GENERAL AGREEMENT ON TARIFFS AND TRADE

COTTON TEXTILES 1962-1968

Trends in Production and Trade and Policy Measures Affecting Them
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Cotton Textiles 1962-1968

Abstract of Cotton Industry Data\(^1\) and General Observations on Developments in the Cotton Sector Submitted by Governments

A. Group I Countries

- Australia
- Austria
- Canada
- Belgium
- France
- Federal Republic of Germany
- Italy
- Netherlands
- Finland
- Norway
- Sweden
- United Kingdom
- United States

\(^1\)From answers to Part II of the Questionnaire COT/W/110.
B. **Group II Countries**

- Hong Kong
- India
- Pakistan
- Republic of China (Taiwan)
- Republic of Korea
- Turkey

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**Copy of COT/W/110**

**Cotton Textiles 1962-1968**

**Data Supplied by the International Federation of Cotton and Allied Textile Industries**

**General Notes**

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A. INTRODUCTION

General

1. The present paper is intended to provide background information for use by the Cotton Textiles Committee in connexion with the seventh annual review of the operation of the Arrangement Regarding International Trade in Cotton Textiles and the discussions under Article 8(d) regarding the future of the Arrangement.

2. Following a brief summary of the main findings, the paper takes up developments in the cotton textile sector under four main headings:

   I Cotton Textiles - Production Trends
   II Trends in Trade
   III Changes in the Cotton Textile Industry
   IV Measures taken for facilitating adjustments in the Cotton Textile Sector

The statistical data which are at the base of the information included under headings I to III, are grouped by subject matter in the accompanying Appendix COT/W/115/Add.1; Addendum 2 contains a country-by-country abstracts on developments in the cotton textile sector, together with any general observations on this subject, which participating countries supplied in response to the questionnaire (COT/W/110), while Addendum 3 contains the statistics supplied by IFCATI.

Methods used and sources of information

3. The paper covers, in general, the period 1962 to 1968, i.e. starting with the year when the Arrangement entered into operation. Wherever possible, statistics have also been included for 1960. As in "A Study on Cotton Textiles", also prepared for the Cotton Textiles Committee and published in 1966, the analysis relates mainly to developments in the thirty-two countries and territories now participating in the Arrangement. In recent years, these countries have accounted for almost three-fifths of world cotton textile production and nearly four fifths of world exports of cotton textiles and cotton clothing. Unless otherwise indicated, the grouping of countries, concepts, definitions and methods throughout this paper are the same as those used and explained in the published Study.

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1 A paper summarizing action, under the provisions of Articles 2, 3, 4 and 6 of the Arrangement, taken by participating countries since the sixth annual review was held, has been circulated as COT/W/114.
4. Unless otherwise noted, the information included in this paper and in the Statistical Appendixes has been derived from submissions received from participating countries in accordance with the regular statistical reporting procedure established by the Cotton Textiles Committee, and from the replies to a questionnaire on adjustments in the cotton textiles industry (COT/W/110) sent to both importing and exporting countries participating in the Arrangement. The paper also incorporates data compiled for the GATT secretariat by the International Federation of Cotton and Allied Textiles Industries (IFCATI) from its member associations and correspondents in the different countries. This material up-dates a part of the statistics furnished by IFCATI to the secretariat for inclusion in "A Study on Cotton Textiles". It is reproduced in Addendum III. The valuable help rendered by IFCATI in collecting the industry data required for the preparation of this paper, and also the assistance given by the International Cotton Advisory Committee in supplying advance data on mill consumption of the different apparel fibres in 1968, are gratefully acknowledged.

5. It might be noted that, in a number of respects, the quality of the data may vary considerably from country to country and sometimes from year to year on account of differences in definitions, completeness of coverage, changes in types and qualities of textiles produced which might not be reflected in some of the conversion factors, the increasing importance of blends of different fibres, and the effect which changes in blends and blend ratios can have for the allocation of a product in one statistical category or another. Caution is, therefore, indicated in using the data for inter-temporal and particularly inter-country comparison. All of the data are subject to the limitations and qualifications set out in the General Note preceding the Statistical Appendix and to the additional qualifications attached to the individual statistical tables. The data are subject to revision as and when more recent and complete figures become available and in the light of any corrections or amendments that participating countries might notify.

B. SUMMARY OF FINDINGS

Developments in production

6. In the period 1962-1968, production of cotton yarns by all participating countries increased by 4.5 per cent. In Group I, it declined by 6 per cent, all countries belonging to the group registering a decline except Australia, Finland and the United States. In Japan and Poland it increased by 10 and an estimated 20 per cent, respectively. In Group II, production of cotton yarns increased by 19 per cent.

7. In the same period, production of cotton fabrics by all participating countries decreased by 3 per cent. In Group I, the decrease was by

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1 As of 15 September 1969, replies to the questionnaire had been received from all of the Group I countries, except Denmark, and from six of the Group II countries, namely India, Hong Kong, Pakistan, Republic of China, Republic of Korea and Turkey.

2 All references to changes in production relate to volume.
13.5 per cent, Japan recorded a decrease by 11 per cent while in Poland production appears to have remained unchanged. In Group II, production of cotton fabrics increased by about 16 per cent.

8. Particularly for Group I countries, these data tend to understate the level of activity in the cotton textile sector. In 1967, yarns and fabrics produced in the sector but not classifiable as cotton textiles constituted each about one third of the sector's total output in Group I countries. In Japan, these yarns and fabrics accounted for an even higher proportion of the sector's output, about one half in the case of yarns and about 40 per cent in the case of fabrics. In the Group II countries, yarns and fabrics not classifiable as cotton yarns and fabrics represent generally less than 10 per cent of the sector's output. In all participating countries, production of these yarns and fabrics has been increasing considerably more rapidly than the output of cotton textiles proper.

Developments in trade

9. While exports of textiles and clothing of all fibres from all participating countries increased in value by two thirds between 1962 and 1968, exports by these countries of cotton textiles and clothing increased by only one third. In Group I, cotton textile and clothing exports increased by 21 per cent, all countries belonging to that group recording increases except the United Kingdom. Japan's exports declined by 14 per cent while available data on Poland indicate an increase by about three quarters. Exports by Group II countries rose by 96 per cent, increases being recorded by virtually all of the countries belonging to that group.

10. A review by product categories indicates that, while by weight exports of all participating countries of cotton fabrics showed a marginal decline between 1962 and 1968, they registered a small increase, plus 3 per cent, in terms of value. Exports of cotton yarns showed an increase of 41 per cent in value and 65 per cent in volume; a major export expansion occurred in the more highly processed products, made-up and miscellaneous cotton textiles, and cotton clothing.

11. The value of exports by all participating countries of made-up and miscellaneous cotton textiles increased by an estimated 125 per cent. Exports by Group I countries advanced by about 85 per cent and in Group II, their amount almost trebled; Japan's exports of made-up and miscellaneous cotton textiles more than doubled during that period.

12. Exports of cotton clothing by all participating countries increased in value by 82 per cent. In Group I the increase was by 107 per cent, in Group II by 93 per cent while exports by Japan showed a 25 per cent increase.

13. Between 60 to 80 per cent of cotton textile and clothing exports by Group I countries combined, depending on the categories involved, entered their mutual trade. In Japan's exports of cotton textiles, the proportion shipped to
Group I countries increased substantially while in cotton clothing exports the proportion of shipments to that destination remained practically unchanged. In the cotton textile exports by Group II countries, the proportion of yarns shipped to Group I actually declined since 1962, it remained unchanged in respect of cotton fabrics and showed an increase in cotton clothing.

14. Total imports of cotton textiles and clothing by the Group I countries increased in the period 1962-1968 by 47 per cent in value as against a 90 per cent increase in the value of these countries' imports of other textile items. The corresponding rates of average annual increase are 6.6 and 11.3 per cent. In comparison, the growth of all manufactured imports into industrial countries proceeded in this period at an average annual rate of 13.4 per cent. Imports by Group I of cotton textiles and clothing from Group II countries increased in value by nearly three quarters, and the corresponding imports of Japanese origin by 30 per cent.

15. As on the export side, it was again the imports of categories containing the more highly processed cotton products that expanded most rapidly, the categories of textile semi-manufactures showing only moderate increases. Imports of clothing by Group I countries from all sources increased by 81 per cent; in contrast, imports of cotton yarns increased by 50 per cent and those of cotton fabrics by only 26 per cent (both measured in volume).

16. The ratio of imports to domestic availability (= production plus imports minus exports) of cotton yarns in Group I countries taken together increased from 3 per cent in 1962 to 5 per cent in 1968. The same ratio calculated for imports from Group II countries alone increased from 1 to 2 per cent.

17. In cotton fabrics, the ratio of imports to domestic availability in Group I countries taken together increased from 12.5 per cent in 1962 to 17 per cent in 1968. For imports from Group II countries alone, the ratio went up from 4.5 to 7 per cent.

Changes in the industry

18. As to the adjustments taking place in the industry, data on changes in the machine park of the cotton textile industry show an increase by 1.5 per cent in the number of spindles in place in all participating countries in 1967 as against 1962, and a decline in the number of looms by 5 per cent. All of the countries belonging to Group I, with the exception of Australia and the United States, registered decreases in spindles ranging from 6 to 53 per cent. Japan also recorded a decrease in the number of spindles in place. Increases in the number of spindles were, on the other hand, recorded by Poland and by all of the Group II countries except Spain. All of the Group I countries showed decreases in the number of looms, ranging from 12 to 48 per cent. In Poland, the number of looms in place was unchanged and in Japan it was 1 per cent above the 1962 level. All of the Group II countries, except Greece, Israel and Mexico, showed a higher number of looms in 1967 than in 1962.

\[1\] The statement may not cover Denmark for which country no data were received.
19. Employment in the cotton textile industry in 1967 was below the 1962 level in all of the Group I countries except Australia and Norway where it remained unchanged. In the Group II countries in Europe the decreases ranged between 27 and 35 per cent, while Canada and the United States registered decreases of about 8 and 9 per cent, respectively. In the Group I countries employment in the cotton sector in 1970 is expected to remain stationary at best, as compared with 1968, or to show a further decline.

20. In the Group I countries there has been a general tendency towards the concentration of productive capacity into fewer firms and individual producing units. A significant number of mill closures over the period 1960-1968 were reported by the United Kingdom, all of the EEC countries, Austria, Sweden and Canada.

21. The data on productivity developments indicate a significant advance made by the Group I countries; in this group, labour productivity in the cotton textile industry was generally advancing at a rate considerably above the average for manufacturing as a whole. The data available from IPCAT indicate a similar development in machine productivity in the Group I countries. Machine productivity has also grown in the Group II countries but on the whole markedly less so than in Group I.

Adjustment assistance measures

22. Most of the industrial countries have provisions under existing legislation for assisting structural adjustments in their industries. While the cotton textile industry can avail itself of these general provisions, it is not clear to what extent it has in fact benefited from the various adjustment assistance measures available to it.

23. Apart from these adjustment assistance measures available to industry generally, France, Japan, the Netherlands and the United Kingdom operate measures designed specifically to facilitate adjustments in their respective cotton textile industries, or the textile sector in general.

24. Specific measures, or additional measures designed specifically to assist adjustment in the textile sector, are reported to be under active consideration in Italy, the Federal Republic of Germany, the United Kingdom and Austria.

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1 The statement may not cover Denmark for which country no data were received.
PART I - TRENDS IN PRODUCTION

Mill Consumption of Apparel Fibres

25. Overall mill consumption of the major industrial apparel fibres, while not directly indicative of the composition or value of the textile industry's output or of the profitability of a specific branch of a country's textile industry, may normally be used as a rough yardstick for measuring the level of the first stages of textile industry activity.

26. World mill consumption of cotton, wool and man-made fibres is estimated to have increased over the period 1962 to 1968 by almost 5.0 million tons, or approximately 33 per cent. For cotton, the increase amounted to about 1.6 million tons or 16 per cent, for the man-made fibres to approximately 3.3 million tons or 85 per cent, while world consumption of wool advanced by only 4 per cent, or about 60 thousand tons. The respective shares of cotton, wool and man-made fibres in estimated world mill consumption of apparel fibres were 64, 10 and 26 per cent in 1962 and 56, 8 and 36 per cent in 1968.

27. These overall figures hide significant differences in the trends of production in different countries and regions. While for the world as a whole mill consumption of cotton registered an increase over the period 1962 to 1968, it went down in all of the Group I countries, the total decrease in these countries over the period under review amounting to some 200 thousand tons or about 6 per cent. It may be noted, however, that mill consumption of all fibres in these countries increased by about 28 per cent. By contrast, mill consumption of cotton in the Group II countries in 1968 was about 20 per cent, or some 430 thousand tons, higher than in 1962. For the Group I countries as a whole the decrease in mill consumption of cotton would have been much larger were it not for the fact that the United States, which accounts for about three fifths of mill consumption of cotton in the Group, recorded only a small decrease of about 2 per cent, as compared with 12 per cent in the EEC, 10 per cent in the United Kingdom and declines in the range of 3 to 33 per cent in the remaining Group I countries. In the Group II countries, on the other hand, the increase in the Group total was held down by the fact that India, which accounts for about two fifths of the Group's total mill consumption, showed only a modest 4 per cent increase. However, even in the Group II countries the rate of increase in mill consumption of cotton has been slowing down in recent years.

28. In Japan - unlike in the Group I countries where the downward trend in mill consumption of cotton has been evident for a number of years - mill consumption of cotton in 1968 was 13 per cent above the 1962 level which, in turn, was 2 per cent above the level reached in 1960. However the increases in mill consumption of cotton in Japan and in the Group II countries notwithstanding, the increase of 5 per cent recorded for all participating countries in the period 1962 to 1968 leaves no doubt that the bulk of the increase in world cotton consumption in recent years is mainly due to countries not members of the Arrangement, in
Table 1

INDEX OF ESTIMATED MILL CONSUMPTION OF COTTON, WOOL AND MAN-MADE FIBRES AND ABSOLUTE CHANGE OVER THE PERIOD 1962 TO 1968

(1962 = 100)

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1964</th>
<th>1968</th>
<th>Absolute change over the period 1962 to 1968 (1,000 metric tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Cotton</td>
<td>Wool</td>
<td>MMF</td>
</tr>
<tr>
<td>World</td>
<td>99</td>
<td>107</td>
<td>100</td>
<td>84</td>
</tr>
<tr>
<td>Total participating countries</td>
<td>95</td>
<td>99</td>
<td>100</td>
<td>85</td>
</tr>
<tr>
<td>Total Group I countries</td>
<td>95</td>
<td>103</td>
<td>102</td>
<td>84</td>
</tr>
<tr>
<td>Japan</td>
<td>98</td>
<td>102</td>
<td>95</td>
<td>93</td>
</tr>
<tr>
<td>Total Group II countries</td>
<td>90</td>
<td>91</td>
<td>(88)</td>
<td>78</td>
</tr>
</tbody>
</table>

*Detailed data on mill consumption of apparel fibres in participating countries are set out in Tables 1/1 and 1/2 of the statistical Appendix.

Source: International Cotton Advisory Committee and secretariat estimates.
particular to the Eastern European countries, the USSR and mainland China. The latter group of countries accounted for about three fifths of the total increase in estimated world mill consumption of cotton over the period 1962 to 1967.\(^1\)

29. With respect to man-made fibres, developments in individual groups of countries were more homogeneous. With probably only one exception, the UAR, industry consumption of man-made fibres registered everywhere important increases. It must be noted, however, that the figures available for the man-made fibres relate to net availability (production of man-made fibre staple and filament yarn plus imports minus exports) rather than to mill fibre consumption. Changes in net availability may understate or overstate changes in mill consumption by the amount of change in stocks, an increase in stocks being more likely in periods of rapid growth of man-made fibre production. The recent years have been such a period. Nonetheless, data on net availability are normally a better indicator of trends in the level of mill usage of man-made fibres than the fragmentary data directly available on mill consumption of man-made fibres.

Production of Cotton Yarns and Fabrics

30. World production of cotton yarns in 1968 was approximately 10 per cent above that of 1962 while in the production of broadwoven cotton fabrics, the corresponding increase was of the order of 3 per cent, the peak in cotton fabric production having been reached in 1964/65.

