

**SELECTED FOREST SECTOR
STATISTICS AND GENERAL ECONOMIC
INDICATORS FOR ONTARIO, 1992**

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ABSTRACT

The objective of this report is to present statistics on the Ontario forest sector for 1992. The statistics are organized into ten sections: the forest resource base, depletions of this resource, forest management, production and shipments, trade in forest products, principal statistics, total employment (by economic region and sector), financial statistics and price indices, selected general economic indicators, and miscellaneous information. The latter category includes a glossary of terms, a list of Forest Management Agreements, a directory of wood-processing firms, populations in selected Northern Ontario census divisions, populations of selected Northern Ontario communities, and frequently used metric conversion factors.

The statistics have a wide range of applications for policy-makers, industry and market analysts, community and regional development planners, researchers, and the general public.

RÉSUMÉ

Ce rapport présente, sur le secteur forestier de l'Ontario en 1992, des statistiques divisées en dix catégories : ressources forestières, épuisement des ressources forestières, aménagement forestier, production et livraisons, commerce des produits forestiers, statistiques principales, main d'œuvre totale (par région et secteur économique), statistiques financières et indices des prix, indicateurs économiques généraux choisis, renseignements divers. Cette dernière catégorie comprend un glossaire et répertorie les ententes sur l'aménagement forestier, les entreprises de transformation du bois, les populations de certaines divisions de recensement et des municipalités dans le nord de l'Ontario ainsi que les facteurs usuels de conversion au système métrique.

Décideurs, analystes de l'industrie et des marchés, planificateurs du développement communautaire et régional, chercheurs et public font ample usage de ces données.

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SECTION 1. THE FOREST RESOURCE BASE

Table 1.1: Land area in Ontario, by land type and ownership.

Land type	Area (ha), by type of ownership			
	Provincial Crown	Patent	Federal	Total
Water	8,065,218	2,395	416,034	8,483,647
Non-forested	212,063	6,457,475	305,010	6,974,548
Non-productive	4,990,732	647,358	542,919	6,181,009
Productive	33,646,186	5,898,224	383,109	39,927,519
Total	46,914,199	13,005,452	1,647,072	61,566,723

Source: Anon. (1986a)

Table 1.2: Area of productive forest land in Ontario, by ownership.

Land type	Area (ha), by type of ownership			
	Provincial Crown	Patent	Federal	Total
Protection forest	1,917,874	237,860	39,371	2,195,105
Production forest reserve	2,146,166	252,569	26,603	2,425,338
Production forest	29,582,146	5,407,795	317,135	35,307,076
Total	33,646,186	5,898,224	383,109	39,927,519

Source: Anon. (1986a)

Table 1.3: Gross volume of timber in productive forest in Ontario, by land ownership and type.

Land ownership/type	Area (ha), by type of ownership		
	Production forest reserve	Production forest	Total
Provincial Crown:			
Commercial timber	235,368,370	3,940,920,216	4,176,288,586
Recreation reserve	3,528,253	23,733,663	27,261,916
Parks	9,006,421	180,221,424	189,227,845
Subtotal	247,903,044	4,144,875,303	4,392,778,347
Patent:			
Patent (private)	24,301,207	631,876,039	656,177,246
Management agreements	398,286	10,444,756	10,843,042
Subtotal	24,699,493	642,320,795	667,020,288
Federal Crown:			
Indian reserve	3,296,009	17,059,031	20,355,040
Other federal	40,830	22,647,774	22,688,604
Subtotal	3,336,839	39,706,805	43,043,644
Grand total	275,939,376	4,826,902,903	5,102,842,279

Source: Anon. (1986a)

Table 1.4: Area of production forest and gross volume of timber in Ontario, by ownership, OMNR administrative region and major forest type.

