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Canada

A Profile of the U.S. Textile Industry

A PROFILE OF

THE U.S. TEXTILE INDUSTRY

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TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

TABLE OF CONTENTS (Cont'd)

Page

TABLES

INTRODUCTION

This profile of the overall U.S. textile industry was prepared in anticipation of the successful negotiation of a free-trade agreement between Canada and the U.S. It is based on a modified definition which corresponds more closely to the definition of the industry in Canada.

A more detailed analysis of selected sub-sectors of that industry may follow in due course. It is hoped that this profile -- along with any subsequent additions -- will be of some use to the Canadian textile industry in adjusting to the new liberalized North American environment.

The approach taken in this study differs somewhat from the traditional sector analysis approach which normally focusses on the larger segments of the industry. In this report, an attempt was made also to consider smaller segments, particularly where in the aggregate they are substantial, as these could be of interest in the identification of potential opportunities for Canadian industry.

All dollar values in this profile are in U.S. currency.

All annual growth rates are compound annual growth rates.

THE U.S. TEXTILE INDUSTRY

INDUSTRY DEFINITION

In order to enable comparison with the Canadian textile industry, the definition of the U.S. textile industry in this study (unless otherwise noted) will be modified as follows:

Starting with Textile Mill Products (Major Group SIC 22), Hosiery (SICs 2251, 2252), Knit Outerwear (SIC 2253) and Knit Underwear (SIC 2254) are removed, while Man-made Fibres (SICs 2823, 2824) and Miscellaneous Fabricated Textile Products (SIC 239), less Automotive and Apparel Trimmings (SIC 2396), are added.

Based on the above definition, the U.S. textile industry comprises 35 industries or sub-sectors at the four-digit SIC level. A complete listing of these 35 sub-sectors, together with selected data for each, is presented in Annex A.

INDUSTRY IN PERSPECTIVE

Based on the modified definition of the industry discussed above, the industry in 1982 comprised 9775 companies which operated 10 870 establishments. In 1984, these employed nearly 770 000 (4.3% of all manufacturing) and shipped products valued at almost $69 billion (3%); the value added by manufacture was about $27 billion (2.8%).

The industry is highly concentrated in the southeast, particularly in the Carolinas and Georgia. In 1982, these three states alone accounted for 59% of employment and 61% of shipments of Textile Mill Products (SIC 22). However, in absolute value, some $25 billion worth of textiles (excluding man-made fibres) were shipped by other states.

The largest industry groups (or sub-sector groups), ranked in descending order by value of shipments, are:

TABLE 1

Major Sub-sector Groups -- 1984

	SIC	Shipments ($ Million)	Employment (1000)
1. Weaving mills (broadwoven fabrics)	221,222,223	14 636.8	213.9
2. Man-made fibres	2823,2824	11 227.1	67.4
3. Miscellaneous fabricated textile products	239	12 968.7	178.3
Less auto & apparel trimmings	- 2396	- 3 109.3	- 29.7
		9 859.4	148.6
4. Yarn and thread mills	228	8 337.1	110.2
5. Floor covering mills	227	7 963.0	48.1
6. Miscellaneous textile goods	229	5 865.7	57.5
7. Textile finishing, except wool	226	5 772	55.8

Source: Bureau of the Census, 1984 Annual Survey of Manufactures, U.S. Department of Commerce.

In terms of major end-users, the apparel industry consumes 40% of textile output, with household and industrial products consuming 35% and 25% respectively.

SELECTED STATISTICS

The following table provides selected statistics for the period 1979 to 1984.

TABLE 2

Selected Statistics
The U.S. Textile Industry*

	1979	1980	1981	1982	1983	1984
Shipments ($ million)	55 779.9	57 961.2	62 273.5	58 301.6	65 583.8	68 698.9
Employment (1000)	922.9	880.4	845.7	787.5	781.7	769
Prod. Workers (1000)	787.4	746.5	716.1	658.0	656.9	648.2
" " Hours (million)	1 571.6	1 472.5	1 408.4	1 243.1	1 302.0	1 292.2
" " Wages ($ million)	7 852.3	8 035.1	8 328.8	7 912.7	8 639.7	8 849.5
Value Added by Mfr. ($ million)	22 239.7	22 744.3	23 960.2	22 249.1	25 831.3	27 050.3
New Capital Expenditures ($ million)	1 850.8	2 041.0	2 247.8	2 106.9	1 892.5	2 300.8 [1]

* Based on the modified industry definition adopted in this report.

[1] Plus an amount for cellulosic man-made fibres withheld due to confidentiality.

Source: Bureau of the Census, 1982 Census of Manufactures and 1984 Annual Survey of Manufactures, U.S. Department of Commerce.

GEOGRAPHICAL DISTRIBUTION

The migration of the U.S. textile industry from New England to the South was caused by a combination of factors. Principal among these are the very low level of unionization in the South, the lower costs for energy, land, construction, transportation and living costs in general, abundance of fresh water, favourable state tax incentives by the southern states and a more moderate climate. It should be noted that, at present, wages in textiles in the South are not lower than in the North. In fact, they are actually increasing as a result of the competition for workers from other industries locating in the South. As a critical mass in textile operations developed and grew in the South, proximity to suppliers and to the rest of the industry became another factor favouring location in the South. Apparently tax incentives, in the form of tax holidays or lower taxes in a number of states, are still in existence, but no information on these is readily available.

This notwithstanding, significant textile operations do exist in many northern states as seen in tables 3 and 4. To illustrate, Table 3 shows that New York ranks fourth with shipments of $2.8 billion, employment of 49 000 and the largest number of establishments (1800), a substantial portion of which are in Miscellaneous Fabricated Textile Products such as curtains and draperies, house furnishings n.e.c., textile bags, canvas and related products, pleating and stitching. Among the top 10 states in 1982, textile shipments valued at $8.7 billion (15.6%) were made by the four northern states, and another

$2.6 billion by Virginia. In fact, as Table 4 shows, certain sub-sectors are concentrated in the North (Wool Weaving and Finishing Mills, and Coated Fabrics, Not Rubberized), while others have significant presence there (e.g. Knit Fabric Mills, Cotton Finishing Mills, and Non-Woven Fabrics). In addition, operations in many other sub-sectors are able to survive in the North by virtue of being specialty operations, i.e., producing smaller quantities of a variety of non-standardized products that command higher prices.

Table 3 provides the geographic distribution of Textile Mill Products and Miscellaneous Fabricated Textile Products (less Automotive and Apparel Trimmings), and ranks the top 10 states (which account for 83% of total shipments) by value of shipments, while Annex B gives the geographic distribution of selected sub-sectors, showing the top five states for each.

TABLE 3

Geographic Distribution -- Top 10 States -- 1982
U.S. Textile Mill Products and Miscellaneous Fabricated Textile Products*

	Establishments		Employment		Value of Shipments	
	No.	% U.S.	(1,000)	% U.S.	($ Million)	% U.S.
1. North Carolina	1 466	11.8	233.4	27.0	14 180.5	25.5
2. Georgia	783	6.3	100.0	11.6	9 195.8	16.5
3. South Carolina	484	3.9	121.7	14.1	7 663.0	13.8
4. New York	1 797	14.5	48.9	5.7	2 785.5	5.0
5. Virginia	176	1.4	38.6	4.5	2 628.0	4.7
6. Pennsylvania	691	5.6	46.6	5.4	2 520.1	4.5
7. Alabama	259	2.1	36.0	4.2	2 480.4	4.5
8. New Jersey	1 075	8.7	27.7	3.2	1 706.3	3.1
9. Massachusetts	450	3.6	26.7	3.1	1 663.0	3.0
10. Tennessee	214	1.7	26.7[1]	3.1	1 554.5[1]	2.8
Top 10 states	7 395	59.6	706.3	81.7	46 377.1	83.3
Others	5 020	40.4	158.7	18.3	9 288.9	16.7
U.S.	12 415	100.0	865.0	100.0	55 666.0	100.0

* Major Group SIC 22 (Textile Mill Products which includes hosiery, knit underwear and knit outerwear) plus SIC 239 (Miscellaneous Fabricated Textile Products) less SIC 2396 (Automotive and Apparel Trimmings). (Note that man-made fibres are not included in this table).

