

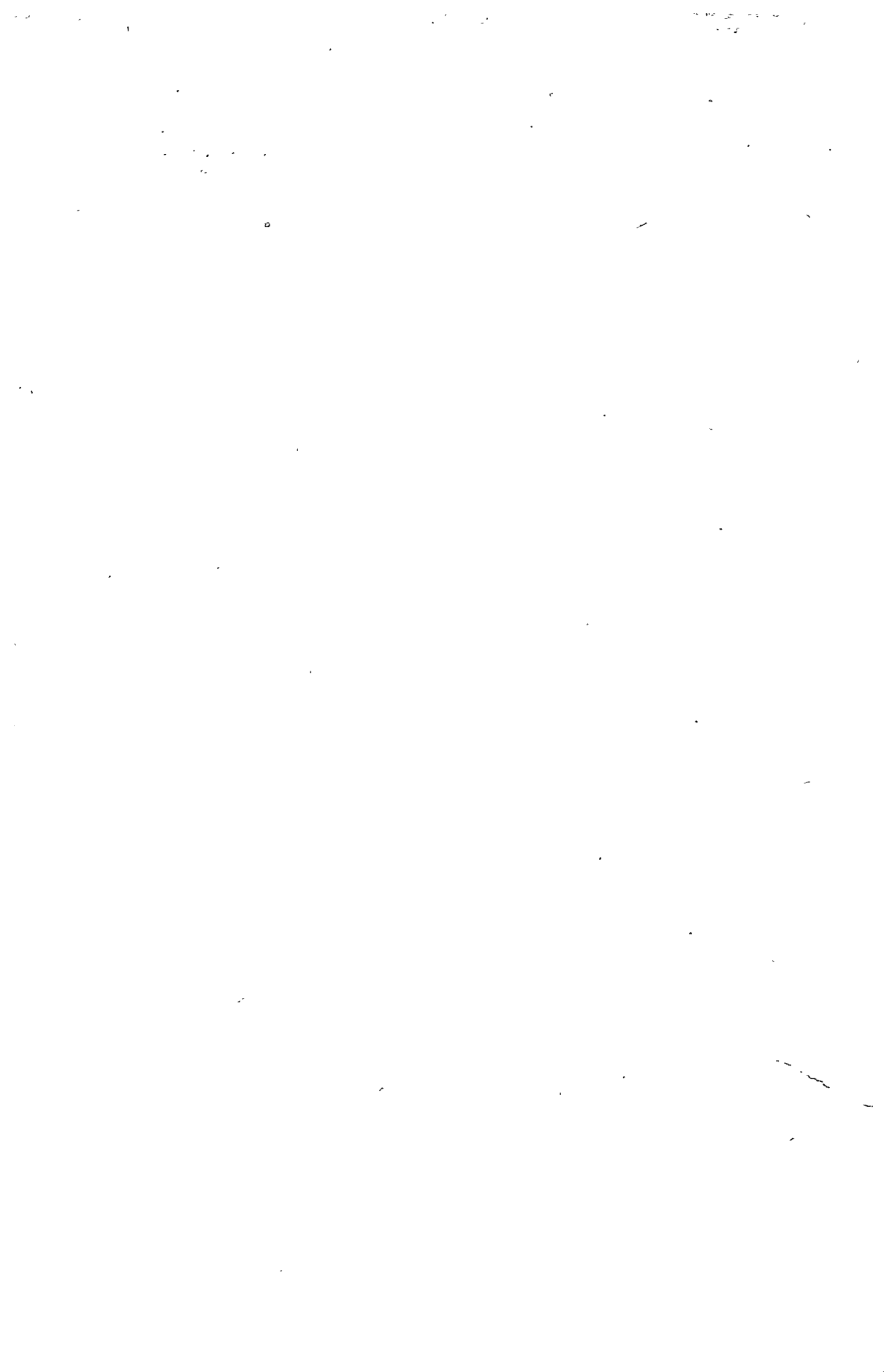
**Royal Commission
on Canada's Economic Prospects**

The Canadian Primary Textiles Industry

**by National Industrial Conference Board
(Canadian Office)**

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THE CANADIAN PRIMARY TEXTILE INDUSTRY

JULY, 1956

Prepared by the
NATIONAL INDUSTRIAL CONFERENCE BOARD

While authorizing the publication of this study, which has been prepared at their request, the Commissioners do not necessarily accept responsibility for all the statements or opinions that may be found in it.

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PREFACE

This report presents the findings of a study of the Canadian Primary Textile Industry, undertaken for the Royal Commission on Canada's Economic Prospects, according to the Royal Commission's terms of reference which we were at liberty to adapt to the subject and to the time available. It reviews the industry's operations and experience in statistical terms since 1926, and in more analytical terms since the war, examining the problems that appear to be significant for its future prospects. We submit no recommendations.

As each chapter is itself a summary of its subject, we have not attempted to make a further summary of the whole report, the order of treatment being shown by the Table of Contents. The final Chapter on "Outlook for the Future" brings together the views of the Canadian industry and of independent American experts, with our own observations, on central questions.

While we have naturally relied upon much published data from government and industrial sources, we found it necessary to assemble a considerable body of independent or original data relating particularly to measurement of the Canadian textile market, and to the internal operation of the industry and problems of management. Statistical tables follow each chapter in separate appendices, and our questionnaires to the industry are reproduced in a general appendix in conclusion. In this connection special mention should be made of our interviews and conversations with leaders of the Canadian industry, following our questionnaires, and with a small group of American textile consultants, engineers and machinery manufacturers whose experience embraced some knowledge of the Canadian industry and merited our request for their independent views. All these gentlemen co-operated most generously. Unanimity was not to be expected, and we have endeavoured to reflect differences of opinion or other reservations as they were encountered.

We are grateful for help received from many other quarters as well: from the Primary Textiles Institute and individual companies in the industry; from officials of the Dominion Bureau of Statistics and other Government departments; and from the staff of the Royal Commission itself. The responsibility for presentation of information supplied by them rests with us, but this study could not have been undertaken and completed without their valued assistance.

NATIONAL INDUSTRIAL CONFERENCE BOARD

Monteath Douglas
Director,
Canadian Office

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DESCRIPTION OF THE PRIMARY TEXTILE INDUSTRY, IN CANADA

Definition and Range of Activities

This study considers the primary textile industry as comprising the preparation, spinning, weaving, braiding and related activities for cotton, woollen, and synthetic and silk textiles, including narrow fabrics, and the dyeing and finishing of textile goods. This definition is somewhat narrower in scope than the customary classification.¹

Our terms of reference exclude the knitting industry. We have also excluded the manufacture of synthetic fibres, as distinct from textiles made from these fibres, because it is so closely related to the chemical industry. Other textile activities which involve further processing of primary textile products subsequent to the spinning, weaving and finishing stages are outside the scope of this report by reason of their "secondary" character. This group includes the clothing and apparel industries, awning, tent and sail manufacturers, and the like.

The primary textile industry so defined accounts for the major portion of "All Textiles except Clothing" as shown by Table I-1. But it should be noted that the "Synthetic and Silk" classification in this table includes the manufacture of synthetic fibres which cannot be segregated uniformly, although our definition excludes it. The industrial classification procedure used by the Dominion Bureau of Statistics places most but not all synthetic fibre plants in this section of the textile industry.² At a number of points in this

¹The Dominion Bureau of Statistics groups all textile operations into the following major classifications: "Textiles except Clothing", "Knitting Mills", and "Clothing". Going beyond the scope of our definition, "Textiles except Clothing" also includes: Awning, Tent and Sail; Cordage, Rope and Twine; Cotton and Jute Bag; and Miscellaneous Textiles. (See Table I-1).

²As illustrations of the effects of the standard classification system, the Canadian Chemical and Cellulose Co. Ltd., plant at Edmonton, which is an integrated chemical operation also producing acetate filament yarn and staple fibre, is grouped with Chemicals. The same company's St. John's plant, a throwing and warping operation only, is classified in the textile industry. So is the Courtaulds (Canada) Ltd. plant at Cornwall, although its only strictly textile operation is the throwing of some filament yarn and warping. The Canadian Celanese Ltd. plants at Drummondville and Sorel are classified as textile establishments, although they include in an integrated operation the manufacture of acetate filament yarn and staple fibre—a chemical process—and subsequent textile operations. Similarly, the Kingston plant of the Dupont Company of Canada Ltd., manufacturing nylon filament yarn and staple fibre, is classified in the textile industry although only a small part of its operations, the throwing of some filament yarn, is textile in nature.

report where we have relied upon regularly published government statistics, it has therefore not been possible to present data that are exactly consistent with our definition of the primary textile industry. Such references necessarily involve a somewhat larger concept than does the main body of our study, and are noted where the point is significant.

Although the classification of main groups within the industry by fibre use—e.g. cotton goods, wool goods and synthetic and silk goods—corresponds historically with the characteristic basis of operations, the former lines of division are losing significance with the increasing use of synthetic fibres. Some companies in the wool industry, for example, now use natural and synthetic fibre in almost equal quantities. All parts of the primary textile industry are engaged in the same manufacturing processes in principle, and much of the machinery is essentially similar. The development of synthetic fibres has had the effect of increasing its flexibility. While this report treats synthetic fibre products as a single category, it should also be understood that different types of synthetic fibre may differ in physical properties as much as they differ from cotton or wool.

Table I-3 showing output of primary mills by main divisions of the industry, and Table I-4 showing how consumption of textiles has been divided between the main fibres, illustrate the increasing use of synthetic fibres over the past three decades.

The resulting displacement of natural fibre is virtually total in the case of silk, substantial and continuing in the case of wool, and appreciable though more limited in the case of cotton. Wool consumption has dropped from 25.7% of total in 1926-1929 to 16.2% in 1951-1954. Cotton is still by far the leading textile fibre, but its average share of the market has fallen from 69% in 1926-1929 to 57.5% in 1951-1954. Conversely, consumption of synthetic fibre has advanced from 3.3% of the market in 1926-1929 to 26.2% in 1951-1954, surpassing wool in 1950.

The Chemical-Textile Link

Although the production of synthetic fibres is an organic and often integrated part of the manufacture of many textile products, the actual manufacturing process is chemical in nature. It is called "spinning", but it involves the extrusion of a liquid compound through a spinneret to form a solid filament, which is an essentially different operation from the spinning of staple yarns or the weaving of fabrics. Synthetic fibre production exhibits the typical investment and labour configurations of the chemical industry, namely high investment per worker and a product of low labour intensity. Consequently it differs from the textile industry in basic methods, problems and organization.

The synthetic fibre industry being excluded from this study for these reasons, we should at the same time point out how closely its interest and pros-

pects are linked with those of the primary textile industry. Table I-5 shows the extent to which Canadian producers of filament yarn and staple fibre have increased their deliveries to domestic mills. By the end of 1955 the book value of fixed investment in Canadian synthetic fibre facilities was \$212 million. Approximately 29% by value of these facilities was being used for products going into non-textile applications, the manufacture of which is nevertheless involved in some of the same processes as the production of synthetic fibres.

Size, Structure, Organization and Ownership

The primary textile industry is significant by all comparative standards.³ In 1954, the latest year for which complete data are available, but a year of poor business for the industry, it employed 51,242 persons, 4% of all persons working in manufacturing industries. Its total value of shipments, at \$495.4 million, was the twelfth largest in ranking by industry. The 422 establishments operating at the end of 1953 paid out in the following year \$134 million in wages and salaries. Their total assets amounted to a half billion dollars.

Of the industry's major components, as shown in Table I-1, cotton textiles lead with 42 out of every 100 employees, \$40 of every \$100 paid out in wages, and \$43 of every \$100 in products shipped from its factories. Within this group, activity is centered in the production of cotton yarn and cloth. Synthetic textiles and silk,—the figures including some filament production as already noted—, was the second ranking component of the primary industry in 1954, followed closely by wool textiles.

The position of the industry as a whole as regards wage and salary payments, and payments for materials and supplies (excluding fuel and power), both reckoned in ratio to gross value of products, is about in line with the averages for all manufacturing industries in Canada. In 1954 the wage and salary ratio was 25.9% for textiles, against 22.2% for all manufacturing, and the materials and supplies ratio at 54% was close to the manufacturing average.

The corporate form of ownership dominates textile activities as it does other lines of manufacturing activity. Corporations in the textile industry account for nearly 96% of employment and 97% of all shipments, compared with 90% and 93%, respectively, for all manufacturing industry in 1953. In terms of number of establishments, however, a substantial proportion are either partnerships or individually owned. Even so, the 59% of firms that are incorporated is a higher proportion than the 38% in all manufacturing. Table I-2 shows that in 1953 something less than half of total textile employment

³These comparative data, reproduced in Table I-1, include manufacture of synthetic fibre.

and value of shipments was accounted for by establishments having 500 employees or more.

According to recent estimates by the Dominion Bureau of Statistics 80% of the capital employed in the textile industry in 1953 was owned in Canada, compared to 52% for all manufacturing and mining industries. United States ownership amounted to 11% and that of the United Kingdom, 9%. 84% of capital employed was controlled in Canada, while 9% was controlled in the United States. These are striking contrasts with the manufacturing and mining industry combined averages of 48% controlled in Canada and 46% controlled in the United States. Only one other major industry group in the manufacturing and mining classification, the primary iron and steel industry, had a greater proportion of capital both owned and controlled in Canada in 1953. Such significant foreign ownership as does exist in the whole textile area is mainly in synthetic fibre production.

Recent Trends: Textiles and General Economic Indices Compared

The experience of the primary textile industry in recent years can be summarized by comparing the profits reported by a group of representative textile companies with profits similarly shown for all manufacturing industries:

Table A

NET INCOME AFTER TAXES AS PERCENT OF NET WORTH

Source: Bank of Canada

	<i>Primary Textiles</i>	<i>All Manufacturing</i>
1936-1939 average	6.9	10.8
1947-1950 average.....	15.7	14.1
1951-1954 average	5.1	12.5
1951	8.2	15.0
1952	6.3	12.8
1953	3.5	12.5
1954	2.4	11.7

Note: Percentages relate to 22 primary textile companies in every period except 1936-1939 when they are for 34 companies. For manufacturing, the percentages are for 526 companies except the 1947-1950 average when they are for 287 companies.

Compared with all manufacturing corporations, the primary textile companies covered by the above sample have had a lower return on net worth during the past 25 years, disregarding wartime. In only two years, 1948 and 1950, were they able to show a higher profit rate.

While the "all manufacturing" sample has shown a decline in return on net worth in the four years, 1951-1954, this has been moderate compared with the case of the textile companies. The spread between them has widened and on the latest comparison was much greater than before the war.

The industry's earnings record, which the foregoing figures illustrate in terms of a collective sample only, has its counterpart in individual records of

bankruptcies and mill closings. Such partial data as we have been able to gather indicate the closing of some 38 establishments since 1950 (since 1952 in the case of woollen and worsted mills). It is estimated that they employed just under 5,000 workers.

Woollen and worsted closings were the most numerous; 25 establishments employing approximately 1,460 went out of business between the beginning of January, 1953, and mid-1954. Between 1950 and 1955, five cotton plants employing 2,570 workers were reported closed; and in the same period eight synthetic and silk textile plants with 840 employees ceased operations.

Disregarding the abnormal demands on the industry during and immediately after the war, and allowing for the fact that 1954 was an unusually bad year, a longer view underscores the disparate movement between the trend of Canadian manufacturing in general and that of primary textiles. In 1939, the physical volume of production indices for total manufacturing, non durable goods manufacturing and textiles except clothing all stood at approximately 108 (1935-1939=100). By last year the all-manufacturing index had reached 270, the non durable goods index 235, while textiles had moved to 185. Within the textile industry, synthetic production, on a physical volume basis, rose much further than the cotton and wool indices and pulled the combined textile index up with it. Synthetic production in 1955 (again including fibre output) was 331% of the 1935-1939 average, in marked contrast with 136 for the cotton index and 143 for wool.

In the postwar period, while many other industries which had experienced abnormally high business in the forties have gone on to new peaks of activity in 1955-56, the Canadian textile industry has lost ground relatively (or even absolutely) in the past few years. The index of manufacturing production, for example, rose more than 40% from 1946 to 1955, while the index of production for textiles except clothing rose less than 15%, (the production of cotton goods in 1955 being only slightly above 1946, and the output of wool goods being substantially lower). Similarly, employment in all manufacturing establishments increased by 20% from 1946 to 1955, but declined by more than 5% in textiles, while payrolls advanced by over 135% in total manufacturing but only about 90% in textiles over these nine years.

In 1946, 6.4% of all manufacturing employees were engaged in the production of textiles except clothing; by 1955 this proportion had fallen to about 5%. Some 5.5% of all payrolls in manufacturing came from textile earnings in the first postwar year, as compared with only about 4.5% in 1955. Textile products accounted for 5% of the value of all factory shipments in 1946 but only 3.8% in 1955. Value added in the manufacturing process—the gross value of shipments less the cost of materials, fuels, and electricity purchased—shows textiles except clothing accounting for 5.2% of total manufacturing in 1946, 4.9% in 1951, and 3.6% in 1954 (the latest year for which such data are available.)

Wholesale prices of textile products have moved approximately in step with the average wholesale prices of all commodities over the longer-run, with a shallower downswing in the thirties, a steeper rise in 1946-1951, and a much greater decline in 1951-1955. The general wholesale price index (1935-1939=100) was 139 in 1946 and 219 in 1955, and the index for all textile fibres and primary products was 138 in 1946 and 226 in 1955. Between 1951 and 1955 textile prices have fallen conspicuously. Compared with declines of 8.9% in the general index of wholesale prices, 11.9% in "raw and partly manufactured goods", and 7.4% in "fully and chiefly manufactured goods" in this period, textile items have dropped as follows:

Cotton fabrics	21.3%
Wool cloth	34.7%
Rayon fabrics	23.3%

The foregoing summary provides the background for consideration of the industry's market, competitive position and productive capacity which are reviewed in the following chapters of this report.

Appendix I

Table I-1

PRIMARY TEXTILES IN RELATION TO ALL TEXTILES, 1954
Dollar Figures in Thousands

Source: Dominion Bureau of Statistics

	Cotton Goods	Wool Goods	Synthetic & Silk ²	Other ³	Total Primary Textiles	Other Textile Industries ⁴	Knitting Mills	Total, All Textiles, Except Clothing
Number of Establishments ¹	80	187	47	108	422	537	294	1,253
Number of Employees.....	21,394	12,829	13,055	3,964	51,242	12,567	21,762	85,571
Wages & Salaries.....	53,355	32,139	38,274	10,096	133,864	32,084	47,800	213,748
Cost of Fuel & Electricity.....	3,959	2,437	3,447	954	10,797	1,299	1,719	13,815
Cost of Materials.....	128,328	68,963	55,021	9,995	262,307	84,041	69,801	416,149
Selling Value of Shipments.....	211,134	122,593	134,595	27,106	495,428	146,007	146,675	788,110

¹In 1953, 1954 data not available.²Includes manufacture of synthetic fibre.³Includes dyeing and finishing of textiles and narrow fabrics.⁴Includes Awning, Tent and Sail; Cotton and Jute Bag; Cordage, Rope and Twine; and Miscellaneous Textiles.

Table I-2

**PERCENTAGE DISTRIBUTION OF ESTABLISHMENTS,
EMPLOYMENT AND VALUE OF SHIPMENTS IN TEXTILES AND
ALL MANUFACTURING INDUSTRIES, 1953¹**

Source: Dominion Bureau of Statistics

Number of Employees Per Establishment	Establishments		Employment ²		Value of Shipments	
	Textiles	All Manu- facturing	Textiles	All Manu- facturing	Textiles	All Manu- facturing
Under 5.....	21.2	44.8	0.7	2.8	0.7	1.7
5-14.....	28.7	25.7	3.3	6.2	2.8	4.6
15-49.....	26.2	16.3	9.4	12.6	10.1	10.1
50-99.....	9.5	5.4	9.1	10.8	9.8	9.3
100-199.....	5.8	3.0	11.1	12.3	10.9	11.8
200-499.....	5.5	2.0	23.1	17.6	22.7	18.6
500-999.....	1.9	0.6	17.0	13.2	15.0	15.5
1,000-1,499.....	0.7	0.2	10.9	5.8	12.4	7.0
1,500 and over...	0.5	0.2	15.5	18.6	15.7	21.3
Not classifiable...	—	1.8				
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

¹Data are for the industrial category, "Textile Products, except Clothing", and industry grouping somewhat larger than our concept of the primary industry (see Table I-1).

²Excludes employees in head offices.

Table I-3

PRODUCTION OF PRIMARY TEXTILES IN DOMESTIC MILLS
BY FIBRE, 1926-1954

Source: The Conference Board

Millions of Pounds

	<i>Cotton</i>	<i>Wool</i>	<i>Silk</i>	<i>Synthetics</i>	<i>Total</i>
1926	101.0	29.2	0.5	2.8	133.5
1927	116.7	29.1	0.7	4.4	151.0
1928	118.0	30.4	0.9	4.9	154.2
1929	114.5	27.5	1.5	5.9	149.2
1930	94.3	25.0	1.5	7.4	128.2
1931	87.8	25.0	1.8	7.5	122.1
1932	85.9	28.3	2.3	7.6	124.0
1933	110.5	35.7	1.9	10.3	158.6
1934	122.8	37.8	2.1	11.5	174.3
1935	118.4	41.5	2.6	14.5	177.0
1936	126.6	45.3	1.7	15.2	188.7
1937	141.6	43.6	2.0	18.4	205.6
1938	119.6	36.2	2.0	16.4	174.3
1939	144.0	43.0	1.8	20.8	209.6
1940	198.5	63.4	1.9	25.6	289.4
1941	208.0	60.6	0.7	32.7	301.9
1942	215.2	65.8	0.1	30.7	311.9
1943	187.4	56.5	a	29.2	273.1
1944	162.8	53.1	a	38.6	254.5
1945	158.0	56.2	a	43.2	257.4
1946	162.0	64.2	a	40.6	266.8
1947	169.2	67.9	a	50.7	287.9
1948	172.8	69.7	0.1	54.8	297.4
1949	173.0	57.0	0.1	61.9	292.0
1950	202.1	61.1	0.1	76.4	339.7
1951	196.9	53.0	a	87.8	337.8
1952	147.7	37.4	a	85.1	270.3
1953	144.2	46.7	a	88.5	279.5
1954	139.2	33.4	0.1	78.7	251.4

a Less than 0.05 million pounds.

Table I-4

**PERCENTAGE DISTRIBUTION OF APPARENT CONSUMPTION
OF MAJOR TEXTILE FIBRES IN CANADA, 1926-1954**

Source: The Conference Board

	<i>Cotton</i>	<i>Wool</i>	<i>Silk</i>	<i>Synthetics</i>
1926	68.5	27.4	2.1	2.0
1927	70.3	24.7	2.2	2.8
1928	68.7	25.8	1.9	3.6
1929	68.6	24.8	1.8	4.8
1930	66.1	24.9	1.8	7.2
1931	69.4	22.0	2.0	6.6
1932	68.6	23.4	1.9	6.1
1933	69.3	23.2	1.2	6.3
1934	69.6	23.1	1.2	6.1
1935	66.8	24.6	1.4	7.2
1936	66.8	25.1	0.8	7.3
1937	68.2	22.8	0.8	8.2
1938	67.9	22.4	1.0	8.7
1939	68.9	21.4	0.7	9.0
1940	68.0	23.1	0.6	8.3
1941	68.3	21.3	0.1	10.3
1942	70.3	20.7	0.0	9.0
1943	71.8	18.8	0.0	9.4
1944	68.3	17.7	0.0	14.0
1945	64.7	19.3	0.0	16.0
1946	64.4	22.3	0.0	13.3
1947	63.3	21.4	0.1	15.2
1948	59.6	23.7	0.1	16.6
1949	61.0	20.1	0.1	18.8
1950	60.5	19.2	0.1	20.2
1951	59.9	16.6	0.1	23.4
1952	57.4	15.0	0.1	27.5
1953	54.9	18.1	0.1	26.9
1954	57.9	15.1	0.1	26.9

Table I-5

PRODUCTION OF PRIMARY SYNTHETIC TEXTILES, 1926-1954

Millions of Pounds

Source: The Conference Board

	Deliveries of Domestic Fibre Producers ¹	Imports			Total Production in Domestic Mills ³
		Filament	Staple ²	Total	
1926.....	1.4	1.4	—	1.4	2.8
1927.....	2.8	1.6	—	1.6	4.4
1928.....	2.8	2.0	a	2.1	4.9
1929.....	3.7	2.2	a	2.2	5.9
1930.....	5.0	2.4	0.1	2.4	7.4
1931.....	5.6	1.8	0.1	1.9	7.5
1932.....	6.4	1.1	0.1	1.2	7.6
1933.....	8.4	1.8	0.1	1.9	10.3
1934.....	10.3	1.2	0.1	1.3	11.5
1935.....	13.2	1.1	0.2	1.4	14.5
1936.....	13.6	1.1	0.4	1.5	15.2
1937.....	15.2	1.9	1.3	3.2	18.4
1938.....	13.4	1.6	1.5	3.1	16.4
1939.....	15.0	2.9	2.9	5.8	20.8
1940.....	17.7	3.3	4.5	7.9	25.6
1941.....	22.2	4.5	5.9	10.5	32.7
1942.....	20.0	3.5	7.2	10.7	30.7
1943.....	17.7	4.9	6.6	11.5	29.2
1944.....	21.1	10.1	7.4	17.5	38.6
1945.....	22.3	13.9	6.9	20.9	43.2
1946.....	23.2	7.9	9.6	17.4	40.6
1947.....	28.8	9.2	12.8	22.0	50.7
1948.....	33.7	11.2	9.9	21.1	54.8
1949.....	39.2	11.5	11.1	22.6	61.9
1950.....	58.9	9.9	7.5	17.4	76.4
1951.....	60.0	9.1	18.8	27.8	87.8
1952.....	65.4	9.9	9.8	19.7	85.1
1953.....	68.6	11.9	8.0	19.9	88.5
1954.....	66.0	6.2	6.5	12.7	78.7

¹In some cases, production rather than deliveries, includes filament yarns and staple fibre.²Includes staple fibre, tops, spun yarns, and waste.³Sum of first and fourth columns, and assumed to equal total domestic production of primary synthetic textiles, aside from inventory variations.

a Less than 0.05 million pounds.