OMNR Region/ ownership	Softwoods		Intolerant hardwoods		Tolerant hardwoods		Total	
	Area (ha)	Volume (m ³)	Area (ha)	Volume (m ³)	Area (ha)	Volume (m ³)	Area (ha)	Volume (m ³)
Northwest								
Provincial	8,233,007	1,041,778,413	1,191,945	212,849,147	10,706	1,249,732	9,435,658	1,255,877,292
Patent	116,704	12,496,231	138,222	18,978,099	8,247	749,896	263,173	32,224,226
Federal	58,062	7,351,025	39,926	6,788,479	2,411	349,749	100,399	14,489,253
Total	8,407,773	1,061,625,669	1,370,093	238,615,725	21,364	2,349,377	9,799,230	1,302,590,771
North Central								
Provincial	5,457,543	710,517,783	1,893,167	311,095,188	1,630	183,768	7,352,340	1,021,796,739
Patent	189,382	22,403,652	231,416	33,367,226	1,081	117,372	421,879	55,888,250
Federal	8,742	1,163,355	7,946	1,507,720	374	47,299	17,062	2,718,374
Total	5,655,667	734,084,790	2,132,529	345,970,134	3,085	348,439	7,791,281	1,080,403,363
Northern								
Provincial	6,508,523	862,670,587	2,138,431	336,183,769	27,664	3,751,980	8,674,618	1,202,606,336
Patent	398,205	44,956,083	266,667	34,390,691	7	654	664,879	79,347,428
Federal	3,721	340,303	1,575	182,531	0	0	5,296	522,834
Total	6,910,449	907,966,973	2,406,673	370,756,991	27,671	3,752,634	9,344,793	1,282,476,598
Northeastern								
Provincial	2,072,563	290,864,360	1,738,898	239,814,682	702,283	111,456,400	4,513,744	642,135,442
Patent	384,706	42,880,905	437,673	50,574,833	282,432	44,848,895	1,104,811	138,304,633
Federal	69,045	9,160,008	125,978	12,337,805	14,264	2,506,738	209,287	24,004,551
Total	2,526,314	342,905,273	2,302,549	302,727,320	998,979	158,812,033	5,827,842	804,444,626
Algonquin								
Provincial	436,993	71,053,264	345,390	53,961,248	688,206	106,424,248	1,470,589	231,438,760
Patent	235,899	30,808,073	180,308	25,596,034	619,873	91,671,571	1,036,080	148,075,678
Federal	18	848	7	1,579	0	0	25	2,427
Total	672,910	101,862,185	525,705	79,558,861	1,308,079	198,095,819	2,506,694	379,516,865
Eastern								
Provincial	54,782	10,448,581	38,328	6,393,063	131,380	15,038,659	224,490	31,880,303
Patent	287,252	27,955,207	101,293	11,545,460	551,053	50,160,425	939,598	89,661,092
Federal	521	41,881	301	26,328	1,013	72,870	1,835	141,079
Total	342,555	38,445,669	139,922	17,964,851	683,446	65,271,954	1,165,923	121,682,474

(cont'd)

Table 1.4: Area of production forest and gross volume of timber in Ontario, by ownership, OMNR administrative forest type (concl.):

OMNR Region/ ownership	Softwoods		Intolerant hardwoods		Tolerant hardwoods		Total	
	Area (ha)	Volume (m ³)	Area (ha)	Volume (m ³)	Area (ha)	Volume (m ³)	Area (ha)	Volume (m ³)
Central								
Provincial	8,936	1,233,475	6,285	1,019,962	21,711	2,260,042	36,932	4,513,479
Patent	248,276	21,806,942	117,206	14,024,421	295,589	30,399,183	661,071	66,230,546
Federal	2,427	323,055	3,417	584,845	2,478	231,009	8,322	1,138,909
Total	259,639	23,363,472	126,908	15,629,228	319,778	32,890,234	706,325	71,882,934
Southwestern								
Provincial	7,963	1,073,081	3,569	500,295	8,409	956,620	19,941	2,529,996
Patent	126,980	13,642,284	44,021	5,446,642	397,872	38,199,509	568,873	57,288,435
Federal	0	0	1,456	24,779	56	1,438	1,512	26,217
Total	134,943	14,715,365	49,046	5,971,716	406,337	39,157,567	590,326	59,844,648
Totals	22,780,31	2,989,639,544	7,356,013	1,161,817,35	1,591,989	241,321,449	31,728,31	4,392,778,347
	1,987,404	216,949,377	1,516,806	193,923,406	2,156,154	256,147,505	5,660,364	667,020,288
	142,536	18,380,475	180,606	21,454,066	20,596	3,209,103	343,738	43,043,644
Grand Total	24,910,25	3,224,969,396	9,053,425	1,377,194,82	3,768,739	500,678,057	37,732,41	5,102,842,279

Source: Anon. (1986a)

Table 1.5: Area and gross volume of timber in production and reserve forests in Ontario, by softwood working group.