31. Production of cotton yarns proper was lower in 1968 than in 1962 in all of the Group I countries,\(^2\) except Australia, Finland and the United States, the volume of production in the latter country being 1 per cent higher than in 1962, as a result of substantial increases in 1964 and 1965 and a continuous decline in the three succeeding years. In Japan, production of cotton yarn in 1968 showed an increase of 10 per cent as compared with 1962; and in Poland, 19 per cent. In the Group II countries, output of cotton yarn increased everywhere between 1962 and 1968, the increase in most cases being 30 per cent or more, except in India which showed an increase of 12 per cent; and in Mexico where the production increase was only 4 per cent.\(^3\)

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\(^2\) For country-by-country detail, see the Appendix Tables I/3 and I/5.

\(^3\) A substantial drop in Mexico's output occurred in 1968, while in 1967 the production index (1962 = 100) stood at 135.
TABLE 2
PRODUCTION OF COTTON YARN AND FABRICS
(in '000 metric tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Yarns</th>
<th>Fabrics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>%</td>
</tr>
<tr>
<td>World</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>9,000</td>
<td>100</td>
</tr>
<tr>
<td>1962</td>
<td>8,800</td>
<td>100</td>
</tr>
<tr>
<td>1967</td>
<td>9,600</td>
<td>100</td>
</tr>
<tr>
<td>1968</td>
<td>9,700</td>
<td>100</td>
</tr>
<tr>
<td>Total participating countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>5,563</td>
<td>62</td>
</tr>
<tr>
<td>1962</td>
<td>5,694</td>
<td>65</td>
</tr>
<tr>
<td>1967</td>
<td>5,932</td>
<td>62</td>
</tr>
<tr>
<td>1968</td>
<td>5,955</td>
<td>62</td>
</tr>
<tr>
<td>of which: Group I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>3,247</td>
<td>36</td>
</tr>
<tr>
<td>1962</td>
<td>3,162</td>
<td>36</td>
</tr>
<tr>
<td>1967</td>
<td>3,051</td>
<td>32</td>
</tr>
<tr>
<td>1968</td>
<td>2,994</td>
<td>31</td>
</tr>
<tr>
<td>of which: Group II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>1,643</td>
<td>18</td>
</tr>
<tr>
<td>1962</td>
<td>1,866</td>
<td>21</td>
</tr>
<tr>
<td>1967</td>
<td>2,151</td>
<td>22</td>
</tr>
<tr>
<td>1968</td>
<td>2,216</td>
<td>23</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>520</td>
<td>6</td>
</tr>
<tr>
<td>1962</td>
<td>502</td>
<td>6</td>
</tr>
<tr>
<td>1967</td>
<td>536</td>
<td>6</td>
</tr>
<tr>
<td>1968</td>
<td>551</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Data available on production of fabrics are not always strictly comparable with data on production of yarns as the statistical coverage of the weaving sector, particularly where weaving is performed by very small units, is often less complete than coverage of the spinning sector.

Source: Submissions by participating countries, ICAC, and secretariat estimates. See notes to Tables 1/3 and 1/5, which contain cotton yarn and fabric production data for the years 1960 to 1968 for each of the participating countries.
32. For woven cotton fabrics, in both 1967 and 1968, production was significantly below the 1962 level in Japan; in all of the Group I countries except Australia and Finland, while in Norway - a relatively small producer of cotton fabrics - output in 1967/68 was about the same as in 1962. Production in Poland also did not show any significant advance. In the Group II countries production appears to have grown rapidly everywhere, except in Spain - where it decreased - and in Israel and the Republic of Korea which recorded only relatively slow growth, their man-made fibre fabric production advancing rapidly, however.

Overall Production Trends in the Cotton Sector

33. Over the years, the use of man-made fibres in cotton spinning and weaving has grown more rapidly than mill consumption of cotton. On the average, almost one third of the 1967 volume of output in the cotton spinning sector of Group I countries consisted of yarns that could not be classified as cotton yarns; the proportion had been approximately one sixth in 1962. The extent of man-made fibre penetration in cotton spinning, measured by the proportion of cotton yarns in the total output of the cotton spinning industry, seems to be particularly large in the United States, Austria, the United Kingdom, Belgium, the Federal Republic of Germany and Norway. In Japan, about one half of 1967 output of cotton system spinning consisted of yarns not classifiable as cotton yarns, up from some 40 per cent in 1962. In the Group II countries, the share of non-cotton yarns in the output of cotton system spinning is still only modest, generally below 10 per cent, except in Israel, China (Taiwan) and Spain, where it ranges between 15 and 20 per cent, and probably also in the Republic of Korea.

34. Similarly, broadwoven fabrics not classifiable as cotton produced in the cotton weaving sector of the Group I countries in 1967 accounted, on the average, for about one third of total output of that sector, the proportion having been less than one fourth in 1962. In Japan, non-cotton fabric production in what might broadly be designated as cotton weaving - the sector being less well defined in Japan than, for instance, in Europe - accounted for some 40 per cent of the sector's 1967 output. In the Group II countries, the proportion was again generally below 10 per cent except in Portugal, Spain, China (Taiwan) and probably also in the Republic of Korea.

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1 See Table 1/5.

2 For details, see Tables J and K in Addendum 3.

3 See Table 1/4.

4 See Table 1/6.
35. The growing proportion of yarns and fabrics not classifiable as cotton in total output of cotton spinning and weaving mills has several causes. First, the availability and variety of man-made fibres suitable for blending with cotton has rapidly increased in recent years. Second, a gradual shift from cotton/cellulosic fibre blends to synthetic/cotton blends has generally increased the proportion of products which, under the established definitions (a product being defined by predominating fibre content), are not classifiable as cotton textiles.\(^1\) Third, where the industry's total output has been stagnating or contracting, the pure-cotton items usually suffered most. The last-mentioned development is generally regarded to be the result not only of a shift in consumer preferences but also of certain cost-economies inherent in processing man-made fibres and fibre blends, rather than pure cotton, on the latest models of high-speed machinery.

36. Despite increased utilization of man-made fibres, however, the cotton textile industry in most Group I countries has not been able to keep pace with the production of all textiles. Indeed, in most Group I countries the volume of production, not only of yarns and fabrics classifiable as cotton, but of all yarns and fabrics produced in the cotton textile sector, tends to stagnate. In both 1966 and 1967, Austria, Belgium, Denmark, France, the Federal Republic of Germany, the EEC as a group, Norway, Sweden and the United Kingdom recorded a level of yarn production (from all fibres) in the cotton sector that was below the mark for 1962. With respect to total fabric production in the cotton sector, the same holds true for Denmark, France, the Federal Republic of Germany, Italy, the Netherlands, the EEC as a group, Norway, Sweden and the United Kingdom. In Group I countries showing increased production in the cotton sector, the increase was generally much smaller than that recorded for all textiles. The main exceptions in Group I are Australia and the United States where fabric production in the cotton sector expanded in step with, or slightly ahead of, fabric production generally.\(^2\)

37. Statistics of production of all yarns and fabrics in the cotton sector for 1968 are not yet available. Some output increases in this sector in the Group I countries should be expected as levels of overall textile production, which had

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\(^1\) Until a few years ago, the bulk of man-made fibres used in cotton mills were cellulose fibres, largely because the synthetic fibre technically most suitable for blending with cotton, polyester, was relatively expensive and therefore used more in blends with wool than with cotton. This has changed in the last two or three years when prices of polyester fibres have declined to a level at which they can compete with the better quality cottons.

\(^2\) c.f. also Table 1/8.
been depressed in several of these countries in 1967 and, in a few instances, also in 1966, were generally higher in 1968. Nonetheless, the production trends for 1960-1967 for the Group as a whole point to a continuing long-term contraction in the volume of output in the cotton sector.

38. In Japan, production of all yarns and fabrics in the cotton spinning sector has continued to progress in recent years, although at an average rate much below that recorded in the 1950's. In the Group II countries, on the other hand, with the possible exception of India, production of all fabrics in the cotton sector has been growing at relatively high rates.

39. Finally, note should be taken of the fact that, in recent years, weaving generally, not only in the cotton sector, has come under increasing pressure from other fabric production processes, mainly industrial knitting which has become one of the most dynamic sectors of the textile industry. In a number of countries, the expansion of knitting has accounted for a substantial part of the growth in total fabric production and in several instances even displaced a part of broad-woven production. Here, too, the modern high-speed machinery is more effective in, and increasingly geared to, the processing of man-made fibre filaments and yarns which constitute the bulk of the sector's input. Nonetheless, in the seven Group I countries for which data on filament and yarn use by the sector are available, knitting has accounted for a growing proportion of total cotton yarn consumption; in five cases the consumption of cotton yarn in the knitting sector has increased between 1962 and 1968 and in two cases it has declined less in knitting than in cotton weaving.\(^\text{1}\)

\(^{1}\)For country-by-country details, see Table I/7.
<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>All manufacturing production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>World</td>
<td>90</td>
<td>100</td>
<td>103</td>
<td>114</td>
<td>122</td>
<td>130</td>
<td>134</td>
<td>142</td>
</tr>
<tr>
<td>Developing countries</td>
<td>87</td>
<td>100</td>
<td>104</td>
<td>115</td>
<td>122</td>
<td>128</td>
<td>132</td>
<td>142</td>
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<tr>
<td><strong>Textile industry</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>93</td>
<td>100</td>
<td>103</td>
<td>109</td>
<td>112</td>
<td>118</td>
<td>116</td>
<td>125</td>
</tr>
<tr>
<td>Developing countries</td>
<td>94</td>
<td>100</td>
<td>102</td>
<td>114</td>
<td>116</td>
<td>116</td>
<td>120</td>
<td>129</td>
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<tr>
<td><strong>Clothing, footwear and made-up textile industry</strong></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>World</td>
<td>93</td>
<td>100</td>
<td>104</td>
<td>110</td>
<td>118</td>
<td>122</td>
<td>120</td>
<td>123</td>
</tr>
<tr>
<td>Developing countries</td>
<td>94</td>
<td>100</td>
<td>104</td>
<td>111</td>
<td>127</td>
<td>137</td>
<td>144</td>
<td>147</td>
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<tr>
<td><strong>Estimated mill consumption of apparel fibres</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>100</td>
<td>104</td>
<td>111</td>
<td>117</td>
<td>122</td>
<td>125</td>
<td>133</td>
</tr>
<tr>
<td>Cotton</td>
<td>105</td>
<td>100</td>
<td>101</td>
<td>106</td>
<td>110</td>
<td>113</td>
<td>115</td>
<td>116</td>
</tr>
<tr>
<td>Other</td>
<td>89</td>
<td>100</td>
<td>106</td>
<td>118</td>
<td>126</td>
<td>136</td>
<td>141</td>
<td>163</td>
</tr>
<tr>
<td><strong>Ratio of mill consumption of cotton to estimated mill consumption of all apparel fibres</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>68</td>
<td>65</td>
<td>63</td>
<td>62</td>
<td>61</td>
<td>60</td>
<td>60</td>
<td>56</td>
</tr>
</tbody>
</table>

1 Data for "World" do not include USSR, Eastern Europe and Mainland China.

PART II - TRENDS IN TRADE

General

40. The changes in world textile output described above were appropriately reflected in the composition and direction of world trade in textiles. Comprehensive and exact statistical time series on cotton's share in world trade in textiles and clothing are not available since several of the most important trading countries did not, until recently, make the distinction between cotton and non-cotton items in all categories of textile products. Nonetheless, such data as are available leave no doubt as to the main trend. Exports of textiles and clothing classifiable as cotton products have shared only to a very limited extent in the overall expansion of textile and clothing exports. As estimated by the secretariat, world exports of cotton textiles and clothing combined increased by only 22 per cent, or some $790 million, in the period 1962-68, as compared with an approximate 85 per cent or $4,700 million increase in exports of non-cotton textiles and clothing in the same period. As a result of these trends, cotton's share in world exports of textiles and clothing decreased from an estimated 34 per cent in 1962 to about 26 per cent in 1968.

41. The lag of the cotton items behind overall export growth of textiles is, of course, partly attributable to the rapid increase in recent years of synthetic fibre production which, though heavily concentrated in the industrial areas is, nevertheless, sufficiently specialized to give rise to trade flows of considerable magnitude both within the industrial areas and between these areas and the developing regions. The progressive diversification of synthetic fibre production has also led to a widespread use of synthetic/cotton blends, i.e. yarns and fabrics no longer classifiable as cotton textiles, which have been expanding in world trade considerably more rapidly than the more traditional cotton/cellulosic blends. Another element contributing to the decline in cotton's share in total textile and clothing exports is the fact that the most dynamic influence in the overall export expansion has been clothing, a sector of trade in which cotton items have traditionally been less important than in textiles proper. The most rapid increase in the trade in clothing, moreover, has been occurring in knitwear (SITC 841.4), a product category in which cotton had originally held a substantial share, but where it is now rapidly being displaced by man-made fibre filaments and yarns. Last but not least, it must, of course, be remembered that a large portion of trade in cotton textiles and clothing is subject to quantitative regulation in a number of important import markets, not only in the industrialized areas but also in many of the developing countries, in the latter case to shield the development of import substituting cotton textile industries.

Export trends

42. Taking textiles (SITC 65) and clothing (SITC 841) of all fibres, exports from all of the participating countries increased by approximately 67 per cent, or $4,785 million over the period 1962-1968, an annual rate of increase of about 8.9 per cent. All of the participating countries, India being the only exception, registered an increase in their exports. The Group II countries taken together almost doubled their exports, the absolute increase amounting to about $1,160 million, while for the Group I countries as a whole the increase was of the order of 62 per cent, some $2,900 million, and for Japan 60 per cent, or $681 million.

1See Table II/1.
Table 4

APPROXIMATE PERCENTAGE AND ABSOLUTE CHANGE IN THE VALUE OF EXPORTS OF COTTON TEXTILES AND CLOTHING OVER THE PERIOD 1962 TO 1968*

<table>
<thead>
<tr>
<th>Countries listed in the order of the relative increase or decrease in exports</th>
<th>Percentage change 1968/1962</th>
<th>Absolute change in $ million</th>
<th>Countries listed in the order of the relative increase or decrease in exports</th>
<th>Percentage change 1968/1962</th>
<th>Absolute change in $ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. INCREASE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Pakistan</td>
<td>657</td>
<td>95.3</td>
<td>17.8</td>
<td>17. Netherlands</td>
<td>50</td>
</tr>
<tr>
<td>2. Republic of Korea</td>
<td>600</td>
<td>17.8</td>
<td>19. Italy</td>
<td>47</td>
<td>47.4</td>
</tr>
<tr>
<td>3. Finland</td>
<td>331</td>
<td>19.2</td>
<td>19. Israel</td>
<td>41</td>
<td>6.1</td>
</tr>
<tr>
<td>4. Portugal</td>
<td>174</td>
<td>71.5</td>
<td>20. United States2</td>
<td>(20)</td>
<td>(43.0)</td>
</tr>
<tr>
<td>5. United Arab Republic</td>
<td>155</td>
<td>73.0</td>
<td>21. India</td>
<td>20</td>
<td>21.3</td>
</tr>
<tr>
<td>6. Canada</td>
<td>154</td>
<td>9.7</td>
<td>22. Germany, F.R.</td>
<td>16</td>
<td>22.4</td>
</tr>
<tr>
<td>7. Turkey</td>
<td>150</td>
<td>7.0</td>
<td>23. Belgium/Luxembourg</td>
<td>8</td>
<td>10.6</td>
</tr>
<tr>
<td>8. Spain</td>
<td>144</td>
<td>23.0</td>
<td>24. France</td>
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<td>13.4</td>
</tr>
<tr>
<td>9. Greece</td>
<td>140</td>
<td>7.0</td>
<td>B. DECREASE</td>
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<td></td>
</tr>
<tr>
<td>10. Australia</td>
<td>138</td>
<td>2.9</td>
<td>25. Japan</td>
<td>-11</td>
<td>-50.0</td>
</tr>
<tr>
<td>12. Sweden</td>
<td>95</td>
<td>16.3</td>
<td>27. United Kingdom</td>
<td>-26</td>
<td>-42.4</td>
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<tr>
<td>13. Norway</td>
<td>85</td>
<td>3.4</td>
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<tr>
<td>14. Denmark</td>
<td>84</td>
<td>10.3</td>
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<td>15. Poland</td>
<td>78</td>
<td>18.3</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>16. Hong Kong</td>
<td>67</td>
<td>144.0</td>
<td></td>
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</tr>
</tbody>
</table>

Note: As complete statistics on exports of cotton clothing and miscellaneous cotton articles are not available for several countries for 1962, data on overall exports of cotton textiles and clothing for these countries involve some element of estimation. The rates and the amount of increase listed should, therefore, only be regarded as indicators of the order of magnitude involved. The figures shown, and hence the ranking of countries, are subject to change as and when more accurate data are received.

