1. At its last meeting, the Working Party requested the Executive Secretary to start a study which would, to begin with, deal with the textile and clothing industries only, in co-operation with the ILO.

2. The general scope of the study contemplated is described in the attached Appendix I. It will be noted that the ILO will carry the major part of the work involved in collecting and analysing information on wages, earnings, income, and employment, while the GATT secretariat will carry main responsibility as regards productivity, costs of production, trade flows, and their impact on economic activity.

3. The present memorandum deals with the first item that requires investigation i.e. the structure and level of costs of production including capital and raw materials costs as well as labour cost per unit of output.

4. For other parts of this study, for example the matters indicated in paragraphs 4(d), 4(e) and 4(f) of the attached Appendix I, additional information will be needed. All or most of this information will generally originate from other sources than those from which the information required for comparisons of costs of production must be obtained. Accordingly, a separate though related questionnaire will shortly be sent out.

5. The method which it is planned to employ for the purpose of carrying out comparisons of costs of production has already been applied to a comparison between the cotton textile industries of Japan and India. A copy of a brief statement of the methods and results of that earlier study is attached as Appendix II.¹

6. In short, the method to be applied would proceed by the following steps:

   (1) International comparisons of the physical volume of output in individual sectors of the textile and clothing industries.

¹ More account would, however, be taken of quality differences than in the early study.
(ii) Comparisons of the principal input (or cost) items in each one of the sectors distinguished, in particular labour (in terms of both physical amount, say man-hours, and outlay - wages, both in cash and in kind, as well as other related expenditures), textile materials and intermediate products, fuels and energy, and depreciation allowances.

(iii) With such information at hand, it is possible to study each of the input (or cost) elements listed under (ii) per unit of output, and thus to arrive at a comparison of both the structure and the level of costs of production (the latter to be measured by average price ex factory and therefore including gross profits).

(iv) Moreover, the material at hand would make it possible to compare for each sector of industry the output per man-hour (or labour productivity) and labour costs per unit of output in different countries.

7. The statistical data required to follow these procedures would essentially be obtained from the information that forms the basis for censuses of manufacturing. Unfortunately, such censuses have been taken in relatively few countries in recent years. Moreover, the definitions used and the details collected in various countries vary considerably. Finally, the years during which the latest census of manufacturing was made are not the same in all countries. However, it should be possible, without introducing undue inaccuracy, to bring the results of cost comparisons, especially as regards labour costs per unit of output, to a common year, by use of appropriate national index numbers of the volume of output, employment, and wages.

8. An attempt to cover all branches of the textile and clothing industries would obviously call for a very considerable amount of information in each country, especially since careful attention would have to be paid to differences in the qualities of the many products involved.

9. In view of the fact that the comparisons of costs of production are to serve in the analysis of international trade in textiles and textile products, it would clearly be desirable to extend the comparisons to all contracting parties. While not all of them have in recent years published censuses of manufacturing which could serve as the main source of the statistics required, the questionnaire is being addressed to each contracting party, if only for information.

10. For the study to be relevant for the purpose of analysing the flows of international trade in textiles, it is indispensable that full information should be obtained at least for the following countries, for most of which censuses of manufacturing have been taken in recent years:
11. It is hoped, however, that other contracting parties may be able to supply data concerning the main sectors of their textile industries.

12. The following principal sectors would be studied:

(i) Cotton spinning and weaving
(ii) Woollen and worsted
(iii) Artificial and synthetic fibres, and silk
(iv) Textile finishing
(v) Knitting, including hosiery
(vi) Wearing apparel, excluding leather, furs and footwear
(vii) Jute manufactures

13. The foregoing list excludes the following relatively minor sectors: lace, narrow fabrics, linen and soft hemp, carpets and rugs, making-up of household textiles, cordage, rope and twine, and miscellaneous textiles (e.g. manufacture of linoleum, oilcloth and other impregnated and coated fabrics, straw and coir, matting and mats, felt by processes other than weaving; batting, padding, wadding, and upholstery filling).

14. In order to achieve reliable comparisons as between the selected branches of the textile and clothing industries in different countries it is, of course, necessary that each sector be identically defined. Definitions in terms of the processes covered, textile materials used, and the principal products made in each sector are given in the appended questionnaire No. I.

15. It appears, from a careful examination of recent censuses of manufacturing, that the definitions of the several sectors of the textile and clothing industry vary from country to country. It will therefore in some cases be necessary to reclassify the original census schedules in accordance with the proposed definitions, although these have been so chosen as to fit the majority of cases. Clearly, there is no other way to obtain data on output strictly comparable as between countries, and the data on the corresponding costs of production which are necessary to arrive at valid conclusions.\(^1\)

\(^1\) Difficulties which may arise in connexion with integrated factories that combine operations belonging to more than one of the sectors distinguished, and suggestions to overcome them, are included in the introductory remarks at the beginning of Questionnaire No. I.
16. The list of data requested in the attached questionnaire in respect of output has been drawn up with a view of specifying the composition of output even in countries that have highly diversified industries. Consequently, some of the items listed may be of very minor importance in certain cases. It is hoped, however, that data will be supplied on items accounting for at least 80 per cent of output in a given sector.
APPENDIX I

Programme of Study of Underlying Economic, Social & Commercial Factors

(Part II of the Terms of Reference of the
Working Party on Market Disruption)

1. The present paper is intended to set out an initial programme of work with regard to the second part of the Working Party's terms of reference (L/1234). This programme covers only the description and preliminary analysis of data which will, in any event, have to be available as a basis for the study. It should be emphasized that this programme is therefore not a complete outline either as regards the full scope of the information which may eventually have to be collected or of the analysis which the study will contain in its final form. The purpose is rather to enable the ILO and the GATT secretariat to start at once the work which has already been the subject of consultation between the Executive Secretary and the Director-General of the ILO.

2. As is brought out by document L/1164 (and further confirmed by the statistics included in MGT(60)37), the majority of cases which have been quoted as examples of market disruption, and which involve the largest trade values, pertain to various branches of the textile and clothing industries, and cover a wide array of their many products. For these reasons, the initial collection of data will be concentrated on textile, although it may be necessary to consider other products as the study progresses.

3. Moreover, the initial work will concern only selected countries for which information is most readily available. However, even in such countries published information will have to be supplemented by special enquiries which will require the co-operation of governments.

4. The programme of work falls into several parts:

(a) An attempt to measure and compare as between countries average hourly earnings and labour productivity (output per worker or per man-hour) and the structure of costs of production (including e.g. raw materials, energy, and possibly depreciation of plant and equipment, as well as labour costs per unit of output).

(b) A description of the value and composition of international trade in textiles, including comparisons of exports and imports with domestic production and consumption, and the importance of the textile industry to the economies of the producing countries. In this connexion an attempt will be
made to establish the amount of unused or excess capacity existing in various exporting countries.

(c) An analysis of the effects of differences in costs of production upon the prices and volume of textiles and textile goods entering international trade. Since data on production costs can only be obtained for fairly broad sectors of industry, while cases of market disruption generally relate to quite specific commodities, this analysis may be less relevant from a short-term than from a longer-term point of view. It may, however, throw light on the extent to which the cause of market "disruption" lies in the importing or the exporting country. The results may also serve as a basis for a better appraisal of the longer-term prospects for the less-developed countries to raise their export earnings through increased supplies of manufactured goods to the international markets. In this part of the analysis, attention will, of course, be given to the impact of domestic demand on the level of exports.

