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COMMUNICATIONS EQUIPMENT MANUFACTURERS

1964

For statistical purposes the industry titled Communications Equipment Manufacturers in the revised Standard Industrial Classification covers the operations of establishments primarily engaged in manufacturing radio and television transmitters, radar equipment, closed circuit television equipment, and electronic navigational aids; public address apparatus, and the related parts and equipment. Included are establishments primarily engaged in manufacturing telephone and telegraph equipment and parts and panels and similar devices.

There are in total six additional firms included in the industry in 1964 but it should be noted that the real change involved the addition of 14 firms and the deletion of 8 firms.

During the year, the value of shipments of goods of own manufacture increased by 13%, the value of materials used in the fabrication of goods of own manufacture increased by 13% and value added on goods of own manufacture increased by 16%. The cost of materials represented 39% of the value of production during 1963 and 1964. Manufacturing employees represented 64% of the total number of employees for 1963 and 1964. The value of communication equipment produced by the firms classified to this industry represented 85% of their total value of production.

Some of the non communications products manufactured and shipped by the firms classified to this industry were metal stampings, tooling, lawn furniture and automotive cigar lighters.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- ° preliminary figures.
- * revised figures.
- x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1. Principal Statistics, 1961-64

Year and province	Establishments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and electricity	Cost of materials and supplies	Value of shipments of goods of own manufacture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	Withdrawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Totals	125	15,018	30,979	57,520	1,492	93,750	251,084	162,423	9	38	24,000	108,753	169,567
1962													
Totals	137	18,188	37,823	70,190	1,778	117,263	319,752	210,811	14	67	27,749	125,645	220,880
1963													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	1	x	x	x	x	x	x	x	-	-	x	x	x
New Brunswick	1	x	x	x	x	x	x	x	-	-	x	x	x
Quebec	27	5,714	12,194	27,554	603	29,880	104,945	57,629	x	x	9,536	51,690	63,335
Ontario	95	12,036	24,892	44,814	1,285	96,599	234,956	146,649	10	44	17,842	76,537	148,832
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	1	x	x	x	x	x	x	x	-	-	x	x	x
Alberta	3	x	x	x	x	x	x	x	-	-	x	x	x
British Columbia	9	x	x	x	x	x	x	x	x	x	x	x	x
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	137	18,624	38,862	74,987	2,066	136,338	360,957	214,813	14	64	28,735	133,558	223,763
1964													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	1	x	x	x	x	x	x	x	-	-	x	x	x
New Brunswick	1	x	x	x	x	x	x	x	-	-	x	x	x
Quebec	29	6,258	14,021	31,007	641	48,330	127,490	80,833	x	x	10,979	62,569	86,798
Ontario	97	12,204	25,814	47,843	1,239	99,373	250,246	154,503	x	x	17,893	81,130	158,818
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	1	x	x	x	x	x	x	x	-	-	x	x	x
Alberta	4	x	x	x	x	x	x	x	-	-	x	x	x
British Columbia	10	x	x	x	x	x	x	x	x	x	x	x	x
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	143	19,621	42,185	82,345	2,029	157,996	401,791	249,198	6	34	30,627	150,448	261,458

TABLE 2. Principal Statistics classified by Size Group based on Value of Shipments of Goods of Own Manufacture, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1963													
Under \$10,000	5	6	13	18	1	22	64	38	1	4	9	28	38
\$ 10,000 to \$ 24,999	8	15	30	53	6	107	302	234	2	9	25	99	234
25,000 " 49,999	13	74	149	236	14	340	924	586	4	22	99	350	652
50,000 " 99,999	16	141	288	467	32	994	2,168	1,191	1	5	187	730	1,207
100,000 " 199,999	28	797	1,601	2,384	134	4,468	9,550	5,105	—	—	1,039	3,868	5,532
200,000 " 499,999	21	1,082	2,226	3,073	156	6,096	14,416	8,377	6	24	1,379	4,880	8,716
500,000 " 999,999	29	3,530	7,106	10,196	449	24,405	55,276	30,994	—	—	4,879	17,997	31,047
1,000,000 " 4,999,999	17	12,979	27,449	58,560	1,273	99,907	278,256	168,287	—	—	20,966	105,005	176,447
5,000,000 and over	...	...	...	...	...	...	...	...	...	...	163	602	(111)
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	137	18,624	38,862	74,987	2,066	136,338	360,957	214,813	14	64	28,735	133,558	223,763
1964													
Under \$10,000	11	14	28	41	4	53	173	119	1	4	24	86	119
\$ 10,000 to \$ 24,999	6	11	22	40	4	85	222	135	4	25	14	53	135
25,000 " 49,999	14	77	154	289	17	437	1,026	678	—	—	114	510	716
50,000 " 99,999	15	145	293	523	33	964	2,226	1,206	1	5	191	795	1,226
100,000 " 199,999	25	644	1,308	2,087	95	3,366	7,873	4,523	—	—	839	3,289	4,724
200,000 " 499,999	23	1,084	2,230	3,239	114	7,930	16,449	8,620	—	—	1,460	5,399	9,191
500,000 " 999,999	31	3,949	8,089	11,682	409	24,602	64,154	38,973	—	—	5,350	19,485	41,181
1,000,000 " 4,999,999	18	13,699	30,060	64,444	1,353	120,561	309,669	194,946	—	—	22,468	120,072	204,300
5,000,000 and over	...	...	...	...	...	...	...	...	...	...	167	761	(135)
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	143	19,621	42,185	82,345	2,029	157,996	401,791	249,198	6	34	30,627	150,448	261,456