[1] Less an amount withheld due to confidentiality.

Note: The above states do not include California as its shipments of textile mill products (SIC 22) are withheld due to confidentiality (its establishments in that SIC were 412). However, it is known that in addition, it has significant operations in miscellaneous fabricated textile products (SIC 239) which, after removing automotive and apparel trimmings (SIC 2396), amounted to 890 establishments with employment of 16 500 and shipments of $784 million.

Source: Bureau of the Census, 1982 Census of Manufactures, U.S. Department of Commerce.

The data show that for Textile Mill Products (SIC 22) and Miscellaneous Fabricated Textile Products (SIC 239), excluding Automotive and Apparel Trimmings (SIC 2396), the leading state is North Carolina with 27% of total employment and 26% of all shipments, followed by Georgia and South Carolina.

SIZE DISTRIBUTION

Textile Mill Products (SIC 22)[1]

The majority of establishments are small (approximately 4200 or about 63% of the total), each having less than 50 employees. In 1982, these accounted for roughly 15% of shipments and 16% of employment. Most of these (nearly 3000) are very small (size class one to 19 employees) employing, on average, seven persons each.

The middle part of the size scale, size class 100 to 499 employees, is occupied by 1381 establishments (21%) and these employed 314 300 persons (44%) and shipped nearly $21 billion (46%).

At the large end of the scale, there are 311 establishments (4.7% of the total) with a size of 500 or more employees. These shipped $18.5 billion worth of products (over 39%) and employed 290 000 persons (over 40% of the total). Seven of these establishments are huge, in the size class 2500 or more employees (on average, employing about 5400 persons each), shipping in excess of $1.9 billion and employing 37 600 persons.

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[1] Includes hosiery, knit underwear and knit outerwear, and excludes man-made fibres and miscellaneous fabricated textile products.

TABLE 4

Distribution by Employment Size of Establishments -- 1982
U.S. Textile Mill Products (SIC 22)

Employment Size Class	Establishments (Number)	%	Employment (1000)	%	Value of Shipments $ Million	%
Establishments with						
1-4 Employees	1 378	20.8	2.6	0.4	177	0.4
5-9 "	725	10.9	5.0	0.7	367.0	0.8
10-19 "	864	13.0	12.1	1.7	804.5	1.7
20-49 "	1 197	18.1	93.4	13.0	5 841.8	12.3
50-99 "	774	11.7	----------		(D) ----------	
100-249 "	894	13.5	142.2	19.8	9 886.7	20.8
250-499 "	487	7.3	172.1	24.0	11 906.7	25.1
500-999 "	240	3.6	161.9	22.6	10 743.2	22.6
1000-2499 "	64	1.0	90.6	12.6	5 873.4	12.4
2500 or more	7	0.1	37.6	5.2	1 923.5	4.1
Covered by administrative records[1]	1 285	19.4	7.7	1.1	428.8	0.9
Total	6 630	100.0	717.4	100.0	47 515.4	100.0

(D) Withheld to avoid disclosing data for individual companies.
[1] Data for these small establishments were estimated from administrative records of various government agencies.

Source: Bureau of the Census, 1982 Census of Manufactures, U.S. Department of Commerce.

It is interesting to compare labour productivity as measured by value added by manufacture per production-worker hour for the various size classes. In the following table, labour productivity is highest for the smallest establishments (one to four employees) at $17.76 and lowest for the largest establishments (2500 or more employees) at $12.56, a significant difference. There are two reasons for this seeming anomaly. The higher level of value added at the smaller end of the size scale reflects the specialty nature of

these operations and the attendant higher prices for their products. Conversely, at the larger end of the scale, the lower level of value added reflects the commodity nature of the products typically produced in these operations with attendant lower prices. The second factor at play in large-sized operations is probably diseconomies of scale that occur beyond a certain size.

TABLE 5

Distribution by Employment Size of Establishments -- 1982
(Productivity and Manpower)
U.S. Textile Mill Products (SIC 22)

Employment Size Class	Prod. Worker Hrs. (Million)	Value Added by Mfr. $ Million	Value Added by Mfr. per Prod. Worker Hr. ($)
Establishments with			
1-4 Employees	4.2	74.6	17.76
5-9 "	8.7	149.5	17.18
10-19 "	19.6	312.1	15.92
20-49 "	149.8	2 365.5	15.79
50-99 "	----------	(D)	----------
100-249 "	230.1	3 770.1	16.38
250-499 "	281.1	4 492.6	15.92
500-999 "	264,4	4 450.9	16.83
1000-2499 "	144.4	2 223.8	15.40
2500 or more	56.6	711.0	12.56
Covered by administrative records[1]	12.6	161.0	12.78
Total	1 158.9	18 550.2	16.01

(D) Withheld to avoid disclosing data for individual companies.

[1] Data for these small establishments were estimated from administrative records of various government agencies.

Source: Bureau of the Census, 1982 Census of Manufactures, U.S. Department of Commerce.

EMPLOYMENT

Based on the modified definition of the textile industry used in this study, employment declined by 153 700 jobs (16.7%) between 1979 and 1984. The percentage decline in production workers over the same period was somewhat higher at 17.7%. The compound annual rate of decline was 3.6%. In fact, employment dropped in every year between 1979 and 1984, with the largest percentage declines occurring in 1982 and in 1980.

TABLE 6

Year-to-Year Percentage Change in Total Employment

	1980/79	81/80	82/81	83/82	84/83	Compound Annual Rate
Percentage change in total employment	-4.6	-3.9	-6.9	-0.7	-1.6	-3.6

It is interesting to examine the possible causes of this significant reduction in employment. Productivity growth, a drop in real production resulting from a decline in the market or from increasing displacement by imports, or a combination of these factors, could lead to job losses. Looking first at production (in real terms), a study by the U.S. Department of Commerce[2]

2 That study, which is referenced below Table 10, used a somewhat different industry definition from the one used in this report in that it included hosiery, underwear, and auto and apparel trimmings and excluded man-made fibres.

estimated that production (in terms of U.S. mill consumption of fibre in million pounds) declined from 1979 to 1984 by 9.5% at a compound annual rate of decline of 2%, while the apparent domestic market increased over the same period by 7.4%, with the compound annual growth rate being 1.4% (see Table 10). Thus the loss in employment was caused, at least in part, by the displacement of production by imports.

Using another proxy for real production, namely constant dollar shipments, the same study shows that although shipments in current dollars increased by 25.7% over the same period, shipments in constant (1972) dollars declined by 1.8% (at an annual rate of negative 0.4%), while the apparent domestic market (in current dollars) increased by 38.9% (at an annual rate of 6.8%). Therefore, regardless of the measure used, it is evident that domestic production contracted in an expanding market, indicating a displacement of production by imports. It is also evident that the percentage decline in production was substantially smaller than the drop in employment (16.7%), indicating that a significant growth in labour productivity had occurred, and that this productivity growth was responsible -- to a significant extent -- for the decline in employment.

PRODUCTIVITY

Labour productivity, as measured by value added by manufacture per production-worker hour, increased in every year throughout the period 1979 to 1984, with the compound annual growth rate being 8.1%. This productivity

growth rate is quite comparable to the 8.6% registered by all manufacturing. However, the textile industry's labour productivity is far below that for all manufacturing, registering only 52.4% in 1984 -- down from 53.6% in 1979.