Working group	Area (ha)	Volume (m ³)
White pine	659,306	111,712,876
Red pine	182,922	22,157,550
Jack pine	4,986,753	652,977,372
Spruce	15,784,074	2,048,820,819
Balsam fir	2,150,235	248,574,878
Hemlock	125,191	22,556,663
Other softwoods	1,021,769	118,169,244
Total softwoods	24,910,250	3,224,969,402

Source: Anon. (1986a)

Table 1.6: Area and gross volume of timber in production and reserve forests in Ontario, by hardwood working group.

Working group	Area (ha)	Volume (m ³)
Poplar	5,787,146	1,011,200,056
White birch	3,266,279	365,994,785
Hard maple	2,760,745	384,927,399
Yellow birch	188,109	32,193,980
Other hardwoods	819,885	83,556,673
Total hardwoods	12,822,164	1,877,872,893

Source: Anon. (1986a)

Table 1.7: World forest areas and growing stocks, by region and species group.

Region	Forest area (thousand ha)							% of land area forested	Merchantable volume (million m ³)		
	Closed forests		Other woodlands		Total				Growing stock		
	Soft- woods	Hard- woods	Soft- woods	Hard- woods	Soft- woods	Hard- woods	Total		Soft- woods	Hard- woods	Total
North America	453,298 ^b	—	296,022 ^b	—	749,320 ^b	—	749,320	37.9	31,334	15,420	46,754
Canada	243,698 ^b	—	209,622 ^b	—	453,320 ^b	—	453,320	43.7	17,834	5,320	23,154
United States	209,600 ^b	—	86,400 ^b	—	296,000 ^b	—	296,000	31.8	13,500	10,100	23,600
Central America and Mexico	25,038	47,230	—	348	25,038	47,578	72,614	26.9	1,900	3,600	5,500
South America	19,474	647,498	1,000	247,047	20,474	894,545	915,019	51.4	900	90,600	91,500
Africa	7,776	228,088	6,115	501,734	13,891	729,822	743,713	24.5	200	24,800	25,000
Europe	88,413	48,592	9,576	12,321	97,989	60,913	158,902	30.5	8,000	4,000	12,000
USSR	593,700	197,900	86,200	50,800	679,900	248,700	928,600	41.5	65,300	20,600	85,900
Asia	86,552	275,270	15,688	90,722	102,238	365,992	468,230	18.5	6,000	32,000	38,000
Oceania	12,060	211,344	3,935	71,608	15,995	282,952	298,947	27.9	700	5,300	6,000
World	2,942,233 ^b	—	1,393,114 ^b	—	4,335,347 ^b	—	4,335,347	32.3	114,334	196,320	310,654

^a Includes water.

^b Includes hardwoods.

Sources: Anon. (1985a, 1992a)

SECTION 2. DEPLETIONS¹

¹ The term *depletions* refers to both harvesting, which in economic terms means *withdrawals of capital*, and to losses due to fire, insects and diseases. Losses attributable to insects and diseases are not reported because of a lack of up-to-date data. The reader is referred to Gross et al. (1992).

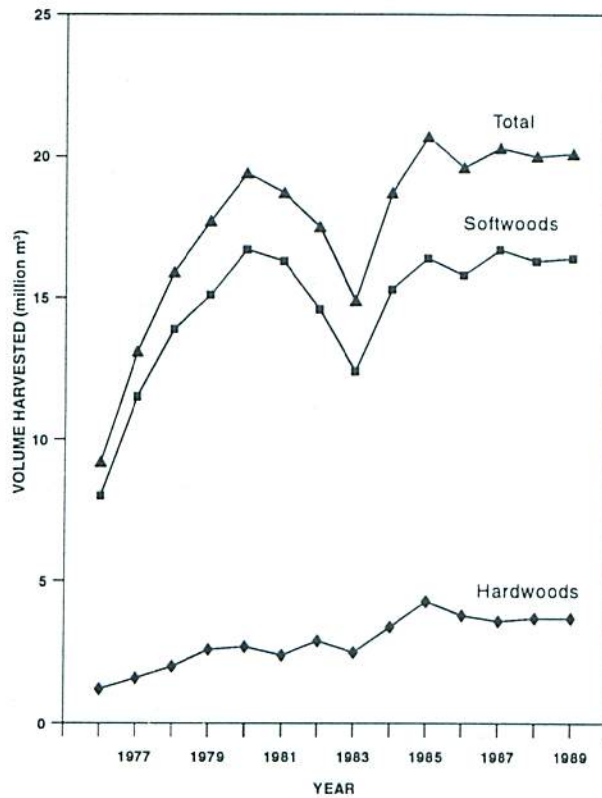


Figure 1. Trends in the mix of softwoods and hardwoods harvested in Ontario from 1976 to 1989.

