich man's' goods (which include engineering goods of various kinds, consumer durables, vehicles, instruments, basic chemicals and plastics and which are in general those goods characterised by the greatest R&D and skill intensity). Ldcs have a comparative advantage in some 'poor man's' goods (textiles) and some 'everyman's' goods which have intermediate income elasticities (clothing, leather, footwear, iron and steel, metals, shipbuilding).

For ldcs there are familiar advantages in specialisation based on factor endowments; but there are equally familiar disadvantages in being locked into the production of 'poor man's' - or even 'everyman's' - goods: protectionist resistance to products where market growth is slow and producers in rich countries are seeking to resist market penetration; severe price competition leading to disadvantageous barter terms of trade. It is considerations such as these which have led some of the Far Eastern newly industrialising countries (NICs) to develop more technology-intensive industries and to make the jump to the production characteristics of rich countries. But some of these countries (Singapore, Korea) are already approaching a relative scarcity of labour - semi and unskilled - and a change in industrial structure flows logically from this. For countries like India with a super-abundance of underemployed workers, there are clearly great advantages to be gained, if they can continue to develop a comparative advantage in labour intensive items but at the same time identify products which in other respects are 'rich man's' goods, with relatively high income elasticity. Some such trades were identified by Hirsch: printing and publishing; furniture. The first is now a major and expanding area of ldc activity in international trade (though difficult to monitor since much of the publishing 'trade' is in the form of a service rather than a good), and the second is too, though inhibited by transport costs unless furniture is shipped in knock-down form. Handicrafts represent another possibility. It should be stressed that in adopting this terminology we are not implying a market solely for luxury items - ivory, jewellery, or silks. 'Rich man's goods', defined in economic terms, include many mass market items.

(1) S. Hirsch, Rich Man's, Poor Man's and Everyman's Goods, Kieler Studien 140 Mohr., Tübingen, 1977.

This view of handicrafts as a labour intensive 'rich mans's good has been strongly supported by the work of Huddle and Ho, who calculated income elasticities (time series and cross-section) for a variety of items which correspond (very approximately) to handicrafts items. The overall elasticity estimates compared favourably with those for manufactures as a whole, and in almost every case were greater than one. Time series data broadly corroborated the cross-section data with the exception of hand-made textiles where the effect of quotas was probably decisive in producing a negative coefficient. The evidence shows that these handicraft items contribute a growing share to ldc exports overall, and even of manufactured exports.

TABLE 1 Income Elasticities of Demand for Handicrafts

Total handicrafts	1.30	(1.60)
Wood products	0.99	(1.59)
of which: wood carving and products	1.13	(1.89)
bamboo and rattan items	0.07	(-0.36)
baskets of bamboo	0.35	(1.14)
Textile products	1.66	(-1.14)
of which: handknitted	1.14	(-1.23)
cotton furnishing	1.22	(-0.87)
wool, lace and other cotton	2.03	(-1.10)
Non-metal minerals	1.12	(2.11)
of which: marble, precious and	0.42	(1.69)
semi-precious objects		
china and earthenware	2.22	(3.12)
ceramics	0.73	(1.35)
Art metalware	1.60	(3.56)
Miscellaneous	1.55	(2.12)
of which: headware	1.75	(0.44)
gloves (hand seamed)	2.43	(1.28)
handbags	1.83	(2.94)
furniture	1.86	(3.00)
dolls/ornaments	1.42	(3.46)
artistic goods/antiques	1.73	(1.89)

Source: Y-M. Ho and D. Huddle, 'Traditional and small scale cultural goods in international trade and employment', Journal of Development Studies, January 1976.

Note: The coefficients are calculated from import data for 15 OECD countries (US time series data in brackets).

This view of handicrafts contrasts sharply with the traditional development view of them as part of a group of largely non-traded, non-leisure activities carried out by artisans in villages within the agricultural sector (sometimes called Z activities), including spinning and handweaving of textiles, manufacture and repair of tools, pottery and ceremonial objects, dressing and tanning of leather. (1) The established view has been that "Z" activities decline with development. The main reason for decline is that "Z" activities are 'inferior' in home and foreign markets: demand for them falls as income rises. Urban workers and middle classes in particular prefer factory-made clothes and shoes and household decorations (for cheapness, or reasons of taste). In this way economic historians have explained the decline - and sometimes the disappearance - of rural industries in Asia, (2) some of which, like India's, were at one time major exporters. (3)

It is perhaps useful to differentiate between two types of handicraft goods. First there are artistic goods of high unit value: what we shall call labour intensive 'rich man's' goods. Second there are utilitarian items of low unit value: 'poor man's' goods, usually produced in competition with machine-made items. The second usually have the characteristics of traditional "Z" goods; hence the recognition by the Indian government that if they are to be preserved as sources of employment they will need to be protected and supported. The contrast between "Z" activities and labour intensive 'rich man's' goods is illustrated in Figures 1-3. These are the

-
- (1) S. Hymer and S. Resnick, 'A model of an agrarian economy with non-agricultural activities', American Economic Review, 1969.
 - (2) S. Resnick, 'A socio-economic interpretation of the decline of rural industry under export expansion: a comparison among Burma, Philippines and Thailand', Journal of Economic History, March 1970.
P. Schram, 'Handicrafts in Communist China', China Quarterly, 1967.
 - (3) For example, Indian handwoven and handprinted cotton goods (or calicos) were imported on a large scale into 17th century Europe and this led to the first major trade policy clash between British manufacturing and Indian exporting interests (then represented by the English East India Company). After a long, and acrimonious, argument between protectionist manufacturers and free trading interests, the former prevailed (c. 1700) using arguments which bear a strong similarity to those used today by the British textile industry. Subsequently, of course, British manufacturers were able to develop the strength which eventually led to the destruction of the Indian handweaving trade when the Indian market was thrown open to factory-made textiles in the early 19th century. For those who believe that progress in economic ideas is cyclical rather than evolutionary, there is considerable comfort to be derived from reading the 'calico' protection story. See E. Lipton, The Economic History of England, volume 3: The Age of Mercantilism, p.39.

Figure 1: 'Rich man's' goods at home and overseas

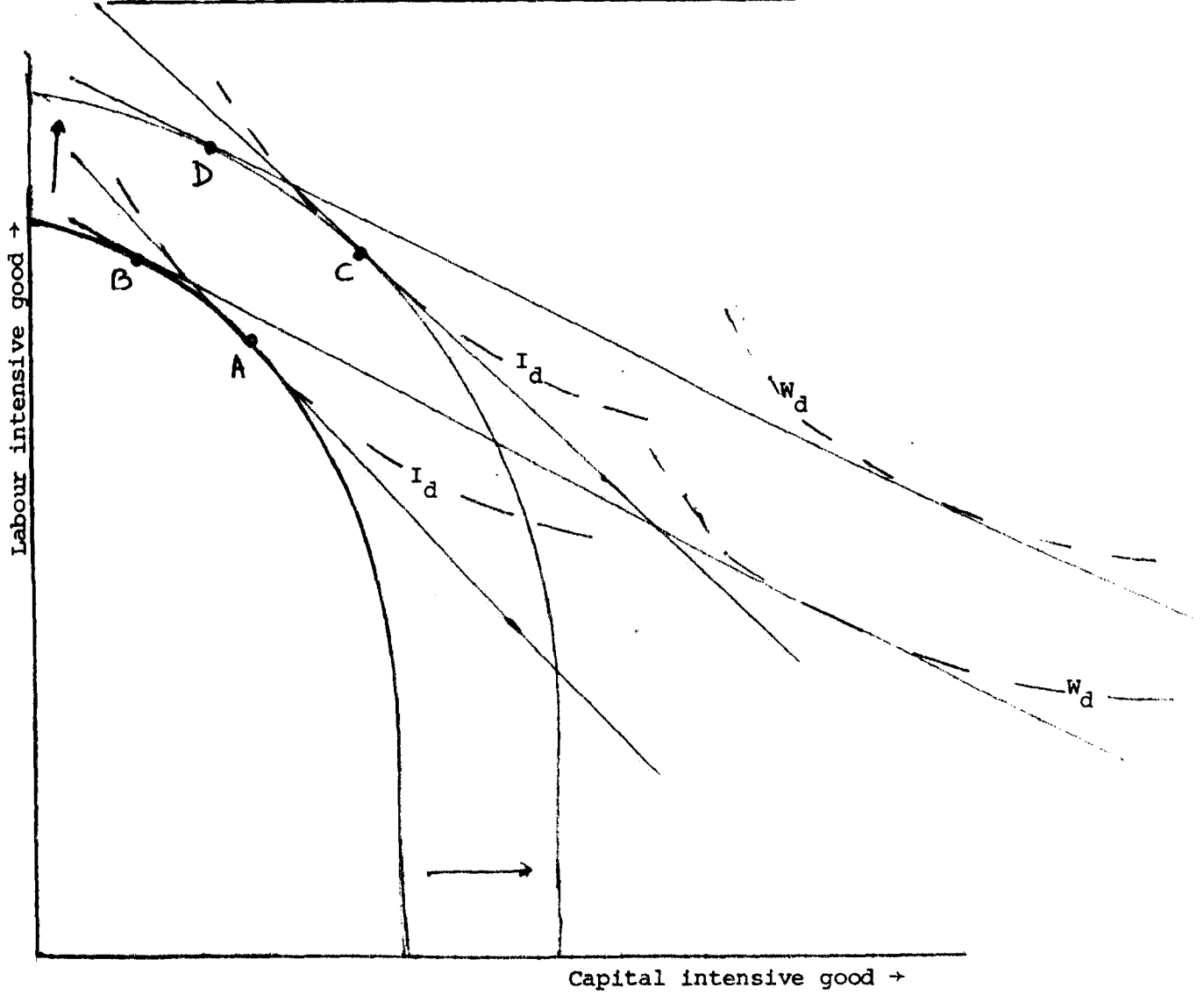
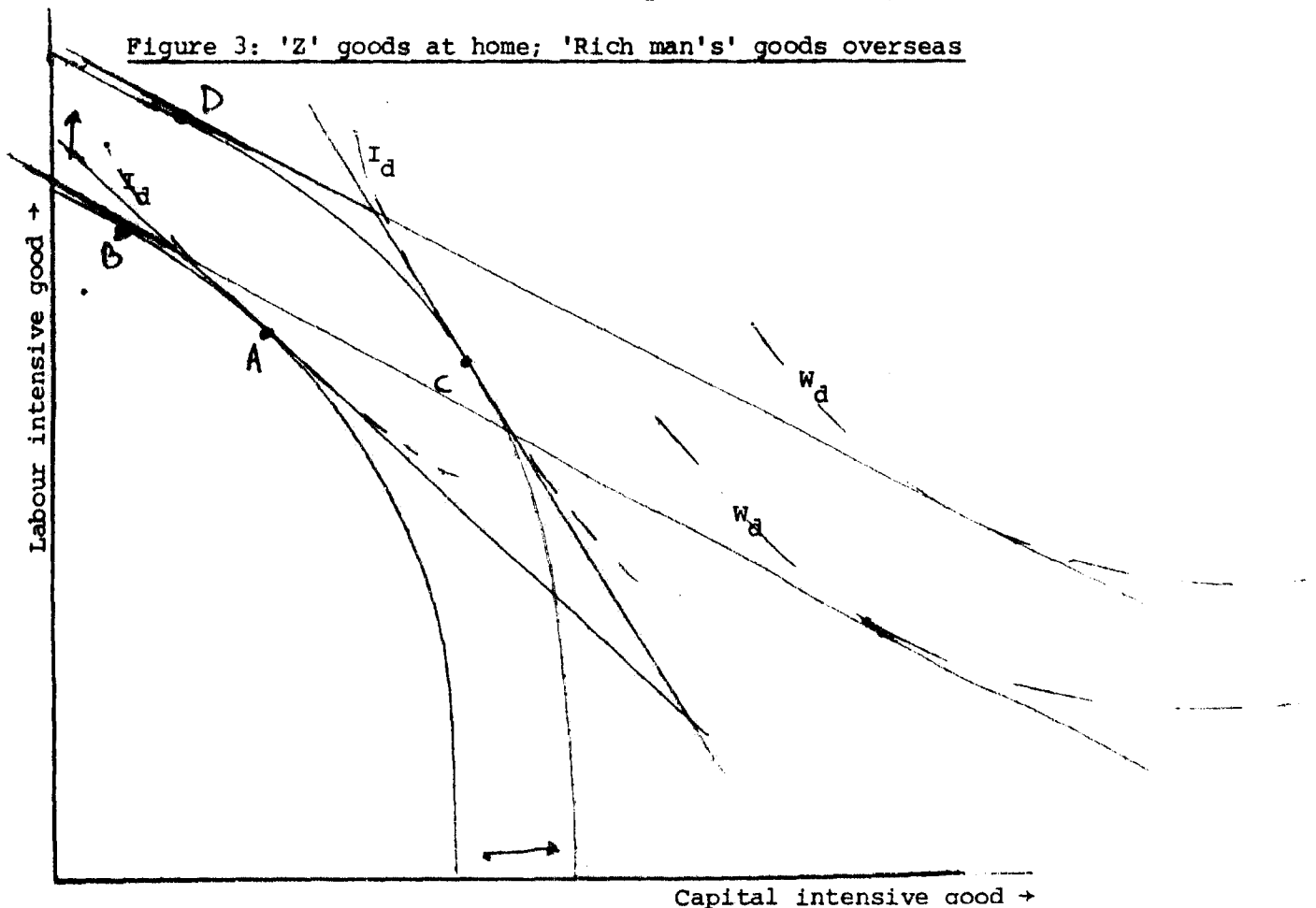


Figure 3: 'Z' goods at home; 'Rich man's' goods overseas



conventional production possibility curves for a poor country in a simple two product representation of the world, focussing upon changes in demand and ignoring for the moment the effects of capital-labour substitution for particular products. In all three cases, trade raises the final equilibrium onto a higher (world) indifference curve and increases the share of labour intensive goods produced, and therefore employment. We have tried to represent the case where the labour intensive good is 'inferior' - like the 'Z' activities - and in this case growth can reduce in absolute, as well as relative, terms the amount of the labour intensive goods produced in the poor country; this is true even where international trade is admitted, if international demand also renders the good 'inferior'. In these circumstances too, the terms of trade between labour and capital intensive goods shifts sharply against the former causing distress to the artisans. The nearest approximation we can find to the case which interests us is shown in Figure 3, where home demand is inferior but foreign demand is not. A good illustration would be handlooms: as incomes rise in India, consumers switch to garments of man-made fibre fabrics, or blends, and Western styling, while in Western countries handlooms are a fashion item. The same contrast is not so stark for other handicraft items but could well apply to basketware, and traditional artwork, including that used in garment printing.

The demand characteristics can be summarised as in Figure 4, which contrasts the handicrafts case with conventional 'rich man's', 'everyman's', 'poor man's' and 'Z' goods. It should be stressed that this is an 'ideal' representation and might not be realised in practice. For example, within any handicraft industry there may be a choice of overseas (and domestic) markets: a rapidly growing, but absolutely small, market for high value 'craft' items; and a less rapidly growing, but absolutely larger, market for standardised items - 'everyman's' or 'poor man's' goods - in which the handicraft worker merely becomes a source of low wage labour for labour intensive activities that could be carried out in any country. In the case of brassware, for example, the borderline between the two markets is difficult to draw but the emphasis lies more on the latter than the former. Another problem may be that markets may be under pressure from machine-made items which can replicate in some degree the character of the craft item. Mies refers to the loss of lace markets for this reason, (1) with similar problems for the silk trade and, of course, competition between handloom garments and powerloom substitutes. Handicrafts producers may then find themselves back in the trap of producing 'Z' goods, unless continuous attention to design and 'craft fashion' maintains their uniqueness.

We should, however, acknowledge that the whole concept of labour intensive 'rich man's' goods, and the gains from specialisation resulting from different product characteristics and factor endowments takes as given the way in which markets reflect existing inequalities. There are those who have noted the importance of the handicrafts export phenomenon but take a far more revolutionary and critical view of its significance: 'the growing pauperisation of peasants

(1) Maris Mies, Housewives Produce for the World Market: the Lace Makers of Narsapur, ILO World Employment Programme Research, 1980.