TABLE 7

Labour Productivity* -- U.S. Textile Industry and All Manufacturing

	Textiles			All Manufacturing
	VA by Manufacture	Hours of Prod. Workers	VA by Manufacture/ Prod.-Worker Hour	VA by Manufacture/ Prod.-Worker Hour
	($ million)	(million)	($)	($)
1979	22 239.7	1 571.6	14.15	26.39
1980	22 744.3	1 472.5	15.45	28.93
1981	23 960.2	1 408.4	17.01	31.93
1982	22 249.1	1 243.1	17.90	35.01
1983	25 831.3	1 302.0	19.84	37.36
1984	27 050.3	1 292.5	20.93	39.91
Compound Annual Growth Rate 1979-84	4%	-3.8%	8.1%	8.6%

* As measured by value added by manufacture per production-worker hour.

Source: Bureau of the Census, 1982 Census of Manufactures and 1984 Annual Survey of Manufactures, U.S. Department of Commerce.

AVERAGE HOURLY EARNINGS

Average hourly earnings for production workers (production-worker wages per production-worker hour) in the textile industry rose from $5.00 in 1979 to $6.85 in 1984 at an annual growth-rate of 6.5% (vs. 6.7% for all

manufacturing). Average hourly earnings in textiles continue to be considerably lower than those for all manufacturing, reaching only 73% of the latter in 1984.

UNIT LABOUR COST

Unit labour cost declined from $0.44 in 1979 to $0.42 in 1984, an improvement of 4.5%. This was the result of a higher growth in labour productivity than in total labour compensation.[3]

NEW CAPITAL EXPENDITURES AND TECHNOLOGY

New capital expenditures fluctuated from $1.85 billion in 1979 to over $2.3 billion in 1984, with the yearly average for the period exceeding

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[3] Unit labour cost is the ratio of total labour cost to total output. If value added by manufacture is used as a proxy for output, then unit labour cost can be measured by the ratio of average hourly compensation (including compensation additional to hourly earnings) to labour productivity (as measured by value added by manufacture per production-worker hour). The U.S. Bureau of Labour Statistics estimates that for the U.S. Textile Mill Products (SIC 22) additional compensation in 1984 was 27.1% of hourly earnings, while in 1979 the respective figure was 24.2%. Applying these factors to the average hourly earnings derived above (based on the industry definition used in this study), total hourly compensation would amount to $6.21 in 1979 and $8.71 in 1984, an increase of 40% over that period. Since labour productivity increased even more during the same period (by 48%), the result was a decline in unit labour cost from $0.44 in 1979 to $0.42 in 1984, an improvement of 4.5%.

$2 billion. The sub-sectors that made the largest expenditures in 1984 were man-made weaving mills, ($472 million), yarn and thread mills ($356 million), noncellulosic man-made fibres ($335 million), and miscellaneous textile goods ($242 million).

Significant advances in automation have occurred in yarn spinning and weaving. According to a publication by the U.S. Department of Commerce:[4]

- Expenditures for new spinning equipment have focussed on open-end spinning which integrates roving, spinning and winding into one operation;

- Open-end spinning can produce four to five times the output of conventional ring spinning and, further, can process fibres of different lengths and use waste materials unsuitable for ring spinning;

- At the present time, some 40% of the filling yarn used in weaving is produced by the open-end method;

- In weaving, the newer shuttleless looms operate at three times the rate of conventional shuttle loom and produce about one-third of all woven fabrics.[5]

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[4] Excerpted from the U.S. Industrial Outlook 1986--Textiles, U.S. Department of Commerce.

[5] However, in a discussion with Dr. Mansour Mohamed, Professor of Textile Engineering and Science, School of Textiles, North Carolina State University, Raleigh, N.C., he estimated that about 35% of all the looms currently operating in the U.S. are shuttleless and that these produce more woven fabrics than the shuttle looms.

A new generation of looms, known as multi-phase looms, is being developed by many machinery manufacturers in Europe and Japan, and are expected to gain popularity in the future. Reports in trade magazines indicate that a number of U.S. textile mills have already placed orders for bi-phase looms.

LABOUR INTENSITY

Despite its increasing capital-intensity, the textile industry remains relatively labour-intensive when compared to all manufacturing. In 1984, production wages accounted for 32.7% of value added by manufacture in the textile industry vs. 23.6% for all manufacturing.

MERGERS AND ACQUISITIONS

While statistical data on this subject could not be found readily, a rash of takeovers and other forms of ownership changes in the textile indusdy has been reported in trade publications since 1986. The larger mergers and acquisitions include:

- West Point Pepperel acquired Cluett Peabody (a large clothing manufacturer that has among its divisions the Arrow Shirt) in January, 1986;

- Burlington (the largest textile producer with sales of $2.8 billion) sold its domestics division to J.P. Stevens in February, 1986;

- J.P. Stevens got out of apparel fabric production by selling its Woolen & Worsted Fabrics division to Forstman & Co. in December 1985, its Finished Shirting Fabrics segment to Dan River in March 1986, its Narrow Elastic Fabrics (Stuart) plant to a management group in March 1986, and its Delta Fabrics and Stevco Knit Fabrics divisions in June 1986;

- Collins & Aikman Corp. (sales of $1.1 billion) was acquired for $1.16 billion by the Wickes Cos. (a $2.8 billion diversified retailing and manufacturing conglomerate including stores, apparel and hosiery manufacturing, and auto and electronics products manufacturing);

- Springs Industries acquired M. Lowenstein Corp. in November 1985;

- Fieldcrest acquired Cannon Mills in January 1986;

- Guilford Mills (producer of decorator and upholstery fabrics) is reported to be in the process of acquiring Gold Mills;

- American Hoechest (producer of chemicals, pharmaceuticals and man-made fibres) acquired Celanese (the second largest fibre producer in the U.S.) for $2.85 billion;

- Burlington acquired C.H. Masland & Sons (a carpet manufacturer) in June 1986;

- Fieldcrest Cannon Inc. acquired Bigelow-Sanford, Inc. (a manufacturer of broadloom carpets);

- Shaw Industries, the largest domestic producer of carpets, acquired the carpet operations of West Point Pepperel (the fourth largest carpet producer) in October 1987.

PROFITABILITY

Table 8 presents three measures of profitability for the U.S. Textile Mill Products (SIC 22) and compares these to all manufacturing.

The data show that profit as a percentage of sales for textile mill products was consistently lower than that for all manufacturing and that the difference was significant, the average for the period being 2.6% for the former vs. 4.5% for the latter.

The other two measures of profitability shown in the table (namely profit on total assets and profit on stockholders' equity) follow a similar pattern, except for 1983 when they were somewhat higher for textile mill products than for all manufacturing.

CAPACITY UTILIZATION

Annual capacity utilization in textile mill products showed a continuous decline from its level of 86.7% in 1979 to a trough of 73.6% in 1982. Since

then, it has been on the increase (except for a small drop of 1.4 percentage points in 1985) but, as of the time of writing, had not attained its 1979 level in any full year. However, data for the first three quarters of 1986 show that the recovery trend is well established, with capacity utilization reaching 92.6% in the third quarter, the highest level of any quarter in the whole period covered here -- outperforming non-durable manufacturing at 84.7% and all manufacturing at 79.7%.

TABLE 8

Corporate Profit Data
U.S. Textile Mill Products and All Manufacturing

	1979	1980	1981	1982	1983	1984	1985
SALES:[1]							
All Manufacturing Industries	1 741 750	1 912 827	2 144 698	2 039 336	2 114 264	2 335 047	2 340 511
Textile Mill Products	41 737	44 882	48 292	41 653	47 993	51 636	50 861
NET PROFITS:[2]							
All Manufacturing Industries	98 698	93 484	101 302	71 028	85 834	107 648	87 550
Textile Mill Products	1 340	977	1 157	851	1 599	1 635	1 083
PROFIT ON SALES[3,4]							
All Manufacturing Industries	5.7	4.9	4.8	3.5	4.1	4.6	3.8
Textile Mill Products	3.2	2.2	2.4	2.1	3.3	3.2	2.1
PROFIT ON TOTAL ASSETS:[3,4]							
All Manufacturing Industries	8.3	7.0	6.7	4.5	5.2	6.0	4.6
Textile Mill Products	6.2	4.3	4.7	3.7	6.1	5.5	3.5
PROFIT ON STOCKHOLDERS' EQUITY:[3,4]							
All Manufacturing Industries	16.6	13.9	13.6	9.3	10.5	12.5	10.1
Textile Mill Products	11.9	8.4	9.4	6.9	12.0	11.2	7.6

[1] Sales are net of returns, allowances, excise and sales taxes, in millions of dollars.
[2] After federal and other income taxes, in millions of dollars.
[3] Percent
[4] Annual data are quarterly averages.