TABLE 3. Principal Statistics classified by Size Group based on Manufacturing Value Added, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1963													
Under \$10,000	4	5	11	14	1	13	42	25	1	4	6	16	25
\$ 10,000 to \$ 24,999	7	16	32	49	4	116	260	132	2	9	21	77	198
25,000 " 49,999	11	48	97	155	10	528	897	434	4	22	73	273	601
50,000 " 99,999	22	181	363	595	42	1,270	2,894	1,590	1	5	255	997	1,602
100,000 " 199,999	15	407	822	1,245	61	2,081	4,551	2,276	—	—	528	1,776	2,441
200,000 " 499,999	27	1,233	2,508	3,379	191	7,832	15,832	8,122	6	24	1,564	5,814	8,689
500,000 " 999,999	22	2,051	4,108	5,558	234	12,361	27,435	15,266	—	—	2,662	9,322	14,904
1,000,000 " 4,999,999	20	4,945	10,244	18,209	544	38,166	89,734	50,914	—	—	7,189	30,696	53,976
5,000,000 and over	9	9,738	20,678	45,783	978	73,971	219,312	136,053	—	—	16,274	84,186	141,437
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	163	602	(111)
Totals	137	18,624	38,862	74,987	2,066	136,338	360,957	214,813	14	64	28,735	133,558	223,763
1964													
Under \$10,000	4	4	8	8	1	17	40	22	1	4	4	8	22
\$ 10,000 to \$ 24,999	13	21	42	72	7	154	363	209	4	25	34	127	209
25,000 " 49,999	9	38	76	131	10	290	634	347	1	5	53	210	375
50,000 " 99,999	17	153	307	554	32	970	2,183	1,201	—	—	203	833	1,213
100,000 " 199,999	19	392	788	1,243	63	2,520	5,118	2,662	—	—	510	1,963	2,836
200,000 " 499,999	30	1,211	2,454	3,630	148	8,716	18,310	9,579	—	—	1,627	6,111	10,247
500,000 " 999,999	17	1,430	2,978	4,365	142	9,606	21,349	11,885	—	—	1,970	7,407	12,477
1,000,000 " 4,999,999	22	4,490	9,309	14,837	436	34,438	85,973	48,606	—	—	6,747	28,347	51,909
5,000,000 and over	12	11,882	26,222	57,505	1,192	101,284	267,821	174,688	—	—	19,312	104,682	182,303
Head offices, sales offices and auxiliary units	...	...	...	...	...	...	...	...	...	...	167	761	(135)
Totals	143	19,621	42,185	82,345	2,029	157,996	401,791	249,198	6	34	30,627	150,448	261,456

TABLE 4. Principal Statistics classified by Size Group based on Total Value Added, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000			\$'000
1963													
Under \$10,000	4	5	11	14	1	13	42	25	1	4	6	16	25
\$ 10,000 to \$ 24,999	6	10	20	33	3	81	196	109	2	9	13	48	109
25,000 " 49,999	10	30	61	113	9	251	620	387	4	22	43	179	387
50,000 " 99,999	23	187	375	612	43	1,305	2,958	1,612	1	5	263	1,026	1,692
100,000 " 199,999	14	355	720	1,088	51	1,821	4,085	2,078	—	—	461	1,594	2,130
200,000 " 499,999	31	1,413	2,865	4,003	218	9,008	18,200	9,374	6	24	1,799	6,525	10,213
500,000 " 999,999	20	1,941	3,889	5,134	219	11,722	25,811	14,259	—	—	2,524	8,686	13,906
1,000,000 " 4,999,999	18	4,193	8,496	14,547	479	32,470	74,469	41,764	—	—	5,963	24,229	43,215
5,000,000 and over	11	10,490	22,425	49,445	1,043	79,667	234,577	145,203	—	—	17,500	90,653	152,197
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	163	602	(111)
Totals	137	18,624	38,862	74,987	2,066	136,338	360,957	214,813	14	64	28,735	133,558	223,763
1964													
Under \$10,000	4	4	8	6	1	17	40	22	1	4	4	8	22
\$ 10,000 to \$ 24,999	13	21	42	72	7	154	363	209	4	25	34	127	209
25,000 " 49,999	8	31	62	111	9	260	566	308	1	5	44	177	308
50,000 " 99,999	19	168	337	607	35	1,039	2,319	1,341	—	—	227	971	1,379
100,000 " 199,999	15	299	604	902	47	1,784	3,869	2,040	—	—	385	1,422	2,050
200,000 " 499,999	31	1,190	2,407	3,607	152	8,682	18,026	9,378	—	—	1,582	5,963	9,862
500,000 " 999,999	17	1,440	2,984	4,292	126	8,203	18,859	10,781	—	—	1,822	6,533	11,061
1,000,000 " 4,999,999	23	4,348	9,028	14,069	405	30,746	78,895	46,330	—	—	6,144	24,961	48,867
5,000,000 and over	13	12,120	26,714	58,676	1,248	107,111	278,855	178,788	—	—	20,218	109,524	187,831
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	167	761	(135)
Totals	143	19,621	42,185	82,345	2,029	157,996	401,791	249,198	6	34	30,627	150,448	261,456

TABLE 5. Principal Statistics classified by Size Group based on Total Employed, 1963 and 1964

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1963													
Under 5 employed	15	26	54	96	8	217	540	320	5	25	33	132	320
5 - 14 employed	23	147	295	504	39	1,237	2,621	1,431	3	15	210	833	1,512
15 - 49 "	35	736	1,493	2,375	194	7,919	16,253	8,196	—	—	1,073	4,377	8,161
50 - 99 "	22	1,200	2,445	3,567	153	7,301	17,893	10,228	6	24	1,513	5,665	10,616
100-199 "	15	1,676	3,413	4,429	145	8,398	20,986	12,491	—	—	2,251	7,638	13,014
200-499 "	14	2,829	6,016	9,774	360	23,402	54,112	29,778	—	—	4,209	17,980	31,710
500 employed and over	13	12,006	25,147	54,242	1,167	87,866	248,552	152,368	—	—	19,283	96,331	158,540
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	163	602	(111)
Totals	137	18,624	38,862	74,987	2,066	136,338	360,957	214,813	14	64	28,735	133,558	223,763
1964													
Under 5 employed	21	30	60	98	10	251	625	371	5	29	50	190	371
5 - 14 employed	20	149	301	557	38	1,120	2,442	1,334	1	5	205	868	1,393
15 - 49 "	40	855	1,738	2,875	152	7,656	16,664	9,028	—	—	1,249	5,308	9,828
50 - 99 "	16	973	2,081	3,258	137	6,363	16,664	9,697	—	—	1,272	5,147	10,043
100-199 "	16	1,753	3,645	5,003	130	9,977	25,708	16,367	—	—	2,252	7,870	17,966
200-499 "	13	2,799	5,729	8,746	293	19,564	47,921	27,167	—	—	4,105	16,556	27,791
500 employed and over	15	13,062	28,631	61,807	1,269	113,064	291,788	185,234	—	—	21,327	113,748	194,397
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	167	761	(135)
Totals	143	19,621	42,185	82,345	2,029	157,996	401,791	249,198	6	34	30,627	150,448	261,456

