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ELECTRICAL & ELECTRONIC  
MANUFACTURING INDUSTRIES

TRADE REVIEW 1975-1980

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ELECTRICAL & ELECTRONIC  
MANUFACTURING INDUSTRIES

TRADE REVIEW 1975-1980

Trade statistics for the commodities and sectors comprising its E&E industries have been reviewed for the period 1975-1980.

The sources for these statistics are:

Statistics Canada, catalogue 65-007, Imports  
Statistics Canada, catalogue 65-004, Exports

To serve those interested in only one industry, the review is presented in two segments: Electrical; and Electronics. Each segment consists of three parts, i.e.,

1. Trade Balance
2. Exports
3. Imports

Following the highlights given in each segment, comments are thereafter interspersed between the various graphs, charts and tables as they pertain to trade by country, by industrial sector, and by commodity.

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Director, Planning and Analysis  
Electrical and Electronics Branch (45)  
Industry, Trade and Commerce

## TRADE REVIEW 1975-1980

### ELECTRICAL HIGHLIGHTS

#### 1. TRADE DEFICITS AND SURPLUSES

- \* The trade deficit dropped in 1980 for the first time in ten years as international trade slumped.
- \* Trade with the United States now accounts for 88% of the total trade deficit and has reached one billion dollars annually.
- \* Trade surpluses with Saudi Arabia and Venezuela now exceed \$20 million each.
- \* Trade deficits in the Small Appliances and Miscellaneous Electrical Products sectors will double every 4½ years by present trends.
- \* Transformers and Parts earned a surplus of \$13 million in 1980, a big improvement from the deficit of \$56 million in 1976.
- \* Insulated Wire and Cable showed a big improvement after incurring a \$14 million deficit in 1977, and its surplus reached \$26 million in 1980.

#### 2. EXPORTS

- \* Very sensitive to world economic conditions, export growth was negative in 1975, 46% in 1979, and 8% in 1980 as the second recent recession took hold.
- \* The U.S.A. market gained in importance by taking 55% of total exports in 1980.
- \* The markets of Cuba (ranked 2nd, 1975) and Iran (6th in 1975) were virtually lost by 1980.
- \* Many new markets exceeding one million dollars a year were gained.
- \* Most improved market was Saudi Arabia which in 1980 was second only to the U.S.A.
- \* Insulated Wire and Cable remained the leading commodity exported.

#### 3. IMPORTS

- \* Imports from the U.S.A. now account for three quarters of the total, and even higher in three sectors: Wire and Cable (96%), Batteries (87%) and Light Fixtures (82%).

\* Commodity imports having the largest relative increases were Electrical Equipment Appliances and Parts (\$30 to \$82 million), Dry Batteries and Parts (\$15 to \$44 million) and Wiring Devices and Parts (\$27 to \$62 million).

PART 1 TRADE BALANCE

ELECTRICAL

SIX-YEAR RECORD

	Trade Deficit \$ Millions	Growth	
		Annual %	1974=100
1980	1,115	(0.5)	175
1979	1,121	8.6	176
1978	1,032	12.3	162
1977	919	10.1	144
1976	835	18.6	131
1975	704	10.3	110
1974			100

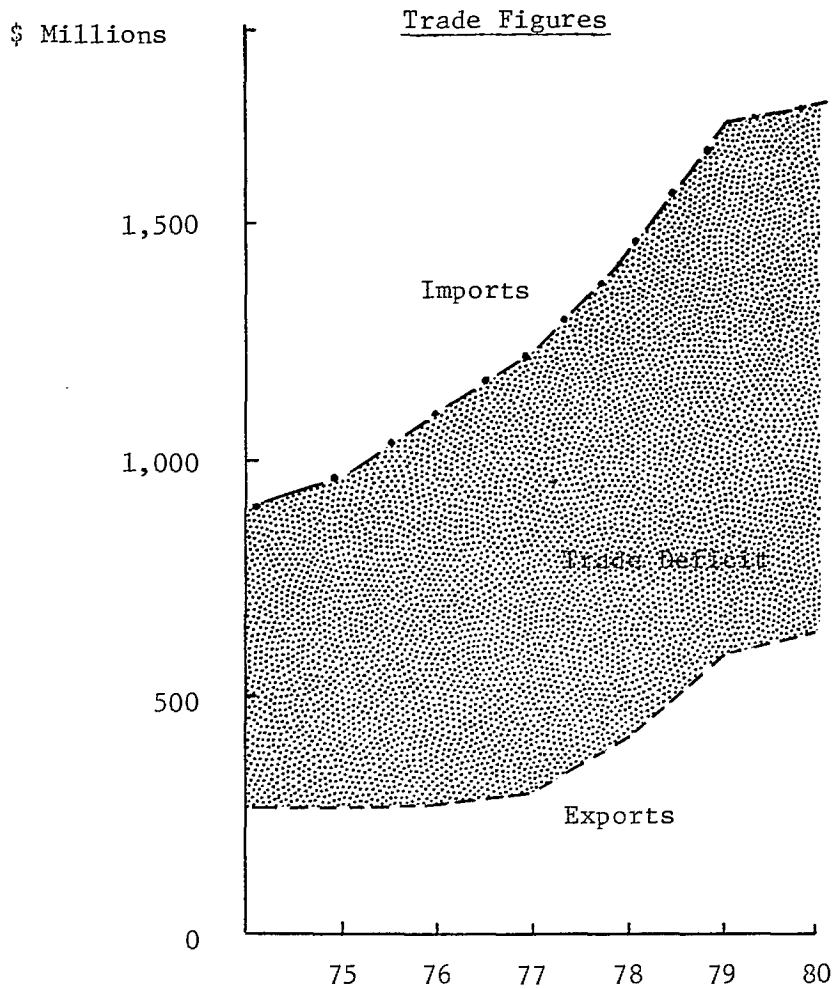
When foreign trade was brisk between 1975 and 1979 (imports up 17% and exports up 23% annually on average) the trade deficit grew appreciably at 12% or about \$104 million a year. As foreign trade slumped in 1980 (imports up 3% and exports up 8%) the trade deficit dropped for the first time in 10 years.

A lasting improvement however is unlikely without better results from the sectors of Industrial Electrical Equipment, Small Appliances, and Miscellaneous Electrical Products, particularly in dealings with the United States.

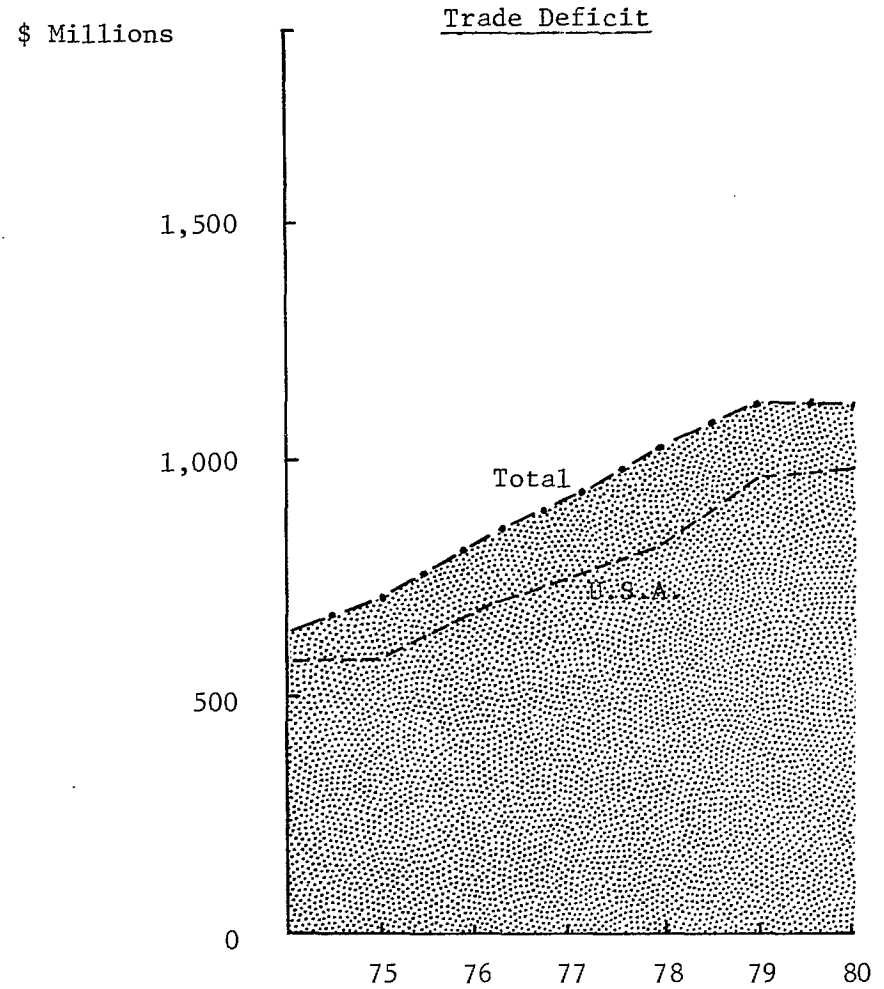
Canada enjoys a trade surplus with a number of developing countries. Led by those of Saudi Arabia, Pakistan and Australia, some surpluses have outstanding rates of growth.

A small number of commodity classes began to trade at a surplus world-wide in the later years, led by insulated wire and cable, transformers and parts, and household refrigerators and freezers.

ELECTRICAL INDUSTRY



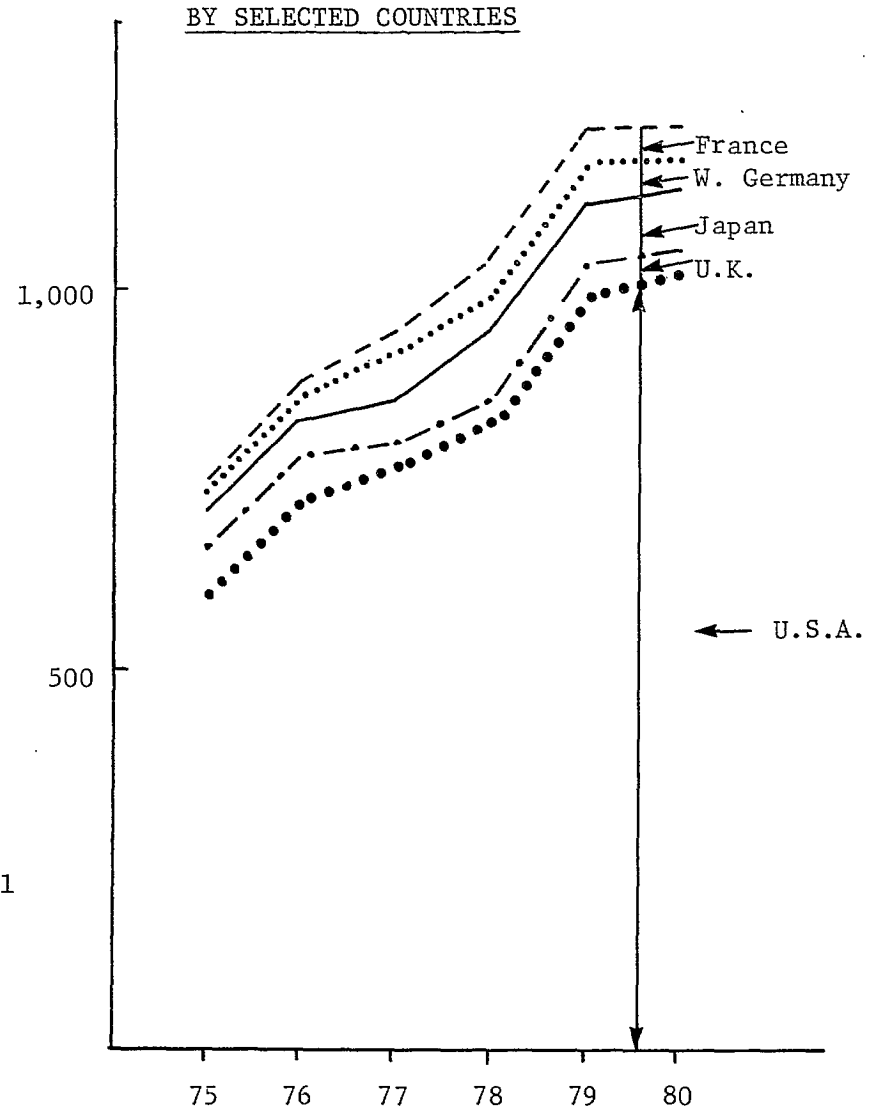
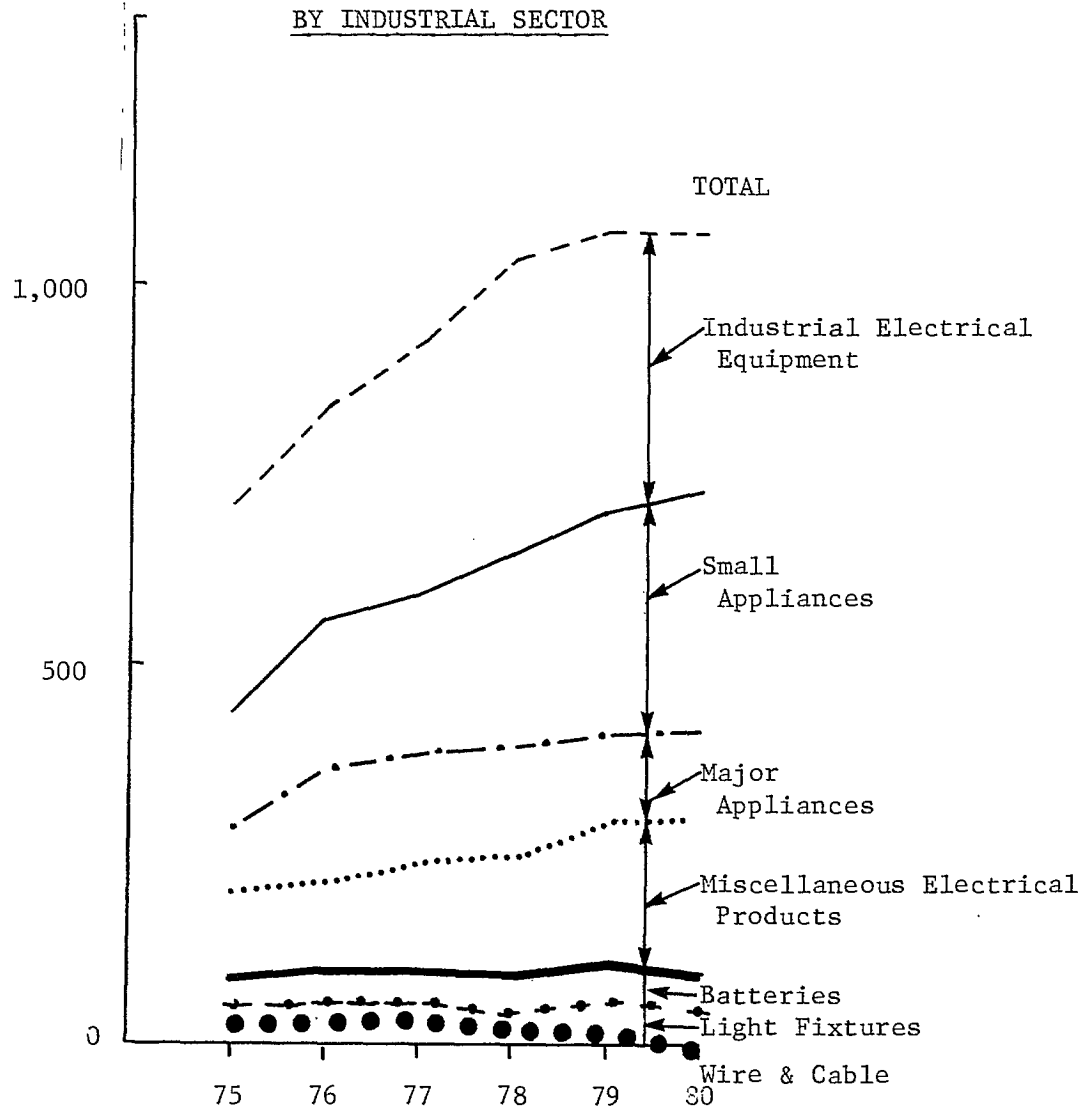
The marked deterioration in the trade deficit to 1977 was due to lagging exports. Exports in 1978 and 1979 picked up but the deterioration continued as the import climb steepened. As trade slackened in 1980, the trade deficit then held steady.



The deficit incurred in trade with the U.S.A. was 83% of the total deficit in 1975 and dropped by 1% each year to 1978. A reverse trend now appears in the making with the U.S.A. trade accounting for 86% in 1979 and 88% in 1980.

# ELECTRICAL INDUSTRY TRADE DEFICITS

\$ MILLIONS



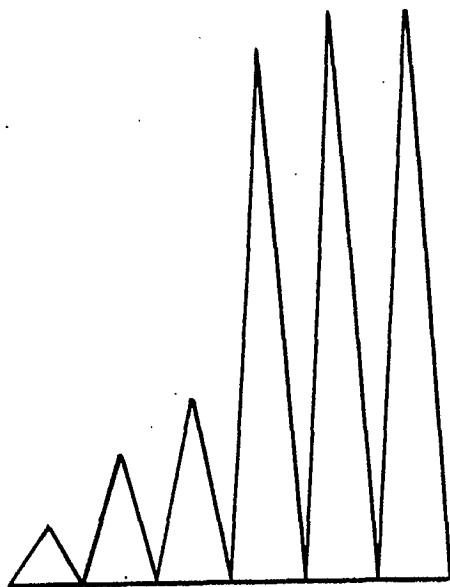
ELECTRICAL INDUSTRY  
TRADE SURPLUS, BY COUNTRY

\$MILLIONS

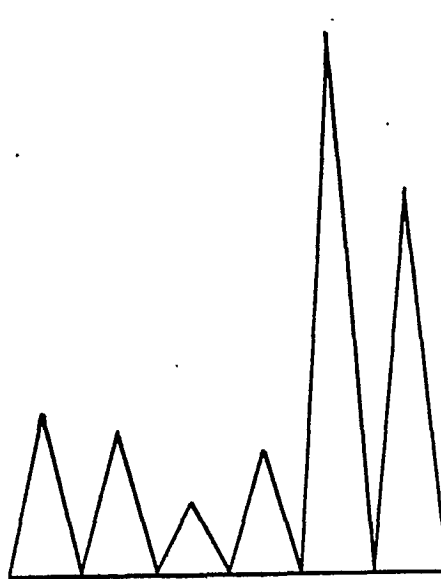
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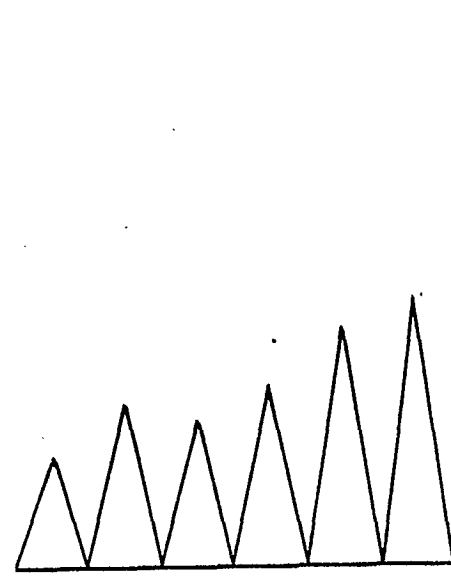
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SAUDI ARABIA



VENEZUELA

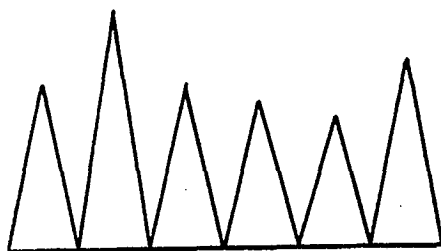


AUSTRALIA

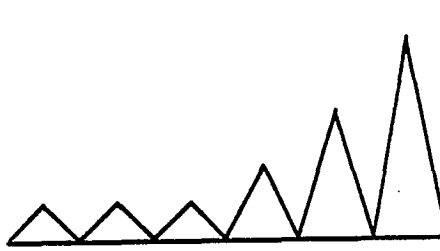
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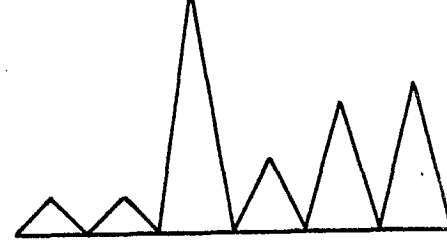
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BRAZIL



TRINIDAD - TOBAGO

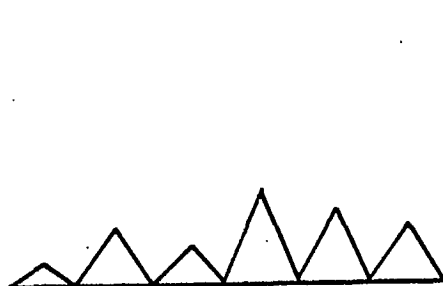


PAKISTAN

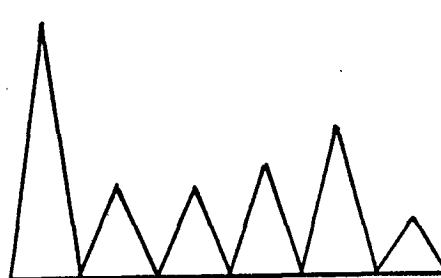
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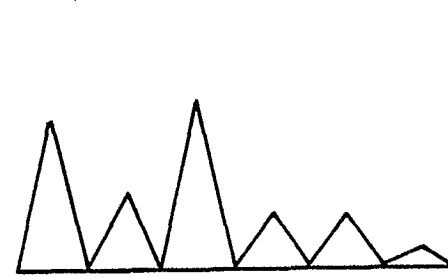
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MEXICO



CUBA



IRAN

'75 '76 '77 '78 '79 '80

'75 '76 '77 '78 '79 '80

'75 '76 '77 '78 '79 '80



ELECTRICAL INDUSTRY

HIGHEST TRADE DEFICITS, BY COMMODITY CLASS

\$MILLIONS

120

100

80

60

40

20

'75 '76 '77 '78 '79 '80

ELECTRIC MOTORS  
AND PARTS

'75 '76 '77 '78 '79 '80

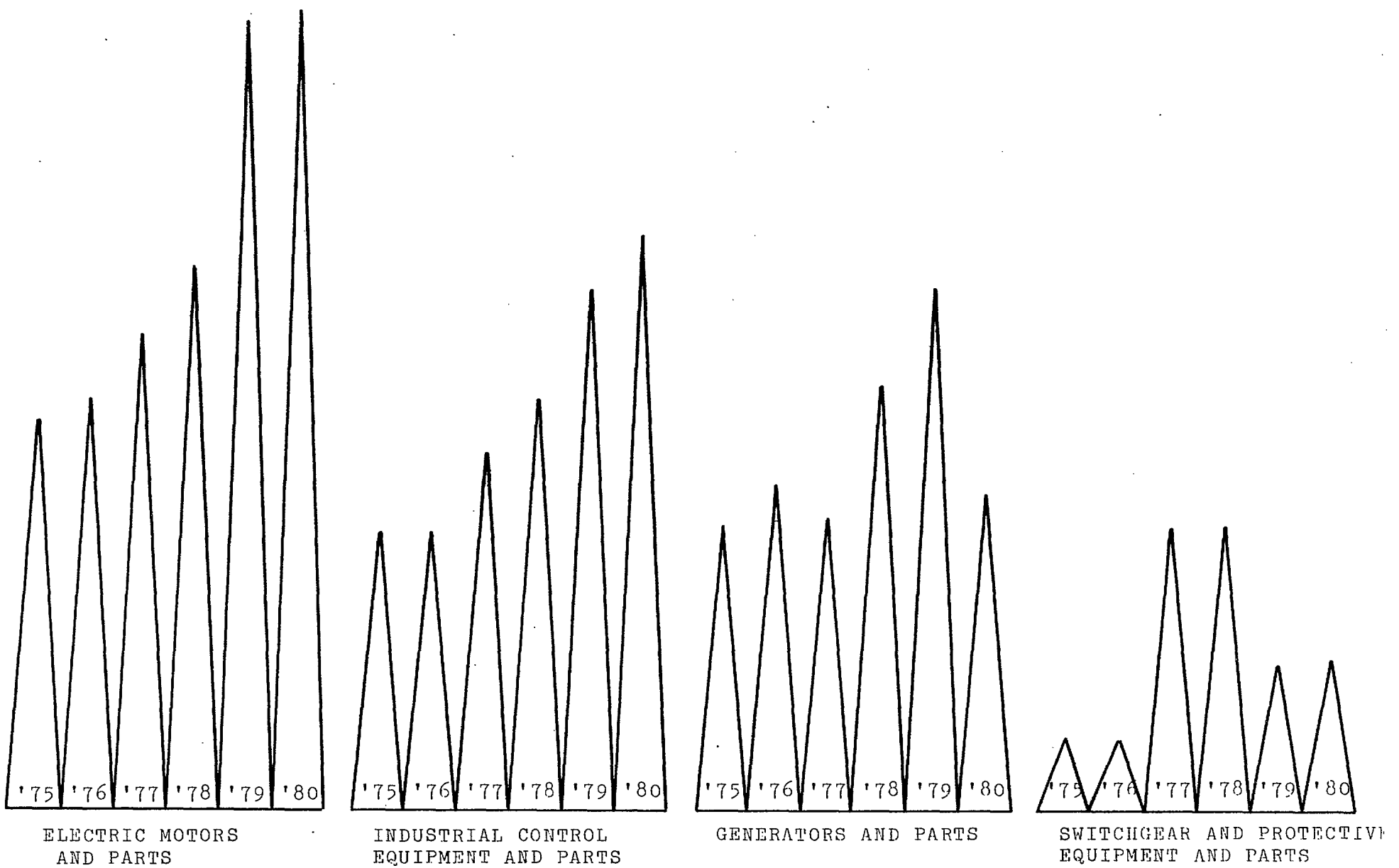
INDUSTRIAL CONTROL  
EQUIPMENT AND PARTS