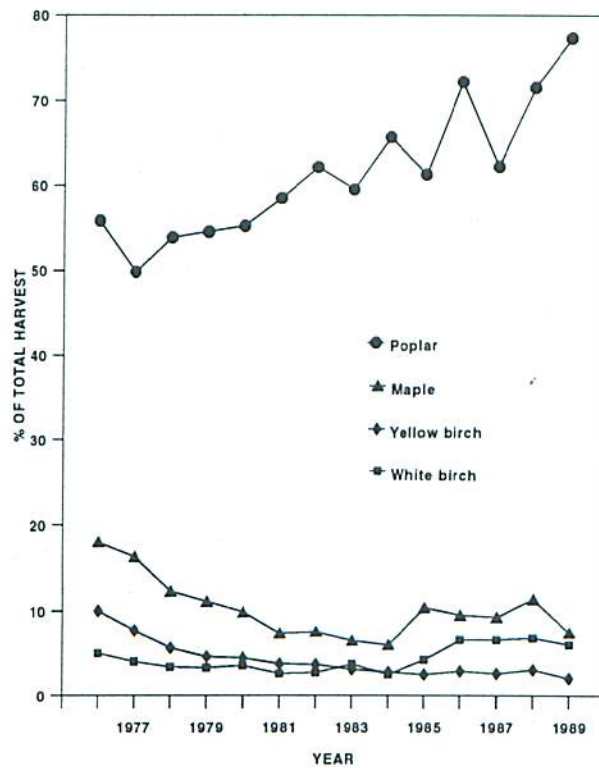


Figure 2. Proportions of total harvest for selected hardwood species in Ontario from 1976 to 1989.

Table 2.1: Volumes of hardwood timber harvested on provincial lands in Ontario from 1976 to 1989, by species.

Year ^a	Volume harvested (m ³)												Total ^b
	Ash	Bass-wood	Beech	White birch	Yellow birch	Butter-nut	Black cherry	Elm	Maple	Oak	Poplar	Mixed	
1976	1,076	6,485	9,854	61,504	123,320	Nil	736	1,614	221,466	7,504	687,164	109,161	1,229,884
1977	1,274	6,088	12,856	63,939	122,838	Nil	595	878	258,844	6,456	792,672	323,633	1,590,073
1978	1,303	7,759	14,696	66,290	111,115	Nil	821	623	241,344	8,920	1,059,586	452,984	1,965,441
1979	1,864	12,009	26,846	86,832	121,078	28	1,235	297	292,783	12,194	1,439,082	642,203	2,636,451
1980	2,494	13,897	23,453	96,526	121,990	14	1,243	306	270,417	14,362	1,509,922	677,854	2,732,478
1981	1,519	9,069	15,737	62,557	90,478	16	634	111	178,833	10,845	1,414,955	633,769	2,418,523
1982	2,021	11,042	19,581	77,523	105,982	16	1,373	39	219,345	11,389	1,800,431	647,366	2,896,108
1983	1,558	7,769	18,377	93,562	78,058	36	1,584	165	164,317	10,415	1,505,038	648,316	2,529,195
1984	1,516	8,544	17,999	83,668	94,616	21	2,046	35	204,384	14,190	2,243,088	743,663	3,413,770
1985	3,770	27,777	32,996	180,990	106,382	38	2,269	19	447,911	13,690	2,641,390	852,633	4,309,865
1986	1,956	12,099	39,951	253,340	109,828	43	1,830	18	364,855	23,937	2,768,308	257,608	3,833,772
1987	2,337	13,312	30,258	271,154	104,686	20	2,022	98	382,522	20,242	2,557,055	246,074	3,629,780
1988	2,211	11,354	35,296	250,067	112,345	22	1,724	4	419,068	21,882	2,631,564	192,713	3,678,252
1989	2,199	11,150	26,727	221,780	72,541	8	972	6	274,952	21,914	2,849,122	201,484	3,682,856

^a year ending 31 March^b Totals may not add due to rounding.

Source: Anon. (1990a)

Table 2.2: Volumes of softwood timber harvested on provincial lands in Ontario, by species, from 1976 to 1989.