Figure 2: 'Z' goods: inferior home and overseas

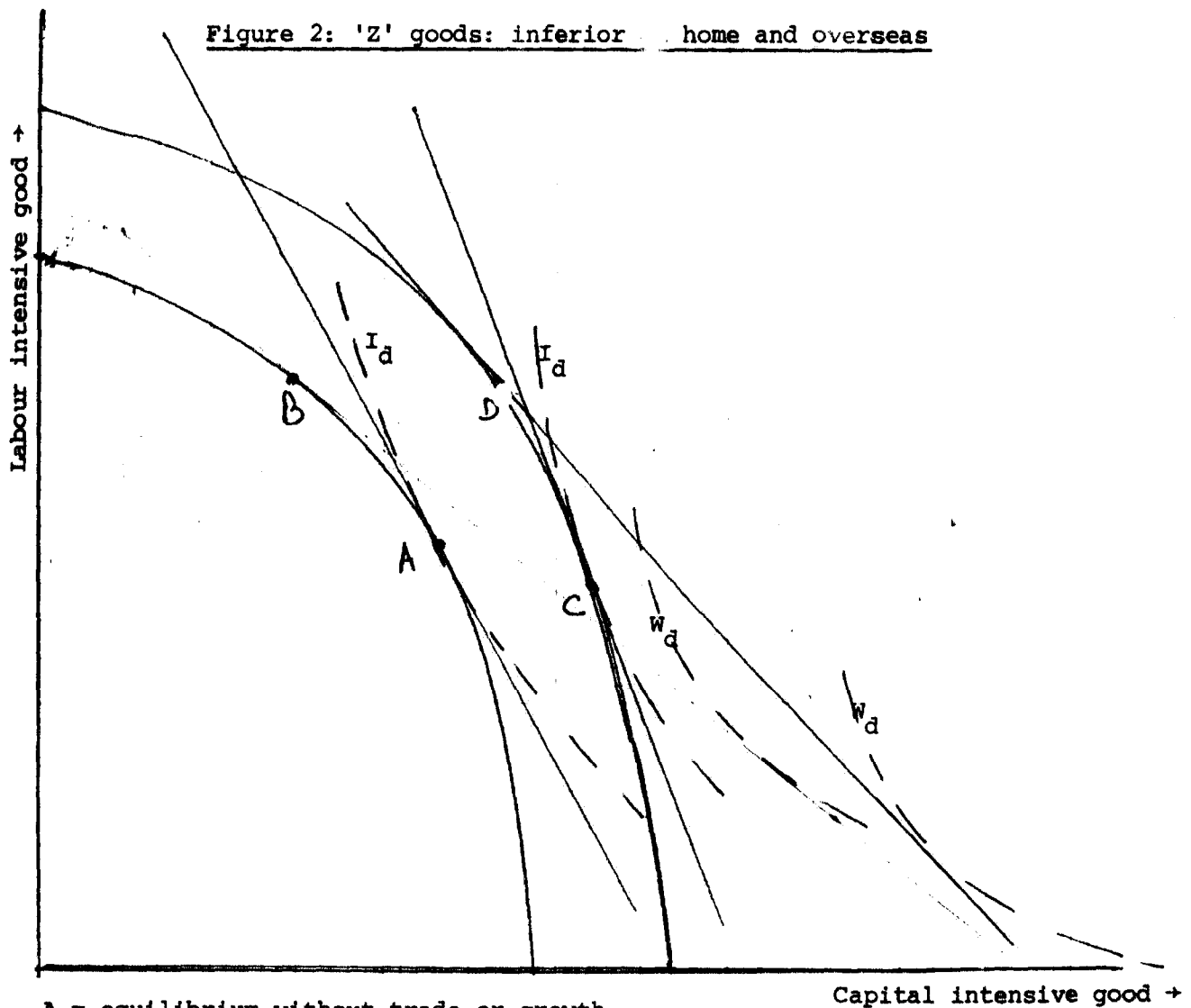
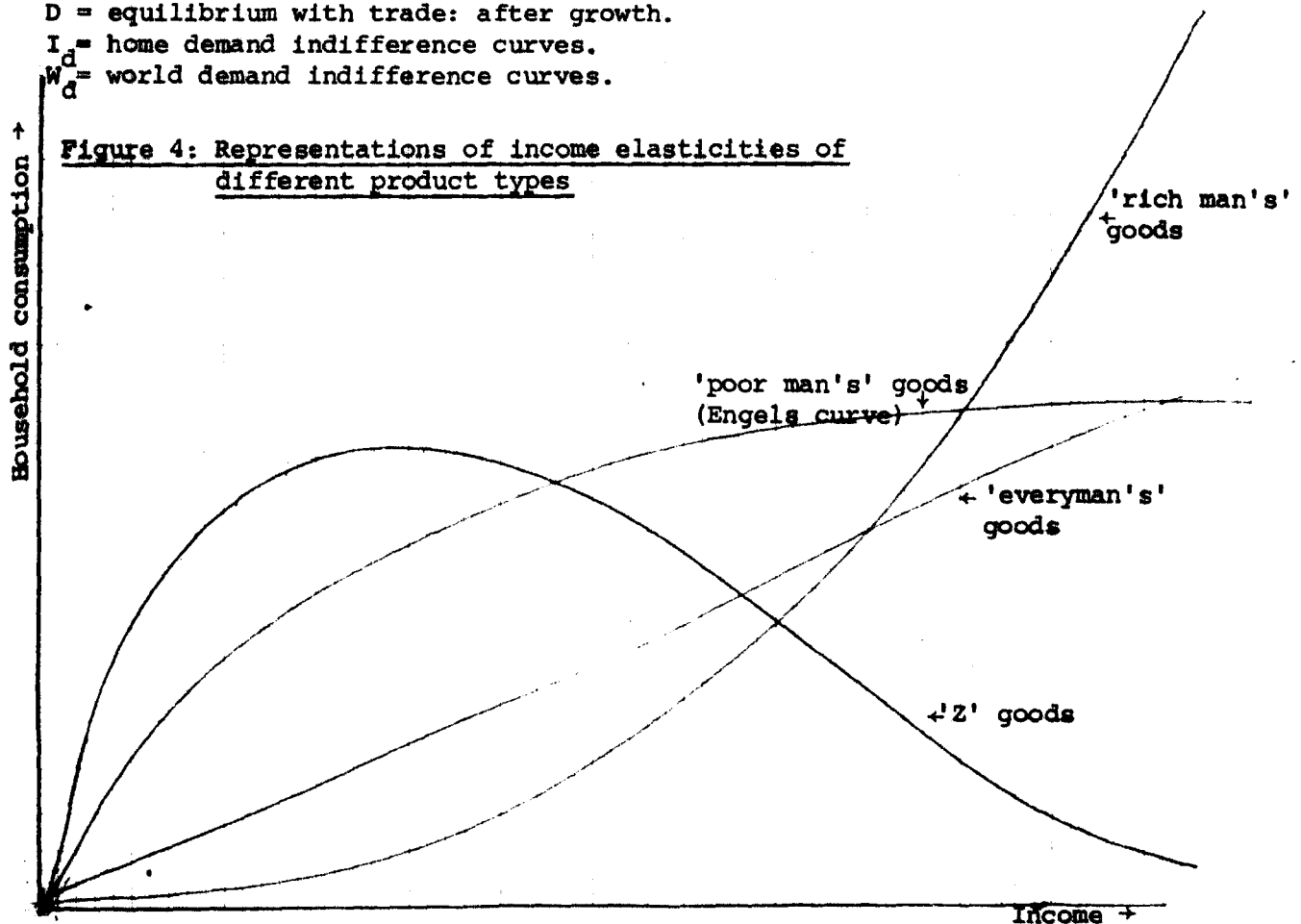


Figure 4: Representations of income elasticities of different product types



in developing countries is a result of their integration into the national and international process of capital accumulation whereby rural women are forced into the absurd situation that they produce unnecessary luxury items, like lace, or other handicrafts, for women in Europe and the USA ... The exploitation of women who produce for the world market does not only consist in the fact that they are denied a just living wage, they are also robbed of their energy, their living time, the development of useful skills and knowledge which they could have combined with local raw materials to produce use values for themselves'. (1) We shall try to deal with the notion of 'exploitation' implied here, below.

(1) Maria Mies, op.cit., pp.134-5.

SECTION 2 HANDICRAFTS AND HANDLOOMS EXPORTS IN THE INDIAN ECONOMY

One of the purposes of the research is to make a comprehensive assessment, from the various disparate elements available, of the contribution made by exports of handicrafts and handlooms to the Indian economy. Since there is only a small domestic market for most of the major products, except silk and cotton handlooms (and gold jewellery amongst the minor items), we are concerned with the contribution of these industries almost in their entirety.

(a) Exports

One simple index of their collective importance is in terms of the value of exports. Export receipts tell us nothing in themselves about economic welfare but for an economy seriously constrained by balance of payments problems (as India now is again after several relatively comfortable years) they are a useful point of departure. As Table 2 indicates, in the last year for which full statistics are available, 1978/79, handlooms and handicrafts contributed almost a quarter (23%) of total export earnings. Put another way, export earnings from these products were greater than gross aid disbursements from all sources. Many of the items are of recent origin and so the contribution at the margin is rather higher than indicated (their share was under 7% in 1970/71, and they contributed 34% of the incremental export earnings over the eight year period). The gross figures are misleading however. A substantial part of the value of production may originate in machine-made inputs; for example machine-spun yarn in handwoven cloth. Several items have a high import content, notably cut diamonds (approximately two-thirds of export value), while brass, wool and silk yarn are also imported. But the same is true for many other manufactured items, notably engineering goods, which are also energy intensive. A full input-output analysis and estimates of the opportunity cost of factors employed would be necessary to pursue this point in detail. Nevertheless, there is no reason to assume that the orders of relative magnitude given above are seriously misleading.

(b) Employment

The other major benefit is in terms of employment. This is, however, an area where documentation is extremely flimsy and where major questions are raised about what is meant by 'employment' and 'unemployment'. The answer cannot be derived simply by enumerating the number of (more or less) fulltime employed members of the labour force. Increased handloom employment is almost entirely a question of increasing the number of days worked per year for a given stock of looms and weavers. Employment in many crafts is subject to sharp fluctuations in demand, especially for foreign fashion markets. Much employment is generated through forward and backward linkages (from handloom fabrics to garments; from silk weaving to sericulture) though it is debatable as to how much these activities are 'additional', and some crafts provide off-farm employment for labourers between cropping seasons. Much ancillary work - and some organised production - is carried out by children although even more is provided by women whose contribution to household

TABLE 2 Exports of Handicrafts and Handlooms from India (Rs. mn)

	1978/79
I Handlooms	3,020
of which: cotton fabrics	623
cotton made-ups	289
cotton garments	1,689
silk items	401
other	21
II Coir Yarn and Manufacture ^a	263
III Gems and Jewellery	7,227
of which: precious stones	7,106
gold jewellery	97
silver jewellery	22
IV Other Handicrafts	2,569
of which: woollen carpets	994
cotton carpets (rugs and dhurries)	36
art metalware	517
hand-printed textiles and scarves	254
art silk shawls	19
embroidered goods	132
woodwares	137
zari	39
ivory products	24
imitation jewellery	38
miscellaneous handicrafts	330
All Indian Exports	57,263

Source: All India Handicrafts Board, Handloom Export Promotion Council

a - There is some debate as to whether coir products should be considered as handicrafts

industry is usually ignored by census enumerators. Faced with these various sources of ambiguity or omission official estimates of employment are often based on theoretical constructs such as the 'full-time job equivalent', which understate the number of people who depend on crafts for a major part of their livelihood. On the other hand, crude estimates of job numbers tell us nothing about the opportunity cost of labour which may be very small but is unlikely to be zero - there is a seasonal peaking problem, especially in places such as Panipat, the handloom centre

in Haryana, when there are labour scarcities of some skill categories. Moreover, there is a level of earnings and of conditions below which even those in 'absolute poverty' will not work; the wage payable in small factories for 'loomless' weavers in parts of Tamil Nadu - Rs.8 to 10 for a 12-hour day - while possibly 'too high' to compete with powerlooms, is barely adequate to attract labour, even in this poor state.

Handloom weaving is the major source of handicraft employment in India. Official estimates of total employment in this sector have been based on the amount of cloth produced. The government believes that there are roughly 3.2m looms in India and output figures suggest that the equivalent of 2.2m are 'fully operational' (300 days per annum). As each is assumed to provide 2.4 jobs, this gives 5.3m jobs in total. Of this total, roughly 1m are employed in the production of goods for export (we estimate that exports of handlooms products contribute 22-23% of production by value, but by volume the figure is probably in the 15-18% range). It has to be remembered that official estimates of handloom output are probably inflated by illegal powerlooms passing off their production as handloom made.

On the other hand, the figures underestimate the number of people actually dependent on handlooms for their livelihood, many of whom are only employed part of the year. Even a 'fully employed' weaver may only be employed for a little over 200 days in the year, two days in every eight being needed for warp preparation and fifty days being lost when the 'pit looms', used in Tamil Nadu, are flooded in the monsoon. Thus at least 1m, possibly as many as 1.5m, are employed in handloom exports.

The remainder of the handicraft sector (excluding coir) is officially estimated to employ just over 2m, but it would be surprising if the margin of error in this figure was less than 50%. Our own researches indicate that employment in the hand-made carpet sector is somewhat less than the government believes, possibly around 255,000. Diamond cutting in Gujarat has been subject to a cyclical fluctuation and the labour force is now down from its peak of 500,000 to nearer 400,000. Gem cutting in Jaipur probably employs 40,000 more. Adding in the many other handicraft trades gives a total of over 1m jobs related directly to exports; but exactly how many is pure speculation.

For reasons already alluded to, employment cannot be treated as pure 'gain' to the Indian economy. There are opportunity costs in terms both of the artisan's time and of resources from outside the handicrafts sector, such as loan funds. As to the first, there is little concrete evidence but some survey work of weavers in Karnataka (not differentiating export and home market based activities) suggests that weavers and their families are for the most part dependent on their craft work: only 30% own land; for 92% weaving is the main occupation; and 75% are self-employed artisans with a recognized occupation. (1) As to outside resources, there are parts of the

(1) Abdul Aziz, Rural Artisans; Development Strategies and Employment Generation, Institute of Social and Economic Change, Bangalore, March 1980.

handicraft sector - the khadi and village industries - which, at least until the Fifth Plan, required external support even to maintain wages; but for others, especially handicrafts, the relevant 'cost' has been the use of loan funds, to which we now briefly turn.

(c) The Alternative Use and Efficiency of Investment

One of the main difficulties in assessing the relative efficiency of the handicrafts sector as a user of scarce investment funds is the lack of data, though there is some, rather unsatisfactory census material and the results of surveys carried out by the All India Handicrafts Board. (1) There are two conceptual issues here of some importance. First, 'investment' is normally defined to include working and fixed capital and is in practice the former since fixed capital - tools, equipment and buildings - is usually of minor consequence. The idea that 'capital intensity' should include working capital is somewhat unorthodox but in this context it seems sensible, and legitimate (and consistent with national accounting practice) to treat stock holding as a form of capital accumulation. Loan capital for working capital, like fixed investment, has an opportunity cost. It can be seen from Table 3 that the activities surveyed are, in general, highly labour intensive in relation to the factory sector (the capital:labour ratio is low) but in one or two cases - woollen crafts, for example, and (though this is not shown) silk and diamond cutting - the handicraft activities are 'capital intensive' because of the high value of working capital per man employed. Second, labour intensity, by itself, has no virtue, otherwise development would consist of governments paying the unemployed to dig holes and fill them in again. Development entails growth through the addition of value, at the very least to pay subsistence earnings.

It can be seen from Table 4 that some village industries have such a low productivity that, expressed as a daily wage (and therefore excluding payments for capital), they fall below most plausible estimates of minimum earnings for other activities, and below the level of income required for basic subsistence (which is not to say that they do not make a useful contribution to family income). By contrast, handloom and handicrafts activities operate at a significantly higher level of productivity (in the case of handlooms, especially at the margin). It is necessary, therefore, to see to what extent the high labour/capital ratio of the handicrafts and village industries sector is offset by relatively low labour productivity. A measure of the capital output ratio gives some idea of the relative efficiency with which the capital is used in the handicrafts sector as opposed to the rest of the economy, bearing in mind the limitations of this measure: ambiguity in the valuation of assets when there are different vintages of fixed capital; the pooling of working and fixed capital; the absence of marginal rather than average comparisons; a lack of means to isolate exports for this comparison. In general, (see Table 3) handicrafts industries compare well with the organised sector on a capital output measure - they do not, of course, require much supporting infrastructure or urban development which can have an exceptionally high capital output ratio. There are, however, some exceptions: khadi spinning; woollen weaving; (village) pharmaceuticals.