*Except Austria. For country-by-country details, see Table II/1.

1 The actual increase, from an estimated $14.5 million in 1962 to $109.8 million in 1968 - almost 660 per cent - puts Pakistan at the head of the list. The years 1961-1963 were, however, characterized by an unusually low level of cotton yarn exports. Assuming that exports of cotton yarn in 1962 were at the same level as in 1960, export expansion should have been rather more modest, about $67 million or 160 per cent.

2 Cf. footnote 6 to Table II/1.
43. In the cotton sector proper, exports of textiles and clothing from all participating countries combined advanced in the same period from an estimated $2,020 million to $2,700 million. The increment of about $680 million corresponds to 34 per cent of exports in the base year or to an average annual growth rate of 5 per cent. With the exception of the United Kingdom, Japan and apparently Mexico, all of the participating countries recorded increases. For the Group I countries combined the increase was of the order of 21 per cent, or $220 million, for the Group II countries 96 per cent, or $500 million. Japan recorded a decrease of 14 per cent, or about $65 million.

44. Out of the overall increase of $680 million registered by all participating countries in 1968 for exports of cotton textiles and cotton clothing, clothing alone contributed approximately $330 million. Exports of cotton clothing from all participating countries increased from about $400 million in 1962 to $730 million in 1968, or by 82 per cent. Exports of cotton clothing from Group I countries increased by approximately $160 million, or 107 per cent, those from Group II countries by some $140 million or 93 per cent, and those from Japan showed an increase of $24 million or 25 per cent.  

45. Exports of yarns showed more dynamism than those of fabrics. The total cotton yarn exports by all participating countries advanced from an estimated $265 million to about $375 million in the period under review, or in terms of volume from 178,000 to 294,000 tons, the relative increase amounting to 41 per cent in value and 65 per cent in terms of volume. Within the overall increase, shipments from the Group I countries combined advanced by 7,4 thousand tons or 9 per cent, those from the Group II countries combined, by 121,000 tons or 155 per cent, while Japan's exports of cotton yarn declined by 12,000 tons or 73 per cent. As its imports grew substantially at the same time, Japan became a net importer of cotton yarns in 1967.  

46. By weight, exports of cotton fabrics from total participating countries, about 551,000 tons in 1968, were marginally lower than in 1962, the decrease being of the order of 4,000 tons. In value, however, these exports increased from $1,195 million in 1962 to about $1,230 million in 1968 or by nearly 3 per cent. Group I countries' exports in 1968 fell short of the 1962 level by 40,000 tons (-17 per cent) or by about $43 million (-7 per cent); Japan experienced an even greater drop, by 65,000 tons (-44 per cent) or $99 million (-30 per cent). Exports from Group II countries, on the other hand, advanced by almost 100,000 tons (+63 per cent) or about $170 million (+73 per cent) in value; Poland also registered an export increase.  

1 For country-by-country details, see Table II/1.
2 This large relative increase reflects to some extent the unusually low level of Pakistan's exports of cotton yarn in the base year, cf. the note to Table 4 on page 16.
3 For country-by-country details, see Table II/2.
4 For country-by-country details, see Table II/3.
47. With respect to exports of Group I countries, it is interesting to note that grey fabrics were on the whole less affected than other fabrics by the contraction in cotton fabric exports recorded over the period 1962-1968. The share of grey fabrics in total cotton fabric exports was in fact higher in 1968 than in 1962 in Australia, Austria, all the EEC countries (if intra-EEC shipments are not taken into account), Sweden, the United Kingdom and the United States.

48. In contrast to the stagnation in exports of cotton fabrics, shipments of made-up and miscellaneous cotton fabrics from participating countries grew from an estimated $165 million in 1962 to approximately $370 million in 1968, or an increase of about 125 per cent. Exports from the Group II countries almost trebled, reaching about $125 million in 1968, those from Japan more than doubling (about $40 million in 1968) and Group I countries' exports advanced by about 85 per cent to more than $200 million in 1968.

49. A large part of exports from Group I countries was shipped to other countries in the group: about three fourths of the tonnage of cotton yarns, about three fifths of cotton fabrics and more than three fourths of the value of cotton clothing shipped was accounted for by Group I intra-trade in 1968.

50. The proportion of 1968 exports by Group II countries shipped to Group I countries was approximately 27 per cent in cotton yarns (60 per cent in 1962), about 57 per cent in cotton fabrics (the same as in 1962) and 85 per cent in cotton clothing, up from about 72 per cent in 1962. The decline in the proportion of cotton yarns shipped to Group I countries occurred despite an absolute increase of about 8,000 tons in the volume of Group II shipments to destinations in Group I.

51. In Japan, the share of 1968 exports (1962 percentages in parentheses) to Group I countries was 16 (1) per cent for cotton yarns, 39 (30) per cent for cotton fabrics and 59 (58) per cent for cotton clothing. In the case of cotton yarns, the increase reflects both a rise in shipments to these countries and a substantial decrease in the level of overall cotton yarn shipments. In the category of cotton fabrics, on the other hand, the increase in Group I's share in the total is due to the fact that shipments to these countries, registering an absolute decline of some 12,000 tons, or 28 per cent, fell less than shipments to other destinations. In cotton clothing, finally, exports going to Group I countries expanded by about $15 million or 27 per cent.

\[1\text{ Cf. Table II/4.}\]
### Table 5

PERCENTAGE SHARES OF GROUP I, GROUP II AND JAPAN IN COTTON TEXTILE AND CLOTHING EXPORTS OF TOTAL PARTICIPATING COUNTRIES - 1962 AND 1968

(Total participating countries = \(100^1\))
(Q = export volume)
\(V = \text{export value}\)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton yarns</td>
<td>47</td>
<td>31</td>
<td>44</td>
<td>67</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>41</td>
<td>35</td>
<td>56</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Cotton fabrics</td>
<td>44</td>
<td>37</td>
<td>28</td>
<td>46</td>
<td>26</td>
<td>15</td>
</tr>
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<td></td>
<td>52</td>
<td>47</td>
<td>20</td>
<td>33</td>
<td>27</td>
<td>19</td>
</tr>
<tr>
<td>Made-up and miscellaneous cotton textiles</td>
<td>V</td>
<td>65</td>
<td>54</td>
<td>26</td>
<td>34</td>
<td>9</td>
</tr>
<tr>
<td>Cotton clothing</td>
<td>V</td>
<td>37</td>
<td>43</td>
<td>37</td>
<td>40</td>
<td>24</td>
</tr>
</tbody>
</table>

1Where percentages do not add up to 100, the residual, apart from differences due to rounding, represents exports of Poland.

Import trends

52. Before the trends revealed by import statistics of the participating countries are discussed, a methodological difficulty should be noted. In trade statistics generally, it is seldom possible to achieve a one-to-one correspondence between data reported by the exporting country and the import statistics on the receiving end. This difficulty is even greater in statistics on trade in cotton textiles and clothing where definitions and classification procedures can differ between countries, and the amounts of cotton textiles and clothing traded are often estimated, again by fairly complex procedures, from the value of trade in textiles and clothing from all fibres.
53. Imports of all cotton textiles and clothing into the Group I countries grew from an estimated $1,330 million in 1962 to about $1,960 million in 1968, i.e. by 47 per cent, which corresponds to an average annual rate of growth of 6.6 per cent. In this overall growth, imports originating in Group II countries increased from $346 million to $598 million, i.e. by 73 per cent or at an average annual rate of 9.7 per cent. The corresponding imports from Japan increased from $167 million to $219 million, or by 30 per cent.

Table 6

APPROXIMATE PERCENTAGE AND ABSOLUTE CHANGE IN THE VALUE OF GROUP I IMPORTS OF COTTON TEXTILES AND CLOTHING OVER THE PERIOD 1962 TO 1968

<table>
<thead>
<tr>
<th>Countries listed in the order of the relative increase/or decrease/ in imports</th>
<th>Percentage change 1968/62</th>
<th>Absolute change in $ million</th>
<th>Countries listed in the order of the relative increase/or decrease/ in imports</th>
<th>Percentage change 1968/62</th>
<th>Absolute change in $ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. INCREASE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. France</td>
<td>(218)</td>
<td>(68.1)</td>
<td>9. Norway&lt;sup&gt;2&lt;/sup&gt;</td>
<td>(39)</td>
<td>(15.9)</td>
</tr>
<tr>
<td>2. Italy</td>
<td>(139)</td>
<td>(39.1)</td>
<td>10. United Kingdom</td>
<td>(25)</td>
<td>(62.9)</td>
</tr>
<tr>
<td>3. Germany, F.R.</td>
<td>(87)</td>
<td>(130.7)</td>
<td>11. Denmark</td>
<td>16</td>
<td>7.7</td>
</tr>
<tr>
<td>4. EEC - Total</td>
<td>(87)</td>
<td>(312.2)</td>
<td>12. Australia&lt;sup&gt;3&lt;/sup&gt;</td>
<td>15</td>
<td>16.6</td>
</tr>
<tr>
<td>5. Sweden</td>
<td>69</td>
<td>49.6</td>
<td>13. Finland&lt;sup&gt;3&lt;/sup&gt;</td>
<td>16</td>
<td>4.3</td>
</tr>
<tr>
<td>6. Belgium/Luxembourg</td>
<td>(67)</td>
<td>(33.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. United States&lt;sup&gt;3&lt;/sup&gt;</td>
<td>55</td>
<td>169.9</td>
<td>14. Canada&lt;sup&gt;3&lt;/sup&gt;</td>
<td>-8</td>
<td>-9.4</td>
</tr>
<tr>
<td>8. Netherlands</td>
<td>(42)</td>
<td>(41.5)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup>Excluding Austria, where the absolute change in imports of cotton textiles and clothing alone is roughly estimated at 39 per cent.

<sup>2</sup>Increase may be somewhat overstated as the statistics cover to some extent also non-cotton items which, on average, have experienced a relatively faster growth rate than cotton products.

<sup>3</sup>Imports f.o.b.

Note: The methodological note to Table 4 also applies to import statistics for some of the Group I countries.

<sup>1</sup>For country-by-country details, see Table II/5.
54. An examination of the commodity composition of Group I imports of cotton textiles shows for cotton yarns imports from all sources an increase from 103.7 thousand tons in 1962 to 155.6 thousand tons in 1968, i.e. 50 per cent. Imports from participating countries increased from 97,000 tons to 136,000 tons, or by 40 per cent, while imports from the Group II countries rose from 36,000 tons in 1962 to 69,000 tons in 1968, a rate of increase of 92 per cent. Imports from Japan increased strongly but were in 1968 still less than 2,000 tons.

55. In cotton fabrics (COT/STAT/Categories B and C only), total Group I imports from all sources grew from 312.1 thousand tons in 1962 to 394,000 tons in 1968, or by 26 per cent. Imports from the Group II countries grew from about 110,000 tons to 162,000 tons, or by 47 per cent. Group I imports of cotton fabrics from Japan amounted to about 49,000 tons in 1962 and to about 38,000 tons in 1968, i.e. declined by about 23 per cent.

56. Measured from export statistics, the Group I countries absorbed in 1968 (1962 percentages in parentheses) 55 (49) per cent of total cotton fabric exports of all participating countries, about 57 per cent of total Group II exports (both in 1968 and in 1962), and 39 (30) per cent of Japanese cotton fabric exports.

57. Cotton clothing was the most dynamic element in Group I's overall import growth of cotton items. These imports from all sources advanced from an estimated $370 million in 1962 to more than $670 million in 1968, or by about 80 per cent, and those originating in Group II countries from an estimated $137 million in 1962 to $250 million in 1968, or by over 80 per cent. Combined Group I imports of cotton clothing from Japan advanced from an estimated $55 million in 1962 to $86 million in 1968, or by 56 per cent.

58. While all of the Group I countries recorded significant increases in the overall level of cotton textile and clothing imports over the period under review, there remained significant differences between individual countries in the share of imports from the Group II countries and Japan.

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1For country-by-country details, see Table II/6.
2For country-by-country details, see Table II/7.
3For country-by-country details, see Table II/5.
Production and trade

59. Since the coverage of cotton textile statistics varies considerably in degree between production and trade, between individual product categories in each, and even more so between countries, a country-by-country comparison of ratios of trade to production could easily be misleading. For all the Group I countries combined, however, it can be supposed that these variations will tend to cancel themselves out so that the resulting totals will correctly represent the main trends of development.

60. On this basis, it will be seen that with respect to both yarns and fabrics, the increase in imports and the reduction in exports by the Group I countries combined were not large enough to offset the declines in internal production. Between 1962 and 1968, the apparent availability (production plus imports minus exports) of yarns in these countries declined from 3,180 to 3,050 thousand tons, or by 4 per cent; in fabrics, the decline was from 2,490 to 2,280 thousand tons, or by 8 per cent.

61. This conclusion must be qualified inasmuch as the general trend in cotton textile industries, particularly in those of the industrial countries, is towards the production of lightweight fabrics. Output measurement by weight thus understates actual production in yards, and even more so, in value.

62. It will also be noted that for the Group I countries on the average, the ratio of imports to domestic availability of cotton yarns and fabrics, measured in weight, has increased somewhat but is generally lower than in the case of non-cotton textiles and, a fortiori, in that of all manufactures. In yarns, imports accounted for 3 per cent of internal availability in Group I in 1962 and for 5 per cent in 1968; in fabrics, the ratio rose from 12.5 to 16 per cent in the same period. Taking imports from Group II countries separately, the corresponding increases would be from 1 to 2 per cent in the case of yarns and from 4 to 7 per cent in that of fabrics.
Part III - Changes in the Cotton Textile Industry

General

63. The scope of the present paper and the statistical material available to the secretariat through the questionnaire do not make it possible to carry the analysis further backwards than 1960. It is, however, important to bear in mind that the adjustments described in this chapter are in many cases only the most recent manifestations of a continuous process of adaption of the industry to changing conditions of demand and competition, new fibre developments, changes in machine technology, and all the other forces affecting industrial organization generally. The degree of adjustments required, and the success achieved by 1960 in making the necessary adjustments, might have differed considerably between individual countries, a fact which would be reflected in their performance during the period under review.

Changes in the location of machinery

64. Number of machinery installed is often taken as an indication of the productive capacity of the industry. The size of the machine park alone is, of course, only a very imperfect yardstick since there exist very wide differences in the productivity of equipment which, in the case of modern weaving machines against modern but conventional looms, might be as much as three to one. Furthermore, whereas the totals of machinery scrapped usually contain a significant, though varying, proportion of machines that had been idle for some time before scrapping, the newly installed machinery is, particularly in the industrial countries, more productive than machines already in operation. Data on changes in the machine park can thus provide only a rough idea of the direction and the magnitude of changes in the industries' equipment over the period.

1 Detailed country-by-country data, abstracted from the replies to the questionnaire COT/W/110 are contained in COT/W/115/Add.2.

2 Some of the statistical tables supplied by IFCATI, set out in COT/W/115/Add.3, do, however, contain data going back to 1953 and 1939. Also, the published study, op. cit. traces developments in the industry, trade and production over a longer period.
Table 9

SPINNING AND WEAVING MACHINERY IN PLACE IN PARTICIPATING COUNTRIES
(in thousands)

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1964</th>
<th>1966</th>
<th>1967</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spindles</td>
<td>Looms</td>
<td>Spindles</td>
<td>Looms</td>
</tr>
<tr>
<td>Group I</td>
<td>50,075</td>
<td>1,019</td>
<td>44,021</td>
<td>378</td>
</tr>
<tr>
<td>Japan</td>
<td>13,231</td>
<td>372</td>
<td>12,175</td>
<td>381</td>
</tr>
<tr>
<td>Group II</td>
<td>24,797</td>
<td>489</td>
<td>28,579</td>
<td>494</td>
</tr>
<tr>
<td>Total participating countries(^1)</td>
<td>90,104</td>
<td>1,921</td>
<td>86,740</td>
<td>1,797</td>
</tr>
</tbody>
</table>

\(^1\)Including Poland.

Source: Statistics supplied by IFCATI.

65. In percentage terms the decrease in the Group I countries in the number of equipment in place at the end of 1967 as compared with the end of 1960 was 17 per cent for spindles and 26 per cent for looms. Japan recorded a decrease of about 5 per cent in the number of spindles installed and a marginal increase in the number of looms. In the Group II countries the number of spindles installed at the end of 1967 was 28 per cent higher than in 1962, while the number of looms showed an increase by 10 per cent.\(^1\)

66. The Group totals hide, however, significant differences between participating countries, as will be seen from Table 10 which ranks countries by the extent of the increase or decrease in spindles and looms over the years 1960 to 1967.