(d) An examination of the economic and social consequences which such increases in supplies of manufactured goods are likely to have. This will be based on experience in recent years, showing the impact of changes in trade upon employment and economic activity, both in exporting and importing countries.

(e) Some analysis, with concrete examples, of action which may be taken to facilitate adjustments in employment and production that would become necessary to meet changing conditions.

(f) An examination of the economic and social factors involved in differences in wage levels, such as differences in wage levels in relation to economic development.

5. The study briefly outlined above will be a joint product of the ILO and the GATT secretariat. However, the ILO will carry the major part of the work involved in collecting and analysing information on wages, earnings, incomes, and employment, while the GATT secretariat will carry main responsibility as regards productivity, costs of production (other than wages), trade flows and their impact on economic activity.
6. The Working Party considered the foregoing suggestions, and authorized the Executive Secretary to start the study. As indicated in paragraph 1, the programme is not a complete outline of the study but, since the Working Party will carry the full responsibility for it, there will at a later stage be ample opportunity for revision and extension of the programme. The Executive Secretary will submit an interim report to the next meeting of the Working Party. The Working Party also considered the possibility of calling on outside experts to assist in the carrying out of the study, but considered a decision in this matter premature. The Working Party decided to give further consideration to this question at its next meeting, also bearing in mind that, if a positive decision were to be taken, budgetary arrangements, and the arrangements for the selection of experts would have to be made during the seventeenth session.
APPENDIX II

THE INADEQUACY OF PRODUCTIVITY COMPARISONS AS AN INDICATION OF THE
COMPETITIVENESS OF EXPORTS, AS EXEMPLIFIED BY THE COTTON TEXTILE
INDUSTRIES OF INDIA AND JAPAN IN 1951

I. SUMMARY

Following a comparison of wage costs per unit of output in the cotton textile industries of Japan, the United Kingdom, India, and the United States which was prepared in September 1954, an attempt has been made to determine, if only in a more limited case, to what extent wage costs per unit of output can be taken as a reliable indication of competitiveness in international markets.

The following enquiry relates to various aspects of costs of production in India and Japan in the year 1951 during which censuses of manufacturing were taken in these two countries.

The principal results are:

1. In comparison with Japan, the volume of cotton textile production in India was in 1951 about 50 per cent larger, while the number of employees (both wage earners and salaried personnel) was twice as large.

2. Hence, production per employee, or productivity, was in India only three-quarters (between 71 and 76 per cent) of what it was in Japan. Production per hour of work in India was even lower (perhaps 60 per cent of the Japanese level), since monthly hours of work are about 20 per cent higher than in Japan.

3. Annual wages and salaries per employee, on the other hand (taking into account wages paid in kind in both countries) were 5 per cent lower in India.

4. Therefore, labour costs per unit of output in India were about 30 per cent (between 24 and 34 per cent) higher than in Japan.

5. However, costs of production other than wage costs, and prices, both in the domestic market and for export, were substantially lower in India.

6. Among important cost items, the price paid for raw cotton and the rate of interest were lower in India, by about one-third and two-fifths respectively. Depreciation allowances were probably also lower.

7. As regards prices, the factory prices were in both countries substantially lower than the export unit values. In respect of cotton fabrics as a whole, the export value exceeded the factory price by more than 20 per cent in both countries.
8. Although quality differences preclude a comparison of export unit values for all fabrics taken together, it seems nevertheless to be legitimate to make a comparison limited to grey (unbleached) piece goods which in India account for half and in Japan for 30 per cent of the total volume of cotton fabrics exported. That comparison indicates that the Indian export price in 1951 was 30 per cent lower than the Japanese. While this discrepancy has declined significantly since 1951, through a fall in Japan's export price which was larger than the fall in India's export price, it still amounted in 1954 to 11 per cent in favour of the Indian product.

9. It therefore appears that comparisons not only of money wages but also of productivity and wage costs per unit are an insufficient basis for appraising the international competitiveness of a country's exports.

II. DISCUSSION OF RESULTS

The kind of comparison which has been summarized in the preceding section is necessarily fraught with difficulties, owing to the lack of comparability not only in the statistical data available, but also of the real conditions prevailing in different countries. Therefore, although every effort has been made to overcome the lack of comparability in the statistics (see below section III), the results are still subject to serious reservations - a point which requires emphasis at the outset of the following more detailed description of the findings reached.

Volume of Production

The great number of products made in the textile industry, and the resulting differences in the quality of output as a whole constitute a serious obstacle to any comparison of the total volume of production as between different countries. Since no real comparison could be drawn in terms of value only, an attempt has been made to arrive at estimates showing at least the relative order of magnitude of the output of the two industries. While the distinction between yarn and fabrics is certainly insufficient to take full account of differences in the quality of output in the two countries, the evidence presented later, especially in respect of the value per unit of output and of export prices tends to indicate that the differences in quality which have been neglected are not such as to affect seriously the validity of the comparison.
Table I

Production of Yarns and Tissues

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
<th>Ratio India</th>
<th>Japan (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton and spun rayon yarns (1000 t.)</td>
<td>429.1</td>
<td>517.6</td>
<td>n.a.</td>
<td>121</td>
</tr>
<tr>
<td>of which cotton yarns</td>
<td>345.8</td>
<td>n.a.</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>spun rayon yarn</td>
<td>83.3</td>
<td>n.a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton and spun rayon woven fabrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(excl. extra narrow fabrics)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>million square meters</td>
<td>1560</td>
<td>3285*</td>
<td>211</td>
<td></td>
</tr>
<tr>
<td>thousand tons</td>
<td>182-207*</td>
<td>373</td>
<td>180-205</td>
<td></td>
</tr>
<tr>
<td>Total volume of production</td>
<td></td>
<td></td>
<td></td>
<td>142-153</td>
</tr>
<tr>
<td>(Japan = 100)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Estimated

The total production of yarns was by about 20 per cent higher in India. However, of the total quantity of yarns produced in that country slightly more than one quarter was sold outside and the rest was used in the weaving industries; on the other hand, in Japan, more than half the output was sold to other industries. It is this difference in the disposal of yarn production which explains the much higher level of the production of woven fabrics (excluding extra narrow fabrics) in India which was roughly twice as high as in Japan.

The combined output ratio for both yarns and tissues, i.e. the total volume of production in both the spinning and the weaving branches was, according to the various estimates, by about 42 to 53 per cent higher in India.