Source: American Textile Manufacturer's Institute, Textile Highlights, June 1986 (quoting Bureau of the Census' Quarterly Financial Reports).

TABLE 9

Capacity Utilization
U.S. Textile Mill Products (SIC 22)
(percent)

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual
1979	84.8	86.4	87.7	87.9	86.7
1980	87.7	84.0	80.4	81.1	83.3
1981	81.7	83.0	83.4	75.6	80.9
1982	73.0	73.3	74.1	73.9	73.6
1983	77.7	82.5	86.2	86.5	83.2
1984	89.0	87.5	84.9	80.4	85.4
1985	79.9	82.5	85.5	88.1	84.0
1986	88.0	90.4	92.6		

Source: Board of Governors of the Federal Reserve System, Capacity Utilization, Catalogue G.3(402) and Supplement, September 1986.

The recovery trend is confirmed by the changes in the Index of Industrial Production, which measures changes in physical output, for textile mill products. In 1985, the average value of the index was only 103.2, i.e. physical output was only 3.2% higher than in 1977, the base year. By the third quarter of 1986, the value of the index had steadily increased to 114.7 and, in the month of November 1986, reached 118.6.

PRODUCTION, APPARENT CONSUMPTION AND IMPORT PENETRATION

The first part of this section, tables 10 and 11, draws on data contained in a study by the U.S. Department of Commerce, based on a definition of the textile industry that is somewhat different from the one adopted in this profile (see note under Table 10). In Table 10, the raw fibre equivalent method is used. It starts with domestic production (measured in terms of mill consumption),

which is the sum of domestic shipments of fibres plus imports of fibres, as the input to the textile and apparel industries. It then treats imports of downstream products (yarn, fabric, apparel, miscellaneous products) as imports for consumption, and divides these imports by the total apparent domestic market in order to obtain a measure of import penetration based on volume.

While avoiding double counting by converting back products to their fibre weight equivalent, this method reflects neither the total nor average activity in the textile industry, nor its total nor average market share; it represents the share of the apparent domestic market held by domestic manufacturers only at the first stage of manufacturing.

TABLE 10

Textile Industry*
U.S. Production, Imports, Exports and Apparent Domestic Consumption
(Million Pounds)

Year	Production[1]	Exports[2]	Imports[2]	ADC	- Ratio - I/C
1979	11 898	1 089	1 352	12 161	11.1
1980	11 266	1 318	1 437	11 384	12.6
1981	10 746	1 017	1 694	11 423	14.8
1982	9 384	703	1 695	10 376	16.3
1983	11 112	699	2 336	12 749	18.3
1984	10 771	708	2 996	13 059	22.9
Average	10 863	922	1 918	11 859	16.0
	Percent Changes and Compound Annual Growth Rates				
Percent Change 1979-1984	-9.5%	-35.0%	121.7%	7.4%	106.4%
Compound Annual Growth Rate 1979-1984	-2.0%	-8.3%	17.3%	1.4%	15.6%

1 Measured in terms of U.S. mill consumption of fibre.
2 Raw fibre equivalent of U.S. imports for consumption and U.S. exports of textile and apparel products; includes raw fibre equivalents of yarn, fabric, apparel, and household and industrial products.

* The definition used in the Department of Commerce's study differs from the one used in this report in that the former excludes man-made fibres and includes hosiery, knit underwear and automotive and apparel trimmings.

Source: Office of Textiles and Apparel, Current Status and Trends in the U.S. Textile and Apparel Industries, U.S. Department of Commerce, August 1985.

Using this method, import penetration of the domestic market more than doubled from 11.1% in 1979 to 22.9% in 1984, with the average for the period being 16%. Very rapid growth in imports (at an annual rate of 17.3%), produced a contraction in production at an annual rate of 2%, while apparent consumption grew by a modest 1.4% annually and exports dropped by 8.3% annually.

The data also show that there had been a decline in production and exports in every year throughout the period with the exception of 1983 for production and 1984 for exports. The year-to-year drop in production was most severe in 1982 (12.7%), a year of general recession in the economy. However, the percentage drop in textile production was greater than the percentage decline in textile consumption in that year (9.2%), while the volume of textile imports remained virtually stable. The overall loss in exports between 1979 and 1984 was a substantial 35%. On the other hand, imports grew every year, with the largest year-to-year increases of 37.8% and 28.3% occurring in 1983 and 1984 respectively. A factor contributing to the decline in exports and the rise in imports was undoubtedly the sharp rise in the value of the dollar relative to other currencies (some 31% vis-à-vis 13 countries between 1979 and 1984).

Rapid growth in imports and in imports' share of the domestic market also occurred in household and industrial textiles over the period 1979 to 1984. The following table shows that the volume of imports of household and industrial products quadrupled during that period (the annual growth-rate

being 31.3%), while the apparent market for these products increased by only 2.2% (at an annual rate of 0.4%), and exports and production fell by 24% and 7.6% respectively (the annual rates being a negative 5.3% and 1.6%).

TABLE 11

Household and Industrial Products[1]

U.S. Production, Imports, Exports and Apparent Domestic Consumption

Million Square Yard Equivalents

Year	Production[2]	Exports[3]	Imports[4]	ADC	- Ratio - I/C
1979	14 198	796	413	13 815	3.0
1980	13 413	865	403	12 951	3.1
1981	12 942	738	490	12 694	3.9
1982	11 875	644	579	11 810	4.9
1983[5]	12 937	562	1 093	13 468	8.1
1984[5]	13 116	605	1 613	14 124	11.4
Average	13 080	702	765	13 144	5.7
	Percent Changes and Compound Annual Growth Rates				
Percent Change 1979-1984	-7.6%	-24.0%	290.6%	2.2%	282.0%
Compound Annual Growth Rate 1979-1984	-1.6%	-5.3%	31.3%	0.4%	26.8%

1 Household and industrial items (made-up and miscellaneous), excluding yarns and fabrics.
2 Domestic production based on square yards of fabric consumed.
3 Excludes exported yarns and fabrics.
4 Excludes imported yarns and fabrics; includes flat goods beginning in 1983.
5 1983 and 1984 exports estimated, based on export value changes.

Source: Same as for Table 10.

Table 12, which is based on value, shows that import penetration of the apparent domestic market for textiles (excluding apparel) increased from 5.3% in 1979 to 7.9% in 1984.

TABLE 12

U.S. Textile Industry[1]

Import Penetration of the Apparent Domestic Market
(In Terms of Value)

Year	Shipments[1]	Exports[2]	Imports[2]	Apparent Domestic Market	I/ADM
		($ Million)			
1979	46 307.8	3 189	2 399	45 517.8	5.3
1980	48 074.0	3 632	2 676	47 118.0	5.7
1981	51 247.3	3 619	3 250	50 873.3	6.4
1982	48 799.0	2 784	3 000	49 015.0	6.1
1983	56 088.5	2 368	3 460	57 180.5	6.1
1984	59 024.2	2 382	4 874	61 516.2	7.9

[1] As defined in this study, but excluding man-made fibres and filament yarns.
[2] Excluding textile fibres and waste, but including man-made filament yarns. Exports are F.A.S. values. Imports are C.I.F. values.

Source: For shipments: Bureau of the Census, 1982 U.S. Census of Manufactures and 1984 Annual Survey of Manufactures, U.S. Department of Commerce.

For imports and exports: U.S. Department of Commerce Catalogues FT-135 and FT-410, SITC Classification 65 and 84.