THE CANADIAN TEXTILE MARKET

The market for textile products in Canada reflects the demands of a diversified economy with a high standard of living in close proximity to the United States. In contrast to the situation in countries having a more elementary economy, basic textile needs in Canada were served at an earlier stage of development, and the demand today for apparel, domestic fabrics, and industrial fabrics is governed to an increasing extent by taste and style on the one hand and by the requirements of industry on the other. At the same time the basic demand in terms of volume is limited by the size of the population.

This diversified demand is matched, and indeed stimulated, by the variety of products manufactured by the industry in Canada and its foreign competitors, particularly in the United States, and by the potential range of possible styles and constructions. Starting from the available natural and synthetic fibres, fabrics coming off the loom can be made from almost any variety or combination. In the intermediate process of spinning, different yarns can be produced by twisting or special treatment, the potential variety of yarns increasing the possible variety of fabrics. Thereafter the construction of the cloth—i.e., the number of yarns used per inch in weaving—introduces further flexibility. Dyeing and finishing follow, with a view to the styles and effects desired by the secondary clothing industries and other intermediate or final consumers. The range of choices that can be made at each stage is increasing with the technical resources of the industry, and the variety of fibres at its disposal.

The primary textile industry in Canada operates for the domestic market. Exports represent a very small fraction of Canadian textile production, as later data will show, the opportunities being narrow and marginal. It is the domestic market that determines the industry's operations; and the factors just mentioned, creating a state of demand that is limited in point of basic volume but highly diversified in point of types, styles and qualities, make for keen competition between Canadian producers and between the Canadian

industry and foreign producers selling in Canada. The industry's competitive position is reviewed in several aspects in subsequent chapters. This chapter is confined to measurement and description of the domestic market.

As existing data were not adequate for detailed analysis of textile consumption, a major phase of our study, and a prerequisite for Chapters II and III in particular, was the compilation of a consistent new body of statistics. These appear in the appendices to these chapters.¹

Measuring the Market

Products which vary from partially processed to finished, from industrial materials to consumer goods, and are sold by weight, linear yards, square feet or dozens of units, require a common unit of measurement unaffected by passage of time. The only unit in which all textile products may be expressed is pounds of fibre content. Using this unit, and confining the analysis to cotton, wool, synthetics and silk, we have measured the market in two ways, the results agreeing closely.²

One method aggregates the total output of Canadian end-products for 1953, the latest year for which complete data were available, determining the quantity of each item produced and the typical fibre content per item and combining these factors. Imports of yarns and fabrics used in the Canadian manufacture of end-products are included, but imports of end-products (accounting for less than 10% of consumption in terms of fibre) are excluded.

The other method, covering the years 1926 to 1954, aggregates the annual input of spinnable fibre (including imported yarn) at primary mills, adding net imports (imports minus exports) of manufactured products and finished goods likewise converted to pounds of fibre content.³ This provides an estimate of total apparent consumption, defined as domestic production plus net imports. Annual data so expressed assume that inventory changes within the production and distribution system are not significant, an assumption which may misrepresent actual consumption in a single year (as in 1947 for cotton goods), but does not invalidate inferences from a time series.

¹These data, for which The Conference Board is cited as source in the tables, were developed with generous help from the Dominion Bureau of Statistics, the Primary Textile Institute and certain companies in the industry.

²Compare total apparent consumption, 1953, of 380.8 million pounds with estimated end-product output of 335.4 million pounds, plus end-product imports of 28.5 million pounds (=363.9 million pounds). The difference is less than 5%. Fibre content of end-products is necessarily less than fibre input by some small amount of net manufacturing waste.

³As a general principle imports and exports have been allocated to the various fibres according to the classifications under which they are reported in "Trade of Canada". These follow customs definitions, which, for example, classify as "wool" articles either wholly or in part of wool. Appropriate adjustments have been made, and many of the items reported under "mixed textiles" have been included, where it has been possible to determine the exact fibre identity of the article. However, this could not be done in all questionable cases, and it has been necessary to omit certain "mixed textiles" items. The total volume of those omitted is estimated not to have exceeded .5% of total apparent consumption in any year. In addition, tourist purchases of clothing, which amounted to an estimated \$32 million in 1954, have not been included.

End-Product Output in 1953

By end-products we mean products in their final textile form, such as clothing, carpets, mattress ticking, tire-cord, papermakers' felts, and so on. Many of these items reach the ultimate consumer as components or process materials in the manufacture of non-textile articles, such items being included in the "industrial" classification below.

Table II-1 presents our itemized analysis, which can be summarized here as follows:

Table B

PRODUCTION OF TEXTILE END-PRODUCTS IN CANADA, 1953

	<i>Million Pounds of Fibre Content</i>	<i>Percentage Distribution</i>
Apparel	195.1	58.2
Men's and youths'	67.6	20.2
Women's and Misses'	53.4	15.9
Children's and infants'	29.8	8.9
Miscellaneous	44.3	13.2
Household	44.7	13.3
Industrial	95.6	28.5
Total.....	335.4	100.0

The corresponding fibre content of imported end-products was 28.5 million pounds, making a total apparent supply on the above calculations of 364 million pounds in 1953.

Our classification of apparel applications includes some items (such as thread and narrow fabrics) which have household and industrial applications as well. The above proportions are therefore slightly distorted. Furthermore, the imported finished goods that are excluded from these figures consist one-third of apparel and two-thirds of household and industrial material. We therefore conclude that approximately 55% by volume of fibre of the total supply of textile end-products coming on the Canadian market in 1953 was in apparel, and about 45% was in industrial and household applications.

Similar compilations for the United States show apparel accounting for about 50% of fibre consumption.⁴ Industrial applications also appear to be a smaller proportion than in Canada. The household proportion (estimated above at 13% for Canada), which includes many items used in hotels, hospitals and other institutions is substantially higher in the United States.

Total Apparent Consumption, 1926-1954

Table II-2 shows our alternative measure of the Canadian textile market by years since 1926, in terms of apparent total consumption of cotton, wool, silk and synthetic fibre, and of per capita consumption of all fibres. It is supplemented by Table II-3 which compares the trend of per capita con-

⁴*Textile Organon*, Supplement, June, 1955; Textile Economics Bureau Incorporated, New York

sumption over the period with the trend of per capita Gross National Product in constant dollars, and by Table II-4 which compares per capita consumption in Canada and the United States.

The incidence of abnormal or specially marked conditions in the period covered by these data calls for some immediate comment. From 1940 to 1945, heavy service orders had priority and a shortage of civilian textile products prevailed in Canada and elsewhere, production and imports being subject to strict allocation to which subsidy arrangements were added following the introduction of price control. Early in 1947, the apparent peak year of per capita textile consumption, the pressure of deferred demand with continued subsidy arrangements (removed in April of that year) coincided with a slight easing of domestic demand in the United States to precipitate a sudden accumulation of imported goods in Canada which was not liquidated for over a year. The outbreak of the Korean War stimulated some speculative and precautionary buying, thus prolonging the abnormal demand of the immediate postwar period. Thereafter the sharp decline to 1954, shown in Table II-2, coincided with a similar contraction of demand for textiles in the United States, which intensified the impact of import competition in the Canadian market. 1954, the latest year for which these data could be computed, was an exceptionally unfavourable year for the industry, and if the table were extended it would show some recovery in 1955.

With these observations in mind, Tables II-2 and II-3 can be taken together as exhibiting a situation in which per capita consumption of textiles, after an extended period of abnormal and inflated demand, appears to be coming out on a plane moderately above prewar levels but relatively much below the trend of demand for consumer goods generally which has been one of the dynamic factors in the growth of the Gross National Product since the war. While the index of textile fibre consumption for the years 1952-1954 averaged about 16% above the 1926 level, GNP in constant dollars per capita increased by 67% for the same period.

A second general inference from the same figures is the basic influence of the size of the population as a factor determining the size of the textile market,—a limiting factor in the short run, but a sustaining factor of expansion in retrospect over the last three decades, and prospectively so for the future.

Interpretation of consumption trends measured by weight of fibre requires some reservation owing to the increasing use of lighter fabrics. Consumption of fabrics alone measured in linear yards would show a greater increase from 1926. The difference cannot be stated precisely. But provided it is noted so that some allowance can be made we believe that it does not essentially alter the significance of the above rather marked comparison, which corroborates the evidence given in Chapter I regarding the declining place of primary tex-

tiles in relation to manufacturing industry as a whole. From the standpoint of the industry itself the same distortion in measurement by weight of fibre content also understates the impact of import competition, as is noted in Chapter III.

Table II-4, comparing textile fibre consumption per capita in Canada and the United States, shows a similar trend in both countries, the ratio of Canadian to U.S. consumption in 1951-1954, as in 1936-1939, being of the order of a little more than 70%.

In view of the major position of clothing in the textile market, (accounting in 1953 for about 55% of the market in Canada, and about 50% in the United States) it is significant that the trend of clothing expenditure as a proportion of all personal consumption expenditure has also been similar in both countries since the war, and indeed since 1930. This is shown as follows:

Table C

SPENDING ON CLOTHING AND PERSONAL FURNISHINGS AS PERCENTAGE OF ALL PERSONAL CONSUMPTION EXPENDITURE

Sources: Dominion Bureau of Statistics; U.S. Department of Commerce.

	<i>Canada</i>	<i>United States</i>
1946	14.9	15.2
1947	14.4	13.9
1948	14.6	13.4
1949	14.3	12.6
1950	13.0	11.7
1951	12.9	11.6
1952	12.8	11.4
1953	12.4	10.7
1954	11.6	10.4

The declining proportion of income spent on clothing in recent years is equally marked in both countries, although the decline set in earlier in the United States. In both countries it is associated with the rise of consumers' income since the war, and suggests that at the standards of living prevailing in North America the total demand for apparel textiles is not as elastic with respect to income as is the demand for other consumer goods and services. In Canada, the downward trend shown in the above table from 1949 through 1954 was accompanied by a rise in the proportion of consumer expenditure for services from 28% to nearly 33%. There was only a slight rise in the proportion of total personal expenditures upon durable consumer goods; the shrinkage took place in nondurables, primarily food and clothing.

Viewed against a broader international background, however, Canadian textile consumption stands high. Statistics prepared by the Food and Agriculture Organization of the United Nations, somewhat similar to our calculations of total apparent consumption in Canada, show Canadian per capita

consumption between 25% and 30% below that of the United States, but substantially ahead of other countries.⁵ In 1953, it was 20% above the United Kingdom (the third highest consumer), 75% above western Europe as a whole, 90% above Japan, and 200% above the world average.

This is the condition of the Canadian textile market today. Our observations regarding the future are submitted in the concluding chapter.

⁵F.A.O. *Commodity Series*, Bulletin No. 25, March, 1954 and *Monthly Bulletin of Agricultural Economics & Statistics*, December, 1955.

Appendix II

Table II-1

PRODUCTION OF TEXTILE END-PRODUCTS IN CANADA, 1953

Millions of Pounds of Fibre Content¹

Source: The Conference Board

Apparel	
<i>Men's and Youths'</i>	
Underwear	7.4
Hosiery	4.7
Nightwear	1.5
Bathrobes, Dressing Gowns and Smoking Jackets .....	.5
Shirts	14.4
Fine and Sports	9.1
Work	3.7
T-Shirts	1.6
Suits (incl. Fine Trousers, Slacks, Jackets and Uniforms).....	14.2
Sportswear (excl. T-Shirts).....	6.8
Outdoor Jackets	5.8
Bathing Suits .....	.1
Sportsuits, etc. ....	.9
Workclothing (excl. Workshirts).....	11.8
Overcoats and Topcoats	4.5
Rainwear .....	.9
Accessories	1.1
Neckwear .....	.8
Handkerchiefs .....	.1
Suspenders and Hose Supporters .....	.2
Total Men's and Youths'	67.6
<i>Women's and Misses'</i>	
Underwear and Lingerie.....	7.2
Hosiery	3.5
Full Length	2.8
Anklets and Socks .....	.7
Foundation Garments.....	2.4
Brassieres and Bandeaux	1.0
Corsets and Girdles.....	1.3
Nightwear	3.0
Bathrobes, Dressing Gowns and Housecoats	1.1
Blouses and Shirts	3.0
Blouses	2.7
T-Shirts .....	.4
Suits and Skirts (incl. Fine Jackets).....	4.8
Street Dresses	9.1
House Dresses and Uniforms (incl. Aprons and Smocks).....	3.6
Sportswear (excl. T-Shirts).....	7.1
Outdoor Jackets .....	.5
Bathing Suits .....	.3
Slacks, etc.	6.3
Coats (incl. Fur Coat Linings).....	7.3
Rainwear .....	.7
Accessories .....	.5
Neckwear .....	.4
Handkerchiefs .....	.1
Total Women's and Misses'	53.4

THE CANADIAN TEXTILE MARKET

Children's and Infants'

Underwear and Slips.....		4.8
Hosiery		2.2
Full Length .....	.9	
Golfers, Anklets and Booties	1.3	
Nightwear (incl. Sleepers).....		1.7
Bathrobes .....		.1
Blouses and Shirts.....		2.8
Blouses .....	.4	
Fine and Sports Shirts.....	1.4	
Work Shirts .....	.2	
T-Shirts .....	.9	
Suits and Skirts (incl. Fine Trousers, Slacks, Breeches and Jackets)		2.8
Dresses		2.1
Sportswear and Playclothes.....		7.6
Outdoor Jackets.....	1.8	
Bathing Suits .....	.1	
Overalls, Dungarees, and Work Trousers....	3.9	
Children's Slacks and Play Suits, etc.....	1.8	
Coats		3.3
Snow and Ski Suits		1.4
Rainwear .....		.2
Miscellaneous Infants' Wear (incl. Diapers).....		.8
Total Children's and Infants'		29.8

Miscellaneous Apparel Products

Apparel Accessories.....		.7
Shoe Laces .....	.4	
Umbrellas .....	.1	
Miscellaneous Accessories .....	.2	
Headwear		3.4
Gloves		3.0
Dress .....	.4	
Work	2.3	
Linings .....	.3	
Hospital Clothing .....		.4
Sweaters (incl. Cardigans, Sweatshirts and Jerseys, but excl. T-Shirts).....		6.4
Piece Goods		17.5
Hand Knitting Yarns		2.2
Thread and Narrow Fabrics (incl. Household and Industrial).....		10.7
Total Miscellaneous Apparel Products		44.3
Total Apparel		195.1

Household Textiles

Curtains and Curtain Materials.....		1.1
Drapery and Upholstery		5.4
Tapestries and Upholstering Materials.....	4.4	
Drapes and Drapery Materials.....	1.1	
Furniture Grey Cloths.....		1.4
Cushions and Lampshades.....		.4
Carpets and Rugs (incl. Bathmats and Sets)		6.2
Bedding and Blankets.....		16.6
Quilts and Comforters.....	.4	
Bedspreads	1.5	
Blankets	10.4	
Mattress and Pillow Ticking (incl. Mattress Covers).....	4.3	
"Linens"		8.7
Sheets and Pillow Cases.....	3.3	
Tablecloths and Napkins.....	.5	
Towels and Towelling (incl. Face Cloths) ...	4.9	
Shades and Blinds.....		.6

Table II-1 (Cont'd.)

Kitchen Uses		2.4
Mops	2.0	
Dish Cloths .....	.3	
Other .....	.1	
Garment Bags and Miscellaneous Covers.....		1.2
Outdoor Uses (incl. Awnings and Garden Furniture) .....		.7
Total Household		44.7
Industrial Textiles		
Automotive		4.9
Upholstery	2.1	
Headlining and Sidewall.....	1.9	
Slipcovers .....	.8	
Tire Fabrics		29.2
Mechanical Rubber Goods		6.2
Papermakers Felts		3.9
Electrical Insulation		2.5
Footwear		5.8
Leather Footwear and Slippers.....	2.3	
Rubber Footwear	3.5	
Luggage and Luggage Lining.....		1.4
Fish Nets and Lines .....		.9
Cotton Bags.....		14.8
Rope .....		.2
Typewriter Ribbons .....		.2
Meat Covering .....		.8
Caskets and Coffins .....		.3
Abrasives and Polishing Buffs .....		.8
Canvas Products (incl. Tarpaulins, Tents, Sails, etc.).....		3.3
Flags, Bunting and Pennants .....		.2
Laundry and Dry Cleaning .....		.2
Sporting Goods (incl. Camp equipment).....		.4
Tobacco and Cheesecloth.....		.3
Coated Fabrics		3.4
Filter Fabrics.....		1.0
Felts		14.9
Total Industrial		95.6
Total End-Products.....		335.4

Table II-2

APPARENT CONSUMPTION OF TEXTILES IN CANADA BY FIBRE CONTENT, 1926-1954¹

Source: The Conference Board

	Total Consumption Millions of Pounds					Per Capita Consumption Pounds
	Cotton	Wool	Silk	Synthetics	All Textiles	All Textiles
1926.....	136.0	54.3	4.1	4.2	198.5	21.0
1927.....	155.4	54.5	4.8	6.2	221.0	23.0
1928.....	155.2	58.2	4.4	8.2	225.9	23.0
1929.....	154.3	55.7	4.0	10.9	224.9	22.5
1930.....	127.3	47.9	3.4	14.1	192.7	18.9
1931.....	111.3	35.3	3.2	10.6	160.3	15.5
1932.....	103.6	35.4	2.8	9.2	151.0	14.4
1933.....	128.5	43.0	2.3	11.5	185.3	17.5
1934.....	142.8	47.4	2.4	12.6	205.2	19.1
1935.....	140.5	51.7	2.9	15.3	210.3	19.4
1936.....	150.7	56.7	1.9	16.4	225.7	20.6
1937.....	168.8	56.4	1.9	20.2	247.4	22.4
1938.....	141.3	46.6	2.0	18.1	208.0	18.7
1939.....	172.9	53.6	1.8	22.7	251.0	22.3
1940.....	220.5	74.9	1.9	26.8	324.1	28.5
1941.....	230.7	71.8	0.5	34.6	337.6	29.4
1942.....	260.9	76.8	0.1	33.5	371.2	31.9
1943.....	246.3	64.5	a	32.2	343.1	29.1
1944.....	215.9	56.0	a	44.0	315.9	26.5
1945.....	199.6	59.5	a	49.5	308.6	25.6
1946.....	215.6	74.7	0.1	44.4	334.9	27.3
1947.....	250.4	84.6	0.5	59.8	395.3	31.6
1948.....	218.7	86.8	0.4	61.1	367.0	28.7
1949.....	224.6	73.9	0.4	69.4	368.4	27.4
1950.....	245.3	77.7	0.6	82.0	405.6	29.6
1951.....	244.7	68.0	0.5	95.2	408.4	29.2
1952.....	203.2	52.9	0.4	97.2	353.7	24.6
1953.....	209.1	68.8	0.4	102.5	380.8	25.8
1954.....	197.2	51.5	0.4	91.3	340.4	22.4

¹Excludes tourist imports.

a Less than 0.05 million pounds.

Table II-3

PER CAPITA APPARENT CONSUMPTION OF MAJOR TEXTILE
FIBRES AND PER CAPITA GROSS NATIONAL PRODUCT
IN CONSTANT DOLLARS, 1926-1954

Sources: The Conference Board, Dominion Bureau of Statistics

Index Numbers, 1926=100

	Per Capita Apparent Consumption of Major Fibres	Per Capita GNP in Constant (1935-1939) Dollars
1926	100.0	100.0
1927	109.5	106.2
1928	109.5	112.6
1929	107.1	110.6
1930	90.0	104.4
1931	73.8	89.6
1932	68.6	81.0
1933	83.3	73.7
1934	91.0	81.4
1935	92.4	86.8
1936	98.1	89.9
1937	106.7	97.9
1938	89.0	97.8
1939	106.2	104.7
1940	135.7	118.5
1941	140.0	135.1
1942	151.9	159.4
1943	138.6	165.1
1944	126.2	169.1
1945	121.9	160.3
1946	130.0	152.9
1947	150.5	151.7
1948	136.7	153.0
1949	130.5	150.2
1950	141.0	156.6
1951	139.1	162.2
1952	117.1	168.2
1953	122.9	170.4
1954	106.7	161.8

Table II-4

PER CAPITA APPARENT CONSUMPTION OF MAJOR TEXTILE
FIBRES: IN CANADA AND UNITED STATES, 1926-1954¹

Sources: Canada, The Conference Board; United States, Textile Economics Bureau and
The Conference Board

Pounds per Capita

	<u>Canada</u>	<u>United States</u>
1926	21.0	27.6
1927	23.0	30.2
1928	23.0	26.6
1929	22.5	28.7
1930	18.9	21.7
1931	15.5	22.9
1932	14.4	20.6
1933	17.5	26.0
1934	19.1	21.8
1935	19.4	25.0
1936	20.6	30.6
1937	22.4	31.3
1938	18.7	24.6
1939	22.3	31.1
1940	28.5	33.0
1941	29.4	44.1
1942	31.9	45.7
1943	29.1	42.0
1944	26.5	37.2
1945	25.6	37.5
1946	27.3	38.6
1947	31.6	34.7
1948	28.7	36.7
1949	27.4	30.8
1950	29.6	40.1
1951	29.2	38.8
1952	24.6	36.7
1953	25.8	35.4
1954	22.4	32.0

¹Includes cotton, wool, silk and synthetics.

3

IMPORT COMPETITION

The preceding chapter indicated that the apparent consumption of textiles in Canada has fallen behind the long-run growth of the Canadian economy. The data presented also suggested that this lag was obscured for a considerable time by abnormal wartime and postwar factors. It was not until after 1950 that the prolonged stimulus of these factors disappeared. At the same time, the contraction of the market after 1950 has been accompanied by re-emergence of intensified foreign competition, with the result that the industry's experience in the 1950-1954 period can be described as defence of a declining share of a contracting market. In this chapter we deal with the industry's share of the Canadian market and the measure of foreign competition, with concluding notes on Canadian tariff provisions and on comparative trends in cotton textile prices in Canada and the United States.

Actual or potential import competition of varying severity is a perennial element in the industry's operations and plans, but a combination of factors has sharpened its intensity in recent years. Chief among the factors affecting Canada directly have been the following: the price inflation of the past decade which has much reduced the degree of protection afforded by the existing Canadian tariff; the appreciation of the Canadian dollar after the war; the increasing range of primary textile products themselves, making it difficult for Canadian producers to handle sufficiently long "runs" to achieve efficiencies comparable with those of competitors serving larger markets; a rise in the ratios of many Canadian textile prices and costs to those in competing countries; the contraction of the market already noted; and comparable contraction of the American textile market, leading to over-production and competition between American producers which has impinged on Canada from several angles.