Labour Force and Wages

According to the census data for 1951, the total number of employees in India was about twice as large as in Japan, while annual earnings per employee (including payments in kind which, for Japan, had to be estimated) were about 5 per cent lower. This difference in the annual earnings does not take any account of differences in the purchasing power of the two currencies. For the purpose of the present study, which deals with costs of production, and not with standards of living, the conversion of Indian rupees into Japanese yen has been made according to the official exchange rates (1 rupee = 75.13 yen).
### Table II

**Employment and Wages**

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of employees (1000)</td>
<td>327.4</td>
<td>656.3</td>
</tr>
<tr>
<td>Wages and salaries (million yen) - cash</td>
<td>28,362</td>
<td>64,424</td>
</tr>
<tr>
<td></td>
<td>in kind</td>
<td>5,670*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34,032</td>
</tr>
<tr>
<td>Annual earnings per employee (yen)</td>
<td>103,950</td>
<td>98,540</td>
</tr>
</tbody>
</table>

*Estimated - see below, section III

Further details on the structure of the labour force are given in the following Table III which has, as regards India, also been derived from the census of 1951, while for Japan additional sources had to be used.
### Table III

#### Labour Structure

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of employees</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>by sex and occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total employees</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Workers, men</td>
<td>15.6</td>
<td>86.7</td>
</tr>
<tr>
<td>women</td>
<td>77.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Clerical workers</td>
<td>6.7</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Average hours of work per month</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers, men</td>
<td>206</td>
<td>236</td>
</tr>
<tr>
<td>women</td>
<td>187</td>
<td>237</td>
</tr>
<tr>
<td><strong>Average monthly wages and salaries per employee</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cash, all employees</td>
<td>87.1</td>
<td>99.5</td>
</tr>
<tr>
<td>men</td>
<td>152.0</td>
<td>n.a.</td>
</tr>
<tr>
<td>women</td>
<td>64.5</td>
<td>n.a.</td>
</tr>
<tr>
<td>workers, men</td>
<td>74.9</td>
<td>95.9</td>
</tr>
<tr>
<td>women</td>
<td>215.0</td>
<td>195.9</td>
</tr>
<tr>
<td>clerical workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in kind, all employees</td>
<td>n.a.</td>
<td>0.5</td>
</tr>
<tr>
<td>workers</td>
<td>18.7</td>
<td>n.a.</td>
</tr>
</tbody>
</table>


**Sources:**
- Japan: number of employees: Census of Manufactures 1951, Vol.I, p.32
- Average hours of work: Yearbook of Labour Statistics and Research, 1951, p.92
- Wages and salaries: Statistical Yearbook 1952, p.284-6
- India: Report of the Sixth Census of Indian Manufactures 1951
The number of female workers was considerably higher in Japan, where it accounted for more than three-quarters of all employees, whereas in India women directly employed in production accounted for only 8 per cent. Furthermore, the average age of the Japanese female workers seems to be lower than in most other countries. But for the large proportion of young girls and the wide disparity between the wages paid to male and female workers, labour costs per unit of output in the Japanese cotton and spun rayon mills would have been much higher in relation to India. The high level of payments in kind in Japan is due to the accommodation and meals offered by the factories at production cost. About three-quarters of the women, and about half the men, working in the textile industry are housed by the factory.

Since average hours of work were by about one-fifth lower in Japan, the hourly earnings of the Japanese employees exceeded the Indian level by about 30 per cent.

**Productivity and Labour Cost per Unit of Output**

It has been shown in the preceding paragraph that the volume of production was about 42-53 per cent higher in India than in Japan. Given the number of employees - about twice as high in India - the production per employee appears to be by about 24-29 per cent lower in India than in Japan. Moreover, as the hours of work were by more than 20 per cent higher, the hourly output of the Indian workers may be roughly put at 40 per cent below the level in Japan. It is unfortunately impossible, without special knowledge of the real conditions of the industry in the two countries, to account for the low output per employee in India - the technological characteristics of the equipment, the quality of raw materials, and other factors may all contribute part of the explanation. But the fact remains that, in conjunction with a level of wages which per employee (though not per hour) was nearly the same as in Japan, the low productivity of Indian labour led to wage costs per unit of output, i.e., a level of efficiency wages, which stood significantly - between 24 and 34 per cent - higher than in Japan.

In spite of the higher level of wage costs per unit of output in India, the export prices (i.e., export unit values) of Indian grey (unbleached) piece goods were in 1951 substantially (by 30 per cent) lower than the comparable Japanese export prices. The contrast suggests that an appraisal of the relative competitiveness of exports from different countries must be based upon a comparison of costs of production as a whole, rather upon the ratios of labour productivity of efficiency wages.

---

1. There are no data available for the industry studied; in the ten largest Japanese cotton spinning factories, the average age of female workers was, in 1954, 21.6 years and the average years of service 4.7 years.

2. Part of the difference in wages paid to males and females is no doubt due to the larger share of payments in kind accruing to women workers.
Cost Structure

The difference in the level of Indian and Japanese export prices is confirmed by the fact that the 1951 average value per unit of output of the main products (i.e. omitting contract work, by-products, etc.) in India works out at about 75 per cent of the corresponding figure for Japan. In fact, while the volume of output was in India 42 to 53 per cent higher, the (gross) value of this output was only 12 per cent higher than in Japan — hence the average value per unit of output stood in India at 73-79 per cent (Japan = 100).

Table IV

Cotton and Spun Rayon Spinning and Weaving

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th></th>
<th>India</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'000 t.</td>
<td>thousand</td>
<td>'000 t.</td>
<td>thousand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>million</td>
<td></td>
<td>million</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yen</td>
<td></td>
<td>yen</td>
</tr>
<tr>
<td>Cotton and spun rayon yarns</td>
<td>429.1</td>
<td>235.6</td>
<td>517.8</td>
<td>64.3</td>
</tr>
<tr>
<td>- of which sold outside</td>
<td>229.0*</td>
<td>125.7*</td>
<td>139.3</td>
<td>64.3</td>
</tr>
<tr>
<td>- used in weaving</td>
<td>200.0</td>
<td>125.7</td>
<td>390.8a</td>
<td>64.3</td>
</tr>
<tr>
<td>Broad woven fabrics</td>
<td>195.0*</td>
<td>158.6</td>
<td>250.1</td>
<td>12.0</td>
</tr>
<tr>
<td>Other products</td>
<td>6.3</td>
<td></td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Total main products</td>
<td>290.6*</td>
<td></td>
<td>326.4</td>
<td></td>
</tr>
<tr>
<td>By-products, waste, etc.</td>
<td>5.8</td>
<td></td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>Work done for customers</td>
<td>17.0</td>
<td></td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Gross value of production</td>
<td>313.2</td>
<td></td>
<td>333.6</td>
<td></td>
</tr>
<tr>
<td>Cost of basic materials</td>
<td>182.2*</td>
<td></td>
<td>211.7</td>
<td></td>
</tr>
<tr>
<td>Fuel, energy, etc.</td>
<td>5.3</td>
<td></td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>Contract work done by other industries</td>
<td>9.7</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total of costs listed</td>
<td>197.4*</td>
<td></td>
<td>222.4</td>
<td></td>
</tr>
<tr>
<td>Value added</td>
<td>116.2</td>
<td></td>
<td>111.2</td>
<td></td>
</tr>
<tr>
<td>of which wages and salaries</td>
<td>34.0</td>
<td>64.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Estimated; for further detail see section III.

aIncluding yarns purchased outside the industry.

1It should be noted that the relative average value level was fairly similar for yarns and fabrics - 79 per cent for the former and 75-88 per cent for
The major components of the gross value of production and of costs are shown in Table IV. As regards the former, the only aspect which needs to be mentioned is the relatively high contribution of contract work done for other industries in Japan - which has its counterpart, on the cost side, in a relatively high outlay for contract work supplied by other industries.

As regards the general cost structure, two major features stand out: on the one hand, the outlay for raw materials per unit of output, and on the other, the share of elements other than wages in the value added, are both much larger in Japan than in India.

The difference in the cost of raw materials is primarily a matter of price. Whereas Japan has to import cotton from foreign countries at world prices, the Indian textile industry takes a great part of raw cotton from the domestic market and imports only long and medium staple fibres. As the Indian Government introduced, after the war, an export tax on cotton, the price of this commodity has been kept low in the domestic market.