(1) Summarised for the 1960s in Jain and Savara, Industrialisation in the Third World, Commercial Publications Bureau, New Delhi, 1980.

TABLE 3 Capital Output and Capital Labour Ratios in Indian Handicrafts

	<u>C/O</u>	<u>C/L (Rs per man)</u>
Textile dyeing	.07	1,000
Wool-weaving	17.1	22,200
Carpets	.69	900
Embroidery	.43	300
Bamboo/cane	.50	200
Wood artwork	.30	300
Paper	.86	500
Fur & leather artwork	.41	2,900
Artwork of stones	.33	500
Ceramics	1.0	600
Glass bangles	.17	200
Art metalwear	.23	500
Jewellery	.30	300
Perfume & other pharmaceutical items	2.9	19,500
Musical instruments	.46	1,100
Others	.03	1,100
All handicrafts	.3	300
Factory sector		
(all 'productive' capital)	.61	6,250
(fixed capital)	.39	3,980

Source: Calculated from 1961 census data (see Jain and Savara, Industrialisation in the Third World) and All India Handicrafts Board estimates.

Note: Capital investment includes all 'productive' capital including working capital.

TABLE 4 Average and Marginal Productivity in Village Industries (Rs per man employed)

	<u>Average (1979-80)</u>	<u>Marginal (1974-79)</u>
Khadi	375	1,134
KVIC village industries	1,725	1,222
Handlooms	2,329	5,969
Handicrafts	10,095	7,258

Source: Calculated from coefficients in Sixth Plan documents.

Note: In order to estimate changes over time 1974/75 productivity was converted to 1979/80 prices using an average manufacturing wholesale price index.

The critical issue however, is not simply one of relative labour intensities and productivities, but the relationship between these coefficients and those of machine substitutes. As Huddle and Ho put it: 'the relatively low value added per worker which necessarily results from such activities can be misleading as a production guide in a society where labour has few alternative skills or opportunities. Where men must inevitably compete against a machine it will eventually become uneconomic to support traditional industries; but this is not the case where the hand producer can command a market - in this case an export market - not available to machine made goods'.

(d) Future Employment and Growth

Given the level of employment and foreign exchange earnings provided by exported handicrafts - in relation to the resources used - it is scarcely surprising that the Indian government has high hopes of future growth. The Sixth Plan (1980-85) envisages that employment in gems and jewellery will increase to 650,000, with exports doubled in (real) value from 1979/80. Other handicrafts are expected to yield another 600,000 new jobs (including 300,000 in carpets; 100,000 in handprinting; 40,000 in art metalware) together with fuller employment for existing craftsmen and a tripling of exports in real terms. For cotton handloom textiles the potential gains are even greater; there is under-employment of existing looms and weavers variously estimated at the equivalent of 2-4m full-time jobs.

We can gain some idea of the importance of exports in future job creation from Table 5. It is expected that the contribution to employment in village industries of various kinds could be of the order of 6.2m new jobs, almost doubling employment in that sector; roughly a quarter would come from exports. Ignoring coir production and sericulture, approximately 750,000 new jobs would come from exports of handlooms and handicrafts goods.

Considerable scepticism has been directed towards these projections for a variety of reasons. (1) The growth rates of output and employment, particularly of KVIC industries and handlooms, are considerably in excess of previously achieved levels. The increase in plan outlays is not exceptional in relation to past plan periods when more modest growth was recorded. There are bottlenecks, of skill, design and administrative capacity; the degree of spare capacity is probably more apparent than real when tastes are changing and skills need to be updated. There is assumed to be no productivity growth in handlooms despite substantial growth in the past (hence employment forecasts may be inflated even if output is not). Encroachment on the handloom sector by powerlooms and on handicrafts by competing, higher productivity industries, cannot easily be stopped. While these doubts apply, a fortiori, to the increases in output to be achieved by those village industries due to benefit from the prohibition of production for the home market by large scale units, they apply in part to exports too.

(1) J.C. Sandesara, 'Small industry production: a quick comment', Economic and Political Weekly, April 1978. (His comments apply in particular to the 1978-83 Draft).

TABLE 5 Village Industries in the Sixth Plan

	<u>Khadi</u>	<u>Other (KVIC) village industries</u>	<u>Handlooms</u>	<u>Seri- culture</u>	<u>Handi- crafts</u>	<u>Coir</u>	<u>Total</u>
Output 1979-80 (Rs. mn)	980	3,140	17,400	1,310	20,500	360	44,190
% growth planned 1979-80/1984-85	104	218	41	37	56	42	64
Actual % growth 1974-5/1979-80	45	69	36	65	25	22	35
Employment 1979-80 ('000)	1,124	1,821	6,150	1,600	2,030	560	13,204
Employment increase 1979-84 ('000)	416	1,689	2,550	550	770	240	6,216
Employment increase 1974-79 ('000)	240	393	940	400	530	59	3,063
Export share of output 1979/80	-	-	15	37	41	35	
Export share of incremental output 1979/80	-	-	15	44	42	43	
Export share of incremental output 1974-79	-	-	20	51	67	58	

Source: Calculated from Sixth Plan coefficients.

(e) The 'Quality' of Employment

There is, finally, the question of the 'quality', rather than the 'quantity' of of employment. From a wider social standpoint than the crude summation of job numbers, the expansion of handicrafts activity has several additional benefits: employment in disproportionate numbers of deprived groups including religious minorities and in particular Muslims who, for example, provide most of the labour force in the art metalware industry, and carry out certain activities in the silk processing industry because of a historical aversion of orthodox Hindus to killing live worms. The role of women is particularly important and handicrafts development can help create employment opportunities for groups such as widows. (1)

(1) Jasleen Dhamija, 'Handicrafts: a source of employment for women in developing rural economies', International Labour Review, December 1975.

Other beneficiaries are 'tribals', and groups with low social status. Aziz, who has summarised some of the data available on rural artisans in Karnataka, notes that most - including weavers, painters and carvers - undertake lower caste occupations. (1) These caste groups are usually relatively low; but not harijans. In general he found artisans to be among the poorest sections of the population; even in a relatively remunerative trade, 70% of artisan households were below the poverty norm. A national survey of debt and investment showed that 75% of village artisans (of all kinds) fell into the poorer section of the rural population, having total assets worth below Rs.2,500 (the average was Rs.409). (2) There was also substantial indebtedness (averaging Rs.287), mostly to money-lenders and mostly for purposes of consumption rather than production. There is no specific information on the export based crafts (superficial evidence suggests that artisans, here, do rather better - see Section 3).

While handicrafts provide employment to those who might otherwise not enjoy it, wages and conditions are often poor: 'most people engaged in traditional crafts and industries live below the poverty line. Their poverty is not due to underemployment or unemployment; a great many of these people are poor despite being fully employed and even working 10-12 hours a day. (3) Labour conditions (poor health standards; employment of minors; insecurity; above all, drudgery) also stretch the tolerance of even the poorest. A 'classical' view of the labour market would be essentially optimistic: substantially increased demand for labour will raise wages and conditions through the market mechanism. However, such is the vastness and degree of segmentation of the labour market, the disproportions of bargaining power and the lack of information available to craftsmen about the market in which they sell their labour, that we are sceptical of the automaticity of this mechanism. There are a priori indications that a substantial expansion in volume of employment in some areas (such as diamond cutting) has been accompanied by falling real wages and deteriorating conditions. However, in general, we accept the premise on which Indian policy is based: that handicraft and handloom expansion is a major development because of the employment which it brings.

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- (1) Abdul Aziz, Rural Artisans Development Strategies and Employment Generation, Institute of Social and Economic Change, Bangalore, March 1980.
 - (2) All India Debt and Investment Survey 1971-72 (Section on rural artisans) summarised in Reserve Bank Bulletin, March 1973.
 - (3) K.K. Taimani, 'Employment generation through handicraft co-operatives: the Indian experience', International Labour Review, July-August 1981.

SECTION 3 PRODUCTION AND DISTRIBUTION OF HANDICRAFTS GOODS

(a) The Organisation of Handicrafts Production: The Specialist Outworker

Handicrafts production, organised on a large commercial scale, is generally characterised by two features: first, a system of 'putting out' or sub-contracting to household units for production; and second, an advanced degree of division of labour, horizontally between products and vertically between processes. Thus Mies describes the village lace-making industry as akin to 'an invisible assembly line where each (woman) is assigned only to make a component part of the whole which she never saw let alone would ever use herself'. (1) This system of advanced specialisation within a cottage industry is by no means confined to the present time, or to India. Thus, Hobsbawm writes of 18th century England of 'the typical worker being some kind of village artisan or smallholder in his cottage increasingly specialising in the manufacture of some product ... The nature of such a system of rural "domestic" or "putting out" industry spread it widely throughout the countryside'. (2) Mead, writing about contemporary Thailand describes the extensive use of sub-contracting or 'putting out' in the production of silk, woodcarving, furniture, fish nets, knitting, lacquerware and metal bowls. In silk production, for example, 'there are eight separate steps done by eight different groups of householders each working outside the firm's own workshop in assorted villages ... all of these tasks are done on a sub-contracting basis: the unskilled work generally by children, the more highly skilled activities by women (and sometimes men)'. (3)

One of the best examples in India of the division of labour in handicrafts is to be found in brassware production, the largest component of the art metalware category, and the third largest handicraft export (excluding handlooms). There are six processes involved in the production of the traditional enamelled brass vases exported from Moradabad (Uttar Pradesh), which account for about 90% of brassware exports. These are (a) casting the basic shape, usually in two or three pieces, (b) brazing the pieces together, (c) machining or planing them down to get a smooth finish, (d) engraving, (e) colouring in the engraved design with lac, and (f) polishing. Each process is carried out in a different unit or cottage. Similarly, for carpets the

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- (1) Maria Mies, Housewives Produce for the World Market: The Lace Makers of Narsapur, op.cit.
 - (2) E.J. Hobsbawm, Industry and Empire, Pelican, 1969, p.29.
 - (3) D.C. Mead, Subcontracting in Rural Areas of Thailand, Research Paper No.5, Centre for Applied Economics Research, Kasetsart University, Bangkok, Thailand-1981 and P. Charsombut, The Silk Industry in Thailand, Conference Paper No.17, Centre for Applied Economic Research, Kasetsart University, 1981.

yarn preparation (spinning, washing, dyeing) is performed in one place, the knotting in another, and each of the finishing processes in others (tying off the warp ends and binding the weft; 'washing' the carpet to fade the colours and give it a sheen; separating the threads, clipping and embossing). In textile printing the block or screen printing processes are carried out in units separate from those responsible for the dye-fixing and washing of the printed cloth. There is less division of labour in the jewellery sector largely because there are fewer production processes involved but in the diamond cutting industry the basic processes of cutting and polishing are carried out by different groups of workers.

The essence of sub-contracting, particularly when products and processes are specialised, is that artisans do not deal directly with each other, neither financially nor, often, physically. The contractor maintains the flow of materials and finance, supplying inputs to the outworkers, collecting their finished goods and paying them. A brass engraver would not buy a smooth brass shape from the planer, and sell his engraved shape to a lacquerer, nor would an individual carpet weaver buy his wool from a mill or a dye house, and sell his knotted carpet to a finisher. Instead they are interlinked by a manufacturer, ie. a person with capital managerial capacities, and links with exporters, if not actually an exporter himself. The manufacturer - or, rather, his agent - supplies the raw materials to the unit carrying out the first process. When this is completed the semi-finished product is returned to the manufacturer - or his agent - for checking, before being passed on to the unit carrying out the following process, and so on until the good is completed, finally checked and packaged ready for export. Even the packaging may be carried out by a separate unit.

In practice this vertical specialisation may be only partially realised. While there is some specialisation in textiles (reeling, twisting, dyeing, weaving for silk; sizing, dyeing, weaving for cotton),^{and} the main process of weaving is usually carried out, together with the ancillary processes, by individual families, there are, for example, some handloom 'factories' - usually small, with under a dozen weavers, although in Kerala they are much larger. But the dominant mode of production in handloom textiles remains the household outworker.

The fragmentation of production and the predominance of outworking might appear, at first sight, as dysfunctional to the development of an export industry geared to large scale production, and meeting delivery dates and strict quality control. Indeed, one of the surprising features of the handicrafts industry is that although production and exports have expanded rapidly, the structure of production generally has not changed. Existing units have not grown (ie. their capacity has not greatly increased though the capacity utilisation may have). Instead the number of units has risen. In Moradabad, for instance, the number of establishments involved in art metalware grew from 2,537 in 1961 to 4,000 in 1971 as output approximately doubled in real terms. (1) Some manufacturers, it is true, have attempted

(1) All India Handicrafts Board, Art Metalware at Selected Centres, Survey Report, 1973.

to integrate their workers by setting up factories or workshops where some or all of the processes are carried out together. Large carpet manufacturers have set up loomsheds or 'Karkhanas'; it has been estimated that these account for about 80% of carpet output in Kashmir, 50-60% in Agra and Jaipur, but only 10% in the major Bhadohi-Mirzapur carpet belt. In other words, for the carpet industry as a whole no more than 20% of total output is produced in factories. Several large garment factories have been set up in recent years, mainly in Bombay, Delhi, Jaipur and Calcutta, but a large number have been forced to close as a result of various problems, and manufacturers have reverted to the outworking system.

The persistence of complex outworking systems - even where there is a demand for large scale production to meet rapid fashion changes and short delivery times - suggests that it has considerable advantages over factory organisation, although these advantages may be perceived differently by manufacturers and artisans. The first major advantage is flexibility. For the manufacturer flexibility lies in not having the overheads of a fixed labour force; workers are commissioned as and when demand requires them. The advantage is not entirely one sided. The pressure for such a system comes not only from the capitalist entrepreneur but also, to a degree, from the artisan. In the handloom weaving industry outworking has considerable attractions for the worker over 'factory' labour; indeed 'factory' handloom workers are the most deprived members of the weaving community who cannot afford a loom or have no space at home to install one. The outworker can control the pace of his own production (ie. he can work longer hours than the factory worker, and when he chooses) and can supplement his own efforts with family labour. There are parallels with the smallholder farmer in relation to the wage labourer.

A second attraction in outworking may be that those who organise production are anxious to preserve the uniqueness of each craftsman's products, which may disappear if they work en masse. (We are sceptical on this point, however: it seems that most handicraft manufacturers and exporters are prepared to sacrifice the uniqueness of individual objects in return for a larger volume of output.) Quality is often controlled in cottage production by hiring experienced craftsmen (or master craftsmen) as sub-contractors, and if the quality is low, by making deductions from their commission (and they in turn will cut the piece rate paid to the worker). This quality control system illustrates a more general point that under an outworker system it is possible to maintain some advantages of scale and centralisation where this is necessary - developing overseas markets, in standardising quality, organising raw material flows, financing working capital - in a context where there are no economies of scale in production itself, and where the household is the optimum production unit.

A third advantage, to both manufacturers and craftsmen, is that outworking permits production to be carried out in villages and small towns rather than in cities. In this way the worker is saved both economic costs (travel, housing) and the non-economic costs of disrupting established social relationships; the manufacturer can also pay lower wages as a consequence.

It would be naive to imagine, however, that the relationship between manufacturers and craftsmen is necessarily evenhanded. Outworking, especially when combined with advanced specialisation, potentially strengthens the position of the former in relation to the latter. The manufacturer has full control over key stages in the chain; raw material supply, credit and marketing. He (usually he rather than she) will be in a position to pick and choose amongst large numbers of villages and villagers. The workers, by contrast, are more likely to compete with each other since they are much more numerous than the firms; and since they work at home rather than together there is little encouragement to organise collectively. The artisan is unable to stock finished products in the hope of obtaining a higher price since the manufacturer - through his agent - is the main source of credit and this credit can in turn lead to debt bondage, especially if extreme poverty leads to dependence on credit for consumption. In some cases debt dependence arises from raw material advances; in others it arises from artisans pawning their raw materials and other assets. For example, the silk weaving artisans of Kancheepuram pawn the 'zari' - the gold and silver thread used in sarees: 'during the raining season the looms lie idle, the gold threads turn red and the silk threads break. At this time they mostly pawn the zari and silk threads and live on that. The zari they now get is barely enough to complete a saree. So they mainly depend on the master weavers for loans'. (1) The vulnerability of the formally independent but practically dependent household worker has been graphically illustrated in the case of the Bidri craftsmen (silver and gold inlayers): 'on two accounts the worker is at a disadvantage; firstly he is unable to secure regular supplies of his raw materials at reasonable rates due to lack of resources. As a result, he is not able to accumulate stocks with a view of marketing them at the proper time when he would be in a position to obtain reasonable prices for his product. In other words he does not possess "holding power". Second he does not possess necessary funds for finance and marketing. This includes storage costs and costs involved in the establishment of marketing outlays in distant places'. (2) The position of the artisan who owns his own equipment, and premises, thus becomes scarcely superior to the wage-labour artisan who does outworking on a piece rate basis. The question of 'exploitation' in handicrafts will be dealt with later; the issues are complex, value-laden and not as clear cut as at first appears. Suffice it to say, that - whether or not this constitutes 'exploitation' - the primary objective in home-based production is to cut the cost of labour.