'75 '76 '77 '78 '79 '80

GENERATORS AND PARTS

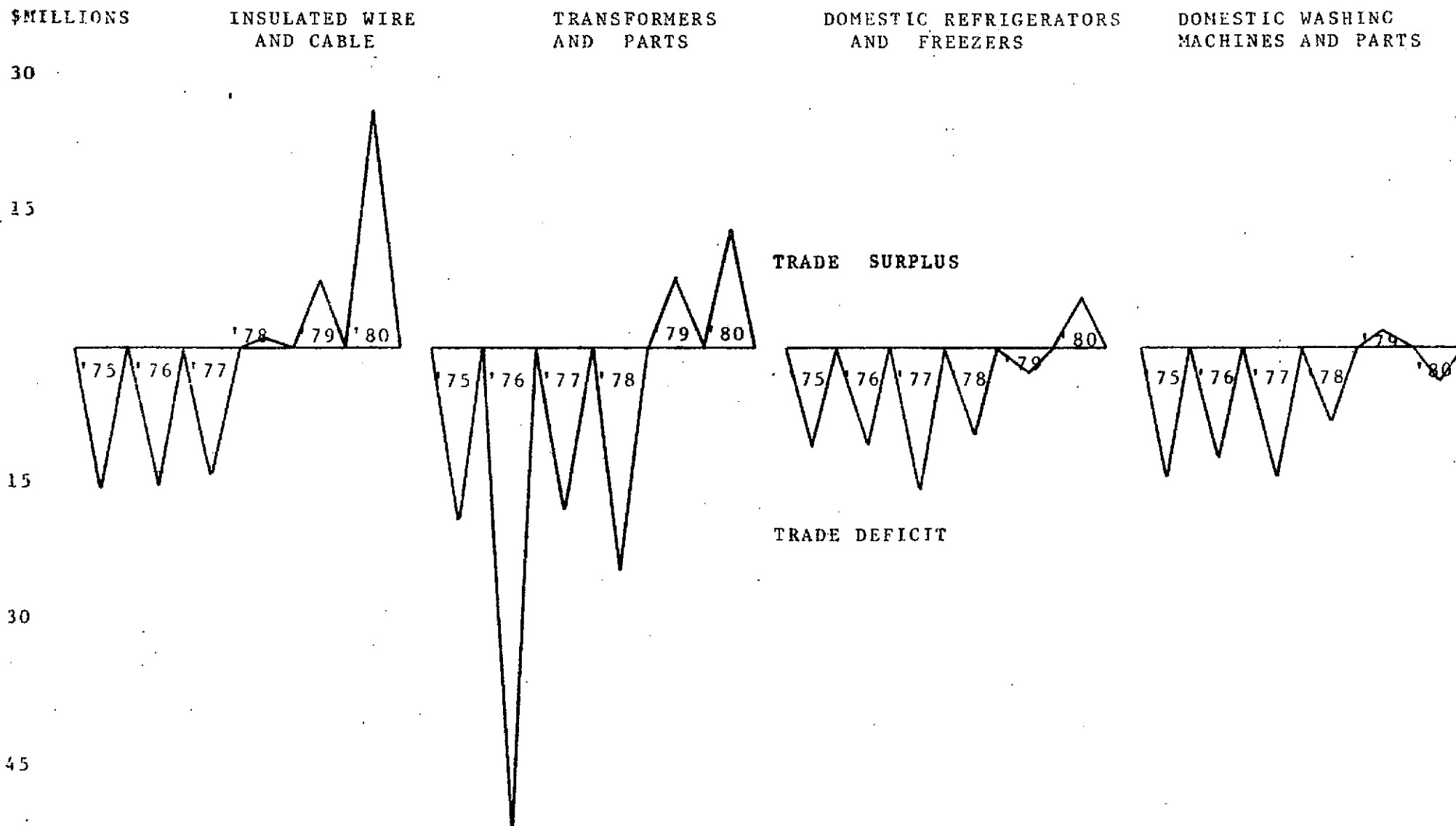
'75 '76 '77 '78 '79 '80

SWITCHGEAR AND PROTECTIVE  
EQUIPMENT AND PARTS



ELECTRICAL INDUSTRY

MOST IMPROVED TRADE BALANCES, BY COMMODITY CLASS



PART 2 EXPORTS

ELECTRICAL

SIX-YEAR GROWTH RECORD

The table below shows a gathering momentum in export growth from 1975 to 1979 and a sharp fall-off in 1980 as general economic conditions worsened. However, the increase in 1980 of 8% or \$47 million compares most favourably with import growth in that year of 2.4% or \$42 million.

	\$ Millions	Growth	
		Annual %	1974=100
1980	638	8.0	244
1979	591	45.6	226
1978	406	34.4	156
1977	302	13.5	116
1976	266	3.9	102
1975	256	(2.0)	98
1974			100

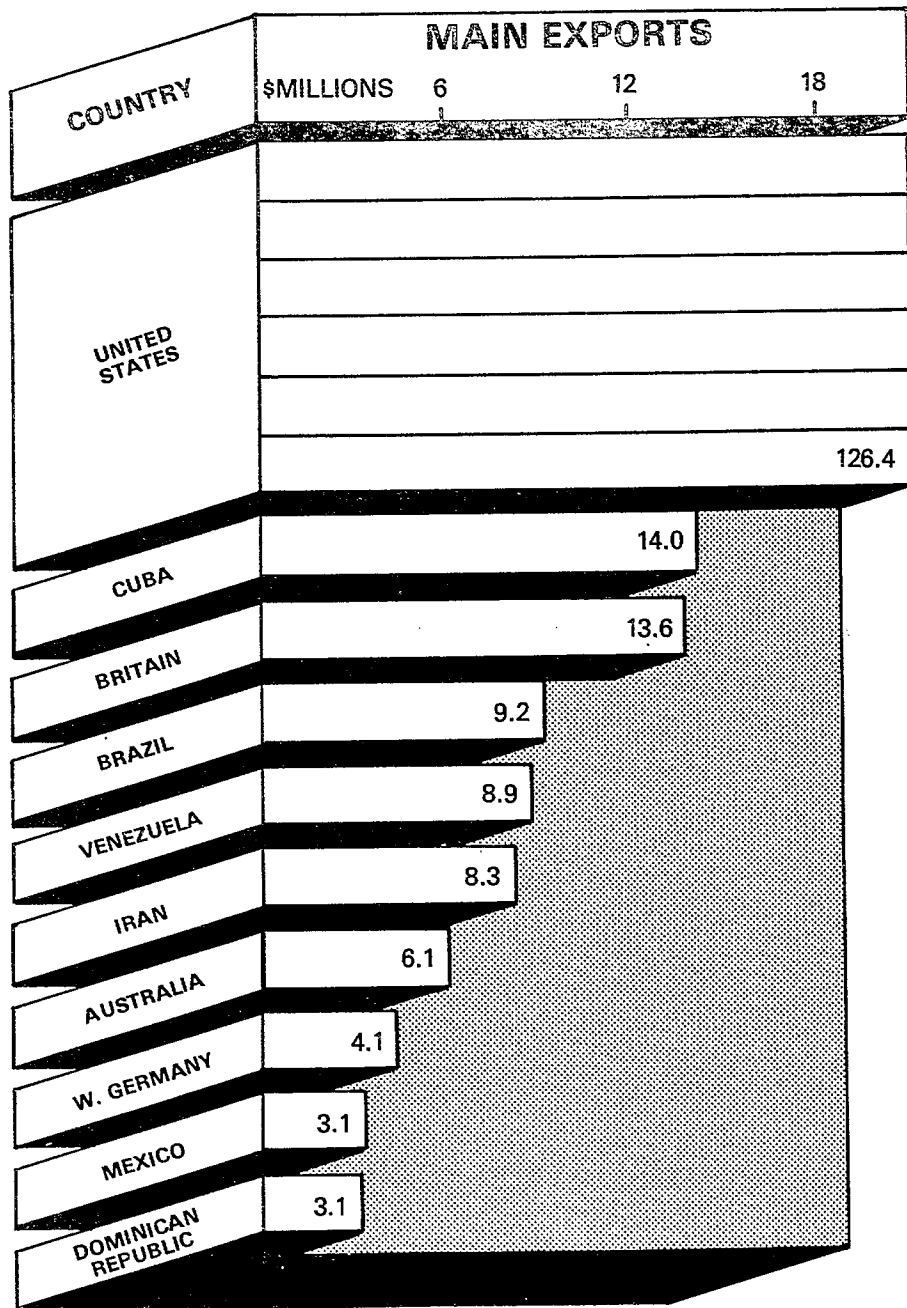
When exports were up strongly in 1978 and 1979, the United States, particularly, Venezuela and Saudi Arabia, greatly increased their purchases of Canadian goods. When export growth softened in 1980, exports to the United States increased by only \$14 million as compared with \$110 million the year before, while those to Venezuela declined by \$9 million (29%) and those to Cuba declined by \$4.5 million (58%).

The attached charts show the situation in 1980 as compared with 1975. Canadian exports are going to more foreign markets than ever before but, even so, exports to the United States were 55.6% of the total in 1980 up from 49.3% in 1975. The reason for this apparent contradiction is that Cuba and Iran, which ranked 2nd and 6th respectively in 1975 when combined they took 8.7% of our exports, took only 0.6% in 1980.

Insulated wire and cable remained the leading commodity exported. Exports increased more than three-fold over the period to account for 16% of total exports for the industry in 1980, up from 11% in 1975. Other share gains were made by Transformers and parts, Air conditioning equipment, Generators and parts, Electric lamps and bulbs, and Wiring devices. Those losing their share of exports were Switchgear, X-Ray equipment, Electric equipment appliances and parts, and Light fixtures.

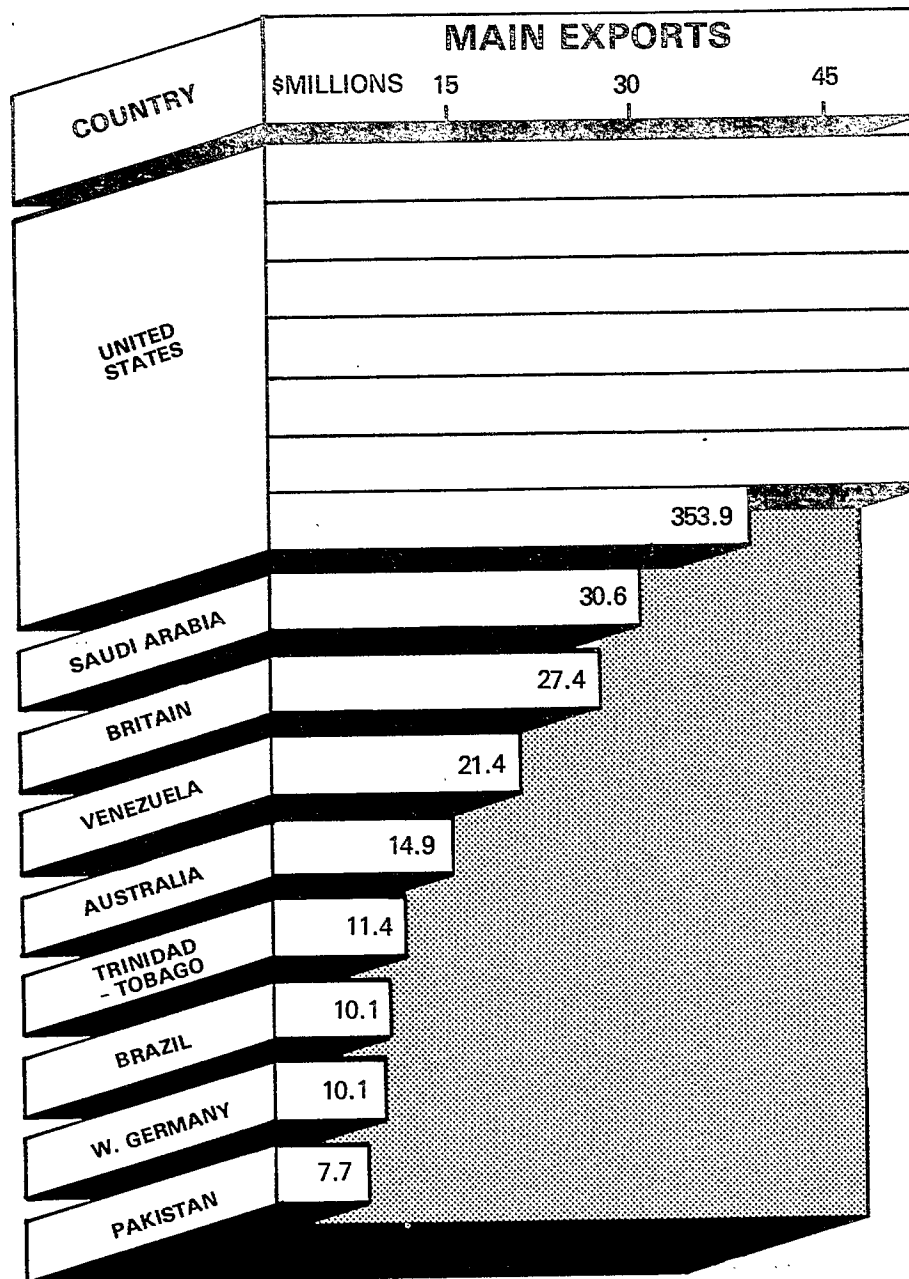
# ELECTRICAL INDUSTRY

1975



TOTAL \$256 MILLION

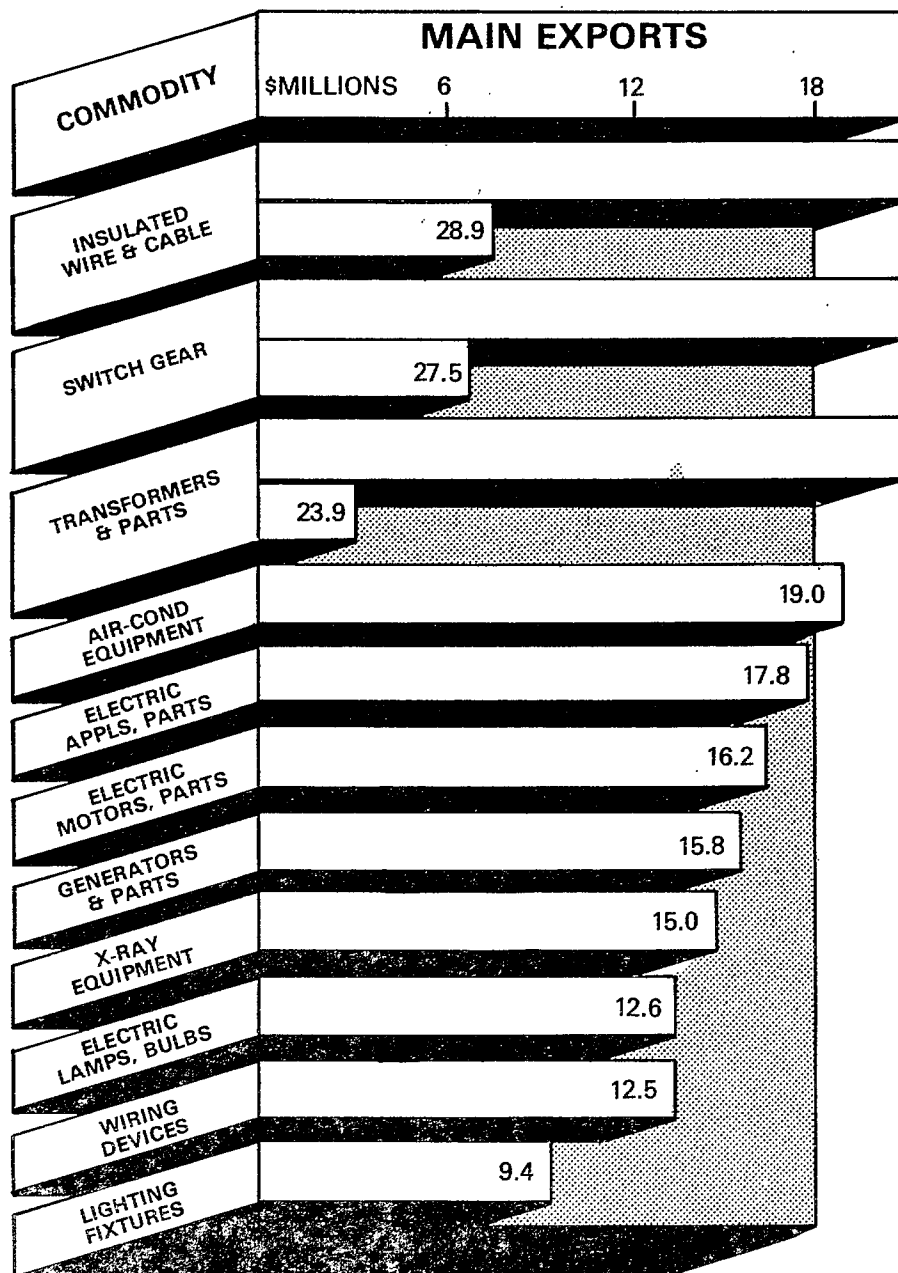
1980



TOTAL \$638 MILLION

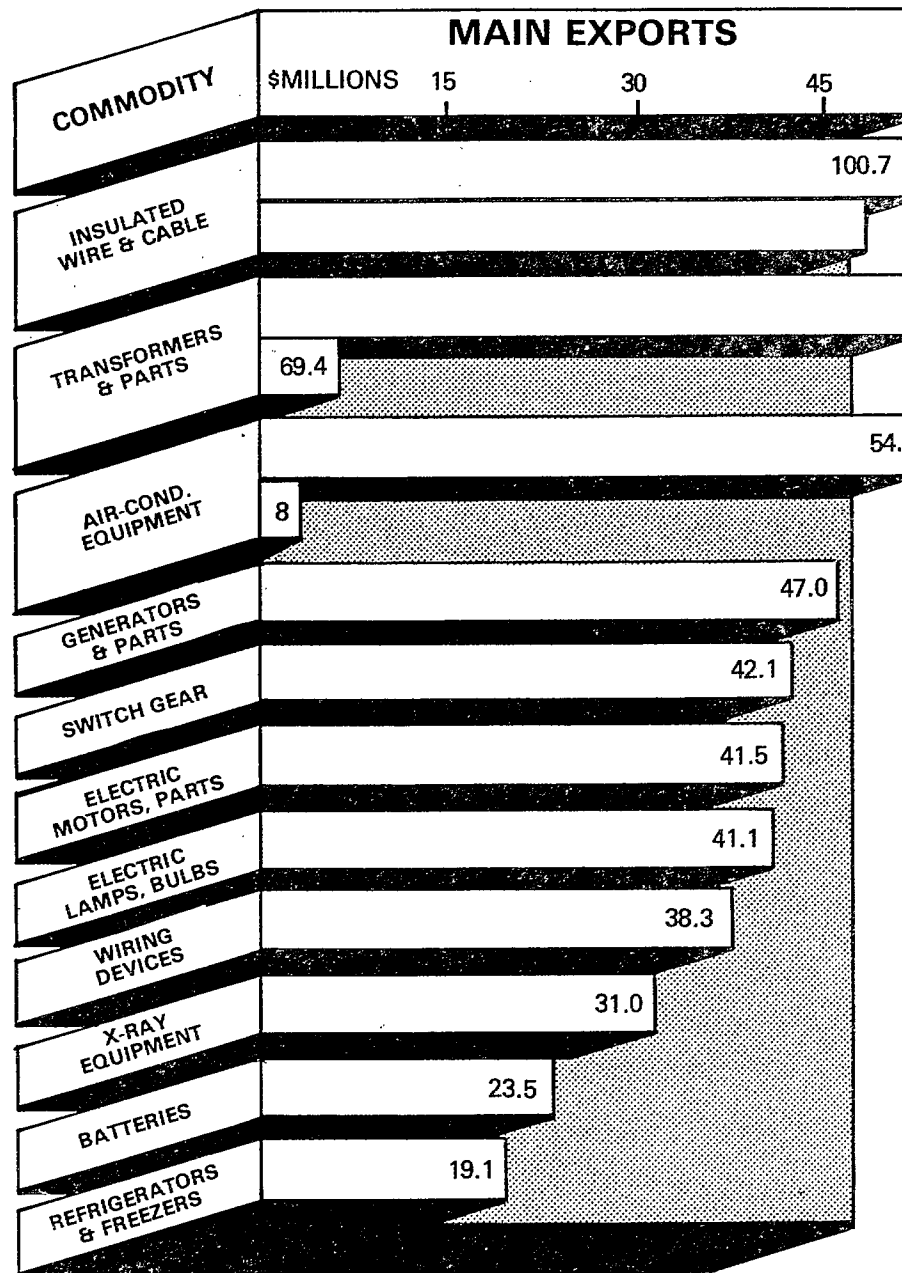
# ELECTRICAL INDUSTRY

1975



TOTAL \$261 MILLION

1980



TOTAL \$638 MILLION

Total exports in 1980 were 144% higher than in 1975 as compared with gross imports which were 83% higher. Exports thus moved to equal 36% of imports in 1980, up from 27% in 1975. The leading commodity classes exported which did better than average: Refrigerators and freezers, a six-fold increase; Batteries, Insulated Wire and Cable, Electric lamps and bulbs, and Wiring devices all with increases of between two-and three-fold.

INDUSTRIAL ELECTRICAL EQUIPMENT has the highest value of exports of any sector and the greatest number of countries taking one million dollars or more of Canadian electrical goods annually. Even so, additional markets gained were only two over a period in which the value of exports more than doubled.

The increase in exports in 1979 of \$82 million (66%) was led by increases to the U.S.A. of \$35 million (49%) and to Venezuela of \$25 million. As sales to Venezuela continued high in 1980, this market overtook its neighbour Brazil as the largest foreign market after the U.S.A. South America has thus become a very rich market for Canadian exports.

	Exports in \$ Millions					
	'75	'76	'77	'78	'79	'80
U.S.A.	43	50	50	72	106	106
Brazil	9	11	7	6	6	9
Venezuela	6	5	2	2	27	19
Cuba	4	1	2	2		2
U.K.	2	2	2	2	4	5
Mexico	2	3	2	5	4	2
Iran	2	1	2	1	3	
Indonesia	2	1	3	2		
West Germany	1	2	1	2	4	2
Australia	1	1	1	3	2	3
Saudi Arabia		3	2	1	3	5
Pakistan			8	3	1	4
All countries	97	104	101	124	205	222

MISCELLANEOUS ELECTRICAL PRODUCTS had a strong rise in exports with a 20% average growth rate annually in spite of negligible growth in 1980. Gains in markets other than the U.S.A. were meagre, so that by 1980 the U.S.A. accounted for 64% of all exports, up from 51% in 1975.