During the year 1951 (more specifically from November 1950 to March 1952), the export tax amounted to 21.3 $/lb. - roughly equal to the domestic wholesale price of Indian cotton.

The following Table V assembles the various items of information available in respect of the prices of raw materials in the two countries. While the import unit values of raw cotton are quite similar, there is in India a very large discrepancy between the average import value and the domestic price of the domestic product. Since the latter accounts for nearly two-thirds of total mill consumption, the resulting average price of raw cotton delivered at the factory is much closer to the domestic wholesale price than to the average import unit value.

The average delivered price of raw cotton is in turn very close to the average cost of all raw fibres consumed. The latter include in India a small amount of other fibres, while in Japan rayon staple fibre is important. However, the difference in Japan between the import unit value of raw cotton and the average value of all fibres consumed by cotton mills seems to be mainly a delayed effect of the much lower prices of domestic rayon staple fibre and especially of import raw cotton during the preceding year.

The high value of contract work among both the receipts and the costs is no doubt due to the relatively limited coverage of the two industrial branches included in Japan, whereas the Indian definition is more comprehensive.

The Bombay wholesale prices of two leading qualities - Jarilla Fine M.G.F. and Bengal Fine - in 1951 were 20.8 and 16.8 $/lb., respectively.
### Table V

**Prices of Basic Raw Materials, 1951**

(yen/kg)

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import unit value (c.i.f.) of raw cotton</td>
<td>440</td>
<td>447*</td>
</tr>
<tr>
<td>Domestic wholesale price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jarilla fine M.G.F.</td>
<td>-</td>
<td>166</td>
</tr>
<tr>
<td>Average price of raw cotton delivered at factory</td>
<td>-</td>
<td>290</td>
</tr>
<tr>
<td>Average cost of all raw fibres consumed</td>
<td>385**</td>
<td>300</td>
</tr>
</tbody>
</table>

*Not including import duty of 21.8 yen/kg. There was no duty in Japan.

**Estimated.**

On the other hand, the raw fibre consumption per kg. of yarn produced was higher in India:

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cotton and spun rayon yarn produced (1’000 t.)</td>
<td>429.1</td>
<td>517.8</td>
</tr>
<tr>
<td>b) Raw fibres consumed (1’000 t.)</td>
<td>459.0*</td>
<td>600.6</td>
</tr>
<tr>
<td>Consumption of raw fibres (in tons) per ton of yarn</td>
<td>1.07</td>
<td>1.16</td>
</tr>
</tbody>
</table>

*Estimated.

A situation perhaps to be explained by the inferior quality of the Indian fibres. Should that be so, the price advantage enjoyed by the Indian industry would be somewhat less than appears from Table V.\(^1\) If other supplies (e.g. dyestuffs and other chemicals) are taken into consideration, the results remain unaffected.

On the other hand, the outlay for fuels and energy was by 68 per cent higher in India, a figure significantly exceeding the ratio of production volumes. In this connexion, it would be interesting to know the volume of fuel and energy consumed in the two industries. In the absence of such data for Japan, the value of fuels consumed together with the relative prices of fuels in the two countries will give at least a rough idea on this matter.

\(^1\)Nevertheless, if the whole difference is attributed to this factor, the cost of raw fibres per kg. of yarn produced would still be by about 17 per cent lower in India.
Value of fuels and energy consumed  
(billion yen)  

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of fuels and energy consumed</td>
<td>5.3</td>
<td>8.9</td>
</tr>
<tr>
<td>Prices*:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>coal (yen/t)</td>
<td>2960</td>
<td>2329</td>
</tr>
<tr>
<td>fuel oil (yen/t)</td>
<td>11219</td>
<td>8828</td>
</tr>
<tr>
<td>electricity (yen/KWH)</td>
<td>1.80</td>
<td>3.09</td>
</tr>
</tbody>
</table>

*Wholesale prices for Japan and prices at factory for India.

Weighted by the value proportions, which are essentially the same in the two countries, the combined price ratio for the three energy sources would be 117. This would indicate that the volume of fuels and energy per unit of output was about the same in the two countries.

The difference between the two countries in respect of value added other than wages and salaries is very large.

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th></th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value added</td>
<td>116,200</td>
<td>111,200</td>
<td>95.7</td>
</tr>
<tr>
<td>Total wages and salaries</td>
<td>34,034</td>
<td>64,671</td>
<td>190.0</td>
</tr>
<tr>
<td>Ratio</td>
<td>29.3%</td>
<td>58.2%</td>
<td></td>
</tr>
</tbody>
</table>

Of the many items which enter value added in addition to payments for labour services (depreciation, profits, interest charges, taxes, and miscellaneous expenses other than raw materials and fuels) little is known except that the rates of interest charged in Japan are nearly twice as high as in India. It may perhaps also be assumed that depreciation charges are relatively heavier in Japan.

Costs and Export Prices

The following table sums up the foregoing discussion of the cost structure in Japan and India.

1The official discount rates in the two countries were 5.84 and 3.50 per cent, in Japan and India respectively. It may also be mentioned that the Japanese market discount rate in 1951 stood at 9.49 per cent.
Comparison of the Cost Structure of Cotton Textile Production in Japan and India, 1951

(Gross value of production per unit of output in Japan = 100)

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross value of production</td>
<td>100</td>
<td>72</td>
<td>-28</td>
</tr>
<tr>
<td>of which main products</td>
<td>(93)</td>
<td>(71)</td>
<td>(-22)</td>
</tr>
<tr>
<td>Labour costs</td>
<td>11</td>
<td>14</td>
<td>+3</td>
</tr>
<tr>
<td>Basic raw materials</td>
<td>58</td>
<td>46</td>
<td>-12</td>
</tr>
<tr>
<td>Fuel and energy</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Other expenses and profits</td>
<td>29</td>
<td>10</td>
<td>-19</td>
</tr>
</tbody>
</table>

It appears that the higher labour costs in India (which are due mainly to low productivity in that country) play only a very minor part among costs of production. The effect of these higher efficiency wages upon the unit value of production is far outweighed by lower raw material costs and other expenses (including profits - the share of which is however unknown), with the result that the general price level of output is 28 per cent lower in India than in Japan.

This discrepancy in the average price level of production in the two countries is well confirmed by the difference in their export prices for grey piece goods which are in both countries an important export commodity of probably very similar quality. In 1951, the Indian export price for such goods was 30 per cent lower than the Japanese. While this discrepancy has declined significantly since 1951, through a fall in Japan's export price which was larger than the fall in India's export price, it still amounted in 1954 to 11 per cent in favour of the Indian product. The following table shows the course of export prices for various types of piece goods (including bleached and coloured etc.) where qualities may, of course, be substantially at variance as between the two countries.
### Table VII

**Export Unit Values for Cotton Piece Goods, 1951-1954**

(yen per square yard in Japan, and per current yard in India)¹

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>India</th>
<th>Ratio (India per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piece goods, grey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>94</td>
<td>66</td>
<td>70</td>
</tr>
<tr>
<td>1952</td>
<td>88</td>
<td>68</td>
<td>77</td>
</tr>
<tr>
<td>1953</td>
<td>54</td>
<td>50</td>
<td>93</td>
</tr>
<tr>
<td>1954</td>
<td>54</td>
<td>48</td>
<td>89</td>
</tr>
<tr>
<td>Do bleached</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1951</td>
<td>94</td>
<td>78</td>
<td>83</td>
</tr>
<tr>
<td>1952</td>
<td>73</td>
<td>74</td>
<td>101</td>
</tr>
<tr>
<td>1953</td>
<td>68</td>
<td>58</td>
<td>85</td>
</tr>
<tr>
<td>1954</td>
<td>69</td>
<td>55</td>
<td>80</td>
</tr>
<tr>
<td>Do coloured,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>118</td>
<td>84</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>1951</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>93</td>
<td>85</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>1952</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>79</td>
<td>70</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>1953</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>81</td>
<td>65</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>1954</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: National trade returns

¹It is the accepted practice in India to assume that the average width of piece goods exported is one yard.