While the above table shows that textile shipments in current dollars grew, it was noted earlier (on pages 10 and 11) that production in real terms declined. That decline was primarily caused by a massive increase in apparel imports which caused serious erosion in the market for domestic textiles and, to a

lesser extent, by increases in textile imports. As shown in the following table, imports of apparel reached $16.1 billion in 1985 (from $6.3 billion in 1979), while imports of textiles increased to $5.3 billion in 1985 (from $2.4 billion in 1979), i.e., the value of apparel imports was triple that of textile imports. However, the volume of textile imports made of cotton, wool and man-made fibres was higher than that of apparel imports of these fibres: in 1985, the former was 5.7 billion Square Yards Equivalent (SYE) vs. 5.1 billion SYE for the latter.[6]

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[6] Source: Major Shippers, Textiles and Apparel, U.S. Department of Commerce, October 1986.

Imports, Exports and Trade Balance (for each of textiles and clothing separately)

The value of U.S. textile and apparel trade is presented in the following table.

TABLE 13

U.S. Textile and Apparel Trade
(millions of dollars)

	Textiles			Apparel		
	Imports[1]	Exports[2]	Trade Balance	Imports[2]	Exports[2]	Trade Balance
1979	2 399	3 189	+ 790	6 291	931	- 5 360
1980	2 676	3 632	+ 956	6 849	1 202	- 5 647
1981	3 250	3 619	+ 369	8 008	1 232	- 6 776
1982	3 000	2 784	- 216	8 703	953	- 7 750
1983	3 460	2 368	-1 092	10 292	818	- 9 474
1984	4 874	2 382	-2 492	14 513	807	-13 706
1985:	5 274	2 366	-2 908	16 056	755	-15 301
1st Q	1 297	569	- 729	3 805	173	- 3 632
1986:						
1st Q	1 503	622	- 881	4 298	204	- 4 094

	Textiles and Apparel		
	Imports[1]	Exports[2]	Trade Balance
1979	8 690	4 120	- 4 570
1980	9 525	4 834	- 4 691
1981	11 258	4 851	- 6 407
1982	11 703	3 737	- 7 966
1983	13 752	3 168	-10 585
1984	19 387	3 189	-16 198
1985:	21 330	3 121	-18 209
1st Q	5 102	742	4 360
1986:			
1st Q	5 802	826	- 4 975

[1] C.I.F. values
[2] F.A.S. values

Note: The data for textiles include man-made filament yarns, but not textile fibres and waste.

Source: U.S. Department of Commerce, FT-135, FT-410, SITC Classification 65 and 84 (quoted in Textile Highlights, American Textile Manufacturers Institute, June, 1986).

Textile Imports (by Value)

The value of textile imports more than doubled between 1979 and 1984 and has continued to grow into 1985 and 1986. The compound annual rate of growth over the period 1979 to 1985 was 14%, vs. 16.9% for apparel. The year-over-year growth was particularly high in 1984 at nearly 41% and to a lesser extent in 1983 (15.3%); and, while it moderated in 1985 to 8.2%, it escalated again in the first quarter of 1986 to 15.9%.

In 1985, textile imports stood at nearly $5.3 billion vs. $16.1 billion for apparel imports.

The major sources of textile imports into the U.S. in 1985 were Asia (excluding Japan) at $2.2 billion, followed by the EEC at $1.3 billion and Japan at $764 million. Imports from Canada amounted to $207 million.

With respect to a breakdown of textile imports by major products, a study by the U.S. Department of Commerce[7] indicates that the value of fabric imports into the U.S. in 1984 was $1.91 billion, with the largest source being Japan (22.7%), followed by Italy (13%), Korea (11.8%), China (7.5%) and Taiwan (6.7%). The value of yarn imports into the U.S. in the same year was $397 million, with Japan again accounting for the largest share (14.4%), followed by West Germany (10.3%), Canada (8.1% or $32 million), Italy (7.8%) and France (7.61%).

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[7] Source: Office of Textiles and Apparel, Current Status and Trends in the U.S. Textiles and Apparel Industries, U.S. Department of Commerce, August 1985.

Textile Exports (by Value)

In contrast with the growth in imports, textile exports declined from $3.2 billion in 1979 to $2.4 billion in 1985.

The major destinations of U.S. textile exports in 1985 were Canada at $518 million, Asia (excluding Japan) at $507 million, Latin America at $486 million and the EEC at $434 million.

In terms of textile products, the same U.S. study quoted above indicates that fabric exports from the U.S. in 1984 amounted to $1.35 billion, with Canada absorbing the largest share of 25.3% ($342 million), followed by Mexico (7.9%), the U.K. (5.4%), Japan (4.4%) and Australia (4%). In the same year, exports of yarn amounted to $463 million, with Canada again being the major destination (16.7% or $77.5 million), followed by Benelux countries (12%), China (8.4%), the U.K. (5.4%) and Turkey (5.3%).

Textile Trade Balance (Value)

The rapid growth in imports coupled with the drop in exports resulted in the textile trade balance falling from a surplus of $800 million in 1979 to a deficit of $2.9 billion in 1985. The apparel trade deficit is, of course, much greater at $15.3 billion, giving rise to a trade deficit in textiles and apparel combined of $18.2 billion in 1985.

Textile Imports (Volume)

In 1985, imports of textiles (excluding apparel) of cotton, wool and man-made fibres increased by 5% to 5719 MSYE (Million Square Yards Equivalent). In the first 10 months of 1986, the growth in imports accelerated to 23.6%.

The percentage of imports subject to control (i.e., covered by limits or calls) in the 12 months ending October 1986 was 49.1%. The percentage controlled was highest in fabrics (70.6%) and lowest in yarns (26.2%); for other miscellaneous textile imports, it was 35.4%. The major sources of imports during that period were China (12.8%), Taiwan (10.7%), Japan (10.1%), South Korea (8%) and Italy (6.7%), with Canada's share being 4.7%, the Big Three's, 22.3% and the EEC's 20.2%.

Imports from Canada decreased in 1985 by 16.6% to 239 MSYE, but grew in the first 10 months of 1986 by 39.3%. The following section contains an analysis of imports of various textile products.

a. Yarn Imports (Volume)

In 1985, the U.S. imported 1321 MSYE of yarns of cotton, wool and man-made fibres. The growth in yarn imports accelerated in the first 10 months of 1986 to 34.6% vs. a growth-rate of 3.3% in the whole of 1985.

In the 12 months ending October 1986, 26.2% of yarn imports were controlled, and the major sources of imports were the Federal Republic of Germany

(FRG, 11%), Canada (8.6%), Mexico (8.3%), Japan (7.7%), Italy (7.2%) and the U.K. (7.1%), with imports from the EEC representing 35.6% of the total. Imports from Canada amounted in 1985 to 103 MSYE, down 3% from the previous year, but, in the first 10 months of 1986, registered a growth of 51.7% over the corresponding period a year earlier.

A detailed analysis of yarn imports in volume terms by type of yarn is presented in Annex C.

b. Fabric Imports (Volume)

In 1985, imports of fabrics of cotton, wool and man-made fibres declined by 2.2% to a level of 2.5 billion SYE. However, in the first 10 months of 1986, they experienced a high growth of nearly 30% over the corresponding period in the previous year.

The major sources of imports in the 12 months ending October 1986 were China (16.3%), Japan (16.2%), South Korea (11.3%) and Taiwan (10.3%), followed by Pakistan (5.8%), Hong Kong (5.6%), Italy (4.7%) and Canada (3.7%). The share held by the Big Three was 27.2% vs. 11% for the EEC and 8.7% for the ASEAN (Association of South East Asian Nations). The percentage of these imports that was subject to control was 70.5%.

Imports from Canada plummetted in 1985 by 47% to 80 MSYE, but recovered somewhat in the first 10 months of 1986, increasing by 52% over the corresponding period in the previous year.

The bulk of fabrics imported were woven, the majority being cotton (some 62%), followed by man-made fibre fabrics (roughly 36%) and woollen and worsted fabrics (approximately 2%). Following is an analysis of each of these.