TABLE 6. Principal Statistics classified by Type of Organization, 1963 and 1964

Type of organization	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec-tricity	Cost of materials and supplies	Value of shipments of goods of own manu-facture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1963													
Individual ownerships	4	15	30	36	3	97	214	122	4	18	15	36	122
Partnerships	3	61	122	145	7	547	670	346	10	46	65	162	510
Incorporated companies	130	18,548	38,710	74,807	2,056	135,694	359,873	214,345	...	...	28,492	132,758	223,242
Co-operatives .....	—	—	—	—	—	—	—	—	...	...	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	163	602	(111)
Totals	137	18,624	38,862	74,987	2,066	136,338	360,957	214,813	14	64	28,735	133,558	223,763
1964													
Individual ownerships	5	14	28	42	4	131	243	106	6	34	14	42	106
Partnerships													
Incorporated companies	138	19,607	42,157	82,302	2,025	157,865	401,548	249,092	...	...	30,446	149,645	261,484
Co-operatives .....	—	—	—	—	—	—	—	—	...	...	—	—	—
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	167	761	(135)
Totals	143	19,621	42,185	82,345	2,029	157,996	401,791	249,198	6	34	30,627	150,448	261,456

TABLE 7. Calculation of Output, Input and Value Added, 1963 and 1964

	Manufacturing activity		Non-manufacturing activities		Total activity	
	1963	1964	1963	1964	1963	1964
\$'000						
Output						
1. Shipments and other revenue	360,957	401,791	61,140	69,441	422,097	471,232
Inventories— Goods of own manufacture:						
Add closing— Goods in process	51,646	60,038	...	...	51,646	60,038
Finished goods	16,816	23,499	...	...	16,816	23,499
Deduct opening— Goods in process	57,351	55,811	...	...	57,351	55,811
Finished goods	18,851	20,295	...	...	18,851	20,295
2. Net inventory change	(7,740)	7,431	...	...	(7,740)	7,431
3. Gross output (1 + 2)	353,217	409,222	61,140	69,441	414,357	478,663
Input						
4. Purchases of goods not of own manufacture .....	...	...	48,541	55,196	48,541	55,196
Inventories— Goods not of own manufacture:						
Add opening .....	...	...	5,844	7,579	5,844	7,579
Deduct closing .....	...	...	4,824	8,231	4,824	8,231
5. Cost of goods sold (not of own manufacture) .....	...	...	49,561	54,544	49,561	54,544
6. Materials, supplies, etc.	136,338	157,996	2,628	2,639	138,966	160,635
7. Fuel and electricity	2,066	2,029	...	...	2,066	2,029
8. Gross input (5 + 6 + 7)	138,404	160,025	52,189	57,183	190,593	217,208
Value added (3 - 8)	214,813	249,198	8,950	12,258	223,763	261,456

TABLE 8. Employment and Payroll, 1963 and 1964

Year and province	Employees										Salaries and wages				
	Production and related workers				Adminis- trative and office		Sales and distribution		Total		Production and related workers		Admin- istra- tive and office	Sales and distrib- ution	Total
	Manufacturing		Other												
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Manufac- turing	Other			
number										\$'000					
1963															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x
New Brunswick	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x
Quebec	3,767	1,947	2	-	2,523	609	502	186	6,794	2,742	27,554	10	19,832	4,294	51,690
Ontario	5,310	6,726	38	50	4,058	1,311	244	105	9,650	8,192	44,814	262	29,416	2,044	76,537
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x
Alberta	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x
British Columbia	x	x	x	-	x	x	x	x	x	x	x	x	x	x	x
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	9,598	9,026	43	50	6,905	2,028	779	306	17,325	11,410	74,987	283	51,672	6,616	133,558
1964															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	x	x	-	-	x	x	-	-	x	x	x	-	x	-	x
New Brunswick	x	x	-	-	x	x	-	-	x	x	x	-	x	-	x
Quebec	4,216	2,042	-	-	3,454	804	367	96	8,037	2,942	31,007	-	28,137	3,425	62,569
Ontario	5,336	6,868	15	47	3,882	1,295	325	125	9,558	8,335	47,843	188	30,195	2,903	81,130
Manitoba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan	x	-	-	-	x	-	-	-	x	x	x	-	x	-	x
Alberta	x	x	-	-	x	x	x	x	x	x	x	-	x	x	x
British Columbia	x	x	-	-	x	x	x	x	x	x	x	-	x	x	x
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	9,935	9,666	15	47	7,762	2,217	726	239	18,458	12,169	82,345	188	61,292	6,623	150,448

TABLE 9. Production and Related Workers, - Manufacturing Activity, 1963 and 1964

Month	1963		1964	
	Male	Female	Male	Female
	number			
Establishments reporting monthly detail (large establishments only):				
January	9,106	8,734	9,702	9,040
February	9,124	8,833	9,635	9,082
March	9,324	8,756	9,602	9,210
April	9,320	8,687	9,648	9,296
May	9,425	8,584	9,545	9,418
June	9,449	8,458	9,697	9,448
July	9,404	8,404	9,568	9,050
August	9,363	8,460	9,631	9,446
September	9,193	8,408	9,734	9,632
October	9,188	8,604	9,779	9,853
November	9,200	8,640	9,829	9,875
December	9,282	8,577	9,853	9,542
Averages	9,196	8,554	9,692	9,409
Establishments reporting annual averages (small establishments only)	402	472	263	257
Average for all establishments	9,598	9,026	9,955	9,666