Foreign competition in the Canadian textile market is also affected by the broad pattern of world textile developments in the past decade. The comparison at the end of Chapter II between the standards of textile consumption prevailing in North America, and in most of the rest of the world, points also

to the potential capacity for growth in the textile industries of less developed countries, which is now strongly under way.

In countries that have become eager to industrialize the textile industry is looked upon as one of the easiest and most advantageous avenues. Basic technology is simple, standard, and readily available. Labour skills for mass-produced lines are easily acquired, while labour content per unit of output is high. Import displacement via expanding internal production has been welcomed by governments as a means of encouraging a more favourable international payments position.

Thus, in the underdeveloped countries generally, textile imports have fallen as a proportion of domestic consumption. India in particular has shifted from a net importer of cotton textile manufactures before World War II to a major net exporter now.

At the same time, the textile industries of some of the more industrially advanced countries have grown aggressively. Japan has now emerged as the largest exporter of cotton and synthetic goods in the world, and West Germany, like India, has changed from a net importer of cotton goods prior to World War II to a net exporter today.

As a result of these developments, total world trade in many textile manufactures has fallen substantially below prewar levels, with accompanying strains backing up on producers in historically prominent textile industries of older industrial countries with respect to both their domestic and export markets. Statistical evidence for this situation is shown in Table III-1. The Canadian textile market is widely exposed to shifting currents of international trade, and the pattern as well as the volume of international trade in textiles is profoundly affected by these new conditions.

Domestic Mills' Share of the Canadian Market

Table III-2, in which data are expressed on a basis of fibre content consistent with the analysis in Chapter II, shows the share of apparent consumption of all textiles obtained by domestic primary mills from 1926 to 1954. From 1951 to 1954, inclusive, their percentage has fallen from 81.1% to 72.9%. Disregarding the exceptional circumstances of 1947, the percentage figures for 1953 and 1954 mark the lowest levels since 1930.

As these data for imports represent fabrics and other manufactures expressed in weight of fibre content, two comments should be made as regards their interpretation. In the first place, a high proportion of all imported textile manufactures are now directly competitive with the primary industry. Table III-3 shows a breakdown for selected years by fibre classes divided between primary manufactured goods and end-products. For 1954, when these respective quantities were 64 and 28 million pounds, about half the latter

amount consisted of finished goods as produced by the primary industry itself, such as sheets, towels and carpets.

In the second place, the percent of the fabric market obtained by the domestic industry is higher when measured by weight of fibre than when measured by linear yards. (See Table III-4). Imports in each fibre category consist unequally, but predominantly, of piece goods which constitute the major area of foreign penetration. (See Tables: for cotton, III-6; for wool, III-8; for synthetics, III-10). In the case of cotton fabrics particularly, which account for a substantial part of aggregate consumption of all categories, imports tend to be more concentrated in the lighter cloths, and domestic mills have a larger share of the market in heavier types, partly by reason of the tariff structure. Consequently the share of fabric market obtained by Canadian mills calculated according to trade usage is appreciably lower than their share of the total market calculated by weight of fibre content.

If import share could be measured absolutely, i.e. item by item, there would be little difference whether yards or pounds were used. Proportions would not be affected. But the different composition of domestic production and imports makes the percentage diverge, sometimes substantially. Neither pounds nor yards by themselves can measure the extent of foreign competition precisely when it is a question of aggregate quantities comprising diversities of products. In the circumstances, our review proceeds in terms of fibre content consistent with the analysis of total apparent consumption in Chapter II, keeping the above distinctions in mind.

Cotton (See Tables III-5 and III-6)

The experience of the cotton industry, which still comprises well over half the total volume of primary textile production, can be stated very briefly. The domestic mills' average share of the market for 1952-1954 was 69.8%, compared with 81.7% for 1935-1939. Excluding 1947, which was an abnormal year as noted earlier, this was the lowest proportion secured during the last 30 years. Even in absolute terms, the average volume of imports in 1952-1954 (62 million pounds) was exceeded only in 1947 and in 1943. While piece goods still account for approximately 70% of the total import volume, end-products have more than doubled in the last three years, reflecting heavy imports from the United States of standard household items such as sheets and towels.

Wool (See Tables III-7 and III-8)

Data on wool do not represent the entire volume of production of this section of the primary industry owing to its increasing use of synthetic staple. In the wool cloth industry, for example, the mixture of synthetics rose to 13% of all new staple in 1952-1953. This development does not imply

grounds for indifference to import competition, which occurs likewise in mixed fabrics, but it does mean that the operations of the industry as such are not limited to the apparent consumption of natural fibre.

Measured in natural fibre, the wool industry's share of its market averaged 66% in 1952-1954, compared with 77% in 1935-1939. It diminished steadily after the war, and even more seriously after 1951. As the market is not much larger now than before the war, the volume of total production has also fallen. With rising imports, the brunt of the contraction over the last ten years has fallen on the domestic industry with increasing severity.

Imports of piece goods, though substantial, are relatively less significant in wool than in cotton. Their average annual rate since the war has been above the prewar rate, but has not yet approached the very high level of 1926-1929 prior to the tariff increases of 1930. As a proportion of total wool imports, piece goods accounted for 57% in the last three years, compared with 78% in 1935-1939. These percentages reflect a marked rise in imports of carpets and rugs since the war. Despite the extensive penetration of this area of the market by overseas manufacturers, however, this section of the Canadian wool textile industry has continued to earn some profits on its selected lines of production.

Three other features of the wool textile market deserve mention. One is the decline over the past 20 years in wool knit goods. This has contributed to the sharper downward trend of the wool fibre data shown in Table III-4, as compared with the parallel fabric data. The second is the declining volume of imported yarn, which is associated with vertical integration of Canadian wool companies to include the spinning of their own yarn. Despite the price at which weaving yarn can be imported under the present tariff, the Canadian industry considers that such integration, which is contrary to the traditional horizontal pattern of the British industry, is necessary in order to provide the types of yarn that it requires. The third feature is the trend to lighter fabrics in imported goods, which is encouraged by the tariff structure and by comparatively higher costs of domestic production.

Synthetics (See Tables III-9 and III-10)

Natural silk, which provided the basis for much of the synthetic weaving industry, has ceased to be a commercially significant fibre in Canada.¹

The fact that most synthetic textiles receive higher tariff protection than cotton or wool products has contributed to the relatively larger share of its market obtained by this section of the industry. The domestic mills supplied 85.8% of total apparent fibre consumption in 1952-1954, compared with 88.4% in 1935-1939. At the same time, the market has been growing impressively. Apparent consumption for the same year shows a growth from

¹Data on silk are shown only in Tables I-3, I-4, II-2, and III-3 of this report.

20.3 to 97.0 million pounds. Allowance for the proportion of synthetic fibre that is used by the wool industry, as previously explained, does not affect this conclusion. The growth of the market has consequently offered increasing opportunities to both domestic and foreign suppliers. The average volume of synthetics imports in 1952-1954 at 13.8 million pounds was six times the prewar volume. This increase has been largely concentrated in apparel and in piece goods for both apparel and household uses. At the same time Canadian synthetic textiles producers have on the whole maintained or increased their share of the market for industrial textiles.

Foreign Competitors

The following section deals directly with the foreign competition faced by Canadian producers from the United Kingdom, the United States, and Japan and India.

At the present time, the Canadian textile industry's main foreign competition comes, in the case of cotton and synthetic products, from the United States, and in the case of wool products, from the United Kingdom. There has also been scattered competition from various European countries—Italy, West Germany, Belgium, the Netherlands and France—covering a wide range of products. At the same time, competition from the Far East (in particular, Japan and India) has become more than marginal during the past few years, especially for certain cotton goods and even for some types of synthetic products, and it is potentially capable of becoming very much greater.

The United Kingdom

Before World War II the United Kingdom was the major source of foreign competition for the Canadian textile industry. In 1938, for example, the United Kingdom accounted for almost two-thirds of the value of all Canadian imports of textile manufacturers, including about 90% of wool goods and over 60% of cotton goods. But since then, the United Kingdom has lost considerable ground in two important senses. First, competition from other foreign sources has reduced the United Kingdom's share of Canadian *imports* of all textile manufacturers to about one-third—in the case of wool goods to about 80% of total imports, and in the case of cotton goods to not much over 15% of total imports, in 1952-54. Second, although the total dollar value of Canadian textile imports from the United Kingdom in recent years has actually been above prewar, this rise is more than accounted for by price increases. In particular, in 1952-54 the physical volume of Canadian imports of British cotton manufacturers was considerably below prewar, while that of British wool manufacturers was probably not much above.

At the same time, the rise in imports of textiles relative to Canadian consumption means that the British share of the entire *market* in Canada

has been better maintained than the above figures suggest. In the case of wool manufacture, United Kingdom exporters actually appear to have had, in 1952-54, a somewhat larger proportion of the Canadian market than before the war (measured in pounds of fibre) with typically important shipments consisting of worsted yarn, worsted and woollen cloth, carpets, and various types of wool clothing. But in the case of cotton, Britain's share of the Canadian market has declined from about 10% before the war to about 3% in 1952-1954.

The United States

The United States has become the major source of foreign competition for the Canadian textile industry. In 1938, less than 20% of the value of Canadian imports of textile manufactures came from the United States; in 1952-1954 this percentage was almost 50%. A very substantial part of this expansion is accounted for by cotton goods, which jumped from less than 20% of the total value of cotton imports in 1938 to almost 75% in 1952-54. Even the latter high proportion, however, is down somewhat from the 1945-49 average (over 80%), as a result of increased cotton imports from other countries, mainly Japan and India (see next section). United States exports of synthetic textiles to Canada have advanced at an even more rapid rate.

The prewar-to-postwar expansion in textile imports from the United States is of course all the more significant because it represents an increased proportion of an increased volume and value of imports, which in turn occupy an increased share of the Canadian textile market. In terms of fibre pounds of all primary cotton textiles, for example, United States producers were supplying not much over 5% of the Canadian market in 1935-39, but more than 20% of this market in 1952-54. In the case of primary synthetic textiles (in terms of pounds of fibre), the United States has moved up from around 2% prewar to not far below 15% in 1952-54.

Among the major textile products now being imported from the United States are coloured cotton fabrics, unbleached cotton fabrics, a wide variety of cotton clothing, sheets and towels, and corresponding synthetic fabrics and clothing.

Japan and India

Although a larger proportion of total Canadian imports of textile manufacturers still appears to come from the United States and the United Kingdom, taken together, as compared with the immediate prewar period, competition from other countries is becoming more active. In particular, India and Japan have emerged as competitors of importance. Although the actual extent of their entry into the Canadian market (in terms of total value) has been, according to the latest information, still fairly small, the degree of penetration in the case of certain products has already been substantial.

As already indicated, India has recently switched from a net importer to a net exporter of cotton manufactures, the principal exports to Canada in recent years (entitled to preferential tariff treatment) being unbleached cotton fabric and cheaper types of coloured cotton fabrics. In the case of Japan, which since the war has rebuilt a technologically-advanced, well managed, well diversified and aggressive textile industry, the potential competition is obviously greater. Indeed, Japan now has a textile industry second only to the United States in productive capacity, has regained its prewar position of the world's largest exporter of cotton fabrics, and has also become by far the largest exporter of synthetic products. Thus far, the greatest competitive activity from Japan has appeared in Canada in the end-product sector.¹

Canadian Textile Tariff Provisions

Canadian textile manufacturers have told us that no country today of comparable economic maturity and having a comparable textile industry has a lower textiles tariff than Canada. This is a generalization that cannot readily be checked for literal accuracy and we have made no such attempt to verify it. But we have no reason to doubt that it is substantially correct.

Provisions and amendments of the Tariff Act covering cotton, wool and synthetic products, from 1928, are shown in a technical note concluding the appendix to this chapter.

Members of the industry in our conversations with them emphasized three points: (i) the duties applicable to the importation of coloured cotton fabrics; (ii) the British preferential duties applicable to wool cloth; and (iii) the wording of the valuation provision in the Customs Act for the imposition of dumping duties. These sections of the Tariff Act, the industry maintains, are either outmoded or unenforceable and consequently do not have the effect intended when they were enacted.

Coloured Cotton Fabrics

Item 523 (b) of the Tariff Act relating to coloured cotton fabrics provides for bracket tariff rates. In the Intermediate (or most-favoured nation) schedule which has applied to imports from the United States since January 1936, the highest rate of 25% and 3½ cents per pound is applicable to fabrics other than denim valued at less than 50 cents a pound. Lower rates apply to goods valued between 50 cents and 80 cents a pound and still lower rates to those valued at more than 80 cents a pound. When these rates were negotiated with the United States in 1938, the bulk of coloured cotton fabrics were valued at less than 50 cents a pound and consequently bore the highest rate.

¹Further details of the Japanese textile industry are given in "The Textile Industry in Japan", Primary Textiles Institute 1956, (Report of a visit by a group of three from the Canadian textile industry to Japan in October-November, 1955).

Price inflation since 1938 has brought prices to a level about double the level then prevailing. Consequently the same imported fabrics that would in 1938 have carried the highest rate, applicable to fabrics valued at less than 50 cents a pound, may now bear the lowest rate of 17.5% and three cents per pound, applicable to fabrics valued at more than 80 cents a pound.

Wool Cloth

In the case of wool cloth, Item 554(b) of the Tariff Act provides that the sum of specific and ad valorem duties applicable to British goods may not exceed 50 cents a pound. This provision was established 19 years ago for the purpose of limiting the duty payable on a few high-priced specialties. But with the rise of prices in the intervening years, a provision that was intended to apply to only a few items has become applicable to nearly all wool fabrics imported. The practical result has been a reduction of the effective rate from about 29% originally to about 15% today.

Customs Valuation for Duty

Before 1948, dumping duties were imposed upon goods imported into Canada below cost of production plus a reasonable amount for administration, selling costs and profits. In 1948 the relative provision of the Customs Act was amended. As before, several bases could be used. But fair market value established by sales in the home market was to be preferred. The effect of this provision, according to Canadian textile manufacturers, is to permit the importation of goods whose value may be established in home markets at distress prices. Furthermore, they claim that the Customs authorities in Canada do not have sufficient means available to check prices that may have been established by fictitious sales in the home market in order to avoid the imposition of dumping duties.²

Disregarding the question of what appropriate rates on cotton and wool fabrics should be, which we are not expected to determine, it is clear that the wording of the relevant tariff paragraphs in conjunction with the price inflation of the last 15 years has resulted in an effective lowering of protection without any deliberate government action. On the other hand, the change in the valuation basis in 1948 represents deliberate government policy following the General Agreement on Trade and Tariffs.

In the nature of the case it is difficult to secure evidence on dumping. But we may note that many of the American experts whom we consulted for their views on the Canadian industry's problems dealt with this question in our conversations with them, stating their belief that at times large quantities (in Canadian terms) of American primary textile goods are

²These points have been made by several industry representatives in submissions to the Royal Commission on Canada's Economic Prospects. See, for example, submission of L. C. Bonnycastle, President of Canadian Cottons Limited, pages 14-17; submission of Francois E. Cleyn, Managing Director of Leach Textiles Limited, page 8, and that of the Primary Textiles Institute, pages 18-20.

dumped in Canada, particularly when inventories in their country are excessive. Their observations referred particularly to mass output and mass consumption lines, although the views that we received from the Canadian industry made no such distinction. From these and other enquiries we believe that the situation of the American primary textile industry since 1951, characterized by price competition and over-production in the face of contracting demand, has been conducive both to dumping in Canada in the circumstances mentioned above, and to offerings and sales of goods in the Canadian market on terms based on prices current in the United States which were nevertheless below real costs of production.

Canada and the United States: Cotton Textile Prices

An underlying difficulty confronting the Canadian cotton industry since 1951 is the fact that prices of primary cotton textiles in the United States, its principal source of competition, have been falling faster and further than prices in Canada. This divergence has exerted pressure on the Canadian industry which represents a different problem from dumping, and which should be distinguished from disposals of distress merchandise originating in the miscalculations of American producers.

The situation is illustrated in a general way, allowing for some difference in the composition of the indexes, by the following comparison of wholesale price trends in both countries over the past ten years:

Table D

INDEX NUMBERS OF WHOLESALE PRICES OF COTTON PRODUCTS—CANADA AND THE UNITED STATES, 1946-1955

Sources: Dominion Bureau of Statistics, Bureau of Labour Statistics, The Conference Board.

1949 = 100¹

Year	Canada	United States
1946	54.7	89.2
1947	77.8	112.3
1948	97.4	114.5
1949	100.0	100.0
1950	109.0	108.4
1951	121.9	121.5
1952	114.8	107.3
1953	108.5	101.8
1954	104.0	97.2
1955	105.3	99.7

¹These series have been compiled by re-basing the present Dominion Bureau of Statistics and the Bureau of Labour Statistics indexes (based on 1935-39 and 1947-49 respectively).

Wholesale prices moved up earlier in the United States, rising in 1946 by more than 25% over the level prevailing under wartime price control. By

1948 they had already reached one postwar peak. Another was registered in 1951 after declines in 1949 and 1950. Thereafter a general decline took place to a point some 13% below the 1948 level.

In Canada, by contrast, the rise in prices did not start so soon, owing to longer retention of price controls. But after a later start, Canadian prices continued to rise without interruption until 1951, when they were 25% above their 1948 level. Thereafter they declined, but to a point about 8% above the 1948 level.

The diverging trends from the peak of 1951 in both countries has meant sharper competition for Canadian producers whose costs, to be discussed in the next two chapters, prevented equivalent adjustment and led to narrowed profit margins or losses on many items. In 1952-1954, when the Canadian market also was contracting, imports of U.S. cotton manufactures increased, and sales of Canadian primary products declined.

Comparative price trends were undoubtedly a factor in this experience, but they do not finally account for it. They reflect more fundamental elements in the industry's competitive capacity, to which we turn next.

Appendix III

Table III-1

WORLD TEXTILE MARKET PERCENT CHANGES IN PRODUCTION, CONSUMPTION, AND IMPORTS
BY VARIOUS IMPORTING AREAS 1948-1953¹

Sources: Trade Intelligence Unit, GATT; The Conference Board

Area	Production			Consumption			Net Imports			
	Cotton	Rayon	Wool	Cotton	Rayon	Wool	Cotton	Rayon	Wool	Total
Latin America.....	65.9	725.0	76.0	28.8	349.0	37.7	-60.3	89.7	-58.1	-45.1
"Other" Asia.....	94.6	a	43.6	27.9	90.7	16.9	-6.5	77.3	-50.0	4.4
Africa.....	240.6	b	292.3	52.0	407.7	120.0	18.0	342.3	42.3	40.0
"Other" Europe & Canada.....	32.6	907.7	28.1	31.3	357.4	17.8	24.1	16.7	2.5	13.5
Total.....	66.8	895.7	55.4	32.8	253.3	31.5	-6.9	101.1	11.9	5.8

¹Excluding the following major exporting countries; Belgium, France, Germany, Italy, Netherlands, Switzerland, United Kingdom, United States, India and Japan.

a No production report for 1938; production for 1953, 13 million pounds.

b No production reported for 1938; production for 1953, 18 million pounds.

Table III-2

**APPARENT CONSUMPTION OF TEXTILES IN CANADA AND
PERCENT OF MARKET SERVED BY DOMESTIC
PRIMARY MILLS, 1926-1954**

Source: The Conference Board

Millions of Pounds

	Production of Primary Textiles in Domestic Mills	Imports of Fabrics and Manufactured Textiles ¹	Exports of Fabrics and Manufactured Textiles	Total Apparent Consumption	Percent of Market Served by Domestic Mills
1926...	133.5	66.6	1.6	198.5	66.4
1927...	151.0	71.9	1.9	221.0	67.5
1928...	154.2	73.8	2.0	225.9	67.4
1929...	149.2	77.8	2.1	224.9	65.4
1930...	128.2	66.6	2.1	192.7	65.4
1931...	122.1	39.9	1.7	160.3	75.1
1932...	124.0	29.0	2.1	151.0	80.8
1933...	158.6	28.6	1.8	185.3	84.6
1934...	174.3	33.5	2.5	205.2	83.7
1935...	177.0	35.9	2.6	210.3	82.9
1936...	188.7	40.3	3.4	225.7	82.1
1937...	205.6	46.6	4.7	247.4	81.2
1938...	174.3	38.5	4.8	208.0	81.5
1939...	209.6	47.8	6.4	251.0	81.0
1940...	289.4	50.1	15.4	324.1	84.5
1941...	301.9	54.3	18.7	337.6	83.9
1942...	311.9	72.4	13.1	271.2	80.5
1943...	273.1	79.7	9.7	343.1	76.8
1944...	254.5	73.8	12.4	315.9	76.6
1945...	257.4	65.1	13.9	308.6	78.9
1946...	266.8	77.8	9.7	334.9	76.8
1947...	287.9	118.3	10.9	395.3	70.1
1948...	297.4	78.9	9.2	367.0	78.5
1949...	292.0	81.3	4.9	368.4	77.9
1950...	339.7	71.2	5.4	405.6	82.4
1951...	337.8	77.0	6.4	408.4	81.1
1952...	270.3	88.2	4.8	353.7	75.1
1953...	279.5	105.0	3.6	380.8	72.5
1954...	251.4	92.2	3.2	340.4	72.9

¹Excludes tourist imports.

Table III-3

**IMPORTS OF MANUFACTURED TEXTILES BY DEGREE OF
MANUFACTURE AND BY FIBRE CONTENT,
SELECTED YEARS, 1928 TO 1954**

Source: The Conference Board

Millions of Pounds

	1928	1933	1939	1950	1954
Primary manufactures¹					
Cotton	28.5	15.5	25.3	39.3	44.5
Wool	19.2	6.3	8.7	10.5	10.0
Silk	3.1	0.4	0.2	0.4	0.1
Synthetic	3.2	1.3	2.2	3.9	9.3
Total primary manufactures	54.1	23.5	36.5	54.1	64.0
End-products²					
Cotton	9.8	3.6	8.4	6.8	14.9
Wool	9.2	1.4	2.5	7.9	8.9
Silk	0.4	0.1	0.1	0.1	0.1
Synthetic	0.3	a	0.3	2.4	4.3
Total end-products.....	19.6	5.1	11.3	17.1	28.3
Total manufactured textiles	73.8	28.6	47.8	71.2	92.2

¹Fabrics, and those yarns which are normally the finished products of the primary industry, i.e. knitting yarns, thread, etc.

²Wearing apparel, carpets and rugs, lace and embroidery, and other manufactures.

a Less than 0.05 million pounds.

Table III-4

**DOMESTIC MILLS' SHARE OF CANADIAN TEXTILE MARKET
BY WEIGHT AND YARDAGE, 5-YEAR AVERAGES,
1935-1949, AND 1950 TO 1954**

Sources: Primary Textiles Institute; The Conference Board

Percentage of apparent supply

	All Textiles	Cotton		Wool		Synthetics	
		Fibre Pounds ¹	Fibre Pounds ¹	Fabric Yards ²	Fibre Pounds ¹	Fabric Yards ²	Fibre Pounds ¹	Fabric Yards^{2}
1935-39 average.....	82	82	71	78	59	90	86
1940-44 average.....	80	78	61	84	67	90	90
1945-49 average.....	76	73	52	79	69	86	86
1950.....	82	81	61	76	68	92	91
1951.....	81	79	58	76	68	92	90
1952.....	75	71	51	69	65	87	79
1953.....	73	68	53	67	58	85	77
1954.....	73	70	55	63	61	85	76

¹All primary textile products.

²Fabrics only in linear yards.