	Exports in \$ Millions					
	'75	'76	'77	'78	'79	'80
U.S.A.	24	29	34	56	75	76
Cuba	4	2	2	2		
U.K.	3	3	4	5	6	6
France	2	2	2	3	4	3
West Germany	2	2	2	3	3	3
Australia	1	2	2	4	6	5
All countries	47	52	59	94	118	119

MAJOR APPLIANCES was quite active as the rate of growth of exports averaged 24% annually and the number of million dollar markets doubled with the U.K. and Saudi Arabia holding particular promise for the future.

	Exports in \$ Millions					
	'75	'76	'77	'78	'79	'80
U.S.A.	26	27	34	51	70	79
U.K.	6	6	7	7	8	11
Saudi Arabia	2	3	5	9	14	7
Australia		4	3	2	3	3
Venezuela						3
Puerto Rico						3
All countries	46	56	68	92	129	135

WIRE AND CABLE exports did not lag in 1980 as they did in other sectors. Accordingly, Wire and Cable managed to achieve an annual growth rate of 27% in spite of a poor year in 1976. Exports in the later years were particularly strong to the United States and Saudi Arabia and the loss of the market in Iran was offset by the gain in Pakistan.

	Exports in \$ Millions					
	'75	'76	'77	'78	'79	'80
U.S.A.	11	9	13	28	49	56
Iran	5	2	7			
Dominican Republic	1	2	2		2	1
Pakistan		1	5	1	6	3
Saudi Arabia			3	18	13	15
Puerto Rico						3
Trinidad-Tobago						5
All countries	31	24	39	56	81	102

SIGNIFICANT MARKETS, BY SECTOR

For the three sectors having the lowest exports, the U.S.A. is the only significant market below:

<u>SMALL APPLIANCES</u>	Exports in Millions					
	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
U.S.A.	14	10	10	8	16	12
U.K.	1	1	1	1	1	4
Australia						1
All countries	19	14	13	12	20	20
 <u>LIGHT FIXTURES</u>						
U.S.A.	4	5	6	7	8	8
Cuba	3			1		
U.K.					1	1
Australia						1
All countries	9	7	9	13	14	14
 <u>BATTERIES</u>						
U.S.A.	4	4	8	8	16	17
U.K.			1	2	2	1
West Germany						4
Sweden						2
All countries	7	9	14	17	25	26

After three successive declines, exports of Small Appliances returned to the level of 1975 as first the United States and then the United Kingdom markets showed some life. The loss of exports to Cuba is the most noteworthy item in the lacklustre performance of Light Fixture exports. Battery exports did much better in total and could hold promise if the new million dollar markets to West Germany and Sweden are held.



LEADING COMMODITIES, BY SECTOR

INDUSTRIAL ELECTRIC EQUIPMENT

TRANSFORMERS & PARTS

Total	24	21	25	36	61	69
U.S.A.	14	14	13	23	40	43
Brazil	1		1		1	4
Cuba	2			1	3	1
W. Germany				1	3	2
Jamaica						5

As for electric motors, exports were flat the first three years before moving to a higher plateau in the latter two years. The United States took approximately 60% of total exports throughout.

Exports in \$ Millions

<u>SWITCHGEAR &amp; PROTECTIVE EQUIPMENT</u>	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Switchgear	28	28	28	27	37	42
Circuit Breakers	4	6	5	5	7	8
Total	32	34	33	32	44	50
U.S.A.	8	10	11	12	18	18
Brazil	7	11	6	6	4	4
Pakistan	1		3		1	2
Saudi Arabia					1	4

The export performance was rather dull with growth averaging only 9.3% a year, just a little ahead of the selling price increase for the sector of 7.2%. There are numerous small markets which take less than one million dollars annually.

Exports in \$ Millions

<u>Generators</u>	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Self-contained inc.	4	7	8	9	15	13
Parts	12	21	13	6	29	34
<b>Total</b>	<b>16</b>	<b>28</b>	<b>21</b>	<b>15</b>	<b>44</b>	<b>4</b>
U.S.A.	2	11	9	7	7	4
Venezuela	5	5			23	18
South Korea					4	16
Iran	2		2		2	
Columbia		3				
Saudi Arabia		3				

The export sales, while erratic, ended on a strong note with big shipments to Venezuela and South Korea. Average exports were \$28.5 with the United State's share a low \$6.6 million which is most unusual for an electrical commodity.

Electric Motors

Electric motors	12	11	10	23	29	28
Parts	4	5	5	9	11	14
<b>Total</b>	<b>16</b>	<b>16</b>	<b>15</b>	<b>32</b>	<b>40</b>	<b>42</b>
U.S.A.	13	11	12	22	31	32
Australia		1	1	2	2	2
U.K.	1		1	1	2	1

The only expansion of the narrow export market was to the United States and this all came in the latter three year period.

MISCELLANEOUS ELECTRICAL PRODUCTS

<u>ELECTRICAL LAMPS &amp; PARTS</u>	<u>Exports in \$ Millions</u>					
	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
<b>Total</b>	<b>13</b>	<b>13</b>	<b>16</b>	<b>29</b>	<b>42</b>	<b>41</b>
U.S.A.	4	4	6	12	21	20
Australia	1	2	2	3	4	4
U.K.	1	2	3	2	5	4
France	1	1	1	1	2	2
West Germany	1	1	1	2	2	2
Hong Kong				1	2	1

Without the five-fold increase to the United States the export performance would have been poor over the period. Any reasonable future performance would require the U.S.A. market to hold the \$20 million level it went to in 1979.

		Exports in \$ Millions				
<u>WIRING DEVICES</u>						
Total	<u>13</u>	<u>13</u>	<u>17</u>	<u>30</u>	<u>33</u>	<u>38</u>
U.S.A.	7	9	12	20	25	27
U.K.	1	1	1	1	1	2

		Exports in \$ Millions				
<u>X-RAY EQUIPMENT</u>						
Total	<u>15</u>	<u>20</u>	<u>21</u>	<u>29</u>	<u>33</u>	<u>31</u>
U.S.A.	11	13	14	20	26	25
France	1	1	1	2	2	1

The markets are very similar; heavy dependence on the U.S.A., one other of note. the modest growth rates would suggest little improvement in exports is to be expected.

		<u>ELECTRIC WIRE AND CABLE</u>				
		Exports in \$ Millions				
<u>INSULATED WIRE &amp; CABLE</u>	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Total	<u>29</u>	<u>23</u>	<u>38</u>	<u>52</u>	<u>77</u>	<u>101</u>
U.S.A.	11	8	12	27	46	55
Saudi Arabia			3	15	12	15
Pakistan		1	5	1	6	3
Iran	5	2	7	1		
Trinidad-Tobago	1		1	1	1	5
U.S.S.R.						6
Puerto Rico						3

The increase in exports of 250% over the five years carried the commodity class well ahead of all others. Furthermore, the annual increases in 1979 and 1980 of 48% and 31% respectively are the best of all the significant commodities. Exports of \$29 million in 1975 equalled 83% of the value of imports; exports of \$101 million in 1980 equalled 191% of imports.

MAJOR APPLIANCES

Exports in \$ Millions

AIR CONDITIONERS

Total	<u>19</u>	<u>25</u>	<u>32</u>	<u>41</u>	<u>52</u>	<u>55</u>
U.S.A.	14	14	18	29	30	34
Saudi Arabia	1	1	3	2	6	3
Australia		3	1	1	2	2
United Arab Emirates		2	2	1	1	3

This commodity class is by far the largest in the sector and accounted for 41% of total sector exports in 1980. Steady growth is in progress, and exports could exceed \$60 million in 1981.

Exports in \$ Millions

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
<u>REFRIGERATORS</u>						
<u>AND FREEZERS</u>						
Equipment	3	2	2	4	10	19
Parts			1	3	6	6
Total	<u>3</u>	<u>2</u>	<u>3</u>	<u>7</u>	<u>16</u>	<u>25</u>
U.S.A.	1	1	1	5	13	17
U.K.	2	1			1	3

In 1978 and thereafter the U.S.A. market showed remarkable growth. The effect was that total exports by 1980 equalled 19% of the Major Appliance sector exports, up from 2% in 1975. The class is showing great expansion potential.

Exports in \$ Millions

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
<u>WASHING MACHINES</u>	3	4	7	13	15	11
<u>PARTS</u>	1	1	2	2	4	3
Total	<u>4</u>	<u>5</u>	<u>9</u>	<u>15</u>	<u>19</u>	<u>14</u>
Saudi Arabia	1	2	2	6	7	4
Kuwait		1	1	1	2	1
Jordan			1	1	2	1
Lebanon				2	2	2
Puerto Rico				2	3	2

SMALL APPLIANCES

ELECTRIC EQUIPMENT  
APPLIANCES & PARTS

Exports in \$ Millions

Total	<u>18</u>	<u>12</u>	<u>10</u>	<u>8</u>	<u>16</u>	<u>15</u>
U.S.A.	14	9	7	6	12	9
U.K.	1	1	1	1	1	3

This commodity class, although small, accounts for more than 75% of sector exports. Its poor export performance had its effect on sector exports and the sector's worsening trade deficit.

LIGHTING FIXTURES

LIGHTING FIXTURES  
& PORTABLE LAMPS

Total	<u>9</u>	<u>7</u>	<u>9</u>	<u>13</u>	<u>14</u>	<u>14</u>
U.S.A.	4	5	6	7	8	8
U.K.	1	1	1	1	1	1
Australia			1	1	1	1
Cuba	3			1		

The sector has only this one commodity class, and it is in the doldrums. In 1975, the \$9 million was 3.5% of the electrical industry's exports; in 1980, the \$14 million was 2.2%.

BATTERIES

Exports in \$ Millions

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Wet Cell	4	5	8	10	17	16
Dry Cell	2	3	4	5	4	7
TOTAL	<u>6</u>	<u>8</u>	<u>12</u>	<u>15</u>	<u>21</u>	<u>23</u>
U.S.A.	4	4	7	8	16	16
Sweden	1	1	1	1		1
U.K.			1	2	2	1
West Germany					1	4

Expansion of the small exports progressed well throughout the period and should continue. Heavy reliance is placed on the U.S.A. market, while the market in West Germany was quite active in 1980.

PART 3 IMPORTS

ELECTRICAL

SIX-YEAR GROWTH RECORD

As shown in the table below, imports were in a strong rising trend until 1979. Then following two years of annual growth of 17.8% and 19.1%, there was a dramatic slowdown in 1980 to 2.4%. The effect of this reduction was noted in Part 1 - Trade Deficits, as it resulted in the first reduction in the amount of the trade deficit in recent years.

	\$ Millions (Net of Re-Exports)	Growth Annual %    1974=100	
1980	1,753	2.4	195
1979	1,712	19.1	190
1978	1,438	17.8	160
1977	1,221	10.9	136
1976	1,101	14.7	122
1975	960	6.8	107
1974			100

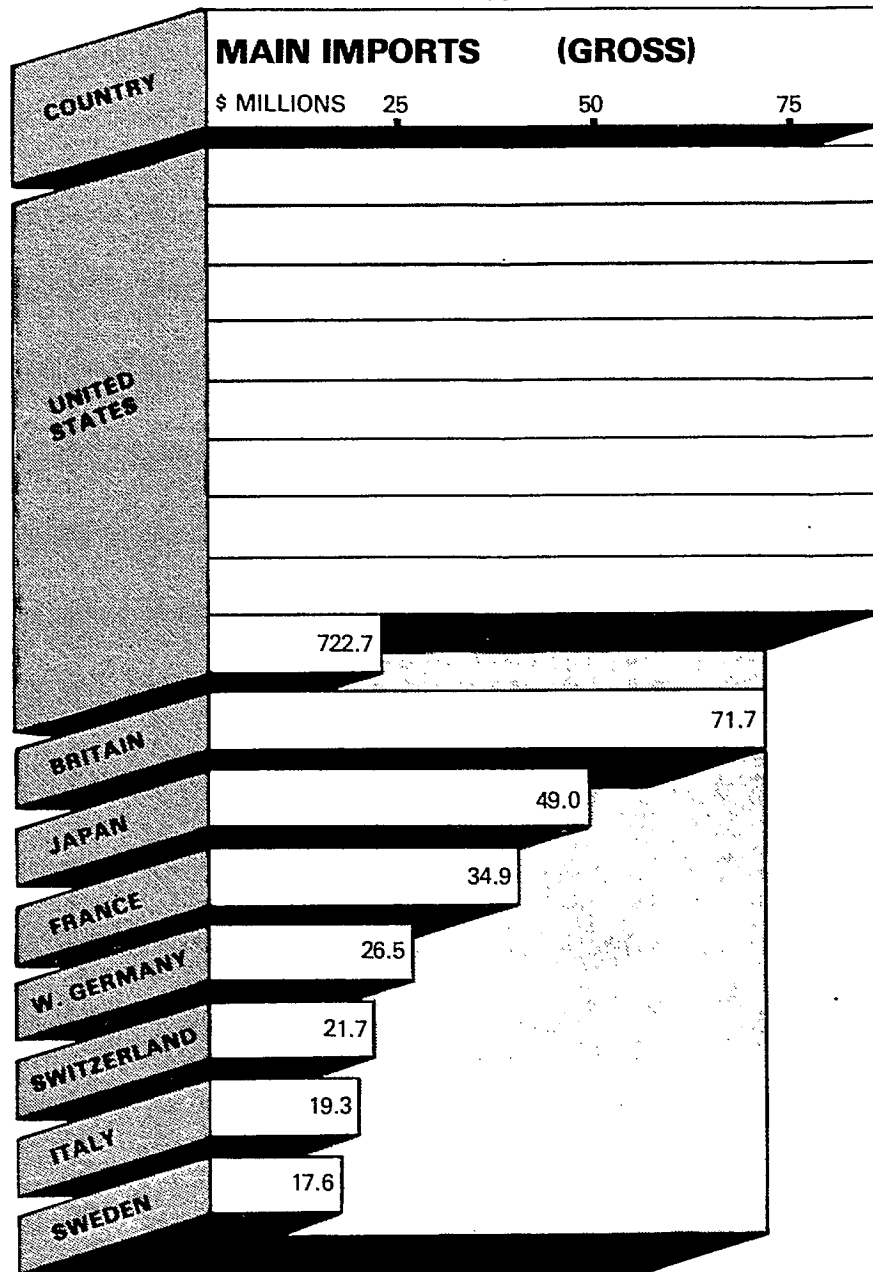
The increase in imports of only \$41 million in 1980 from \$274 million in 1979 was not attributable to any particular country or industrial sector. There was a slowdown in the imports from most of the leading importing countries and in the commodities of all sectors.

The attached charts show the situation in 1980 as compared with 1975. The United States is the source of some three-quarters of imports into Canada and it closed the period having gained its highest percentage of 76.7%. Britain lost a lot of ground in dropping from 7.4% in 1975 to 3.3% in 1980, most probably caused by the strength of the pound. While other traditional suppliers of western Europe held their shares of the Canadian market, two suppliers of the far east, Hong Kong and Taiwan, made noteworthy gains to rank 6th and 9th respectively by 1980.

In the sectors, imports of Small Appliances and Misc. Electrical Products made up a much higher percentage of the total in 1980. Against an increase of 83% for the industry over the period, Small Appliances increased by 100% and Misc. Electrical Products by 124%.

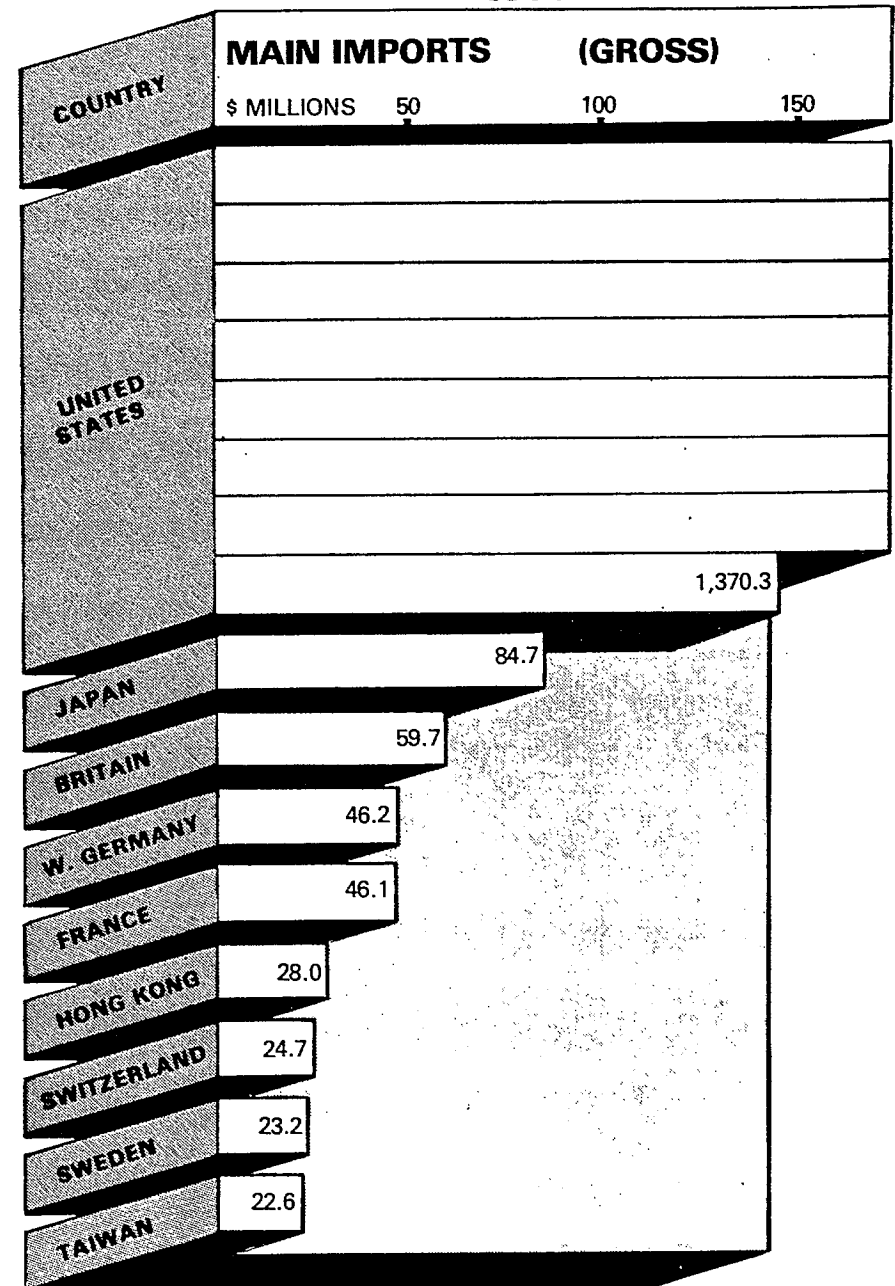
# ELECTRICAL INDUSTRY

1975



TOTAL \$976 MILLION

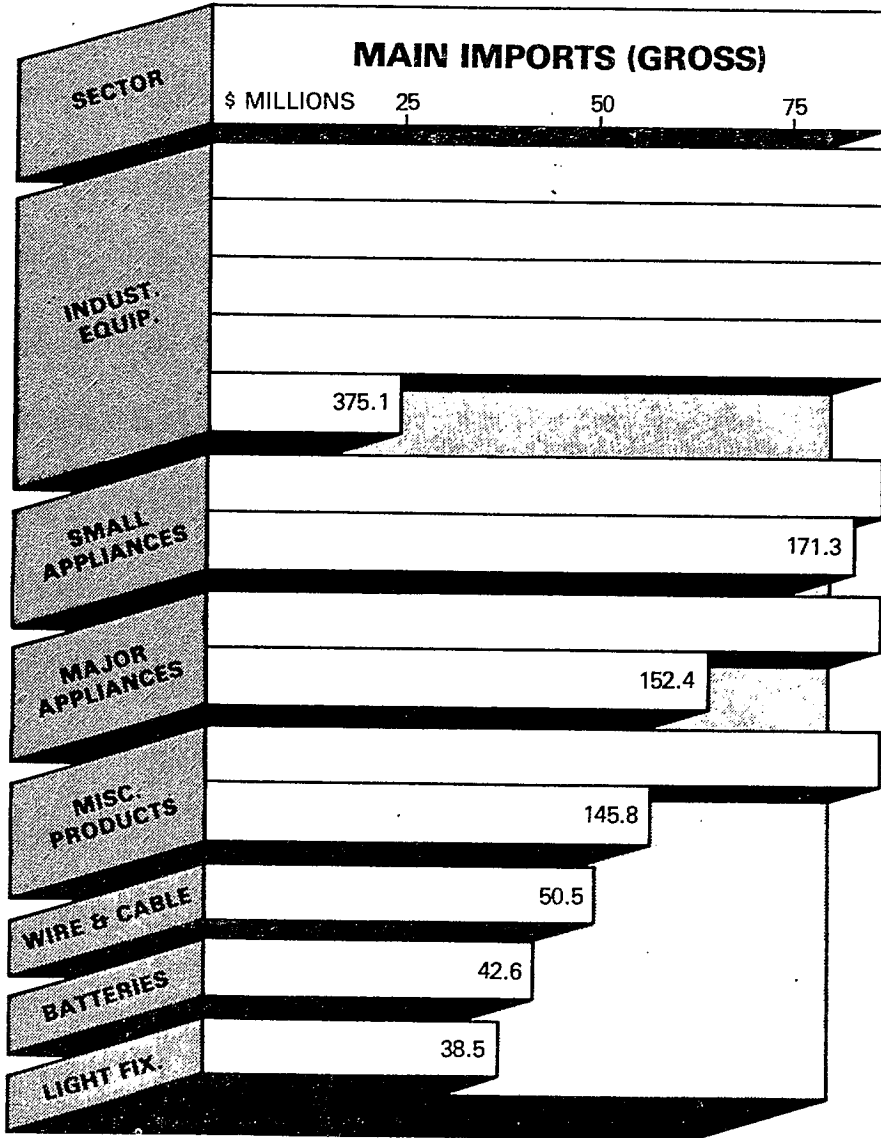
1980



TOTALS \$1,788 MILLION

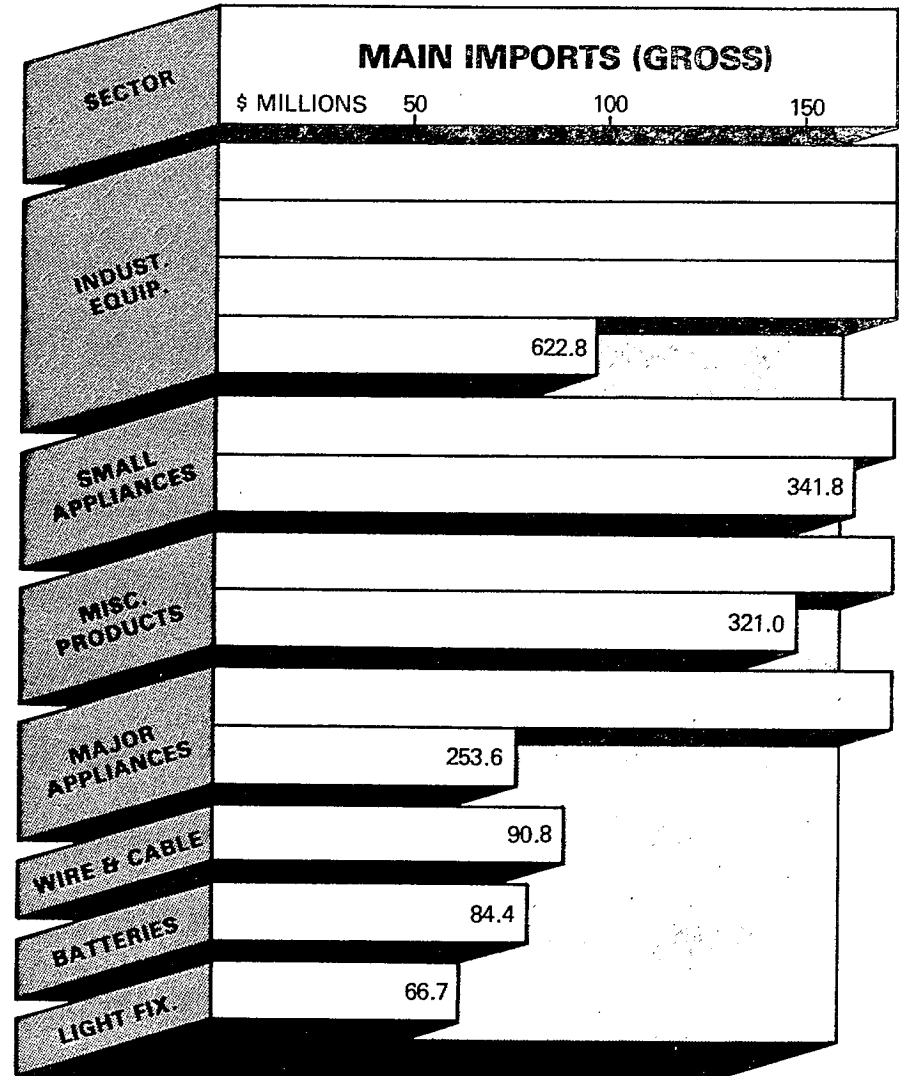
# ELECTRICAL INDUSTRY

1975



TOTAL \$976 MILLION

1980



TOTAL \$1,788 MILLION



SIGNIFICANT SOURCE COUNTRIES, BY SECTOR

The United States is by far the major source of imports of each industrial sector. In fact, it has no competition of note in Wire and Cable, Light Fixtures, and Batteries, as seen below.