TABLE 10. Inventories, 1964

Province	Manufacturing				Non-manufacturing	Total inventories
	Materials, supplies, etc.	Goods in process	Finished goods of own manufacture	Total	Products or materials purchased for resale	
book value \$'000						
Opening:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	x	x	x	x	—	x
New Brunswick	x	x	—	x	x	x
Quebec	5,324	25,064	10,571	40,960	4,038	44,999
Ontario	11,067	27,400	9,291	47,758	3,432	51,191
Manitoba	—	—	—	—	—	—
Saskatchewan	x	x	x	x	—	x
Alberta	x	x	x	x	—	x
British Columbia	x	x	x	x	x	x
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	18,710	55,811	20,295	94,816	7,579	102,396
Closing:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	x	x	x	x	x	x
New Brunswick	x	x	—	x	—	x
Quebec	4,334	25,503	12,448	42,285	2,382	44,667
Ontario	12,745	31,046	10,514	54,305	4,425	58,730
Manitoba	—	—	—	—	—	—
Saskatchewan	x	x	x	x	—	x
Alberta	x	x	x	x	—	x
British Columbia	x	x	x	x	x	x
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	19,327	60,038	23,499	102,864	8,231	111,095

TABLE 11. Purchased Fuel and Electricity Used in Manufacturing Activity, 1963 and 1964

Description	1963		1964	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Large establishments reporting commodity detail:				
Bituminous coal:				
(a) From Canadian mines	ton	1,639	21	—
(b) Imported	"	2,360	27	3,703
Sub-bituminous coal (from Alberta mines only)	"	—	—	—
Anthracite coal	"	—	—	—
Lignite coal	"	—	—	—
Coke	"	—	—	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	153,526	61	186,309
Fuel oil including kerosene or coal oil	"	4,565,180	418	4,390,913
Wood	cord	—	—	—
Gas:				
(a) Liquefied petroleum gases	Imp. gal.	1,472	—	104,595
(b) Other manufactured gas	M cu. ft.	—	—	—
(c) Natural gas	"	164,491	160	199,064
Other fuel .....		...	33	...
Electricity purchased	kwh.	132,183,958	1,104	125,374,446
Steam purchased .....		...	31	...
2. Small establishments not reporting commodity detail:				
Estimate for fuel and electricity .....		...	210	...
3. All establishments:				
Total fuel and electricity used .....		...	2,066	...
				2,029

TABLE 12. Materials and Supplies - Manufacturing Activity, 1963 and 1964

Description	1963		1964	
	Quantity	Cost \$'000	Quantity	Cost \$'000
1. Materials used:				
Aluminum:				
Castings	lb. 85,080	132	292,179	217
Wire rods	" 90,693	62	179,460	110
Sheets and strip	" 1,600,604	686	1,357,621	698
Other	" ...	499	...	596
Brass and bronze:				
Castings	lb. 16,474	15	26,587	33
Wire rods	" 846,904	288	1,016,454	489
Sheets and strip	" 1,184,348	730	1,363,822	830
Other	" ...	362	...	443
Copper:				
Wire rods	lb. 117,437	57	144,528	85
Sheets and strip	" 89,972	62	89,220	68
Tubing and pipe	" 88,982	72	164,891	136
Wire, enamelled	" 1,853,589	1,470	1,673,577	1,625
Wire, other insulated	" ...	1,291	...	872
Other	" ...	600	...	785
Glass tubing and cane	" ...	2,190	...	1,664
Insulating varnishes, japans, enamels and lacquers	" ...	36	...	129
Iron and steel:				
Castings:				
Iron (gray and malleable)	ton 7	4	51	10
Steel	" 198	54	122	31
Steel bars and rods	" 1,106	244	1,637	361
Steel sheets and strip:				
Plain	" 6,052	1,127	7,857	1,483
Galvanized	" 1,140	184	1,827	308
Steel wire	" 5	1	1	-
Structural steel	" 203	43	138	46
Other steel (except alloy)	" ...	1,141	...	1,505
Alloy steel, all forms:				
Stainless	" ...	214	...	370
Silicon sheets and strips	ton 1,469	598	1,743	803
Other alloy	" ...	398	...	252
Lead	lb. 6,744	3	6,764	2
Mica, unfabricated forms only	" 4,150	4	4,120	4
Motors, electric:				
Under 1 h.p.	No. 5,852	152	5,441	152
1 h.p. and over, A.C. or D.C.	" 5,570	570	1,723	171
Paints, stains, lacquers, for finishing only	" ...	178	...	298
Resins, synthetic, all types	" ...	1,100	...	1,142
Resistance wire, ribbon and strip	" ...	86	...	104
Tubes, electronic	No. 1,973,294	2,979	3,239,040	4,253
Tungsten wire	" ...	104	...	79
All other materials and components used ¹	" ...	108,545	...	125,228
2. Containers and other packaging materials and supplies used	" ...	1,682	...	1,936
3. Operating, maintenance and repair supplies used (excluding fuel)	" ...	6,508	...	8,209
4. Amount paid out to others for work done on materials owned by establishments	" ...	1,891	...	2,470
Totals	" ...	136,338	...	157,996

¹ No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. These estimated costs were \$4,775,000 in 1963, and \$3,225,400 in 1964.