Table III-5

**COTTON TEXTILES: APPARENT CONSUMPTION AND
PERCENT OF MARKET SERVED BY DOMESTIC
PRIMARY MILLS, 1926-1954**

Source: The Conference Board

Millions of Pounds

	Production of Primary Textiles in Domestic Mills	Imports of Fabrics and Manufactured Textiles	Exports of Fabrics and Manufactured Textiles	Total Apparent Consumption	Percent of Market Served by Domestic Mills
1926...	101.0	36.0	1.0	136.0	73.6
1927...	116.7	39.8	1.0	155.4	74.4
1928...	118.0	38.3	1.2	155.2	75.3
1929...	114.5	40.9	1.1	154.3	73.5
1930...	94.3	34.1	1.1	127.3	73.2
1931...	87.8	24.3	0.8	111.3	78.2
1932...	85.9	19.0	1.3	103.6	81.7
1933...	110.5	19.1	1.1	128.5	85.2
1934...	122.8	21.6	1.6	142.8	84.9
1935...	118.4	23.8	1.6	140.5	83.1
1936...	126.6	26.2	2.1	150.7	82.6
1937...	141.6	30.3	3.1	168.8	82.1
1938...	119.6	24.8	3.1	141.3	82.5
1939...	144.0	33.7	4.8	172.9	80.5
1940...	198.5	35.7	13.7	220.5	83.8
1941...	208.0	39.2	16.4	230.7	83.0
1942...	215.2	56.4	10.8	260.9	78.4
1943...	187.4	65.3	6.4	246.3	73.5
1944...	162.8	59.1	5.9	215.9	72.7
1945...	158.0	49.0	7.4	199.6	75.5
1946...	162.0	59.1	5.5	215.6	72.6
1947...	169.2	87.2	6.0	250.4	65.2
1948...	172.8	50.7	4.7	218.7	76.8
1949...	173.0	54.2	2.6	224.6	75.9
1950...	202.1	46.2	2.9	245.3	81.2
1951...	196.9	51.9	4.1	244.7	78.8
1952...	147.7	58.4	3.0	203.2	71.3
1953...	144.2	66.7	1.7	209.1	68.1
1954...	139.2	59.4	1.3	197.2	69.9

Table III-6

IMPORTS OF MANUFACTURED COTTON TEXTILES, 1926-1954

Source: The Conference Board

Millions of Pounds

	Yarn ¹	Piece Goods	Lace and Embroidery	Wearing Apparel	Other Manufactures	Total
1926.....	1.5	25.3	1.2	1.4	6.4	36.0
1927.....	1.6	27.6	1.3	1.5	7.7	39.8
1928.....	1.0	27.5	1.5	1.6	6.8	38.3
1929.....	1.0	29.3	1.9	2.0	6.7	40.9
1930.....	1.1	24.2	1.7	1.8	5.4	34.1
1931.....	1.1	17.0	1.1	0.9	4.2	24.3
1932.....	0.9	13.8	0.8	0.5	3.0	19.0
1933.....	1.2	14.3	0.6	0.3	2.6	19.1
1934.....	1.2	15.8	0.8	0.4	3.4	21.6
1935.....	1.3	17.1	0.9	0.5	4.0	23.8
1936.....	1.1	18.7	1.0	0.7	4.6	26.2
1937.....	1.4	21.9	1.1	0.8	5.1	30.3
1938.....	1.4	16.6	0.9	1.0	4.9	24.8
1939.....	1.7	23.7	0.8	1.1	6.5	33.7
1940.....	2.7	24.6	0.9	0.9	6.6	35.7
1941.....	2.9	29.6	0.8	0.4	5.5	39.2
1942.....	4.4	47.1	0.7	0.2	4.1	56.4
1943.....	6.6	55.8	0.5	0.1	2.3	65.3
1944.....	5.5	49.2	0.4	0.1	4.0	59.1
1945.....	3.4	40.0	0.4	0.1	5.1	49.0
1946.....	3.7	46.5	1.7	0.3	6.8	59.1
1947.....	8.4	68.4	0.6	2.7	7.2	87.2
1948.....	4.7	40.0	0.4	1.3	4.3	50.7
1949.....	4.2	44.3	0.5	1.1	4.1	54.2
1950.....	2.4	36.9	0.6	1.7	4.5	46.2
1951.....	3.4	41.5	0.5	1.7	4.7	51.9
1952.....	3.6	44.0	0.5	1.9	8.4	58.4
1953.....	4.4	48.6	0.6	3.7	9.9	66.7
1954.....	3.5	41.0	0.5	2.6	11.7	59.4

¹Includes thread, twines, and knitting yarns, but not yarns used as raw materials in primary mills.

Table III-7

**WOOL TEXTILES: APPARENT CONSUMPTION AND
PERCENT OF MARKET SERVED BY DOMESTIC
PRIMARY MILLS, 1926-1954**

Source: The Conference Board

Millions of Pounds

	Production of Primary Textiles in Domestic Mills	Imports of Fabrics and Manufactured Textiles	Exports of Fabrics and Manufactured Textiles	Total Apparent Consumption	Percent of Market Served by Domestic Mills
1926...	29.2	25.6	0.6	54.3	52.8
1927...	29.1	26.0	0.6	54.5	52.4
1928...	30.4	28.4	0.7	58.2	51.2
1929...	27.5	29.1	0.8	55.7	47.9
1930...	25.0	23.7	0.8	47.9	50.5
1931...	25.0	10.9	0.6	35.3	69.1
1932...	28.3	7.7	0.5	35.4	78.3
1933...	35.7	7.7	0.5	43.0	82.1
1934...	37.8	10.1	0.5	47.4	78.7
1935...	41.5	10.7	0.5	51.7	79.4
1936...	45.3	12.1	0.6	56.7	78.7
1937...	43.6	13.6	0.8	56.4	75.9
1938...	36.2	11.1	0.7	46.6	76.2
1939...	43.0	11.3	0.6	53.6	79.0
1940...	63.4	12.2	0.7	74.9	83.7
1941...	60.6	12.2	1.0	71.8	83.1
1942...	65.8	12.4	1.5	76.8	83.9
1943...	56.5	10.6	2.6	64.5	83.6
1944...	53.1	8.3	5.5	56.0	85.2
1945...	56.2	8.3	5.0	59.5	86.1
1946...	64.2	13.2	2.6	74.7	82.3
1947...	67.9	19.7	2.9	84.6	76.8
1948...	69.7	20.6	3.5	86.8	76.2
1949...	57.0	18.7	1.8	73.9	74.7
1950...	61.1	18.4	1.8	77.7	76.4
1951...	53.0	16.7	1.7	68.0	75.5
1952...	37.4	16.7	1.2	52.9	68.5
1953...	46.7	23.0	1.0	68.8	66.5
1954...	33.4	19.0	0.9	51.5	63.1

Table III-8

IMPORTS OF MANUFACTURED WOOL TEXTILES, 1926-1954

Source: The Conference Board

Millions of Pounds

	Piece Goods	Carpets and Rugs	Wearing Apparel	Other Manufactures	Total
1926	19.1	1.7	2.1	2.7	25.6
1927	18.8	2.3	2.1	2.8	26.0
1928	19.3	3.1	2.3	3.8	28.4
1929	19.2	3.1	2.4	4.3	29.1
1930	16.5	2.3	2.1	2.8	23.7
1931	8.5	0.6	1.4	0.5	10.9
1932	6.2	0.3	0.9	0.3	7.7
1933	6.3	0.5	0.7	0.2	7.7
1934	8.2	0.7	0.8	0.5	10.1
1935	8.5	0.7	0.9	0.6	10.7
1936	9.3	0.8	1.0	0.9	12.1
1937	10.7	1.0	1.0	0.9	13.6
1938	8.6	0.9	0.9	0.7	11.1
1939	8.7	1.0	0.8	0.8	11.3
1940	9.6	1.3	0.7	0.6	12.2
1941	9.7	1.4	0.6	0.5	12.2
1942	10.4	0.9	0.5	0.6	12.4
1943	9.9	0.1	0.2	0.4	10.6
1944	7.5	0.4	0.1	0.3	8.3
1945	6.3	0.9	0.7	0.4	8.3
1946	8.5	3.0	0.8	0.8	13.2
1947	10.9	5.4	2.1	1.2	19.7
1948	13.1	4.6	1.6	1.3	20.6
1949	11.8	4.3	1.6	1.0	18.7
1950	10.5	4.9	2.2	0.8	18.4
1951	9.6	4.8	1.6	0.6	16.7
1952	10.1	4.3	1.6	0.7	16.7
1953	13.2	6.5	2.2	1.1	23.0
1954	10.0	5.7	2.2	1.1	19.0

Table III-9

**SYNTHETIC TEXTILES: APPARENT CONSUMPTION AND
PERCENT OF MARKET SERVED BY DOMESTIC
PRIMARY MILLS, 1926-1954**

Source: The Conference Board

Millions of Pounds

	Production of Primary Textiles in Domestic Mills	Imports of Fabrics and Manufactured Textiles	Exports of Fabrics and Manufactured Textiles	Total Apparent Consumption	Percent of Market Served by Domestic Mills
1926...	2.8	1.4	a	4.2	65.9
1927...	4.4	2.1	0.3	6.2	67.1
1928...	4.9	3.5	0.1	8.2	57.7
1929...	5.9	5.1	0.1	10.9	53.5
1930...	7.4	6.8	0.2	14.1	51.7
1931...	7.5	3.3	0.2	10.6	68.7
1932...	7.6	1.7	0.1	9.2	81.3
1933...	10.3	1.3	0.1	11.5	88.6
1934...	11.5	1.2	0.2	12.6	90.2
1935...	14.5	1.0	0.2	15.3	93.8
1936...	15.2	1.5	0.3	16.4	90.6
1937...	18.4	2.3	0.5	20.2	88.7
1938...	16.4	2.2	0.6	18.1	87.6
1939...	20.8	2.5	0.6	22.7	89.0
1940...	25.6	2.0	0.7	26.8	92.7
1941...	32.7	2.9	1.0	34.6	91.7
1942...	30.7	3.6	0.8	33.5	89.4
1943...	29.2	3.7	0.7	32.2	88.4
1944...	38.6	6.4	1.0	44.0	85.4
1945...	43.2	7.8	1.5	49.5	84.2
1946...	40.6	5.3	1.6	44.4	88.0
1947...	50.7	11.0	1.9	59.8	81.6
1948...	54.8	7.3	1.0	61.1	88.0
1949...	61.9	8.0	0.4	69.4	88.5
1950...	76.4	6.2	0.6	82.0	92.4
1951...	87.8	8.1	0.7	95.2	91.5
1952...	85.1	12.8	0.7	97.2	86.8
1953...	88.5	15.0	0.9	102.5	85.4
1954...	78.7	13.6	1.0	91.3	85.1

a Less than 0.05 million pounds.

Table III-10

IMPORTS OF MANUFACTURED SYNTHETIC TEXTILES, 1926-1954

Source: The Conference Board

Millions of Pounds

	Piece Goods	Wearing Apparel	Other Manufactures	Total
1926	1.4	a	a	1.4
1927	2.0	a	a	2.1
1928	3.2	0.2	0.1	3.5
1929	4.6	0.4	0.1	5.1
1930	6.2	0.5	0.1	6.8
1931	3.2	0.1	a	3.3
1932	1.7	a	a	1.7
1933	1.3	a	a	1.3
1934	1.2	a	a	1.2
1935	0.9	a	a	1.0
1936	1.4	0.1	a	1.5
1937	2.2	0.1	a	2.3
1938	2.1	0.1	a	2.2
1939	2.2	0.2	0.1	2.5
1940	1.5	0.2	0.2	2.0
1941	2.7	0.1	0.2	2.9
1942	3.2	a	0.3	3.6
1943	2.9	a	0.8	3.7
1944	3.5	a	2.9	6.4
1945	5.1	a	2.7	7.8
1946	4.5	0.2	0.6	5.3
1947	6.6	1.0	3.3	11.0
1948	5.0	0.3	2.0	7.3
1949	5.5	0.4	2.1	8.0
1950	3.9	0.5	1.9	6.2
1951	4.8	0.9	2.3	8.1
1952	9.3	1.6	1.9	12.8
1953	10.5	2.2	2.2	15.0
1954	9.3	1.9	2.4	13.6

a Less than 0.05 million pounds.

TECHNICAL NOTE ON TEXTILE TARIFF RATES

Cotton

The rates of duty on cotton goods were at their peak in 1930—approximately 22½% British Preferential, 33% Most-Favoured-Nation (Intermediate Tariff at that time), and significantly higher under the General Tariff.

The British Preferential rates were progressively reduced from the 1930 peak of 22½% in 1932, 1936, 1937, and finally under the GATT Negotiations in 1948. At the present time these rates are about 17½%.

The Intermediate or Most-Favoured-Nation rates, on the other hand, remained substantially unchanged from the peak of 33% in 1930 up to the GATT Negotiations of 1948 and at present they are about 20%. It should be mentioned, however, that imports from the United States, which were subject to the General Tariff rates up to January 1st, 1936, were accorded Most-Favoured-Nation treatment after that date. Moreover, the rates on coloured cotton fabrics were reduced, under a Trade Agreement with the United States, at the beginning of 1939.

Wool

The rates on woollen goods were also at their peak in 1930—about 50% British Preferential, 60% Most-Favoured-Nation Tariff, and 70% General Tariff.

The British Preferential rates were reduced progressively throughout the 'thirties and at the GATT Negotiations of 1948—they are presently about 15% on fabrics and 25% on manufactures.

The actual rates of duty under the Most-Favoured-Nation Tariff were not changed from 1930 until the GATT Negotiations in 1948—since that time the rate has been about 27%.

Synthetics

The rates of duty on synthetics were also at their peak in 1930. The British Preferential rate at that time was about 30% and was reduced in 1936 and 1937 and again during the GATT Negotiations in 1948—the present rate is about 20%.

The Most-Favoured-Nation rate which was in the neighbourhood of 80% in 1930 was not reduced until 1948, a further reduction was made in 1951, and the present incidence is about 30%.

Under both the British Preferential and Most-Favoured-Nation rates, during most of the period from 1930 to the present time, the rate on the fabric has been greater than the rate on clothing and manufactures of synthetic fibres. This difference, however, has been narrowed somewhat in recent years.

Tariff Item 523

Woven fabrics, wholly of cotton, not bleached, mercerized nor coloured.

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
1928			
Feb. 17th	12½%	20%	22½%
1930			
Sept. 17th	17½% & 3¢ lb.	20% & 3½¢ lb.	25% & 4¢ lb.
1932			
Oct. 13th	17½% & 2¢ lb.	20% & 3½¢ lb.	25% & 4¢ lb.
1936			
May 2nd	15%	20% & 3½¢ lb.	25% & 4¢ lb.
1948			
Jan. 1st	15%	15% & 3¢ lb.	25% & 4¢ lb.

Tariff Item 523a

Woven fabrics, wholly of cotton, bleached or mercerized, not coloured.

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
1928			
Feb. 17th	15%	22½%	25%
1930			
Sept. 17th	20% & 3¢ lb.	22½% & 3½¢ lb.	27½% & 4¢ lb.
1932			
Oct. 13th	20% & 2¢ lb.	22½% & 3½¢ lb.	27½% & 4¢ lb.
1936			
May 2nd	20%	22½% & 3½¢ lb.	27½% & 4¢ lb.
1948			
Jan. 1st	17½%	17½% & 3¢ lb.	27½% & 4¢ lb.

Tariff Item 523b

Woven fabrics, wholly of cotton, printed, dyed or coloured.

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
1928			
Feb. 17th	20%	25%	27½%
1930			
Sept. 17th	22½% & 3¢ lb.	27½% & 3½¢ lb.	32½% & 4¢ lb.
1932			
Oct. 13th	22½% & 2¢ lb.	27½% & 3½¢ lb.	32½% & 4¢ lb.
1936			
May 2nd	22½%	27½% & 3½¢ lb.	32½% & 4¢ lb.
1937			
Feb. 26th—Woven fabrics, wholly of cotton, printed, dyed or coloured.	20%	27½% & 3½¢ lb.	32½% & 4¢ lb.

IMPORT COMPETITION

1939

Jan. 1st—An Ex Item was inserted reading as follows:
Under the United States Trade Agreement, woven fabrics,
wholly of cotton, printed, dyed or coloured:

	Special Rates under Trade Agreements with certain Countries
(1) Valued at more than 80 cents per pound.....	20% & 3¢ lb.
(2) Valued at 50 cents or more but not more than 80 cents per pound.....	25% & 3¢ lb.
(3) Valued at less than 50 cents per pound.....	27½% & 3½¢ lb.
(4) Woven fabrics, wholly of cotton, commonly known as denims, when imported by manufacturers for use in their own factories in the manufacture of garments.....	20% & 3¢ lb.

1948

Jan. 1st—Woven fabrics, wholly of cotton, printed, dyed or coloured.

(1) Valued at more than 80 cents per pound.	17½%	17½% & 3¢ lb.	32½% & 4¢ lb.
(2) Valued at 50 cents or more but not more than 80 cents per pound.	17½%	22½% & 3¢ lb.	32½% & 4¢ lb.
(3) Valued at less than 50 cents per pound.	17½%	25% & 3½¢ lb.	32½% & 4¢ lb.
(4) Woven fabrics, wholly of cotton, commonly known as denims, when imported by manufacturers for use in their own factories in the manufacture of garments.	17½%	17½% & 3¢ lb.	32½% & 4¢ lb.

Tariff Item 532

Clothing, wearing apparel and articles made from woven fabrics, and all textile manufactures, wholly or partially manufactured, composed wholly of cotton.

1928

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
Feb. 17th.....	22½%	25%	30%

1930

Sept. 17th.....	25% & 3¢ lb.	30% & 3½¢ lb.	35% & 4¢ lb.
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1932

Oct. 13th.....	25% & 2¢ lb.	30% & 3½¢ lb.	35% & 4¢ lb.
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1936

May 2nd.....	25%	30% & 1½¢ lb.	35% & 4¢ lb.
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1937

Feb. 26th.....	25%	30%	35% & 4¢ lb.
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1948

Jan. 1st.....	25%	25%	35% & 4¢ lb.
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Tariff Item 532 (Cont'd.)

1950

May 30th—An Ex Item was inserted reading as follows:
 "Tablecloths, tray cloths, napkins, dresser scarves, wash
 cloths, bath mats, pillow cases, quilts, counterpanes, sheets
 and towels" with rates of:

22½%	22½%	35% & 4¢ lb.
The balance of the goods classified under this Item:		
25%	25%	35% & 4¢ lb.

Tariff Item 554b

Woven fabrics composed wholly or in part of yarns of wool or hair.

Provided however that the sum of the specific and ad valorem duties shall not be in excess of the maximum figures given below.

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
1928			
Feb. 17th	22½%	30%	35%
1930			
Sept. 17th	27½% & 25¢ lb.	35% & 30¢ lb.	40% & 35¢ lb.
1932			
Oct. 13th	27½% & 18¾¢ lb.	35% & 30¢ lb.	40% & 35¢ lb.
1935			
March 23rd	27½% & 17¢ lb.	35% & 30¢ lb.	40% & 35¢ lb.
Maximum Duties	65¢ lb.		
1937			
Feb. 26th	22½% & 12¢ lb.	35% & 30¢ lb.	40% & 35¢ lb.
Maximum Duties	50¢ lb.		
1948			
Jan. 1st	20% & 12¢ lb.	27½% & 30¢ lb.	40% & 35¢ lb.
Maximum Duties	50¢ lb.	\$1.00 lb.	

Tariff Item 555

Clothing, wearing apparel and articles made from woven fabrics, and all textile manufactures, wholly or partially manufactured, composed wholly or in part of wool or similar animal fibres, but of which the component of chief value is not silk nor synthetic textile fibres or filaments, fabrics, coated or impregnated, composed wholly or in part of yarns of wool or hair, but not containing silk nor synthetic textile fibres or filaments.

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
1928			
Feb. 17th	27½%	35%	35%
1930			
Sept. 17th	20% & 25¢ lb.	40% & 32½¢ lb.	40% & 35¢ lb.
1932			
Oct. 13th	30% & 18¾¢ lb.	40% & 32½¢ lb.	40% & 35¢ lb.

IMPORT COMPETITION

1944			
June 27th.....	30%	40% & 32½¢ lb.	40% & 35¢ lb.
1948			
Jan. 1st	25%	27½%	40% & 35¢ lb.

Synthetic fabrics

Tariff Item 561

Woven fabrics wholly or in part of synthetic textile fibres or filaments, not containing wool, not including fabrics in chief part by weight of silk.

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
1928	17½%	32½%	35%
1930	27½% & 30¢ lb.	40% & 40¢ lb.	45% & 40¢ lb.
1936	30%	40% & 40¢ lb.	45% & 40¢ lb.
1937	27½%	40% & 40¢ lb.	45% & 40¢ lb.
1948	22½%	27½% & 40¢ lb.	45% & 40¢ lb.
1951	22½%	25% & 30¢ lb.	45% & 40¢ lb.

Synthetic manufactures

Tariff Item 567a

Clothing, wearing apparel and articles, made from woven fabrics and all textile manufactures, wholly or partially manufactured, of which the component of chief value is synthetic textile fibres or filaments.

	<i>B.P.</i>	<i>M.F.N.</i>	<i>Gen.</i>
1928	30%	35%	37½%
1930	30%	40%	50%
1931	30%	40% & 7¢ oz.	50% & 7¢ oz.
1936	25%	35% & 5¢ oz.	50% & 7¢ oz.
1948	20%	27½%	50% & 7¢ oz.

PROBLEMS OF SCALE: MARKET AND PRODUCTION

The primary textile industry's costs are directly associated with the size of the domestic market. The elements of this situation were introduced briefly in Chapter II. The resulting dilemma confronting the industry, and the consequences for its competitive position, deserve closer consideration before discussing its efficiency in terms of plant, equipment and productivity, because the given size of the market is a matter over which this industry would appear to have little control. Although the problems described in this chapter apply in some degree to all three sections of the primary industry, they especially concern competition in cotton goods vis-à-vis the United States.

Stated in perhaps oversimplified terms, the crux of the matter as it has been explained to us by the industry is as follows. The demands of Canadian consumers for many textile products, stimulated in part and influenced with respect to styles by proximity to the United States, and assimilation of American advertisement, are extremely varied and subject to changing taste. At the same time the capacity of the domestic market is small compared with the American market. The combination of exacting and highly diversified demands in terms of quality and limited demand in terms of quantity poses the dilemma. On the one hand, Canadian producers feel they must do what they can to satisfy their customers, or forfeit the business. This objective necessitates production in wide variety. On the other hand their output and over-all scale of operations are much smaller than those of their American competitors. This condition involves much shorter production runs and denies them comparable economies of mass production.

Among members of the industry in Canada we found common apprehensions that inability to supply a given item or range of items may cause a customer, particularly a large customer having a wide variety of demands, to take his business elsewhere. Further, we were told that lack of domestic supply in a certain commodity or line may open the door to duty-free status for foreign imports, leading to irrevocable loss of business. We thus encountered a general belief that the Canadian industry must continue to produce a wide

range of products, notwithstanding the resulting higher costs, as the alternative to loss of markets. This is corroborated by our analysis of the reasons and objectives motivating the industry's programme of postwar capital investment which is discussed later in this report.

The higher costs incurred by reason of short production runs arise directly from smaller workloads, costly change-overs and new set-ups, and indirectly from the added complexity and time involved in planning, supervision and management. In view of the central importance of this problem we attempted to assemble data on comparative costs in Canadian and American mills for specifically comparable fabrics by circulating the questionnaire which is reproduced in the General Appendix, headed "Cost Comparisons", to selected members of the industry in both countries. Many firms in Canada supplied us with the requested information, but American data to warrant comparative analysis unfortunately proved to be unobtainable. While the Canadian data that we collected is insufficient for this purpose, it did provide some supporting evidence concerning the nature of the problem as we describe it here.

Lacking comparative data as between Canadian and American mills, the following table submitted by one Canadian manufacturer serves to illustrate the principle of the matter in terms of the higher costs of producing one of his regular fabrics in small lots. These figures show the additional time required, not the added monetary cost, and they take no account of higher administrative, designing and sampling costs, or of greater waste resulting from small lots. They show the percentage increase in the time required, by departments at each stage of manufacture, to produce eight pieces each of all patterns of a specific fancy worsted cloth in four lots of two pieces rather than one lot of eight pieces. A "piece" is the conventional unit of production, —some 70 or 80 yards—, of worsted cloth. All stages of manufacture from raw material to finished product are included:

Table E

PERCENT INCREASE IN DEPARTMENTAL PROCESSING TIME FOR SMALL LOTS

	Yarn A	Yarn B	Cloth
Pin drafting	24	24	—
Reducing	28	28	—
Roving	33	103	—
Spinning	19	38	—
Twisting, first coning and filling winding	nil	nil	—
2-ply coning	36	—	—
Jack spooling	288	—	—
Warping	—	—	15
Weaving	—	—	7
Finishing	—	—	227

The problems of scale in the Canadian textile industry and market had first place in our interviews with the American textile experts whose views

we consulted, all of whom were familiar with them. We report their opinions with some necessary generalization as representing the observations and experience of a selected but rather limited group of consultants, textile engineers and machinery manufacturers.