The immediate incentive for manufacturers to look for alternatives to factories is their fear of organised labour - such workers are more accessible to unionists (and politicians) than village workers - and their experiences of lockouts and strikes, including labour unrest in handicraft factories. In 1970 the carpet industry in Jaipur stopped for three and a half months when weavers and contractors went on strike, demanding higher rates. It is rare for outworkers to take comparable industrial action. It could be

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- (1) C.S. Lakshmi, 'Silk weavers of Kancheepuram', The Economic Times, Bombay, 19 October 1931.
- (2) M.N. Upadhyoy, Economics of the Handicrafts Industry, New Delhi, 1973, p.21.

argued that such disruption would be less likely to occur if conditions in these factories were better but this could add to overheads, and it is this which is the crux of the problem. All of the main handicraft industries are subject to intense price competition between Indian exporters, and internationally, resulting in strong pressure to cut overheads. Manufacturers are also concerned that it is difficult to dismiss workers when demand is cyclical and subject to fashion changes, which greatly adds to factory costs.

The Factories Act is yet another source of added overheads. Under this, manufacturers must provide certain basic facilities and if they employ ten workers or more they must pay bonuses, while if 50 or more are employed, the manufacturers must make contributions to a provident fund on the workers' behalf. An associated cost is that factory operations must be regularly inspected by government officials. It seems, however, that the power of the Act tends to be exaggerated; there are few inspections by government officials (1) and where an attempt is made to enforce the law a manufacturer may find it cheaper to pay a fine than to improve working conditions. For instance, a garment manufacturer in Bombay preferred to pay a fine every six months than to install the toilet facilities which he was legally obliged to provide as he employed a large number of women.

A common way of circumventing restrictions on organised production is for the manufacturer to hire out various parts of his factory to sub-contractors who in turn are in charge of up to nine workers. The sub-contractor is paid a commission and the workers are paid on a piece rate basis. In principle then even when workers are under the manufacturer's roof he still does not deal with them directly, though in practice he clearly has more control over them and their work. This type of 'mini'-factory production may substitute for the putting out system where the technical equipment is unsuitable for home working, for example if it is too big (as are some dhurry looms) or requires electricity. It may also be preferred if strict quality control is important. For instance the price of a carpet is affected by how well it has been finished, ie. knotted, bound, clipped, and embossed, so these processes may be carried out in a factory. Similarly, where the value of the raw material is high, as in silk garments, the manufacturer may want to keep closer control over workmanship to ensure that rejection rates are low. Rather surprisingly, this argument has not persuaded gem manufacturers in Jaipur to set up factories even though the export market demands high standards; as much as 30% of the many stones exported on consignment basis in 1979/80 were returned as being of poor quality. (2) Most stones are cut in small, separate, workshops employing less than five people. Diamond cutting establishments in Bombay and Surat are somewhat larger because of the need for supervision and for power equipment, but a 'factory' of more than 20 workers is unusual. The emergence in international markets of Indian cut and polished small diamonds has been accomplished almost entirely through these small units. Moreover attempts to

(1) This is supported by H. Streefkerk, 'Too little to live on, too much to die on. Employment in small scale industries in rural South Gujarat', Economic and Political Weekly, April 1981, p.661.

(2) Rajasthan Consultancy Organisation, Report on the Status of the Lapidary Industry in Rajasthan, 1981.

break this dominance by units set up in Malaysia and Ghana, employing large numbers of workers operating under factory discipline, have failed, even with substantial expatriate assistance. A characteristic of these 'mini-factory' activities is that they are geographically concentrated, usually in towns, permitting close supervision and control to be reconciled with small scale production. (1)

It is, of course, not only in India that business responds in this way to regulation of organised production. Outworking and 'mini-factories' are a common feature of garments' production worldwide. Perhaps the closest analogy is the prodigious growth of the Italian 'black economy' which, as in India, has drawn heavily on traditional craft skills in textiles, stone cutting and leather work to produce a major export industry. Perhaps the most comprehensive use of sub-contracting as a form of manufacturing organisation has been in Japan, where handicraft orientated activities have been subsumed in a much more extensive network of small firms, many using machinery, albeit secondhand. (2)

To summarise; the organisation of handicrafts production in India is influenced by two divergent forces: one is towards large scale organisation; the other towards small scale production. Seen in this light the pre-dominance of small 'inefficient', 'fragmented' units is less inappropriate than it at first appears. But the capacity for large scale organisation clearly demands a considerable input of entrepreneurship, whether in 'manufacturing' (ie. managing a complex outworker or sub-contracting system), financing, or marketing overseas. The extent to which these inputs are available from the private and/or public sector, crucially affects the industry's capacity for expansion.

(b) The Structure of Distribution

While we have demonstrated reasons for the fragmented character of production, we have implied that the system of control and ownership on a large scale. There are two criteria to consider here (though for some products they overlap). The first is the management of production - what we have called 'manufacturing' although the manufacturer may well be a financier or a master craftsman who has built up a sub-contracting business. Manufacturers' operational sizes vary greatly even if, at the top end, they are constrained by their ability to manage very large and complex networks (though management can be delegated to master weavers, agents, supervisors and so on), and also by working capital availability, of which more below. In the silk weaving business a 'typical' manufacturer could have 50 craftsmen working for him, as sub-contractors or as paid employees, while in cotton weaving it could be as many as 1000. In most other trades 'optimal scale' is within this range.

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- (1) The urban bias of the handicrafts industry is discussed in greater detail below.
 - (2) S. Watanabe, 'Subcontracting, industrialisation and employment creation', International Labour Review, July/August 1971.
S. Paine, 'Lessons for ldecs from Japan's experience with labour commitment and subcontracting in the manufacturing sector', Oxford Bulletin of Economics and Statistics, vol.33, no.2, 1971, p.122.
C. Berthomieu and A. Hanaut, 'Can international subcontracting promote industrialisation?', International Labour Review, May/June 1980.

The second point to consider is international marketing. Here one would expect that there are substantial economies of scale. Exporting is, after all, a complex and difficult business with a wide range of problems: from the choice of the correct product (design and colour), to contact with importers/wholesalers/retailers, knowledge of import regulations (tariffs, documentation required), securing shipping space, and knowledge of export procedures (documentation, subsidies. The premise is that these problems should diminish with increasing output - large 'manufacturers' should be better able to solve them than smaller ones. As the problems become more important, eg. if the amount of documentation increases or designs and colours change more frequently, this will hinder the emergence of small exporters or exporter/manufacturers. One would expect, therefore, that the export trade would be dominated by a relatively small number of exporters. Indeed, organisations like the government-owned Handicrafts and Handlooms Exports Corporation (HHEC) have been able to expand their business partly because of their ability to handle large volumes, and the economies of scale in marketing.

Yet, exporting of most handicrafts, like production, is surprisingly fragmented. Even in a trade involving large working capital requirements, such as diamonds, there are over 1000 competing exporters. There are strong pressures for market entry: from merchants trying to find a mechanism for employing 'black money' productively and with possibilities for foreign exchange conversion; and in recent years from foreign importers who have become increasingly involved in the production of goods they buy from India. In the latter case, the most common pattern is for importers to visit their Indian suppliers to discuss the designs and colours of the products they want made, and possibly to give advice on production techniques, and to watch over the production of a few samples. In addition, some importers have agents in India who control the quality of production, ensure that delivery schedules are met, and check the export documentation. This has probably helped a new generation of medium-sized manufacturers to move into the export market themselves rather than having to export through an Indian marketing outlet. There are certain costs involved: the manufacturers may have to accept a lower price for their products (and India lower export earnings) than if they were able to perform the marketing functions themselves; and the dependence on importers for market information is risky as it is difficult for Indian manufacturers to maintain their exports if their partners collapse.

One of the consequences of easy entry into exporting is that most exporters are operating from below the optimum scale required to build up an efficient and independent overseas network. Because exporting is highly competitive, it is sometimes claimed that newcomers 'spoil the market', and so help foreign importers to take advantage of price cutting between Indian exporters (though the corollary is that there are fewer monopoly rents being earned by this particular group of 'middlemen'). Established firms have often expressed a preference in these circumstances for some form of cartelisation or for the kind of organised large scale exporting associated with the Japanese 'Zaibatsu'. One answer gradually emerging in response to the exporting needs of small (including handicraft enterprises) is the specialist 'export-house' of which there are now 300 in India. These houses provide export services for small producers and share the profit, and are being encouraged by fiscal means. Precedents are not, however, encouraging. Mies notes how 'anarchic' competition between lace exporters led to the undermining of quality standards, under-quotation and misrepresentation. Yet, despite attempts by the All India Handicrafts Board to organise exporters over a 20-year period, jealousy between established and new exporters has prevented any agreement.

SECTION 4 CONSTRAINTS ON THE HANDICRAFTS INDUSTRY

The spectacular expansion of handlooms and handicrafts exports in the 1970s has highlighted those things which India has in abundance: considerable width and depth of traditional skill and craftsmanship; labour, willing (or obliged) to work at low wages and in poor conditions; entrepreneurs capable of mounting a substantial organisational effort. It also demonstrates the advantages for India of industries requiring negligible fixed capital and energy. But constraints have appeared, some of which are serious.

(a) Credit Availability

Credit availability is crucial both for export expansion in general and more specifically for the artisans to achieve an equitable bargaining relationship with 'manufacturers' or distributing firms. Handicrafts production, as presently organised using traditional techniques, requires little or negligible fixed capital. But access to working capital is crucial. For some handicrafts raw material costs per unit of output are high (eg. carpets, silk, precious stones), and the production process may be so slow that an artisan buying his own raw materials has to wait some three to six months (as in the case of carpets or silk) before recovering these costs. In the case of silk weaving the working capital required for one loom alone may be Rs.10,000, and for a medium-sized master weaver perhaps as much as Rs.500,000. Bulk buying of raw materials is often necessary to ensure a steady supply throughout the year, or to ensure output of consistent quality (eg. to ensure that all the coloured wool used in a single carpet is of the same dye lot) and maybe to get lower prices. For instance there are two wool selling seasons when prices are low and dhurries manufacturers prefer to buy all their requirements. Small independent weavers who cannot raise the capital to buy in bulk are forced to buy in off-season periods when speculators have entered the market and wool is only available at higher prices. In order to compete with the manufacturers' dhurries, they have to lower their own wages.

Sometimes there is a system of credit available to both manufacturers and artisans as in the case of the woollen yarn supplied to the carpet industry on around 60 days credit. But this only operates in the Bhadohi-Mirzapur area, where there is a high concentration of carpet manufacturers; in other areas, such as Agra and Jaipur, manufacturers pay cash for their wool. Even if credit were available to the artisans for their inputs, they would still require finance to cover their living costs, especially where the production process is slow, as in carpet knotting. Under the present system manufacturers give advances to the artisans working for them, charging interest, and this can easily develop into debt bondage or more subtle forms of dependence. The All India Debt and Investment Survey showed (generally) that institutional agencies (banks, co-operatives, government) provided only 5% of the total borrowing of artisan households. 70% was from money-lenders, landlords and traders. Of this, 40% was at rates of 12.5-32.5% interest per annum and on 15% was higher still. For the poorest households interest rates were generally higher. 64% of all borrowing was for consumption, not production, rising to 84% for poorer groups. Institutional finance played a small role for either consumption or production purposes, particularly for poorer social classes.

In principle, banks are meant to assist both manufacturers and artisans to meet their working capital requirements by providing what is known as 'packing credit', ie. up to 75% of their working capital for up to 180 days at 12% interest (6% below the market rate). The Central Bank is committed to giving artisans, like small farmers, priority in credit allocation. But banks are reluctant to lend without adequate security and tend to allocate credit to a few, well-established manufacturers who have export orders from customers known to the bank. Even with this assistance, credit can be a problem for the manufacturers. One of the largest carpet manufacturers in Mirzapur argued that attempts to upgrade their carpets (a move which the government is encouraging) were being frustrated by a serious cash-flow problem. As carpets become finer, the consumption of wool per square metre of carpet rises, as does the turnaround time. The banks, however, have not been willing to extend extra credit for longer periods and the company has only been able to continue its improvement programme by borrowing money from its parent company.

Once a handicraft is completed and ready for export, banks provide what is known as 'pre-shipment finance' to exporters, on presentation of the shipping documents, to cover the delay before they receive payment from the importers. This is much more common than packing credit and is open to both large and small exporters. As with packing credit, it usually covers 75% of the value of the goods for up to 180 days at an interest rate of 12%, subsidised by the Reserve Bank of India. If importers delay payment further the credit can be extended, but at the full 13% interest rate.

In addition the government provides 20% cash assistance for handicraft exports and this has encouraged many manufacturers to become exporters. (The scheme is also designed, in the case of carpets, to encourage higher quality exports - and to discourage under-invoicing - by giving more assistance to exports of higher unit value.) The survey of the gem industry in Jaipur, however, found that most entrepreneurs knew nothing of these government incentives. (1) Some exporters doubt whether it has really assisted them; they argue that importers use it as an excuse to force prices down (but this may in turn help to expand sales). Government sponsored co-operatives are better able to obtain working capital, but then they rarely export. Special state schemes (such as Differential Interest Rate Schemes) designed to help artisans have helped, but surveys show that a large majority of artisans cannot realise loans because of lack of security or lack of influence.

The implications of working capital shortage are several. First, it is holding back expansion in some categories. Diamond exporters claim that while in other diamond cutting countries bank finance can cover over 75% of requirements (Belgium) or even 90% (Israel), in India official agencies provide \$130m against requirements of \$700m. The difference has to be self-generated; but (they claim) profits are now being squeezed, making this difficult. In practice those with resources available are often merchants eager to find an outlet for 'black money', rather than entrepreneurs with a deeper and more long term commitment to building up the industry. Second, working capital limitations affect bargaining power since the ability to hold on to stocks of finished products and raw materials is a major factor influencing the capacity

(1) Rajasthan Consultancy Organisation; op.cit.

to maximise returns from the market. Thus, importers in Western countries tend to have an advantage over exporters; specialised exporters, who are traders with financial means, over manufacturers (or garments establishments over their fabric suppliers); and manufacturers over their outworkers and wage employees.

(b) Problems with Raw Material Supplies

The Indian handicrafts industry faces many problems with respect to its raw materials (or semi-processed inputs): problems of poor quality, insufficient quantity and higher prices than those paid by the organised sector. This is surprising as one assumes that, if items have been traditionally produced in an area, they would have been adapted to use raw materials available locally. It seems likely that the rapid expansion of production for overseas markets has been largely responsible for creating this raw materials problem which was not in evidence when only a limited, and protected, domestic market was being served (eg. for silk sarees and gold jewellery). Rather than run through a list of the different problems faced by each handicraft industry, we shall focus here primarily on carpets, which illustrate most of the problems.

The handloom, carpet and wood industries are all said to have problems of unavailable and poor quality inputs. Quality depends both on the physical characteristics of the raw materials (cotton, wool, silk and wood in these cases), on the way they have been processed and on the availability of subsidiary imports (dyes in textiles). Taking the example of carpets first, some of the Mogra and Chokla wools available in India are of the coarse quality required for hand-knotted carpets. But there is not enough to satisfy carpet manufacturers' demands, and they have been forced to use blends with inferior types of wool, which has in turn depressed the prices of their carpets. The shortage has been made worse by competing demands for this type of wool from the defence sector (for use in military clothing) and from the growing machine-made carpet industry (which mainly supplies the domestic market).