\(^1\)For country-by-country details see Tables III/1 and III/2.
Table 10

PERCENTAGE INCREASE OR DECREASE OVER THE PERIOD 1960 TO 1967 IN THE
NUMBER OF SPINDLES AND LOOMS IN PLACE

(1960 = 100)

<table>
<thead>
<tr>
<th>Spindles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage change in spindles in place</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A. INCREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Republic of China</td>
</tr>
<tr>
<td>2. Israel</td>
</tr>
<tr>
<td>3. Macao</td>
</tr>
<tr>
<td>4. Hong Kong</td>
</tr>
<tr>
<td>5. Republic of Korea</td>
</tr>
<tr>
<td>6. Pakistan</td>
</tr>
<tr>
<td>7. Colombia</td>
</tr>
<tr>
<td>8. Turkey</td>
</tr>
<tr>
<td>9. India</td>
</tr>
<tr>
<td>10. United Arab Republic</td>
</tr>
<tr>
<td>11. Greece</td>
</tr>
<tr>
<td>12. Portugal</td>
</tr>
<tr>
<td>13. Australia</td>
</tr>
<tr>
<td>14. Poland</td>
</tr>
<tr>
<td>15. United States</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Japan</td>
</tr>
<tr>
<td>17. Canada</td>
</tr>
<tr>
<td>18. Italy</td>
</tr>
<tr>
<td>19. Norway</td>
</tr>
<tr>
<td>20. Spain</td>
</tr>
<tr>
<td>21. Austria</td>
</tr>
<tr>
<td>22. Germany, F.R.</td>
</tr>
<tr>
<td><strong>Total EEC</strong></td>
</tr>
<tr>
<td>23. Belgium/Luxembourg</td>
</tr>
<tr>
<td>24. France</td>
</tr>
<tr>
<td>25. Finland</td>
</tr>
<tr>
<td>26. Netherlands</td>
</tr>
<tr>
<td>27. Denmark</td>
</tr>
<tr>
<td>28. Sweden</td>
</tr>
<tr>
<td>29. United Kingdom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Looms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage change in looms in place</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A. INCREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Republic of China</td>
</tr>
<tr>
<td>2. Republic of Korea</td>
</tr>
<tr>
<td>3. Hong Kong</td>
</tr>
<tr>
<td>4. Pakistan</td>
</tr>
<tr>
<td>5. Turkey</td>
</tr>
<tr>
<td>6. United Arab Republic</td>
</tr>
<tr>
<td>7. India</td>
</tr>
<tr>
<td>8. Spain</td>
</tr>
<tr>
<td>9. Colombia</td>
</tr>
<tr>
<td>10. Portugal</td>
</tr>
<tr>
<td>11. Japan</td>
</tr>
<tr>
<td>12. Poland</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>B. DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Mexico</td>
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<tr>
<td>14. Israel</td>
</tr>
<tr>
<td>15. Greece</td>
</tr>
<tr>
<td>16. Australia</td>
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<tr>
<td>17. Canada</td>
</tr>
<tr>
<td>18. United States</td>
</tr>
<tr>
<td>19. Norway</td>
</tr>
<tr>
<td>20. Denmark</td>
</tr>
<tr>
<td>21. Italy</td>
</tr>
<tr>
<td>22. Finland</td>
</tr>
<tr>
<td>23. France</td>
</tr>
<tr>
<td>24. Belgium/Luxembourg</td>
</tr>
<tr>
<td><strong>Total EEC</strong></td>
</tr>
<tr>
<td>25. Austria</td>
</tr>
<tr>
<td>26. Sweden</td>
</tr>
<tr>
<td>27. United Kingdom</td>
</tr>
<tr>
<td>28. Germany, F.R.</td>
</tr>
<tr>
<td>29. Netherlands</td>
</tr>
</tbody>
</table>

Source: Based on IFCATI statistics.
67. From the replies to the questionnaire COT/W/110 as it relates to the estimated number of spindles and looms in place by 1970, it is also clear that most of the developed countries expect the downward trend to continue while the Group II countries which sent in replies expect further increases in installed capacity, except India where no appreciable change is foreseen.

Employment

68. Like changes in machinery installed, changes in the level of employment in the industry by itself are not a sufficient indicator of changes in the productive capacity of the industry, in view of the very significant increases in labour productivity achieved almost everywhere as a result of the increasing specialization and installation of ever more efficient machinery, and of more efficient management. Nevertheless, data on changes in employment may be considered a useful indicator of structural changes in the industry.

Table 11
CHANGE IN EMPLOYMENT OVER THE PERIOD 1960 TO 1967 IN THE COTTON TEXTILE INDUSTRIES OF GROUP I COUNTRIES

<table>
<thead>
<tr>
<th>Countries listed in order of relative decrease</th>
<th>Percentage change in employment</th>
<th>Absolute change in thousand employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Sweden</td>
<td>-35</td>
<td>- 4.6</td>
</tr>
<tr>
<td>2. Germany, F.R.</td>
<td>-34</td>
<td>- 57.3</td>
</tr>
<tr>
<td>3. Netherlands</td>
<td>-33</td>
<td>- 16.9</td>
</tr>
<tr>
<td>4. United Kingdom</td>
<td>-32</td>
<td>-103.2</td>
</tr>
<tr>
<td>5. Finland</td>
<td>-32</td>
<td>- 2.2</td>
</tr>
<tr>
<td>6. Italy</td>
<td>-31</td>
<td>- 51.2</td>
</tr>
<tr>
<td>7. Belgium/Luxembourg</td>
<td>-30</td>
<td>- 9.6</td>
</tr>
<tr>
<td>8. Austria</td>
<td>-28</td>
<td>- 6.7</td>
</tr>
<tr>
<td>9. France</td>
<td>-27</td>
<td>- 32.4</td>
</tr>
<tr>
<td>10. United States</td>
<td>- 9</td>
<td>- 28.3</td>
</tr>
<tr>
<td>11. Canada</td>
<td>- 8</td>
<td>- 1.4</td>
</tr>
<tr>
<td>12. Australia</td>
<td>unchanged</td>
<td>-</td>
</tr>
<tr>
<td>13. Norway</td>
<td>unchanged</td>
<td>-</td>
</tr>
</tbody>
</table>

21960-1968.
3United States: Employment in cotton weaving and finishing mills only.

Source: Replies to COT/W/110.
69. The downward movement in most of the Group I countries contrasts with an increase in employment in the cotton textile industry in all of the Group II countries replying to the questionnaire. The increases in the period under review amounted to 3 per cent (33,000 workers) in India, 20 per cent (8.6 thousand) in Hong Kong, 31 per cent (or 47,000) in Pakistan, and 100 per cent (or 31.8 thousand) in the Republic of China.

70. In the Group I countries employment in the cotton textiles sector in 1970 is at best expected to remain stationary or to show a further decline as compared with the 1967/68 level. India expects no appreciable change in cotton textile industry employment in 1970 as compared with 1968 when employment was, however, down by 1.5 per cent or 14,000 from its 1967 level. Employment is expected to register a modest increase in Pakistan and Hong Kong and a more significant one in the Republic of China and in Turkey.

Concentration in the industry

71. While comprehensive data on the organization of the cotton textile industry reaching back over a number of years and broadly comparable as between countries are only available for a few of the participating countries, the data supplied in response to the questionnaire leave no doubt as to the main trend which has everywhere been towards the concentration of productive capacity in fewer firms and individual producing units.

72. For instance, in the United Kingdom out of about 870 cotton textile mills in operation in 1961 only 469 were still in existence in October 1968, a decrease of about 46 per cent. In France the number of cotton textile mills decreased from 842 in 1960 to 606 in 1968 and the number of firms from 554 to 399, a contraction of 28 and 39 per cent respectively. In the Federal Republic of Germany, the number of cotton textile mills went down from 664 in 1960 to 454 in 1968, or a drop by about 32 per cent. In Italy 144 cotton mills closed their gates over the period 1960-1968, or a rate of decrease of 17 per cent. In Belgium 17 spinning mills, or 27 per cent of the 1960 number, closed down over the period 1960 to 1968; a decrease of 27 per cent - 66 mills - likewise occurring in weaving but over a shorter period, 1960 to 1967. In the Netherlands 44 mills or 28 per cent of all mills were closed down over the period 1961 to 1967. In Sweden, the number of mills members of Swedish Cotton Manufacturers Association, which account for 100 per cent of the cotton yarn production and 90 per cent of the production of cotton fabrics, decreased from 13 in 1960 to 10 in 1968.

1 The changes relate to the period 1960-1968.
2 Spinners, waste spinners, doublers, weavers and finishers.
No official data on mill closures are available for the United States. From such qualitative information as is available it appears, however, that here too the process of concentration and integration, though maybe at a slower rate than in the 1950's, has been continuing during the period under review.

Investment

73. While data on gross fixed investment supplied by individual countries in response to the questionnaire COT/W/110 are not always strictly comparable with each other on account of differences in definitions used, the figures listed below should give some indication of the broad magnitudes of the investment effort in recent years in the cotton textiles industries of Group I countries.

74. In Europe, the United Kingdom tops the list with an average annual investment of some £77 million over the years 1960 to 1967; the Federal Republic of Germany comes next with about £60 million invested annually on the average, in the same period, followed by Italy, £30.4 million; France, £27.3 million; the Netherlands, £13.5 million and Belgium, £11 million. In Canada, outlays for repair expenditure and new production facilities averaged in the same period to £19.6 million per annum, and investment in the Australian cotton textile industry to approximately £6 million per annum. In the United States, investment in cotton weaving and finishing mills alone amounted to approximately $192 million annually in the period 1963 to 1967. The relative magnitude of the investment effort by individual national industries would be better expressed by investment figures per employee, machine or unit of output in some base period; unfortunately, the statistics available to the secretariat are not internationally comparable in this respect.

Changes in productivity

75. As might be expected, the heavy outlays incurred by the textile industry for modernizing the machine park and rationalizing operations has in most instances been reflected in improved machine and labour productivity, often sufficiently so to enable the industry to maintain or even expand its production despite a substantial cutback in the number of employees as well as machines in operation.

76. However, clearly visible as changes in productivity might be on the shop floor or at the firm level, they are difficult to measure for the industry as a whole; and even more difficult is the measurement of productivity differentials between national industries. Not only can the input variables for the calculation differ on account of differences in definitions used - for example in delimiting the cotton industry or in defining "production workers" etc. - but in many cases the type and composition of output of one country's cotton textile industry may differ significantly from that of another country's industry, for instance on account of the proportion of light- and heavyweight fabrics in total fabric production. Even apart from any shortcomings due to often incomplete statistical coverage and possible discrepancies arising from matching data from different sources, the productivity statistics included in this chapter should be regarded with certain caution.
77. Data supplied in response to the questionnaire show for the United Kingdom an increase in labour productivity\(^1\) over the period 1960 to 1968 of 31 per cent in spinning and 25 per cent in weaving, corresponding to compound annual rates of increase of 3.4 and 2.5 per cent, respectively. Labour productivity in Belgium measured in the same manner is reported to have risen by 47 per cent over the same period in cotton spinning, or by 4.9 per cent annually, and by 57 per cent in cotton weaving in 1960-1967 which corresponds to an average annual increase of 6.7 per cent. In Finland, the increase reported for the period 1961-1968 is 44 per cent in spinning and 39 per cent in weaving, or 5.3 and 9.5 per cent annually. Canada notified an increase in labour productivity in spinning of 18 per cent over the period 1960-1968, i.e. of 2.1 per cent per year, and if total cotton textile manufacturing is considered, an increase (in constant dollars) of 31 per cent, or of 3.4 per cent per year, in value added per employee. In United States cotton weaving mills output per production worker in constant dollars increased by 36 per cent over the period 1960 to 1966, equivalent to a compound annual rate of 5.3 per cent. Italy estimates that labour productivity in the whole of the cotton textile sector over the period 1960 to 1968 showed an average annual rate of growth of about 5 per cent or a total increase of about 48 per cent. The productivity increase reported by the Netherlands, but relating to the whole of its textile industry, is 37 per cent for the period 1960 to 1967, corresponding to an annual rate of 4.6 per cent. The data supplied by the Federal Republic of Germany relate only to machine productivity in spinning and weaving generally, showing an increase over the period 1960 to 1967 in yarn production per spindle of 13 per cent and a 60 per cent higher fabric output (by weight) per loom, or an average annual increase of 1.8 and 6.9 per cent, respectively.

78. Of the Group II countries, India recorded an increase of about 14 per cent in yarn production per worker over the period 1960 to 1967; and in cloth production an increase by about 3 per cent. The Republic of China (Taiwan) reported growth in labour productivity by about 10 per cent over the period 1960 to 1968 for both cotton spinning and weaving. Labour productivity in Hong Kong spinning mills recorded an increase of 13 per cent over the period 1964 to 1967 and in weaving an increase of 17 per cent.

79. Heterogeneous and incomparable with each other as the above data may be, they do show significant increases in labour productivity over the period under review, particularly so in the Group I countries. With very few exceptions, labour productivity in the cotton textile industries of these countries increased at a rate above the average for all manufacturing. The more uniform and comprehensive data compiled by IFCATI point in the same direction, showing that over the period under review average machine productivity increased on the whole considerably faster in the Group I countries than in Group II.

80. Several mutually compatible explanations of this phenomenon are possible. First, the relatively faster increase in average machine productivity in the Group I countries is, of course, to a very large extent the result of scrapping redundant equipment. Obviously, there existed more scope in the majority of

\(^{1}\)Volume of yarn or fabric output per employee.
Group I countries for eliminating idle and obsolete equipment than among the Group II countries whose textile industries are in most cases of a more recent origin and contained less, if any, idle equipment. Mainly due to their lower ratio of labour cost to capital cost, the rates of average machine utilization in Group II countries were already in the base year on the whole higher than those still current in Europe. Second, it is likely that the general economic conditions of the Group II countries, in particular the above-mentioned ratio of labour to capital cost, were less conducive to further modernization of their textile industries by the installation of the most up-to-date high-speed machinery than the overall economic conditions in the Group I countries where a large part of the increase in machine efficiency is essentially due to the higher output of the new equipment being installed. This can be seen from the fact that as both the cotton spinning and weaving sectors in most of the Group I countries were, on the whole, able to maintain a level of output fairly close to that of the base year and some even to expand their production in the period 1962 to 1967, the total number of spindle and loom hours worked almost everywhere showed a substantial decrease. In the United States, the total number of loom hours worked also showed a decrease, but total spindle hours worked remained practically unchanged. In the Group II countries, on the other hand, the increase in the production of yarns and fabrics in cotton spinning was virtually everywhere accompanied by an increase in the total number of spindle and loom hours worked, and in Japan there was a small increase in total spindle hours worked and a moderate one in total loom hours worked.
Table 12

INDEX OF PRODUCTION IN THE COTTON SECTOR OF ALL YARNS AND FABRICS PER TOTAL SPINDLE AND LOOM HOURS OF MACHINERY IN PLACE (1960 = 100)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>90</td>
<td>97</td>
<td>159</td>
<td>150</td>
</tr>
<tr>
<td>Austria</td>
<td>103</td>
<td>94</td>
<td>122</td>
<td>134</td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>113</td>
<td>116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium/Luxembourg</td>
<td>107</td>
<td>109</td>
<td>121</td>
<td>128</td>
</tr>
<tr>
<td>France</td>
<td>108</td>
<td>112</td>
<td>114</td>
<td>125</td>
</tr>
<tr>
<td>Germany, F.R.</td>
<td>107</td>
<td>108</td>
<td>128</td>
<td>134</td>
</tr>
<tr>
<td>Italy</td>
<td>113</td>
<td>112</td>
<td>117</td>
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<tr>
<td>Netherlands</td>
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<td>Finland</td>
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<td>Norway</td>
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<tr>
<td>United Arab Republic</td>
<td>95</td>
<td>99</td>
<td>87</td>
<td>93</td>
</tr>
</tbody>
</table>

Source: Derived from statistics supplied by IFCATI, cf. also Tables III/3 and III/4.
PART IV - MEASURES FOR FACILITATING ADJUSTMENTS IN THE COTTON TEXTILE SECTOR

General

81. The material supplied by participating countries, developed and developing, in response to Part I of the questionnaire, i.e. "Measures for facilitating Adjustments in the Cotton Textile Sector" is reproduced in the Annex to this document.