All opinions expressed to us agreed that the variety of textile goods produced is a fundamental issue in the Canadian industry's future, and that it is closely related to the size of the market. Yet they felt that little could probably be done about it at present. This was not because they thought nothing need be done. To the contrary, greater unanimity existed here than on almost any other point, and it was repeatedly stressed that determined progress must be made to concentrate production by firms. Some went so far as to state that little else could be done about the industry's problems until this was accomplished. Rather, it was generally felt that little real progress was likely to be made given the realities of the present situation:

It was recognized in the United States that Canadian manufacturers are fully aware of the adverse effects of this problem on costs and operating efficiency. It was also acknowledged that in recent years some progress has been made in reducing variety, in eliminating some of the more marginal items, in concentrating production in given mills and in specialization by company or by establishment within companies.

The only comment that American opinion could offer was to endorse a continuation and stepping up of these efforts. Some pointed out to us that a similar problem existed in the United States to a considerably lesser degree and that many of the fringe items formerly produced domestically are now imported. Another expressed the problem as "making a break with the past", of abandoning the inherited policy in both countries that a full line of domestic products must be made available to consumers. A major theme in these comments ran in terms of continuing the present efforts by some Canadian firms and more whole-hearted efforts by the others to concentrate mill activity into fewer items or even to concentrate company selection of products. One variation suggested was greater effort to develop "families of products" or related items with as many common processes or characteristics as possible.

On the other hand, we heard a warning that overspecialization, too, has its dangers, especially where the market for specialized items is not large or is subject to vagaries of style, and where a big item in one year may become a small item in the next. There was also the pessimistic view that little could be done in this direction for many lines of textiles. On this view, output should be concentrated almost entirely in the mass production, mass consumption, lines, with tariff or other protection if needed, and ready access permitted to the domestic market for imported specialty, or low-volume lines. One official, with much the same general approach, stated that the present

variety of products is anything but a matter of choice. Another expressed the opinion that Canadian producers "would be glad" to withdraw from 10% of the present market by volume, representing perhaps 40% of the variety of styles and counts now manufactured, if they could have assurance of sufficient protection on the remaining volume lines. Nearly all with whom we spoke held the view that continuous operations are the *sine qua non* of successful, modern textile operations.

We also asked these American officials for their views on the question of comparative size of mills. From their experience with both the larger-scale American industry and present Canadian operations, a majority felt that *size in itself*, now or in the future, is no fatal handicap for Canadian textiles. Views on this subject varied in degree of conviction. Most of those who saw no insurmountable obstacle in this situation predicated their opinion upon favourable assumptions,—the best of new machinery, optimum planning and organization, a reduced product mix, more nearly continuous operations on products selected, etc. But, provided further improvement along these lines could be accomplished, the consensus held that the size of the Canadian market does not necessarily involve uneconomic size of mills.

Other lines of reasoning, reflecting somewhat divergent views of the industry's major problems, pointed to the same conclusion. One authority held that the primary difficulty lies not in problems of scale of production, but rather in the marketing and distribution area. Another also minimized the question of size, putting his emphasis upon greater efficiency in distribution, materials handling, and supervision.

We were reminded that small size in itself is not considered unusual or a grave handicap in other countries. It was noted, however, that many small but profitable operations are conducted in the United States on a basis of specialization, and that some at least of the larger American firms operate on a highly decentralized basis, with many relatively small individual mills each usually producing a single product or group of related products. Other countries, it was also pointed out, have smaller domestic markets than Canada, yet their primary textile industries seem to be successful.¹

We encountered one dissenter who felt that the Canadian industry faces a "hopeless" situation. It is highly unlikely, he thought, that Canadian producers could ever spread overhead expenses over a sufficient output to bring costs down to a competitive basis without governmental or other assistance. To illustrate, he cited a hypothetical example of an unspecified product of which the Canadian market might absorb a half million yards. Regardless of other improvements, he held, the industry would not be able to conduct profitable operations when an American competitor might well be running off possibly 25 million yards of the same product.

¹It should be noted in retrospect that those making this point did not elaborate upon any protection or subsidy which may exist in the countries to which they referred.

Many of those to whom we spoke also felt that there is an optimum size or scale of textile operations beyond which larger size of establishments or greater volume of output does not appreciably reduce unit costs.² In the woollen industry in particular, it was indicated, the economic size of operations is probably such that foreign industries with larger markets can derive no special advantage from greater volume of output, today or in the visible future. While statements of this type were normally qualified with many particulars, and often restricted to the types of machinery or operations with which the speaker was most familiar, there seemed to be a consensus that textile unit costs do not necessarily continue to decline as size of plant or volume of output increase. Put another way, it would follow from this view that Canadian textile producers are not inevitably committed to a losing game in which future expansion of their domestic market will be matched by parallel trends for their already larger competitors. With an increasing scale of operations on both sides the Canadian disadvantage might conceivably diminish.

We were told by one official that a mill of 100 looms or possibly even smaller could be an economical unit in the woollen industry. Another felt that a 600-loom mill in the cotton industry with not more than six or seven constructions could definitely compete with much larger operating units, always assuming fairly continuous operations. A third official told us that a 500-loom cotton mill could be competitive. Still another put the optimum size in terms of numbers of spindles and type of product. Thus, he felt, for fine-combed fabrics, a mill with about 125,000 spindles would be generally of optimum size; for fine-combed prints, about 85,000 to 100,000 spindles; and for sheetings and coarse goods, about 40,000-50,000 spindles.

Our rough calculations of listed equipment in Canadian cotton mills, based on incomplete data which do not warrant conclusive inferences, indicate that many establishments are below these size criteria. But the average appears to be in the neighbourhood of 34,000 spindles and nearly 800 looms. The median size is 18,000 spindles and about 430 looms. Moreover, 13 out of 30 cotton establishments list more than 25,000 spindles and 11 more than 500 looms.

So far as they go these figures are consistent with the American opinions quoted above. They are also in line with the findings of a study of labour productivity in cotton textiles in certain Latin American countries, undertaken by American textile experts for the United Nations' Economic Commission for Latin America, which included the question of optimum size in its survey.³

²It is this size, in fact, toward which designers and planners aim in the construction of completely new mills when such projects are undertaken.

³"Labour Productivity of the Cotton Textile Industry in Five Latin American Countries", United Nations, Department of Economic Affairs, E/CN. 12/219 (1951).

The objective of the U.N. analysis was to determine optimum size from a productivity point of view; e.g., in kilogrammes per man-hour, rather than in minimum unit costs, and it made no reference to the mills' ability to sell the resulting output. The study found that at mill sizes of more than 25,000 spindles for spinning mills and 500 looms for weaving mills, "substantial increases in capacity yield almost unnoticeable increments to productivity". These values were found to vary but slightly with the kind of textile product or type of equipment. They were considered to be the lower limit of optimum size. The upper limit, determined largely by estimated limitations to effective administrative control and supervision, were placed at "around 50,000 spindles or 1,000 looms, depending very much on the personal capacity of the superintendent and on the degree of specialization of production".

It can be concluded that product mix with length of production runs, rather than size of mills, is the critical problem in the industry's competitive capacity. But a further point arising out of the comparative size of the Canadian and American market for cotton textiles should be noted here.

The industry in Canada is now pressing for three-shift operation wherever possible in contrast to one-shift operation usual before the war. In 1946, actual spindle hours run in the Cotton Yarn and Cloth industry were 119% of the hours possible on a one-shift basis, whereas in 1953 they were 151%.⁴ A number of companies have been operating at less than full capacity, in some cases as low as 50%, or less. In the case of companies working only one or two shifts, output could be increased by working more shifts, with consequent reductions as a rule in unit overhead costs. But most of the companies in this position have told us that at the present time the increased output could not be sold profitably.

In the United States, by contrast, the rate of cotton spinning as reported by the U.S. Department of Commerce has been 200% of an 8-hour shift in the crop year 1939-1940, 261% in 1946-1947, and 279% in 1953-1954.

⁴"Cotton Textile Industry, 1946", and "Cotton Textile Industry, 1953", Dominion Bureau of Statistics.

CAPITAL INVESTMENT AND PRODUCTIVITY

Confronted by the described conditions in the domestic market, in foreign competition, and in the handicap of comparative scale, the Canadian textile industry has clearly been under a compelling necessity to make itself as efficient as possible at all points that are within its own control. This chapter reviews the record of its capital investment since the war and attempts to assess its productivity, employment and wages being dealt with in Chapter VI.

We submitted a questionnaire on "Technology, Capital Equipment Policy, and Labour Productivity" to twenty-two major companies, of whom twenty replied in considerable detail. The replies represented nearly all the manufacturing capacity in primary cotton and synthetics, but we were obliged to limit our enquiry in the wool industry, owing to its wide dispersion, to very few principal companies only. This survey was later followed in nearly all cases by personal interviews. Much of the present chapter, as well as certain other parts of our report, depends upon the information so obtained. The questionnaire is reproduced in the general appendix.

Record of Capital Expenditures

At the end of the war the Canadian textile industry, like most other industries, embarked on an extensive programme of expenditures on fixed investment, as shown in Table V-1.¹ In terms of money, both new investment and repair and maintenance since the war have been running at some four times the 1936-1939 average. Over the first six years after the war, while the industry continued to enjoy relatively prosperous times, this rate represented 6.2% of all new investment by manufacturing industries, which was about the prewar ratio. But in 1952-1955, as the industry has encountered increasing strains, this proportion has declined to 3.0%. (See Table V-2) These figures include producers of synthetic fibre; and since the latter have ac-

¹Data in Tables V-1 and V-2 refer to Textiles except Clothing. (See Chapter I, Footnote 1).

counted for a higher share of the aggregate capital outlays in textiles in recent years, the decline in the primary industry's share has been somewhat greater.

Although the Canadian textile industry has not kept pace with the growth of total manufacturing new investment during the last four or five years, it is perhaps more to the point to note that comparative figures suggest that it has at least been keeping pace with new investment outlays by the textile industry in the United States, its principal competitor so far as cotton and synthetics goods are concerned. Table V-3, showing new investment by American textile mills in relation to all manufacturing industry, gives a series of ratios for 1948 to 1955 which are nearly parallel with the Canadian ratios in Table V-2: Less comparable data for the United Kingdom which we do not show, follow a similarly declining trend.

Two general observations were made by most members of the industry when we discussed this situation with them. First, there was a general consensus that new capital expenditures or replacements would only be made if the new machinery would pay for itself in from three to five years. Some companies stated this even more forcefully by maintaining that a company could not afford not to make such expenditures if a pay-back period was as little as three years. Secondly, they noted the restraints imposed on capital outlays by such factors as relatively poor rates of return in comparison with other industries, difficulties in generating internal funds for capital financing, and the great obstacles in the way of attracting new equity funds.

During the last four years, in which in comparison with other manufacturing totals the relative rate of capital investment by the textile industry has fallen off, the industry has been facing a contracting market, a reduced output at drastically lower prices, and intensified foreign competition. With depleted financial resources, these factors have obviously inhibited major new investment, and suggest that the sustained level of total capital expenditures, comprising both new investment and repair and maintenance, as shown in Table V-1, is a not unfavourable record in the circumstances.

Capital Financing: Source and Use of Funds

The following observations relate collectively to the combined accounts of twenty-two primary textile companies which are tabulated by the Bank of Canada in their series "Corporate Financial Statistics". Combined balance sheets for these companies (year-end 1947, 1951 and 1954) are shown in Table V-5. This sample is believed to be thoroughly representative of the industry.

(i) Source of Funds

Undistributed earnings and depreciation charges were the principal source of funds from 1947 through 1950. Thereafter dependence on internal

sources, particularly on undistributed income, lessened. In the years 1952-1954 continued dividend payments by the companies here reviewed exceeded net income after taxes. Annual depreciation charges rose through 1951 in line with the increased property account, but declined moderately thereafter.

External funds in the form of long-term debt were used sporadically. Large amounts were borrowed in 1951 and 1953. But in other years there was little long-term borrowing, and some debt was retired in 1949, 1952 and 1954. Equity financing during the whole period was negligible.

The companies drew on their cash and marketable securities, particularly after 1950. Since no net accumulation of liquid resources had taken place in the years from 1947 to 1950, when operations were profitable, cash and marketable securities were lower at the end of 1954 than at the end of 1947.

Considerable dependence was placed upon bank loans through 1951. Thereafter these companies reduced their bank loans, but to a level still some \$8 million above that at the end of 1947.

(ii) Use of Funds

Investment in plant, property and equipment, and in inventories, were the two major uses to which these textile companies put their funds. Nearly \$20 million was invested in property, plant and equipment (net of depreciation charges) through 1951.² Thereafter depreciation charges exceeded new capital expenditures.

Inventories increased rapidly in the period through 1951 and then contracted in the subsequent three years. A rise of \$34 million was followed by a drop of \$11 million to leave inventories about \$23 million above their level at the end of 1947.

The third use of funds was extension of credit to customers. Accounts receivable at the end of 1954 were more than double the 1947 figure. No corresponding increase took place in the credit extended to the textile companies by their suppliers, accounts payable increasing only moderately. It appears that this was a significant factor in the depletion of their liquid resources.

Current assets constituted a larger part of total assets at the end of 1954 than at the end of 1947. But a much larger part of current assets consisted of inventories and receivables, with some concurrent increase of bank borrowing. Cash and marketable securities declined both absolutely and relative-

²More than \$20 million gross was so spent. The \$20 million figure is obtained as the difference between the property account at the end of 1947 and the end of 1951 and, consequently, does not represent total expenditures.

ly. This appears to have put these companies in a more vulnerable financial position, their enlarged current assets consisting in greater degree of items subject to price fluctuation or to default.

Type and Purpose of Capital Expenditures

As indicated in Table V-1, expenditures on repairs and maintenance, in contrast to new investment, have been relatively high and steady throughout the period from 1946 through 1955. Some companies even increased their repair and maintenance expenditures in the more recent difficult years. In the textile industry, where advances in machinery in the past decade have been on the whole evolutionary rather than revolutionary, this stable level of maintenance expenditure acquires added significance from the fact that, perhaps more than in most other industries, such outlays may be almost as effective as expenditures on new plant and equipment in keeping production facilities modern and efficient. Some companies maintained, in response to our questions, that under certain conditions it may be more economical to completely overhaul and modernize an old machine than to replace it with a new one. Opportunities for such transformation appear to have been fairly widespread in the industry.

With regard to new capital expenditures, construction outlays were substantial in the early postwar years, but by far the larger proportion of all capital outlays since 1950 has gone into new machinery and equipment rather than buildings. The over-all figures published by the Department of Trade and Commerce indicate that the primary textile industry spent about three dollars on machinery and equipment to every one spent on buildings. Most of the respondents to our questionnaire indicated that higher ratios were the rule in their own companies. Some indicated that the postwar average was about six to one and some even as high as nine to one.

The preponderance of expenditures on machinery and equipment by the responding companies is underscored by repeated statements to the effect that little, if any, of these capital outlays have gone into construction or relocation of mills. Construction expenditures have been undertaken either because new machinery required more space (without necessarily increasing capacity) or for better flow and handling of materials. In some cases construction expenditures have been accounted for by such things as the installation of modern air conditioning and lighting.

We asked the companies replying to our questionnaire to list the reasons and objectives governing their capital outlays. Their answers are tallied below in Table F. The reasons given are not weighted according to amounts involved,—a small outlay carries the same weight as a large one—, and some reasons border closely on others. Nevertheless we believe that the presentation by and large gives a fair picture of the industry's motives and objectives.

Table F

**TEXTILE COMPANIES' REASONS FOR MAKING CAPITAL
EXPENDITURES, 1946-1955**

	<u>Wool</u>	<u>Cotton</u>	<u>Synthetics</u>	<u>All</u>
(1) Cut production costs by installing more efficient machinery, equipment and structures.....	8	6	5	19
(2) Cut costs by mechanizing what was previously done by labour	3	4	2	9
(3) Enter parts of the textile industry new to the company	3	4	4	11
(4) Widen range of fabrics or yarns ...	3	1	2	6
(5) Increase capacity	3	1	3	7
(6) Improve quality.....	1	3	1	5
(7) Replacement	3	1	4	8
(8) Research and development of new fabrics	—	—	1	1
Total number of reasons given	24	20	22	66

The general conclusions are fairly clear. The primary objective is to cut production costs. This was mentioned in every response to the questionnaire. The next most common objective (taking two tallies together) is to enter new parts of the industry and to widen range of fabrics or yarns. It is significant and consistent with our other findings that increased capacity does *not* appear as a primary objective.

Underlying the explanation of capital expenditures there was a strong indication that competition within Canada, originating both at home and abroad, dictates an alert and aggressive attitude. In addition to the replies from eleven companies that they were entering new fields, such phrases as the following appear in the answers: "In order to keep our plant completely competitive with regard to the cost of production and the quality of the output", "technological improvements in machinery for our industry have been so impressive over the past ten years that a mill must continually replace equipment to remain competitive", "the main factor . . . which bears on (capital expenditure) policy is competition".

Efficiency of Plant and Equipment

Most companies were satisfied with the present efficiency of their buildings. Nearly all had some multi-storied buildings which they conceded to be not as efficient as single-story buildings. But few thought that the expense of abandoning the old for the new was warranted. They could not see sufficient savings forthcoming to justify the capital cost involved. In other words, buildings of the latest design were looked upon as desirable but not essential.

The ideal in buildings, most industry members felt, was a one-story structure, without windows, and air conditioned. Such a structure has a decided advantage over multi-storied buildings because of the possible savings in handling costs. Materials can enter at one end, be processed through the mill

and emerge at the other end in the form of finished goods. As an extra advantage, three rail sidings would be desirable—one to deliver the raw fibre, one to take away the finished fabric, and one for the delivery of dyestuffs and other necessary chemicals. With this type of plant there is no necessity for backtracking. Furthermore it is the type best adapted for expansion.

The disadvantage of the single-story buildings is that it is more expensive to build and requires more land. With relatively inexpensive labour before the war it was economical to build three, four or five-story buildings and to handle materials by the use of elevators and conveyors. The one-story building minimizes the handling costs and consequently becomes more economical under the wage rates currently prevailing. In all, four of the replying companies had buildings approaching the above-mentioned single-story ideal, and had the bulk of their operations now centred in these structures.

The industry not unnaturally feels that its machinery and equipment is modern and efficient. There was general agreement that efficiency is a continuous process, requiring vigilance and a programme of regular repairs, maintenance and replacement. As a result of capital outlays of this character in recent years it appears to be the industry's consensus that it is now equipped with sufficient technologically advanced machinery to be in general terms on a level with the textile industry in the United States, and considerably ahead of the textile industry in the United Kingdom.

Table V-4 shows the numbers of the principal items of mechanical equipment in the cotton yarn and cloth industry, the wool cloth and the wool yarn industries, and the synthetic textiles and silk industry, for 1946 and 1953. These data show slight reductions in some types of mechanical equipment between these years, and it is believed that when more recent data become available, equipment in place will show further reductions since 1953. For example, the Primary Textiles Institute reports only 983,510 spindles in place in the cotton industry on July 31, 1955, a decline of about 10% from 1953. Despite these apparent reductions in equipment, we believe that capacity has actually been increased through technological improvements. Although changes in other factors, such as product-mix and workloads, make it very difficult to isolate the capacity factor by itself, it seems fairly certain that increased machine speeds, the use of ancillary automatic handling equipment and the impact of advances in industrial engineering have more than offset the effects on capacity of reductions in installed machinery. For example, 71% of the looms in the cotton yarn and cloth industry were over 41 inches wide in 1953, compared with 58% in 1946. Another example is the very substantial increase in automatic looms in the wool yarn and wool cloth industries from 1,075 in 1946 to 1,902 in 1953.

However, of greater importance to the potential capacity of Canadian textile industry is the trend to longer hours of operation per week. Recalling the figures quoted at the end of Chapter IV, showing spindle hours in the

cotton industry at 119% of one-shift capacity in 1946 rising to 151% in 1953, and comparing the much higher rates of operation prevailing in the United States, it appears that the Canadian industry as it stands is equipped to handle a substantially larger output if the domestic market can take it profitably.

In our previously mentioned interviews with a few American textile consultants, engineers and machinery manufacturers we asked for their opinions on the efficiency of the Canadian industry's plant and equipment. So far as their experience and observation went, their opinions with some variation were favourable on the whole but inclined to be more critical than those of the Canadian manufacturers. We variously heard that the top 25% of Canadian mills are inferior to the top 25% of American mills, that the two industries generally speaking are equal in their use of modern technology, and (from a machinery manufacturer) that he would be "most happy" if American mills had been as eager as Canadian mills to buy machinery in recent years.

The preponderance of the American opinion on existing capital equipment in the two countries was generally to the effect that, compared to the top, pace-setting U.S. mills, Canadian machinery and physical plant are not as modern, but that below this level there is little to choose between the two industries. Considerable investment would be necessary to bring Canadian mills up to the very highest U.S. level. It might also be necessary to reduce present capacity by reducing the number of spindles and looms and liquidating some marginal establishments.

Probably the most important aspects of such generalizations are the exceptions. They do not apply equally to individual companies. Some Canadian mills were thought to be the equal of all but a few of the newest U.S. mills and obviously better than many. It was stated that inferiority of Canadian equipment some years ago has given way to a situation where policies toward new machinery now seem fairly comparable, implying a constructive record of improvement. Today, the same criteria for investment are generally applied in both countries, although the Canadian attitude appears to some to be more conservative and deliberate. This, in turn, is attributed to recent unfavourable financial conditions and limited ability to make capital outlays. Some of the people we talked to felt, in fact, that a considerable element of Canadian textile management has become more receptive to new ideas, and more disposed to buy new equipment, than their American counterparts.

Productivity

No published estimates appear to exist for productivity in the Canadian textile industry, or any of its sub-groups. In connection with its index of industrial productions, the Dominion Bureau of Statistics has said, "Until more research and analysis has been applied to the basic data than was

hitherto possible, the Bureau of Statistics does not intend to release official figures of output per man-hour."³ Several studies in the technical journals during the past few years have attempted to measure productivity movements for the Canadian economy as a whole and for some of the manufacturing industries. None of them, unfortunately, include any data or estimates for the textile industry.⁴

Theoretically, it is relatively simple to calculate productivity. An index of production is divided by a corresponding employment or man-hour index. In practice, however, it is difficult to obtain satisfactory production and labour series. Errors in either of the two may be compounded with the result that the error in the resulting productivity index may be greater than actual changes in productivity from year to year.

But such calculations, though crude, can serve as a rough indication of productivity trends over a period of time. We have therefore used the output, employment and man-hour data for Canada, the United States and the United Kingdom which appear in Table V-9 to obtain a rough aggregative measure of productivity gains in the principal sections of the primary textile industry for the three countries. These data suggest that as regards postwar productivity gains, the Canadian textile industry compares favourably with its counterparts in the United States and the United Kingdom. Output per man-hour in Canada appears to have advanced most rapidly for both wool and synthetic goods. In wool manufacturing, the Canadian rate of increase was about 1.5% a year, whereas in the United States and the United Kingdom, output and man-hours in this part of the industry moved together so that postwar productivity did not change. In synthetic textiles output per man-hour advanced about 5% a year in Canada, nearly 4% a year in the United Kingdom, and much less in the United States. In cotton goods the annual gain for Canada at 1.5% was about half the United States rate, but was considerably better than in the United Kingdom where output per man-hour remained unchanged.

In connection with its general analysis of trends in Canadian secondary industries, the Commission's staff has developed new statistics for a conceptually superior measurement of productivity since the end of World War II.⁵ According to these figures, output per man-hour is substantially lower in textiles except clothing than in all manufacturing. At the same time, the rate of increase in productivity in textiles except clothing, *despite the recent decline in textile output*, has kept pace with the rising rate for all manufacturing

³"Revised Index of Industrial Production, 1935-1951", Dominion Bureau of Statistics Reference Paper No. 34, 1952, p. 34.

⁴"Productivity in an Expanding Economy", A. Maddison, *Economic Journal*, September, 1952; "Productivity in Canada, The United Kingdom and the United States", A. Maddison, *Oxford Economic Papers*, October, 1952; "Productivity in Canada", G. D. Sutton, and "Productivity in Canadian Manufacturing, 1935-48", A. Maddison, *The Canadian Journal of Economics and Political Science*, May, 1953; "Physical Productivity in Canada, 1935-42", H. C. Pentland, *Economic Journal*, June, 1954.

⁵This measurement is in terms of gross domestic product per man-hour for production workers, in constant dollars, for the period 1945 to 1955.

since 1946. Moreover, these rates of increase for both textiles and all manufacturing are clearly high by historical standards—almost 3% per year from 1946 to 1955, and 3.5% per year from 1949 to 1955.