TABLE 13. Shipments of Goods of Own Manufacture, 1963 and 1964

Description	1963		1964	
	Quantity	Value	Quantity	Value
	No.	\$'000	No.	\$'000
1. Products:				
Domestic radio receiving sets and record players	1	1	1	1
Broadcast studio equipment (radio and television) including transmitters, antenna equipment, etc.	5,230	...	7,300
Radio communication equipment for civilian use	23,003	...	18,675
Radio communication equipment for defence	13,565	...	7,368
Radar equipment, commercial and defence	23,586	...	23,002
Sonar equipment, commercial and defence	4,293	...	4,924
Navigational equipment, airborne and marine	29,689	...	48,395
Telephone materials, excluding intercommunication and inter-office	115,945	...	124,969
Multiplex equipment	2	...	6,888
Signal systems, traffic, fire alarm, etc.	5,856	...	4,544
Electronic tubes	11,759,887	20,582	9,866,192	20,049
Antennae and antenna parts and mounting, domestic type	3,047	...	4,036
Spare parts (less tubes) for maintenance of electronic telecommunication equipment and other electronic equipment, commercial and defence	3,042	...	2,314
Contract maintenance of electronic equipment, commercial and defence	5,241	...	5,747
Electronic sound equipment including amplifiers, loud speakers, public address systems, etc.	5,196	...	6,719
All other radio and electronic equipment	61,841	...	65,137
All other products	36,555	...	53,465
2. Amount received in payment for work done on materials and products owned by others	8,706	...	4,120
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	(900)	...	(705)
Net adjustment for establishments receiving progress payments	(3,519)	...	(5,156)
Total adjusted value of shipments and work done	360,957	...	401,791

¹ Included with "All other radio and electronic equipment".

² Included with "All other products".

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries, 1963 and 1964

(Includes shipments from other industries which manufacture, as a secondary activity, the commodities listed)

A. Specified Communications Equipment¹

Item	1963		1964	
	Quantity	Value	Quantity	Value
	No.	\$'000	No.	\$'000
Broadcast studio equipment (radio and television) including transmitters, antenna equipment, etc.	5,230	...	7,300
Radio communication equipment for civilian use:				
Aviation	2	...	2
Marine	1,037	...	452
Land mobile	4,376	...	6,508
Point to point	18,231	...	11,081
Radio communication equipment for defence:				
Aviation	2,856	...	4,157
Marine	2	...	2
Land mobile	2	...	2
Point to point	4,157	...	2,565
Radar equipment, commercial and defence	25,920	...	24,475
Sonar equipment, commercial and defence	9,223	...	8,680
Airborne navigational equipment	52,306	...	51,994

See footnotes at end of table.

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries, 1963 and 1964 - Concluded
A. Specified Communications Equipment¹ - Concluded

Item	1963		1964	
	Quantity	Value	Quantity	Value
	No.	\$'000	No.	\$'000
Telephone materials, including central and private branch exchange switchboard, telephones, transmitters, receivers, parts and supplies, excluding intercommunication telephones and inter-office communication sets .....	...	115,733	...	125,014
Inter-office communication sets, electronic type .....	...	508	...	469
Carrier current equipment .....	...	2	...	2
Multiplex equipment .....	...	4,111	...	2
Traffic signal systems .....	...	722	...	907
Fire alarm signal systems .....	...	2,071	...	2,156
Interior signal and clock systems, excluding telephones and inter-office communication sets .....	...	4,619	...	3,316
Electronic tubes:				
Electronic receiving tubes:				
Entertainment type	14,132,185	10,076	12,522,901	8,867
Other, including power, industrial and military	308,818	2,141	...	1,785
Television picture tubes, including rebuilt tubes	657,466	12,375	826,081	13,941
Miscellaneous electronic equipment:				
Antennae and antenna parts and mountings, domestic type .....	...	3,047	...	4,036
Resistors, electronic, excluding power service .....	...	5,307	...	5,477
Electronic control (replays, photo-electric timing, capacitance, etc. and electronic control panels for industrial application) .....	...	2,277	...	2,281
Radio frequency heating equipment .....	...	2	...	2
Spare parts (less tubes) for maintenance of electronic telecommunication equipment and other electronic equipment, commercial and defence .....	...	6,041	...	4,124
Contract maintenance of electronic telecommunication equipment and other electronic equipment, commercial and defence .....	...	5,241	...	6,430
Electronic sound equipment, including amplifiers, loud speakers, public address systems, etc. ....	...	5,417	...	6,719
All other radio and electronic equipment ² .....	...	52,378	...	62,489
Totals⁴ .....	...	355,400	...	365,223

¹ For record players, radio and television receiving sets, see Catalogue No. 43-205.

² Confidential, included with "All other radio and electronic equipment".

³ (a) Including semi-conductors, crystals, closed circuit industrial television, etc. where less than three firms reported shipments.

(b) Does not include capacitors, see Table 8 B.

(c) Transformers for radio, T.V. and other electronic applications not included, see Catalogue No. 43-207.

⁴ There is also other electronic equipment included in Catalogue No. 47-206 "Scientific and Professional Equipment Manufacturers".

B. Capacitors

Item	Value	
	1963	1964
	\$'000	
Radio and T.V. capacitors, including radio condensers	4,251	4,005
Capacitors for electronic application (other than radio and T.V.)	6,670	8,190
Fluorescent ballast capacitors		
Miscellaneous capacitors		
Totals	10,921	12,195

List of Establishments classified to This Industry, 1964

(Does not include establishments classified to other industries, which as a secondary activity, manufacture products typical of this industry)