82. A brief analysis of adjustment measures in developed countries, based on their submissions, is given in the following paragraphs. With regard to developing countries, information has not been received from a sufficient number of governments to permit a description of the general pattern of adjustments in these countries, and therefore they are not dealt with in this analysis.

83. The measures taken by the developed countries to facilitate adjustments in the cotton textile sector can be classified in two broad groups. Firstly, adjustment measures taken by governments and directed to industry in general or to the cotton textile industry in particular. In the second place, strenuous efforts made by the cotton textile industry itself to adjust its production facilities to changes in market conditions.

I. Government measures

(a) General adjustment measures

84. In most developed countries, general adjustment measures have been conceived by governments to assist industry generally to improve its efficiency through, inter alia, re-organization, rationalization, relocation of plant and technical and development research. With this end in view, certain measures have been aimed at stimulating investments in new industries and at restructuring existing operations to achieve more efficient lines of production. These measures include financial assistance as, for example: grants and loans; guarantee of credit; subsidies for the payment of interest on private loans; funds to finance rationalization, mergers and fusions. Investments have been encouraged also by fiscal policy measures in the form of tax exemption, rebate and depreciation allowances. Legislation is available also for improving employment opportunities and facilitating labour mobility. In addition, technical assistance measures have been designed to help industry to improve its productive and technological position. The industrial policy pursued by these countries, as revealed by replies to the questionnaire, entails no assistance in the form of subsidies to production or trade.

85. Certain measures exist in Canada and in the United States which provide assistance for industrial adjustment to cope with the difficulties encountered as a result of increased imports. Canada operates a General Adjustment Assistance Programme providing for assured loans to assist manufacturers to meet increased import competition. The United States adopted, under the Trade Expansion Act of 1962, a programme of financial assistance for both workers and companies injured by imports engendered by tariff concessions.
86. The cotton textile industry in these countries can avail itself of the adjustment measures applicable to industry generally. It is not always clear whether, and to what extent, general adjustment measures have, in fact, been used in favour of the cotton textile industry, as it is difficult to separate the consequence of these measures from other interrelated economic factors and even more difficult to assess precisely their effects on the volume and direction of investments in the cotton textile sector. However, it is generally pointed out that these measures, and particularly those providing for tax advantages, adjustment premiums and equipment credits, have proved beneficial to cotton textile firms which have made use of them.

87. Most countries lack measures designed specifically to diversify employment opportunities in areas where cotton textile mills provide an exceptionally large proportion of total employment. However, mills located in depressed areas have derived benefit from legislation for economic development programmes aimed at increasing industrial activity in these areas. These programmes have made it possible to re-organize such mills or to convert their activities to different lines of production. In the case of France and Sweden, as a result of a contraction in the textile industry in some areas, measures have been taken to facilitate the redeployment of workers becoming redundant. Training programmes have generally helped the cotton textile industry by upgrading the scales of labour needed to operate and maintain the modern sophisticated equipment.

88. In some countries the industry has benefited from government research programmes or from the activities of State supported textile institutes. In one country, universities are equipped to assist, on an ad hoc basis, textile firms with certain research and development projects.

89. In a limited number of cases, however, special factors have prevented the cotton textile industry from deriving full benefit from adjustment measures available under general legislation. In Austria, for example, it is reported that in areas which are predominantly dependent on the textile industry, such as Lancashire and New England, the diversification of the industry has been going on for a long time.

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1 It should be noted, however, that in areas which are predominantly dependent on the textile industry, such as Lancashire and New England, the diversification of the industry has been going on for a long time.

2 It is of interest to mention a passage in the report commissioned by the Textile Council in the United Kingdom on present performance and future prospects of the cotton and allied textiles, in which it is stated that "textile firms have not made full use of the fiscal aids already provided by the government. Although this is to some extent due to the fact that the traditional textile industry is largely situated outside the development areas and thus denied the greatest single fiscal aid of high investment grants, we think many firms have failed to look at investment opportunities in a scientific way and we advocate that more attention be given by the industry to this subject".
that the legislation aimed at facilitating industrial adjustments is not expected to produce tangible results for the cotton industry. Narrow profit margins in the Austrian cotton textile industry preclude benefits which otherwise might have accrued from legislation providing for the establishment of investment reserves; the structure of the industry, being family owned, does not lend itself to mergers or conversions which are the pre-conditions of tax advantages. In the United States no firms or workers have qualified for assistance because the eligibility criteria provided in the Trade Expansion Act are too stringent; the Administration is, however, considering the possibility of easing these criteria.

(b) Specific adjustment measures

90. Some countries have taken specific measures to facilitate adjustments either in the textile industry generally or in the cotton industry in particular. The absence of specific legislation in others may be due, at least in some cases, to the fact that the industrial policy of these countries is not sectorally oriented.

91. The French Government has set up special renovation funds for the textile industry financed by a para-fiscal textile tax. The revenue from this tax is devoted to promoting research and structural reform in the textile industry. For the cotton sector, the Central Committee, with the approval of the Government, was set up in 1960 with a view to promote the necessary adjustments with the objective of eliminating 1,200,000 spindles and 25,000 looms within ten years. It has assisted in the closing down of several firms by providing compensation for obsolete machinery and assisting in the replacement of unemployed workers. Further rehabilitation of the cotton sector is needed but economic and social conditions have rendered this impossible.

92. In Japan the "Textile Industry, Equipment and Other Temporary Measures Law" came into force on 1 October 1964, aimed at mothballing surplus equipment in the spinning sector by joint action of the firms concerned. Under this law, State loans are provided mainly to small and medium-sized spinners to help in meeting the necessary costs. The law thus aims at reducing surplus capacity and promoting sophisticated end products. In order to supplement the effect of this Act, the Government is implementing "the structural improvement policy" with a view to encouraging modernization of plants and equipment in the spinning, weaving and knitting industries and scrapping old machinery as well as facilitating smooth conversion of business.

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1Industrie Cotonnière Française, 44th Year, No. 6, June 1963, "Account of three years' activities of the Central Committee of the Cotton Industry".

2No information received from Japan.
93. The Government of the Netherlands, with a view to alleviating difficulties encountered by the cotton textile industry, decided to grant the industry a State credit of f. 150 million to finance investment over the years 1968, 1969 and 1970. This financial assistance makes no provision for compensation for scrapping obsolete equipment.

94. The measures taken by the Government of the United Kingdom to rationalize the cotton textile industry were embodied in the Cotton Industry Act 1959. This Act provided for the payment by the Government of two thirds of the compensation for scrapping obsolete machinery and up to one fourth of the cost for re-equipment. The total amount paid by the Government was approximately £25 million. Payments to compensate employees who lost their jobs as a result of the scrapping and re-equipment processes were financed entirely by the industry.

95. In 1961 the United States Government allowed a faster write-off on textile machinery and adopted a system of tax credits for money invested in production machinery or buildings to house such machinery. The industry benefits from a Government research programme aimed at improving the quality of cotton fibres and developing cotton fabrics with improved durable press characters. The Government also contributed $1.6 million over a five-year period to a co-operative research programme with the textile and apparel industries. The most important measure applying primarily to the cotton textile industry was the adoption by Congress in 1964 of legislation whereby domestic mills could obtain American cotton at the same prices as those paid by foreign producers.

96. Apart from the above-mentioned specific measures which have been implemented, other measures have been contemplated by some countries. Some of these measures are at an advanced stage, as for example in the case of Italy and the Federal Republic of Germany.

97. In Italy the Council of Ministers adopted, at the end of March 1969, subject to Parliamentary approval, draft legislation providing facilities in favour of the textile industry as a whole. This legislation provides financial assistance, tax advantages and training aids with a view to improving the competitive position and the profitability of textile mills while avoiding increase in production capacity.

98. In the Federal Republic of Germany, discussions on a programme aimed at improving the structure of the cotton industry are being continued. A bill providing for granting of tax privileges in case of a change in the legal form of any enterprise has been submitted to Parliament. If this bill, which applies however to industry generally, were passed, it would permit cotton textile firms to change their legal form into that of registered corporations, thus facilitating their access to the capital market.
99. The United Kingdom Government is actually studying the report presented by the Textile Council on the present performance and future prospects of the cotton and allied textile industry and the recommendation made therein. Some decisions have been taken to assist the industry. These are now being discussed with the major suppliers of imported cotton textiles.

100. The Austrian Government is contemplating various additional general assistance measures to remove barriers hampering the adjustment of the economy to the changed market situation. It is rather premature to judge whether and to what extent these measures will facilitate structural adjustments in the cotton textile industry.

101. In some countries, no specific measures have been taken by the governments to facilitate adjustments in the cotton textile industry. In such cases, various factors have been cited by them as militating against the introduction of such measures as, for example, budgetary, fiscal or internal policy; or the reluctance of the industry to contribute in the financing.

II. Adjustment measures taken by the cotton textile industry

102. The cotton textile industry in almost all developed countries has taken various steps to adjust itself to changing market conditions and modern requirements. International competition, the development of new fibre properties, better production and processing techniques as well as various other factors have induced the adjustments which have been made. While adjustment steps differ widely within firms and from country to country, the industry's activities would appear to be hinged, as far as can be judged from the fragmentary information received, on the following broad areas: elimination of excess capacity and modernization, concentration, technical and market research and the shift to new and more sophisticated end products.

103. A great deal of effort has been directed in most of the developed countries towards eliminating excess capacity and obsolete equipment. This is evidenced by the marked decline in the number of spindles and looms in place in these countries. This process has been effected in some countries through decisions by individual cotton textile firms while in other countries, as for example in Belgium and France, scrapping programmes have been adopted, jointly on an industry-wide basis. In Belgium, the spinners have signed voluntary conventions under which the installation of new spindles was to be effected, without compensation, simultaneously with the destruction of an equal number of obsolete spindles. In addition, compensation grants to undertakings contemplating the cessation of activities are financed by the spinners. As a result of these measures a large

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The United Kingdom Government intends to replace their existing general quota system at the end of 1971 and to introduce a tariff on cotton textiles from Commonwealth countries as from 1 January 1972. The abolition of quota control will not, however, apply to Eastern European countries and Mainland China.
The number of spinning mills have been closed down. The unsatisfactory economic, financial and social situation, accentuated by increasing imports made it difficult for the remaining spinners to finance these measures and these therefore had to be abandoned in 1967. In France, a professional group was set up in 1960 to rationalize the cotton textile industry. A fund financed by the industry itself has enabled the group to scrap 900,000 spindles and 6,000 looms during the period 1960 to 1965.

104. In a number of countries, this process of contraction has not come to an end and they have to curtail further their productive capacity and eliminate remaining obsolete equipment. In some countries, on the other hand, the optimum size in the cotton textile productive capacity has been attained and there is little room for further contraction.

105. The industry has been investing large sums of money in new plant or the modernization of existing equipment. Under the impetus of the increased capital intensity in the cotton textile industry and so as to keep pace with technological progress, the scale of investment by the industry has been increasing in recent years. In the United States, for example, investment by the cotton broadwoven fabric mills industry, from 1962 to 1966 averaged $151 million annually as compared with $72 million annually during the preceding five-year period. In some countries, however, the investments fell short of the industry's requirements: in Finland adjustments have been hampered by difficulties in raising capital; in the United Kingdom investment within the industry has been taking place but not at a rate sufficient to meet its requirements.

106. There have been numerous instances of concentration of production units within the cotton industry of most developed countries. This has resulted in there being many fewer units in operation, in almost all countries, than was the case in 1960. This fall which has come about through the elimination of marginal units and the accelerated pace of mergers was accompanied by a progressive increase in the proportion of total manufacturing capacity accounted for by the largest undertakings. In some countries this marked shift to a more concentrated structure has been stimulated by and associated with the increasing use of man-made fibres which has induced reorganization of the industry to process these as well as the natural fibre. The industry now in certain countries is developing into a multi-fibre and multi-process industry.

107. There is some evidence of increasing research and promotional activities aimed at adjusting the production to market requirements as well as the development of new processes and end-uses. In the Netherlands, the cotton industry has set up a foundation to carry out overall analyses of markets within the country and abroad, and to work in co-operation with fashion organizations which are members of international institutes. In the United States, spending on research and development by the combined textile and apparel industries increased from $15 million in 1957 to $30 million in 1961 and $42 million in 1966, mainly to develop new products and to improve existing items.
108. The evolution of textile products which has been influenced by a multiplicity of new fibres and fibre blends, new finishing processes and other technical improvements has made it possible for the industry in some countries to shift from products similar to those produced in the developing countries to new and more sophisticated end products. For example, the Norwegian industry adjusts its production programme away from those products where competition from developing countries is most severe and instead branded products and specialities are developed. In Austria, the contraction of the cotton industry relates mainly to firms producing fabrics of the kind produced in the developing countries. The Canadian industry has taken steps to reduce its dependence on the manufacture of cotton fabrics: several types of products have been retired from manufacture. On the other hand progress is being made in fibre blending.
Annex

INFORMATION SUPPLIED BY PARTICIPATING COUNTRIES ON ADJUSTMENT MEASURES

This annex sets out the information supplied by participating countries both developed and developing in response to "Part I" of the questionnaire. The information is classified on the same basis as the questions listed in that part except in the case of replies to questions 5 and 6 which have been amalgamated under one heading.

Thus the information is classified on a country-by-country basis under each of the following headings:

I. Measures taken by the governments for facilitating adjustments

II. Measures contemplated by the governments for facilitating adjustments in the cotton textile industry

III. Field of application of the adjustment measures

IV. Adjustment measures taken by the cotton textile industry

V. Reasons for absence or failure of special adjustment measures: remedial action

1The information from the Republic of Korea was received when this document had reached an advanced stage of preparation. It is reproduced as it was received at the end of this annex.
I. MEASURES TAKEN BY THE GOVERNMENTS FOR FACILITATING ADJUSTMENTS

In Australia, taxation laws provide for an investment allowance in the form of a deduction from taxable income of a sum equal to 20 per cent of the cost of new plant and equipment. This allowance, which is additional to normal depreciation allowance, applies to all Australian manufacturing industries only in the first year of use of new plant and equipment. The Australian cotton textile industry supplies only about 20 per cent of Australia's requirements. Production is concentrated principally on the heavier types of fabric, and household textiles. Further, Australia maintains no import restrictions that are inconsistent with the GATT; even those which are imposed under Article XIX and which are currently under review, apply only to a small range of knitted goods. In these circumstances, there is little scope for any adjustments in the industry, and there are no special measures to facilitate adjustment.

In Austria, the Government has not taken any measures to facilitate adjustments in the domestic cotton textiles industry. The measures taken so far are applicable to Austrian industry generally. To facilitate investments and structural adjustments, respectively, and to promote economic development, the Federal Acts listed below contain inter alia the following provisions: accelerated depreciation allowances, creation of investment reserves, tax advantages for non-distributed profits, corporation tax relief, conversion of resources into share capital, improvement of the economic structure, promotion of development and modernization investments, promotion of research.


(b) Federal Act concerning the corporation tax of 6 July 1966 (Corporation Tax Act 1966). Federal Gazette No. 156/1966. The corporation tax is reduced by 50 per cent of the amount due, if stock corporations which are wholly subject to taxation distribute their profits statutorily.

(c) Federal Act concerning tax advantages in the context of the Conversion of Resources into Share Capital of 6 July 1966. Federal Gazette No. 157/1966. The purchase of new shares (for increasing the nominal capital) by a partner is not subject to income or revenue taxation.

(d) Federal Act concerning the Promotion of the Financing of Development and Modernization Investments of 23 January 1969. Federal Gazette No. 56/1969. This Act creates an essential precondition for increased private investment activities by the creation of a new credit instrument. This instrument provides guarantees in co-operation with the Development and Modernization Fund Limited Liability Company for investment credits aiming at adjustments, conversions and relocations of industrial or research enterprises. To provide finance facilities for large-scale
industries in addition to the above-mentioned credit instrument, the Austrian Investment-Credit Joint Stock Company has been established. Credits for conversions of production, for reinvestments and for the mergers of enterprises enjoy priority.


(f) Federal Act concerning the Promotion of Scientific Research of 25 October 1967 (Research Promotion Act 1967). Federal Gazette No. 377/1967. In Austria a "Research Promotion Fund for Trade and Industry" has been established for the promotion of research in the field of trade and industry. Besides, the Austrian budget provides also a certain amount for technical research.

(g) Federal Act amending the Trust Law 1959, of 19 June 1968 (Fifth Amendment of the Trust Act). Federal Gazette No. 241/1968. The Trust Law as amended provides inter alia for procedures to facilitate the co-operation of enterprises.