### III. METHOD OF CALCULATION

**Sources**

**Japan:** Census of Manufactures 1951, volume 1, gives data on industries classified according to the Standard Industrial Classification for Japan, mainly number of employees, salaries and wages paid in cash, value of shipments, various costs and value added by manufacturing. Volume 2 relates to statistics of products made tabulated by items of products regardless of the industrial classification into which the reporting establishments have been classified. Both volumes 1 and 2 refer to establishments of four and more employees.

Data on wages paid in kind have been taken from Japan, Wirtschaft und Wettbewerb (Forschungstelle für allgemeine und textile Marktwirtschaft an der Universität Münster) and relate to wages in kind of textile workers in the period January–March 1952. They agree fairly well with figures for non-legal welfare expenses in cotton spinning in December 1953 shown in Cotton Industrial Wages in Japan (Institute for Economic Research, Osaka).
Statistics on the average hours of work, wages and salaries by sex and occupation come from the Japanese Yearbook of Labour Statistics and Research, 1951, and Statistical Yearbook 1952. Both refer to industrial sectors slightly larger than those selected from the census.

India: Report of the Sixth Census of Indian Manufactures, 1951 gives data similar to those available for Japan, all uniformly relating to cotton spinning and weaving. This report covers 93 per cent of factories employing twenty or more workers and using power in the manufacturing process.

Industries Selected

After careful examination, the conclusion was reached that the comparison had to be limited to cotton spinning and weaving. Thus, for Japan, the following industries have been taken:

**Indl. Classification**

2221 Cotton and rayon staple spinning mills
2231 Broad-woven cotton and spun rayon fabric mills

with the corresponding products:

B-2 : 91 cotton yarn (pure)
92 cotton mixing yarn
93 spun rayon yarn (pure)
94 spun rayon mixing yarn

B-3 : 126 cotton broad fabrics
127 cotton narrow fabrics
128 spun rayon broad fabrics
129 spun rayon narrow fabrics

and for India:

cotton textiles - spinning and weaving (chapter XX of the Census Report).

It should be noted that India does not produce any significant quantities of yarn and woven fabrics of spun rayon which are often produced in the cotton spinning and weaving mills. In Japan spun rayon accounts for about 19 and 16 per cent of the total quantity and value of cotton and spun rayon yarns produced.

**Estimates of the Volume of Production** (Table I)

The estimation of the volume of production has met with serious difficulties as regard woven goods, because of different systems of measurements used in the two countries. The Japanese products are given in square metres (or tans²), whereas the Indian goods are reported both in

\[ 1 \text{ tan} = 4.65 \text{ m}^2 \] (equivalent supplied by the Japanese delegation to the GATT).

\[ 2 \text{ over 12 inches in width} \]
current yards and lbs. In view of the difficulties encountered in the establishment of reliable equivalents between the length, surface and weight units, the comparison has been conducted both in square metres and in tons. In the first case the width of Indian woven goods has been estimated for the various kinds of tissues, in the second the weight per square metre has been based on the Japanese export returns where, for a number of items, quantities are shown both in surface and weight units. However, in view of the fact that the quality of Japanese woven goods might differ considerably in respect of goods produced for domestic and foreign markets, a range rather than a single conversion factor has been adopted.

As a result of applying these various conversion factors to the original census data, two totals (one in weight, the other in surface units) have been arrived at in each country for the output of woven goods.

On the other hand, the volume of yarns could be compared directly as both countries report this production in weight.

The total output of yarns and fabrics, respectively, was in each country obtained in units of weight (or surface), without allowance for differences in value of the various kinds, because it would have been impossible to match the classifications used in the two countries. The total volume of production was then computed from the total yarn production and the total production of fabrics in the two countries, by weighting the ratios of production in the spinning and weaving branch, respectively, in proportion with the value added by each branch in Japan.

In conclusion, two somewhat different results have been obtained: one resulting from the surface estimate of the Indian broad woven fabrics, the other from the weight estimates of Japanese woven goods. The results do not seem to be incompatible as the goods produced in the two countries are not identical and the ratio between surface and weight of a tissue is not necessarily the same. It should be borne in mind that this comparison does not take account of possible difference in quality both of yarns and tissues produced in the two countries.

Value of Production, Cost of Materials, Value Added (Table IV)

The value of production has been taken directly from the census statistics. However, these statistics differ as between India and Japan in one important respect. In India, the cotton textile industry includes

1It has not been possible to make the same calculation by using the Indian weights since the value added is not given separately for the two branches in the Indian census.

2The Indian figures in rupees have been converted into yen at the rate: 1 rupee = 75.13 yen.
both spinning and weaving, and therefore only yarn sold outside the industry appears in the value of production. In Japan, the spinning and weaving branches are considered as two separate industries, and the value of yarn used in the weaving branch had to be deducted from the value of yarns produced.

In the absence of detailed statistics in the Japanese census on materials consumed in each industry, the estimates of the volume and value of yarns consumed in weaving have been based on the actual volume of production of woven goods (with an allowance for loss in manufacturing) and on the average value of yarn produced.

One other aspect of the census data available must be mentioned. In India, certain products other than yarns and fabrics (e.g. blankets, towels, netting) and by-products (waste materials and rags) account for about 2 per cent of the gross value of output. In Japan, the value of yarns and woven goods taken from the census volume 2 relates to goods produced in the course of the year; the difference between these figures and those relating to the value of shipments of the respective industries (shown in the volume 1) includes both other goods produced by the industry and variations in stocks which, unfortunately, could not be excluded. In Table III, this difference (which accounts for about 2 per cent of the gross value of output) is shown separately as "other products".

In order to make the value added by manufacturing comparable in the two countries, depreciation allowances have been added back to the Indian census figures.

Number of Employees, Hours of Work, Wages and Salaries

In the Japanese census statistics, there are no detailed data on labour conditions such as hours of work and salaries and wages by sex and occupation. The data shown in Table II and in Table III do not uniformly relate to the same industries and are therefore not strictly comparable.

The former table which gives the total number of employees and wages and salaries is based on the census data, plus an allowance, in the case of Japan, for wages paid in kind. Payments in kind to clerical workers are not included, but this omission is unlikely to affect the results significantly.