Year ^a	Volume harvested (m ³)									
	Balsam fir	Cedar	Hem-lock	Jack pine	Red pine	White pine	Spruce	Tama-rack	Mixed	Total ^b
1976	273,002	14,725	7,091	2,726,398	202,720	446,754	4,299,283	2,152	19,369	8,031,607
1977	418,522	11,327	53,434	3,823,306	144,444	492,627	6,586,516	2,832	2,237	11,535,216
1978	529,184	12,289	58,049	5,010,884	174,205	586,894	7,511,569	1,926	7,079	13,892,165
1979	602,451	16,863	79,471	5,507,057	157,209	533,606	8,193,427	2,321	36,527	15,128,932
1980	662,803	22,886	64,167	6,207,462	192,051	607,311	8,901,496	4,622	9,970	16,672,766
1981	926,677	13,972	59,109	5,927,897	187,494	495,271	8,692,652	5,658	10,017	16,318,746
1982	718,975	13,659	63,504	5,362,713	183,663	529,159	7,724,772	2,330	18,503	14,617,179
1983	586,883	17,195	47,361	4,135,200	168,759	563,024	6,707,133	1,168	30,599	12,257,322
1984	638,428	18,667	65,111	5,182,626	193,575	754,044	8,423,622	2,740	20,691	15,299,504
1985	723,544	23,478	79,230	5,618,274	197,854	728,257	8,987,681	1,311	14,236	16,373,865
1986	809,984	16,741	71,554	5,578,024	400,155	654,854	8,407,276	3,725	18,238	15,764,214
1987	1,047,717	22,555	73,435	5,753,027	252,322	738,686	8,830,198	4,290	8,064	16,730,294
1988	1,063,259	17,640	86,870	5,928,441	246,314	745,244	8,835,856	2,336	391	16,296,351
1989	973,532	9,757	33,818	6,061,445	210,227	578,196	8,526,293	2,174	5,854	16,401,296

^a year ending 31 March

^b Totals may not add due to rounding.

Source: Anon. (1990a)

Table 2.3: A summary of the volumes and values of timber harvested in Ontario from 1983 to 1989.

Year	Harvest	
	Volume (m ³)	Value ^a (thousand \$)
1983	14,786,521	35,037
1984	18,713,275	47,151
1985	20,684,001	60,965
1986	19,794,324	60,413
1987	20,360,074	67,997
1988	20,604,603	76,983
1989	20,084,152	77,740

^a Crown dues plus bonus (i.e., profit margin for the operator).

Source: Anon. (1990a)

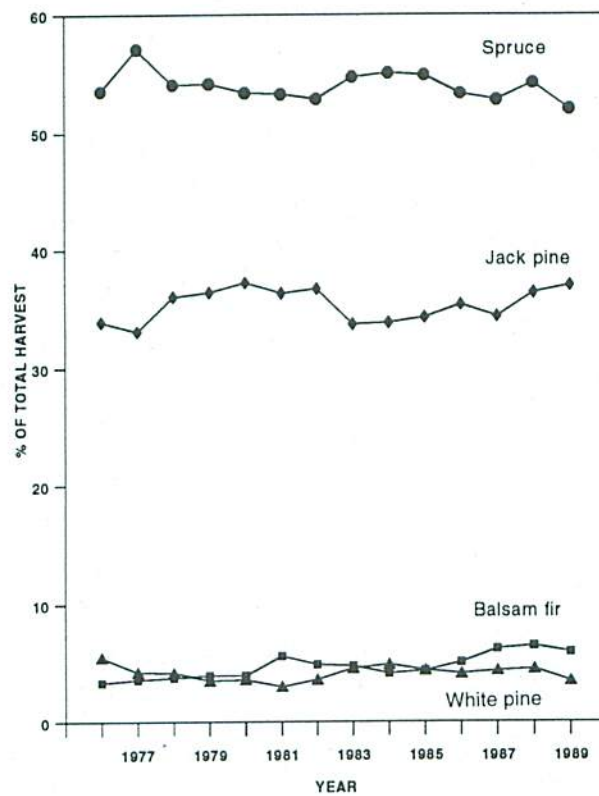


Figure 3. Proportions of total harvest for selected softwood species in Ontario from 1976 to 1989.