In Canada, no measures have been taken by Federal or Provincial Governments since 1960 which have been specifically designed to facilitate adjustments in the cotton textile industry. The following measures are applicable to industry generally.

Areas of slow economic growth: the Federal Government makes available cash grants or credits against income tax liabilities to new or expanded manufacturing or processing enterprises located in designated areas of slow economic growth or chronic unemployment. The Province of Quebec has established two schemes under which grants and/or tax credits are available to new or established industries meeting certain criteria. The Province of Ontario has recently inaugurated a programme of interest-free loans with non-repayable clauses to foster industrial expansion or upgrading in designated areas of the province.
All areas: The Federal Government operates a General Adjustment Assistance Programme (GAAP) providing insured loans to assist manufacturers to restructure their operations to meet increased import competition or to take advantage of export opportunities resulting from Kennedy Round tariff changes.

There are no provincial or Federal production and trade subsidies paid to Canadian secondary manufacturers.

There have been no measures specifically related to the cotton industry for diversifying employment opportunities. In areas where the existence of a cotton mill coincides with the Federal "designated" area programmes there has been some diversification because of the entry of new industry.

Training and retraining programmes in industry have been in effect since 1965. The implementation of these programmes was governed by Federal-Provincial technical and vocational training assistance agreements until 1 April 1967, and after that date has been governed by the Canada Adult Occupational Training Act. The programmes assist manufacturers in the retraining and upgrading of their employees with the Federal Government paying all direct costs and reimbursing a certain part of the wages of the trainees. Technical assistance related to training and curriculum development is usually provided by Provincial Departments of Labour and/or Education. The Federal Government again reimburses Provincial Governments for the cost of such support.

The Federal Government administers several programmes designed to assist industry to maintain its productive and technological position:

(i) Programme for the Advancement of Industrial Technology (PAIT)

This is a shared risk programme in which the Government loans qualifying companies up to one-half the cost of a successful research and development project. The Government waives the share it has invested in any such project should it fail or be found not to be commercially feasible.

(ii) Industrial Research and Development Incentives Programme (IRDIA)

In addition to normal deductions from income tax allowed by the Government for specified research and development work, the IRDIA Programme provides for additional allowances in the form of cash grants, up to 25 per cent of all capital expenditures for research and development plus 25 per cent of the increase in current expenditures for this purpose over the preceding five years.

(iii) Industrial Research Assistance Programme (IRAP)

This programme which is administered by the National Research Council is aimed at promoting the establishment of new industrial research activities and the expansion for existing ones by sharing through grants the cost of qualifying projects.
(iv) The National Research Council, the Ontario Research Foundation and some universities are equipped to assist on an ad hoc basis certain Canadian textile companies with certain research and development projects. In addition the Federal Government administers a shared cost Defence Industrial Research Programme (DIRP) for the purpose of stimulating and strengthening research capabilities of Canadian industry in the critical areas of defence technology.

The Manpower Adjustment Programme is an integral part of a Government programme for the development and utilization of manpower. Its purpose is to facilitate joint labour and management research and planning to accommodate internal manpower adjustment required by technological and other change. The Manpower Consultative Service administers the programmes and its financial incentives to encourage the establishment of joint private adjustment programmes, coordinates public adjustment manpower programmes to supplement the private plans, and provides technical advice concerning internal manpower and adjustment processes.

The Belgian Government has not taken any special measures since 1960 to facilitate adjustments in the cotton textiles industry.

Legislative measures relating to adjustments are applicable to the industry generally and are likely to benefit the textile industry.

It should be pointed out that Belgian industrial policy has hardly ever been sectorially slanted. Most measures taken were intended to pursue general objectives (expansion of the economy and employment) and the methods used were limited to economic incentives without any direct intervention in business management.

Since 1953, a number of laws have been passed to foster productive industrial investments. Since 1959, moreover, legislation has been aimed at producing a better geographical distribution of such investments, in order to meet the problems of certain regions which are either less favoured or undergoing industrial reconversion.

Thus there is no specific assistance in favour of the cotton sector or the textile industry as a whole.

Among assistance measures for the reconversion of individual undertakings, industrial sectors or the economy as a whole, mention should first be made of the laws on aid to investments; those of 17 and 18 July 1959 (assistance for the establishment of new industries, aid to regions undergoing economic and social difficulties) and the temporary law of 14 July 1966 for the benefit of certain regions in difficulties. They provide for the following types of aid:
- reduced interest rates,
- State guarantees for certain credits,
- capital subsidies,
- ten years' exemption from anticipatory levy on immovable property,
- interest-free advances for the perfecting of prototypes,
- expropriation of land for industrial plants.

All these forms of aid may be granted on productive industrial investment, in particular on reconversion investments, for example to firms wishing to drop certain production lines in order to manufacture articles with greater or better quality finish or products for which demand is rapidly expanding. The reason for reconversion may be a shrinking market, a labour shortage, or increased international competition, due among other things, to growing import volumes from developing countries.

All sectors of the textile industry can, on request, be granted subject to certain conditions, State aid in the form of subsidies for the payment of interest on credits obtained from private financing institutions or in the form of guarantees for credits obtained, but only within the general framework of the legislation for the development of industry as a whole, as mentioned above.

Mention should also be made of fiscal incentives to speed up depreciation schedules, especially in the research field or where mergers are envisaged, since these often imply reconversion.

These accelerated depreciation allowances or tax advantages can also be obtained on request, subject to certain conditions, by all sectors of the textile industry. There are no production and trade subsidies paid to Belgian manufacturers.

The National Investment Corporation, created under the Law of 2 April 1962, is authorized to take up for the State shares in the capital of new or expanding industrial undertakings. Reconversion needs may be taken into account in the Corporation's decisions. Hence, it is not regarded as an institution set-up to aid specific industries.

The National Employment Board offers aid for vocational training and rehabilitation (Royal Decrees of 20 and 24 March 1961). Training assistance is available for staff recruited with a view to industrial reconversion, and rehabilitation aid comprises contributions to the remuneration of workers affected by the reconversion of their place of employment. In certain cases, the Board grants removal allowances, travel allowances and re-installation allowances.
Aid to new undertakings is also granted by the public authorities (State, provincial, communal, intercommunal organizations) which make available industrial sites either belonging to or expropriated by them. General measures to aid individual regions, such as infra-structure projects, collective equipment, creation of industrial zones, are also worthwhile mentioning, because reconversion at the regional level is intimately connected with reconversion at the sector level. Indeed, regional development difficulties stem from the fact that the regions are all too often dependent on economic sectors that are in difficulty (agriculture, coal-mining, textiles, rolling stock, etc.) and in order to boost the economy in these regions, the public authorities are obliged to promote their economic reconversion. In this way, the measures mentioned above can be used by the State to promote such reconversion.

There is no government research institution for the textile industry. A private body - "The Scientific and Technical Centre for the Textile Industry" (Centexbel) - may occasionally receive subsidies from the State.

The French cotton industry, set up in regions where there were employment problems, has benefited from a number of general provisions for adjustments such as equipment credits, local tax reliefs and training aids. Of these adjustment measures, the industry has been particularly interested in those which involve adjustment premium designed to facilitate the reconversion of cotton undertakings, especially in regions where they employed high percentage of local manpower.

With regard to the structure of the textile industry, the French Government has taken one specific supplementary measure: in 1967 it set up a special renovation fund for the textile industry, financed by a para-fiscal textile tax. The Government has also recognized the professional association of the cotton industry which was created in 1960 to settle the problems deriving from reductions in means of production in the industry.

In the Federal Republic of Germany no special governmental subsidies have been granted to the cotton industry up to the present time. It is true that since 1958 the firms in this branch of industry could avail themselves - just as any other undertakings - of specific credit facilities within the framework of the Programme for Reorganizational Purposes (E.R.P.) in order to adjust themselves to international competition, and in connexion with specific measures for regional promotion in Federal areas of development, and in areas adjoining the zonal border. In addition, some Länder have made available loans at lower interest rates and loan guarantees for rationalization projects; these credit facilities, however, were not limited to cotton textile firms.

No tax privileges have so far been granted to the cotton industry. The basic income tax regulations concerning depreciation do not provide for any special arrangements benefiting the cotton industry. There have been no governmental subsidies to aid exports and production of the cotton industry.

During the period 1960-1968, the textile industry of the Federal Republic of Germany has not kept pace with the industry as a whole. In 1968 the net production index (1962 = 100) of the industry as a whole rose to 131, whereas the corresponding
The index of the textile industry went up to 119.5 points only. The degree to which the individual sectors of the textile industry contributed to that development varied considerably; the cotton industry failed to match even the average growth rate of the textile industry. The cotton industry suffered much more than the textile industry from the cyclical decline as a whole during the recession (mid-1966 until the third quarter of 1967). However, in 1968 this decline was more than offset and the production index of the overall textile industry rose by 17.3 per cent. The cotton industry's share in this increase amounted only to barely 10 per cent. In the 3-4 cylinder cotton mills, the proportion of man-made fibre yarns including blended yarns with less than 50 per cent of cotton content increased to 32 per cent in 1968, whereas it had only been 26 per cent in 1967 and 25 per cent in 1966.

It can generally be said that the cotton industry, despite its intensified efforts of rationalization and despite an increase of the processing of man-made fibres, succeeded only to a limited extent to offset the disadvantages arising from structural weaknesses, change in consumer's preference for other fibres and rising imports.

In view of the difficulties described above, the Federal Government has started consultations with the industry concerned about structural programmes supported by the Government. These consultations have not yet been terminated.

In Italy, the Council of Ministers approved, at the end of March last, a draft legislation which has not yet been submitted for parliamentary approval, providing facilities in favour of the textile industry as a whole, not exclusively the cotton textile industry, although this particular sector has greater need of adjustments than the others. The purpose of the draft legislation is to improve the competitive position and the profitability of textile mills while, at the same time, avoiding any increase in production capacity, which already produces a surplus.

The advantages expected of the legislation, once the Ministry of Industry and Commerce has approved the plan drawn up by the undertakings concerned, are briefly the following:

- medium-term credits at low rates of interest are granted for re and adjustments in the textile industry;

- in areas where the textile industry represents the main activity, tax and financial incentives are granted for mills changing over from textiles and turning to other activities and for non-textile undertakings setting up in the areas in question;

- programmes for the training and re-training of workers laid off by the textile industries.
In the Netherlands the textile industry has had for several years now, difficulties to contend with. Apart from structural changes within the sector itself, competition has been partly responsible for these difficulties. Until 1967 the cotton industry had been engaged in a very thorough-going rationalization scheme without any financial aid whatsoever from the Government. In that year, the difficulties in the cotton industry reached such proportions that the Government decided to grant the industry a State credit of f. 150 million to finance investment over the years 1968, 1969 and 1970.

The credits granted to the cotton industry have been designed to enable it to carry through an investment programme aimed at improving its competitive prospects. The main purpose of the credits is to finance investments in depth. Following an analysis of the viability of an undertaking applying for a credit, this may be granted by the National Investment Bank of the Netherlands, a banking institution in which the Netherlands Government has a major interest. The interest payable by the undertaking receiving the credit is no lower than the normal bank interest. The State guarantees the credits vis-à-vis the bank.

This method of financing makes no provisions for compensation for scrapping obsolete equipment; and though the credits are granted by a bank in which the State has an interest, it cannot be said that this bank is an organization specially set up to assess and grant State-guaranteed credits, as this is a part of the functions of the bank in question.

The tax legislation does not grant special advantages to the textile industry and there are no production or trade subsidies.

The regional industrial policy laid down by the Government does not include any special measures for setting up textile mills in areas where the textile industry plays little or no part in industry as a whole.

Training for the textile industry is carried out as a rule in textile schools, elementary or advanced, subsidized by the State. Apart from this, retraining is carried out by institutes (including the Netherlands Textile Institute) which may or may not work in collaboration with scientific research institutions in the technical, commercial and economic fields. The larger textile mills at times provide training and retraining courses which they organize themselves.

The main institution for scientific research in the Netherlands is the Netherlands Organization for Applied Scientific Research (T.N.O.), a non-profit making body. As far as the textile industry is concerned, the "Fibre Institute" is the main branch of this organization. The T.N.O. is subsidized by the State; it also receives voluntary contributions from industry, and fees for the consultant services it carries out.

The Finnish Government has not taken any measures so far to facilitate adjustments in the cotton textile industry.
In the years 1960 to 1968, the Government of Norway has not taken measures specifically designed to facilitate adjustments in the cotton textile industry. The national assistance schemes apply generally to both industry and labour facing readjustment difficulties. There are two national facilities for providing assistance to industry:

1. **Assistance to structural readjustments in the home industries**

   The fiscal budget provides for direct assistance to joint measures covering an entire branch or groups of firms in cooperation to ease the adjustment of the home industries to new market formations.

2. **Industrial Development Fund**

   The purpose of this Fund is to provide guarantees, acting for the State, for loans granted by the Bank of Industry and other credit institutions to finance industrial projects.

In order to secure the equilibrium and facilitate adjustment on the labour market, the State Labour Agency applies a number of economic measures to further the mobility of manpower. Assistance may be granted to workers who are without suitable employment (or expected to be so in near future) and who take work found for them through the services of the labour agencies at a place where it is considered that there is need for the manpower. Various forms of such economic assistance are available, among which is a scheme for extraordinary vocational training for adults, which is planned to increase the supply of better qualified manpower so that adjustments within industry involving the transfer of labour from one branch to another can be facilitated.

In Sweden there are no specific legislative or governmental regulations related to structural adjustment assistance. The adjustment that has taken place has been spontaneous. It has, however, been facilitated by general official policies such as an active labour market policy. In this connexion reference can be made to the decision of the OECD Council in May 1964, to recommend that member States re-examine their manpower policies with a view to increasing their ability to solve employment problems created by technical and economic developments.

A short account of the aims and objectives of the Swedish policy in this field is given in document COT/105.

The textile industry is providing a large proportion of total employment in certain areas. Especially during the last four years the closing down of textile firms and mills has created severe problems in such areas. This has necessitated special measures, mainly the use of investment reserve funds and governmental location support, in order to diversify employment opportunities in these areas.

In 1968 a national investment bank was established to facilitate especially such investment projects that are aimed at rationalization, structural adjustments and development.
Between 1912 and 1958 annual production of cotton fabrics in the United Kingdom fell by almost 75 per cent, largely because of the decline in exports and the fact that imports had increased considerably. Towards the end of 1958, the United Kingdom Government decided to introduce measures to rationalize the domestic industry. The measures taken were embodied in the Cotton Industry Act 1959, and under the schemes for dealing with excess capacity, the United Kingdom Government agreed to pay two-thirds of the compensation for scrapping obsolete equipment (the remaining third to be paid by firms which remained in the industry). The Government also paid grants of up to 25 per cent of the cost of re-equipment with new or modernized machinery. In all, the Government's contribution, between 1959 and 1966 (when the provisions of the Act expired), was approximately £25 million. An innovation of the Act was the requirement that provision be made for the compensation of employees who lost their jobs as a result of scrapping or, indeed, as a result of re-equipment. These payments were financed entirely by levies on firms in the relevant section of the industry.

Under the Industrial Training Act 1964, the Government was given the power to set up Industrial Training Boards with the following aims:

(i) to ensure an adequate supply of properly-trained men and women at all levels in industry, from top management to factory floor;

(ii) to secure an improvement in the quality and efficiency of industrial training; and

(iii) to share the cost of training more evenly between firms.

Training, in the sense employed in the Act, includes re-training for new jobs or occupations.

The Cotton and Allied Textiles I.T.B. (one of the six textile I.T.B.'s - the others are for wool, jute, and flax; carpets; knitting and lace; man-made fibres production; and the Northern Ireland Textile I.T.B.) was set up in 1966 and includes in its scope some 8,000 establishments employing about 250,000 workers. A levy is imposed on all employers and, from the funds thus raised, grants are made available to those firms whose training measures are approved by the Board. The Textile Council's Productivity Centre also runs a wide range of training courses.

Research, and other measures for increasing productivity, are the province of the Cotton, Silk and Man-made Fibre Research Association (still known as the Shirley Institute). The Association was set up in 1961 by the merger of the British Rayon Research Association and the British Cotton Industry Research Association. The Shirley Institute is not, of course, the only research association for the textile industry, but it is one of the big three, the other two being the Hosiery and Allied Textile Research Association and the Wool Industry Research Association.
In 1961, the United States Government adopted a programme of assistance to the domestic textile and apparel industries. The programme's objective was to strengthen the domestic textile industry (which had been depressed for a decade) by restoring confidence in the industry and by encouraging firms to improve the efficiency of their operations. This programme, plus other more general measures to encourage economic growth and improve manpower utilization, have helped the cotton textile industry in its efforts to adjust to changing conditions.