IMPORTS IN \$MILLIONS

WIRE AND CABLE

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
U.S.A.	41	43	48	55	80	87
All Countries	50	46	61	61	86	91

LIGHT FIXTURES

U.S.A.	30	38	41	41	52	55
All Countries	38	46	49	52	63	67

BATTERIES

U.S.A.	36	40	45	53	69	73
All Countries	43	47	53	63	79	84

However the level of exports for the above sectors are low. Imports from other countries do have noteworthy levels of imports in the larger sectors as shown below.

INDUSTRIAL ELECTRICAL EQUIPMENT has the largest imports and the greatest number of countries, each supplying more than \$10 million annually. The rate of growth was in excess of 20% in 1978 and 1979, and then dropped 3% in 1980 as imports from Japan, U.K., West Germany and France all fell. The United Kingdom which had imports of \$55 million in 1975 (15%) appears unlikely to regain the strong position it held in that year. Japanese imports dropped 33% after 1978 to show a strong downtrend while those from West Germany dropped by 50% in 1980 alone. In contrast, imports from the U.S.A. increased by \$100 million after 1978 and raised the U.S.A. share from a steady 66% to 73% in 1980.

IMPORTS IN \$MILLIONS

U.S.A.	251	275	285	354	445	454
U.K.	55	50	28	27	44	37
Japan	19	11	17	45	40	30
France	13	12	16	39	28	26
Sweden	11	14	11	15	12	14
Switzerland	10	9	21	16	20	21
West Germany	9	37	45	22	35	17
All Countries	375	416	431	534	641	623

SMALL APPLIANCE imports came from six main sources. The U.S.A. supplied at least three-quarters of total imports and the other five had to vie for the remaining 20-25%. Of these, only Hong Kong made gains. The gains were nonetheless outstanding in moving from \$1 million to \$25 million in an unbroken trend, which augurs well for Hong Kong in future years. The United Kingdom is noticeable by its absence, and The Netherlands by its rare appearance in the sector listings.

	IMPORTS IN \$MILLIONS					
	'75	'76	'77	'78	'79	'80
U.S.A.	139	175	182	202	240	256
Japan	10	10	12	12	9	9
The Netherlands	8	7	8	11	10	11
West Germany	5	8	8	8	11	11
France	2	4	6	11	11	10
Hong Kong	1	3	6	14	20	25
All Countries	171	213	228	269	314	342

MAJOR APPLIANCE imports underwent a change in mid-period. Between 1975 and 1977 imports rose by 43% - the highest rate of any sector; then between 1978 and 1980 they rose by 4% - the lowest rate of any sector. In 1980 only Japan managed to increase the dollar value of its imports and this increase was more than offset by decreases registered by the U.S.A. and the U.K. As a consequence of the slowdown in recent imports, the trade deficits of the sector were reduced by more than \$35 million in the latest two years.

	IMPORTS IN \$MILLIONS					
U.S.A.	115	156	158	178	191	188
Japan	10	22	25	25	22	27
U.K.	8	9	9	10	11	4
All Countries	152	209	218	245	255	254

MISCELLANEOUS ELECTRICAL PRODUCTS imports increased more than any others - up at an annual rate of 17.5%. The rate reached 24.8% in 1979 but dropped back to 10.1% in 1980 to move with the general trend of the industry. There is three-way competition for the Canadian market with Japan and West Germany having approximately 4-5% each and the United States about 80%.

	IMPORTS IN \$MILLIONS					
U.S.A.	110	128	153	190	247	258
West Germany	9	9	8	8	9	13
Japan	7	9	10	11	9	14
All Countries	146	166	195	238	297	327

LEADING COMMODITIES, BY SECTOR

INDUSTRIAL ELECTRIC EQUIPMENT

<u>Electric Motors</u>	<u>IMPORTS IN \$MILLIONS</u>					
(\$ millions)	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Universal	44	47	52	67	92	82
Induction-over 1 H.P.	17	14	15	24	26	32
-Fractional	9	13	15	21	29	35
Rotors, Stators	5	7	7	7	11	11
Parts & Access.	<u>21</u>	<u>24</u>	<u>24</u>	<u>32</u>	<u>47</u>	<u>39</u>
Total	<u>96</u>	<u>105</u>	<u>113</u>	<u>151</u>	<u>205</u>	<u>199</u>
U.S.A.	73	90	81	119	158	159
U.K.	8	4	7	11	17	14
Japan	5	3	5	6	13	9
W. Germany	3	3	3	5	5	4
France	3	1	2	4	6	5

Imports were up sharply in just two years, 1978 and 1979. It was the U.S.A. which picked up these big increases and ended the period with 80% of the market, up from 76% in 1975.

<u>Industrial Control Equipment</u>	<u>IMPORTS IN \$MILLIONS</u>					
Total	48	46	57	65	85	94
U.S.A.	40	41	51	60	76	88

The U.S.A. share varied between 84% and 94%, and no other country has a sizeable market share.

<u>Generators</u>	<u>IMPORTS IN \$MILLIONS</u>					
Alternating current	18	17	11	15	32	23
Self-contained sets	17	21	24	16	21	21
Turbo-generator sets	12	18	16	43	41	16
Parts & Access.	<u>33</u>	<u>32</u>	<u>14</u>	<u>16</u>	<u>24</u>	<u>20</u>
Total	<u>80</u>	<u>88</u>	<u>65</u>	<u>90</u>	<u>118</u>	<u>80</u>
U.S.A.	36	43	32	52	49	41
U.K.	27	33	11	5	16	13
Japan	13	7	10	26	24	18
W. Germany	0	1	10	2	21	4

These four countries share virtually all of the Canadian demand for imports. Particular strengths are as follows: West Germany and Japan, turbo generator sets; U.S.A., A/C generators; and the U.K., parts and accessories. The U.K. appears to have lost a good portion of the market share held in the earlier years. Imports, as a whole, made no significant gains as they ended where they started at \$80 million.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
<u>Electric Welding Apparatus &amp; parts</u>	IMPORTS IN \$MILLIONS					
Total	24	19	24	29	42	50
U.S.A.	22	19	23	26	39	47

The very high growth in the latter two years caused the imports of this commodity class to double in five years, with the U.S.A. losing none of its abundant share.

<u>Circuit Breakers</u>	IMPORTS IN \$MILLIONS					
Total	26	31	38	41	52	42
U.S.A.	12	14	15	17	27	15
France	6	7	11	14	11	13
Switzerland	6	6	8	5	8	8

Imports increased steadily until falling off in 1980. Little change is seen in the shares held by the three main supplying countries.

<u>Switchgear</u>	IMPORTS IN \$MILLIONS					
Total	24	23	52	48	35	39
U.S.A.	13	14	15	17	22	20
U.K.	7	6	3	2	2	3
W. Germany			24	4	3	3
Switzerland			9	8	2	8
France				12	1	
Sweden				4	4	3

This market is more varied and only the U.S.A. kept a fairly constant share throughout. West Germany and France won big orders in 1977 and 1978 respectively.

MISC. ELECTRICAL PRODUCTS

<u>X-Ray Equipment</u>	IMPORTS IN \$MILLIONS					
Total	46	46	52	59	69	90
U.S.A.	30	30	37	42	51	57
W. Germany	8	7	6	6	8	11
France	2	2	3	3	2	6
The Netherlands	3	3	3	4	4	4

The X-Ray imports were quite uneventful except for the 1980 total which moved up by \$21 million or 30%.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
<u>Wiring Devices &amp; Parts</u>	IMPORTS IN \$MILLIONS					
Total	27	32	37	45	60	62
U.S.A.	26	30	35	43	58	59

Imports more than doubled over the period, with the U.S.A. being the only significant supplier.

	<u>WIRE AND CABLE</u>					
<u>Insulated Wire and Cable</u>	IMPORTS IN \$MILLIONS					
Total	35	27	40	39	52	53
U.S.A.	27	25	28	36	49	51
Italy	7					
Sweden			12			

Imports grew by only 51% over five years, and except for the occasionally a competitor the U.S.A. has the market to itself.

	<u>MAJOR APPLIANCES</u>					
<u>Dishwashers &amp; Parts</u>	IMPORTS IN \$MILLIONS					
Total	31	43	38	45	53	42
U.S.A.	30	43	38	45	53	42
<u>Washing Machines &amp; Parts</u>	IMPORTS IN \$MILLIONS					
Total	27	32	33	40	46	39
U.S.A.	25	30	30	39	41	38

The above two commodity classes are nearly identical in character - fairly sluggish and the sole preserve of U.S. imports.

	IMPORTS IN \$MILLIONS					
Sewing Machines, Domes.	14	20	20	25	23	22
<u>Parts, Domestic</u>	<u>7</u>	<u>8</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
Total	<u>21</u>	<u>28</u>	<u>30</u>	<u>35</u>	<u>33</u>	<u>32</u>
U.K.	6	6	7	9	9	2
U.S.A.	5	7	9	8	6	5
Japan	4	7	6	9	5	5
Switzerland	2	2	2	2	1	2
Taiwan				1	3	5

Growth, overall, was strong until 1978 after which a decline set in. This is one of the very few markets in which the U.S.A. is not the top supplier, and in which the U.K. ranks near the top. Traditional market shares may be upset a little in future years should the flow of imports from Taiwan keep going up as they have in the past two years.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
<u>Microwave Ovens</u>	IMPORTS IN \$MILLIONS					
Total	20	22	28	26	33	
U.S.A.	13	12	16	14	15	
Japan	7	10	12	12	18	

Microwave ovens were identified as a separate commodity by Statistics Canada in 1976, growth was not exceptional other than in 1978 and 1980. In the two-way competition for the Canadian market, Japan has shown steady growth at the expense of the U.S.A.

	<u>SMALL APPLIANCES</u>					
	IMPORTS IN \$MILLIONS					
<u>Electrical Equipment Appliances &amp; Parts-Other</u>						
Total	30	44	38	45	66	82
U.S.A.	20	30	23	27	44	54
The Netherlands	6	6	7	10	9	11
West Germany	3	4	3	3	6	5

Imports increased of an average rate of 22% which is higher than for any other commodity class seen thus far. The U.S.A. is holding its two-thirds share, while the Netherlands holds second place comfortably and is not losing any ground.

	IMPORTS IN \$MILLIONS					
Cooking Appliances	24	26	28	26	34	39
<u>Cooking Appl., Parts</u>	<u>13</u>	<u>18</u>	<u>21</u>	<u>23</u>	<u>30</u>	<u>35</u>
Total	<u>37</u>	<u>44</u>	<u>49</u>	<u>49</u>	<u>64</u>	<u>74</u>
U.S.A.	32	40	44	44	58	63
Hong Kong						4
Japan						2

Total imports and those from the United States both doubled in five years, while no other country supplied significant imports until 1980.

IMPORTS IN \$MILLIONS

Cleaning Equipment	8	10	9	12	11	10
<u>Cleaning Equip., Parts</u>	<u>17</u>	<u>20</u>	<u>22</u>	<u>27</u>	<u>32</u>	<u>29</u>
Total	<u>25</u>	<u>30</u>	<u>31</u>	<u>39</u>	<u>43</u>	<u>39</u>
U.S.A.	24	29	30	37	40	36

The demand for imports of equipment is quite flat whereas that for parts is showing average growth.

LIGHTING FIXTURES

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Electric Light Fixtures & parts-other	IMPORTS IN \$MILLIONS					
Total	24	27	28	32	43	46
U.S.A.	19	23	24	25	35	39

The other two commodities in the sector Incandescent and Fluorescent lighting and fixtures are low import items. The United States maintains over 80% of the market and the rest is shared by a half-dozen countries.

BATTERIES

<u>Wet Cell Storage</u>	IMPORTS IN \$MILLIONS					
Total	22	20	21	26	34	29
U.S.A.	21	19	20	24	32	26
Batteries, N.E.S.	5	6	8	11	16	23
<u>Parts &amp; Supplies</u>	<u>10</u>	<u>12</u>	<u>14</u>	<u>15</u>	<u>18</u>	<u>21</u>
Total	<u>15</u>	<u>18</u>	<u>22</u>	<u>26</u>	<u>34</u>	<u>44</u>
U.S.A.	12	14	19	21	28	37
U.K.	1	1	1	2	2	3
Japan	1	1	1	1	1	1

Dry battery commodities have far greater growth than for the wet batteries. While the imports grew by a little less than 300%, those from the U.S.A. grew by a little more than 300%.

## TRADE REVIEW 1975-1980

### ELECTRONICS HIGHLIGHTS

#### 1. TRADE DEFICITS AND SURPLUSES

- \* The trade deficit is estimated to double every 3 to 3½ years from its level of \$2.5 billion in 1980.
- \* The Office Machines sector, including Photocopiers, fared badly in 1980 with a deficit exceeding one billion dollars.
- \* Microelectronics commodities had a deficit of \$350 million in 1980 - fourteen times the size of the 1975 deficit.
- \* Mounting trade surpluses are being earned by Commercial Communications Equipment and Telephone Apparatus.
- \* The annual trade deficit with the U.S.A. exceeds \$2 billion while the largest surpluses with Australia, Turkey and Brazil approximate \$20 million.

#### 2. EXPORTS

- \* Exports have more than doubled since 1977 to \$2 billion.
- \* Big increases were made by the commodity classes of Computers (\$450 million or 275%), Telephone Apparatus (\$221 million or 300%) and Commercial Communications Equipment (\$174 million or 240%).
- \* Electric Typewriters exports started with three markets (the U.K., Japan, and Australia) but ended with only one, the U.S.A.

#### 3. IMPORTS

- \* Since 1977, the Canadian market has been inundated by imports rising by \$747 million or 25% annually.
- \* In 1980, the value of imports exceeded the value of Canadian shipments for the first time.
- \* Imports of computers were \$343 million in 1975 and \$1,645 million in 1980.
- \* Imports of integrated circuits and semi-conductors were \$76 million in 1977 and \$494 million in 1980.



## PART 1 TRADE BALANCE

ELECTRONICSSIX-YEAR RECORD

	Trade Deficit \$ Millions	Growth	
		Annual %	1974=100
1980	2,536	26.9	239
1979	1,999	15.8	188
1978	1,726	21.0	163
1977	1,427	22.1	134
1976	1,169	23.8	110
1975	944	(11.1)	89
1974			100

The year 1975 was unusual in that both lower imports and higher exports combined to reduce the trade deficit by \$117 million. Imports were not to drop again and the average annual increase in the trade deficit after 1975 was 22% or \$312 million. At this rate, the deficit will double every 3-3½ years; i.e. be \$5 billion by 1983 or 1984 and \$10 billion by 1986 or 1987.

Trade with the United States accounted for the bulk of the trade deficit, from a low of 74% in 1976 to 89% in 1980. The balance was accounted for by far eastern countries as very little is incurred in dealings with European countries.

Three of the four sectors had similar trade deficit performances. The exception Office Machines, set itself apart in 1980 when its deficit rose by 82% from \$533 million to \$971 million.

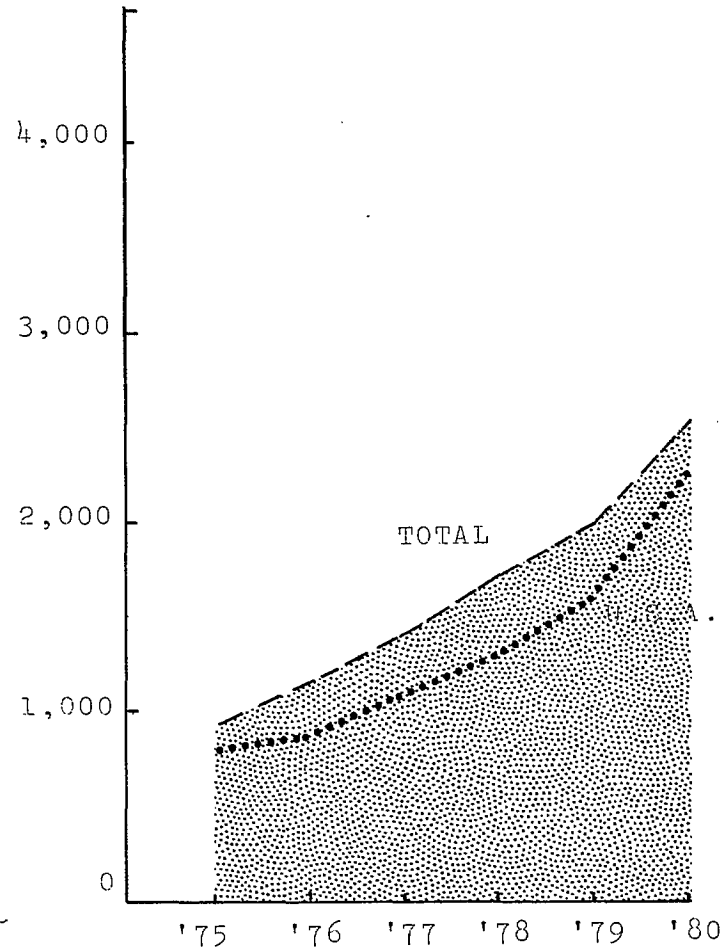
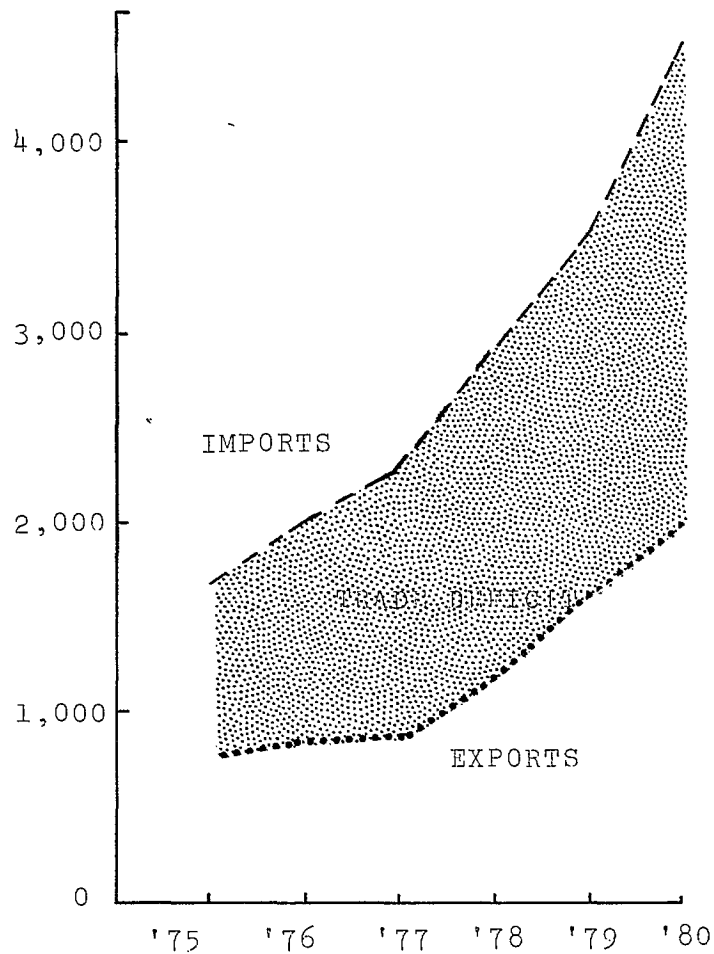
Of the commodities, computers had a deficit which rose almost 100% in 1980 to \$878 million. The microelectronics group led in growth, having less than a \$25 million deficit in 1975 and having more than \$350 million in 1980. Some commodities, on the other hand, had sizeable trade surpluses. The leaders were Commercial Communications Equipment with a surplus of \$385 million over the six years; and Telephone Apparatus which had steeply rising surpluses in the later years, up from \$1 million in 1977 to \$186 million in 1980.

ELECTRONICS INDUSTRY TRADE STATISTICS

\$MILLIONS

CANADA WITH THE WORLD

TRADE DEFICIT WITH THE UNITED STATES

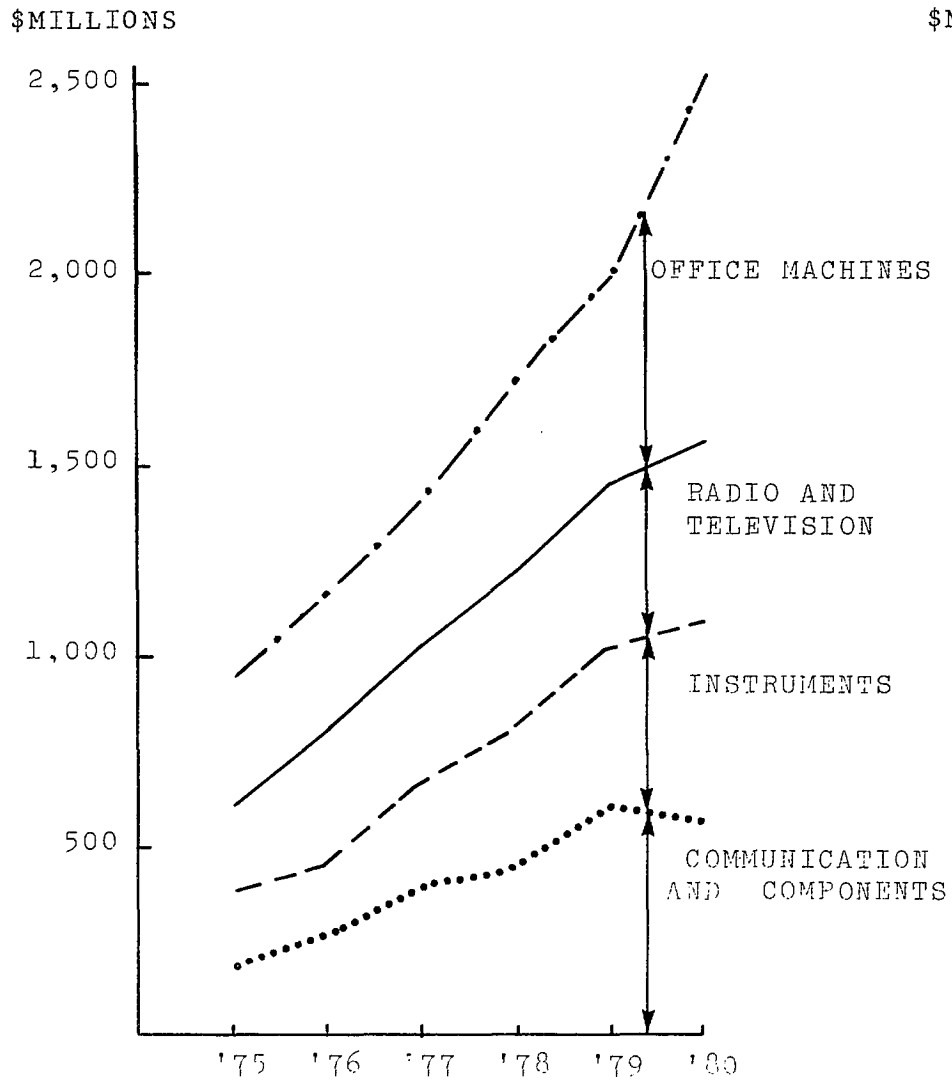


The Trade Deficit was squeezed in 1975 by rising exports and falling imports. Afterwards the deficit grew appreciably as the growth in imports exceeded that of exports.