These broad measures of productivity changes for the whole textile industry (except clothing) make no allowance for changes in product-mix. In our questionnaire to textile firms we therefore sought information on productivity changes for specific fabrics or yarns, and for departments or mills in which the product-mix has remained relatively constant. In addition, we also asked for explanation of changes in output per man-hour. We were unable to obtain sufficient information on synthetic and wool products to warrant useful conclusions, but for the cotton industry the results are tabulated in Table V-6, and in Table G below.

There is clearly a high degree of consistency in these output per man-hour figures for cotton textiles, although the nature of the material does not lend itself to measurement by averaging, or to direct comparison with the data derived from Table V-9. As in the case of the broader productivity measures discussed above, our samples indicate a fairly high rate of productivity increase over the past ten years, again with an apparent acceleration after 1949. Indeed, in most of these specific cases the apparent rate of increase from 1946 to 1955 is somewhat above the broad industry estimate of nearly 3% calculated by the Commission's staff.

The reasons cited by respondents for the rise in productivity are tallied as follows:

Table G

REASONS FOR CHANGES IN OUTPUT PER MAN-HOUR IN
THE CANADIAN TEXTILE INDUSTRY, 1946-1955

	<u>Given Cases</u>
(1) Introduction of new and efficient machinery.....	15
(2) Change in utilization of existing machinery and equipment	11
(3) Change in efficiency of employees	8
(4) Change in organization of manufacturing	8
(5) Change in handling methods	6
(6) Change in use of raw materials	3

The introduction of new and efficient machinery is considered to be the principal factor contributing to increased output per man-hour. As indicated earlier in this chapter, the industry's principal objective in making capital expenditures in recent years was to cut production costs, and in this respect its expectations appear to have been justified. Changes in organization and in utilization of existing machinery and equipment have also contributed to higher man-hour output. Mention of changes in the efficiency of employees is notable, because labour efficiency is a factor that is often difficult to separate from other factors. The incentive wage system was given some

weight as an element in higher labour efficiency, but it appears to be effective only when production is high and assured for some time in the future.

Our questionnaire to the textile companies also elicited index numbers, prepared by them according to their records and re-based by us, of unit production costs and unit labour costs for the same series of items as the indexes of output per man-hour. These are shown, again for the cotton industry only, in Tables V-7 and V-8. We learned that most companies use a unit cost system providing a standard schedule of costs (usually excluding raw materials in view of price fluctuations) for each item produced, which is periodically revised and adjusted. Labour costs are similarly scheduled for each item, in cents per yard. The indexes supplied to us are of this character, and as samples of evidence they are comparable to the output per man-hour indexes. They warrant the following observations.

(i) Unit Production Costs: Cotton Textiles (See Table V-7)

A general pattern is indicated of rising costs from the end of the war through 1953 and 1954, with some moderation in the rate of rise in the two or three years before 1951 when prices reached their peak. Most recently, with some recovery of production in 1955, a decline of costs is perceptible in a number of cases. Putting this pattern beside the trend of cotton prices since the war, we find some speculative evidence of a rise in profit margins in 1948-1950 when the industry's earnings improved, and fairly convincing evidence of drastically narrowed profit margins after 1951, when prices fell seriously. Beyond this we have these grounds for inferring that some financial benefits of the industry's new capital investment since the war are now beginning to be realized.

(ii) Unit Labour Costs: Cotton Textiles (See Table V-8)

With more variation than unit production costs the same general pattern prevails, except that in some cases stabilization or decline appears earlier, after 1952. Meanwhile, wages have been rising. From 1951 to 1954 average hourly earnings for the entire textile industry rose by about 14%.

Broad generalization with respect to falling unit labour costs despite rising hourly rates of pay may be misleading. For example, the unit labour costs of one company reached a peak in 1952 and then dropped off by about 12% by 1955. But its own explanation is as follows: "In certain departments we have a full night shift with male operators as opposed to female operators on the day shift. With the lower production, the night shift has been reduced, with the result that the (calculated) average hourly rate of male and female operators has been reduced."

In judging the prospect of continuing future reductions of unit production and labour costs it must be remembered that the industry's postwar new in-

vestment has fallen off since 1952. Unit labour costs and unit production costs, according to our samples, remained high or even continued to rise for several years after 1952. Allowing for other factors in the industry's experience, this comparison suggests a lag before capital expenditures have been effective in bringing down costs. There is thus no reason to suppose that delayed realization of benefits from earlier capital expenditure will not continue beyond 1956. Moreover, as noted earlier, continuation of relatively large expenditures on maintenance and repairs indicate that the industry is taking care of its existing machinery and equipment, and it can be assumed that some element of capital outlay is included in such expenditures.

Appendix V

Table V-1

**CAPITAL EXPENDITURE IN THE PRIMARY TEXTILE INDUSTRY,
1936-1939 AVERAGE AND 1946-1956¹**

Source: Department of Trade and Commerce

Millions of Dollars

	New Investment	Repair and Maintenance	Total Capital Expenditures
1936-1939 average.....	6.9a	4.5	11.4
1946.....	24.6	13.5	38.1
1947.....	36.6	15.0	51.6
1948.....	35.6	18.1	53.7
1949.....	32.1	18.5	50.6
1950.....	27.4	19.4	46.8
1951.....	39.1	20.7	59.8
1952.....	31.5	19.4	50.9
1953.....	27.9	19.4	47.3
1954.....	28.5	17.0	45.5
1955(p).....	26.9	19.2	46.1
1956(b).....	29.6	19.4	49.0

¹Textiles except clothing.

a Includes knit goods not included in later years.

b Intended expenditures.

p Preliminary.

Table V-2

**NEW INVESTMENT, CANADA: PRIMARY TEXTILES
AS PERCENT OF ALL MANUFACTURING,
1936-1939 AVERAGE AND 1946-1956**

Source: Department of Trade and Commerce

Millions of Dollars

	Primary Textiles ¹	All Manufacturing	Primary Textiles ¹ as Percent of all Manufacturing
1936-1939 Average.....	6.9a	109.3	6.3
1946.....	24.6	337.2	7.3
1947.....	36.6	527.9	6.9
1948.....	35.6	579.0	6.1
1949.....	32.1	535.8	6.0
1950.....	27.4	502.5	5.5
1951.....	39.1	793.0	4.9
1952.....	31.5	972.6	3.2
1953.....	27.9	969.0	2.9
1954.....	28.5	822.1	3.5
1955p.....	26.9	938.5	2.9
1956b.....	29.6	1,304.1	2.3

¹Textiles except clothing.

a Includes knit goods not included in later years.

b Intended expenditures.

p Preliminary.

Table V-3

**NEW INVESTMENT, U.S.A.: TEXTILE MILL PRODUCTS
AS PERCENT OF ALL MANUFACTURING, 1948-1955**

Source: U.S. Securities and Exchange Commission

Millions of Dollars

	Textile Mill Products	All Manufacturing	Textile Mill Products as percent of all Manufacturing
1948.....	618	9,134	6.8
1949.....	471	7,149	6.6
1950.....	450	7,491	6.0
1951.....	531	10,852	4.9
1952.....	434	11,632	3.7
1953.....	378	11,908	3.2
1954.....	331	11,038	3.0
1955.....	366	11,439	3.2

Table V-4

**MECHANICAL EQUIPMENT IN PRIMARY TEXTILE MILLS:
SELECTED COMPARISONS, 1946 AND 1953**

Source: Dominion Bureau of Statistics

	1946	1953
Cards		
Cotton Yarn and Cloth	4,317	4,920
Wool Yarn and Cloth ¹	402	355
Combs		
Wool Yarn and Cloth.....	35	21
Spindles		
Cotton Yarn and Cloth ²	1,094,353	1,078,366
Wool Yarn and Cloth ³	229,601	243,329
Looms		
Cotton Yarn and Cloth	20,312	19,083
Wool Yarn and Cloth	3,008	2,651
Synthetic Textiles and Silk.....	6,624	7,342

¹Worsted and woollen cards only.

²Frame, and a small number of mule spindles for waste process only.

³Mule, ring, cap and flyer spindles.

Table V-5

**COMBINED BALANCE SHEET FOR 22 PRIMARY TEXTILE COMPANIES IN CANADA,
YEAR-END 1947, 1951, 1954**

Source: Bank of Canada

	Thousands of Dollars				Percent Distribution		
	1947	1951	1954	1947	1951	1954	
CURRENT ASSETS							
Cash.....	7,031	3,692	3,611	6.0	2.1	2.3	
Marketable Securities.....	19,183	18,933	17,505	16.4	10.7	11.0	
Current Accounts Receivable.....	9,225	19,345	18,918	7.9	10.9	11.9	
Total Current Assets Ex. Inventories.....	35,439	41,971	40,034	30.2	23.7	25.2	
FIXED ASSETS AND INVENTORY							
Inventories.....	24,062	58,186	47,545	20.5	32.9	30.0	
Plant, Property, and Equipment (Net).....	44,891	64,300	55,730	38.3	36.3	35.1	
Investment in Other Companies (Net).....	7,401	9,655	13,240	6.3	5.5	8.3	
Other Assets.....	5,448	2,980	2,066	4.6	1.6	1.3	
Total Fixed Assets and Inventories.....	81,802	135,121	118,581	69.8	76.3	74.7	
Total Assets.....	117,241	177,092	158,615	100.0	100.0	100.0	
CURRENT LIABILITIES							
Bank Loans.....	2,613	16,433	10,942	2.2	9.3	6.9	
Current Accounts Payable.....	6,055	13,045	8,314	5.2	7.4	5.2	
Accrued Taxes Payable.....	5,093	5,795	1,614	4.3	3.3	1.0	
Accrued Interest and Dividends Payable.....	468	370	790	0.4	0.2	0.5	
Total Current Liabilities.....	14,229	35,643	21,660	12.1	20.1	13.7	
SHAREHOLDERS EQUITY							
Preferred Stock Outstanding.....	16,514	18,337	18,196	14.1	10.4	11.5	
Common Stock Outstanding.....	33,627	33,299	33,778	28.7	18.8	21.3	
Earned Surplus and Surplus Reserves.....	31,762	59,657	58,500	27.1	33.7	36.9	
Total Shareholders Equity.....	81,903	111,293	110,474	69.9	62.8	69.6	
FUNDED DEBT AND OTHER LIABILITIES							
Funded Debt.....	20,285	29,093	25,740	17.3	16.4	16.2	
Loans from Parent Companies and Other Sources (Net).....	231	182	158	0.2	0.1	0.1	
Miscellaneous Liabilities.....	593	881	583	0.5	0.5	0.4	
Total Funded Debt and Other Liabilities.....	21,109	30,156	26,481	18.0	17.0	16.7	
Total Liabilities.....	117,241	177,092	158,615	100.0	100.0	100.0	

Table V-6

INDEXES OF OUTPUT PER MAN-HOUR IN THE COTTON
TEXTILE INDUSTRY, 1946-1955¹

Source: The Conference Board

1951 = 100

Classification	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MILL:										
1.....	62	63	67	68	82	100	99	95	99	100
2.....					(not available)					
3.....	79	87	94	99	102	100	100	103	113	118
4.....					(not available)					
DEPARTMENT:										
5a.....	83	76	75	84	90	100	108	111	118	115
6a.....	65	61	56	62	74	100	76	74	91	108
7b.....	90	84	88	90	86	100	92	93	95	116
FABRIC:										
8.....	85	83	95	96	95	100	101	103	107	106
9.....	73	75	113	100	108	100	113	96	91	127
10.....	72	85	82	82	97	100	100	102	97	103
11.....	79	78	86	88	102	100	119	127	129	110
12.....	88	83	89	84	100	100	102	102	82	95
13.....	91	85	88	91	97	100	103	114	123	145
14.....	94	89	91	95	100	100	97	101	106	127
15.....	91	89	86	89	96	100	109	132	144	175
16.....	86	81	81	81	90	100	107	129	143	172
17.....	89	86	86	87	95	100	104	117	128	132
18.....	96	93	91	93	101	100	101	104	107	122
19.....	96	92	91	94	103	100	101	104	108	127
20.....	91	87	90	86	94	100	101	110	112	116
21.....	n.a.	n.a.	n.a.	n.a.	98	100	101	116	112	n.a.
YARN:										
22.....	57	64	88	92	88	100	94	115	104	105
23.....					(not available)					

n.a. Not available.

¹Tables V-6, V-7 and V-8 respectively show indexes of output per man-hour, unit production costs and unit labour costs for given operations in the cotton textile industry, as obtained from mills in response to Questionnaire I. The three tables cover identical units (mills, departments, fabrics or yarns), which are identified by serial numbers under the "Classification" heading of each table. Thus, for example, item 10 (fabrics) related to the same operation throughout. See text of Chapter V for the relative analysis and conclusions.

Table V-7

INDEXES OF UNIT PRODUCTION COSTS IN THE COTTON TEXTILE INDUSTRY, 1946-1955¹

Source: The Conference Board

1951 = 100

Classification	1946	1947	1948	1949	1950	1951	1952, 1953	1954	1955	
MILL:										
1.....						(not available)				
2.....						(not available)				
3.....	65	70	81	84	85	100	105	111	106	100
4.....	79	88	97	101	98	100	110	120	110	109
DEPARTMENT:										
5a.....	70	77	90	93	94	100	90	100	93	95
6a.....	78	87	99	100	104	100	117	107	121	89
7b.....	76	85	92	103	117	100	118	118	128	105
FABRIC:										
8.....	67	73	76	86	95	100	104	109	103	103
9.....	71	71	61	74	78	100	83	116	125	109
10.....	84	89	100	105	101	100	118	117	134	132
11.....	70	80	89	96	94	100	104	101	96	120
12.....	59	70	82	91	95	100	120	127	188	152
13.....	72	82	89	103	103	100	107	109	110	106
14.....	71	80	87	100	100	100	113	119	119	112
15.....	73	75	89	103	103	100	108	107	103	98
16.....	69	72	86	100	100	100	108	103	99	94
17.....	74	77	91	106	106	100	109	114	113	110
18.....	68	70	84	97	97	100	108	114	114	115
19.....	67	69	82	96	96	100	108	112	113	112
20.....	71	75	83	103	103	100	109	115	114	115
21.....	n.a.	n.a.	n.a.	n.a.	94	100	99	95	90	n.a.
YARN:										
22.....	105	125	107	96	111	100	114	90	113	109
23.....	51	67	84	89	87	100	101	105	109	n.a.

n.a. Not available.

¹See page 83.

a Spinning.

b Converting.

Table V-8

INDEXES OF UNIT LABOUR COSTS IN THE COTTON TEXTILE INDUSTRY, 1946-1955¹

Source: The Conference Board

1951 = 100

Classification	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MILL:										
1.....	78	87	102	101	87	100	111	112	111	n.a.
2.....	n.a.	102	107	94	88	100	84	76	79	n.a.
3.....	59	68	85	87	86	100	103	105	98	90
4.....	(not available)									
DEPARTMENT:										
5a.....	69	81	100	99	96	100	96	96	91	93
6a.....	71	85	105	117	117	100	127	138	115	97
7b.....	67	73	83	97	110	100	119	124	128	108
FABRIC:										
8.....	69	77	79	88	93	100	103	103	100	101
9.....	78	83	66	84	81	100	92	110	117	84
10.....	76	74	89	100	100	100	114	115	124	119
11.....	66	78	86	94	94	100	100	97	93	103
12.....	61	74	83	97	97	100	111	114	146	132
13.....	62	75	83	96	96	100	107	105	99	90
14.....	61	73	80	94	94	100	113	119	113	98
15.....	61	64	82	96	96	100	102	92	86	74
16.....	64	67	87	101	101	100	102	92	86	74
17.....	65	68	85	99	99	100	108	105	103	100
18.....	58	61	79	91	91	100	108	113	109	99
19.....	59	62	80	92	92	100	108	114	110	100
20.....	63	66	82	100	100	100	109	107	106	104
21.....	(not available)									
YARN:										
22.....	90	114	96	99	104	100	112	95	104	103
23.....	(not available)									

n.a. Not available.

¹See page 83.

a Spinning.

b Converting.

Table V-9

**PRODUCTION AND EMPLOYMENT IN THE TEXTILE INDUSTRY, CANADA, UNITED STATES AND
UNITED KINGDOM, 1947-1955**

Sources: Canada—D.B.S.
U.S. Bureau of the Census, Bureau of Labor Statistics, Textile Economy Bureau.
U.K. Ministry of Labour and National Service, Board of Trade.

1949 = 100

Year	Canada			United States			United Kingdom		
	Physical Production	Total Employment	Hours Per Week ¹	Physical Production	Total Employment	Hours Per Week ¹	Physical Production	Total Employment	Hours Per Week ¹
1947	98.4	94.0	104.1	116.8	107.9	107.8a	80.9	n.a.	101.4
1948	98.6	98.9	100.5	114.6	n.a.	105.9a	96.4	93.2	101.8
1949	100.0	100.0	100.0	100.0	100.0	100.0a	100.0	100.0	100.0
1950	115.9	105.0	102.4	119.2	104.4	107.8a	105.9	102.3	100.7
1951	115.0	112.1	94.5	120.3	102.7	105.6a	109.8	113.0	100.5
1952	87.6	94.8	90.5	112.9	96.0	103.8a	84.3	97.0	94.6
1953	92.1	95.3	91.9	121.1	96.1	105.6a	93.0	93.2	100.9
1954	82.1	79.7	91.9	116.0	n.a.	102.7a	99.5	93.9	100.2
1955	97.2	85.8	97.6	119.7	n.a.	108.3a	88.8	90.2	99.3
				Cotton Goods					
1947	111.1	103.2	100.0	132.2	125.3	102.8	81.9	n.a.	98.4
1948	106.6	106.9	98.8	120.3	n.a.	103.1	94.5	97.2	101.1
1949	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1950	99.1	96.2	100.2	111.4	106.8	102.3	102.7	102.8	100.7
1951	90.0	96.0	99.3	97.4	93.1	100.5	95.3	100.9	100.2
1952	90.4	84.2	100.2	91.2	85.5	103.1	86.2	90.3	94.2
1953	92.8	85.6	100.5	87.8	90.6	102.1	93.9	98.6	102.0
1954	70.1	67.6	98.4	72.2	n.a.	102.6	94.5	99.5	101.3
1955	88.6	71.4	101.2	80.8	n.a.	107.2	93.5	96.8	101.6
				Woollen and Worsted Goods					

1947	72.5	88.0	100.2	Synthetic Textiles	96.0	104.3	107.8b	66.2	n.a.	98.6		
1948	86.4	96.3	100.9		107.7	n.a.	105.9b	86.4	92.3	99.5		
1949	100.0	100.0	100.0		100.0	100.0	100.0b	100.0	100.0	100.0		
1950	127.0	102.9	101.8		123.5	103.4	107.8b	120.3	111.5	100.2		
1951	129.1	107.6	100.0		110.3	112.8	105.6b	129.2	117.3	100.5		
1952	113.2	93.1	100.0		105.7	109.4	103.8b	102.3	100.0	92.0		
1953	111.9	111.9	100.7		111.1	112.8	105.6b	130.9	100.0	100.7		
1954	95.4	82.3	99.1		103.9	n.a.	102.7b	133.0	103.8	100.7		
1955	108.7	87.2	100.7		119.0	n.a.	108.3b	118.9	103.8	99.8		

Note: Data for U.S. and U.K. refer to broad woven goods; for Canada, they include in addition to broad-woven goods, yarn and some other types of textiles. The production data of U.S. and U.K. are based on yards of fabric output; for Canada the index of industrial production computed by the DBS was used.

¹Hourly rated wage earners.

a Includes synthetic fibres and silk.

b Includes cotton goods.

n.a. Not available.

EMPLOYMENT AND WAGES

Postwar Trends in Textile Employment

As noted in Chapter I, the declining relative position of the textile industry in Canada is reflected in employment trends. The industry group, textile products except clothing, employed 4.4% fewer persons in 1955 than in 1946, while all manufacturing industries combined added to their work force by 20.1%.¹ In 1946, primary textiles accounted for 5.7% of total factory employment, but by 1954 their share had declined to 4%.

These totals obscure significant differences within the time span considered, as well as within the industry group itself. Actually, the first half of the postwar decade saw a sharp expansion in textiles, as well as in all manufacturing. The falling off in textiles has occurred since 1951. This contrasts with a continued, though slower, rise in total manufacturing employment. (See Table VI-1).

All three major branches of the textile industry have fared badly since 1951, with employment in cotton yarn and broad woven goods down 23.5%, in woollen goods, 25.6% and in synthetic textiles and silk, 19%. And they did not similarly share the early postwar prosperity. Chief gainer then was the synthetics division, cotton goods also doing quite well, while woollen goods, employed fewer people in 1951 than in 1946.

There have also been changes in the pattern of employment within the primary textile industry. The relative importance of woollen textiles declined to 25% in 1954 from 29% in 1946, while the proportion of employees in synthetic textiles and silk, rose to 25% from 22% and in other primary textiles to 8% from 7%. The cotton textile division had the same proportion of primary textile employment, namely 42%, in 1954, 1951 and 1946. (See Table VI-2.)

¹Some of the employment data in the following pages refer to the "textile products, except clothing" category rather than the smaller "primary textiles" group because certain data are available only for the larger grouping.

In 1954, more than 95% of all employees in textile products except clothing were in Quebec and Ontario. These two provinces also share the bulk of all manufacturing employment, but the concentration, 81%, is not so great. Of the two, Ontario is a more important area for manufacturing industries generally, while Quebec is more important for the textile industry.

For all of Canada there is one textile employee out of every 20 factory workers, but for Quebec the ratio is one out of 12. The provincial distribution of textile employment in 1954 is summarized in Appendix Table VI-3.

Labour Force Characteristics

The textile industry in Canada tends to be a "small town" industry. This is shown by the following data for 1953. Two-thirds of the employees in

Table H

DISTRIBUTION OF TEXTILE ESTABLISHMENTS, 1953^a

Source: Dominion Bureau of Statistics

Size of Locality	Number of Establishments	Number of Localities
Rural	39	32
0-5,000 persons	139	95
5,000-50,000	241	76
50,000-500,000	77	13
500,000 and over	249	2
Total	745	218

^a Primary textiles plus hosiery and knitted goods.

primary textile establishments are stated by the Primary Textiles Institute to be in cities of less than 50,000 persons.

The industry employs a relatively high proportion of women. In February, 1956, 35.1% of all workers in textile products except clothing were female, compared with 22.4% of all factory workers. There were other nondurable manufacturing groups in which women accounted for more than 35% of total employment, namely, tobacco, leather and clothing, but in the durable goods the proportion of women was 11.8%. Outside of manufacturing the industries hiring a relatively large number of women are trade, finance, and service.

The average textile worker is younger than the average factory worker. Details of the work force by age, available from the 1951 Census of Canada, show the median age of textile employees at just under 31, compared with almost 35 for all manufacturing employees. More than 35% of the labour force in textile industries except clothing were in the 14-to-24 year group, compared with less than 25% in total manufacturing. At the other end of the age scale, only 5.0% of textile workers were 60 years or older, while for all manufacturing the proportion was 7.1%. (See Table VI-4). The proportions

of women and young persons result in a larger-than-average proportion of single persons in the textile labour force—45.7% in 1951. This compares with 36.1% in all manufacturing industries. With regard to education, textile workers appear to have averaged less than all factory workers. Of the 1951 textile labour force, only 37.3% had more than eight years of schooling, as against 47.3% in all manufacturing.

Unemployment and Mobility of Unemployed

An indication of higher unemployment in the textile industry than in all manufacturing during recent years may be seen in comparisons of selected unemployment insurance data in Table VI-5. Benefit year terminations in 1953 were 33.9% of 1952 insured employment in textiles, 24.6% in all manufacturing. Details are not available to show how many of these terminations represented exhaustions of benefit rights, and how many resulted from re-employment before benefits were exhausted. But from the average number of benefit days paid per benefit year terminated—51.1 days for textiles, 51.9 days for all manufacturing—it appears that the average duration of unemployment may have been roughly similar.

The distribution by age of claimant of benefit years terminated corroborates what has already been noted concerning the relatively young work force in textiles. Over one-third were under 25 years compared with one-fourth of claimants in all manufacturing. Persons 60 and over appear to have suffered only slightly more than younger persons so far as the *rate* of unemployment goes, but the considerably greater number of benefit days paid to them on the average is evidence that they find re-employment more difficult.