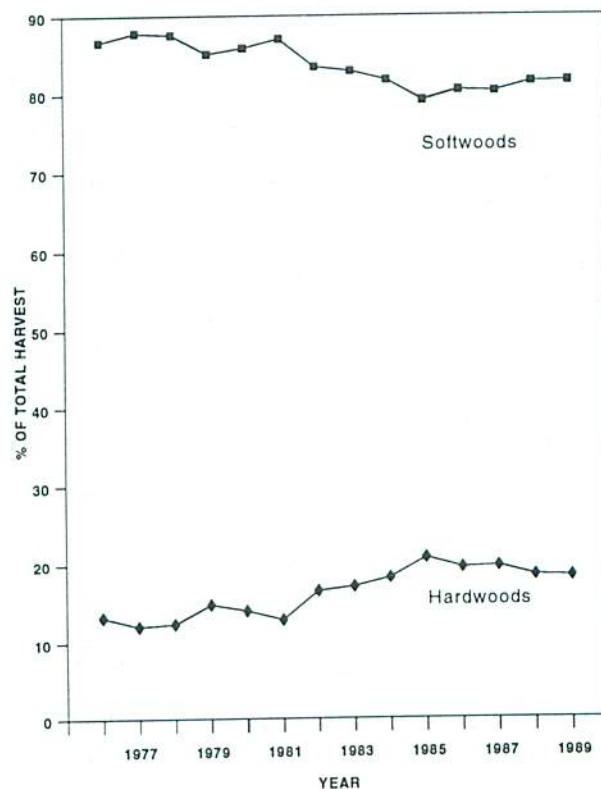


Figure 4. Trends in the proportion of the total harvest for softwood and hardwood species in Ontario from 1976 to 1989.

Table 2.4: Age-structure classification of cutover forest land in Ontario, by tenure, from 1981 to 1989.

Year ^a /type	Land area (ha)						Total
	Crown lands	FMA ^b	Total Crown lands	Agreement forests	WIA ^c	Patent lands	
1981: Even-aged	166,249	19,180	185,429	165	131	31,437	217,162
Uneven-aged	10,948	–	10,948	821	523	13,230	25,522
Total	177,197	19,180	196,377	986	654	44,667	242,684
1982: Even-aged	146,928	25,366	172,294	79	134	30,280	202,787
Uneven-aged	7,229	–	7,229	827	988	15,773	24,817
Total	154,157	25,366	179,523	906	1,122	46,053	227,604
1983: Even-aged	126,219	42,411	168,630	2,181	151	29,375	200,337
Uneven-aged	9,561	–	9,561	219	599	12,475	22,854
Total	135,780	42,411	178,191	2,400	750	41,850	223,191
1984: Even-aged	110,935	31,116	142,051	1,249	188	9,598	153,086
Uneven-aged	12,956	–	12,956	85	842	16,239	30,122
Total	123,891	31,116	155,007	1,334	1,030	25,837	183,208
1985: Even-aged	116,300	60,689	176,989	573	949	8,808	187,319
Uneven-aged	15,479	–	15,479	323	1,265	13,420	30,487
Total	131,779	60,689	192,468	896	2,214	22,228	217,806
1986: Even-aged	100,785	87,823	188,608	138	–	3,522	192,268
Uneven-aged	11,591	–	11,591	194	1,992	17,472	31,249
Total	112,376	87,823	200,199	332	1,992	20,994	223,517
1987: Even-aged	81,222	106,877	188,099	45	21	8,209	196,374
Uneven-aged	13,770	–	13,770	138	861	17,321	32,090
Total	94,992	106,877	201,869	183	882	25,530	228,464
1988: Even-aged	79,859	120,115	199,974	132	492	4,548	205,146
Uneven-aged	13,873	–	13,873	204	1,090	16,875	32,042
Total	93,732	120,115	213,847	336	1,582	21,423	237,188
1989: Even-aged	79,193	117,549	196,742	38	115	3,397	200,292
Uneven-aged	15,087	–	15,087	341	797	13,791	30,016
Total	94,280	117,549	211,829	379	912	17,188	230,308

^a year ending 31 March

^b Forest Management Agreements (FMAs) on provincial Crown lands

^c harvested under the Woodlands Improvement Act

Source: Anon. (1990a)

2.5: Amounts of forest land burned in Ontario, classified by ownership type, and an estimate of monetary damages on that land from 1970 to 1989.