Name	Location
Nova Scotia:	
EMI - Cossor Electronics Ltd.	Dartmouth
New Brunswick:	
Radio Engineering Products Ltd.	Atholville
Quebec	
Alpha Electronic Products Reg'd.	205 St. Zotique St. W., Montreal 8
Amplitrol Electronics Ltd.	51 Marie Victorin Blvd., Candiac
Audio-Video Inc.	3155 Hochelaga St., Montreal
Audio Vox Intercom Inc.	9720 Waverley St., Montreal 12
Auto Vox Inc.	160 Carillon St., Quebec
Canadian Aviation Electronics Ltd.	6214 Côte-de-Liesse Rd., St. Laurent
Canadian Cameo Chime Co. Ltd.	10332 Lille St., Montreal
Canadian Marconi Co.	2442 Trenton Ave., Montreal
Chaput, Paul Ltée.	2626 Bates Rd., Montreal
Constanta Company of Canada Limited, The	280 Regina Ave., Verdun
Eclipse Electrical Alarm Inc.	5868 Delorimier St., Montreal 35
Electrolabs Reg'd.	2500 Bates Rd., Montreal
Halburton & White Limited	8235 Mountain Sights Ave., Montreal
International Systoms Ltd.	4940 Bourg St., St. Laurent
Itt Canada Limited	101 Louvain St. W., Montreal
Kirkland, H.R. (Canada) Ltd.	4604 Coolbrook St., Montreal
Microwave Devices Ltd.	6120 Metropolitan St., St. Leonard
Multi-Vox Ltd.	9967 St. Michel Blvd., Montreal
National Semiconductors Ltd.	2150 Ward St., Montreal
Northern Electric Co. Ltd.	1261 Shearer St., Montreal
Pine Electronic Products Co. Ltd.	306 Craig St. E., Montreal
Pylon Electronic Development Co. Ltd.	139 Clement St., Ville La Salle
R.C.A. Victor Company Ltd.	1001 Lenox St., Montreal 30
R.C.A. Victor Company Ltd.	Cowansville
Sigma Technical Assoc. Ltd.	1150 Marie Victorin St., Jacques Cartier
Simtec Ltd.	3400 Metropolitan Blvd. E., Montreal
Standard Electric Time Co. of Canada Ltd., The	Pointe Claire
Superior Electronics Inc.	2255 Dandurand St., Montreal
Televox Systems Inc.	410 Lafayette St., Quebec 8
Ontario:	
Aerovox Canada Ltd.	1551 Barton St. E., Hamilton
Aes Electronics (Scarborough) Ltd.	1752 Midland St., Scarborough
AMF Canada Ltd. (Potter & Brumfield Div.)	Guelph
Amphenol Canada Ltd.	349 Carlaw Ave., Toronto 8
Amplifone Canada Ltd.	Belleville
Andrew Antenna Cor., Ltd.	Whitby
Arrow Radio Co. Ltd.	1829 Davenport Rd., Toronto 9
Audio Transformer Company Limited	Waterloo
Automatic Coil Mfg. Ltd.	50 Wingold Ave., Toronto 19
Automatic Electric (Canada) Limited	Brockville
Avionics Ltd.	Niagara-on-the-Lake
Bayly Engineering Ltd.	Ajax
Beama Engineering Ltd.	76 Densley Ave., Toronto 15
Benco Television Associates Ltd.	Rexdale
Brasco Electronics Ltd.	Weston
Broy Engineering Ltd.	14 Old Weston Rd., Toronto
Canadian Arsenal Limited (Instrument and Electronics Div.)	651 Warden Ave., Scarborough
Canadian Astatic Limited	2273 Danforth Ave., Toronto 13
Canadian General Electric Company Limited (Electronic Equipment)	830 Landsdowne Ave., Toronto
Canadian General Electric Company Limited (Tube Section)	189 Dufferin St., Toronto
Canadian Industrial Consultants Ltd.	60 Newcastle St., Toronto 18
Canadian Stackpole Ltd.	550 Evans Ave., Toronto 14
Canadian Westinghouse Company Limited (Electronic Devices)	Longwood Rd., Hamilton
Canadian Westinghouse Company Limited (Tube Division)	Aberdeen Ave., Hamilton
Cannon Electric Canada Limited	160 Bartley Dr., Toronto 16
Capacitors of Canada Ltd.	40 Upton Rd., Scarborough
Centralab Canada Ltd.	Ajax
Collben Mfg. Co. Ltd.	Dundas
Collins Radio Co. of Canada Limited	11 Bermondsey Dr., Toronto
Consolidated Electronic Equipment Co. Ltd.	94 Sheppard Ave. W., Willowdale
Croven Limited	Whitby
CTS of Canada Ltd.	Streetsville
C. & V. Products Ltd. & Vibro-Acoustics Ltd.	35 Crockford Blvd., Scarborough
Dale Electronics (Canada) Ltd.	18 Howden Rd., Scarborough
Darcy, J.H. Limited	Smiths Falls
Delhi Metal Products Ltd.	Delhi
Delta Electronics Ltd.	70 Ronson Dr., Rexdale
Eclipse Electronics Co.	153 Logan Ave., Toronto 8
Edwards of Canada Limited	Owen Sound
Electronic Materials of Canada Ltd.	850 Belfast Rd., Ottawa
Electronics Corporation of America (Canada) Limited	520 Kipling Ave. S., Toronto 19
Erie Technological Products of Canada Ltd.	Trenton
Essex Electronics of Canada Ltd.	Trenton
Ferritronics Limited	Richmond Hill
Fire Devices Mfg. Ltd.	170 Willowdale Ave., Willowdale
Geleco Electronics Ltd.	61 Curlew Dr., Don Mills
General Instrument of Canada Ltd.	Waterloo
Graphic Precision Works Co.	74 Mack Ave., Scarborough
Gulton Industries (Canada) Ltd.	Gananoque