The sources from which Table III has been compiled and the scope of the figures shown are indicated in the footnotes. In this connexion, it must be mentioned that serious discrepancies exist between the average cash payments to all employees in spinning and weaving as shown in the Statistical Yearbook and those relating to cotton and spun rayon yarns and woven goods industries as reported in the census statistics.
GATT - ILO STUDY ON PROBLEMS OF MARKET DISRUPTION

QUESTIONNAIRE No. I

DATA REQUIRED FOR INTERNATIONAL COMPARISONS OF THE LEVEL AND STRUCTURE OF COSTS OF PRODUCTION IN THE TEXTILE AND CLOTHING INDUSTRIES

A. INTRODUCTORY REMARKS

The definitions of the seven principal sectors to be studied are shown on the following pages. The textile materials used and the products made, which should be individually reported for each sector, are also listed.

Enterprises engaged in activities classified in more than one sector, for which the various input and output elements could not be properly allocated by sectors, should be reported in the sector of their principal activity. However, output of their departments which in fact belong to but cannot be included in the other sectors should be reported under "other products" (in value only if of minor importance, and in full commodity breakdown in quantities and values if more important); in addition, estimates of the value added and of the principal input elements related to these activities should also be supplied.

The data on output should indicate both the quantity and the value of sales adjusted if possible for variations in stocks. Sales of waste materials should be included in this total and, wherever important, reported separately. In addition, any important repairs or new installations undertaken by the enterprise itself and done by its regular employees should be reported (at cost value) under "other products".

On the input side total purchases of raw materials and intermediary products adjusted if possible for variations in stocks should be reported.

In all cases both output and input should be reported on a sector basis. Therefore, a product listed as typical for one sector but made by an establishment classified in another sector should be shown (in detail if important) under "other products" of the sector to which the establishment was allocated.

The data should be taken from the latest available census if possible. If other sources are used, please indicate year, nature and coverage of these sources. Indications of any other relevant sources would be greatly welcomed.

Should it not be possible to obtain certain data, such as indications concerning quality of products made and materials used, from sources covering a whole sector, data relating to part of the sector would also be valuable. However, in all such cases the coverage and the source and nature of such data should be specified.

Spec(60)403
B. Data on output and materials in each sector

(i) COTTON SPINNING AND WEAVING

including the following processes: preparation of fibres for spinning (e.g. ginning, carding, combing), spinning, throwing, twisting, winding, plying or spooling of spun yarns, manufacture of tyre cord or tyre cord fabrics, and weaving fabrics, other than narrow fabrics, from grey, bleached or other yarns of cotton or cotton mixed with other fibres.

Principal products made for sale

Shipments or production for sale of the following products made in the sector should be individually reported both in quantities (yarns by weight and fabrics by both weight and surface) and values

- weaving yarns of cotton, grey, distinguishing coarse, medium and fine yarns according to count, (e.g.: up to 15's, over 15's to 40's, and over 40's British counts)
- knitting yarns of cotton, grey, distinguishing at least three categories according to count
- yarns of cotton waste, grey, incl. mixtures of cotton and cotton waste
- finished thread of cotton, grey
- yarns of cotton mixed with synthetic or artificial fibres, distinguishing several categories according to count and type of fibres used
- cotton tyre cord and tyre fabrics, grey
- cotton broad-woven fabrics, grey: duck and allied fabrics, sheeting and allied coarse yarn fabrics, sheeting and allied medium yarn fabrics, towellings, cleaning cloth, dish cloth, napped fabrics, blankets and blanketing, poplins, drills and jeans, satins, gabardines, velvet and velveteens, furnishing fabrics distinguishing light from medium and heavy fabrics, industrial cloth, cloth for surgical dressings, bandages, gauze, scrim etc., other fabrics

---

1 Average quality - in terms of count - should be indicated for each of the three categories and, if not available, at least an estimate of the overall average count of all yarns produced (whether for sale or for consumption within the same enterprise) should be supplied. This information is needed not only as an indication of quality of the yarns sold but also for an evaluation of the quality of fabrics produced therefrom.

2 The quality of yarn used should be indicated in terms of count; the most suitable limit would be up to 15's for the coarse type and over 15's for the medium yarn fabrics.

3 In case shipments are reported, please indicate also changes in stocks for the whole output (value only).
cotton broad fabrics woven from bleached, dyed or other processed yarns:
towollings, turkish and terry-woven
gabardines
jacquard
other
other products (incl. waste)
work done on commission (value only)

Note: Fabrics of cotton mixed with other fibres wherever important should be reported separately according to category of tissue (as above) and components of the mixture.

Yarns produced and consumed in the same enterprise
In addition to yarns made for sale outside the enterprise output (quantities only) of yarns produced in the spinning section and used in other sections of the same enterprise should be reported in the same categories and with the same quality specifications as yarns produced for sale.

Purchases of textile fibres and intermediate products (quantities and values) if possible adjusted for changes in stocks

Fibres - cotton raw - short staple
- long staple
- cotton carded or combed
- cotton waste
- rayon or acetate staple fibre distinguishing several categories
- nylon and other synthetic staple fibres indicating average quality
- other textile fibres

Yarns - cotton yarns, grey the same types and quality
- yarns, cotton mixed with other specifications as on the output fibres side should be distinguished
- rayon or acetate filament yarns
- other yarns
- cotton yarns, bleached or dyed
- other yarns, bleached or dyed

Other textile intermediate products (value only)

1 Should it not be possible to adjust the individual items, please indicate total changes in stocks of textile materials and intermediate products (value only).
(i) WOOLLEN AND WORSTED

including the following processes: preparation of virgin wool and fine animal hair for spinning (e.g. sorting, blending, scouring, carbonizing, combing), spinning, twisting, winding or spooling yarn on the woollen or worsted system and weaving woollen and worsted fabrics.

Principal products made for sale

Shipments or production for sale of the following products made in the sector should be individually reported both in quantities (yarns by weight and fabrics by both weight and surface) and values

- tops of wool, merino
  - other
  - of fine animal hair (alpaca, mohair, cashmere etc.)
- noils of wool
  - of fine animal hair
- other tops and noils
- yarns, other than for carpets and rugs, woollen - all wool
  - wool mixed with other fibres
  - worsted - all wool
  - wool mixed with other fibres
  - of fine animal hair
- yarns for carpets and rugs - all wool
  - wool mixed with other fibres
- other yarns spun on woollen or worsted system
- woollen and worsted fabrics wholly or mainly of fine animal hair
- wire-loom and pile fabrics
- other woollen apparel fabrics
  - all wool, distinguishing at least four categories according to weight per unit of surface (e.g. 16 oz. and over to the square yard, 12 and under 16 oz., 8 and under 12 oz., and under 8 oz. to the square yard)
  - of wool mixed with other fibres
  (distinguishing the same categories as above)
- other worsted apparel fabrics
  - all wool (distinguishing the same categories as above)
  - of wool mixed with other fibres
  (distinguishing the same categories as above)
- furnishing fabrics, other than wire-loom and pile fabrics
  - all wool
  - wool mixed with other fibres

In case shipments are reported, please indicate also changes in stocks for the whole output (value only).
- other fabrics
- woven piece goods
  - blankets
  - shawls, wrappers, etc.
- woven wool felt
- other products (including waste)
- work done on commission (value only)

**Yarns produced and consumed in the same enterprise**

In addition to yarns made for sale outside the enterprise, output (quantities only) of yarns produced in the spinning section and used in other sections of the same enterprise should be reported in the same categories as yarns produced for sale.