There are three ways of solving the shortage: expanding the domestic supply of such wools, reserving their use for hand-knotted carpets, or allowing imports. To date the Indian government has emphasised the first. There has been little private development of domestic wool supplies (exactly why is not clear) and it has been left to the government at both central and state levels to introduce sheep breeding programmes (which also have large employment potential). According to manufacturers these programmes have not yet proved successful and they have therefore asked for wool imports to be liberalised. At present wool imports are allowed, but at a very high rate of duty (75%). Carpet exporters may claim a duty rebate but only if they can prove how much imported wool their carpets contain. This is nearly impossible as the wool (largely from New Zealand) is imported by yarn spinning mills for blending with Indian wool. The carpet exporter cannot know exactly how much of each type of wool went into his carpets. It is only possible if he is a manufacturer with his own spinning facilities. In this case he can apply to the government for an open general licence to import wool duty-free, provided that he gives a fixed sum of money as a bond to the government (on which the interest payable is equivalent to a duty of

about 13%). As Pakistan allows the import of New Zealand wool duty-free, most Indian manufacturers cannot afford to pay the high duty on imports and still compete with Pakistan exporters. The government is reportedly unwilling to liberalise imports, even under a duty-free tariff quota, on the grounds that imported wool could be diverted to other industries and so would depress demand for domestic production which it is trying to promote. Manufacturers claim, however, that the carpet wool is too coarse (below 56 counts) for most other woollen items and leakage would be minimal.

Similar problems and choices have arisen in the handloom sector. When cotton for spinning is in short supply, mills have tended to squeeze out scattered handloom weaving communities in obtaining the yarn. Moreover, co-operatives have a prior claim over master weavers, who predominate in the export trade. In order to remedy raw material shortages (while limiting imports) the authorities have forced weavers to use blended yarns incorporating 5% viscose. Unfortunately this occasionally includes cotton handloom weavers who sell overseas on the basis of 100% cotton - as when the Australians, inter alia, refused to accept the blended yarn products as qualifying for duty-free admission. A particularly serious crisis arose in the handloom sector in late 1980 with the lack of availability of hank yarn of low count. As an emergency measure mills were required to produce specified amounts of scarcer yarn types but the long-term insecurity remains. Handloom weavers also have serious problems in obtaining the full range of high quality, fast, dyes, especially those which are imported.

In the silk industry, too, a particularly critical raw material shortage in 1981 severely affected silk exports, and handloom weavers in particular. A failure of the tassar silk crop and damage to mulberry led to big increases of 200-300% in the price of raw silk, and this was in turn reflected in the cost of spun silk and noil silk. After representations by the industry it was permitted to import raw silk and yarn free of duty. But this does not deal with the long-term problems of ensuring supplies of Indian silk which are of adequate quality and of comparable (and stable) price to those present in international markets. The problems of raw material supply in the silk weaving industry in the traditional centre of Kancheepuram are compounded by limited interstate transactions. The main mulberry growing area is just across the border in Kollegal and the supply of 'Khora', the weaving material, is pre-empted by the Karnataka silk weavers and merchants.

These examples show that in handicrafts, as in all industries, there is a choice to be made between exports of lower unit value (as a result of using lower quality inputs) but with a high share of Indian value added, and exports of a higher unit value (and possibly higher volume) but lower share of Indian value added and a higher share of imported inputs. The government has generally chosen the first option, but some manufacturers feel that the second option would give a larger total net value added to India. In some cases it is inconceivable that the domestic raw material sector would be sacrificed to assist the export processors (there are, for example, at least 2m or more employed in sericulture and associated activities). But elsewhere liberalisation of imported inputs is more easily achieved and there has been something of a move in this direction with import liberalisation of, for example, brass. More sympathetic consideration has also been given to gold imports against gold

jewellery exports, though a workable scheme has not yet evolved. One reason for conservatism on this point may be that India is wary of developing a handicrafts industry - one employing many people - which depends on imported materials. A related fear is that any import scheme not tightly controlled could lead to abuse. For example it is generally recognised that India's greatest potential in jewellery is in the skilful inlaying of gold with precious stones. The government is, however, concerned that this could lead to a smuggling of domestic gold onto world markets where prices are higher. It insists therefore that gold jewellery exports should be directly offset against matching gold imports. The Central Bank recently proposed a scheme which would offset quantities of imports against exports but the trade refused to accept the risk of price fluctuations and demanded value for value compensation (which the government thought the trade would manipulate). On such issues progress has been stalled.

The technology (both the equipment and the technique) involved in preparing the raw material is also crucial. Often a more capital-intensive technology may help to improve the quality of inputs. In the case of wood, seasoning is required before the wood can be carved; traditional techniques not only take more time but also may not give the even results that Western methods can. In cotton handlooms, even the mill spun yarn is often of such a poor quality, in terms of strength, fineness and evenness, that the quality of the cloth is affected. Traditional silk growing and reeling processes affect the quality of the silk yarn. For carpets the traditional vat-dyeing techniques are unable to produce as consistent a colouring as the newer systems used by some carpet manufacturers. The spinning of the yarn itself in some badly equipped mills is said to be very poor and the wool may shed badly after the carpet is made. (In order to distinguish these carpets from those made of inferior wools, some of the leading carpet manufacturers have adopted the woolmark. As well as guaranteeing that a carpet is made from pure wool, it is a sign that the wool is of a high quality and that it has been mothproofed.) This issue merges however into the wider question of the choice of technology in handicrafts, discussed below.

Finally, another problem which can result from imported raw materials is lack of control over supplies. This applies in particular to the gems and jewellery industry. Indian diamond manufacturers have to buy their stones from the Central Selling Organisation (CSO) which maintains a near-monopoly over world supplies. It is argued that one of the reasons India is unable to increase unit value of its diamond exports is that it can only buy small stones, as the CSO refuses to sell it any of the larger stones. Manufacturers (or their brokers who buy diamonds from CSO in Antwerp) are unable to challenge this position for fear that their purchasing rights will be withdrawn totally. This situation may improve with the recent decision by Zaire to sell its diamonds independently, not through CSO, and also with negotiations between the Indian government and various African governments over collaboration in diamond processing, in return for exports of roughs to India.

(c) Shortage of Skilled Labour

It is often suggested by government spokesmen that one of the major constraints on the development of handicrafts exports for India is the shortage of skilled labour. This is paradoxical given the vast supply of skilled Indian artisans but is perhaps explained by the way in which many skills have been allowed to lapse, by the fact that exporting calls for special new techniques, and the concentrated geographical centres of production. In general, training develops through the market mechanism. For example, trainee diamond cutters (usually young men) have to pay an 'entry fee' to an instructor, a master craftsman, who trains them on an apprenticeship basis. Government authorities believe, however, that there are limits to what can be accomplished through traditional private channels. First, it is argued that the normal market response of higher wages to attract labour will raise prices and so reduce the demand for Indian handicrafts. The government may want to maximise employment in the sector rather than raise wages. Second, there may be a serious time lag before the skills are acquired. Third, manufacturers may be unwilling to bear the training costs especially with the putting-out system, which means that workers are not bound to the manufacturers who have paid for their training. Similarly, artisans may be unable to bear the costs of training their children or relatives - either the direct costs resulting from damage to the product on which the child is working or from distraction affecting the output, or the indirect, opportunity, costs where the child or relative would otherwise be involved in agricultural production.

In order to remove these constraints, the government has undertaken a variety of handicrafts training schemes. Training has been given priority over all other aspects of handicrafts development: expenditure in 1977/78 amounted to Rs. lakhs 396, or 63% of central government expenditure under the Plan on handicrafts; in the 1980-85 period it is planned that a total Rs.lakhs 7346 be spent on training, ie. 51% of handicrafts expenditure. (1) By far the largest amount (97% in 1977/78 and 67% in 1980-85) has been allocated for carpets, followed by art metalware (12% in 1980-85), cane and bamboo (7%), handprinted textiles (6%), and gems and jewellery (3%). State governments have also been financing training programmes; for instance of the 900 carpet training centres opened by 1980, 398 were sponsored by state governments.

In most cases the training schemes are intended not only to strengthen the national production base for the various handicrafts, but also to spread the regional distribution of handicrafts production into rural and economically backward areas and to encourage the participation of particularly disadvantaged groups, such as women and children of very poor parents (landless labourers, etc).

It is difficult to estimate the extent of the skilled labour shortage. As mentioned above this will depend partly on one's view of the optimal level of wages, of output, and of the number of days of employment, as well as of the 'natural' increase in the number of artisans. Most official estimates appear to have been made on a rather crude basis, comparing existing employment and output with planned output and assuming a fixed or slightly falling employment:output ratio. These figures are necessarily rough because there is

(1) All India Handicrafts Board, Government of India, Plan Proposals for Handicrafts, Sixth Five Year Plan (1980-85) and Annual Plan (1981-82).

little reliable data on the number of people employed in each handicraft industry, let alone on the hours worked, or on the 'natural' rate of increase in the labour force.

Many manufacturers (even in the carpet industry) argue that there is no need for government sponsored training schemes as the natural increase is enough to satisfy labour demands. The costs to artisans of training their children are said to be minimal. Where natural increase is not sufficient the large pools of unemployed (or underemployed) labour from rural areas are available for employment in the less skilled processes - of which there are many under the existing division of labour. Master craftsmen can perform the skilled tasks (eg. in brassware, sketching the pattern to be engraved) leaving the more routine work (in this case, the actual engraving) to the new entrants to the industry. What is more difficult is ensuring that the newly trained workers stay in the industry, developing their skills and eventually becoming master craftsmen, rather than being attracted by the prestige of a government clerical job, or pushed out by the drudgery and poor working conditions of handicrafts production.

Despite these opinions there is evidence of a shortage of labour in certain areas. First, in some areas piece rates have risen, leading to higher real wages relative to other jobs in the area, as a means of attracting the additional labour required to meet growing export production. In the heart of the Bhadohi-Mirzapur carpet belt some of the higher quality carpet manufacturers have to compete with each other for the more advanced weavers. Rather than raise piece rates, however, they prefer to offer fringe benefits to keep their workers loyal to them. Sometimes piece rates rise when large export orders are known to have been placed, which exporters are in a hurry to complete. Second, the extensive use of migrant labour suggests there are several instances of localised labour shortage. Migrant labour can only partly solve this problem as there are certain times of the year (notably during harvests and festivals) when migrant workers return to their agricultural homes. Third, in the case of carpets, manufacturers have joined with some of the state governments (notably UP) in running training centres, on the basis that they later employ the newly trained weavers. It has been suggested, however, that manufacturers take part in these training schemes, not because they are unable to find skilled labour elsewhere but because the trainees are offered to them free. The state provides the overheads and the trainees' stipends; the manufacturer has only to pay a nominal rent and to supply the raw materials. A rough measure of the need for skilled labour would be the number of trainees from these centres, and those run by the All India Handicrafts Board, who remain in the industry, less the number of children who would have entered the industry anyway. But this figure is not known.

There is no overall shortage of handloom weavers but one of the bottlenecks to expansion of the silk industry in Karnataka is the lack of silk weavers (possibly because of the narrow caste base from which weavers are recruited in that state). Cotton weavers are therefore being retrained for silk. Weavers' centres are the focus of efforts to develop more specialised skills. Although cotton handloom weavers are in abundant supply, this is less true of weavers equipped to use the more specialised

looms - with jalahs, jacquards, shifting shuttles, paddles - needed to produce the novelty or complex weaves, even though it is this small order business in which the hand craftsman has an advantage over machines.

(d) 'Improved' Technology

It is one of the paradoxes of handicrafts that while they are developmentally attractive because of their low requirements for machinery in relation to labour they are often inhibited by a lack of adequate or modern machinery. A common complaint of manufacturers is that the technology used by their workers is old and unsuitable, therefore production is slower and the quality of the product is inferior when compared with that of competing producers in other countries. Traditional technology is often unsuitable when goods are being made for an export market which requires a large volume of items of consistent quality within a short space of time. The complaint is directed at the government which in its desire to maximise employment - and save foreign exchange - is wary of improved technology in the handicrafts industry, where this means more machines. There is an excise duty of some 30% on the use of machinery. In addition, many foreign machines must pay an import duty and are often (though decreasingly) banned. The excise duty is repayable on export of the finished product, but it still acts as a deterrent to the use of new technologies. Another deterrent is the large capital cost of new machinery, while lack of investment in R&D is also seen as a problem.

There have been some changes in the technology used in handicraft industries. These changes have not been without problems, thus demonstrating how the government's caution can be justified. In the cotton and silk hand-printing industry, screenprinting techniques have begun to displace traditional blockprinting. Manufacturers are in favour of this change as screenprinting can triple output, produce a more even print, and have better registration. But hand-printers are naturally worried about redundancies. A distinction can broadly be made between new machinery which is capital 'deepening' - raises the ratio of capital to labour - and that which is 'widening' - increases the range of products or varies the output but does not replace labour by capital. Manufacturers cannot always be expected to be sensitive to the distinction - it is often difficult to estimate ex ante - but governments have to be.

A few examples will be quoted here of instances where the use of outdated technology is said to be a constraint on India's ability to compete in the world market for handicrafts. The broader question of the choice of technology will be considered later. To illustrate how sensitive an issue this is, it is worth quoting the case of a carpet manufacturer who used a set of rails on pulleys to stretch his carpets into shape after they had been washed. It was argued that the pulleys formed a machine and therefore the carpets would be subject to excise duty. The manufacturer had to appeal his case in court and won it only after two years.

In the brass industry around 90% of the work is done by hand using traditional techniques. Power is generally only used to drive lathes used in planing and polishing, and for electroplating. The need to increase the speed

and scale of production, to reduce costs and to improve the quality of the products, has encouraged manufacturers to use more mechanised techniques. In order to reduce engraving time, some brass moulds are being made with a pattern already engraved on them, while in other cases the pattern is stamped on, or engraved with acid. Further advances are possible: pressure die-casting for the newer plain brass items being produced, such as builders' ware; better silver-plating equipment would allow higher quality (and value) items to be produced than is possible with the crude technology presently used. In both cases, however, the expense involved is said to be too large for individual manufacturers and the new techniques can only be adopted with government assistance - though the relative size of social costs and benefits is not immediately obvious.

Capital costs and excise duty have deterred carpet manufacturers from using machinery to wash their carpets. At present all carpets in India are washed manually: buckets of water are poured onto the carpet and the water is then rubbed into it with wooden scrapers resembling brooms. This process is repeated many times for up to two hours, in the course of which as much as 10% of the wool is lost. Many carpets are rewashed by machine in the importing country, particularly in the US. Machine washing can be used to give different types of lustre (antique, glossy, etc) to the carpet with little wool loss, giving the carpet a longer life. It is a costly process - in West Germany it costs Rs.30-90 per square metre - and so is normally only given to the higher quality carpets. Even so, the existing capacity in importing countries is said to be inadequate, resulting in a delay of two to three months before the carpets can be sold. It is argued, therefore, that were India to set up its own washing plant, manufacturers would be able to realise higher unit values. There would be a loss of employment, but this would be limited to some 400 people presently washing the higher quality carpets. The major problem is the size of investment involved. A single plant, capable of processing 10% of India's exports, would cost some Rs.1½-2 crores (excluding duty).

The use of mechanised tools for finishing carpets is also thought to be crucial for India to increase its competitiveness with Iran and China. All Persian carpets are clipped with electric shears, while in China embossers use electric scissors. Once again this improves both productivity and quality. What the effect on employment would be is debatable; some sources claim that there is a shortage of embossers while others claim that the decline in export of Chinese-type carpets (as a result of competition from China) has led to a surplus of embossers. The introduction of electric scissors may only mop up this unemployment providing other factors affecting competition with China (notably poor quality of yarn) can be overcome. If not, unemployment of embossers is likely to grow.

In the handweaving industry quite small adaptations, well within the range of existing technological knowledge could considerably assist the weaver to raise the quality and quantity of output. In the case of the more primitive narrow looms, for example, a simple pulley (for the warp) and changed reeds would permit greater widths of cloth to be woven and greater lengths of warp thread to be used (the latter reducing the preparation time and permitting the thread to be kept under cover throughout the year). The

productivity of the typical traditional pit loom (about 5 metres per 8 hour day) could be raised to 6 metres in an improved frame loom, and 8 metres in a semi-automatic loom. (The classic instance of minor adaptations to artisan technology making enormous strides - in productivity terms - is outside the export sector: the increase by almost three times in the daily product of the wooden ambar charka over the traditional charka spinning wheel.) These incremental advantages are of considerable importance in helping handlooms compete against powerlooms; as in jaloh and jacquard attachments which help to produce and multiply designs. There are numerous other examples, amongst the minor crafts, of simple improvements yielding considerable productivity gains: in the case of pottery, ball-bearings on the wheel can triple output; hand operated Respador machines can double the extraction rate, and more than halve the time in fibre processing; the metal crafts of Karnataka are held back by lack of electricity for metal turning machines; lacquerware production in Goa needs electric saws, fretwork machines, a seasoning plant and other small items. (1) In general, great improvements can be made simply by attaching electric motors to craftsmen's tools, though of course this can be done only where electricity is available.