List of Establishments classified to This Industry, 1964 - Concluded

Name	Location
Ontario—Concluded:	
Hammond Manufacturing Co. Ltd.	Guelph
Industriotics (Canada) Ltd.	362 Chilver Rd., Windsor
Jarry Electronics (Division of Jarry Hydraulics Ltd.)	Hawkesbury
Kelk, George, Ltd.	5 Lesmill Rd., Don Mills
Lindsay Antenna & Specialty Products	50 May St. W., Lindsay
Litton Systems (Canada) Limited	Rexdale
Marsland, Eric & Company	Kitchener
Marsland Engineering Ltd.	Waterloo
McCurdy Radio Industries Limited	108 Carforth Rd., Toronto
McNeill Electronics Ltd.	5 Sable St., Toronto 15
Measurement Engineering Limited	Arnprior
Morina Electronics Mfg. Co. Ltd.	41 Shorncliffe Rd., Toronto 18
Multi-Elmac of Canada Ltd.	Windsor
Northern Electric Company Ltd.	Bramalea
Northern Electric Company Limited	Belleville
Northern Electric Company Limited	London
Northern Radio Manufacturing Co. Ltd.	1950 Bank St., Ottawa 10
Precision Electronic Components Ltd.	77 Densley Ave., Toronto 15
Presentey Engineering Products Ltd.	233 Armstrong St., Ottawa
Quality Hermetics Ltd.	45 Hollinger Rd., Toronto 16
Radio Components Ltd.	50 Wingold Ave., Toronto 19
Radio Condenser Company Limited	6 Bermondsey Rd., Toronto 16
Radio Speakers of Canada Ltd.	37 Hanna Ave., Toronto 3
Raytheon (Canada) Ltd.	Waterloo
Renfrew Electric Co. Ltd.	349 Carlaw Ave., Toronto 8
R.C.A. Victor Company Ltd.	Renfrew
Richmond Hill Laboratories Ltd.	35 Crockford Blvd., Scarborough
Sinclair Radio Laboratories Ltd.	21 Toro Road, Downsview
Smallwood, S.G. Limited	Kitchener
Snelgrove, C.R. Co. Limited	141 Bond Ave., Don Mills
Soundmaster Limited—Bloom Sound Enterprises	283½ Bank St., Ottawa
Sprague TCC (Canada) Ltd.	50 Berta Rd., Toronto 15
Sprague—TCC (Canada) Ltd.	Walkerton
Standard Coil Products (Canada) Ltd.	37 Drummond St. Mimico, Toronto 14
Standard Television Products Limited	Kitchener
Stark, H.G. & Co. Ltd.	126 Willowdale Ave., Willowdale
Stark Electronic Instruments Ltd.	Ajax
Telequipment Ltd.	London
Tenatronics Ltd.	Newmarket
T.M.C. (Canada) Ltd.	R.R. #5, Ottawa
Topping Electronics Ltd.	94 Laird Dr., Toronto 17
Tri-View Electronics Ltd.	8 Hafis Rd., Toronto
Uni-Tel Ltd.	120-5 Barbados Blvd., Scarborough
Urquhart, Ronald Industries Ltd.	65 Nantucket Blvd., Scarborough
Vanal Mfg. Co. Ltd.	3600 Lake Shore Blvd. W., Toronto 14
Varian Associates of Canada Ltd.	Georgetown
Watkins Electronics Ltd.	60 Wingold Ave., Toronto 19
Welwyn Canada Ltd.	London
Saskatchewan:	
Western Television Laboratories Ltd.	1612-14th St. West, Saskatoon
Alberta:	
Automatic Electric (Canada) Limited	Lethbridge
Caltron Mfg. Ltd.	219-40th Ave. N.E., Calgary
Mandrel Industries Ltd.	303 Forge Road S.E., Calgary
Silver-Glo T.V. Picture Tubes Ltd.	12418-66th St., Edmonton
British Columbia:	
Barvic Engineering Ltd.	909 Beach Ave., Vancouver 1
Crown Electronics	165 Pemberton Ave., North Vancouver
Ekolite Limited	525 E. Hastings St., Vancouver 4
Humble Manufacturing Co. Ltd.	1695 W. 2nd Ave., Vancouver 9
Lenkurt Electric Co. of Canada Ltd.	7018 Lougheed Hwy., Burnaby 2
Major Electronics of Canada Ltd.	250 Kingsway, Vancouver
McCarter Radio & Television Ltd.	1625 West 3rd Ave., Vancouver 9
Spilsbury & Tindall Ltd.	120 E. Cordova St., Vancouver 4
Vision Manufacturing Div. of S & V Mfg. Ltd.	Richmond
West Coast Radio Telephone Manufacturers	1366 W. Pender St., Vancouver

CONCEPTS AND DEFINITIONS

Census of Manufactures

General

The Census of Manufactures is an annual mail survey covering Canada's Manufacturing Industries. It is based on the Standard Classification of Industries and full details concerning the system may be found in the Standard Industrial Classification manual, Catalogue No. 12-501 which is available from the Queen's Printer or the Dominion Bureau of Statistics. In summary, the Classification as it relates to the manufacturing industries provides for a breakdown into 140 industries arranged in 20 major industry groups. Of the 140 (3 digit) industries, 18 are further broken down into 56 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 176 separate industries. They cannot all be published separately by province, however, because of the confidential nature of the data in certain provinces.

The reporting unit for the Census is designated as the **establishment** (see definition of "Establishment" in following section) and a return is requested from every establishment classified to a manufacturing industry. Although respondents are required to submit reports covering the calendar year, financial year reports other than the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. When an establishment is operated for only part of a year a report is required covering the period of operation.

There are four different questionnaires used in the Census of Manufactures; (a) short form (b) long form (c) head office questionnaire and (d) commodity questionnaire. The short and long forms are used to obtain principal statistics and commodities shipped from establishments classified to manufacturing industries and differ only in the amount of detail requested. The short form is a single-sheet questionnaire sent to small manufacturers generally reporting shipments of less than \$100,000; this cut-off, however, varies somewhat between industries. The head office questionnaire is generally used for company head offices and/or auxiliary units separately located from the manufacturing establishment(s), (see following notes on Head offices and auxiliary units). The Commodity questionnaire is used to survey certain establishments which are coded (on the basis of their principal activity) to industries other than manufacturing in the Standard Industrial Classification system, but which undertake some manufacturing as a subsidiary activity. This single-sheet questionnaire is designed to collect information on the quantity and value of goods of own manufacture shipped by such establishments in order to achieve full coverage of domestically manufactured commodities (see the following note under Shipments).

The results of the Census are presented in some 140 publications. In addition to these annual industry publications there are annual summary reports for Canada and the provinces and special reports giving principal statistics by detailed geographic areas, by type of ownership and size of establishment. A special annual report covering the shipments of all manufactured commodities arranged in alphabetical order is also published.