Annex D provides a detailed analysis of fabric imports in terms of volume for the different types of fabrics.

c. Other Miscellaneous Imports of Cotton, Wool and Man-made Fibres (Volume)

Imports of these miscellaneous textile products amounted to 1897 MSYE in 1985, up 17.8% from the previous year. In the 12 months ending October 1986, imports grew by 7.4% and 35.4% of these were controlled. The major sources were Taiwan (19.2%), China (14.9%), Italy (7.9%), South Korea (7.2%), India (6.2%) and Pakistan (5.9%). The Big Three accounted for 29.8% vs. 21.3% for the EEC.

Textile Imports vs. Apparel Imports (1979-1984)

Table 14 shows that when apparel imports are converted to square yards equivalent and added to textile imports, the volume of imports is found to have more than doubled between 1979 and 1984 (the annual growth-rate being 17%) with the fastest year-to-year growth occurring in 1984 and 1983 (32% and 29.8% respectively). In 1985, the year-to-year growth moderated to 6.8%

(according to a publication by the American Textile Manufacturers Institute[8]). The majority of imports (58%) consisted of man-made fibres while cotton accounted for 40% and wool for 2%.

It is interesting to contrast textile imports to those of apparel. The growth in textile imports outpaced that for apparel imports by a large margin. The total percentage increase over the period was 176.4% for textiles vs. 77.1% for apparel (the corresponding annual rates were 22.5% vs. 12.1% respectively). The period 1983 to 1984 was one of very rapid growth in imports of both apparel and textiles, but the increase in textile imports was more than that in apparel imports, both in percentage and in absolute terms. In 1983, textile imports increased by 50.1% (1771 MSYE), while apparel imports grew by 14.5% (492 MSYE). Similarly in 1984, textile imports increased by 41.9% (1607 MSYE) vs. 22.1% (857 MSYE) for apparel. As a result of the faster growth in textile imports, their volume in absolute terms exceeded that of apparel imports for the first time in 1984.

Within textiles, import growth was highest for the miscellaneous group, followed by yarns, then fabrics. However, fabric imports were still the largest of the three categories in 1984, accounting for nearly 47% of the total, vs. 30% for miscellaneous and 23% for yarns.

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8 Textile Hi-lights, June 1986, page 26.

TABLE 14

U.S. Imports of Textiles
(MSYE)*

	Apparel	Misc.[1]	Fabrics	Yarns	Total (Excl. Apparel)	Total (Incl. Apparel)
1979	2 671	413	1 116	439	1 968	4 639
1980	2 884	403	1 217	380	2 000	4 884
1981	3 136	490	1 706	444	2 640	5 776
1982	3 382	579	1 478	496	2 553	5 935
1983	3 874	1 093	1 871	868	3 832	7 706
1984	4 731	1 613	2 546	1 280	5 439	10 170

* Million square yards equivalent

[1] Includes flatgoods beginning in 1983.

Source: Same as for Table 10.

Exports (by Volume)

The volume of U.S. exports of textiles and apparel over the period 1979 to 1984 is presented in the following table.

TABLE 15

U.S. Exports of Textiles
(MSYE)

	Apparel	Misc.*	Fabrics	Yarns	Total Textiles (Excl. Apparel)	Total (Incl. Apparel)
1979	491	796	1 825	6 661	9 282	9 773
1980	1 036	865	2 049	6 940	9 854	10 890
1981	813	738	1 580	7 713	10 031	10 844
1982	518	644	1 483	5 951	8 078	8 596
1983	461	562	1 416	4 547	6 525	6 986
1984	490	605	1 897	4 601	7 103	7 593

* 1983 and 1984 exports estimated based on export value changes.

Source: Same as Table 10.

The data show that U.S. exports of textiles fluctuated over the period 1979 to 1984, and their level in each of the last three years was below that in 1979. It is also evident that yarn export accounts for the bulk of textile exports (65% in 1984) vs. 27% for fabrics.

It is also seen that the volume of textile exports is much larger than that of apparel, with textiles representing 94% of the total of the two.

TARIFFS

On the whole, U.S. tariffs on imported textiles are lower than Canadian tariffs but are higher than those in the EEC. The following table presents average tariffs (trade-weighted) for the overall textile industry and its major product groups.

TABLE 16

Comparative Tariff Levels* in Textiles — 1987

	Overall Industry	Yarns	Fabrics	Carpets	Miscellaneous Textiles
			(per cent)		
U.S.A.	10.4	9.0	11.5	7.6	7.5
Canada	18.2	13.0	21.5	20.0	20.0
EEC	6.4	7.0	10.5	14.0	7.5

* Average rates, weighted by MFN imports, reflecting rates which have been internationally negotiated for application by 1987.

Source: GATT, Textiles and Clothing in the World Economy, July 1984.

The U.S. tariff schedule is very detailed. For example, if one were to consider only those tariff items under which Canadian exports entered the U.S. in 1985, one would find 41 separate items for yarns alone, another 41 items for broadwoven fabrics, etc.

Tariff items under which Canadian exports in 1985 exceeded $5 million, ranked in descending order by the value of exports, are shown in the following table.

TABLE 17

Selected U.S. Tariff Items and Imports from Canada -- 1985

TSUSA	Description (Shortened)	MFN Applied Rate	Imports from Canada ($ million)
35581	Woven or knitted fabrics of MMF, coated	4.2%	22.0
31002	Yarns of continuous MMF, Singles, value over $1/lb.	10.0%	17.1
30943	Non-continuous MMFs, wholly of filaments	4.9%	16.4
36083	Floor coverings, tufted, of MMF, NES	7.6%	9.0
30931	MMF filaments, over 80¢/lb.	10.0%	6.5
33850	Woven fabrics of MM continuous fibres, not containing wool	17.0%	6.1
35582	Woven or knitted fabrics of MMF, coated, NES	8.5%	6.0

Source: U.S. International Trade Commission.

Among the tariff items that faced imports from Canada in 1985, the highest tariff was 64% (TSUSA # 31090 -- yarns for handwork of man-made fibres, not over 90¢/lb.), followed by 42% (TSUSA # 33662 -- wool woven fabrics, value over $2/lb. but not over $9 U.S.) and 33% (TSUSA # 33664 -- wool woven fabrics, value over $9/lb). The corresponding imports from Canada were small: $2 000, $77 000 and $67 000 respectively.

Apart from the tariff items under which imports from Canada entered the U.S., there are a number of tariff levels that are relatively high, and their removal as part of a free-trade agreement might present potential opportunities for Canada, regardless of whether Canada has production and export capabilities in these products at the present time. Of course, other factors such as market demand, competition from U.S. and other producers, production costs, transportation costs and exchange rates would figure prominently in a decision to develop such capabilities if the tariffs were removed. These relatively high tariff levels include:

TSUSA	Description	Rate
31005	Yarns, wholly of continuous MMF, Singles, with over 20 t.p.i., valued not over $1/lb.	19¢/lb. (the average duty on Canadian exports was 48.9%)
31060	Yarns of MMF, except those wholly continuous or discontinuous MMF, incl. mixtures with natural fibres	15%
31658	MMF cordage, measuring 3/16 inch or over in diameter	12.5¢/lb. + 15%
33650	Wool woven fabrics, not over $1.26/lb. n.e.s.	49%
33655	Wool woven fabrics, over $1.26/lb. but not over $2/lb., n.e.s.	82¢/lb.