Gems and jewellery producers argue that newer techniques are required if India is to move upmarket into the production of larger, higher value diamonds in competition with Israel, Belgium and the USA. Present cutting and polishing methods are very slow; machines would not only raise productivity, but also help to standardise products and to give a better finish. But caution is necessary here; a foreign adviser to the diamond cutting industry has recently pointed out that it is adaptation of existing tools rather than fundamental re-equipment (which creates problems of maintenance) which is needed. Traders are also less certain than they were that India should try to adapt its technology to produce big diamonds, since they have proved particularly vulnerable to the downturn in world demand.

In some cases the technology is just not available to Indian manufacturers. There are, for example, several crafts which have not yet taken off as export items, and one factor could be the unavailability of key items of equipment. India is thought to have an enormous potential in the field of wood carving but its craftsmen lack the knowledge and equipment (which is available in competing Thailand) to sculpt basic shapes while economising in the use of expensive hard wood. A major constraint in the currently very limited export of silk cloth and madeups is the poor quality of finish given to the silk as a result of using crude techniques - silk voile is given a sheen by beating it on a piece of wood. The best quality silk is produced in Switzerland, northern Italy and Japan, where techniques are said to be highly sophisticated. But Indian manufacturers were not able to consider adopting these techniques until very recently, because the details were secret. This suggests the need not only for imported equipment but for a greater handicrafts R&D effort. By contrast with the research budget of textile mills, that of the handloom silk and cotton weaving organisation, in product and process development, is trivially small.

There are many other instances where R&D effort would be useful to improve productivity and raise quality. For example, one problem facing many of the textile based crafts (carpets, cotton weaving, handprinting) is the

halt in production caused by the monsoon. This could be solved by the introduction of drying machinery or fast drying dyes or by the use of better looms (like those used in Kerala). Most manufacturers are too small or risk averse to undertake extensive R&D, and so this task has become the government's responsibility. Under the Sixth Plan various design and technical development centres will be set up at a total cost of around Rs.750 lakhs, for carpets (130.00), gems and jewellery (150.00), woodenware (50.00), toys and dolls (50.00), handprinting (37.90), cane, grass and bamboo items (34.60), pottery (10.00), textile weaving and printing (9.22), and fibre craft (7.00). Our general evaluation so far is that the authorities are correct to approach the question of new techniques for handicrafts with care, and case by case. But within these limitations there still appears a great deal of scope for adaptation and imported technology.

(e) Design and Marketing

The use of better machines for handicrafts, which improve productivity and widen product range, helps to resolve the fundamental dilemma in the marketing of handicrafts - that handicrafts cannot be produced 'en masse' (otherwise they lose much of their appeal); but at the same time they need to be marketed on a large scale with standardisation of quality. The failure of Indian silk manufacturers to resolve this dilemma is graphically illustrated by a leading manufacturer: 'since export demand comes in short rapid spurts and the export market is time orientated, the first victim is quality. Because of complaints in quality, re-orders are difficult and price-realisation goes down which in turn leads to market resistance to Indian products'. (1) This is partly explained by 'antiquated and primitive' processing techniques.

But it is not only a question of new machines but also of evolving designs to meet changing consumer demand, and fashion. For example, it has been noted that while 'jacquard looms help in producing and multiplying designs the successful attempts made in some centres have not been sustained ... The looms currently remain unutilised, the colour schemes are poor and the designs originally evolved have not been improved upon nor efforts made to evolve new designs'. (2) Yet it is precisely in doing this that handlooms have a unique advantage. Handloom products are, in fact, ideally suited for fashion markets. Handlooms are capable of producing 100 metres per design per colour, whereas a mechanised mill needs an order for 12,000 metres to produce one design in four colour combinations. Some importers, therefore, prefer handlooms for fashion markets as they can try a number of products, designs and colours economically in their respective markets. Fashion changes and therefore there is a need for an industry which can cater quickly for every change in fashion requirements, with new products, new designs and new colours. (3) Handlooms can produce complicated designs

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- (1) S. Kumar (Silk Association of India), Economic Times, Bombay, December 1981.
 - (2) K. Kasturi & P.S.S. Srinivasan, Economic Times, Bombay, 8 March 1982.
 - (3) K.R. Pande, 'Handloom industry: strategies for marketing', Economic Times, Bombay, 20 May 1981.

extra warp, extra weft, dobbis, jacquards, mixed fabrics, special types of fabrics in small quantities and keep on changing the designs and colours economically. It is difficult for the mechanised mills to do this. Therefore, it is in this area that handlooms have an edge over textile mills.

Product development, design and fashion are particularly important in sustaining the growth of handicrafts in Western markets. Eastern European markets which absorb a large proportion of India's brassware exports, besides a number of other products, are said to be less demanding in this respect. This partly reflects the organisation of marketing there; it can take up to two or three years for a change in consumer demand to reach the decision makers in the importing agency, whereas in the West tastes can change in six months and importers must respond to them. However, Eastern Europe is generally more interested in traditional artistic items than the West. For instance the USSR buys a lot of traditional brass vases, with engraving and enamelling, from Moradabad, while Western Europe and the US prefer to buy simple, plain brass objects and objects made out of white metal.

Only a few manufacturers are able to develop their own designs, partly as a result of scarce finance and partly because of inadequate information about tastes in foreign markets. In addition, artisans who are paid on a piece rate basis will suffer a fall in their wages each time they have to learn a new design or technique. They are therefore not encouraged to innovate themselves. Another problem is the tendency of manufacturers to copy each other. There can be no patenting of designs - moreover the system of outworking makes it difficult to keep designs secret until the goods are on the market. What happens is that the market is often flooded with similar items, which can depress prices severely. For example, when in 1978/79 there were over 5,000 looms in Panipat (the production centre for upholstery) all producing the same type of cloth (hissar) for bedcovers, largely for export to the USA, within a year the market had collapsed.

In trade with the West, the designs (colours, finish, etc) are increasingly provided by the importer, who sometimes visits India to oversee the production of prototypes. This poses several problems. First of all it has increased the danger of traditional designs dying out through displacement by foreign ones. Of course in some cases, such as carpets, there are no traditional designs. India has always produced carpets based on Persian, Chinese, Turkish and French (Aubusson) designs. Often the product is so alien to the craftsmen that they do not understand how it is to be used - ie. the stresses it will undergo in the functions it has to perform. For instance few craftsmen ever use carpets or brass plant holders, or wear silk dresses, so they do not appreciate which of their tasks are crucial and must be done with special care. Second, it has meant that manufacturers (and the craftsmen) have become very dependent on their buyers and this has probably depressed the prices they can obtain for their goods. On the other hand, one of India's advantages over its competitors (notably Korea and Taiwan in brass, China in carpets) is its flexibility; it is willing to produce small runs of products to importers' specifications. And this may allow manufacturers to raise their prices slightly. Exactly what the next effect is, therefore, remains ambiguous.

In order to overcome this lack of design innovation the government has set up various design centres. Some are being run by the All India Handicrafts Board, specifically for handicrafts, in addition to the National Institute of Design at Ahmedabad. Less than 1% of total planned expenditure on handicrafts (Rs.100 lakhs) will be spent specifically on design development in 1980-85, but there will also be some design information resulting from the craft institutes mentioned in 4(d) above. Whether these facilities will really help to reverse the present dependence on foreign importers in Europe and the US remains to be seen. Where it could help, however, is in breaking into new markets which we consider below. The situation in handlooms is a relatively happy one in this respect and provides a precedent for other handicraft sectors. Exporters of handloom fabrics base their appeal on design initiatives taken in India, stimulated by bodies such as the HHEC and the Weavers' Centres. There, the danger is less one of lack of design initiative than its emulation elsewhere (eg. French mills now make 'crepe Indien'). By contrast, there is little design initiative among garment exporters; instead it comes from import houses and retail stores in the West.

Running through the arguments about design or production innovation are several different threads, often confused, and we should conclude by trying to separate them. First, there is the question of whether design or product innovation should be led by importers and followed by 'dependent' exporters or vice versa. This is an area where nationalism is not very helpful. There is presumably an optimum combination which may vary from product to product and which will maximise the value added, of exports and employment, in the long term, and may well emphasise the exporters' capacity to adapt to changing demand rather than to mould it. India's most successful exports - garments, carpets, diamonds - are all based on essentially derivative designs. Second, there is the related question of 'quality' versus 'mass' production (related, since foreign demand may lead in either direction). Mass production emphasises output and employment rather in the manner of a factory-based labour intensive industry (indeed many manufacturers see no reason why 'handicrafts' should be differentiated from industries, as indeed it is not in the production of plastic flowers in Hong Kong). Already, in brassware for example, any pretensions of an 'Indian', let alone an artistic, character have been abandoned in the pursuit of sales of cheap ashtrays and 'knick-knacks' to Western markets. There are, indeed, disadvantages in being hitched to a (Western) luxury rather than a mass market. But for many crafts there may be room for both: that is, there is scope for using India's vast potential for producing labour intensive manufactures, drawing in particular on the rural population through sub-contracting arrangements, while at the same time retaining a capacity to produce more luxurious items of high quality and artistic appeal (provided, of course, that the exporter realises that they are different!). Third, there is a distinction to be made between novelty and quality. The emphasis of policy discussion tends to be on the former, but it is the latter which is probably more crucial to expanded export volumes and goods prices: textile fabrics which are fast and without faults; brass flower vases which do not leak; precious metalware which is hallmarked.

(f) Delivery Problems

A handicraft process is, almost by definition, slow. Handloom weavers can produce on average 5 to 6 metres a day and, for complex weaves, no more than 2 metres a day. The organisational problems of meeting large uniform orders can be immense and as we have seen, handloom weavers have an advantage over mechanised weavers only for small orders (under, say, 20,000 metres). A frequent complaint of manufacturers is that importers do not understand the speed of delivery problem which a handloom or handicraft industry has. Some problems are, however, manmade and India's infra-structural problems mean that all exports are plagued by problems of inadequate rolling stock, poor and congested roads, delays in ports, lack of container facilities, high freight charges, etc. For handicrafts, these problems may be slightly worse because of the dispersed nature of production (particularly in handlooms) or, more generally, because of the remoteness of the centres of production from sea and air ports. Many handicrafts require special protective packing to prevent damage - tarnishing of the brass and silver plated items, warping of the wooden items, crushing of the bamboo items. The resulting increases in costs can exclude some products, such as cane basketry items or blown glass, from export altogether, unless they are items which no other country produces (such as reed chairs, for which freight is 350% of the f.o.b. cost). Freight rates are very high for a number of products. For wooden carvings the freight:value ratio is as much as 60%. This can be partly reduced by moving away from shisha wood to the more expensive walnut and sandalwoods. For brassware, sea freight to Hamburg can be as much as 20-25% of the f.o.b. cost - twice the amount from Taiwan - while inland freight and packing alone can account for 12% of the f.o.b. cost. For carpets, sea freight is much less - Rs.15-16 per square metre, or roughly 2-5% of the f.o.b. cost of the carpet. Another problem is that some major competitors get large freight subsidies. For instance China and Yugoslavia have their own shipping lines which charge rates well below those of the conference lines used by most Indian handicraft exporters.

(g) Overdependence on Established Markets

The bulk of India's handicraft exports are sold in a small number of developed country markets. From the preliminary data available it seems that for some products (and sub-product categories) this concentration is high. For example about 50% of all hand-knotted carpets are exported to West Germany, while the USA and USSR between them buy roughly 65% of brassware exports (see Table 6). As with any export industry such overdependence on a few markets presents problems for handicrafts. In particular it constrains the development of exports; not only is the growth in demand in a few markets likely to be lower than if new markets were broached, but also there is the risk that a sudden change in taste or economic conditions will lead to a fall in demand. A few examples will illustrate how vulnerable some handicraft exporters are. In Germany the demand for Indian carpets fell sharply in 1980/81. This was primarily attributed to the 20% decline in the DM, although others have suggested that the market slumped as a result of the recession, with excess supplies and high stocks. This situation was made worse by the small number of buyers relative to the number of exporters (or their agents) hoping to sell in West Germany. Another problem was that German importers operated a loose form of cartel; they began to refuse to

TABLE 6 Dependence on Foreign Markets: % exports to particular countries
(value)

	USA	W. Germany	Belgium	USSR	UK
Handlooms ^a (1973/79)	35	10	-	-	-
Gems and Jewellery ^b (1979)	29	3	21	-	3
Carpets ^c (1980)	30	50	-	10	5
Brassware ^d (1980)	30	10	-	30	5

Sources: a Handloom Exports Promotion Council
b Gems and Jewellery, May 1980, p.29.
c Estimates
d Estimates

Notes: - insignificant

accept orders, when these had already been shipped, unless exporters reduced prices to take into account some of the fall in the value of the DM. No importer would accept an order which had been refused by another. Indian exporters did not have the financial backing or organisation to bring the carpets back to India, nor to hold them in customs warehouses until importers accepted them. They were therefore forced to sell at lower prices or to give importers longer credit. Some manufacturers feel that this situation could have been avoided if the government had insisted that all carpet exports were paid for by irrevocable letter of credit (as is the case for textiles), or if all exporters had to have a minimum turnover of, say, Rs.50 lakhs. At present foreign importers have too much power, particularly when they know that they buy such a large share of India's exports.

One way of reducing these problems would be to diversify into new markets, particularly in the Middle East and Latin America.. Some manufacturers have begun to visit these areas, but most are too small to do so individually and therefore depend on initiatives taken by the government-run Handicrafts and Handlooms Export Corporation (HHEC). The HHEC has showrooms in Hamburg, Paris, Zurich, New York, Tokyo and Nairobi, which are designed to introduce foreign importers to the wide range of handicrafts produced in India, and in some instances also to act as retail outlets. It is claimed that the breakthrough of Indian carpets into the German market was largely the result of the HHEC setting up a warehouse in Hamburg in the late 1960s. Trade fairs and exhibitions are organised by the All India Handicrafts Board (AIHB), which in addition to its other activities is the export promotion council for all handicrafts, as well as by the separate export promotion councils, which have been set up by manufacturers of gems and jewellery, apparel, handlooms, wool and carpets (with government support). To date most of these fairs have been in the more traditional markets (including West Germany, the USA and USSR). Under the Sixth Plan some Rs.150 lakhs will be spent on further exhibitions on all continents, except Africa, with priority being given to gems and jewellery.

There is some debate in India as to the effectiveness of such government organisations in breaking into new markets. Some manufacturers feel that a more successful alternative might be export houses as discussed above. The scope for diversification and development of exports does, of course, also depend critically on the degree of openness of importing markets. Market access barriers - particularly the question of quotas on handlooms - is dealt with in a separate paper.

SECTION 5 DEVELOPMENT POLICY ISSUES

(a) Labour Conditions and the Welfare of the Artisan

The issue of wages and conditions in the handicrafts industry is one of the most difficult, yet important, policy questions. It is difficult because it arouses strong and conflicting emotions amongst different groups of people, each of whom claim to have the interests of the artisan at heart, and because it centres on that most elusive of concepts - 'exploitation'. On the one hand there are those who see the expansion of handicrafts in terms of economic alternatives. Since the 'opportunity cost' of labour is close to zero, and the productivity of artisan labour is very low it could be argued that a low but positive return to work cannot be represented as 'exploitation'. On the other hand, there are those concerned with the unequal bargaining position of artisan workers and their inability to organise in the face of more wealthy and powerful manufacturers and merchants and rich consumer interests. In this case 'exploitation' of labour may exist, both in the Marxist sense of extracting 'surplus value' and also possibly in the Marshallian sense of wages being lower than labour's product.

The policy implications of these views of the world are, naturally, quite different: the first pointing to the need for maximum expansion of handicraft (and other) activity in order to raise the demand for labour in relation to current excess supply; the second pointing to the need for more strengthening in the organisation of artisans, to the elimination of 'unnecessary' middlemen, and to State protection of workers in the form of minimum wages and conditions. It is, of course, possible to believe that the main problem is one of low productivity and inadequate demand for labour while also believing that some degree of 'exploitation' takes place. In the case of 'Marshallian' exploitation the proposition is, at least, potentially testable, and the problem remediable by removing nonopsonistic elements in the labour market. We shall look at the question initially from the viewpoint of a free labour market; then at the observance of minimum 'subsistence' standards of wages and conditions; and, third, at the controversy about 'middlemen'.