To the question: where do displaced textile workers find new employment, especially during a period of general layoffs, there are no clear answers from Canadian experience. But a survey of displaced textile workers in various New England labour market areas during 1952 and 1953 may be relevant here. Some of the general conclusions reached from six case studies conducted are as follows:²

(1) Fewer than half of the displaced workers were re-employed at the time of the survey, which in most cases was more than a year after the layoff or quit. Two-thirds of those at work had found jobs earning less; in some cases the decline in earnings was substantial.

(2) The typical displaced textile worker is relatively immobile, both geographically and with respect to movement into another industry.

(3) Although textile employment was declining during the period covered in the survey, more of the displaced workers had found new textile jobs than other employment.

²William H. Miernyk, "Inter-Industry Labor Mobility", Bureau of Business and Economic Research, Northeastern University, Boston, 1955.

(4) Workers displaced from jobs in a highly diversified, non-textile area were less successful in finding employment than those in textile areas where other mills offered job opportunities to some of the displaced workers.

The applicability of these conclusions is limited by the fact that in Canada there appear to have been more younger persons among displaced textile workers, while the typical displaced worker studied by the New England survey was older than the average member of the civilian labour force.

Unionization and Labour Efficiency

The first local unions in the Canadian textile industry were organized half a century ago and soon became associated with the United Textile Workers of America, AFL. The second oldest of the three major unions in the industry, formed in 1926, was the National Catholic Federation of Textile Workers. In 1945 the Textile Workers Union of America, CIO, entered the Canadian scene.

Since the war these three unions have been aggressively competitive, with the Textile Workers Union of America, CIO, apparently gaining on the others. In January, 1955, the membership of these unions stood as follows:

United Textile Workers of America, AFL-TIC	5,000
Textile Workers Union of America, CIO-CCL	16,750
Federation Nationale Catholique du Textile, CTCC	7,440

Since then the AFL and CIO have merged. What effect this will have on the future of collective bargaining in the industry is not yet known, but it should alleviate some of the tensions created in the past by membership rivalry.

The American textile officials whom we interviewed considered that labour relations in the industry in Canada are less favourable than in the United States. They observed that inter-union competition, active drives to increase membership, and the complementary effort to obtain greater concessions have caused more instability. By contrast, a large part of the American industry is not unionized and most of the remainder is organized by a single, established union. Some of them held that union policy in Canada was an obstacle to higher workloads even though it could be demonstrated that they were practicable and had proved equitable under comparable conditions elsewhere.

Our American consultants felt there was little difference, however, in the quality of labour in comparable sections of the two countries. One person

declared that Canadian labour generally shows a "superior ability" in textile operations; while several pointed out that for many years textile workers from Quebec have been encouraged to work in New England mills. It was frequently pointed out that inter-country comparisons of labour performance are rendered difficult by various differences, particularly in length of production runs and variety of products. The comment was made several times that Canadian output per employee per hour could equal that of the U.S. if the prospect of selling the larger output were assured, and equipment and techniques were comparable. As one official said, the productivity problem can be dominated by an excessively diversified product-mix, which can carry more weight than efficiency of either labour or machinery.

Textile Wages

Average wages in the primary textile industry are low in comparison with most other manufacturing industries. Two major contributing factors are the higher percentage of females in the industry (which must be allowed for in direct industry comparisons) and the lower percentage of highly skilled occupations. For example, in the cotton yarn and broadwoven goods section, the only occupations in which piece rates yielded straight-time hourly earnings, in October, 1955, in excess of \$1.25 were (1) Grinder, at \$1.35; (2) Slasher Tender, at \$1.31; (3) Warp Hanger, at \$1.32; (4) Fixer, spinning, at \$1.36; and (5) Loom Fixer, at \$1.42.³

Table VI-6 compares the main divisions of the textile industry with non-durable goods and all manufacturing industry with respect to average hourly earnings, average weekly wages and indexes of wage-rates from 1946 to 1955.⁴ Despite the substantial increase in the earnings of Canadian wage earners since the war it is significant that the relationship between hourly earnings in textiles and the average for all manufacturing industries has remained fairly constant. In both 1946 and 1954-1955, average hourly earnings in textiles except clothing were approximately 77% of those in all manufacturing and approximately 85% of those in non durables. Partial data available for 1939 suggest that the relationship in that year was just about the same.

Although the money wages of Canadian textile workers are below the average in all manufacturing, their fringe benefits compare favourably. This is illustrated by Tables VI-7 and VI-8, showing the comparative prevalence of pension plans and paid holidays among textile workers and all factory workers.

³Advance printing of Table 24, —Cotton and Broad Woven Goods—, from Annual Report No. 38, Wage Rates and Hours of Labour in Canada, October, 1955. Department of Labour.

⁴The difference between hourly earnings and wage rates may be confusing. The Department of Labour wage rate data referred to are averages of straight time rates only. Beginners, learners and helpers are not included, nor are overtime and shift differentials. For these reasons there is some difference between wage rates and average hourly earnings for an industry such as the textile industry which makes increasing use of incentive schemes.

International wage comparisons are difficult to make with any precision, and we have been unable to study this problem in detail. Because of the importance of U.S. competition in the Canadian market, however, we compare average wage rates for representative occupations in the cotton textile industry in Canada and the United States as follows:

Table I

OCCUPATIONAL WAGE RATES IN THE COTTON TEXTILE
INDUSTRY IN CANADA AND THE UNITED STATES,
OCTOBER, NOVEMBER, 1954

Sources: Department of Labour; U.S. Department of Labor, Washington

Canadian and U.S. Dollars per Hour

	Canada	United States	
		New England	Southeast
Loom fixer, male	1.35	1.68	1.53
Weaver, male	1.26	1.55	1.35
Battery hand, female .....	.96	1.15	1.06
Spinner (ring), female	1.05	1.27	1.14

Simple international wage comparisons such as these must be interpreted with caution. In addition to the obvious complications of currency conversion and the selection of identical occupations for comparison, such qualifications as output per man-hour and the substitutability of labour must be allowed for, to say nothing of all the other elements in the cost structure. But these considerations do not invalidate general conclusions from crude wage data. The International Labour Office has made an international comparison of textile wages for the years 1947, 1948 and 1949.⁵ This study shows that Canadian textile wages are among the highest in the world. Of the thirty major textile producing countries examined in the 1947-1949 period, average hourly earnings for Canadian textile workers were exceeded only in the United States and Israel. Furthermore the countries following Canada are very considerably lower. The I.L.O. study also compares earnings in the textile industry with other industries, and shows that the relationship in Canada is matched in many other countries, where average hourly earnings in textiles were found to be about 75-85% of the average for all manufacturing industry.

⁵"Textile Wages", 1952, International Labour Office, Geneva.

Appendix VI

Table VI-1

CHANGES IN EMPLOYMENT; TEXTILE INDUSTRIES AND ALL INDUSTRIES, SELECTED YEARS, 1939-1955

Sources: Dominion Bureau of Statistics; The Conference Board

Year	Cotton Yarn and Broad Woven Goods	Woollen Goods	Synthetic Textiles and Silk	Total Textiles Except Clothing	All Manufacturing	All Industries ¹
Index Numbers of Employment, 1949 = 100						
1939.....	86.4	66.8	49.0	67.9	56.3	60.1
1946.....	88.5	96.2	80.2	88.7	91.0	88.2
1951.....	112.1	96.0	107.6	105.2	108.0	108.8
1955.....	85.8	71.4	87.1	84.8	109.3	112.5
Percentage Change Between Selected Years						
1939 to 1955	-0.7	+6.9	+77.8	+24.9	+94.1	+87.2
1946 to 1955	-3.1	-25.8	+8.6	-4.4	+20.1	+27.6
1946 to 1951	+26.7	-0.2	+34.2	+18.6	+18.7	+23.4
1951 to 1955	-26.5	-25.6	-19.1	-19.4	+1.2	+3.4

¹Includes manufacturing, mining, forestry, construction, transportation, storage and communication, public utility, service and finance, insurance and real estate.

Table VI-2

EMPLOYMENT: PRIMARY TEXTILES BY MAIN GROUPS AND ALL MANUFACTURING, 1946, 1951 AND 1954

Source: Dominion Bureau of Statistics

	1946	1951	1954
Thousands of Employees			
All manufacturing.....	1,058	1,258	1,268
Primary Textiles	60	69	51
Cotton textiles.....	25	29	21
Wool textiles.....	18	17	13
Synthetic textiles and silks.....	13	18	13
Other primary textiles.....	4	5	4
Percent			
Primary textile share of manufacturing employment.....	5.7	5.5	4.0
Distribution of primary textile employment			
Cotton textiles.....	42	42	42
Wool textiles.....	29	25	25
Synthetic textiles and silk.....	22	27	25
Other primary textiles.....	7	7	8
Total.....	100	100	100

Table VI-3

TEXTILE EMPLOYMENT, -BY PROVINCE, 1954

Source: Dominion Bureau of Statistics

Province	Employees in All Textiles Except Clothing		
	Number	Percent Distribution	Percent of Total Factory Employment
Prince Edward Island,			
Nova Scotia, and Newfoundland	622	1.0	1.5
New Brunswick.....	460	0.7	2.0
Quebec.....	36,565	57.3	8.6
Ontario.....	24,456	38.3	4.1
Manitoba.....	835	1.3	2.0
Saskatchewan.....	68	0.1	0.6
Alberta.....	145	0.2	0.4
British Columbia.....	658	1.0	0.7
Total, Canada.....	63,809	100.0	5.0

Table VI-4
PERCENTAGE DISTRIBUTION OF LABOUR FORCE BY SELECTED CHARACTERISTICS: TEXTILES AND ALL MANUFACTURING, 1951

Source: Dominion Bureau of Statistics

Characteristic	Both Sexes			Male		Female	
	Textiles Except Clothing	All Manufacturing	Textiles Except Clothing	All Manufacturing	Textiles Except Clothing	All Manufacturing	
Age:							
14-24.....	35.3	24.7	17.2	15.9	18.2	8.8	
25-59.....	59.6	68.2	42.3	57.4	17.4	10.8	
60 and over.....	5.0	7.1	4.4	6.5	0.6	0.5	
Total.....	100.0	100.0	63.8	79.8	36.2	20.2	
MARITAL STATUS:							
Married.....	54.4	63.9	42.9	57.3	11.4	6.6	
Single, widowed, divorced.....	45.7	36.1	20.9	22.5	24.8	13.6	
Total.....	100.0	100.0	63.8	79.8	36.2	20.2	
YEARS OF SCHOOLING:							
0-4.....	5.5	6.1	4.2	5.4	1.3	0.7	
5-8.....	57.2	46.6	36.4	37.5	20.9	9.0	
9-12.....	32.5	39.7	19.4	30.4	13.1	9.3	
13 and over.....	4.8	7.6	3.8	6.5	1.0	1.1	
Total.....	100.0	100.0	63.8	79.8	36.2	20.2	

Note: For all manufacturing, 1,360,662 persons equal 100.0%; for textiles except clothing 81,422 persons equals 100.0%.

Table VI-5

**SELECTED UNEMPLOYMENT INSURANCE DATA:
TEXTILE AND ALL MANUFACTURING**

Source: Dominion Bureau of Statistics

Item	Textiles Except Clothing	All Manufacturing
Number of insured persons, 1952.....	67,390	1,123,280
Benefit years terminated, 1953		
Number.....	22,862	276,166
% of insured persons, 1952.....	33.9	24.6
Benefit years terminated by age of claimant, 1953 —		
% distribution		
Under 25 years.....	33.6	25.0
25-59 years.....	60.7	66.3
60 years and over.....	5.7	8.8
Total.....	100.0	100.0
Average number of benefit days paid per benefit year terminated in 1953, by age of claimant		
Under 25 years.....	47.0	43.1
25-59 years.....	47.4	47.8
60 years and over.....	115.4	107.5
Average of all claimants.....	51.1	51.9

Note: The number of benefit years terminated includes all claimants who had either exhausted benefit rights during 1953 or whose benefit year had lapsed during 1953 owing to the fact that 12 months had passed since the date of its establishment. It includes some benefit years for which no benefit was paid because the claimant regained employment before the first benefit was due.

Table VI-6

HOURLY EARNINGS, WEEKLY WAGES AND WAGE RATES: TEXTILES AND ALL MANUFACTURING, 1939 AND 1946-1955

Sources: Dominion Bureau of Statistics; Department of Labour

Average Hourly Earnings (Cents)

	Cotton Yarn and Broad Woven Goods	Woollen Goods	Synthetic Textiles and Silk	Total Textiles Products Except Clothing	Non- Durable Goods	All Mfg.
1946....	52.8	53.2	53.8	53.7	63.8	70.0
1947....	60.9	61.6	62.4	62.0	73.4	80.3
1948....	73.9	71.8	74.0	73.8	84.0	91.3
1949....	85.1	79.2	85.0	83.0	90.6	98.6
1950....	87.6	82.4	87.2	86.0	95.2	103.6
1951....	99.8	91.1	97.8	96.6	107.2	116.8
1952....	104.0	99.5	107.1	103.8	117.4	129.2
1953....	110.1	102.1	109.8	107.5	122.9	135.8
1954....	111.2	104.4	114.8	110.1	129.4	140.8
1955....	112.7	104.7	117.6	111.9	132.7	144.5

Average Weekly Wages (Dollars)

1939a...	16.10	16.70	17.89	n.a.	n.a.	17.60
1946....	23.92	23.04	24.21	23.57	27.18	29.87
1947....	26.55	26.43	27.58	26.78	31.05	34.13
1948....	31.11	30.44	32.93	31.51	35.28	38.53
1949....	35.66	33.98	37.49	35.44	38.05	41.71
1950....	37.58	35.43	39.15	37.24	40.17	43.82
1951....	39.52	38.81	43.13	40.09	44.70	48.82
1952....	39.42	42.79	47.23	42.56	48.49	53.62
1953....	42.39	44.01	48.75	44.40	50.27	56.09
1954....	42.81	44.06	50.17	45.14	52.15	57.16
1955....	46.09	45.44	52.21	47.45	54.14	59.25

Indexes of Wage Rates (1949=100)

1939....	40.2	38.7	40.3	39.9	46.5	45.9
1946....	65.0	70.8	66.3	66.8	73.8	74.1
1947....	76.0	81.1	75.2	77.0	83.5	84.1
1948....	92.8	93.3	87.8	91.4	94.4	94.5
1949....	100.0	100.0	100.0	100.0	100.0	100.0
1950....	106.1	106.7	107.7	106.7	105.6	106.1
1951....	117.1	120.8	115.7	117.6	118.8	120.3
1952....	127.5	126.2	120.1	125.0	126.5	128.4
1953....	128.7	131.6	124.3	128.1	132.8	134.6
1954....	129.5	134.6	125.4	129.5	136.9	138.5
1955p...	131.5	137.3	125.3	131.0	140.7	142.2

a Partial data not strictly comparable with 1946-1955 series.

p Preliminary.

n.a. Not available.

Table VI-7

**ESTABLISHMENTS WITH PENSION PLANS FOR
NON-OFFICE EMPLOYEES: TEXTILES AND
ALL MANUFACTURING, APRIL 1, 1955**

Source: Department of Labour

	Textiles Except Clothing	All Manufacturing
Plans in operation	64.4	61.1
Proportion of premium borne by employer		
None	1.0	0.5
Less than 25%	0.7	3.2
25% to 49%	0.1	1.2
50%	15.8	19.2
51% to 67%	8.8	7.2
68% to 99%	—	2.9
100%	33.0	20.7
Premium shared but proportion not stated	3.7	3.4
No information as to sharing	1.3	2.8
No plans in operation	35.6	38.9
Total,	100.0	100.0

Table VI-8

**ESTABLISHMENTS WITH PAID STATUTORY HOLIDAYS FOR
NON-OFFICE EMPLOYEES: TEXTILES AND ALL
MANUFACTURING, APRIL 1, 1955**

Source: Department of Labour

Number of Paid Statutory Holidays Allowed	Textiles Except Clothing	All Manufacturing
None	5.1	5.6
1 to 5	10.2	14.3
6	11.2	12.6
7	28.8	11.2
8	36.0	47.3
More than 8	8.7	9.0
Total	100.0	100.0

OUTLOOK FOR THE FUTURE

In concluding this review of the primary textile industry in Canada we are chiefly impressed by the elements of the industry's experience and operations that have made for instability. The elements of stability, which in this industry imply limitation rather than advantage, are easily seen and stated. They are a domestic market that is governed essentially by size of population, a basic technology that has not changed and is accessible almost anywhere in the world, easily acquired labour skills, and non durable products that are in some form a universal necessity of life. But the elements of instability, which are paradoxically associated with the features just mentioned, cannot be classified so simply. Their symptoms on the record are precarious prices and profits, and high susceptibility to government policy. But we think it would be misleading to attribute these symptoms to the incidence of depression, war, and tariff changes without going beyond these external and obvious factors. Perhaps the industry's inherent elements of instability can be defined as competitive conditions that are fluid and marginally unpredictable, end-product demand that is capricious and extremely diverse, productive capacity that is flexible to the point of embarrassment, and pre-occupation for these reasons with short-run market factors. In cotton textiles particularly, the proximity and magnitude of the American textile economy has magnified the significance of all these elements.

As these impressions began to develop at an early stage of our study, which then confirmed them, we thought it advisable to approach questions concerning the industry's future prospects, in particular, by obtaining the views of people who have intimate experience of the business. Questions concerning the future were therefore prominent in our discussions with members of the industry in Canada, and in our first questionnaire to them, and in our interviews with the American textile experts whom we consulted for their independent views. The opinions that we received in both quarters are reported in this chapter, necessarily much condensed and generalized, dealing broadly with the outlook for markets and technology, and with related

points. Where some contradiction appears, we report it as reflecting the nature of the matter in question.

It was also evident that management is a particularly critical factor in the future of an industry having the characteristics that we have mentioned. We therefore asked our American respondents for their opinions of the Canadian industry in this respect as well, so far as they felt competent to judge; and we now preface the rest of this report with a summary of their replies on this question. Our consideration of the industry's future prospects concludes with a projection of the consumption of primary textiles in Canada to 1980, and related estimates of the possible trend of production and employment in the Canadian industry.

Canadian Textile Management

Among those who were prepared to comment the consensus was favourable as regards top management, and constructively critical as regards the lower supervisory level. Where parallels were drawn with American management, they were accompanied by qualifications for the circumstances or problems confronting Canadian management which either do not exist, or are less difficult, in the United States. And it was made clear time and again that neither criticisms nor suggestions could properly be generalized, but were only relevant to certain sectors, companies, or operations with exceptions in practically every instance.

The management of some companies, particularly in recent years, was generally considered to be the equal of management anywhere. Policies and programmes, given conditions in the industry, are shrewd and well implemented. On the adverse side, perhaps the most common comment was to the effect that neither management nor union leadership have been very receptive to mass production techniques and high speed operations, even allowing for the fact that they have more limited application in an industry facing a smaller market with unused capacity. While this attitude is changing,—as one person put it, “a clear break” has been made with the past—, the change was said to be relatively recent. A long tradition of inherited techniques and basic ideas has lingered on, particularly at supervisory levels.

Management, especially at the supervisory level, is more difficult in Canada because of the product variety typically scheduled in a given installation or company. This was recognized and acknowledged. Supervision, planning, and co-ordination are made more complex by multiple operations. Faced with more complex and varied problems, managerial and supervisory personnel have less opportunity to become specialized, or to exploit new technical developments as they occur. It was suggested, nevertheless, that there is room for improvement in the general planning and organization of operations.

From some we heard the comment that, compared with American management, many (though not all) Canadian officials are less receptive to new ideas. Others on the contrary told us that top management in the two countries is about equally forward looking. One machinery manufacturer told us flatly that most Canadian management today are more receptive to new equipment than are most of his fellow countrymen. As in the case of the comparison of plant and equipment in the two countries, considerable evidence suggested that in years past the Canadian industry may have lagged in equipment, and in policies of modernization, and was only in the last few years beginning to keep abreast.¹

On a more specific level, we heard some criticism of policies in developing managerial talent. The custom of importing personnel, with imported philosophy and methods of operations, has tended to leave a gap in the training programmes. Some effort is being made, but much more could be done, it was said, to attract and train competent Canadian personnel and to offer better incentives. A considerable body of opinion further held that this situation became graver as one went down the managerial line, i.e., that ability of personnel tended to become progressively less satisfactory at lower levels; and some held that at the operating level there was most definitely room for improvement. A few also offered the suggestion that there ought to be greater specialization of management, in organization and areas of responsibility. Frequently, they thought, too much responsibility and too many functions or types of activities are assigned to individual managers with resulting "Jack of all trades, master of none" consequences.

Even after allowing for the obvious difficulties in maintaining workloads comparable to those in mass production or specialized mills, a good many of our discussants still felt that management had failed to achieve maximum work assignments. Others divided the responsibility between management and unions. Another official dissented from this position, telling us that "where the market is sufficient, Canadian mills can and have assigned workloads equal to comparable American mills".

As a footnote to our report of this phase of our American conversations, we should record our impression that many in Canadian management, while they might be disposed to dispute some of these observations, are alert to most of the problems alleged. Supervisory training is one case in point which has come up in our discussions with the Canadian industry.

Markets

Members of the Canadian industry are agreed that population and income growth will bring an expanding textile market in Canada over the long

¹One equipment manufacturer told us that 30 years ago Canadian equipment of the type he produces was superior to that employed by American mills. In the intervening years, particularly during the 1930's and until late in the 1940's, the quality lagged and American mills became superior. An effort to "catch up" has followed.

run. But our questions elicited a strong undercurrent of pessimism regarding the ability of the industry to maintain, let alone enlarge, its share of the market. This pessimism stems from the recently increased intensity of import competition, which many expect to become considerably more severe with mounting pressure from Asia. At the same time, most members of the industry, as a consequence of their present problems, are much more preoccupied with short-term business prospects than with the longer-term outlook, and few seem to have attempted to develop concrete long-term appraisals.

Short-term preoccupations are closely linked to the problem of style, and to the concern of Canadian producers to anticipate the domestic response to the foreign style leadership of New York and Paris. And this in turn involves Canadian marketing policy. One or two of our American respondents went so far as to assign primary responsibility for the basic problems facing the Canadian industry to poor styling in the past, inadequate systems of distribution, and lack of effective promotion of Canadian textiles. They suggested that little or no market research or product development is conducted and that output is insufficiently responsive to changes in consumer demand.

On the other hand, other American observers asserted with conviction that, with the proximity of the American market and the penetration into Canada of so many of the media through which American styles and products are promoted, it would be futile for the Canadian industry to undertake extensive independent styling and promotion activities. Markets and modes are dominated by the larger American producers and designers, and their innovations quickly become available in Canada. Extensive sales efforts could similarly be negated by the ability of larger foreign producers to undersell in many textile lines. Styling too, they pointed out, is more hazardous in a smaller market, where variety offers much less protection to the producer.

Foreign markets for Canadian textiles have always been of minor importance. (See Table VII-1). Under the circumstances of the past few years, there has been a sharp reduction in the already small exports of Canadian cotton goods, despite intensified efforts to maintain or enlarge sales in foreign countries. The principal obstacles to larger export sales, according to industry spokesmen, are: comparatively high Canadian textile costs and prices, trade and currency restrictions, and fears of retaliation in some cases.

The wool textiles industry exports a larger percentage of its production than other sections of the Canadian textile industry; and opportunities would exist, according to members of the industry, for a considerable expansion of exports of wool goods in the absence of trade and foreign exchange barriers. In particular it is claimed that the industry is in a good position to invade the American market with both apparel and industrial cloths if it were not for the high tariff and frustrating customs administration procedures. The industry maintains that unit costs are lower in Canada than in the United

States, partly because duties are imposed on raw wool imports into the United States but not into Canada. Furthermore, we were informed that quite a small operation in wool textiles can be an economic unit, so that American mills do not benefit greatly from their larger market.

The volume of exports of synthetic textile products, although still very small, has been increasing for the last few years, contrary to the trend in cotton and wool products. Here trade and currency restrictions particularly in the Sterling Area, are cited as the primary impediment to a larger export volume.

Technology

A majority of Canadian industry officials consulted by our questionnaire and in conversation (from all parts of the industry—wool, cotton, and synthetics) believe that the pace of technological advance in the industry will accelerate. But among those who share this expectation it is believed that such changes will be a continuation of trends already in existence, rather than a “technological break-through” into new automation processes or revolutionary methods of production. Typical of the changes envisaged are: larger, faster and more automatic machinery, with greater capacities and reduced time and cost of maintenance; improvement in materials handling; reduction of waste; and possible combination of certain operations up to the spinning stage. On the other hand, there are some who expect changes of a more basic nature, such as the telescoping of several operations in making finished fabrics out of the raw fibres, or the introduction of electronic or other mechanisms to control finishing processes or yarn evenness, tensile strength, elasticity and other desired qualities, even replacing manual inspection of finished cloth.