TSUSA	Description	Rate
34605	Fabrics of corduroy pile construction	23%
34635	Velvets, plushes and velours, of cotton	21%
35515	Wool felts and wool felt articles, not over $1.50/lb.	13.5¢/lb. + 10%
36301	Sheets and pillowcases including bolster cases, of cotton, lace or net or of other fabrics, ornamented	23.8%
37016	Lace handkerchiefs, and other handkerchiefs, ornamented, of cotton, n.e.s.	21.5%
33180 33190	Woven fabrics, chief value cotton, containing silk or MMF, fancy or figured, coloured of no. 80 and over	27¢/lb. + 19.1%

ANNEX A

The U.S. Textile Industry and Its Sub-sectors* -- 1984

SIC	Sub-sector	Companies[1]	Estblsh.[1]	Employt. (1000)	Shipments ($ Million)
2211	Weaving Mills, Cotton	209	269	69.6	4 347.2
2221	Weaving Mills, MMF & Silk	342	523	130.6	9 273.9
2231	Weaving & Finishing Mills, Wool	115	131	13.7	1 015.7
2241	Narrow Fabric Mills	241	281	18.1	954.6
2257	Circular Knit Fabric Mills	384	422	29.7	2 319.1
2258	Warp Knit Fabric Mills	61	207	17.4	1 643.1
2259	Knitting Mills, n.e.c.	71	72	2.6	121.2
2261	Finishing Plants, Cotton	266	275	10.2	851.1
2262	Finishing Plants, MM	265	296	33.9	3 822.2
2269	Finishing Plants, n.e.c.	177	182	11.7	1 098.7
2271	Woven Carpets & Rugs	59	60	3.0	284.4
2272	Tufted Carpets & Rugs	323	366	43.2	7 520.3
2279	Carpets & Rugs, n.e.c.	79	79	N/A	N/A
2281	Yarn Mills, Except Wool	206	377	75.5	5 247.4
2282	Throwing & Winding Mills	160	189	21.9	2 213.7
2283	Wool Yarn Mills	71	73	3.9	256.1
2284	Thread Mills	60	75	8.8	619.9
Miscellaneous Textile Goods					
2291	Felt Goods, Except Woven Felts & Hats	40	45	4.1	366.3
2292	Lace Goods	63	65	2.4	85.7
2293	Paddings & Upholstery Filling	86	93	4.4	351.4
2294	Processed Textile Waste	97	102	3.2	372.5

* Based on the definition adopted in this report. See page 1 of the main text.
[1] 1982 data.

ANNEX A (cont'd)

The U.S. Textile Industry and Its Sub-sectors* — 1984

SIC	Sub-sector	Companies[1]	Estblsh.[1]	Employt. (1000)	Shipments ($ Million)
2295	Coated Fabrics, Not Rubberized	188	198	11.7	1 336.9
2296	Tire Cord & Fabric	12	21	6.0	1 192.1
2297	Nonwoven Fabrics	114	132	13.4	1 489.8
2298	Cordage & Twine	164	181	6.6	408.8
2299	Textile Goods, n.e.c.	283	283	5.8	262.3
Miscellaneous Fabricated Textile Products					
2391	Curtains & Draperies	1 328	1 371	25.2	1 282.7
2392	House Furnishings, n.e.c.	880	958	46.8	3 800.0
2393	Textile Bags	233	249	7.4	487.9
2394	Canvas & Related Products	1 108	1 128	16.9	953.0
2395	Pleating & Stitching	906	912	19.2	896.1
2397	Schiffli Machine Embroideries	356	366	6.5	291.7
2399	Fabricated Textile Products, n.e.c.	770	801	26.6	2 147.9
Man-made Fibres					
2823	Cellulosic Man-made Fibres	14	18	13.3	1 307.2
2824	Organic Fibres, Noncellulosic	44	70	54.1	9 919.9
	Total U.S. Textile Industry	9 775	10 870	769	68 698.9

* Based on the definition adopted in this report. See page 1 of the main text.
1 1982 data.

ANNEX A (cont'd)

The U.S. Textile Industry and Its Sub-sectors* — 1984

SIC	Sub-sector	Companies[1]	Estblsh.[1]	Employt. (1000)	Shipments ($ Million)
The following sub-sectors have been excluded in this study:					
2251	Women's Full-length and Knee-length Hosiery	180	206	31.2	1 654.4
2252	Hosiery, n.e.c.	376	420	33.3	1 604.3
2253	Knit Outerwear Mills	896	923	67.8	3 607.1
2254	Kit Underwear Mills	72	84	25.0	1 010.7
2396	Automotive and Apparel Trimmings	803	826	29.7	3 109.3

* Based on the definition adopted in this report. See page 1 of the main text.
[1] 1982 data.

ANNEX B

1982 Geographic Distribution — Top Five States
Selected Sub-sectors of the U.S. Textile Industry

	Establishments	Employment		Value of Shipments	
	Number	(1000)	%	($ Million)	%
Weaving Mills, Cotton (SIC 2211)					
U.S.	269	76.9	100.0	3 972.0	100.0
1. North Carolina	38	26.6	34.6	1 384.6	34.9
2. Georgia	35	17.1	22.2	866.9	21.8
3. South Carolina	40	16.8	21.8	821.2	20.7
4. Alabama	16	7.7	10.0	376.5	9.5
5. Tennessee	6	2.5	3.3	110.4	2.8
Others	134	6.2	8.1	412.4	10.3
Weaving Mills, MMF & Silk (SIC 2221)					
U.S.	522	140.8	100.0	8 186.7	100.0
1. South Carolina	110	52.3	37.1	2 946.8	36.0
2. North Carolina	84	34.6	24.6	2 077.0	25.4
3. Georgia	42	13.2	9.4	951.7	11.6
4. Virginia	18	14.2	10.1	735.5	9.0
5. Alabama	15	6.7	4.8	347.0	4.2
Others	253	19.8	14.0	1 128.7	13.8
Weaving & Finishing Mills, Wool (SIC 2231)					
U.S.	131	13.1	100.0	762.8	100.0
1. Maine	12	2.1	16.0	120.7	15.8
2. Massachusetts	18	1.7	13.0	90.4	11.9
3. New Hampshire	6	1.0	7.6	59.5	7.8
4. South Carolina	4	0.6	4.6	27.2	3.6
5. New York	13	0.3	2.3	17.4	2.3
Others	78	7.4	56.5	447.6	58.6
Circular Knit Fabric Mills (SIC 2257)					
U.S.	422	31.1	100.0	2 538.8	100.0
1. North Carolina	123	13.7	44.1	1 085.7	42.8
2. New York	105	2.7	8.7	256.5	10.1
3. New Jersey	47	1.7	5.5	147.8	5.8
4. Pennsylvania	40	1.9	6.1	102.8	4.0
5. Georgia	12	1.3	4.2	98.3	3.9
Others	95	9.8	31.4	847.7	33.4

ANNEX B (cont'd)

	Establishments Number	Employment (1000)	Employment %	Value of Shipments ($ Million)	Value of Shipments %
Warp Knit Fabric Mills (SIC 2258)					
U.S.	207	19.0	100.0	1 465.8	100.0
1. North Carolina	44	8.1	42.6	627.9	42.8
2. Pennsylvania	19	1.8	9.5	210.7	14.4
3. New York	49	2.3	12.1	162.5	11.1
4. New Jersey	34	1.3	6.8	75.7	5.2
5. Rhode Island	13	0.9	4.7	71.7	4.9
Others	48	4.6	24.3	317.3	21.6
Knitting Mills, N.E.C. (SIC 2259)					
U.S.	72	2.9	100.0	114.5	100.0
1. New York	26	0.8	27.6	34.6	30.2
2. North Carolina	15	0.5	17.2	18.7	16.3
3. Pennsylvania	4	0.2	6.9	6.2	5.4
Yarn Mills, Except Wool (SIC 2281)					
U.S.	377	72.6	100.0	4 327.6	100.0
1. North Carolina	167	41.0	56.5	2 237.3	51.7
2. Georgia	50	10.1	13.9	715.4	16.5
3. South Carolina	36	7.0	9.6	459.7	10.6
4. California	14	1.1	1.5	101.8	2.4
5. Virginia	5	1.5	2.1	72.3	1.7
Others	105	11.9	16.4	741.1	17.1
Finishing Mills, Cotton, (SIC 2261)					
U.S.	275	11.6	100.0	753.8	100.0
1. North Carolina	23	2.3	19.8	162.7	21.6
2. Massachusetts	17	2.0	17.2	147.2	19.5
3. South Carolina	13	2.6	22.4	139.2	18.5
4. New Jersey	18	0.6	5.2	33.2	4.4
5. New York	35	0.6	5.2	20.3	2.7
Others	169	3.5	30.2	251.2	33.3