Labour markets and artisans. The analysis of labour markets is always dogged by such fundamental difficulties as unscrambling cause and effect and separating out the relationship between wages and employment from changes in specific or aggregate demand and growth in productivity levels. Thus, it is possible in India to find cases of high underemployment apparently caused by wage rigidity (Kerala), high unemployment despite low and flexible wages (Bihar), high employment sustained by downward wage flexibility (Madhya Pradesh, Rajasthan), and low unemployment co-existing with relatively high wages (Punjab and Haryana). There are similar variations between handicraft centres and over time. In some handicrafts, at least, real wages appear to have improved. In Bhadohi-Mirzapur workers have been able to buy a few consumer durables (radios, bicycles) and to improve their houses. Some have managed to accumulate savings which they have invested in land, or they have bought raw materials and become small manufacturers sub-contracting work to other artisans. In an expanding industry individuals have been able to move up the skill hierarchy to the position of master craftsman. The position of workers in the cotton weaving and

gem-cutting industries, however, does not appear (albeit on very fragmentary evidence) to have improved significantly and may even have deteriorated with expanding demand because of rapid entry into the industry. Mies also cites lace working (but without evidence) as a case of expansion with falling real wages.

In general, however, it can be said - the evidence is set out below - that workers are paid more than they would be in alternative (agricultural or 'informal' sector) activities. And it is the decline, rather than expansion, of markets for handicrafts which has been the chief worry of rural artisans, especially women. (1) Moreover, where labour markets have been allowed to work freely - as in Thailand - rural handicraft wages appear to have reflected relative scarcities quite accurately, rising significantly for products in demand and at seasons of peak demand, and at harvest times. (2) In India, however, there is some evidence that due to market imperfections - incomplete freedom to move (of women especially), incomplete knowledge, unequal power - some artisan wages are actually less than productivity merits: 'the real situation existing in (the) handloom industry is that wages are less than the value of the marginal physical product'. (3) This is partly attributed to the ability of manufacturers to tap supplies of children (4) and women workers. (5) And the 'opportunity cost of women's time (housework) or children's (learning) is not measured in market estimations.

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- (1) Uma Ram Nath, 'Women: Progress on Development', Action in Development, No. 76, July 1980.
 - (2) D.C. Mead, Subcontracting in Rural Areas of Thailand, op. cit.
 - (3) T. Yagaiah, 'Handloom Industry in India', Yojana, 16 December 1979.
 - (4) In India 'among the unorganised industries, the handicrafts sector draws the largest number of children. Unofficially, it is conceded that 30% of labour engaged in this industry are children', Sumantra Banerjee, Child Labour in India, Anti-Slavery Society, London 1979, p.18. (We suspect that this figure is very much on the high side.)
 - (5) As Ruth Dixon says: 'Women who produce handicrafts at home typically undervalue their work because they are not used to attaching a monetary value to time, and because they frequently define their handiwork - often interrupted by domestic chores - as an incidental spare-time activity. The amount of profit is not important - any remuneration at all is better than none - so long as the raw materials are paid for', Rural Women at Work, Johns Hopkins University Press, 1978, p.57.

Labour market imperfections may distort in a different way, by depressing wages below those of alternative sources of (market) income. One of the consequences of depressed wages appears to be a loss and demoralisation of the most skilled and experienced craftsmen who are required to develop the high quality and sophisticated designs in which India's trading comparative advantage lies. Thus, in the silk centre of Kancheepuram, 'weavers are abandoning all time consuming designs' since the small extra payment does not justify it: 'no one is bothered about the texture or quality of weaving anymore. This is a poverty ridden job. We are not allowing our children to be weavers'. (1) Many weavers (of cotton handlooms) who are dissatisfied with the low level of earnings in the handloom industry are leaving their age-old traditional work in search of employment elsewhere in the cities, thereby increasing the process of urbanisation'. (2) But in handicrafts, hereditary skills and the lifelong attachment of whole families to a trade represent the 'human capital' base on which the industry rests and insecure or inadequate returns to workers and unrestricted supply can be self-defeating. This was well understood by the 19th century Indian craft guilds, which while they 'are condemned by many for fixing the hours of labour and the amount of work to be done in them by strict laws ... nonetheless ... by their stubborn resistance further stimulated by caste prejudice, while they oppose all innovation, still continue in this folorn way, to serve a beneficial end, in maintaining for probably another generation, the traditional excellence of the ... arts of India against the fierce and merciless competition of the English manufacturers'. (3)

Minimum standards. The above comments serve to qualify, rather than to refute, our broadly optimistic judgment that handicraft wages and conditions, as well as employment, would generally improve in response to increased demand, and with improved capacity to supply. There is, however, a rather different approach to looking at wages and conditions: in terms of absolute minimum standards. This is easier said than done; there are serious problems, notably the lack of data on wages and conditions in the handicraft sector and also the lack of obvious criteria to use in evaluating one's findings. What is involved is not simply a question of wages but of physical conditions. In some handicrafts activities, for example, there is a definite health risk - in the form of TB and other chest illnesses. (4) Even to take the more straightforward area of wages, as most artisans are paid on a piece rate basis, wages can only be calculated if the average productivity per hour is known, and the number of hours worked. Piece rates within an industry can vary from place to place; at the heart of the carpet belt in Bhadohi-Mirzapur, for instance, rates are much higher than on the outskirts. Another

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- (1) C.S. Lakshmi, 'Silk weavers of Kancheepuram', The Economic Times, Bombay, 18 October 1961.
 - (2) T. Yagaiah, 'Handloom industry in India', Yojana, 16 December 1979.
 - (3) Sir George Birdwood, Industrial Arts of India, 1960, p.39.
 - (4) 'Those engaged in handprinting have to deal with chemical dyes; those engaged in art brassware have to work with open Bhatties; those engaged in carpet weaving inhale wool dust; woodcarvers inhale wood dust', All India Handicrafts Board, Annual Report, 1976-79, p.13.

difficulty is that a certain proportion of a worker's output may be rejected as sub-standard and deductions made from his wages accordingly. Deductions may also be made in lieu of interest charges where a manufacturer had advanced capital for equipment purchase or gives a worker part of his wage packet in advance or acts more generally as a money-lender. The matter is further complicated by the fact that in some instances wages may refer to a family unit rather than a single worker. The 'average' wage is also rendered of questionable significance by the low wages of trainees. Those in the diamond cutting industry pay to join the profession - in effect, a negative wage - in expectation of higher returns later. Finally there is the problem of fluctuations in work. In both handloom and carpet weaving a number of days are 'lost' - in the sense that there is no direct payment for them - in warp preparation and in winding on the warp. For handlooms this can occupy as much as two days in eight. A lot of work is seasonal, partly because import demand is seasonal (a large proportion of the minor handicrafts, such as brassware, is sold at Christmas while a lot of handloom garments are produced for summer wear) and partly because of variations in the weather such as monsoons which affect production (textile printing, carpet finishing). In 1973 carpet weavers in Bhadohi-Mirzapur worked only 265 days, though this figure is believed to have risen since with the growth in exports, while in 1980 workers in the gem industry in Jaipur worked over 300 days. Not only do the number of days worked fluctuate within a year but also from one year to the next. In 1980 the decline in foreign demand for brassware led to a fall in the average number of days worked in the industry in Moradabad, from six to four a week.

We have endeavoured in Table 7 to summarise some daily wage data for the purpose of comparison. As can be seen, reported wages compare reasonably well with minimum agricultural wages for which there is state legislation (and these are widely undercut). It might be noted that a year after those wages were recorded, the Union Labour Ministry recommended a unified national minimum daily wage of Rs.7 to 8 as from January 1982. Even the poorest class of artisan - the handloom weavers - were (and are) generally paid more than that. But the question then arises as to whether handicrafts should be compared to agricultural wages or in relation to organised industry. 'Handicrafts', as we have seen, represents a continuum of processes from village household industries to urban or semi-urban factories which have been broken into small units, in order to avoid the imposition of factories legislation. The question of the basis of comparison is of particular importance when confronted by the question of child labour. In villages it is considered unusual for children not to be employed tending animals and assisting their parents with farm work. But under the Factory Act, child employment is, in theory, strictly regulated. The Factory Act - which established hygiene and safety standards, obligatory paid holidays, restraints on child labour, and provides a base line for other laws such as profit sharing bonuses - applies only to firms using non-animal traction and where ten or more labourers work. The logic behind the exclusion of small scale units is partly economic - many would be unable to afford the obligations, and would have to close; partly because the character of work is different - without the hazards of machinery and the need to relate work speeds to those of machines; and partly practical - controls could not be policed. While some handicrafts production can reasonably be compared, in the use of children, to peasant farming, some is also on the borderline of what is covered by the Factory Act. Here, child labour has a more ambiguous legal (and ethical) basis. Yet it is undoubtedly widespread, and surveys by the Government's

TABLE 7 Estimates of Wages (Rs./day)

	<u>Cotton</u>	<u>Silk</u>
weaver	10-12 (TN)	25-50 (K, TN)
handprinter	20-30 (R)	10-20 (WB)
	<u>Carpets (UP)</u>	
weaver	20-25	
washer	10-15	
finisher/embosser	17-27	
	<u>Brass (UP)</u>	
caster	50-60	
machiner	35-40	
engraver	40-50	
lacquerer	20	
polisher	15	
	<u>Gems and Jewellery (G)</u>	
cutting/polishing	15-18	
	<u>Agricultural labourers (minimum wages 1979)^a</u>	
Gujarat (G)	5.50	
Karnataka (K)	3.25-5.60	
Rajasthan(R)	4.25-5.00	
Tamil Nadu (TN)	3.50-5.00	
Uttar Pradesh (UP)	4.50-6.50	
West Bengal (WB)	7.25	

a - Commerce, 27 December 1980, p.1216.

Labour Bureau have shown that child labour is extensive in handloom and carpet weaving. In parts of Tamil Nadu about a third of the workers in handloom weaving are aged under 14, children work 9 to 10 hours a day, earning less than Rs.5 per day (1979 rate) and the use of children, whileless, is also substantial in Kerala. The carpets industry in Kashmir (less so in Mirzapur-Bhadohi) employs large numbers of children where -wages apart - 'conditions lead to their health being ruined. The ventilation and lighting impare their eyesight, the cotton fluff they breathe enters their lungs, the hunched up position in which they sit at work for long hours stunts their growth. None are covered by health insurance, nor are they given a regular and proper medical check-up'. (1) There are, clearly, instances where conditions fall below even those which might be expected by poor people in a poor country.

(1) Prem Vishwanathan, 'Child labour in India: Survey on children and child labour', Economic Times, 10 April, 1982.

Distribution of 'value'. The third approach to the question of wages and conditions is to look at the distribution of 'value' between producers' wages and profits; between the artisans and distributors. There is a fair degree of consensus that (to quote the All India Handicrafts Board) 'while the demand for handicrafts both in the internal and external markets has increased substantially, commensurate benefits have not been flowing to the crafts persons. In fact, there are instances of gross under-payment of wages, unfair deductions and unwarranted rejections of the products offered by the workers'. (1) It is, however, one thing to argue that the benefits of expansion could be better distributed; it is another to question the whole legitimacy and usefulness of the private entrepreneur. Moes, for example, actually calculates an approximate 'rate of exploitation' of lace workers of almost 300%, which is the relationship between the surplus over artisans' wages in the final prices and wages - and concludes: 'the exporters and traders gain from one woman's daily production almost three times the amount they pay her as wages'. (2) Most other writers, less formally but often more vituperatively, argue (or assume) that the profits of 'middlemen' represent 'exploitation': 'the fruits of the industry are actually grabbed by the usurious money lenders and extortionate middlemen'. (3) 'The bane of handicrafts marketing is the large number of middlemen that thrive at the expense of the artisan on the one hand, and consumer at the other' (4) ... 'where the markets are wider and expanding (eg. toys and lacquerware) the artisan is exploited by the middlemen; it was found that the sale price by such intermediaries to consumers has a margin varying from 25% to 150% and that to retailers from 6.3% to 112.5%' (5) ... 'cottage industries suffer under predatory middlemen. Families work under a middleman who supplies them with raw materials and credit, both at inflated prices, and buys off them their production, at low prices, creaming off from the return to labour a fat margin as the reward for his organisational work'. (6)

The view of economics which these statements represent is, however, very far removed from that which sees distribution as no less useful or necessary than production, and recognises that 'predatory' middlemen perform an invaluable entrepreneurial function: identifying market demands and bringing together necessary inputs. On this interpretation 'exploitation' cannot be equated with markups (the addition of 300-400% to f.o.b. prices may well be explicable largely in terms of wages and salaries in the distribution sector of industrial

(1) Annual Report, 1978-79.

(2) Mies, op.cit., p.107.

(3) B. Subramanian, B. Ramakrishna Rao, A. Babu Rao, Handicaps of India Handicrafts, Kurukshetra (Andhra University), January 1982.

(4) See M.N. Uphadyaya, Economics of Handicrafts Industry, New Delhi, 1973, p.21.

(5) Abdul Aziz, op.cit.

(6) Paul Harrison, 'The fruits of rural industry', New Scientist, 23 August, 1979.

countries). 'Exploitation' arises only if 'super-normal' profits arise due to monopoly power in supply or demand. There seems to be a general tendency for artisans to be much less organised than the manufacturers who contract them, and Indian exporters to be less organised than importers. The most extreme example of this progression is diamond cutting, where several hundred thousand artisans work directly or indirectly for just over 1000 merchant/exporters who, in turn, buy roughs from, and sell diamonds to, one major agency: the Central Selling Organisation (de Beers). But in general (and with the major exception of diamonds) there is reasonably free entry at all stages of distribution and the scope for squeezing out 'excess' profits would seem to be limited

There remains the practical question of whether workers' conditions could be improved without affecting the demand for exports. The government (at both state and central level) has tried to introduce legislation on minimum wages, for some handicrafts, and on working conditions. But the disorganised nature of handicrafts production and the underlying problem of excess labour supply has made this legislation largely ineffective, in the same way that the Factories Act is for organised production. Even if it were effective, it would only work if the demand for labour was inelastic (that is, if machine substitution possibilities were limited) and foreign demand price inelastic). Another approach is to try to replace private distribution, in whole or in part.

(b) Alternative Structures: Co-operatives

There are two ways frequently suggested to improve labour conditions: the provision by the government of raw materials and/or marketing outlets to enable artisans to work independently, and the establishment of co-operatives. Two others which tend to be overlooked, probably because their links with charities make them appear unviable on a large scale, are voluntary societies and alternative marketing organisations (AMOs).

In principle, co-operative organisation of production should solve many of the problems of the sector. It offers the possibility of large scale organisation for many independent producers, economies of scale in raw material purchase and distribution, and an opportunity, by providing an independent source of working capital, for artisans to disentangle themselves from relationships with middlemen which entail debt and unequal bargaining power. Co-operatives are, moreover, officially favoured and enjoy financial concessions and access to raw materials.

It is extremely difficult to generalise sensibly and briefly about the experience of co-operatives since there are different kinds - producer as opposed to marketing - involving different degrees of sharing by members, different tiers of co-operative management and different relationships with state and union government organisation. In general, however, those who have reviewed their experience have come to discouraging conclusions. (1)

(1) For example, C.P.S. Nayar, A Case Study of Industrial Cooperatives in Tumkur, Centre for Studies in Decentralised Industries, Bombay, 1979.

Altogether it is estimated that there are 15,000 registered handloom co-operatives in India and some 1,600 for other handicrafts. Exactly how many are active is a moot point. More than a third of the handloom co-operatives are said to be dormant, and nearly three-quarters of the handicraft co-operatives, a rate of dormancy similar to that of co-operatives in the economy as a whole. (1) Some of the active ones do not actually operate as co-operatives; often they have been set up by private manufacturers to take advantage of special privileges such as subsidised inputs, without any fundamental changes to the wage structure. (2)

Perhaps the most serious limitation of co-operatives in handicrafts is that they are too limited in scale, resources, or in quality of management to offer their members a comprehensive alternative to producing for private sale. And, as a consequence, members work most of the time for themselves, having found self employment to be more regular and no less remunerative. Craftsmen may be attracted to work outside the co-operative by the greater willingness of master craftsmen or money-lenders to advance money (even if this leads to dependence) while the co-operative (for the best of reasons) is reluctant to lend members for private consumption. Even if they are well run and responsive to members, co-operatives almost certainly rely on state or union government for raw materials supply, finance and marketing outlets. In some cases these government organisations are inflexible and inefficient so that the co-operatives are unable to keep their members fully occupied, and they must then turn to private manufacturers and sub-contractors to supplement their incomes. Where co-operatives are well run and supported by a relatively efficient and committed state government - as in Tamil Nadu - they have expanded to cover over half of all handlooms but have little impact in the export sector where market disciplines are harsher (though some apex societies, like Cooptex, are now exporting). But the consequence of having a helpful state government is that co-operatives effectively become state-run organisations, with government representatives influencing many of the management decisions often through seconded staff, and with government agencies responsible for providing raw material inputs and for marketing the product. The logical extension of this approach is for state-run handicraft or handloom complexes rather than co-operatives, and some handloom export centres are being developed.