Since 1960 the following major changes have been implemented in the Census of Manufactures: (a) a revised Standard Industrial Classification (b) a new establishment definition and (c) an extension of the establishment definition to cover the non-manufacturing activities of manufacturing establishments. The statistics presented in the various 1963 reports reflect the complete implementation of these changes and enable comparisons to be made with the years 1961 and 1962. For a complete description of the procedures followed in establishing the revised series, reference should be made to the Explanatory Notes included in the 1960, 1961 and 1962 industry publications. The statistical framework within which the Census of Manufactures is now carried out is based on the following concepts and definitions which have been developed as part of a general programme to achieve a fully integrated system of economic statistics.

Establishment

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. The majority of such establishments are firms but many firms have more than one establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements embodied in the following definition of the "establishment":

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on the different activities (manufacturing, trading in goods not of own manufacture, construction by own labour

force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completely consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own manufacturing activities. For example, inventory of goods purchased for re-sale may not be distinguishable from inventory of own manufactured goods. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the manufacturing industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other manufacturing and non-manufacturing industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on head offices and auxiliary units).

Head Offices and Auxiliary Units

All head offices and auxiliary units of companies classified to the manufacturing industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Manufactures.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the manufacturing plant (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Manufactures as they do not normally generate operational revenues, but give rise only to costs of operations (mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

(a) In the case of single establishment firms, statistics for separately located offices and units are classified to the same industry (3 or 4 digit) as the establishment;

(b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the firm, when all establishments are in the same industry (3 or 4 digit). When establishments of

such firms are coded (1) to different industries within a major group, (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

Employees

(a) Production and related workers — Manufacturing activities

In addition to those engaged in production and assembling activities, they include those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. For those establishments reporting on the "long" form, production and related workers engaged in manufacturing activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. In the case of those establishments reporting on the "short" form, respondents are requested to report average annual figures. The man-hours of production and related workers in manufacturing activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.). Data on man-hours are not collected from establishments reporting on the short form. Man-hours for these establishments are estimated on the basis of ratios derived from the 1958 census. During this census all establishments reported on the long form. In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

(b) Production and related workers — Non-manufacturing activities

Such employees include those on manufacturing establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments, some outside piece-workers employed in certain industries, logging employees who are reported as part of a sawmilling establishment and any other production workers who are not engaged in manufacturing-type operations.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers, etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the line supervisor or working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; these are generally included in the figures for the province in which they are located according to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truckdrivers and their helpers, etc. It may also include some sales employees who are reported as part of a manufacturing establishment but are not working at the establishment's location. These are generally broken down by province in cases where more than 15 employees are involved in any one province. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total Employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part time or seasonal employment. In all the above categories, figures on employment refer to the calendar year whether or not other establishment statistics can only be reported on a fiscal year other than the calendar year.

Working Owners or Partners

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners are defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

Salaries and Wages

Salaries and wages refer to gross earnings of employees **before** deductions for income tax and employees contributions to social services such as sickness, accident and unemployment insurance, pensions, etc. They include all salaries, wages,

bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any other allowance forming part of the worker's earnings. Payments for over-time are included. Figures on salaries and wages refer to the calendar year.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. **Any fuel and electricity produced by establishments for internal consumption are not included in the total cost.** Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of manufacturing activity it should be noted that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

Materials and Supplies

(a) Manufacturing activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. These statistics represent only commodity items or physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Non-manufacturing activities

1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of

purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

Shipments

(a) General

The figures represent revenue from all production, sales, services and related activities of reporting establishments with shipments valued in Canadian dollars at the point at which the establishment relinquishes control. The unsold portion at year end of consignment shipments in Canada is treated as inventory and not as shipments but all shipments to foreign countries for which the form B13 "Customs Canada Export Entry" has been completed, are treated as shipments.

In those industries where work on principal products extends over a relatively long period, (Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair Industry) the value of production rather than the value of shipments is recorded. There are certain establishments in other industries which also operate on a basis of progress payments. For these establishments, shipments are also adjusted to work put in place on the basis of the net change in progress payments over the year.

(b) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost (book value) of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm, when such units are treated as separate establishments. The value of shipments are net of returned goods, discounts, returns, allowances, sales tax and excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own manufacture of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in manufacturing as a subsidiary activity

are collected by means of the Commodity questionnaire referred to earlier. Such shipments together with shipments of goods of own manufacture of establishments forming the universe of manufacturing industries are compiled and recorded in the various industry publications.

(c) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship such goods on a rental basis, the value of shipments represents the book value of these goods. All sales of consignment goods from other countries are included.

(d) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishment's own employees, such as revenue from goods produced or purchased for rental (the book value of such goods are included as part of shipments of goods of own manufacture or shipments of goods not of own manufacture), servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Inventories

(a) Manufacturing activities

Values represent the book values of manufacturing inventory owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payment accounts are maintained, the change in these accounts is treated as a net adjustment to shipments. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Goods shipped abroad and held in inventory are included in shipments. Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the



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receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

(b) Non-manufacturing activities

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by the reporting establishments and held at plants and at any warehouses or selling outlets which are treated as extensions of establishments. Other characteristics are the same as in (a) above.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of manufacturing materials, supplies, etc. and fuel and electricity consumed from the (value of shipments of goods of own manufacture adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By non-manufacturing activities

The figures are compiled by deducting the cost of goods purchased for re-sale (adjusted for changes in the value of inventories of goods pur-

chased for re-sale) and the cost of non-manufacturing materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By Total activities

The figures consist of value added by manufacturing activities plus value added by non-manufacturing activities. This total value added figure may, in some cases, be less than value added by manufacturing activities as a result of expenditures associated with non-manufacturing exceeding revenues from such activities or because of a decrease in inventory of goods not of own manufacture exceeding the mark-up on the sale of such goods. "Value added" is sometimes referred to as net output or net production. However, to arrive at the National Accounts concept of net production, or Gross Domestic Product at "Factor cost" it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected as part of the annual Census of Manufactures. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202, "Survey of Production".