ANNEX B (cont'd)

	Establishments Number	Employment (1000)	%	Value of Shipments ($ Million)	%
Finishing Mills, Man-made (SIC 2262)					
U.S.	296	34.4	100.0	3 186.2	100.0
1. South Carolina	25	12.4	36.0	1 286.3	40.4
2. North Carolina	37	5.9	17.2	510.8	16.0
3. New Jersey	47	2.6	7.6	157.8	5.0
4. Massachusetts	18	2.3	6.7	118.2	3.7
5. Rhode Island	12	1.2	3.5	73.0	2.3
Others	157	10.0	29.0	1 040.1	32.6
Coated Fabrics, Not Rubberized (SIC 2295)					
U.S.	196	11.0	100.0	1 115.0	100.0
1. Massachusetts	20	1.5	13.6	203.7	18.3
2. Ohio	19	1.2	10.9	147.1	13.2
3. Connecticut	9	1.0	9.1	99.8	9.0
4. New Jersey	32	1.1	10.0	83.4	7.5
5. New York	28	1.0	9.1	80.2	7.2
Others	88	5.2	47.3	500.8	44.8
Non-Woven Fabrics (SIC 2297)					
U.S.	132	12.3	100.0	1 278.7	100.0
1. North Carolina	20	2.2	17.9	233.1	18.2
2. Massachusetts	10	1.1	8.9	118.4	9.3
3. Pennsylvania	12	1.1	8.9	85.7	6.7
4. South Carolina	7	0.8	6.5	76.9	6.0
5. New Jersey	8	0.7	5.7	72.5	5.7
Others	75	6.4	52.1	692.1	54.1
Tufted Carpets & Rugs (SIC 2272)					
U.S.	367	36.6	100.0	5 514.6	100.0
1. Georgia	244	23.3	63.7	3 890.0	70.5
2. California	59	3.6	9.8	484.4	8.8
3. South Carolina	6	1.5	4.1	153.3	2.8
4. Pennsylvania	5	1.1	3.0	121.8	2.2
5. New York	5	0.3	0.8	30.1	0.5
Others	48	6.8	18.6	835.0	15.2

Source: Bureau of the Census, 1982 U.S. Census of Manufactures, U.S. Department of Commerce.

ANNEX C

Yarn Imports (By Volume)

Imports of filament yarn in 1985 represented 54.2% (139.3 million pounds) of the total, with approximately 60% of these being textured filament yarn. In the 12 months ending October 1986, the major sources of imports of textured filament yarns were Canada (17.8%), Belgium (13%), Mexico (12%), the FRG (10.3%), Italy (8.4%), the U.K. (8%) and France (7.6%), with the EEC's share being 50%.

Imports of spun yarn in 1985 amounted to 97.5 million pounds with cotton yarn being the predominant type (49.4% of spun yarn), followed by man-made fibre yarn (37.1%) and wool tops and yarn (13.5%).

The majority of cotton yarn imports in 1985 were carded (29.2 million pounds or 60.6% of cotton yarns) and in the 12 months ending in October 1986, 79.4% of these were controlled; the major sources of imports being Brazil (22.9%), Egypt (12.6%), Salvador (11.9%), Turkey (10.6%), Thailand (9.8%), Mexico (8.5%) and China (6.4%). Imports from Canada of carded cotton yarn were 68 661 pounds in 1985. The balance of cotton yarn imports were combed and in the 12 months ending October 1986, 89.8% of these were controlled. The major sources of imports were China (26.2%), Thailand (17.7%), South Korea (14.3%) and Japan 9.4%), with the ASEAN and the Big Three accounting for 22.2% and 16.2%, respectively.

ANNEX C (cont'd)

Imports of spun man-made fibre yarn amounted to 36.1 million pounds in 1985, with 95.3% of these being non-cellulosic. In the 12 months ending October 1986, 42.9% of these imports were controlled; the major sources of imports were Italy (18.8%), Japan (10.1%), Romania (7.4%), Turkey (6.8%) and the FRG (6%), with the shares held by the EEC and the ASEANs being 36.5% and 14.7% respectively.

Wool tops and yarn imports were 13.2 million pounds in 1985, and the major sources in the 12 months ending October 1986 were the U.K. (19.8%), Italy (14.3%), South Africa (8.4%), FRG (8%), Brazil (7.9%) and France (7.2%).

Imports of other man-made fibre yarn amounted to 20.4 million pounds in 1985. In the 12 months ending October 1986, 32.5% of these were controlled, with the major sources of imports being Canada (27%), South Korea (12.7%), Japan (11.6%), China (6.5%), while the shares of the Big Three and the EEC were 20.9% and 16.5%, respectively.

ANNEX D

Fabric Imports (By Volume)

(a) Cotton Fabrics

Imports of woven cotton fabrics amounted to 1381 MSYE in 1985. The highlights of the three largest categories are:

Sheeting imports in 1985 were 425.5 MSYE. In the 12 months ending October 1986, import growth was 26.5%, and the percentage controlled was 94.1%. The major sources were China (17.5%), Hong Kong (12.6%), Korea (11%), Taiwan (10.5%), Pakistan (9.7%) and Brazil 8.6%).

Printcloth imports were 285.6 MSYE in 1985. In the 12 months ending October 1986, imports grew by 76.4% and 97.9% of these were controlled. The major sources were China (58.3%), Taiwan (7.3%) and South Korea (5.7%).

Twills and Sateens imports amounted to 158.9 MSYE in 1985. In the 12 months ending October 1986, imports increased by 53.3%, with 91.3% being controlled. The major sources were Hong Kong (21.5%), Taiwan (9.9%), China (8.7%), South Korea (8.4%) and Japan (7.8%).

ANNEX D (cont'd)

(b) Man-made-fibre Fabrics:

In 1985, imports of woven MMF fabrics amounted to 817.9 MSYE. Of these, 48% were filament fabrics, 28% spun fabrics and the balance were other woven MMF fabrics. In addition 4.1 million lbs. of knit MMF fabrics were imported in that year. The following is a summary of the largest categories:

Woven Fabrics of Non-cellulosic Filament Yarns: 1985 imports were 378.8 MSYE. In the 12 months ending October 1986, imports grew by 7.3%, and 85.7% of these were controlled. The major sources were Japan (54.5%), and South Korea (28.1%). Canada's share was 4.7%, while the Big Three and the EEC accounted for 31.1% and 8.1% respectively.

Woven Fabrics of Non-cellulosic Spun Yarns: Imports in 1985 amounted to 189 MSYE. In the 12 months ending October 1986, imports increased by 66.7%; the percentage controlled was 73.1%. The major sources were Pakistan (32.3%), China (23.4%), Taiwan (11.2%), South Korea (6.2%) and Japan (6%). The Big Three and the ASEAN accounted for 17.6% and 17.2% respectively.

ANNEX D (cont'd)

Other Woven MMF Fabrics (other than of filament yarn or of spun yarn, cellulosic or non-cellulosic): 1985 imports were 200.3 MSYE. In the 12 months ending October 1986, imports increased by 16.4%, with the percentage controlled being 18.4%. The major sources are Italy (37%), Japan (15.7%), Taiwan (14.2%), South Korea (8.9%), Indonesia (6.6%) and the FRG (5.8%). The EEC accounted for 47.3% and the Big Three for 23.1%.

(c) Woollen and Worsted Fabrics:

41.1 MSYE were imported in 1985. In the 12 months ending October 1986, imports declined by 19.2%; the percentage controlled was 23.2%. Italy was the major source (27.5%), followed by Japan (18.3%), the U.K. (16%) and South Korea (10.4%). The EEC accounted for 49.2% vs. 10.9% for the Big Three.

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