Year	Area burned over (ha)			Number of fires	Damage estimates (\$)		
	Crown land	Private land	Total		Timber	Non-timber private property	Total
1970	22,358	1,179	23,537	1,239	1,323,041	28,815	1,351,856
1971	40,284	1,689	41,973	1,790	462,064	75,875	537,939
1972	29,802	2,208	32,010	1,604	1,081,876	47,446	1,129,322
1973	2,417	1,190	3,607	1,111	11,944	121,900	133,844
1974	522,641	1,346	523,987	1,625	12,063,428	239,384	12,302,812
1975	11,226	5,630	16,856	3,146	683,726	340,414	1,024,140
1976	536,529	7,578	544,107	3,985	26,839,738	930,514	27,770,252
1977	411,752	4,564	416,316	2,049	11,190,900	252,565	11,443,465
1978	7,040	483	7,523	940	165,267	139,386	304,653
1979	63,322	393	63,715	1,564	2,310,161	60,032	2,370,193
1980	524,893	35,847	560,740	1,779	72,094,096	3,254,443	75,348,539
1981	173,479	5,994	179,473	1,656	9,171,418	60,906	9,232,324
1982	2,555	1,337	3,892	1,396	116,695	71,068	187,763
1983	442,156	1,499	443,655	2,244	15,230,649	352,210	15,582,859
1984	118,851	1,567	120,418	1,240	787,487	652,985	1,440,472
1985	682	325	1,007	887	69,552	319,329	388,881
1986	143,692	1,869	145,561	1,088	20,331,092	525,234	20,856,326
1987	66,248	9,334	75,582	1,923	1,883,921	419,209	2,303,130
1988	388,868	1,838	390,706	3,260	9,043,510	841,572	9,885,082
1989	376,861	27,025	403,886	2,430	1,823,660	448,794	2,272,454
1990	179,834	3,859	183,693	1,614	1,699,916	376,635	2,076,551
1991	317,231	1,652	318,883	2,560	7,288,369	487,845	7,776,214

Sources: Anon. 1990a; personal communication, OMNR Aviation, Flood and Fire Management Branch, Sault Ste. Marie, Ont.

Table 2.6: Amounts of forest land burned in Ontario, by OMNR administrative region, from 1973 to 1989.

Year	Area burned (ha), by region								Total
	North-western	North Central	Northern	North-eastern	Algonquin	Eastern	Central	South-western	
1973	1,177	1,428	413	383	108	91	6	1	3,607
1974	436,587	82,198	3,870	771	410	112	34	4	523,986
1975	708	4,242	5,155	4,831	1,269	619	18	14	16,856
1976	360,452	164,761	14,653	3,426	671	140	1	1	544,105
1977	287,200	74,454	40,843	12,485	1,065	229	38	1	416,315
1978	952	4,377	528	616	864	151	8	27	7,523
1979	49,109	13,611	622	96	107	168	2	0.1	63,715
1980	374,367	177,276	7,056	1,198	184	197	15	13	560,306
1981	109,841	56,049	12,394	513	318	276	67	14	179,472
1982	1,639	252	422	970	275	233	80	22	3,893
1983	365,248	73,993	3,379	497	340	187	9	0.9	443,654
1984	102,051	14,887	2,963	256	159	73	17	11	120,417
1985	117	121	324	159	114	144	10	17	1,006
1986	134,380	4,156	6,302	418	217	65	17	6	145,561
1987	55,107	7,258	12,466	428	212	61	25	25	75,582
1988	361,318.7	7,552.3	12,827.6	8,386.4	446.4	147.2	24.6	2.5	390,706
1989	314,133.9	78,001.8	9,680.7	1,245.3	479.1	314.2	9.4	21.5	403,886

Sources: Anon. (1990a); personal communication, OMNR Aviation, Flood and Fire Management Branch, Sault Ste. Marie, Ont.

Table 2.7: Overview of actual consumptions (depletions) of forest products in Ontario and projections to the year 2000, by commodity group.

Major product group	Actual		Projected (2000)	Average annual rate (%)
	1975	1986		1986–2000
Solid wood products (million m ³)				
Industrial roundwood	1,293	1,580	2,077	2.0
Lumber	404	475	589	1.5
Wood-based panels	84	119	203	3.9
Fiber products (million tonnes)				
Wood pulp	97	136	186	2.3
Newsprint	21	29	42	2.7
Printing and writing paper	28	55	95	4.0
Other paper and paperboard	82	118	157	2.1

Source: Reed (1991)

SECTION 3. FOREST MANAGEMENT

Table 3.1: Silvicultural operations on provincial Crown lands in Ontario from 1985 to 1990.