The Small Business Administration and the Economic Development Administration are Government Agencies established to provide financial assistance to eligible firms that are unable to obtain funds from regular financial institutions. The Small Business Administration limits its assistance to small firms (a manufacturing firm is generally not eligible for a loan if it employs more than 250), that cannot obtain funds from a regular financial institution at a reasonable rate. Assistance may be in the form of a direct loan or of a guarantee that a loan made by a commercial leading agency will be repaid.

The Economic Development Administration (EDA) was established to assist in promoting economic health in areas with high unemployment and low family incomes. The Agency's loans to business firms are restricted to companies that plan to build new plants or enlarge existing ones in EDA-designated areas, but who are unable to secure needed financing from commercial lending agencies.

Interest rates charged by the Small Business Administration and the Economic Development Administration vary according to circumstances but are usually somewhat lower than rates charged by commercial lending agencies.

In 1961, the schedules used in calculating depreciation on textile machinery for income tax purposes were revised. Before this revision, depreciation on textile finishing equipment was based on a useful life of fifteen to twenty years and on other types of textile machinery on a useful life of fifteen to forty years. These were reduced to twelve years on finishing equipment and fifteen years on other types of textile machinery.

In addition to allowing a faster write-off on textile machinery, the Government adopted a system of tax credits that allows a firm a credit of up to 7 per cent of its Federal income tax for money invested in production machinery or buildings to house such machinery. This credit was suspended temporarily in October 1966, but was reinstated as of 10 March 1967. On 21 April 1969 the President recommended the repeal of the investment tax credit. There are no production and trade subsidies.

There are no Government programmes designed specifically to diversify employment opportunities in areas in which cotton textile mills provide a large proportion of total employment. However, some mills that are located in areas in which the Economic Development Administration is working to increase economic growth are affected by EDA's programmes to increase industrial activity in these areas.
The Government's manpower programme is designed to train people who lack the skills needed to find employment and to retrain workers whose present skills are not matched by employment opportunities. The Government supplies funds both for the training programmes and as subsistence allowances for the trainees. Although the primary goal of this programme is to assist workers to attain the skills needed to obtain employment, the programme has proved beneficial to industry by upgrading the skills of the work force. The apparel industry is largely excluded from the benefits of this programme since manpower funds are not available for training sewing machine operators.

The cotton textile industry has benefited from some Government research programmes. One is the Department of Agriculture's plant breeding programme to improve the quality of cotton fibres. The Department also conducts research to identify and promote improved cotton ginning practices. In addition, the Department of Agriculture is conducting research aimed at developing cotton fabrics with improved durable press characteristics.

The United States Government contributed $1.6 million over a five-year period to a co-operative research programme with the textile and apparel industries. This programme had the dual goal of identifying areas in which research was most needed and of encouraging textile and apparel firms to increase their own research and development efforts. The Government is not contributing any financial assistance to this project at the present time.

The United States Government restructured its raw cotton price support programme so that domestically grown cotton could be purchased by American users at the same price at which it was offered for sale abroad.

For several years prior to 1964, United States Government programmes to support the price of domestically grown cotton resulted in domestic producers having to pay substantially higher prices for raw cotton than those paid by foreign purchasers. In April 1964, Congress adopted legislation whereby domestic mills could obtain United States cotton at the same prices as those paid by foreign purchasers. The price equalization policy that began with the two-year programme enacted in 1964 has been extended by subsequent legislation in 1965 and again in 1968.

In Turkey, there are no special credits for adjustments in the cotton textile industry. Credits can be obtained from private banks or from the Investment Bank.

Beginning on 28 December 1961, the Turkish authorities have taken the following measures in respect of percentage depreciation figures: ginning and pressing equipment - 6 per cent; spinning machinery - 8 per cent; weaving machinery - 8 per cent; other machinery - 10 per cent; equipment for mercerizing, dyeing, washing, finishing, printing - 10 per cent; labelling and packing - 5 per cent; machinery involving chemicals - 20 per cent; machinery not involving chemicals - 10 per cent.
Under the Five Year Plan and the 1968 and 1969 Programme, and with the approval of the State Planning Authority, industrialists can make use of industrial development funds earmarked for the modernization of industries. A 5 1/4 per cent rediscount credit is granted to industrialists in the sectors of industry included in the Plan and the annual Programme. Accelerated depreciation allowances are granted at the request of industrialists and subject to technical control.

Generally speaking, there is no system of production or trade subsidies. There is, however, a system of refund of taxes on exports of manufactured articles. Investments made in accordance with the Plan are encouraged by the application of a reduction of the customs tariffs, in respect of imports, deferred payments of customs duties on investment products and tax reliefs. In areas where the manpower ratio is very high exceptions are made. Furthermore an 80 per cent reduction of taxes is applied in twenty-three less-developed departments to encourage investment.

Retraining courses are organized in the factories. Industrialists have the advantage of the technical research done by the National Productivity Centre. In addition, the universities undertake scientific research and there are also private technical research organizations.

In pursuance of Pakistan's Industrial Policy formulated after independence giving priority for industries based on indigenous raw material, the cotton textile and jute industry assumed the first and major importance. As it was, after World War II, the supply position of industrial machinery from foreign countries like Japan, Germany and the United Kingdom was not satisfactory. All that was available was based on the technological pattern developed up to the thirties. Notwithstanding this handicap, as much as 1,900,000 spindles and 30,000 looms were imported and put into operation by the year 1960.

By the year 1960 great technical development had ushered in textile technology and latest machines incorporating the new development were made available. By this time the Pakistani textile industry had entered into the export market which required quality and low production costs. This was not possible on the machines of old designs. Naturally, recourse had to be taken to install latest machines and also modernize the old ones.

The Government had been alive to this situation and fully approved the requirements of the cotton textile industry. It was with this end in view that while preparing investment schedule for new industries, the Government reserved certain percentage of the investment both in foreign and local currency to be used for balancing, modernization and replacement of the textile industry. There is no scheme to allow compensation for scrapping of the obsolete equipment.

Against these provisions both foreign exchange and local currency loans are advanced by the Industrial Development Bank of Pakistan and the Pakistan Industrial Credit and Investment Corporation specially set up for the purpose.
Apart from this, the National Investment Trust and Investment Corporation of Pakistan also established under Government legislation, helps finance the local currency requirement by way of under-writing and investment in shares of joint stock companies. Simultaneously, with this financing scheme renovation and modernization is also permitted against bonus voucher. There is no provision for concessional interest rate. Loans of course are provided on a long-term basis by various financing institutions.

There is no accelerated depreciation allowance or any tax advantage except that tax holiday for two to six years is admissible in the case of new industries which are either based on indigenous raw materials or are export oriented, depending upon the areas where these are set up.

There is no scheme for giving a production subsidy. A bonus allowed against exports is utilized mainly for meeting import requirements of the industry in respect of sizing material, dyes, chemicals and spares.

No special measures for diversifying employment opportunities have been adopted.

There are institutions such as the Pakistan Industrial Technical Assistance Centre, polytechnics and the technical colleges and schools which impart training to the supervisory and managerial staff. The labour force is, however, trained by the industry within their mills during the course of their employment. There also exist institutions which carry out research activities for increasing productivity. Some of them are: (1) Pakistan Council of Scientific Industrial Research; (2) Central Testing Laboratories; (3) The Pakistan Industrial Technical Assistance Centre; and (4) The Pakistan Central Cotton Committee.

In the Republic of China there are no schemes for scrapping obsolete equipment. However, there are provisions that the cotton textile industry must be equipped with new and up-to-date machinery. It is planned to train 5,000 workers and retrain 1,500 workers per year for the coming five years. Working conditions of cotton textile mills are being improved and wages increased. There are no production and trade subsidies nor any institution to provide finance facilities to the cotton textile industry.

Hong Kong has applied no restrictions or regulations in relation to the cotton textiles industry, other than normal labour safety and welfare regulations and those export controls necessitated by Hong Kong's obligations under agreements with certain importing countries under the Arrangement Regarding International Trade in Cotton Textiles.

In India the expansion of the spindleage and loomage capacity in the cotton textile industry is regulated by the Government and all proposals for installation of additional capacities require prior approval. In giving its approval, the Government is guided mainly by the estimated demand for cotton textiles in the country. In recent years, the expansion of the capacity has taken place almost entirely in the spinning sector.
The industry is being encouraged by the Government to adopt measures for rehabilitation and modernization in the following ways:

(a) for arriving at the net taxable income, the industry has been made eligible, from the financial year 1969-1970, for claiming investment allowance to the extent of 35 per cent of value of the new machinery, as against normal allowance of 20 per cent. This allowance would however be reduced to 25 per cent from 1 April 1970.

(b) The Industrial Development Bank of India, has evolved a scheme for giving deferred payment facilities for the purpose of supply of indigenous textile machinery to the textile industry on deferred payment terms.

The Government has recently established the National Industrial Corporation to take over and run mills which are likely to close down due to losses or other reasons and which could be made economically viable. The stress here is on avoiding unemployment by closure of units in the textile industry, which is a highly labour intensive industry in India.

II. MEASURES CONTEMPLATED BY THE GOVERNMENTS FOR FACILITATING ADJUSTMENTS IN THE COTTON TEXTILE INDUSTRY

The Australian Government is not contemplating introduction of any measures to facilitate adjustment in the Australian cotton textile industry.

In the framework of the policy of the Austrian Government to promote the growth of the national economy and to improve the economic structure, various additional measures are contemplated to remove barriers which hamper the adjustment of the Austrian economy to the changed market situation. For instance, the draft of the new Trade Act provides on the one hand for certain facilities concerning subsidiary rights (e.g. carrying out preliminary or finishing performances, production of machines, tools etc.), and on the other hand for the removal of legal barriers hampering the traditional co-operation between firms, in order to facilitate adjustments especially of medium-size enterprises. In the framework of the measures taken to facilitate investments, the establishment of a holding company is contemplated. This company is to acquire holdings of promising enterprises with an unfavourable structure of the capital, in order to improve their credit standing. After the reorganization of such enterprises the holdings are to be disposed of. However, it is not as yet known when such a holding company will be established. The carrying-out of larger investments is also rendered difficult by the fact that the individual credit banks are unable to furnish the required credit by themselves. In such cases it would be useful to have several credit banks jointly finance such projects. At the time
being, various capital transfer taxes and fees are charged on the contracts relating to such joint credits. It is contemplated to eliminate these fiscal barriers together with an amendment of the relevant provisions of the civil law.

After the elimination of the taxes hampering mergers of enterprises by the Act concerning the improvement of the economic structure, it will be studied whether the re-implementation of the Conversion Act which expired in 1964 should be taken into consideration, in order to eliminate existing trade and legal barriers for mergers.

In the framework of the measures taken to promote research, investigations are made to ascertain whether and to what extent additional depreciation allowances for assets other than real estate being used for purposes of research and technical development, are to be taken into consideration, thereby limiting the obligation to enter such assets on the asset side.

Furthermore, in co-operation with and as supplement of the Development and Modernization Fund, respectively, complementary measures are contemplated in co-operation with the provincial governments in order to create additional incentives for large scale investments in threatened industrial areas.

It will not be possible to judge whether and to what extent the measures mentioned above will facilitate structural adjustments in the Austrian industry generally, and the Austrian cotton textile industry, respectively, until the respective resolutions have been passed and the precise wording is made available.

In Canada no programmes specific to the cotton sector are planned at the present time.

The Belgian Government is not contemplating, at the present time, the introduction of any measures for facilitating adjustments in the cotton textile industry.

The French Government does not, at present, contemplate any new measures for facilitating adjustment in the cotton textile industry.

In the Federal Republic of Germany discussions on a programme running for a limited period to improve the structure of the German cotton industry are continued. In the meantime a bill has been submitted to Parliament through which tax privileges are to be granted in case of any change of the legal form of an enterprise. This bill, which has not been drafted only for the special benefit of the textile or cotton industries, would permit - if it were passed - many firms of the cotton industry to change their legal form into that of a registered corporation - which, in turn, would facilitate their access to the capital market.
In Italy, the draft legislation mentioned above has to be approved by Parliament.

In the Netherlands, apart from the above-mentioned credit facilities available to the cotton textile industry, the Government has taken no measures to reform the structure of the cotton industry.

The Governments of Finland, Sweden and Norway are not contemplating the introduction of any measures to facilitate adjustment in the cotton textile industry.

The United Kingdom Government has recently received a report, commissioned by the Textile Council, on the present performance and future prospects of the United Kingdom Cotton and Allied Textile Industry. The report, and the recommendation made therein, have now been studied and some decisions have been taken to assist the industry. These are now being discussed with the major suppliers of imported cotton textiles.

The United States has always regarded the Arrangement Regarding International Trade in Cotton Textiles as a measure which would provide the industry with time in which to effect through its own efforts the requisite adjustments.

In Pakistan, adequate provision has been provided for balancing and modernization of the textile industry under Industrial Investment Schedule announced by the Government from time to time.

The Republic of China does not contemplate, at the present time, the introduction of any measures for facilitating adjustments in the cotton textile industry.

The Turkish Government is contemplating the introduction of certain measures aimed at facilitating adjustments in the industry generally. There are no special measures for the cotton textile industry.

In India, it is expected that the programme for the cotton textile industry in the Fourth Five-year Plan would be mainly directed towards modernization of the industry.

III. FIELD OF APPLICATION OF THE ADJUSTMENT MEASURES

In Australia, investment and depreciation allowances apply to all manufacturing industries. There are no special measures designed to facilitate adjustments in the cotton textile industry.

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1. I.e. the extent to which the measures are specifically applicable to the cotton textiles industry or are of more general scope.
In Austria, the measures taken so far, or contemplated to be taken, are applicable to Austrian industry generally.

The measures which have been taken by the Federal or Provinical Governments of Canada for facilitating adjustments are applicable to industry generally.

In Belgium, apart from the coal industry, there are no measures specifically designed to facilitate adjustments in any particular industrial sector. The general legislations for economic development can be applied to all industries on request and subject to certain conditions.

In France, in addition to the general provisions for adjustments which are applicable to all industries, specific measures have been designed to facilitate adjustments in the textile industry in general and in the cotton industry in particular.

In the Federal Republic of Germany, the measures for reorganization, or regional promotion apply to industry generally.

The Italian draft legislation which has to be approved by the parliament provides facilities in favour of the textile industry as a whole.

The measures taken by the Government of the Netherlands apply only to the cotton industry. However, if any other branch of the industry were to find itself in structural difficulties similar to those faced by the cotton industry at the present moment, the Government would undoubtedly look into the matter.

In Finland, no measures have been taken or contemplated to facilitate adjustments in the cotton textile industry.

In Norway, the national assistance schemes for both industry and labour facing readjustment difficulties apply to industry generally.

In Sweden, general official policies such as an active labour market policy apply to all industries. In areas where the textile industry is providing a larger proportion of total population, special measures, mainly the use of investment reserve funds and governmental location support, have been applied to diversify employment opportunities.

In the United Kingdom, the Cotton Industry Act of 1959 was applicable only to the cotton and allied textile industry.

The only adjustment measure effected by the United States Government that applies primarily to the cotton textile industry is the one-price cotton policy. All other Government measures apply to industry generally.
In Pakistan the measures taken by the Government are applicable to all the industries in general.

In the Republic of China the measures taken so far apply only to the cotton textile industry.

The adjustment measures taken so far by the Government of Turkey are applicable to industry generally.

IV. ADJUSTMENT MEASURES TAKEN BY THE COTTON TEXTILE INDUSTRY

The Australian Government is unaware of any adjustment measure taken by the Australian cotton industry.

The Austrian cotton textile industry itself has always made and is still making efforts especially to remove obsolete equipment. For the largest part this removal has been effected by the shutting down of enterprises. In this way the number of enterprises of the cotton textile industry has been reduced from 123 in 1960 to eighty-seven in 1968 or by 29 per cent. In the same period the number of spindles declined from 592,462 to 443,980 or by 25 per cent, the number of looms from 11,926 to 7,102 or by 41 per cent, and the number of employees from 23,919 to 16,864 or by 29 per cent. This reduction is also evidenced by the production index relating to the Austrian cotton textile industry. Taking all processed textile fibres into account the production index declined from 105.1 in 1960 to 89.4 in 1968 (1956 = 100). This contraction of the Austrian cotton textile industry, which has not yet come to an end, relates mainly to enterprises producing grey fabrics and simple fabrics of the kind produced in the developing countries.