**Purchases of textile fibres and intermediate products (quantities and values)**

*If possible adjusted for changes in stocks*

**Fibres** - virgin wool greasy, merino, 60's and above
  - other, above 50's to 58's
  - other, 50's and less
  - wool, scoured, carbonized or sliped, merino, 60's and above
    - other, above 50's to 58's, 50's and less
  - mohair, alpaca and other fine animal hair
  - other fibres (in detail wherever important)

**Noils or tops** - noils of wool
  - of fine animal hair
    - tops, wool merino 60's and above
    - other wool, above 50's to 58's
    - other wool, 50's and less
    - fine animal hair

**Yarns** - woollen, other than for carpets
  - worsted, other than for carpets
  - carpet yarns
  - spun and filament yarns of artificial fibres (rayon etc.)
  - other yarns

**Other textile intermediate products (value only)**

---

1. Should it not be possible to adjust the individual items, please indicate total changes in stocks of textile materials and intermediate products (value only).
(iii) **ARTIFICIAL AND SYNTHETIC FIBRES AND SILK**

including the following processes: throwing and spinning silk, rayon, nylon and other synthetic fibres and manufacturing thread of these fibres, and weaving fabrics of over 12" in width of silk, synthetic or artificial fibres. However, mills spinning yarns on cotton system might be included under cotton and mills working on woollen or worsted systems might be classified under woollen and worsted. Consequently mills weaving spun yarns might be classified under cotton or woollen and worsted respectively.

**Principal products made for sale**

Shipments or production for sale of the following products made in the sector should be individually reported both in quantities (yarns by weight and fabrics by both weight and surface) and values:

- spun or thrown silk yarn
- spun yarn all rayon and/or acetate distinguishing several categories or indicating average quality in terms of denier
  - rayon and/or acetate mixed with cotton
  - wool
- spun yarn all nylon or other synthetic fibre distinguishing several categories or indicating average quality in terms of denier
- other spun yarns
- thrown filament weaving yarn of rayon and/or acetate distinguishing several categories of synthetic fibres or indicating average quality in terms of denier
- other thrown yarns
- finished thread of rayon or acetate of other fibres
- tyre cord and fabrics: synthetic fibres predominant
  - artificial (rayon) fibres predominant
- broad-woven fabrics: silk fabrics — wholly of silk
  - of silk mixed with other fibres
  - nylon and/or other synthetic fibres distinguishing if wholly synthetic fibres possible spun yarn from filament fabrics
  - mixtures with other fibres
  - colored yarns
  - pile, upholstery and tie fabrics wholly or partly of rayon and/or acetate
  - filament rayon and/or acetate fabrics: taffetas
    - twills and serges
    - sateens
    - other flat fabrics
- spun rayon and/or acetate fabrics: twills
  - shirtings, poplins and linen type
  - other
- filament and/or spun rayon or acetate fabrics woven from colored yarns
- mixtures of rayon and/or acetate other than pile etc. fabrics (artificial fibre predominant) with wool
  - cotton
  - other fibres
- other products (incl. waste)
- work done on commission (value only)

In case shipments are reported, please indicate also changes in stocks for the whole output (value only).
Yarn produced and consumed in the same enterprise

In addition to yarns made for sale outside the enterprise output (quantities only) of yarns produced in the spinning section and used in other sections of the same enterprise should be reported in the same categories and with the same quality specifications as yarns produced for sale.

Purchases of textile fibres and intermediate products (quantities and values) if possible adjusted for changes in stocks:

Fibres
- silk (cocoons, hanks, skeins, and cocoon and thread wastes)
- acetate staple fibre
- viscose staple fibre
- acetate filament
- viscose filament
- nylon or other synthetic fibres, staple fibre
- nylon or other synthetic fibres, filament
- cotton
- wool
- other textile fibres

Yarns
- silk
- cotton
- synthetic (nylon etc.)
- artificial (rayon etc.)
- other, not bleached or dyed
- bleached or dyed yarns

Other textile intermediate products (value only)

1 Should it not be possible to adjust the individual items, please indicate total changes in stocks of textile materials and intermediate products (value only).
(iv) **TEXTILE FINISHING**

including the following processes: bleaching and dyeing of raw fibres, bleaching, dyeing, and finishing of yarns, bleaching, dyeing, printing, finishing, shrinking, proofing, crease resisting, burling, and mending of woven fabrics, and other bleaching, dyeing, and finishing, and converting cloth to the finished state.

A particular difficulty arises with finishing of textiles, on account of the fact that in some countries it is integrated with spinning and weaving operations, while in others it is partly independent, and only in a few cases is it an entirely independent line of activity working mainly on commission. In these conditions, it will be necessary to obtain data for the textile finishing sector, at least partly, separately from spinning and weaving. The main requirement would be that the total value added by textile finishing, as well as the quantities of the textiles treated, should be known, with an indication as to whether, and to what extent, it is already contained in each of the three spinning and weaving sectors, i.e. (i) cotton spinning and weaving, (ii) woollen and worsted, and (iii) artificial and synthetic fibres and silk.

The production data should indicate the value added by finishing and the quantities of textiles treated, distinguishing within each product class (i) cotton, (ii) woollen, (iii) worsted, (iv) synthetic and artificial fibres, in the following commodity detail:

- bleaching yarns (quantities in weight units)
  - fabrics " " " "
- dyeing yarns " " " "
  - fabrics " " " "
- bleaching and/or dyeing raw fibres " " " "
- printing fabrics (quantities in length or surface units)
- finishing yarns (mercerising or other finishing) (quantities in weight units)
  - fabrics (quantities in length or surface units)
- other finishing

1 For finishing establishments integrated with spinning and weaving mills, value added by finishing should be reported separately from value added by spinning and weaving. For independent establishments working on commission, the amount charged for finishing may be reported instead.
(v) **HOSETRY AND OTHER KNITTED GOODS**

including the following processes: knitting fabrics, hosiery, outerwear, underwear and other knitwear; included is the bleaching, dyeing and finishing of knitted products; the manufacture of garments in knitting mills is included but the making-up of garments from knitted fabrics bought outside the establishment is classified in wearing apparel.

**Principal products made for sale**

Shipments or production for sale of the following products made in the sector should be individually reported both in quantities (numbers and weight) and values.

- hosiery: men's half-hose and socks
  - women's full length stockings - full fashioned - nylon
  - other yarns & mixtures
  - seamless - nylon
  - other yarns and mixtures

- children's and infants' socks, three-quarters-hose and stockings

- warp knitted fabrics
- knit underwear - men's, cotton
  - wool or wool mixed with other fibres
  - women's, nylon and other synthetic fibres
  - rayon and/or acetate
  - other
  - children's, cotton
    - wool
    - other fibres

- knitted, netted etc., shirts and nightwear - children's and infants
  - other

- outer garments, knitted, netted etc. - jumpers, pullovers, cardigans - for children
  - other
  - women's dresses and shirts
  - costumes and two or three-piece suits
  - infants outerwear
  - other garments

- gloves, mittens and linings, knitted, netted or crocheted to shape in the piece
- work done on commission (value only)
- other products

**Purchase of textile materials (quantities and values) if possible adjusted for changes in stocks**

- cotton yarns
- rayon and acetate yarns
- nylon and other synthetic fibre yarns
- wool yarns
- other yarns
- narrow fabrics
- other textile materials

In respect of yarns, several categories, according to quality, should be reported or an indication of the average quality (count, denier, etc.) of the yarns used should be supplied; furthermore mixed yarns should, as far as possible, be separately reported according to the fibres contained. Should it not be possible to distinguish the various yarns on the input side, the output of the various knitted fabrics as listed above should be further subdivided according to material used in their fabrication.
Should some of the enterprise classified in this sector be also engaged in spinning, the yarns produced in the spinning section and used in other sections of the same enterprise should be reported (in quantities) with full quality specifications.