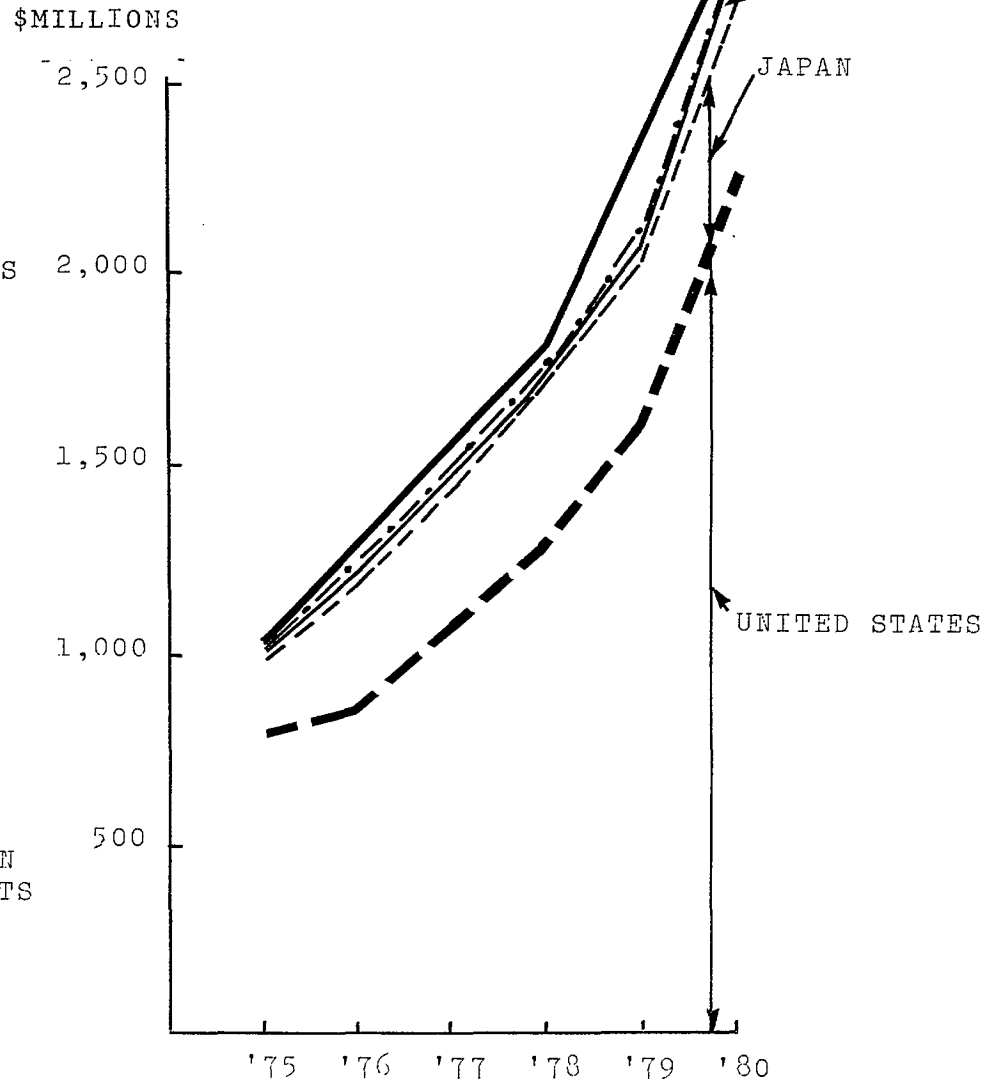
In 1975, the deficit with the USA was 85% of the total. It eased in the middle-seventies then rose to 89% in 1980.

ELECTRONICS INDUSTRY TRADE DEFICITS

BY SECTOR



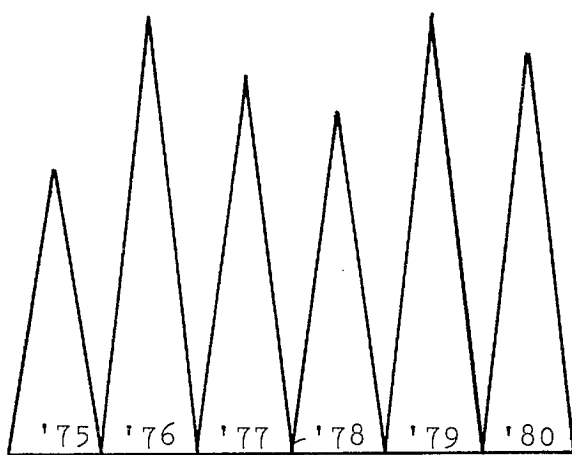
BY COUNTRY



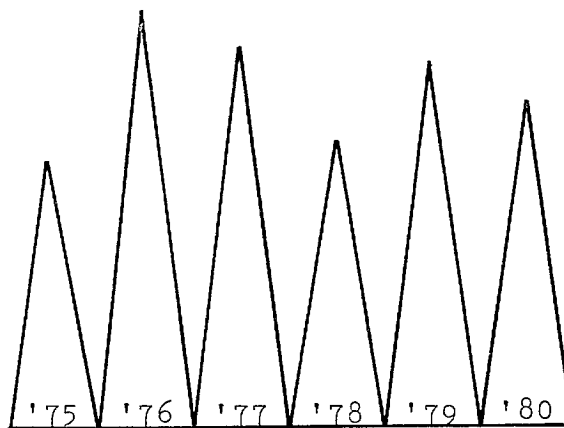
ELECTRONICS INDUSTRY

HIGHEST TRADE SURPLUSES, BY COUNTRY

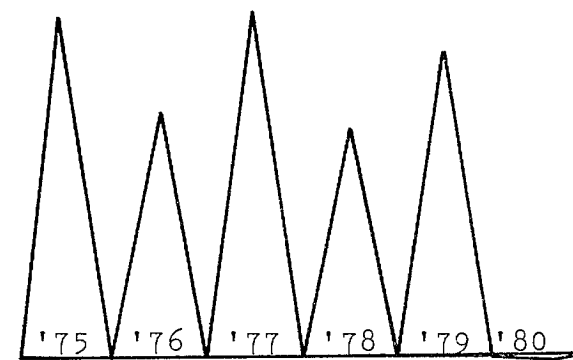
\$MILLIONS



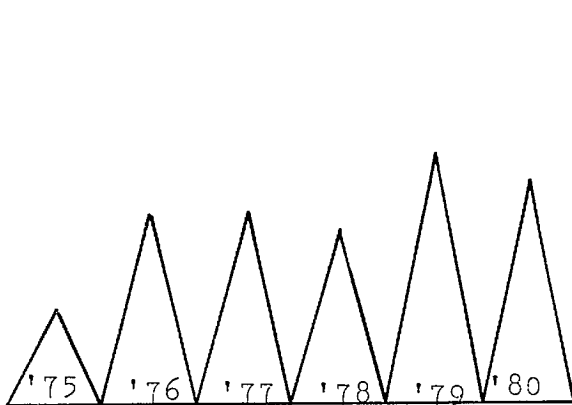
AUSTRALIA



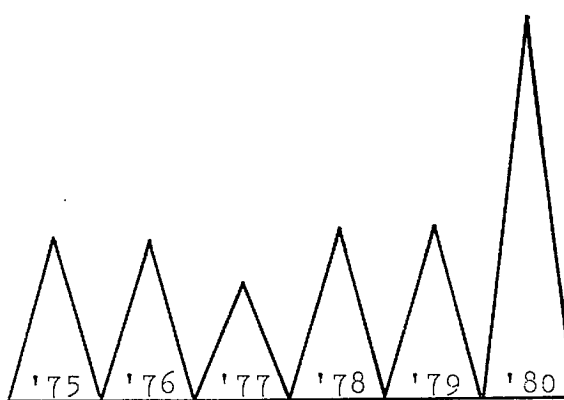
TURKEY



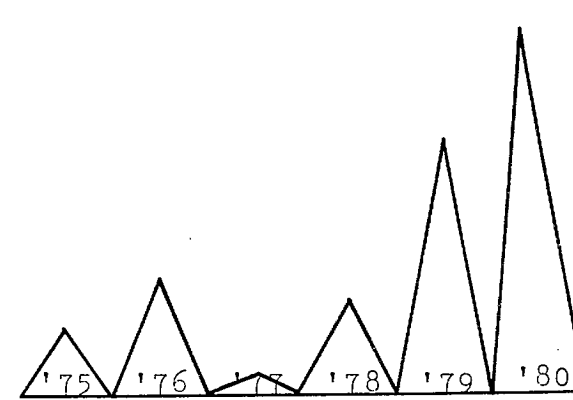
ITALY



SAUDI ARABIA



BRAZIL

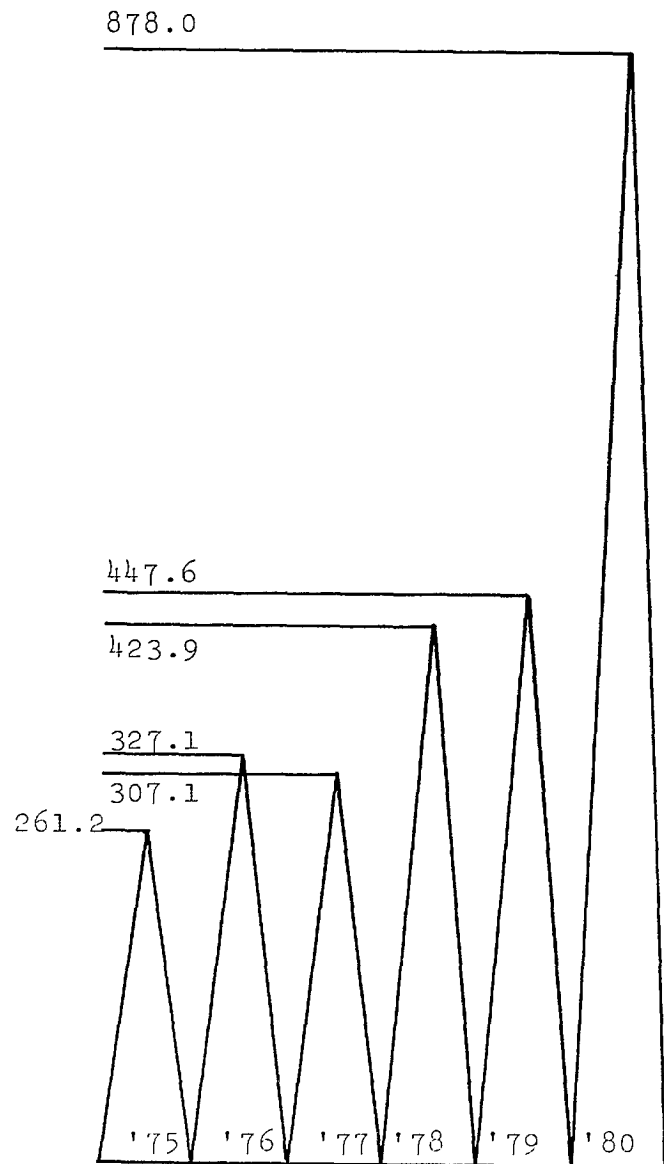


LIBYA

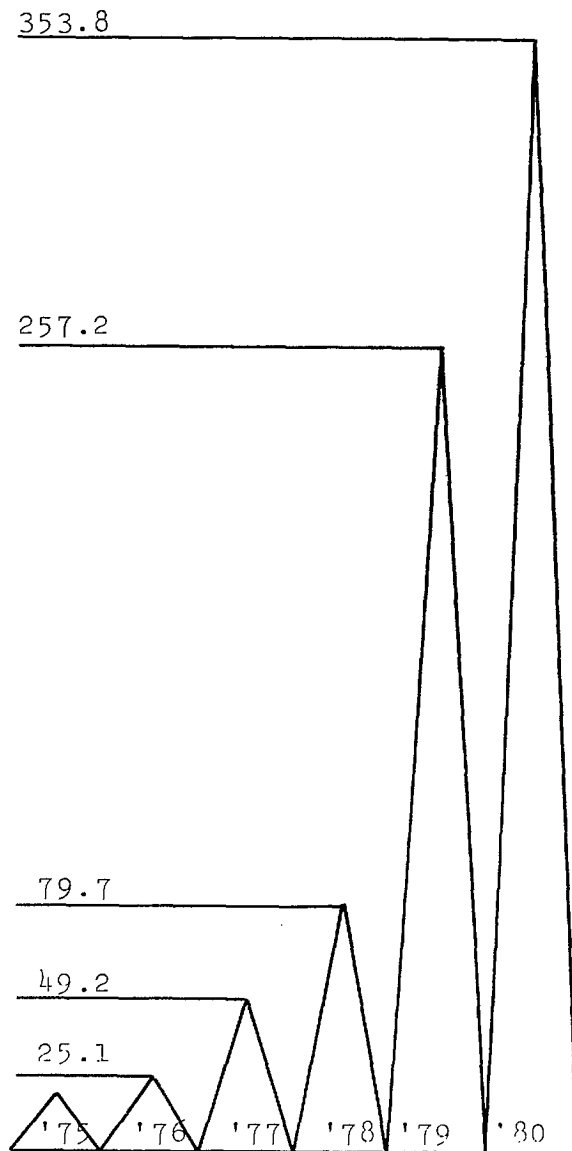
ELECTRONICS INDUSTRY

PRINCIPAL TRADE DEFICITS, BY COMMODITY CLASS (3 of 6)

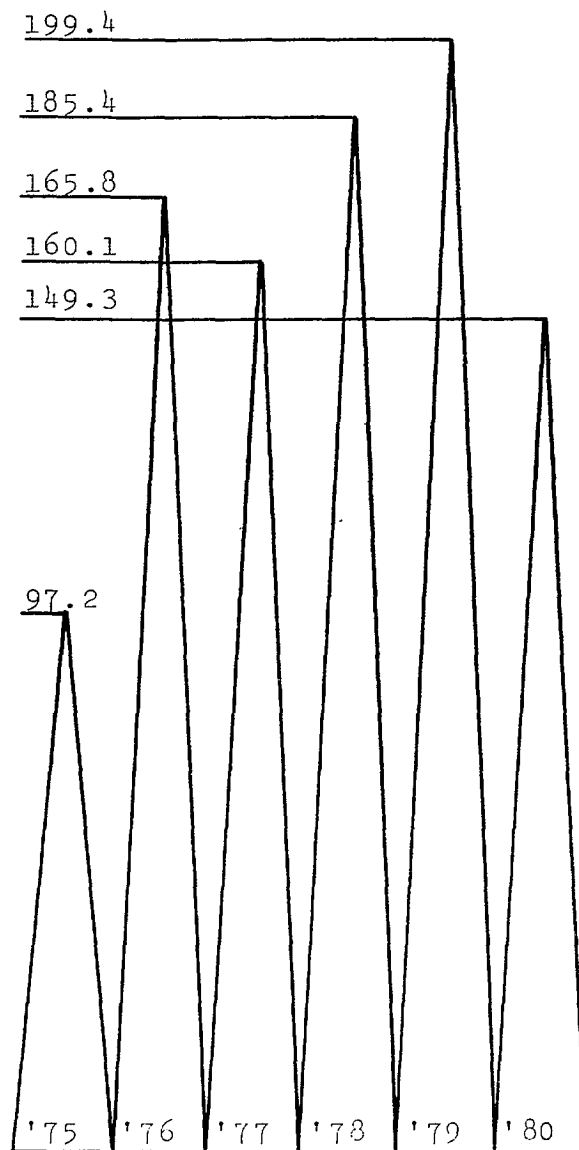
\$MILLIONS



COMPUTERS  
(Electronic Computer and Parts  
Card Punch, Sort, Tab.Machines)



MICROELECTRONICS  
(Integrated Circuits, Semi-  
Conductors and Parts)

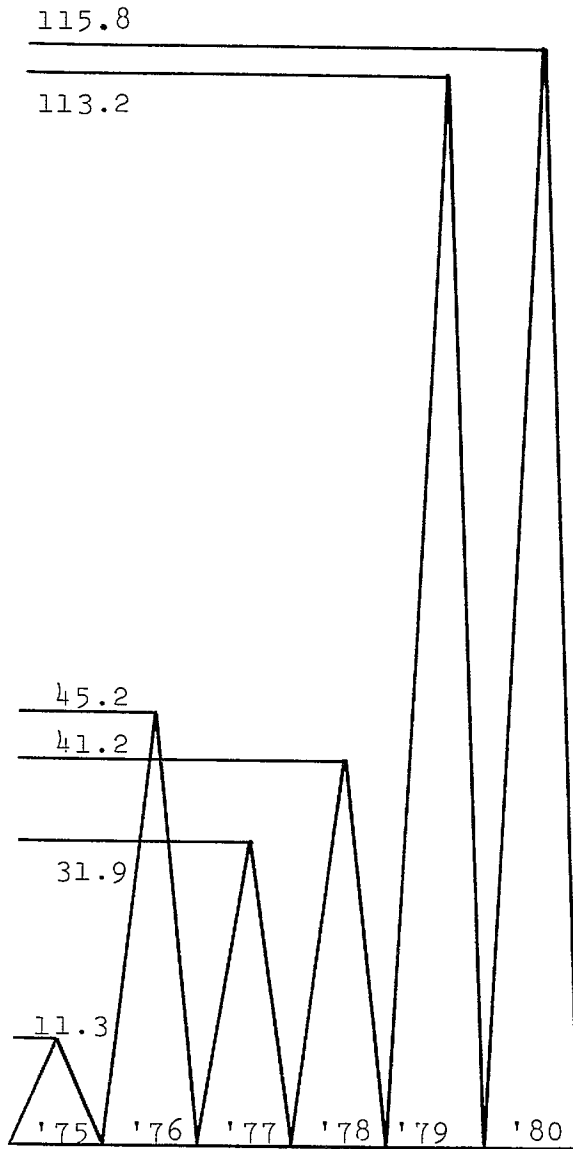


TELEVISION SETS

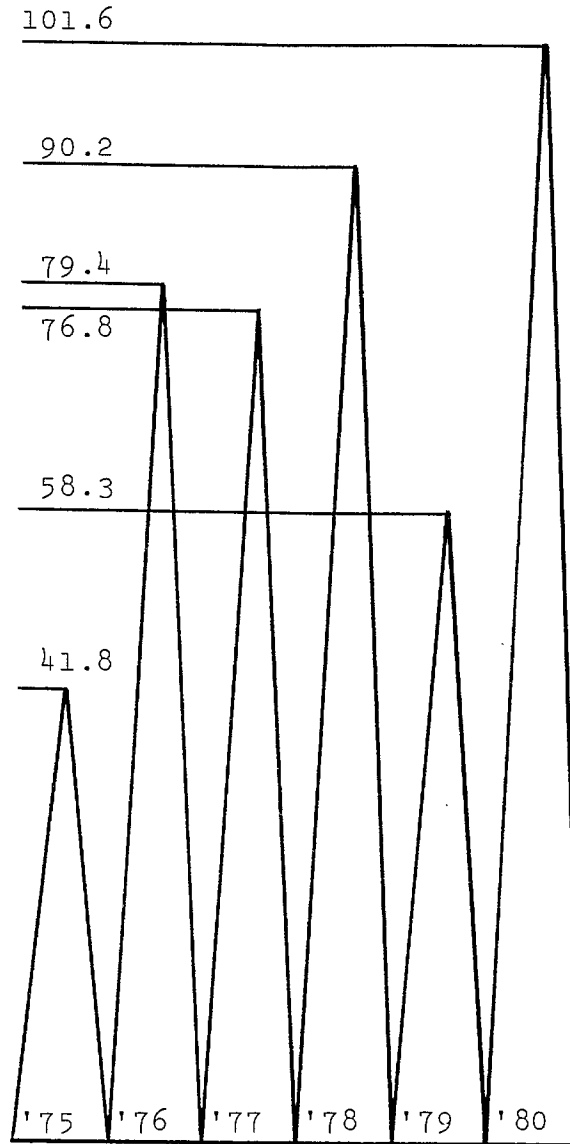
ELECTRONICS INDUSTRY

PRINCIPAL TRADE DEFICITS, BY COMMODITY CLASS (3 of 6)