In Canada, the measures taken by the cotton textile industry are individual company decisions to phase out eight plants, and retire from manufacture of several types of products.

In Belgium the spinning sector of the cotton textile industry has taken certain adjustment measures. Between 1935 and 1967, (with an interruption during the war years), Belgian spinners representing more or less 90 per cent of the industry voluntarily signed a convention under which the installation of new spindles was to be effected simultaneously with the destruction (duly controlled by the spinners) of an equal number of obsolete spindles, without compensation.
The purpose of the convention was twofold: (a) to reduce the average age of Belgian equipment; (b) to prevent obsolete equipment from being brought back cheaply and put into operation again at the risk of disrupting the market and thus hampering the modernization of the healthy part of the industry. Thus it is a voluntary measure designed to encourage the scrapping of obsolete equipment. It has been distinctly effective, making it possible to scrap a large number of obsolete machinery.

Another convention, financed exclusively by spinning mills on a voluntary basis involved a guarantee to undertakings contemplating the cessation of the spinning activity of a minimum return on their equipment. The spindles would be destroyed, under control, or turned over to other spinners, on condition that the latter would destroy the machinery they possessed.

The amount of the guarantee was fixed in the course of confidential discussions between the interested undertaking and an independent person designated by the spinners. This method made it possible for an undertaking which could not make up its mind to foresee the outcome of the proposed liquidation and hence to make its decision on the basis of the facts. The secret nature of the conversations protected the undertaking in question against the danger of having its standing jeopardized in the event of the conversations not being successful.

No general measures have been taken in the weaving sector of the Belgian cotton industry as a result of any initiative on the part of the measures.

In France, the cotton textiles industry, with the consent of the Government, has for nearly ten years been concerned with structural adjustments. In 1960 it set up a professional group whose essential purpose was to take action for the settlement of problems raised by the inevitable reduction of its means of production. Financed by a fund set up by the professional bodies themselves, this group has taken action for the closing down of production units and the supervision of liquidation of the equipment. The group was particularly effective up to the 1965 crisis; during that short period it arranged for the closing down of thirty weaving mills representing 6,000 looms and fifty spinning mills representing 900,000 spindles.

The cotton industry itself of the Federal Republic of Germany has made great efforts to adjust itself to the changed market situation through rationalization measures and operational reorganizations, and/or shut-downs of mills. The drop of the total number of both cotton textile mills from 664 to 454 between 1960 and 1968 and its labour force from 167,000 workers to 110,000 workers as well as its advance in productivity can be regarded as impressive evidence of the cotton industry's efforts.

In Italy some undertakings have embarked on reorganization schemes on their own initiatives in relation to the needs of the domestic market.
In the Netherlands the cotton industry has set up a foundation for promoting exports of cotton fabrics. The foundation carries out overall analyses of markets within the country and abroad. It also works with fashion organizations which are members of international institutes, so that when designs etc. are selected it can follow the trends of fashion closely and thus preserve and maintain its competitive position.

The Finnish cotton textile industry has tried to adapt itself to the changing market situation by rationalization and modernization. The adjustment has however been hampered by the difficulty to raise capital for this purpose in sufficient quantity and at acceptable interest rates. The stringency of the Finnish capital market during these years has thus made it impossible to carry the adjustment plans of the industry into effect to such an extent as would have been necessary.

As regards the Norwegian textile industry, far-reaching adjustments, rationalization and reduction in capacity have taken place both prior to and during the period covered by the Cotton Textiles Arrangement. The cotton textile industry is now covering only about one third of the home market consumption and there is very little room for further contraction without serious repercussions on the national economy as a whole. In spite of this the industry continues systematically to adjust its production programmes away from those products where competition from developing countries is most severe. Instead, design products, branded products and specialities are developed. The number of factories in the clothing industry, largely small sized, has been reduced by about 20 per cent.

As a result of Sweden's liberal trade policy, Swedish cotton textile industry has in general had to meet a hard competition from abroad and not least from the less-developed countries. As a result of this competition and the changing situation on world markets there have been adjustments, mergers, fusions and close-downs within the Swedish industry. This development can be regarded as a continuous process of structural or sectoral rationalization. The number of firms or combines in the Swedish cotton textile industry is now seven and the number of mills is ten. During the period 1960-68 three new mills were built while six firms and mills were closed down.

In the United Kingdom there has been a certain amount of rationalization within the industry which has resulted in there being many fewer units in operation than was the case in 1960. Investment within the industry in modern equipment has also been taking place - apart from that facilitated by the Cotton Industry Act 1959 - but, and this is one of the findings of the Textile Council's report, not at a sufficient rate.

While the adjustment steps taken by individual cotton textile firms in the United States vary widely, adjustment activities are concentrated in three broad areas: (1) increased investment in new plant and equipment; (2) increased research and development activities; and, (3) a trend to fewer but larger firms.
The increasing emphasis that the cotton textile industry has placed on modernizing its production facilities is shown by the data on investment in new plant and equipment by the cotton broad-woven fabric mills industry. From 1962 to 1966 (the latest year for which these figures are available) investment by this industry averaged $151 million annually. During the preceding five-year period, investment averaged $72 million annually.

Research and development data are not available for the cotton sector of the textile industry. However, spending on research and development by the combined textile and apparel industries increased from $15 million in 1957 to $30 million in 1961 and $42 million in 1966, the latest year for which these figures are available. The basic objective of these expenditures is to develop new products and to improve existing items.

The available data indicate that concentration in the cotton weaving mills industry is increasing and that the number of firms is declining. In 1958, there were 325 firms in this industry. The four largest accounted for 25 per cent of the industry's total value of shipments and the twenty largest for 59 per cent. By 1963, only 229 firms were classified in the cotton weaving mills industry. However, the four largest firms accounted for 30 per cent of the industry's total value of shipments and the twenty largest for 67 per cent. In 1966, the four largest firms continued to account for 30 per cent of the industry's total value of shipments.

The cotton textile industry in Pakistan helps in the establishment and running of some of the technical institutions in the country through financial contribution.

In Turkey, apart from Government measures, there are no adjustment measures taken by the industry itself. However, industrialists concerned with cotton textiles are interested in forming unions among themselves in the export field.

The cotton textile industry in the Republic of China has not taken any adjustment measures.

In India efforts for rehabilitation and modernization of the existing equipment are being continuously made by the individual units, either by ploughing back their own resources, or by raising loans on commercial basis.

V. REASONS FOR ABSENCE OR FAILURE OF SPECIFIC ADJUSTMENT MEASURES: REMEDIAL ACTION

In Australia there is little scope for any adjustments in the cotton textile industry since it supplies only about 20 per cent of Australia's requirement.
In Austria special measures facilitating structural adjustments in the domestic cotton textile industry could not be taken by the Government for various reasons, mainly for budgetary reasons and for reasons of the internal policy. Even in the future it will be hardly possible to take adjustment assistance measures only for an individual industrial segment (e.g. the textile industry) or for only a branch of this segment (e.g. the cotton textile industry) without causing similar demands of other industrial segments at the same time. Nevertheless, the contraction which has occurred in the Austrian cotton textile industry might very well lead to improving sales opportunities in the Austrian market for cotton textiles from developing countries. In this way the Austrian cotton textile industry has contributed substantially to a solution of the world-wide problem of production capacities in the cotton textile field.

As regards the possible effects of the measures mentioned in Part I on the Austrian cotton textile industry, it should be noted that the measures mentioned under I(a) i.e. the implementation of the provisions of the Income Tax Act 1967 facilitating the establishment of reserves for investments, have only been in force since 1 January 1968. Moreover, the provisions requiring profits could hardly be used in favour of the Austrian cotton textile industry. Owing to the increasing production costs, which frequently are not covered by selling prices as a result of low-priced imports on a large scale, the Austrian cotton textile industry can hardly expect profits in the coming years. In general, the tax advantages mentioned under I(b) and I(c) will produce only limited effects for the Austrian economy as a whole if compared with the extent of investments required to achieve the necessary degree of adjustment to the structural changes of the market. For 1969 the shortfall in tax revenue as a result of the above-mentioned provisions in Part I is estimated at about S 700 million, as against about S 1.5 billion required for investments in the cotton textile industry. As to the possible effects of the Acts mentioned under I(d), (e) and (h), it is to be noted that textile firms are owned by families striving to maintain their individual character and independence to the largest possible extent. This typical structure of the Austrian cotton textile industry hampers mergers and conversions as preconditions for tax advantages according to the Federal Act concerning the improvement of the economic structure. Thus mergers are not to be expected in the coming years.

Cotton textile firms have not as yet applied for subsidies according to the Research Promotion Act mentioned under I(f). Furthermore, at the time being enterprises of the Austrian cotton textile industry are not expected to submit applications concerning the registration of cartel agreements, serving only the purpose of rationalization (I(g)). Such measures are not considered as useful in this branch so long as they are not supplemented by the joint regulation of selling.
As to the measures contemplated to adjust the Austrian economy to the changed market situation, it will not be possible to judge whether and to what extent these measures will facilitate structural adjustments in the Austrian industry generally, and the Austrian cotton textile industry, respectively, until the respective resolutions have been passed and the precise wording is made available.

In Canada the forces of international competition and the changes in the demands of the market have been quite adequate to induce the adjustments which have been made. No generalized and systematic measures have been taken for cotton textiles.

In Belgium the adjustments undertaken by the cotton spinning industry itself had to be abandoned in 1967 owing to the closing down of a large number of cotton spinning mills between 1962 and 1967, and the burden which the financing of these measures placed on the remaining spinning mills. The reason for the large number of spinning mills which closed down was the very unsatisfactory economic, financial and social situation throughout the period and particularly during the years 1966 and 1967. This unsatisfactory economic situation was aggravated by the growing competition of imports from countries practising a systematic policy of abnormally low prices. Poor business conditions and abnormal competition had the effect of wiping out the margin of profit almost completely, so that the remaining undertakings were unable to support the financial burden of the measures taken. At all events, by the end of 1967 the combination of the measures taken by the industry itself and the economic and competitive circumstances referred to above had already brought about the reorganization of most of this sector of the cotton industry.

The adjustments made on the initiative of the spinning industry and financially supported by it can be regarded as on the whole successful. Whereas there were forty-seven firms and sixty-two mills in 1960, by 1968 there were twenty-nine firms and forty-five mills, equipped with modern machinery and operating on a sound technical and economic basis.

Since most of the cotton weaving undertakings, apart from integrated undertakings, are in a less strong position than spinning mills, and since many of these undertakings are relatively small in size, the weaving industry has not been financially in a position to undertake adjustments similar to those undertaken by the spinning industry. However, note should be taken of the real reorganization carried out by the sector during the period 1960-1968, when the number of firms fell from 204, with 241 mills, at the beginning of the period, to 159 firms with 175 mills by the end of 1967. This was affected by economics and competition and also by the legislation for the economic development of industry generally, which made it possible to reorganize certain firms or reconvert them for other purposes.
The Government has taken no specific measures in favour of the cotton industry, or for the textile industry generally. The legislation for the economic development of industry as a whole had led to satisfactory adjustments, i.e. rationalization or modernization in firms within the cotton textile industry requesting this and taking advantage of it.

In France, although real results have been brought about by their action, the Government and industry would have liked to speed up the rehabilitation of the sector still further but economic and social conditions have made this impossible.

In the Federal Republic of Germany the envisaged projects for structural readjustment through the reduction of production capacities could not be implemented, above all, because the cotton industry itself was not in a position to guarantee that they would contribute to the financing of the proposed measures as demanded by the Federal Government. In addition, there were two obstacles opposing this project: the absence of tax privileges to be granted to undertakings closing down their mills as well as the Government's refusal to comply with industry's request to offer greater protection in the field of foreign trade. If the bill which has been submitted to parliament through which tax privileges are to be granted in case of any change of the legal form of an enterprise were passed, it would facilitate access of textile firms to the capital market.

In Italy a number of parliamentary bills concerning the reorganization of the cotton textile industry have been examined at various intervals, but no appreciable consensus has been reached on any of them.

The measures taken both by the Government of the Netherlands and by the textile industry itself appear to have helped to bring about a certain stabilization of the situation in the cotton textile industry.

In Finland scarcity of available capital has mainly hampered measures for facilitating adjustments in the cotton textile industry.

The Norwegian cotton textile industry is now covering only about one third of the home market consumption and there is very little room for further contraction.

In Sweden, mergers, fusions and close-downs which have taken place in the textile industry can be regarded as a continuous process of structural or sectoral rationalization.

In the United States, aside from measures already referred to in the previous sections, the Government in line with its general policy that basic adjustments in the cotton textile industry should be carried out by the industry itself, has not
contemplated the institution of further adjustment measures other than that provided in the Trade Expansion Act of 1962. Under this Act, the Government adopted a programme of financial assistance to both companies and workers injured by imports engendered by tariff concessions. This assistance is applicable to all industries and workers. No firms or workers have qualified for assistance under the stringent criteria set forth in the law and the administration is considering the present criteria to determine whether changes should be proposed to Congress.

In Pakistan the necessary measures have been taken. No instance of failure of any measure has come to notice.

Turkey began to export cotton textiles as early as 1960. The system of tax refunds applied over the last few years is not sufficient to make Turkish products competitive in the export sphere. Industrialists are therefore trying to reach agreement among themselves to cope with losses arising from exports.

A system is at present being contemplated for improving the quality of export products while at the same time bearing in mind equality of prices by respecting the provisions of international agreements and avoiding disruption of the markets.
General information on the development of the cotton textiles industry

1. As will be seen from the figures, substantial increase in production capacity has taken place, mostly in the spinning sector which increased its spindles from 469,648 in 1960 to 759,512 in 1968. Production and exports of cotton textiles have accordingly increased during the period and both in spinning and weaving production facilities have partly been modernized by discarding a part of obsolete equipment in the large-scale enterprises. All this result has been due to the strenuous efforts made by the industry itself, backed by the Government, in response to the rising domestic and export requirements for cotton textiles since 1960.

2. In Korea, the need to increase exports of cotton textiles is particularly felt in view of the industry's entire dependence on foreign sources for its raw materials and foreign exchange necessary for imports of raw cotton has to be earned through exports of cotton textiles. Furthermore, due to the shortage of foreign exchange needed for new facility investment, modernization and expansion of the existing plants to a rationally large scale hinge on the industry's export performance and future export prospects.

3. There is no surplus capacity to be mentioned at the present stage in view of the current situation of supply and demand of cotton textiles. Nearly a full utilization has been made of the presently installed facilities. As a matter of fact, it is felt necessary to further modernize and re-equip the existing machinery and to enlarge those small and medium-sized enterprises to larger scales so as to enhance their low productivity through rationalization of operations. Despite some progress made in modernization and growth in capacity, much of the installed facilities remain obsolete and worn out resulting in considerably low efficiency in production and inferior international competitiveness.

4. In the process of industrializing the cotton textiles industry in a relatively short range since 1960, the Government has occasionally rendered some assistance, mainly in the form of foreign exchange loans, to the industry for its modernization and supplement of capacity. Owing to the limited foreign exchange resources and scarcity of self-capital of the industry available, however, the Government has enforced, particularly since 1963 "Criteria for approval of importation of textiles facilities" whereby excessive installation of new equipment has been avoided and priority has been accorded to the facilities which are designed for producing goods for exports rather than for the domestic market. In general, new investment has been required to be made within the extent necessary for rationalization of mills and export promotion.
5. In Korea, the cotton textiles industry has an important rôle in the national economy and its development program. The share of cotton textiles industry in the total production in the manufacturing industries was some 6.5 per cent in 1966 in value terms and its contribution in the total employment in the manufacturing was around 7 per cent in 1968. Also nearly one half of cotton fabrics produced in the seventeen large-scale mills was exported in 1968.

6. There has been a rapid increase in the demand for man-made fibres since 1960, as reflected in the increase in the import of man-made fibres from 16,112 tons in 1960 to 57,945 tons in 1968. In the face of such a heavy reliance on imports for man-made fibres demand, a total of thirteen man-made fibres mills have newly been established to produce 1,484 tons of man-made fibres in 1964 and 23,140 tons in 1968. However, the domestic man-made fibres mills still remain under-developed because of relatively small, insufficient size of each production unit and lack of raw materials from domestic industrial sources. Under such circumstances, even though there is an increasing competition from man-made fibres, consumption of raw cotton is predicted to maintain its upward trend for some time in the foreseeable future in view of the growing population, steadily rising standard of living as well as the needs to increase export of cotton textiles.