It is apparent from these references that technological prospects, perhaps even more than other aspects of an industry as varied and complex as primary textiles, can be discussed only with specific reference to given machines, processes, products, etc., and at greater length than is feasible here. Discussing this question with the American experts, in terms of their experience and anticipations in the United States, we were told that generally speaking, the technology of textiles is running strongly in the direction of helping to solve many of the problems faced by a relatively smaller industry obliged to produce a wide variety of goods. This conclusion, though not unanimous, emerged from discussions with machinery manufacturers producing a broad range of equipment. In weaving, in spooling, in finishing and dyeing, and in other operations, the future trend is expected by these people to be in the direction of greater adaptability, higher flexibility, and less costly change-over. The cost of short production runs may thereby be reduced, and an even wider variety of end-products become obtainable from the same basic units of equipment. A continuing flow of new or improved attachments and acces-

sories for major items of equipment—for looms, for example—should help to lower unit costs of the smaller operator and of mills which cannot specialize intensively. The multi-count spooler and the larger package now possible will also substantially help in the shorter-run problem. Printing equipment to handle two-colour processes without the necessity for halts to clean and set up will have similar significance.

On the other hand, some American experts who talked to us believe that current and future technological advances will benefit both large and small producers so that the probable net advantage is not clear. Higher speeds of operation lie ahead, as do more efficient operations and further labour-saving devices. They agree with the Canadian opinions that more continuous and integrated operations, at least in some processes, are in prospect. In some operations and types of equipment, we were told, changes have only just begun in processes and machinery which have remained basically the same for decades. Whether developments in these directions will tilt the scales in favour of the larger or the smaller unit of textile production cannot easily be judged. *A priori*, it would seem that those facilitating more continuous operations would be of greater utility to mills potentially able to run continuously. Some of the newer developments, too, may require so large an investment outlay as to be economically feasible only with large-scale production.

On the last point one comment received from a Canadian mill is relevant, suggesting the possible magnitude of future capital requirements as compared with present fixed investment: . . . “to install a new weaving unit using the latest buildings, machinery and equipment would run from \$20,000 to \$25,000 per employee. Our present depreciated investment per employee is around \$3,000, although we have spent over \$4,500 even after making some allowance for increased prices.” It would appear from this statement that the price of substantial new equipment may be prohibitive if it cannot be run on a three-shift basis. Several Canadian producers pointed out to us that the higher average hours run per spindle per year in the United States than in Canada (the current rates were cited as 5,800 and 3,600 respectively) give the American mills a competitive advantage from the standpoint of ability to make new capital investment, as well as from the standpoint of lower unit production costs.

Anticipations of major technical developments are by no means unanimous. Some American officials told that they see little in store in the way of change for some kinds of equipment or processes. They feel that textile technology has gone about as far as it can go in a fundamental sense and that only minor and gradual developments can be expected. Those who expect no dramatic developments seem fairly confident that there will, in any case, be a steady flow of changes, new parts, accessories, and ideas, but they are not expecting this process to accelerate conspicuously. In these points

they are not far from the views of many Canadian officials, although most of the latter are inclined to expect a more rapid rate of change.

The Canadian industry believes that there is considerable scope for increased knowledge and understanding of fibre characteristics. It is expected that new instruments will be developed to permit better evaluation of significant characteristics of different fibres and consequently how each can best be used. Simultaneously, it is anticipated not only that agricultural research will lead to improved cotton and wool fibres, but also that there will be a continuing development of new synthetic fibres with special characteristics that can better help to adapt end-products to specific needs.

Some of the respondents to our questionnaire expect fairly radical changes in end-products. Plastic films, laminated fabrics and non-woven fabrics are expected to take the place of woven fabrics. According to one company, improved fibre properties and new production techniques will extend the use of textiles to markets not now reached by textiles, particularly in the industrial field.

Arising out of our investigation of prospective changes in technology and production, the Canadian industry's views on two related matters are summarized as follows:

Capital Expenditures

On the assumption that the Canadian textile industry maintains roughly its present share of the domestic market, the industry appears to feel that capital spending can at best be expected to advance only gradually. It is suggested by some members that, given the deterioration of the industry's financial position during the past few years, a very substantial improvement in over-all operations will be necessary as a condition of any considerable rise in capital spending from the average level of the past five years. If this occurs, the industry does not expect any rise in the recent average ratio of construction spending to spending for machinery and equipment, in view of the capacity yet remaining for higher output within existing plants through higher multiple-shift operations. But the quandary remains that, as a condition of maintaining its competitive position, the industry should be in a position to undertake sufficiently large expenditures for newer, larger, faster, and more automatic equipment to raise fixed investment per employee substantially over the long run.

Employment and Productivity

Regarding future employment trends, most people in the industry believe that its total volume of employment will only grow slowly, with increased output obtainable principally from higher labour productivity, (as reflected

in reduced man-hours per unit of output in conjunction with improved machinery and possibly longer production runs).

In addition, there is common opinion that the future is likely to see some reduction in the degree of skill required by machine operators. At the same time, however, there may well be a need for more maintenance skill. Some need for better trained executives and superintendents is also recognized.

The future may also see some changes in the composition of textile employment. For example, the substitution of plastic film, laminated fabrics and non-woven bonded fabrics for woven fabrics would reduce the demand for spinners and weavers and generate a demand for substitute types of labour. Similarly, the proportions of male and female labour will possibly change considerably over time, for these and like reasons, but on this point there is no clear agreement.

Projection to 1980: Consumption, Production and Employment
(See Table VII-2)

A long-term projection of future consumption and production of primary textiles in Canada must be based entirely on assumptions. The assumptions themselves encounter the difficulty that special factors (depression, war, shifts in tariff protection and foreign competition, etc.) over the past quarter century prevent clear-cut conclusions about basic textile trends. Its obedience to our terms of reference, but with these reservations, the following analysis projects for the next twenty-five years:

- (i) Growth of the Canadian textile market, depending on population growth and growth in per capita consumption of major textile fibres;
- (ii) Growth in output of the Canadian textile industry, depending on the possible share of the domestic market that may be secured by Canadian mills;
- (iii) Growth of employment that may be required with expanded output, depending on the future rise in output per man-hour.

(i) As shown in Table II-2, per capita annual consumption of major textile fibres has moved within a range of 20 to 23 pounds in 1926-1939 (excluding the early thirties) and a range of 25 to 30 since the war. But on the assumption that the decline in consumption since 1951 may be interpreted as a return to "more normal" levels, the indicated rise in per capita consumption over the past fifteen years would appear to be of the order of around 20%, or slightly over 1% per year. Extending this rate for the next quarter century, and starting from about 25 pounds in 1952-53 (1954 being an abnormally poor year), per capita consumption would reach 32 to 37 pounds by 1980. A

figure of 32½ pounds would follow a cumulative rate of growth of 1% per year, and 37 pounds would follow 1½% per year.

To set these figures in perspective, it might be noted that an apparent consumption level of 32 pounds per capita has already been achieved in Canada in two abnormally high years—1942 and 1947, and that American consumption exceeded 30 pounds in several years before the war, reaching 35 pounds in most of the years since. It is therefore possible that the above projection will prove to be conservative. At the same time, continued trends toward lighter weight, longer-wearing fabrics, would operate to the opposite effect, though this would not mean less activity for textile mills.

In any event, population growth will be a major factor expanding the Canadian textile market, as it has been the past quarter century. According to projections prepared by the Commission's staff, Canada's population may rise to about 26.7 million by 1980 (assuming net immigration of 75,000 per year); if attained, this would represent a level about 80% above 1952-53, or a cumulative rate of growth of over 2% per year.

Taking this population projection in conjunction with the above projections of per capita consumption of textiles, the possible size of the Canadian textile market in 1980 would be in excess of 850 million pounds if per capita consumption rises at 1% per year, and nearly 1000 million pounds if the rate is 1½%. Such estimates mean much more than a doubling of the market in the next 25 years, (it was 340 million pounds in 1954), and an annual rate of growth in total Canadian textile consumption in the neighbourhood of 3½%.

(ii) Whether the production of Canadian textile mills will keep pace with the expansion of textile consumption is another question. Table VII-2 shows projections of the output of domestic mills for 1980 assuming that they retain approximately their recent share of the Canadian market of about 75%, first on the basis of a 1% annual increment in per capita consumption, and second on the basis of 1½%. The table also shows projections of output on the assumption that the industry's share of the market might fall to 65% in 1980 (that is, to approximately the same proportion as in the late 'twenties). These calculations give estimates for the production of domestic primary mills in 1980 of 560 million to 740 million pounds, an expansion in the range of about 105% to 170% from the 1952-53 level, representing annual rates of increase from about 3% to 3.5%.

(iii) Finally, on the basis of three further assumptions, the increase that would be required in primary textile employment in response to these projected increases in output may be conjectured. First, it is assumed for the sake of simplicity that productivity changes will be the only relevant factor. Second, it is assumed that the textile industry's efficiency will continue to rise, and that over the long run productivity will gain at an annual rate of 2%.

While it is difficult to measure productivity growth for any industry with precision, available data suggest that output per man-hour in the Canadian primary textile industry has advanced at an average annual rate of close to 3% over the past decade, and perhaps at a rate slightly below 2% per year since the late thirties.² Thus the assumption of a 2% "productivity factor" seems fairly reasonable. Third, it is assumed that man-hours can be equated with employment—that is, that the average number of man-hours worked per year by employees of the primary textile industry will be the same in 1980 as in 1952-53.

An annual increase in output per man-hour (or employee) of 2% would mean on these assumptions that if a given volume of output were produced by 100 employees now, it could be produced by 62 employees 25 years from now. Following such calculations, a rise in Canadian output of primary textiles from 275 million pounds in 1952-53 to a range of 560 million to 740 million pounds in 1980 would require an expansion of employment in the primary textile industry of between 21% and 60% from 1952-53 to 1980, that is to say, from 60,000 in 1952-53 up to a range of 73,000 to 96,000 by 1980.³

These projections may well prove to be conservative, and they are certainly artificial. But it is a clear conclusion from our study that growth of population, and consequently of the size of the Canadian market, will be a primary long term factor in the Canadian textile industry's ability to reduce its cost and to continue to improve its technical efficiency, through more continuous production, larger scale of output, and greater scope for specialization.

²In its brief to the Commission, the Primary Textiles Institute stated that this average rate of increase from 1938-39 to 1953-54 had been 1.8% ("The Outlook for Canadian Textile Industry", page 9). The postwar figure is derived from estimates prepared by the Commission's staff.

³Recent employment of 60,000 is approximately consistent with the above "fibre pounds output" statistics, and is therefore somewhat below the figure (73,000) relating to the D.B.S. classification, "textiles except clothing"

Appendix VII

Table VII-1

EXPORTS OF MANUFACTURED TEXTILES, BY FIBRE, 1926-1954¹

Source: The Conference Board

Millions of Pounds

	Cotton	Wool	Silk	Synthetics	Total
1926.....	1.0	0.6	a	a	1.6
1927.....	1.0	0.6	a	0.3	1.9
1928.....	1.2	0.7	a	0.1	2.0
1929.....	1.1	0.8	0.1	0.1	2.1
1930.....	1.1	0.8	0.1	0.2	2.1
1931.....	0.8	0.6	0.1	0.2	1.7
1932.....	1.3	0.5	0.1	0.1	2.1
1933.....	1.1	0.5	0.1	0.1	1.8
1934.....	1.6	0.5	0.2	0.2	2.5
1935.....	1.6	0.5	0.3	0.2	2.6
1936.....	2.1	0.6	0.3	0.3	3.4
1937.....	3.1	0.8	0.4	0.5	4.7
1938.....	3.1	0.7	0.4	0.6	4.8
1939.....	4.8	0.6	0.4	0.6	6.4
1940.....	13.7	0.7	0.3	0.7	15.4
1941.....	16.4	1.0	0.3	1.0	18.7
1942.....	10.8	1.5	a	0.8	13.1
1943.....	6.4	2.6	a	0.7	9.7
1944.....	5.9	5.5	a	1.0	12.4
1945.....	7.4	5.0	a	1.5	13.9
1946.....	5.5	2.6	a	1.6	9.7
1947.....	6.0	2.9	a	1.9	10.9
1948.....	4.7	3.5	a	1.0	9.2
1949.....	2.6	1.8	a	0.4	4.9
1950.....	2.9	1.8	a	0.6	5.4
1951.....	4.1	1.7	a	0.7	6.4
1952.....	3.0	1.2	a	0.7	4.8
1953.....	1.7	1.0	a	0.9	3.6
1954.....	1.3	0.9	a	1.0	3.2

¹Fabrics and manufactured products, including a small amount of yarns.
a Less than 0.05 million pounds.

Table VII-2

CONSUMPTION OF MAJOR TEXTILE FIBRES IN CANADA
AND PRODUCTION OF DOMESTIC PRIMARY MILLS,
SELECTED GROUPS OF YEARS, 1926 TO 1953
AND PROJECTION TO 1980

Source: The Conference Board

	Annual Averages				Projections for 1980	
	1926-29	1936-39	1946-49	1952-53		
Population ¹ (thousands)	9,736	11,104	12,778	14,606	Population ² (in thousands)	26,700
Consumption per capita (pounds)	22.4	21.0	28.8	25.2	Consumption per capita (pounds)	
					Assumption A ³	32½
					Assumption B ⁴	37
Total consumption (millions of pounds)	218	233	366	367	Total consumption (millions of pounds)	
					Assumption A ³	868
					Assumption B ⁴	988
Percent of the market served by domestic mills	67	81	76	74	Percent of the market served by domestic mills	
					Assumption C	75
					Assumption D	65
Production by domestic mills (millions of pounds)	147	195	286	275	Production by domestic mills (millions of pounds)	
					Assumptions A & C	651
					Assumptions A & D	564
					Assumptions B & C	741
					Assumptions B & D	642

¹Average of June 1 figures for years shown.

²Estimate provided by staff of Royal Commission on Canada's Economic Prospects; assumes average net immigration of 75,000 per year.

³Per capita consumption of major textile fibres will rise at a rate of 1% per year.

⁴Per capita consumption of major textile fibres will rise at a rate of 1½% per year.

GENERAL APPENDIX

QUESTIONNAIRE I

TECHNOLOGY, CAPITAL EQUIPMENT POLICY AND LABOUR PRODUCTIVITY IN THE PRIMARY TEXTILE INDUSTRY

This study relates mainly to the primary cotton, wool and synthetic sections of the textile industry in Canada. We are further confining our attention to the spinning, weaving, dyeing and finishing processes of the industry. Consequently our interest in related parts of the industry is only incidental. The knit goods industry is specifically excluded from our frame of reference.

We are concerned mainly with what has happened during the last ten years, from 1946 to the present. Of course, the future is also of importance to us since the Commission is vitally concerned with the prospect of Canada's industrial development. In so far as it is possible, we wish to obtain data and opinions that will logically connect current events in the industry with its likely future.

In all that follows we would like to have you supply us with facts and opinions on your Company separately from your appraisal of the industry at large. Furthermore, we would appreciate your indicating to us the specific parts of the industry, such as cotton, wool or synthetics or subdivisions thereof, to which your remarks apply.

It is important for us to obtain facts as well as opinions. Consequently we would appreciate your providing us with statistics, references or other data in support of your remarks. Where such are not available we would very much appreciate your opinion as one conversant with the facts of the situation.

Capital Equipment and Technology

- (a) What has been the trend of capital expenditures in your company since 1945? What has been the trend of expenditures on new buildings (structures) in relation to such expenditures on machinery and equipment? What is the significance of that trend currently and to the future? Can you supply any comments on the industry at large with regard to the foregoing?
- (b) Is there a relationship in your company between expenditures on repairs and maintenance and expenditures on new plant and equipment? What do you see as significant in this relationship? Can you supply any comments on the industry at large with regard to the foregoing?
- (c) What has been the main reason for making capital expenditures since 1946? For example, has it been your intention to (1) increase your capa-

city; (2) cut production costs by installing more efficient machinery, equipment and structures; (3) cut costs by mechanizing what was previously done by labour; (4) enter parts of the textile industry new to your company; (5) any other reason that you can identify.

- (d) In general we are interested in obtaining information on the age, the modernity and the use of capital equipment and buildings in your company and in the textile industry and how these factors bear upon unit production costs. In so far as is possible, we would appreciate having your reply contain such information separately for (1) buildings (structures), and (2) machinery and equipment.

More specifically, we would like to have your answers to the following questions:

- (1) Are buildings in your company modern and efficient for your market? Why do you think so or why not?
- (2) What percent of building (measured in square feet) has been installed since 1950? Since 1945? Since 1940? What is the average age of buildings now in place? What change, if any, has taken place in this average within the last ten years?
- (3) Is your company under any specific disadvantages with regard to the location of its buildings within Canada? What are they?
- (4) Is machinery and equipment in your company modern and efficient? Why do you think so or why not?
- (5) What percent of machinery and equipment (use as a measuring rod whatever physical units seem best suited to your operations) has been installed since 1950? Since 1945? Since 1940? What is the average age of machinery and equipment now in place? What change, if any, has taken place in this average in the last ten years?
- (6) For each broad type of investment, what reason would you give if the buildings and machinery and equipment are not modern and efficient?
- (7) What policy do you have for initiating and making capital expenditures?
- (8) What is your policy for the replacement and retirement of machinery and equipment?
- (9) What factors, inside and outside the industry, bear upon these policies?
- (10) What has been the course of unit production costs since 1945? In order not to reveal any information that you deem confidential

would you simply express unit production costs in each year as a percent of such costs in 1955 for as many products as you have data.

- (11) Are buildings, machinery and equipment being used to the fullest extent? If not, why? What changes could be made in the use of existing capital equipment so as to bring down unit production costs? Would these changes have repercussions on matters other than costs? What are these?
- (12) In general, how does the Canadian textile industry compare with the industry in the United States and the United Kingdom with regard to the above factors?
- (e) Our interest in the future extends over the period to 1980. Within that span of years would you venture to tell us what you believe to be the outlook for technological advance in the Canadian textile industry? Is it possible for you to foresee what effect such advance may have upon textile employees? For example, can you foresee that great changes will be required in the skill of such employees? Is it likely to increase or decrease the demand for labour in the industry? The industry at present is a relatively large employer of female labour. Will the technology of the future have any bearing on the relative proportions of male and female employees?

The textile industry is reputedly one which requires a small amount of fixed investment per employee. Is such a situation likely to change within the next 25 years? Why, or why not?

Labour Productivity

- (f) Labour productivity is another important element in efficient production. In general by productivity we mean the amount of textile yarn or fabric that is produced per man-hour. It is important when making such a comparison that a product be used which has not changed much over the period in question. If such data are available only for combined operations in which several different yarns or fabrics are made, could you tell us whether the product-mix of your output has changed significantly over the period in question?
- (g) Is it possible for you to trace the course of labour productivity in your own plants during the last ten years? Could you list below the amount of yarn or fabric produced per man-hour in each of the years from 1946 through 1955? We would appreciate your specifying the product made and giving the information on as many products as you can.

What reasons can you give for the changes that have occurred?

- (1) Change in use of raw materials
 - (2) Introduction of new and efficient machinery
 - (3) Change in utilization of existing machinery and equipment
 - (4) Change in organization of manufacturing
 - (5) Change in handling methods
 - (6) Change in efficiency of employees
 - (7) Other
- (h) What has been the course of unit labour costs in the same period? In order not to reveal information that you deem confidential would you simply express unit labour costs for each year as a percent of such costs in 1955 for as many products as you have data?
- (i) Do you see the possibility of any changes in labour productivity within the next five years? What are they? Do you see the possibility of changes for a longer period in the future? What are they?
- (j) Are there any other comments or observations that you care to add on capital equipment, labour productivity and related matters?

QUESTIONNAIRE II

COST COMPARISONS

Would you describe in 1, 2 and 3 the Yarn and Fabric for which you are supplying cost data. It is necessary to obtain so detailed a description in order to ensure that cost data from the United States relate to the same product. Please attach a sample.

I. Specified yarns or fabrics (to be completed for each specified yarn and/or fabric).

1. Yarn

(a) Detailed description (including put-up)

(b) Count

2. Fabric

(a) Style and description (including finish and put-up)

(b) Construction:

	<i>Per in.</i>	<i>Count</i>
Warp Ends - - - - -
Filling Picks - - - - -

(c) Finished width.....

(d) Finished Yds. per lb.

3. Production of specified yarn and fabric per week

- (a) Yarn - - - - - lbs.
- (b) Fabric - - - - - yds.
- lbs.
- (c) Standard set - - - - - yds.
- (d) Average length of run - - - - - yds.

4. Period to which unit costs apply.....

5. Summary breakdown of unit costs (exclude any allowance for seconds)

Specify whether
\$ per lb. or
per running yd.

(a) Raw Materials

- Fiber (less waste sold) - - - - -
- (laid down net cost per lb.)
- Other - - - - -

(b) Direct labour: (1)

- Wages - - - - -
- Fringe benefits (show separately if possible. If it is not possible to separate fringe benefits indicate in which category they have been included). - - - - -

(c) Indirect labour (including fringe benefits):

- Mill indirect labour (2) - - - - -
- Mill administration (3) - - - - -

(d) Overhead

- Power and steam - - - - -
- Depreciation - - - - -
- Other (indicate major items included) - - - - -

(e) Total cost of goods sold - - - - -

(f) Selling, (4) General and Administrative expense - - - - -

- (1) Include all labour employed directly in the manufacturing process including departmental cleaners, oilers, fixers, sweepers, etc.
- (2) Include all labour not employed directly in the manufacturing process such as maintenance workers, electricians, stationary engineers, watchmen, etc.
- (3) e.g. foremen, superintendents, mill clerical, mill office, etc.
- (4) Excluding cash discounts and sales freight.

It would be helpful if you could also supply the unit cost data below in order to help us determine the factors making for differences in direct labour costs.

	\$ per lb. or per running yd.
Direct labour (total wages and fringe benefits as in 5(b) above) - - - - -
Yarn	
Stock preparation including dyeing, blending, picking, and carding - - - - -
Combining, drawing and roving - - - - -
Spinning - - - - -
Sub-Total - - - - -
Spooling, warping, slashing and beaming - - - - -
Fabric	
Drawing-in - - - - -
Weaving - - - - -
Dyeing and finishing - - - - -
Inspecting, etc. - - - - -
Packaging - - - - -

The data requested in II is needed to help in interpreting data on costs. Such data are meant to supply the background for comparison with operations in the United States.

II. General Mill Information

1. Yarns (where applicable)

(a) No. of spindles - - - - -	.....
(b) No. of counts spun - - - - -	.....
(c) Range of counts spun (singles):	
Warp - - - - -	.....
Filling - - - - -	.....
(d) Average count - - - - -	.....
(e) Efficiency - - - - -	%.....

2. Fabrics (where applicable)
 - (a) No. of looms - - - - -
 - (b) No. and type of styles woven
 - (c) Range of constructions:
 - Warp ends per inch - - - - -
 - Picks per inch - - - - -
 - Yds. per lb. - - - - -
 - (d) Weaving efficiency - - - - - %.....
3. Hours of operation per week - - - - -
4. Production per week
 - (a) Yarn - - - - - lbs.....
 - (b) Fabric - - - - - yds.....
5. Average hourly wage rate in mill - - - - -

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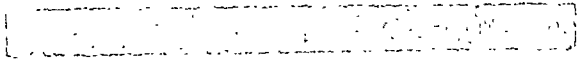
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¹This is one of a series of three studies on Canadian international economic relations prepared under the direction of S. S. Reisman.

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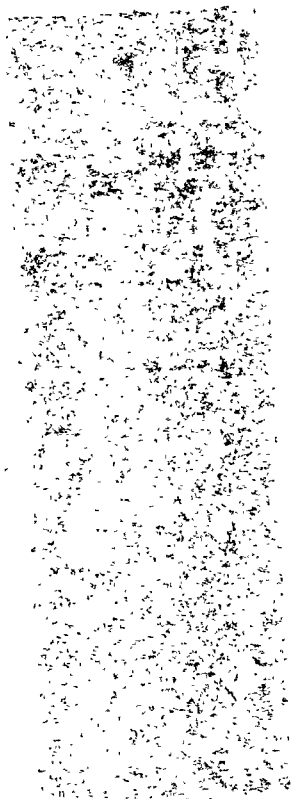
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