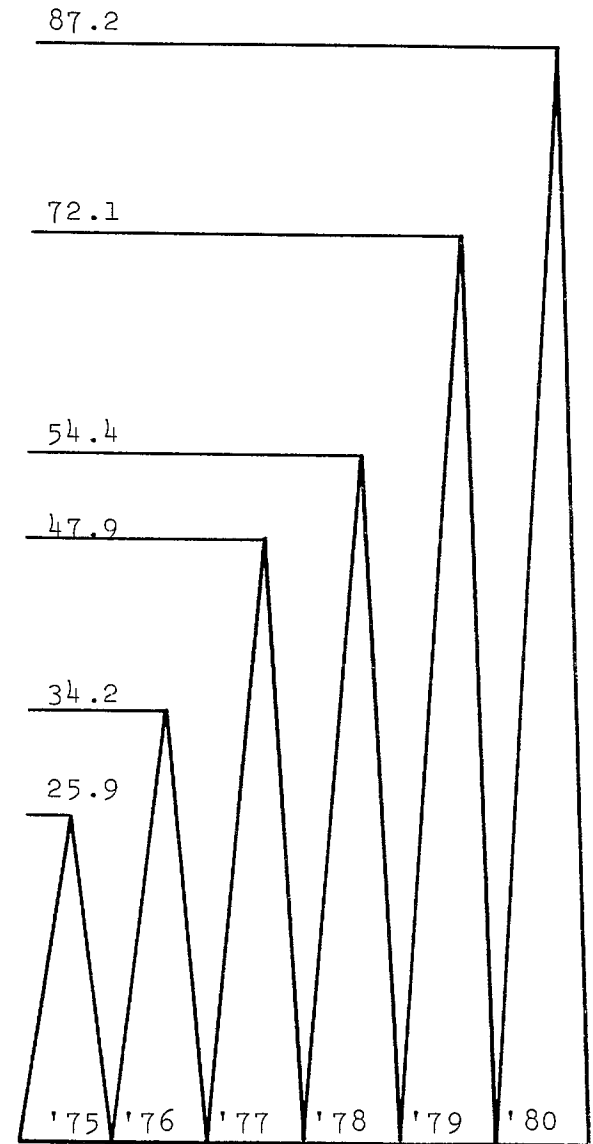
\$MILLIONS



ELECTRONIC COMPONENTS-OTHER



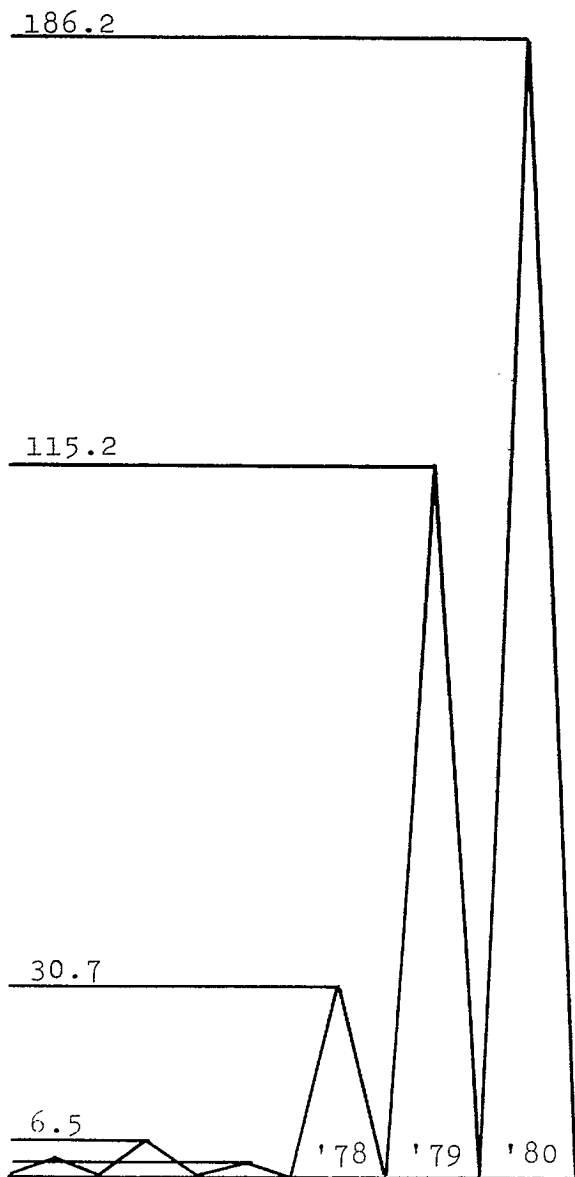
RADIOS



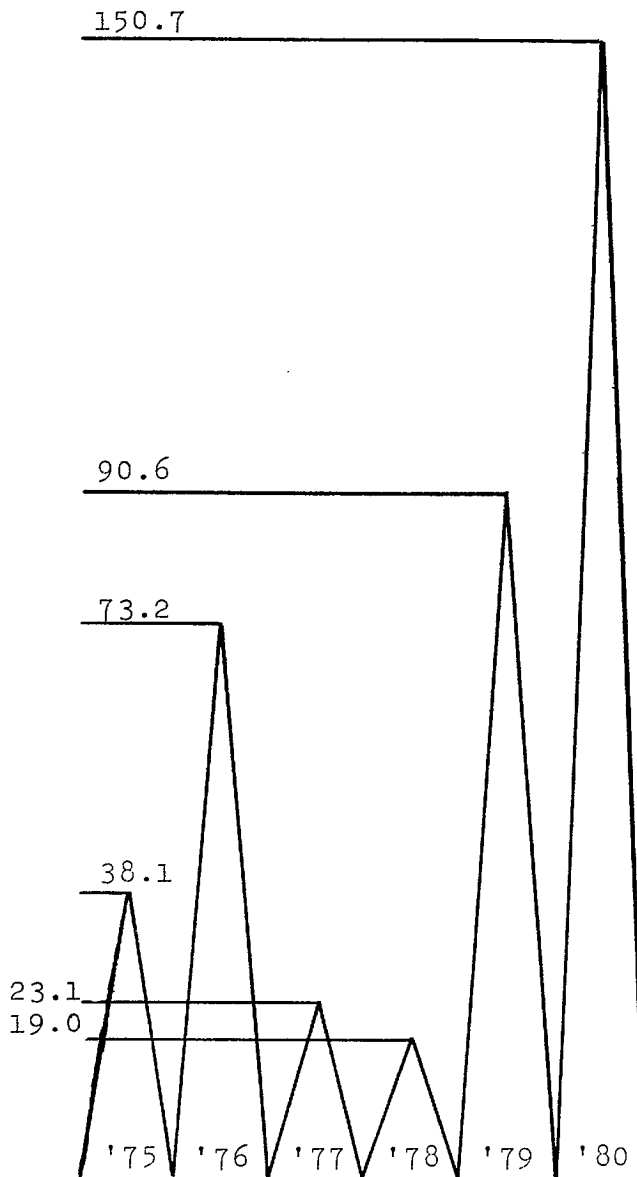
COMBINATION RADIO -  
PHONOGRAPH SETS

ELECTRONICS INDUSTRY

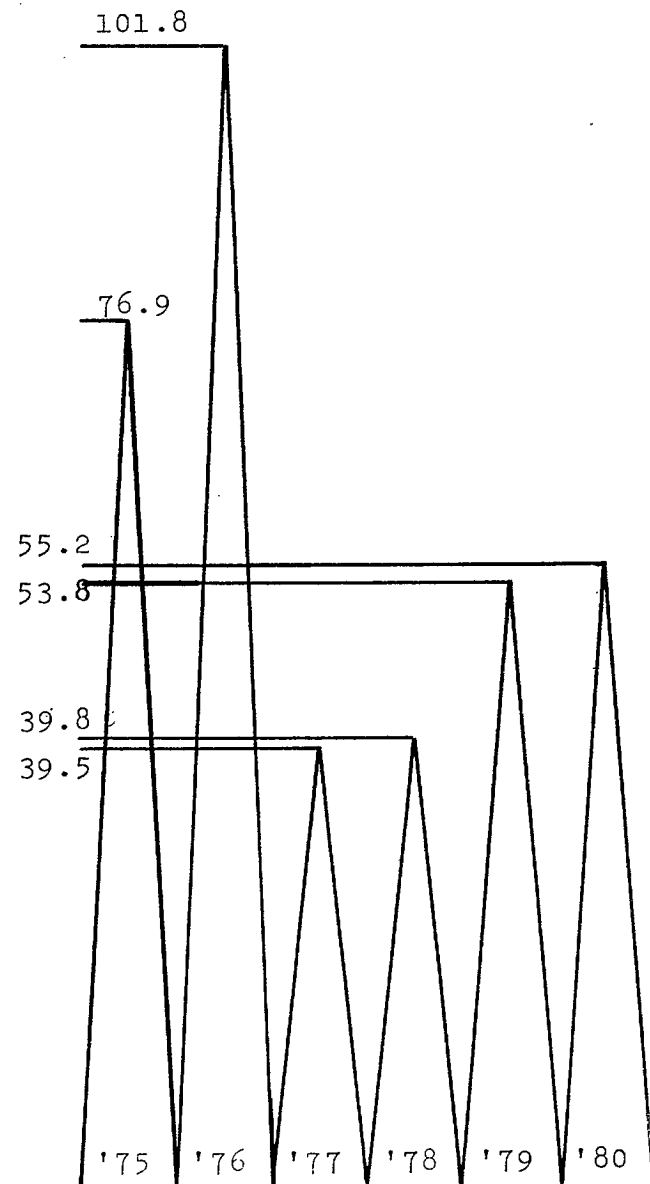
PRINCIPAL TRADE SURPLUSES BY COMMODITY CLASS  
\$MILLIONS



TELEPHONE APPARATUS, EQUIPMENT  
AND PARTS



COMMERCIAL COMMUNICATIONS  
EQUIPMENT

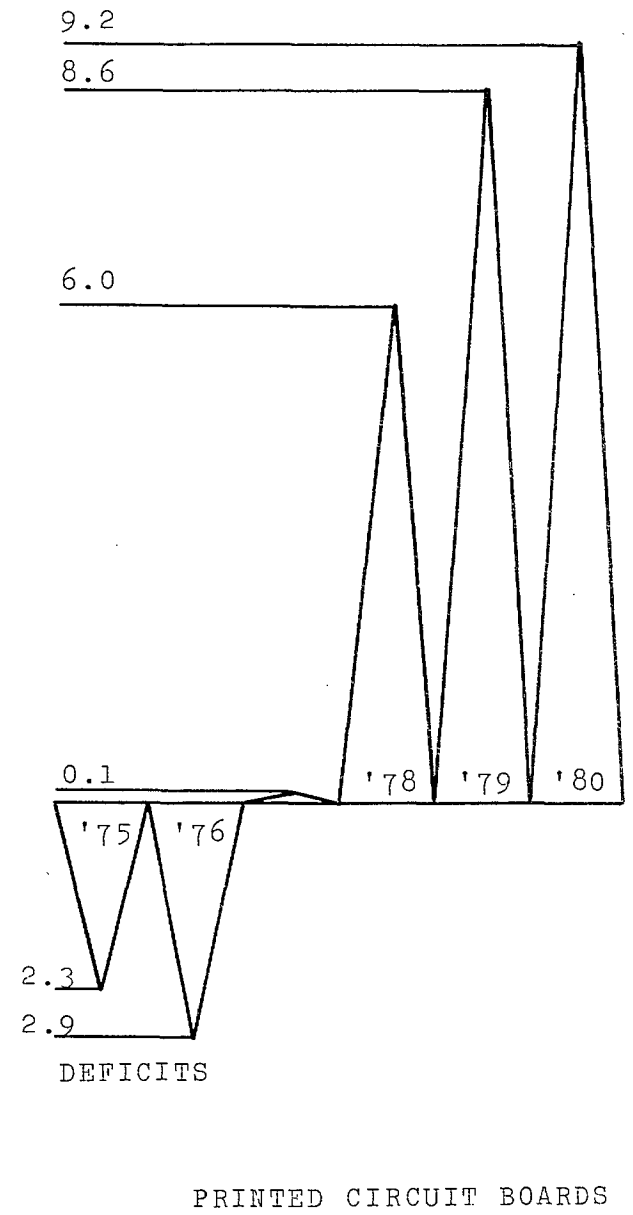
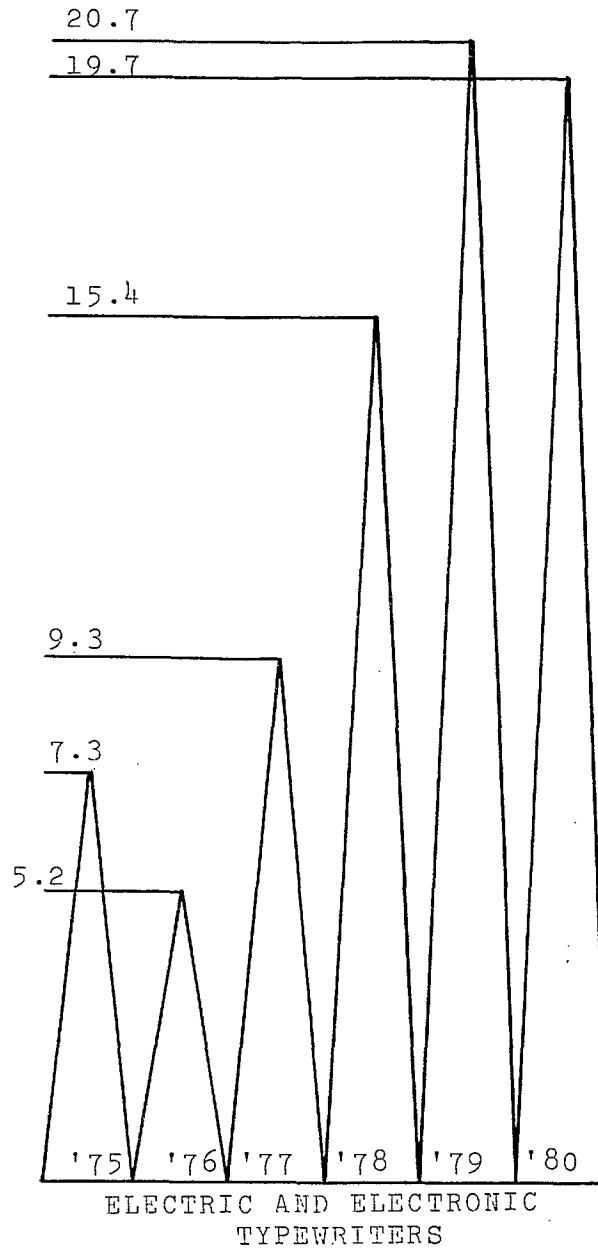
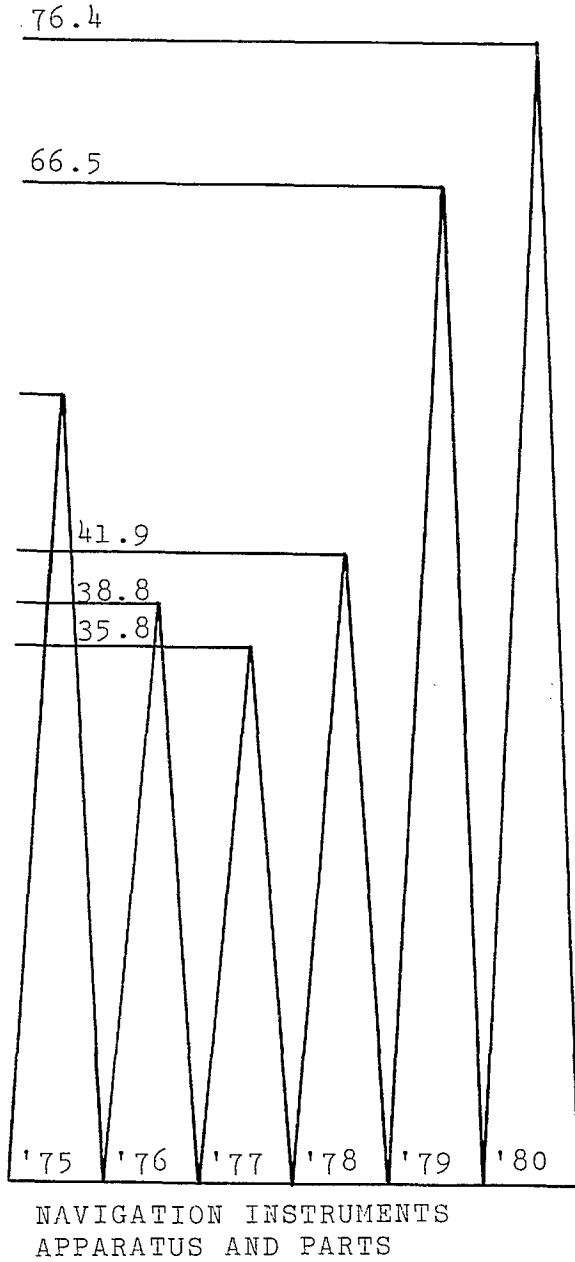


OFFICE MACHINES, EQUIPMENT  
AND PARTS, OTHER

ELECTRONICS INDUSTRY

PRINCIPAL TRADE SURPLUSES, BY COMMODITY CLASS

\$MILLIONS





## PART 2 EXPORTS

### ELECTRONICS

#### SIX-YEAR GROWTH RECORD

The following table shows how Canadian exports in 1980 became three-fold the size of the 1974 exports:

	\$ Millions	Growth	
		Annual %	1974=100
1980	1,996	23.3	298
1979	1,619	36.6	242
1978	1,185	37.2	177
1977	864	2.6	129
1976	842	13.9	126
1975	739	10.5	110
1974			100

Shipments from Canadian plants did not expand to the same extent and thus exports moved from 30% of shipments in 1975 to 46% in 1980.

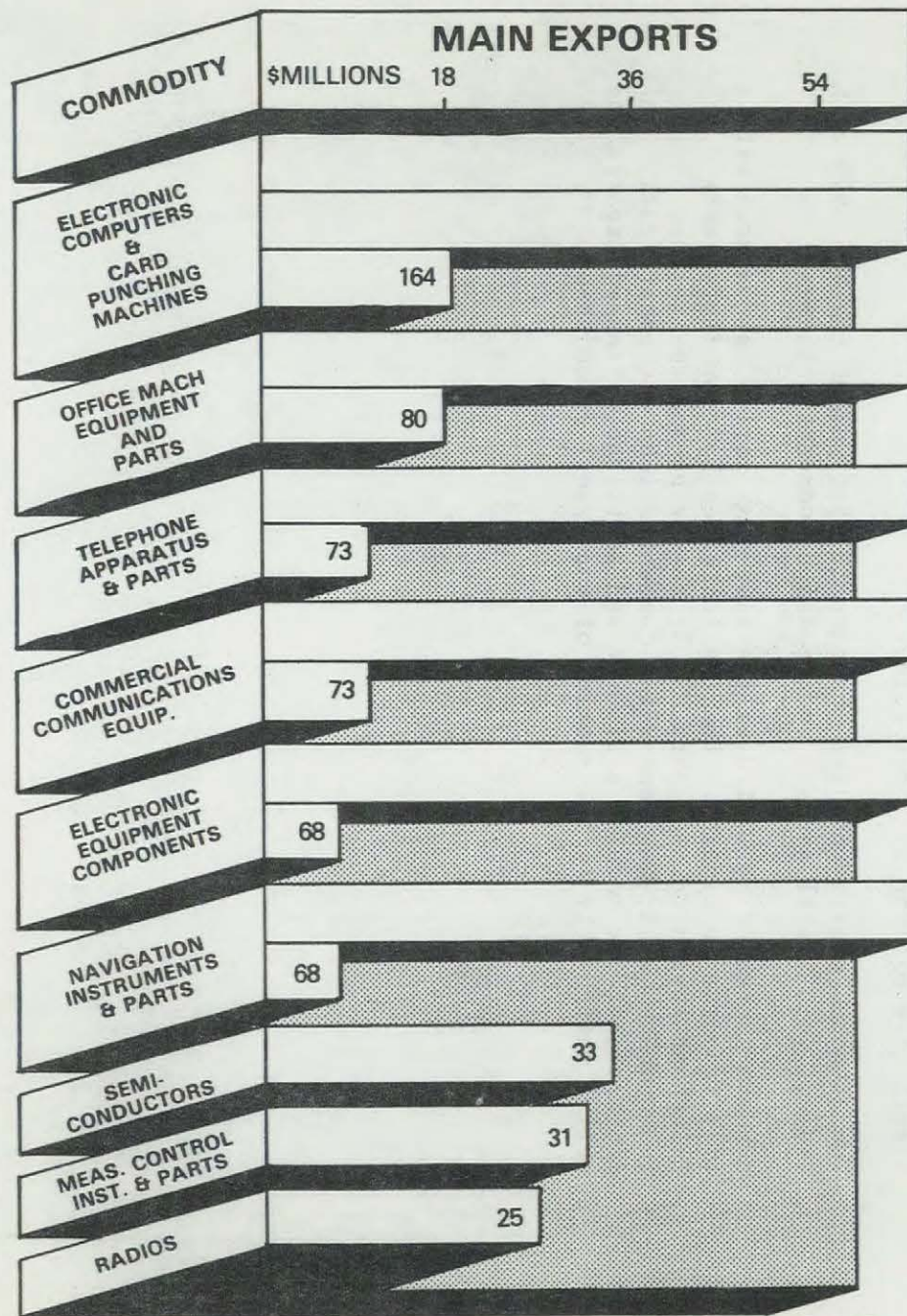
At the forefront of the 1978-1980 boom years were export increases to the United States (\$733 million or 135%); The Netherlands (\$3 million or four-fold); West Germany (\$27 million or three-fold); Sweden (\$26 million or eight-fold); Mexico (\$24 million or six-fold); and Brazil (\$14 million or three-fold).

The attached charts show the position in 1980 versus that in 1975 with respect to national markets and separate commodity classes.

Exports increased by 170% over the five-year period as compared with a 172% increase in imports. Leading increases by commodities were: Telephone apparatus and parts, 303%; Measuring and controlling instruments, 242%; and Commercial communications equipment, 238%. In contrast, office machine equipment and parts had decreased exports and fell significantly in the ranking of top export commodities.