One further reason why co-operatives have become only marginally involved in exports is that exporters and importers prefer not to deal with them, fearing that production will be disrupted by infighting or that the design, quality control and speed of output will be relatively low as a result of poor management and lack of discipline.. Even government agencies such as the HNEC and state handicraft corporations, which sell handicrafts in India through their own emporia and were set up to buy directly from co-operatives as well as individual artisans, have found it easier to buy from private manufacturers or middlemen whom they describe as a 'necessary evil' since only they can guarantee delivery and quality. Only 10 of the

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- (1) K.K. Taimini and K. Chellappan, Dormancy among Industrial Co-operatives, Viakinth Mehta Institute of Cooperative Management, Pune, 1975.
 - (2) Upadhyaya (op.cit.) p.32 quotes the co-operatives organised by Bidri producers as a blatant attempt by factory owners to 'hoodwink' the government and take advantage of facilities.

2,000 suppliers to the General Cottage Industries Emporium, for example, are co-operatives. For the state emporia the situation is worse; many emporia managers do not appear to know what co-operatives exist in their state.

Despite this experience, the government is determined to continue promoting co-operatives. Some Rs.750 lakhs will be spent under the Sixth Plan, providing assistance to 300 handicraft societies with a total of 50,000 members, setting up apex co-operatives in each state, and at the national level a federation of all handicraft co-operatives. For handlooms, the government support of co-operativisation, which is channelled through the state level handloom development corporations, will be much larger.

Voluntary societies involved in the production of handicrafts have (like AMOs) the same basic objectives as co-operatives, namely to improve the lot of the workers, but they operate in a slightly different way. First, their management committees tend to include non-workers, though no government representatives. Second, they get little (if any) government support - they are not eligible for special credit, assistance in the supply of raw materials, nor for special treatment in the allocation of export licences for garments, an item which many groups produce. Third, they usually involve an educational input. Most societies do not export through government organisations or private exporters but through locally based equitable marketing agencies, which are normally non-profit making organisations; above all they prefer to export themselves as only then can they claim the cash assistance open to registered exporters of handicrafts. Often, however, this is only possible with the assistance of foreign-based AMOs.

AMOs such as Oxfam Trading and Traidcraft in the UK or Gepa in West Germany, largely operate on a commercial basis, as they have to compete at the margin with commercial handicraft importers and retailers (though intra-marginal sales are usually to sympathetic customers who are willing to pay prices higher than in commercial shops). But by cutting out middlemen they aim to increase the returns to the producers. A portion of any profits made is usually reimbursed to the producers in the form of a social project for their community, while some may be given to help new producer groups. In addition, unlike most commercial importers, they offer the producer groups assistance in the form of advice on improved production techniques, new designs, better packaging, export procedures and marketing, to help them upgrade their output. They may also provide groups with advances of up to 40% of the value of their orders, to buy the necessary raw materials. AMOs rarely have the finance (or expertise) to initiate producer groups or even to subsidise them once they have been set up, except by providing this advice free. Groups must already be able to produce and sell handicrafts; and to avoid creating a dependent relationship, AMOs insist that each group must sell part of its output independently, preferably to the local market. (This, however, often means selling to foreign tourists rather than to Indians, which can be as volatile a business as exporting.)

It is too early to evaluate the success of AMOs and voluntary groups, though one point is clearly emerging. This is that the learning process is very slow and it may be a long time before the groups are able to export without help from the AMOs. Another point is that their labour costs are high; nearly all goods bought by AMOs are a third more expensive than if they had been bought from private manufacturers. This does not mean necessarily that wages in voluntary societies are higher; rather it seems that productivity is usually lower. Substantial improvements will be needed before the groups are able to compare with private manufacturers.

(c) The Urban Bias

The handicrafts industry, being composed of small units with little capital required, is seen by many policy makers as a potential source of employment for at least some of the millions of unemployed rural workers. And one major reason advanced for the desirability of labour intensive handicraft 'outworking' is that it minimises rural-urban migration. Our impression is, however, that many handicrafts activities are located in or around urban areas. As Savara has noted: 'there are reasons to believe that the 60% share of total employment in rural crafts (in 1961) might have declined to 50% for the reason that there has been a contraction of artisans in urban areas and towns due to export orientation of handicrafts'. (1)

At present handicrafts production is quite concentrated both regionally and within regions. According to one estimate six northern states account for over 65% of handicrafts exports (excluding gems and jewellery and handlooms) and 75% of production: UP - 40%; Rajasthan - 10%; Jammu and Kashmir, Delhi, Haryana and Punjab - around 5% each. Within these states there are several major urban handicraft centres, eg. in UP, Moradabad for brassware, Bhadohi and Mirzapur for carpets; in Gujarat, Surat for diamond cutting, Rajasthan, Jaipur for semi-precious stones and other items; in Haryana, Panipat for dhurries and household linen. Over 75% of handloom fabric destined for export originates in the south, mainly in Tamil Nadu, and production for export is concentrated in certain centres. There are problems here in defining what is an urban industry as opposed to a village or rural industry. But it seems clear that production of handicrafts is not as simple a solution to rural unemployment as originally thought.

The reasons for such concentration of handicrafts production are fairly obvious, including managerial, technological and infrastructural factors, and distribution costs. The managerial constraint is perhaps the most important in restricting the spread of existing business into rural areas. As explained above, the fragmented structure of handicrafts production requires a large managerial input, co-ordinating the various units to ensure a continuous flow of production (and employment) and supervising them to control the quality of their output. Many are family businesses and there is a general reluctance to share the management with non-family employees. To some extent this constraint can be overcome by the use of sub-contractors; for instance this has allowed the knotting part of the carpet industry to spread out from Bhadohi and Mirzapur to villages as far as 30 miles away.

(1) Jain Savara, op.cit., p.122.

Sometimes the technology is inappropriate for rural production. For instance, in the case of dhurries which are on average 3 feet wide, the frame looms (which cannot be folded away) are simply too large for the average rural (or even urban) household. Even if the loom could be modified, the high level of output (3 dhurries of 8-12 metres in length per loom per day) requires a large volume of wool, too bulky to be stored in the average house or to be distributed daily by the manufacturers. The use of electrically driven tools and machines, as for example in the planing and polishing processes of the brassware industry and in gem polishing, also bias production towards urban areas where electricity is more readily available. As technology is upgraded and machines are introduced to reduce the amount of drudgery in handicrafts production, this bias will be increased. Exporters also require a minimum amount of infrastructure (telex, telephone, hotels, etc) for dealing with foreign importers.

Another problem is the transport cost involved in the distribution of raw materials to rural craftsmen and the collection of the final product. These costs can be quite high and are only justified where the value-added is also high, as in the carpet industry, or where rural wages are much lower than in the urban centre. In the brassware and gem cutting industries the time taken to do each process is quick. For brass this means that a large volume of semi-finished products has to be shifted daily. In the case of gems although the value-added to freight ratio is high, the amount of capital tied up is also high, and the possibility of delay will deter manufacturers from sending stones into rural areas. Distance can also cause serious delays in the production process if an artisan runs out of raw materials. Some of the larger carpet manufacturers have set up distribution centres to overcome this difficulty. More centres are required if the industry is to spread further.

All these factors have helped to create handicraft centres; once created they have their own multiplier effect, attracting labour and continuing to grow. In some cases, such as Moradabad and Bhadohi, they appear to have become quite congested, and manufacturers have therefore tried to establish new centres. In Delhi various attempts have been made to set up brassmaking and also carpet knotting units, but these have generally been unsuccessful.

Some manufacturers are also trying to extend their production base into rural areas, where lower wages can offset the disadvantages mentioned above. A dhurrie manufacturer in Panipat has been able to halve his costs by engaging 100 women in about 10 villages some 30 miles away to weave dhurries for him. Their piece rate wages are said to be much lower because this is not their full-time occupation; they produce only 2 to 3 rugs a month. Such a slow process is not suitable for international trade where the demand is increasingly for large orders to be delivered within a short space of time. The bulk of production (in this case) will therefore have to remain in the urban areas. In Mirzapur a carpet manufacturer is developing supplies of handspun yarn from shepherds in the foothills of the Himalayas. At present these shepherds spin only a small percentage of their wool production for their own use, and the rest is sold to the yarn

spinning mills. Although the collection costs, which are borne by the manufacturer, are high, these are offset by the much lower cost of the handspun yarn and by the fact that its physical properties are much better for knotted carpets than millspun yarn. In April 1961 handspun wool cost Rs.37 to 43 per kg., ie. Rs.27 to 33 for the raw wool and Rs.10 for the spinning, compared to Rs.50 to 55 for the millspun yarn. One reason this experiment is more likely to be successful than the dhurry example above is that it is concerned with preparation of a raw material, where the speed of production is not so important as there is no question of designs becoming outdated.

To sum up, it seems that the export expansion of most handicraft industries is by-passing the rural areas. In some cases this is for technological reasons. But in general it is because of poor infrastructure, leading to high transport costs, and the difficulty of finding skilled labour, raw materials supplies and marketing outlets. The government (both at state and central levels) has recognised these problems and has set up many training centres in rural areas, particularly for carpets. But until basic infrastructure in rural areas is also improved, the newly trained labour will tend to migrate to the existing production centres.

(d) Technological Choice

The question of appropriate technology for the Indian handicrafts industry has already been raised in the discussion above of the constraints to exports (section 4(d)). New techniques are said to be required to create new markets or to compete with other exporters of handicrafts, on quality, quantity and price. They may also help to raise individual workers' wages and to reduce the drudgery involved in many of the stages of production. But at the same time this could reduce overall employment in the handicrafts industry. In addition new techniques are capital-intensive and access to capital is skewed, favouring the larger manufacturers and so leading to a more concentrated structure of production.

The choice of technology involves a combination of engineering, commercial, economic and social considerations. The government has limited discretion but can affect the choice, particularly by varying the availability of, and rate of duty on, imported equipment, and by its own research efforts. An economically efficient choice of technique will need to recognise that 'market' factor prices - interest rates and wages, and also foreign exchange rates - do not reflect relative scarcity in social terms. The considerable body of literature in shadow pricing in India suggests that - with many qualifications to allow for differences in capacity utilisation between industries, seasonality, and local labour market conditions - it is probably correct to apply a shadow wage discount of about 50% of the market wage and a 50% premium (on some activities much more) to the cost of capital and a similar premium to foreign exchange. (1) If cost-benefit analysis was applied according to these principles there would be a predisposition against more sophisticated technology even when commercially viable. But there is one important exception: the case when output (and in this case exports) is increased so that productive employment is increased overall, even if less labour intensive methods are used. If some more sophisticated machines are used therefore to expand the overall sales of handicraft items -

by increasing volume production within a specified time period or permitting access to new quality ranges - then it could be justified economically as well as commercially.

In the case of textiles - weaving and finishing - the issue of technological choice can be posed in terms of several clearly defined choices for which it is possible, in general terms, to evaluate the economic costs and benefits. It should be stressed that comparisons are based on some very approximate estimates of such information as the total investment in handloom weaving, and the number of weavers. Technology, of course, is not static either. It also assumes we are comparing uniform products (say, one standard metre of cloth).

TABLE 3 Alternative Weaving Technologies

	Loom Type ^a				
	Hand	Power (cotton)	Non- automated (mill) loom	High speed automatic (mill) loom	Shuttleless (mill) loom
(1) Investment (total) ^b (Rs. mn)	3.93	2.51	2.39	10.78	30.37
(2) Investment per worker (Rs.)	308	4,960	9,122	70,000	421,416
(3) Average Monthly Wages (Rs.)	175	300	500	550	600
(4) Labour cost (Rs. metre)	1.65	0.29	0.25	0.16	0.14
(5) Capital cost ^c (Rs. metre)	0.13	0.08	0.03	0.37	1.72
(6) (4) + (5)	1.73	0.37	0.33	0.53	1.86

Source: From P.H. Adhyaru, P. Arubhai, B.V. Iyer, P.C. Mehta, J.G. Parikh, 'Appropriate technology for India', Indian Textile Journal, October 1980.

Notes: a - single shift work in handlooms; 3 shift work on powered machinery
b - investment costs include preparatory work
c - annual capital cost per metre calculated by discounting at 16% over 10 years.

The most striking feature of these estimates is the highly unfavourable economies of handweaving in relation to both powerlooms and the less sophisticated mill-looms. We have not allowed for shadow pricing but it would require labour to have a zero opportunity cost to approach the economic efficiency of powerloom and non-automatic mills - and, for this, the whole of the wage would constitute, in effect, a subsidy. Moreover,

in relation to powerloom production handlooms are not only labour intensive but also (and surprisingly) capital intensive and it is this which most seriously undermines the economic basis of production - though, of course, the capacity use and estimates of investment cost are extremely imprecise and might look very different if adapted for the vintage and replacement cost of equipment.

In practice, therefore, if handlooms are to be preserved, it could only be for social reasons and by regulating the competition to which they are subjected. If labour costs were substantially discounted and a premium applied to capital costs, decentralised powerlooms would undoubtedly emerge over mill-looms as the most economically efficient solution; but not handlooms. This 'intermediate' solution - the superiority in economic terms in developing countries of semi-automatic looms over both capital intensive advanced mill machinery and handlooms (at least for mass production) - is confirmed by studies in both Indonesia and Korea. (1) The above conclusions have, however, to be modified to take account of non-homogeneous products. Handweaving can handle orders in small quantities without loss in efficiency or increase in cost or waste, and complex colour patterns, provided that fabrics have a low density and low width. Exports can enlarge this (inherently limited) demand over and above the home market reserved for handlooms. The question of product definition applies, also, in the opposite sense; mills seek advanced machinery as much for quality reasons as cost. But these crude estimates do suggest a key role for exports; in creating a specific demand for handloom products which insulates them from machine competition.

In the case of both handloom and powerloom weaving the finishing process - dyeing and printing - is also performed outside factories, much of it in the small scale sector (the need for such finishing being much greater in the case of powerlooms). There are technology choices to be made here too, though the more labour intensive options are largely confined to the finishing of powerloom fabrics (the mill sector, largely, carries out its own printing, and is geared, more, to man-mades) while the handloom weavers usually carry out dyeing beforehand). The main techniques employed in the decentralised sector are roller and (hand) screen printing as well as the traditional block printing. From Table 9 below it can be seen that roller printing - the most capital intensive of the various village industry techniques - compares favourably with other technologies in terms of labour and capital cost (and this is even more the case where runs are short and designs complex - in Jetpur, one of the main 'cottage' industry finishing centres, print lengths average around 500 metres and for each design and colour combination around 100 metres). The main constraint on the expansion of this kind of printing has proved to be a shortage of skilled workers - and pollution - rather than the economics of production.

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- (1) H. Mill, 'The economics of recent changes in the weaving industry', Bulletin of Indonesian Economic Studies, July 1930.
Y.W.Rhee and L.E. Westphal, 'A microeconomic investigation into choice of technology', Journal of Development Economics, vol.4, 1977.

TABLE 9 Comparison of Printing Technologies

Technology	(1) Capital cost per worker (Rs)	(2) Average monthly wage	(3) Labour cost (Rs/metre)	(4) Capital ^c cost (Rs/metre)	(3) + (4)
Hand screen ^b printing	3,300 ^a	350	0.17	0.03	0.20
Roller printing	28,600 ^a	400	0.02	0.02	0.04
Automatic Flatbed screen printing	66,700	450	0.08	0.20	0.28
Rotary screen printing (imported equipment)	133,300	475	0.04	0.15	0.19

Source: As in Table 8

Notes: a - Investment cost relates to the cost of tables in the handscreen/roller techniques. The cost of screens and rollers is not included but is less important.

b - Single shift operations in hand screen printing.

c - Capital cost per metre as in Table 8.

O.T. 4.0000
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