1. At least two categories should be distinguished according to denier.
2. In case shipments are reported, please indicate also changes in stocks for the whole output (values only).
3. Should it not be possible to adjust the individual items, please indicate total changes in stocks of textile materials and intermediate products (value only).
(vi) WEARING APPAREL (EXCEPT FOOTWEAR, LEATHER, AND FURS)

(Manufacture of wearing apparel by cutting and sewing textile fabrics)

Principal products made for sale

Shipments or production for sale of the following products made in the sector should be individually reported both in quantities (numbers and weight) and values.

(a) Wholesale tailoring and proofed garments

- raincoats and other waterproofed outer garments
- men's and boys' tailored outerwear - overcoats
  - suits
  - jackets
  - trousers
- women's and girls' tailored outerwear - overcoats
  - costumes
  - skirts
  - other

(b) Wholesale dressmaking

- dresses
- blouses, jumpers, dress skirts, dressing gowns etc.

(c) Men's and boys' shirts, underwear, and nightwear

- shirts
- pyjamas
- other underwear

(d) Lingerie and infants' wear

- corsets and brassieres
- women's and girls' nightwear and other underwear
- infants' outerwear
- infants' underwear

(e) Other garments n.e.s. (excluding millinery, leather, and furs)

- industrial overalls
- bathing costumes and slips
- scarves and neckties
- handkerchiefs

Other products

Work done on commission (value only)
Purchase of textile materials (quantities and values) if possible adjusted for changes in stocks

- linings
- woven piece goods
  - wholly or mainly of wool or fine animal hair
  - wholly or mainly of cotton
  - wholly or mainly of synthetic fibres (nylon etc.)
  - wholly or mainly of artificial fibres (rayon etc.)
    - continuous filament
    - wholly or partly spun yarn
  - other cloth (silk, linen, etc.)
- knitted fabrics, wholly or mainly of wool
  - wholly or mainly of cotton
  - wholly or mainly of synthetic fibres
  - wholly or mainly of artificial fibres

1 For the purpose of arriving at comparisons which would, as far as possible, take account of quality, not only of the materials used, but also of work done in the clothing sector, it would be highly desirable to obtain also the value added as well as labour input (hours worked and hourly earnings) in some detail. This information would be most useful if it could be supplied for each of the sections (a) to (e). If not available in detail, data on these points relating to the apparel sector as a whole should be furnished.

2 Retail bespoke tailoring and retail bespoke dressmaking should be excluded throughout from this investigation.

3 Should a substantial part of work be performed on commission basis, quantities of the various clothing made on commission should be reported, in addition to the amount charged.

4 In case shipments are reported, please indicate also changes in stocks for the whole output (value only).

5 Should it not be possible to adjust the individual items, please indicate total changes in stocks of textile materials and intermediate products (value only).
including the following processes: sorting and spinning of jute or sisal and weaving and finishing of jute or sisal fabrics; weaving of carpets and rugs, making-up canvass goods, and manufacture of sacks and bags of jute or sisal.

Principal products made for sale
Shipments or production for sale of the following products made in the sector should be individually reported both in quantities (yarns by weight and fabrics by both weight and surface) and values.

- yarn and twist distinguishing fine and coarse grades
- woven cloth - canvass
  - sacking
  - bagging for baling cotton
- jute webbing
- hessian bags
- sacking bags
- tarpaulin and other canvass goods
- carpets and carpeting, floor rugs, mats and matting
- work done on commission (value only)
- other products

Purchases of textile fibres and intermediate products (quantities and values) if possible adjusted for changes in stocks

- jute
- kenaf (mesta), roselle, urena lobata (Congo jute), phormium tenax and other natural jute substitutes
- sisal
- other fibres, raw
- jute yarn and twist - fine
  - coarse
- other yarns

1 In case shipments are reported, please indicate also changes in stocks for the whole output (value only).

2 Should it not be possible to adjust the individual items, please indicate total changes in stocks of textile materials and intermediate products (value only).
C. DATA ON INPUT REQUIRED FOR EACH OF THE SEVEN SECTORS

(i.e. separately for (i) Cotton spinning and weaving, (ii) Woollen and worsted, (iii) Artificial and synthetic fibres and silk, (iv) Textile finishing, (v) Hosiery and other knitted goods, (vi) Wearing apparel (except footwear, leather, and furs), (vii) Jute and sisal (including canvass and sacks))

A) Employment and wages

(a) Average number of operatives distinguishing men, women and juveniles
(b) Average number of other employees
(c) For operatives, average hours worked
(d) For operatives and other employees, separately:
   - cash wages or salaries
   - other labour cost such as social insurance and other
     legal or non-obligatory welfare expenses, wages in kind,
     bonuses and other gratifications

B) Purchases of materials and intermediate products, other than textiles, (adjusted if possible for variations in stocks)

(a) Energy (quantities and values) - electric energy
   - fuels
(b) Chemicals, lubricating oils and other materials, showing individual
    data for the most important items (quantities and values)
(c) Work done on commission by other enterprises (value only)

C) Other production costs (values)

(a) Maintenance of - buildings
   - machinery and other equipment
(b) Depreciation of - buildings
   - machinery, tools and other equipment

1 If hours worked are significantly different for men, women and juveniles, please show separately.
2 Please indicate whether adjusted or not.
3 It is indispensable to obtain a detailed description of the method of estimation of the depreciation charges.
4 Please specify which of these items are included.
D. GENERAL DATA ON THE INDUSTRY

Please report separately on each of the seven sectors i.e. (i) Cotton spinning and weaving, (ii) Woollen and worsted, (iii) Artificial and synthetic fibres and silk, (iv) Textile finishing, (v) Hosiery and other knitted goods, (vi) Wearing apparel (except footwear, leather, and furs), (vii) Jute and sisal (including canvass and sacks).

A) Size of establishments

- number of establishments classified into several classes according to average number of persons engaged e.g. up to 20, 20 to 49, 50 to 249, 250 to 999, 1000 and more persons engaged; in addition to the number of establishments so classified, indicate wherever available for each such class of establishments number of persons engaged and total value of shipments

and/or

- number of establishments classified into several classes according to value of shipments (or value added by manufacturing) e.g. value of shipments per establishment: less than $100,000; $100,000 to less than 250,000; $250,000 to less than 1,000,000; $1,000,000 and more; in addition to the number of establishments so classified indicate wherever available for each such class of establishments number of persons engaged and total value of shipments.

B) Value of fixed assets

- value of land and buildings
- value of machinery, tools and other equipment

C) Textile machinery in possession of the establishments, degree of utilisation and excess capacity

The number of spindles, looms, knitting and sewing machines with appropriate distinctions by main types (e.g. ring and mule spindles, automatic, semi-automatic and other looms etc.).

If available, average hours of utilisation of these types of equipment as well as any other data which would make it possible to establish the amount of unused (or excess) capacity should be supplied. Should these data be not available for the individual sectors an overall appraisal of the degree of utilisation of the textile and clothing machinery might be given instead.

1 Please specify the lower size-limit of establishments included.
2 Please specify the method of valuation.