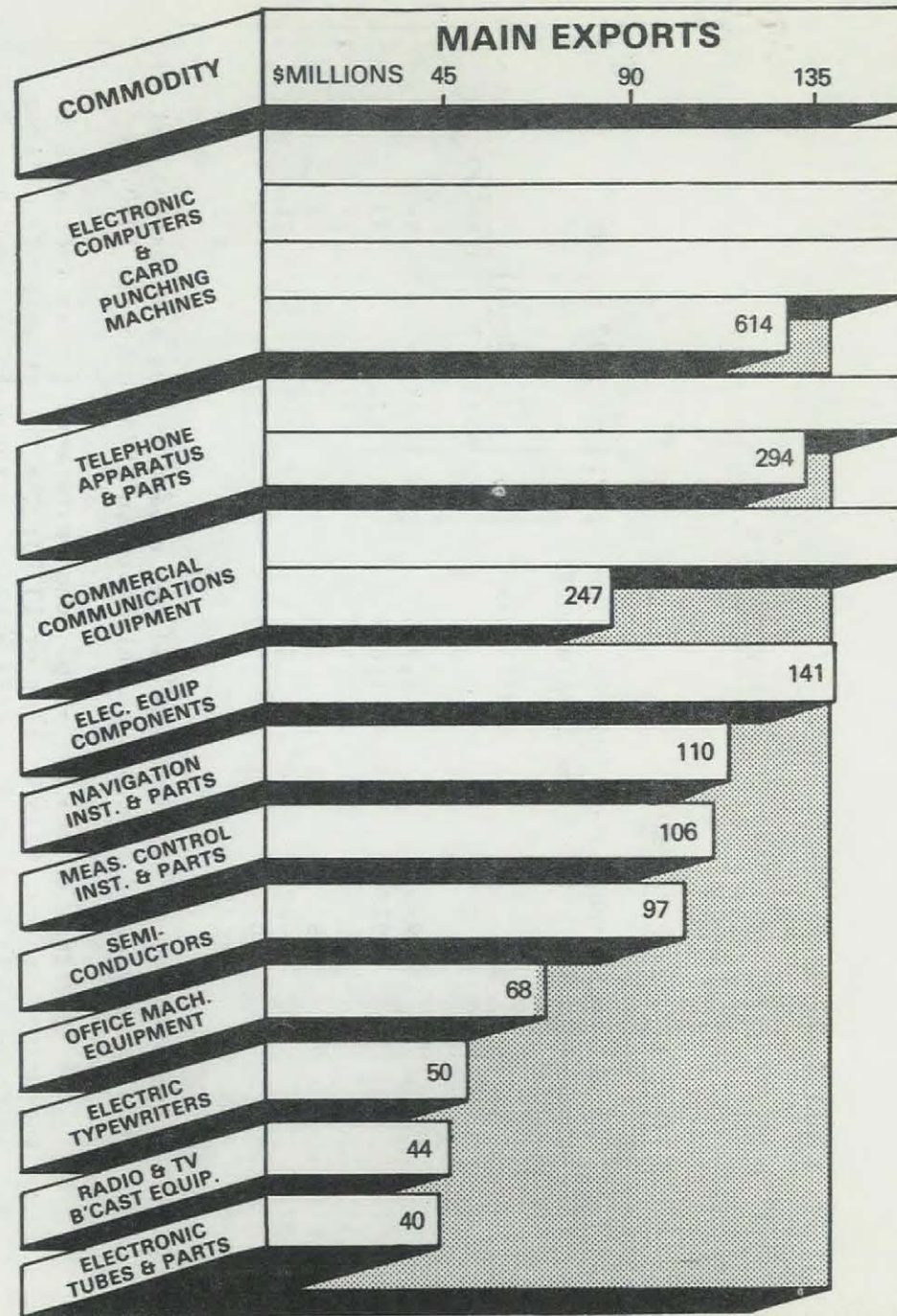
# ELECTRONICS INDUSTRY

1975



TOTAL \$739 MILLION

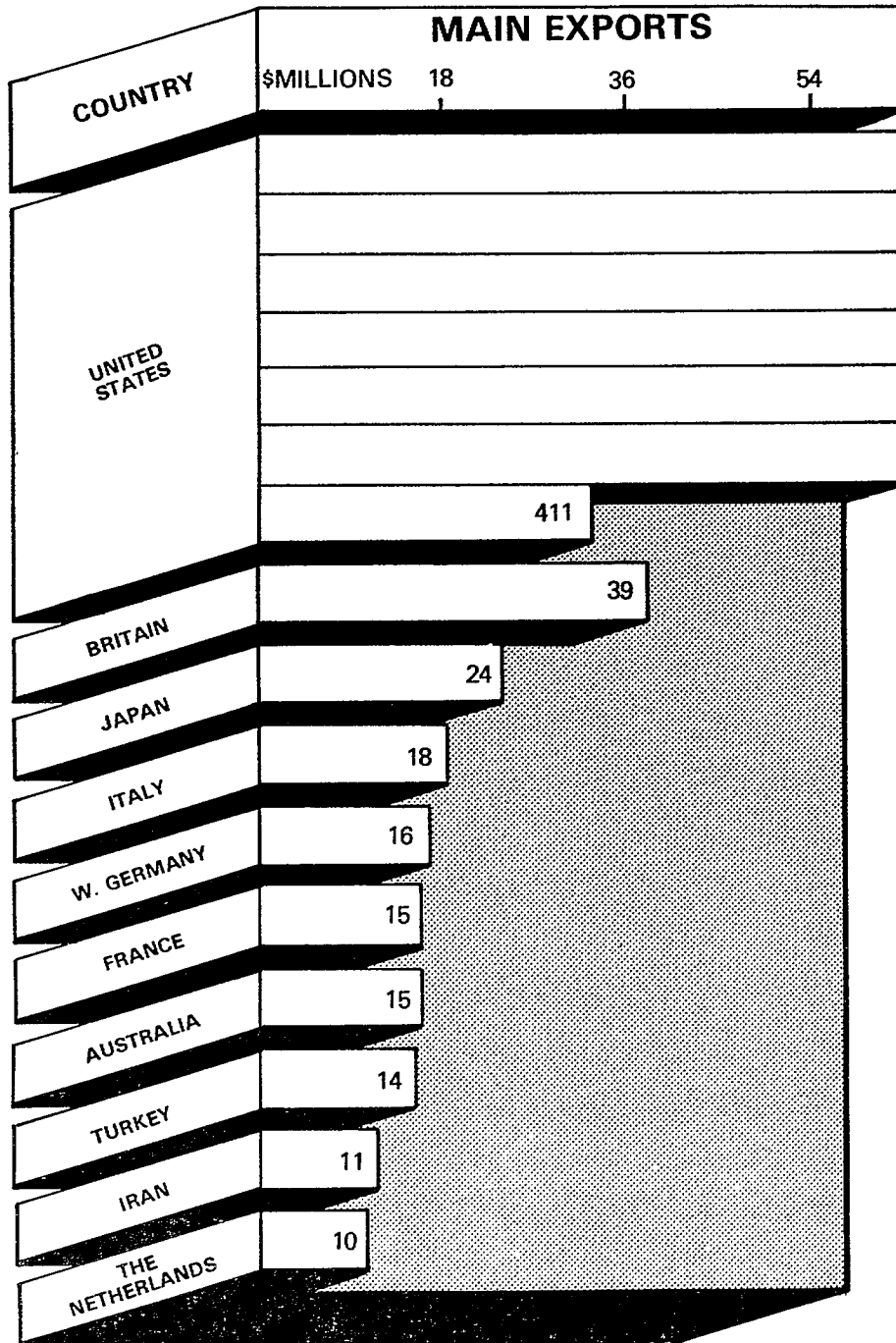
1980



TOTAL \$1,996 MILLION

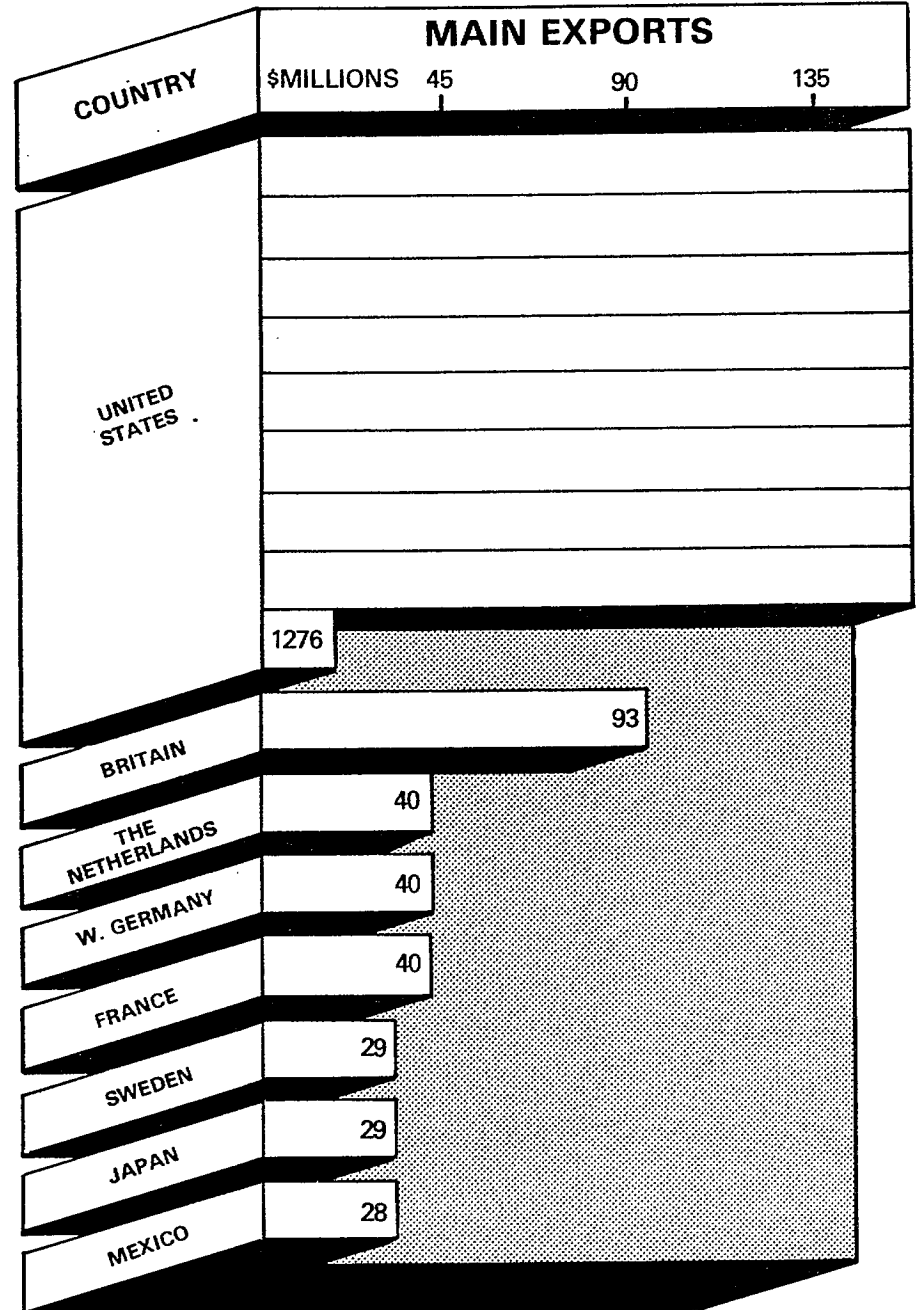
# ELECTRONICS INDUSTRY

1975



TOTAL \$739 MILLION

1980



TOTAL \$1,996 MILLION

SIGNIFICANT MARKETS, BY SECTOR

COMMUNICATIONS AND COMPONENTS

	Exports in \$ millions					'80
	'75	'76	'77	'78	'79	
U.S.A.	211	232	238	326	471	663
South Korea	20	14			10	11
U.K.	14	15	20	30	28	42
Turkey	13	22	19	15	19	17
Iran	10	22	12	5		
West Germany	9	8	7	13	19	24
Italy	8	4	7	7	9	13
France	6	7	8	13	16	19
Saudi Arabia	5	10	9	9	12	8
Libya	3	6	1	5	14	19
Ireland	2	2	4	5	11	22
All countries	<u>389</u>	<u>421</u>	<u>397</u>	<u>528</u>	<u>750</u>	<u>1,041</u>

The United States increased its share of Canadian exports every year, moving from 54% in 1975 to 64% in 1980. In the more traditional markets, exports did well to the United Kingdom and West Germany. The new markets doing very well were Ireland and Libya. The only market lost was Iran.

OFFICE MACHINES

	Exports in \$ Millions					'80
	'76	'76	'77	'78	'79	
U.S.A.	146	204	222	352	451	491
U.K.	21	23	21	19	28	31
Japan	20	19	11	11	13	21
Australia	11	17	15	14	15	11
Italy	11	7	11	5	7	10
France	8	8	13	11	14	20
Brazil	7	5	4	6	5	7
West Germany	6	5	5	6	7	13
The Netherlands	5	8	5	5	17	27
Mexico	3	4	2	4	7	13
Sweden		1	2	3	14	19
All countries	<u>272</u>	<u>331</u>	<u>347</u>	<u>475</u>	<u>642</u>	<u>739</u>

Exports to the United States rose from 54% of the total in 1975 to 74% by 1978 and then the reverse trend started which brought the share down to 66% in 1980. Total exports increased over the period by 172%. The national markets with the greater expansion were Sweden, The Netherlands, Mexico and France. Exports to the United Kingdom were higher in the latter two years, but to Japan, Australia, and Italy were dormant.

INSTRUMENTS

	Exports in \$ millions					
	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
U.S.A.	28	32	38	50	67	72
U.K.	3	4	4	6	6	7
The Netherlands	2	1	2	1	2	3
Mexico	1	3	1	3	6	10
Brazil	1		1	2	2	3
Australia	1	1	2	2	3	4
Venezuela	1		1	2	2	3
West Germany		1	2	2	3	3
All countries	<u>51</u>	<u>59</u>	<u>65</u>	<u>89</u>	<u>124</u>	<u>148</u>

Total exports increased by 190% over the period, the highest of any electronics sector. Moreover, as the share taken by the United States dropped to under 50%, exports to other countries did very well without any spectacular gains other than to Mexico.

RADIO AND TELEVISION

	Exports in \$ Millions					
	<u>'76</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
U.S.A.	26	29	46	82	87	50
U.K.		2	8	11	16	13
West Germany				2		
Venezuela						3
All countries	<u>27</u>	<u>31</u>	<u>55</u>	<u>95</u>	<u>104</u>	<u>68</u>

The increase of 152% in total exports to 1980 was the lowest for any sector, and the opposite to the position at the end of 1979. Because this is a two-country export market, the sharp drop-off in exports to the United States in 1980 had a marked effect on sector exports.

LEADING COMMODITIES, BY SECTOR

OFFICE MACHINES	(Exports of \$2 Million or More)					
	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
<u>ELECTRONIC COMPUTERS &amp; PARTS</u>	(\$ MILLIONS)					
<u>CARD PUNCHING MACHINES</u>						
Total	<u>164</u>	<u>190</u>	<u>239</u>	<u>347</u>	<u>504</u>	<u>614</u>
U.S.A.	75	107	160	254	342	398
Japan	16	15	7	9	12	19
U.K.	13	13	10	15	25	26
Italy	10	7	10	4	4	6
France	7	6	10	7	11	15
West Germany	6	5	4	5	7	11
Brazil	5	2	1	2	3	6
Australia	3	8	6	8	11	8
The Netherlands	3	3	2	2	15	27
Mexico	3	4		3	6	9
Venezuela	2	2	2		4	5
Spain	2					
South Korea		2				4
South Africa			2	5	2	4
Sweden				5	14	18
Argentina				5	6	4
Switzerland				2	11	8
Denmark						4
Belgium-Lux.						5

This commodity class is the largest in the electronics industry and more than twice as large as the next leading class. A strong growth rate of 30% annually compares with 29% for imports. Providing the impetus for the exports was the U.S.A. market with average growth of 40% annually. The loss of the market in Spain was offset by the gain to South Korea in 1976. Thereafter there were no markets lost and some very substantial markets gained of which the best were Sweden and Switzerland. Of the older markets, The Netherlands, which had been dull, rose from \$2 million to \$27 million in just two years to take second ranking behind the United States. Exports to the United Kingdom made a strong move to a new level in 1979 after a lean period, while those to Japan never got going and fell from 9.8% to 3.1% of total exports.

	(\$ Millions)					
<u>OFFICE MACHINES AND PARTS</u>	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Total	<u>80</u>	<u>104</u>	<u>49</u>	<u>59</u>	<u>72</u>	<u>68</u>
U.S.A.	65	88	33	44	53	42
U.K.	3	3	3	2	3	4
Australia	3	3	4	2	2	
France			3	3	3	5
Hong Kong	2					
Italy					2	3
West Germany						2
Mexico						2

The up-and-down export sales ended on the downside and below the level of 1975. If there was a bright spot it would be the non-U.S.A. markets which rose by \$7 million (37%) in 1980 against the direction of the United States market.

ELECTRIC TYPEWRITERS

	(\$ Millions)					
	<u>18</u>	<u>18</u>	<u>25</u>	<u>43</u>	<u>47</u>	<u>50</u>
Total						
U.S.A.			8	39	46	47
U.K.	5	6	7			
Japan	3	3	4			
Australia	3	4				

The nature of the world market changed completely between 1976 and 1978. In 1976, exports other than to the U.S.A. were 72% of world exports; two years later they were 9% and have yet to recover. Future exports may approximate \$50 million now that the United States demand has levelled off.

COMMUNICATIONS EQUIPMENT  
AND COMPONENTS

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
<u>Telephone Equip. &amp; Parts</u>						
Total	<u>73</u>	<u>87</u>	<u>93</u>	<u>121</u>	<u>228</u>	<u>294</u>
U.S.A.	37	46	54	77	158	203
Turkey	13	21	19	14	18	17
Dominican Republic	5	3				
Ireland	2	2	3	5	10	18
Philippines	2		3		2	
Saudi Arabia		4	3	4	3	
U.K.				2	5	12
Malaysia				3	3	3
Hong Kong				2	3	6
Sweden					4	6
Greece						4
Barbados						4

Growth of exports was exceedingly strong in later years. In 1978, they grew by \$28 million or 30%; 1979, \$107 million or 88%; and 1980, \$66 million or 29%. While the number of significant markets doubled, it was the U.S.A. market which accounted for the overall rate of growth. Turkey took \$102 million in the six years but may not remain the second best market for long as the markets of Ireland and the United Kingdom are on a sharp upturn.

COMMERCIAL COMMUNICATIONS  
EQUIPMENT

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
			(\$ Millions)			
Total	<u>73</u>	<u>107</u>	<u>80</u>	<u>94</u>	<u>166</u>	<u>246</u>
U.S.A.	29	40	36	51	79	122
South Korea	9	5			10	10
Iran	3	5	19	11		
Libya	2	4		5	11	17
Saudi Arabia	2	4	5	3	11	4
Yugoslavia			4	2	6	3
U.K.			2	2	4	8
Japan		2			2	2
West Germany					4	4
Australia					2	4
Argentina						8
Israel					3	3

Commercial communications equipment had the same exports as telephone equipment in 1975 but not the same steady growth trend thereafter. Following weakness in the middle years, the exports thrust upwards. The markets broadened quite noticeably in 1979, with the U.S.A. market accounting for only \$28 million of the \$72 million increase in total exports. The Middle East markets did well and even the Iranian market was maintained longer than for most other commodities. Current outlook for exports is very good in light of the \$80 million increase in 1980.

(\$ Millions)

Electronic Equipment Components

Total	<u>68</u>	<u>71</u>	<u>85</u>	<u>113</u>	<u>112</u>	<u>141</u>
U.S.A.	45	52	62	82	82	100
U.K.	3	3	4	4	4	6
West Germany	2	2	2	3	3	4
Belgium-Lux.					2	2



World exports were close behind those of telephone equipment and communications equipment in 1975. The class, however, is more dependent on exports to the U.S.A. which did little better than double over the five years. The top seller to the U.S.A. in 1975 in the sector, this commodity class sold less than one-half the amount sold by telephone equipment to the U.S.A. in 1980.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
<u>NAVIGATION INSTRUMENTS</u>						
Total	<u>68</u>	<u>59</u>	<u>51</u>	<u>69</u>	<u>95</u>	<u>110</u>
U.S.A.	41	37	34	47	72	86
West Germany	5	4	2	2	3	3
U.K.	2	5	2	2	3	2
Italy	3	3	3	2		
France	4	2	2	2	3	4
The Netherlands		2		3	2	2
Belgium-Lux.					2	3
Saudi Arabia						2

There is another commodity class with heavy dependence on the U.S.A. for exports. There was not a single country outside of the United States which had any significant gains.

The average annual growth rate by value was only 10.1% while the estimated industry selling price for all instruments was up 8.5% on an annual basis. Accordingly, there was very little improvement in the volume of exports.

	(\$ Millions)					
<u>SEMI-CONDUCTORS &amp; PARTS</u>						
Total	<u>33</u>	<u>27</u>	<u>17</u>	<u>26</u>	<u>34</u>	<u>97</u>
U.S.A.	17	16	12	16	20	69
South Korea	8	9				
U.K.	2			2		2
Malaysia				2	5	5
West Germany					2	2
Philippines						10
Switzerland						2

The performance was poor for four years to 1979 followed by a sudden change for the better. The 1980 exports were greater than for any previous three-year total, and non-U.S.A. markets held their 41% share of total exports in a show of widespread market strength.

The South Korean market suffered an abrupt collapse in 1976, whereas the Philippines market opened up just as abruptly in 1980.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
<u>RADIO &amp; TV BROADCAST TRANSMISSION EQUIPMENT</u>						
Total	<u>16</u>	<u>11</u>	<u>10</u>	<u>13</u>	<u>18</u>	<u>44</u>
U.S.A.	7	5	6	9	11	30
U.K.					2	4
Ireland						2

This was another commodity class with a poor performance until 1980. The big gains of 1980, moreover, were limited to the U.S.A. market which leaves Canada relying on the United States demand for 68% of its exports.

	(\$ Millions)					
<u>RADIO TRANSMITTING RECEIVING UNITS</u>						
Total	<u>16</u>	<u>18</u>	<u>9</u>	<u>13</u>	<u>14</u>	<u>24</u>
U.S.A.	7	9	4	6	7	8
Libya		3				2
Greece						3

With the U.S.A. market going nowhere and with no other sustained markets, the much improved export sales of 1980 may not last.

	(\$ Millions)					
<u>RADAR EQUIPMENT &amp; PARTS</u>						
Total	<u>15</u>	<u>6</u>	<u>12</u>	<u>14</u>	<u>10</u>	<u>11</u>
U.S.A.	10	6	8	9	5	6
Italy	2					
Malaysia				2		

Based on the recent bleak past performance, one might expect little more than an equally bleak future for exports of this class.

	<u>'75</u>	<u>'76</u>	<u>'77</u> (\$ Millions)	<u>'78</u>	<u>'79</u>	<u>'80</u>
<u>PRINTED CIRCUIT BOARDS</u>						
Total	<u>6</u>	<u>4</u>	<u>8</u>	<u>14</u>	<u>20</u>	<u>25</u>
U.S.A.	4	3	6	11	16	18
U.K.				2	4	5

The four-fold increase in the value of exports brought the class to a significant size. A \$4-6 million increase per annum is now well established and may be a minimum in the near future. If the new U.K. Market - already greater than that of the U.S.A. four years ago - were to expand in step with the United States market, the future would hold much promise.

	<u>INSTRUMENTS</u> (\$ Millions)					
Measuring Instruments	21	23	24	36	58	79
Parts	9	14	20	31	30	27
Total	<u>30</u>	<u>37</u>	<u>44</u>	<u>67</u>	<u>88</u>	<u>106</u>
U.S.A.	17	21	26	39	51	53
U.K.	2	3	4	4	5	6
Mexico		2		2	4	6
Poland					3	
Japan					2	3
Algeria					2	2
Australia						4
Venezuela						3
The Netherlands						2

The exports have been very healthy since 1977 with annual growth averaging 25% and with many new markets added. Exports to other than the United States increased to 50% in 1980 from 41% in 1977 to ease the reliance on that one market.

	<u>ELECTRICITY MEASURING INSTRUMENTS</u> (\$ Millions)					
Total	<u>12</u>	<u>12</u>	<u>9</u>	<u>10</u>	<u>18</u>	<u>19</u>
U.S.A.	6	6	5	5	9	7
Yugoslavia					2	
Mexico						2
Thailand						2
Saudi Arabia						2

Annual growth of 9.6% was only slightly higher than the selling price increase and would mean that the volume increase was minimal. United States demand is flat and, unless the new markets gained in 1980 are held, the future for exports look bleak.

GEOPHYSICAL & MINERAL  
PROSPECTING EQUIPMENT

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
Total	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>15</u>	<u>19</u>
U.S.A.	3	4	4	4	5	9
U.S.S.R.						2

The low volume of exports goes to numerous small markets, and this is the reason why Russia appears as the second largest market. The increases of \$5 million and \$4 million in the latter two years were a big improvement and bodes well for the near term.

RADIO AND TELEVISION

(\$ Millions)

Radio Sets

Total	<u>25</u>	<u>27</u>	<u>33</u>	<u>46</u>	<u>67</u>	<u>35</u>
U.S.A.	25	21	25	34	50	22
U.K.		2	8	11	16	13

As for all commodities in this sector, the breadth of markets for radios is extremely limited. So when the U.S.A. demand tumbled in 1980, the whole outlook changed from very good to very bad.

TELEVISION SETS

(\$ Millions)

Total	<u>1</u>	<u>5</u>	<u>17</u>	<u>43</u>	<u>30</u>	<u>29</u>
U.S.A.	1	4	17	42	29	25
Venezuela						3

The exceptional export market development to 1978 ran its course, and a continuing market of \$30 million annually appears likely.

PART 3 IMPORTS

ELECTRONICS

SIX-YEAR GROWTH RECORD

The flow of imports after dipping in 1975 was very strong. Moreover, the effect on prices due to inflation is relatively minor so that the figures below reflect strong volume increases.

	\$ Millions (Net of Re-Exports)	Growth	
		Annual %	1974=100
1980	4,532	25.3	262
1979	3,618	24.2	209
1978	2,912	27.1	168
1977	2,291	14.0	132
1976	2,010	19.4	116
1975	1,683	-2.7	97
1974			100

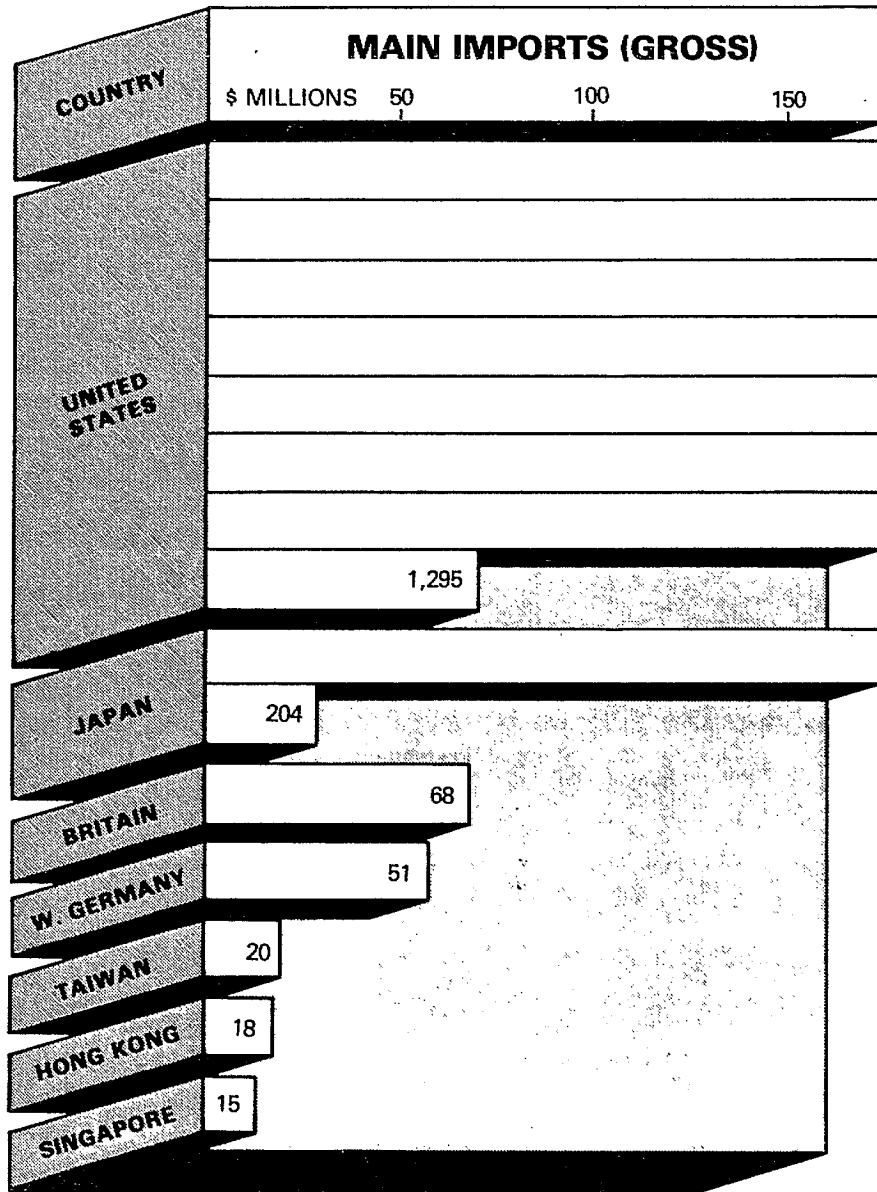
The recent increases in excess of \$600-\$900 annually have drastically changed the relationship of imports to shipments and to the apparent domestic market. In 1975, the \$1,683 million in imports equalled 69% of shipments and 50% of the ADM. By 1980, the \$4,532 million in imports equalled 106% of shipments and 66% of the ADM.

The U.S.A. improved its share of Canadian imports from 72.6% in 1975 to 78.3% in 1980 while, surprisingly, its nearest competitor, Japan, lost some of its share. Japan had held as much as 16% in 1976 and 1977 then three years of decline brought the share to 10.1% by 1980. Bigger share losses were recorded by both Britain and West Germany, down by more than one-half. Gaining the bigger shares were Taiwan and South Korea as the charts clearly show.

The changes between the value of imports in 1975 and 1980 from the leading source countries and of the leading imported commodities appear on the attached charts:

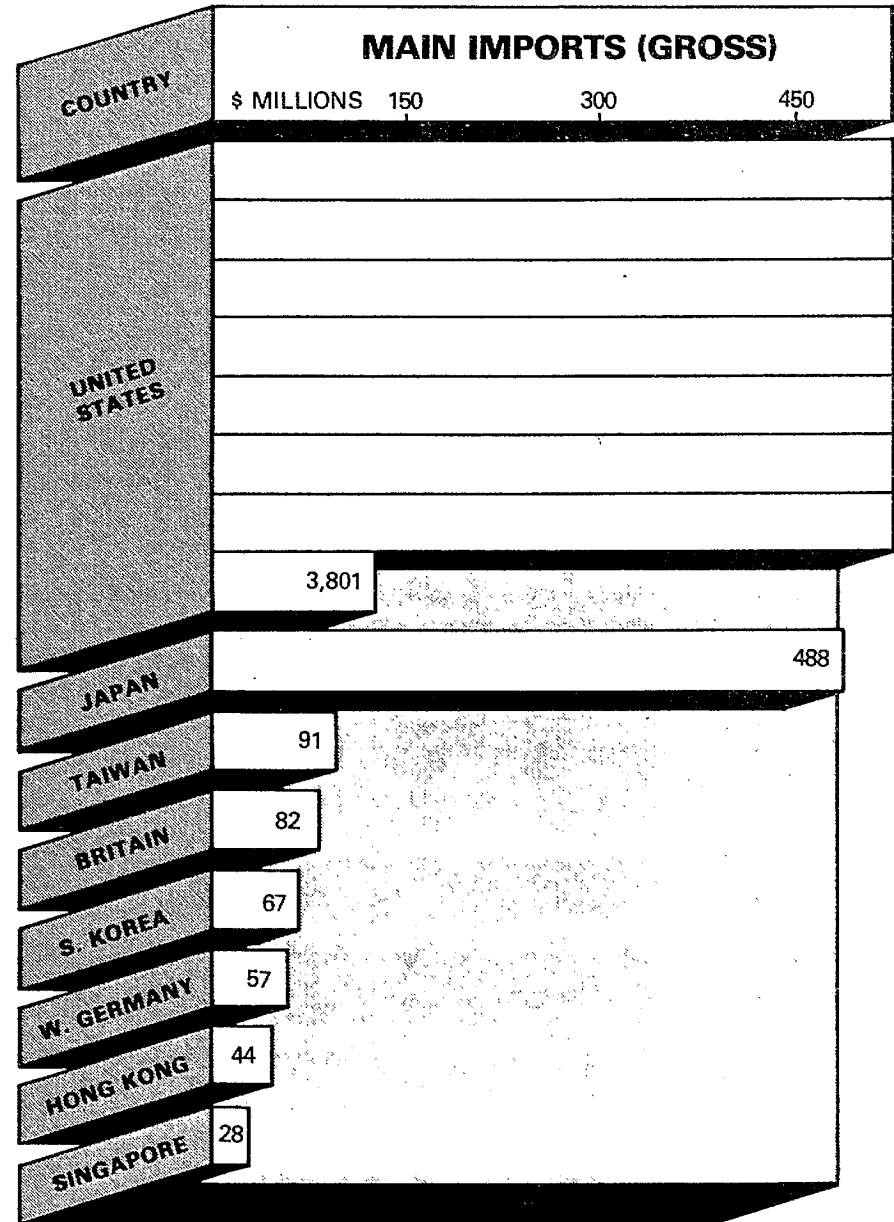
# ELECTRONICS INDUSTRY

1975



TOTAL \$1,783 MILLION

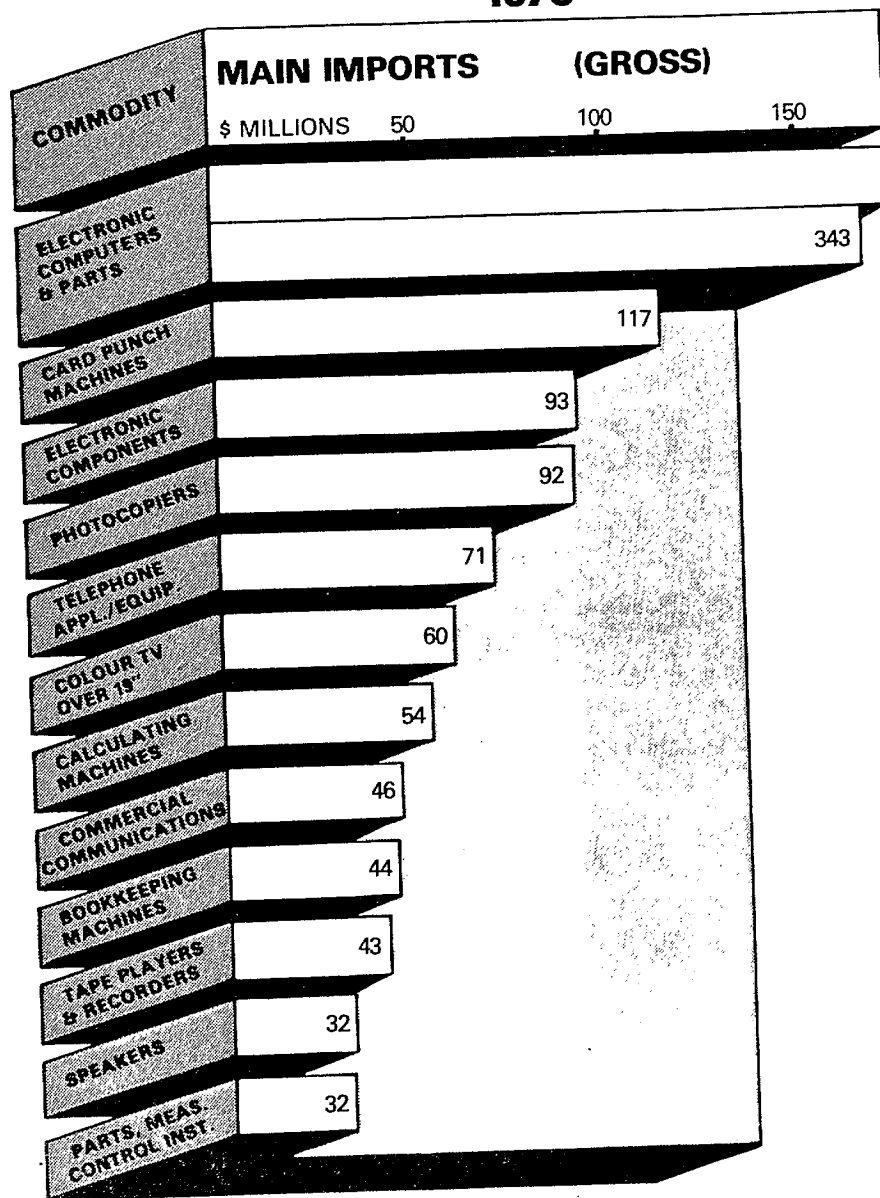
1980



TOTAL \$4,853 MILLION

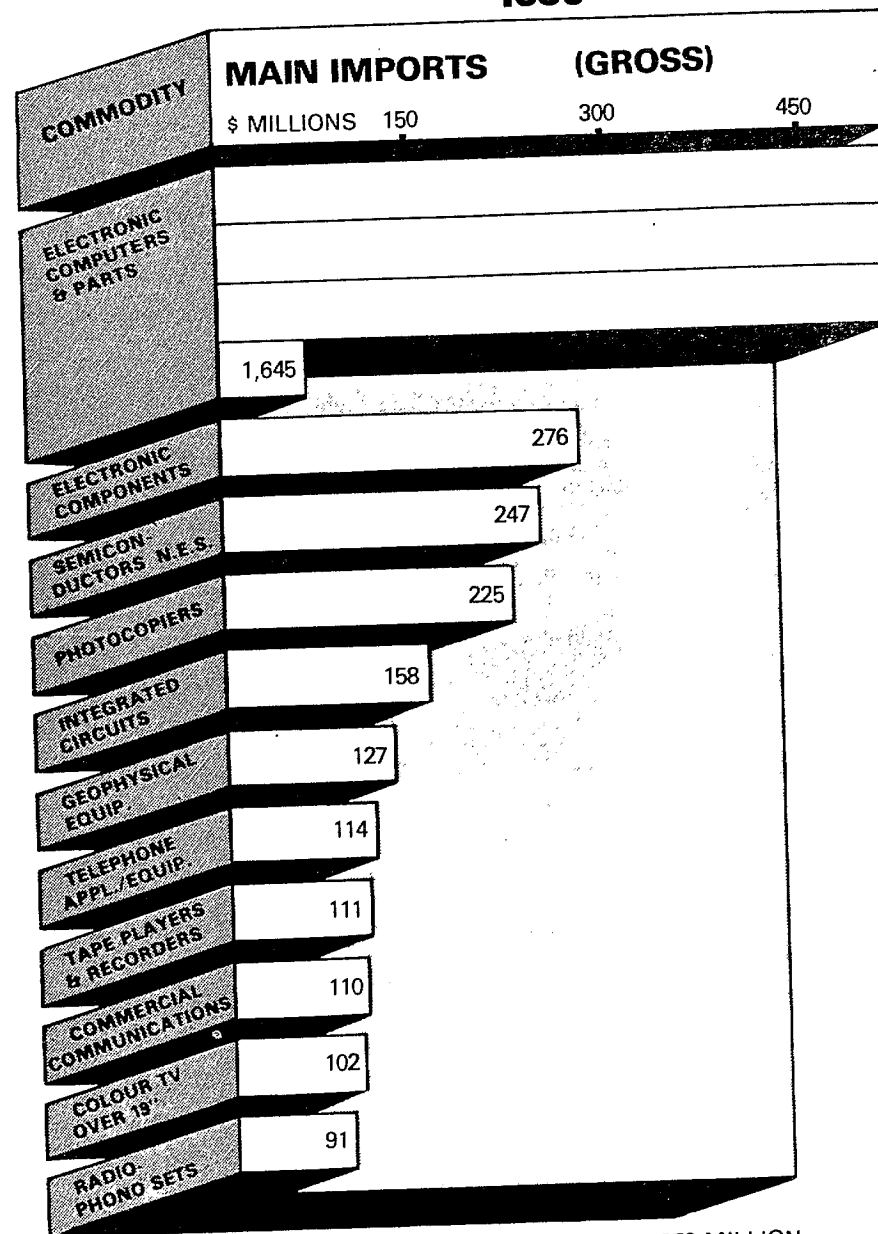
# ELECTRONICS INDUSTRY

1975



TOTAL \$1,783 MILLION

1980



TOTAL \$4,853 MILLION

In the commodities, the individual shifts can best be measured against the increase of 172% for the industry. Semi-conductors, N.E.S. came first and is shown with two sister classes as follows:

	<u>1975</u>	<u>1980</u>
Semi-conductors, N.E.S.	14	247
Semi-conductors, transistor	15	50
Parts	<u>9</u>	<u>38</u>
	<u>38</u>	<u>335</u>

and together they had a nine-fold increase. Integrated circuits followed with a six-fold increase and did not make the 1975 chart with only \$22 million. Combination Radio-Phonograph sets had a 240% increase.

Card Punching and Sorting machines, second on the 1975 chart with \$117 million, fell to \$9 million in 1980 and are now a very minor item. This is a result of technological change, more evident in electronics than electrical.

#### SIGNIFICANT SOURCE COUNTRIES, BY SECTOR

In the three largest sectors, the U.S.A. is improving, or holding, its dominant position. Only in Radio and Television does it not supply at least three-quarters of all imports to the Canadian market.

#### OFFICE MACHINES

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	Imports in \$ millions					
U.S.A.	520	610	672	899	1,151	1,704
Japan	33	37	49	63	78	66
U.K.	25	12	12	15	18	22
W. Germany	19	19	17	17	13	14
Italy	8	9	10	20	14	17
The Netherlands	8	8	8	10	10	10
Sweden	4	3	2	7	10	10
Puerto Rico				2	10	16
Total	<u>659</u>	<u>736</u>	<u>804</u>	<u>1,073</u>	<u>1,343</u>	<u>1,896</u>



The U.S.A. tripled its value whereas Japan, its closest competitor, only managed to double its volume. European suppliers made no headway at all and we may see Puerto Rico offering a strong challenge to the older suppliers in the very near future.

COMMUNICATIONS AND COMPONENTS

	Imports in \$ Millions					
	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
U.S.A.	443	493	575	720	1,045	1,283
Japan	56	103	116	139	162	185
U.K.	33	32	33	38	50	44
W. Germany	14	12	14	15	20	25
Taiwan	7	14	11	13	25	37
Mexico	3	12	12	18	21	22
South Korea	2	6	10	10	14	11
Total	<u>575</u>	<u>713</u>	<u>824</u>	<u>1,007</u>	<u>1,411</u>	<u>1,691</u>

Competing countries are keeping a little closer to the U.S.A. in this sector. Moreover, the countries with relatively low labour costs made remarkable gains from a low base in 1975 although there was some tapering off in the rate of increase in the later years.

INSTRUMENTS

	Imports in \$ Millions					
	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
U.S.A.	234	227	303	403	477	615
W. Germany	16	18	12	11	17	16
U.K.	9	7	8	11	16	16
Japan	7	13	21	29	43	60
Total	<u>277</u>	<u>275</u>	<u>358</u>	<u>473</u>	<u>576</u>	<u>730</u>

With the U.S.A. maintaining 84% of the Canadian market, there are fewer large suppliers in this sector. The 1975 ranking, while made up of the same four countries as in the above sectors, was in a different order. The end was much the same, however, as the European suppliers lost a good deal of their share. Japan is much stronger in this sector after continuously good annual gains.

RADIO AND TELEVISION

Imports in Millions

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
Japan	108	185	197	199	168	178
U.S.A.	98	114	131	214	216	200
Taiwan	12	16	16	24	39	51
South Korea	12	29	34	36	72	55
Hong Kong	12	23	23	20	21	30
Singapore	7	13	14	15	20	16
Total	<u>252</u>	<u>384</u>	<u>421</u>	<u>512</u>	<u>544</u>	<u>536</u>

Japan, starting slightly ahead of the U.S.A. in 1975, moved far ahead in the next two years and appeared about to leave the competition in its wake. But the Japanese imports eased after that and the U.S.A. came on to supercede Japan as the leading supplier. Imports from Taiwan and South Korea were very strong in the late years and now each country has 10% of the Canadian imports which is double the share held in 1975.

LEADING COMMODITIES, BY SECTOR

(Imports of \$5 million or more)

OFFICE MACHINES

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$Millions)					
Card Punching Machines	117	123	52	10	6	9
<u>Electronic Computers</u>	<u>343</u>	<u>428</u>	<u>553</u>	<u>851</u>	<u>1,098</u>	<u>1,645</u>
<u>Total</u>	<u>460</u>	<u>551</u>	<u>605</u>	<u>861</u>	<u>1,104</u>	<u>1,654</u>
U.S.A.	423	520	568	785	1,014	1,559
U.K.	9			9	11	17
France	5	5	7	12	9	6
Japan		10	7	20	28	18
W. Germany		5	5	5	5	5
Italy				13	7	11
Brazil				7		
Puerto Rico					10	16
Sweden					8	9

The decline of card punching machines and the rise of electronic computers had little effect on the 'players' concerned: more countries continued to engage in the Canadian market as it grew by \$1.2 billion but the United States ended the period with 94% after opening with 92% so that little changed on a proportionate basis. The average growth rate was a striking 29% annually and rose to 40% after 1977.

Typewriters

(\$ Millions)

Electric	11	13	16	16	14	16
Electronic				12	13	15
Parts	26	24	33	39	46	52
<u>Total</u>	<u>37</u>	<u>37</u>	<u>49</u>	<u>67</u>	<u>73</u>	<u>83</u>
U.S.A.	20	18	29	39	48	57
W. Germany	5	6	5	6		
The Netherlands				6	6	
Italy				6	5	5

Gains by the United States kept the competition out. Over the period, the imports were up by 220% and the U.S.A. increased its share to 69% from 54% in this good import market.

COMMUNICATIONS EQUIPMENT AND COMPONENTS

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
<u>Microelectronics</u>						
Integrated Circuits	22	22	30	53	105	158
Semi-Conductors, Trans.	15	15	25	39	51	50
Semi-Conductors, Other	14	17	15	23	134	247
Semi-Conductors, Parts	10	7	6	6	31	39
Total	<u>61</u>	<u>61</u>	<u>76</u>	<u>121</u>	<u>321</u>	<u>494</u>
U.S.A.	47	50	63	108	293	454
France					7	
U.K.					5	
Japan						9

An eight-fold increase makes this group of products the leader in growth throughout the industry. Yet even with the demand for foreign products growing by 59% in 1978, 165% in 1979, and 54% in 1980, the scope of competition actually narrowed. The United States supplied 77% of imports in 1975 and 92% in 1980.

Electronic Components - Other

	(\$ Millions)					
Total	93	127	128	164	240	276
U.S.A.	78	98	101	132	190	220
Japan	7	11	10	11	18	22
Mexico		6				5
W. Germany					6	5
Taiwan					5	8

The hold of the United States on imports lessened a little from 84% to 80% over the period, to allow four other countries to sell over \$5 million annually. Growth, which was particularly high in 1978 (28%) and 1979 (46%), tapered off to 15% in 1980.

	<u>'75</u>	<u>'76</u>	<u>'77</u> (\$ Millions)	<u>'78</u>	<u>'79</u>	<u>'80</u>
Telephone Equipment & Parts	71	82	92	92	116	114
<u>Telegraph Equipment &amp; Parts</u>	<u>19</u>	<u>13</u>	<u>20</u>	<u>22</u>	<u>22</u>	<u>22</u>
Total	<u>90</u>	<u>95</u>	<u>112</u>	<u>114</u>	<u>138</u>	<u>136</u>
U.S.A.	70	78	99	100	120	112
Japan	6	5				
U.K.	5	5				
Sweden	5					

Offshore competition fell away to leave the United States as the sole supplier of significance.

	(\$ Millions)					
Commercial Communications						
<u>Small Equipment</u>						
Total	<u>46</u>	<u>46</u>	<u>64</u>	<u>84</u>	<u>85</u>	<u>110</u>
U.S.A.	37	35	50	64	64	79
Japan		7	8	13	15	22

Growth came in stages with 1976 and 1979 being flat years. Japan tripled its imports over the latter four years and took a sizeable portion of the market away from the United States.

	(\$ Millions)					
Electronic Capacitors	18	18	28	35	53	54
<u>Electronic Resistors</u>	<u>12</u>	<u>11</u>	<u>13</u>	<u>16</u>	<u>26</u>	<u>22</u>
Total	<u>30</u>	<u>29</u>	<u>41</u>	<u>51</u>	<u>79</u>	<u>76</u>
U.S.A.	24	23	32	40	60	58

The United States maintained approximately 80% of the imports throughout and had no serious challenges although demand was up by two and one-half times.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
<u>Television, Radio, and Phonograph Set Chassis</u>						
Total	<u>9</u>	<u>18</u>	<u>17</u>	<u>22</u>	<u>42</u>	<u>54</u>
U.S.A.	<u>5</u>					
Japan		6	6	9	23	28
Mexico				6	10	12
Taiwan						9

Growth was very strong except in 1977 and 1978. Japan took full advantage of the market opportunities and the low-wage countries of Mexico and Taiwan joined in. The United States, however, was not a significant supplier after 1975.

INSTRUMENTS

(\$ Millions)

<u>Photocopiers &amp; Parts</u>						
Total	<u>92</u>	<u>68</u>	<u>112</u>	<u>157</u>	<u>171</u>	<u>225</u>
U.S.A.	<u>74</u>	<u>42</u>	<u>86</u>	<u>124</u>	<u>120</u>	<u>159</u>
W. Germany	12	15	8	6	11	10
Japan		10	17	25	37	54

The rate of growth following the fall in imports in 1976 was quite strong - averaging 35% annually. Japan managed to get a strong foothold in 1976, and then increased that foothold by five times as imports strengthened. Japan's growing share of Canadian imports reached 24% in 1980.

Geophysical Equipment  
and Parts

(\$ Millions)

Total	<u>22</u>	<u>32</u>	<u>43</u>	<u>57</u>	<u>85</u>	<u>127</u>
U.S.A.	<u>19</u>	<u>30</u>	<u>40</u>	<u>52</u>	<u>78</u>	<u>119</u>

A near six-fold increase in five years puts this commodity class among the top ones regarding growth. The United States was the only significant supplier.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
<u>Electrical and Electronic Measuring Instrument</u>	29	27	33	42	59	67
<u>Measuring &amp; Controlling Instrument, Parts</u>	32	31	36	44	53	62
Total	<u>61</u>	<u>58</u>	<u>69</u>	<u>86</u>	<u>112</u>	<u>129</u>
U.S.A.	<u>58</u>	<u>54</u>	<u>63</u>	<u>78</u>	<u>101</u>	<u>119</u>

Although picking up in 1977, this import market is not expanding in the manner of geophysical equipment. However, the American dominance is the same.

RADIO AND TELEVISION

	(\$ Millions)					
<u>Television Sets</u>						
Colour, Over 19"	60	101	107	145	125	102
Colour, 19"	5	5	9	26	28	20
Colour, Under 19"	<u>22</u>	<u>36</u>	<u>37</u>	<u>36</u>	<u>43</u>	<u>33</u>
Total	<u>87</u>	<u>142</u>	<u>153</u>	<u>207</u>	<u>196</u>	<u>155</u>
Japan	43	85	90	67	38	23
U.S.A.	40	48	55	122	119	105
Singapore		8	7	10	12	
Taiwan				7	12	13

Japan made exceptional gains against the United States in 1976 and 1977; after that the position reversed as Japan's share of the market fell from 59% to 15%. Imports, generally, took a roller-coaster path and the dip became sharp in 1980.

	(\$ Millions)					
Black & White, Over 19"	2	6	3	1	3	1
Black & White, 19"				2	3	2
Black & White, Under 19"	<u>12</u>	<u>22</u>	<u>22</u>	<u>19</u>	<u>28</u>	<u>24</u>
Total	<u>14</u>	<u>28</u>	<u>25</u>	<u>22</u>	<u>34</u>	<u>27</u>
South Korea		11	13	11	22	16
Japan		8	6			
Taiwan				6	8	7

Only the small black and white television sets enter Canada in significant quantities and even then the growth of imports is quite restrained. The noticeable feature is the presence of South Korea at the top of the list, the absence of the United States which holds top spot for coloured sets, and the replacement of Japan by Taiwan.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
	(\$ Millions)					
<u>Radios</u>						
<u>Car Radio</u>	<u>24</u>	<u>36</u>	<u>43</u>	<u>60</u>	<u>56</u>	<u>61</u>
U.S.A.	21	32	38	54	50	55
<u>Radio-Phonograph Sets</u>						
Japan	13	19	24	30	31	38
U.S.A.	7	7	12	13	16	15
South Korea		7	10	8	15	13
Taiwan					11	15
Hong Kong						5
<u>Transistor &amp; Other</u>						
Japan	18	30	29	38	28	27
Hong Kong	11	19	19	15	15	22
Taiwan		6	5	6		7
South Korea		6	7	10	12	8
Singapore						7

In car radios, the United States supplies some 90% of the imports into Canada; in radio-phonograph sets, it is a distant second and may be about to lose that position; and in hand-carried radios it supplies less than \$5 million annually and does not rank in the top ten.

In other than automobile radios, Japan has the lead although doing much better with the bigger combination radio-phonographs than those of smaller-size. In both latter classes, however, Japan's market share dropped by 6% over the period to 42% and 38% respectively.



South Korea's exports of transistor radios to Canada jumped 50% in 1980, and with Japan's exports on a decline, South Korea may move to top ranking before too long.

	<u>'75</u>	<u>'76</u>	<u>'77</u>	<u>'78</u>	<u>'79</u>	<u>'80</u>
			(\$ Millions)			
<u>Tape Players</u>	<u>43</u>	<u>52</u>	<u>60</u>	<u>73</u>	<u>93</u>	<u>111</u>
Japan	27	36	43	55	65	83
U.S.A.	9	6	6	8	11	10
South Korea		5		5	6	7
Taiwan					5	8

The growth of tape player imports was quite strong and second only to radio-phonograph sets. Imports were up 252% and those from Japan by 307% so that, unlike in television and radio, Japan is not losing ground in this market.