Treatment	Area treated (ha)							
	1983	1984	1985	1986	1987	1988	1989	1990
Regeneration								
Planting								
Bareroot	21,272	21,286	15,527	22,725	22,620	28,128	27,815	30,062
Container	7,305	17,889	36,963	38,521	39,885	34,987	42,270	39,579
Hybrid poplar cuttings	19	286	100	358	48	139	234	209
Seeding	29,857	21,180	15,908	18,683	20,925	26,310	27,535	32,952
Scarification	817	1,110	879	1,050	447	752	523	820
Harvesting and regeneration option	—	—	—	—	—	1,905	2,687	3,527
Strip cutting	1,445	718	1,145	1,641	1,032	976	853	449
Seed-tree cutting	3,215	4,204	2,489	2,361	2,367	3,245	4,999	5,129
Shelterwood cutting	9,431	10,308	9,232	8,771	8,717	9,067	11,314	9,783
Clearcutting	7,552	14,121	8,960	9,437	15,351	19,618	21,246	25,771
Total	80,913	91,102	91,203	103,547	111,392	125,127	139,476	148,281
Retreatment								
Tending	2,353	3,483	3,949	4,462	3,764	2,488	2,110	1,697
Hand cleaning	5,844	6,282	7,696	9,384	10,660	5,250	2,031	3,251
Herbicide spraying	26,165	21,125	42,023	57,566	59,279	64,071	69,346	89,615
Thinning, improvement cuts	6,698	6,908	6,591	8,845	9,404	7,191	4,722	8,650
Pruning	756	751	596	934	1,017	459	247	325
Fertilization, drainage	87	207	58	65	9	9	—	246
Total	39,550	35,273	56,964	76,794	80,369	76,980	76,346	102,087
Site preparation	67,583	74,064	83,808	94,687	107,072	112,607	106,181	120,877
Marking	37,229	42,301						
Uneven-aged management	—	—	11,769	13,529	13,202	26,532	21,731	17,802
Total area treated	225,275	242,740	243,744	288,557	312,035	341,246	343,734	389,047

^a year ending 31 March

Source: Anon. (1991a)

Table 3.2: Silvicultural operations in Ontario, by ownership, in 1990^a.

Treatment	Area treatment (ha)					Total
	Crown land	Forest Management Agreements ^b	Agreement forests	Private ^c	Other private	
Regeneration						
Planting						
Bareroot	12,185	17,877	200	4,851	5,493	40,606
Container	10,281	29,298	55	115	-	39,749
Hybrid poplar cuttings	201	8	177	2	182	570
Seeding	11,449	21,503	-	-	-	32,952
Scarification	641	179	-	-	-	820
Harvesting and regeneration option	-	3,527	-	-	-	3,527
Strip cutting	273	176	5	-	-	454
Seed-tree cutting	3,477	1,652	4	-	-	5,133
Shelterwood cutting	9,783	-	119	36	647	10,585
Clearcutting	13,654	12,117	25	-	1,675	27,471
Total	61,944	86,337	585	5,004	7,997	161,867
Retreatment^b						
Tending	1,343	354	237	1,774	56	3,764
Hand cleaning	2,955	296	366	1,318	10	4,945
Herbicide spraying	23,414	66,201	664	3,041	528	93,848
Thinning, improvement cuts	8,407	243	783	621	606	10,660
Pruning	325	-	324	1,411	42	2,102
Fertilization, drainage	246	-	604	45	406	1,301
Total	35,347	66,740	2,741	6,436	1,592	112,856
Site preparation	43,090	77,787	345	2,107	254	123,583
Uneven-aged management	17,802	-	611	2,273	6,839	27,525
Total area treated	158,183	230,864	4,282	15,820	16,682	425,831

^a year ending March 31^b provincial Crown land

Source: Anon. (1991a)

Table 3.3: Public and industry expenditures on forest management, by activity, in Ontario and Canada.

Operation	Expenditures (million \$), by year									
	1981		1983		1985		1988		1990	
	Ontario	Canada	Ontario	Canada	Ontario	Canada	Ontario	Canada	Ontario	Canada
Silvi-culture	80.4	272.3	95.5	335.9	116.1	476.6	121.4	705.0	124.0	722.2
Protection	52.3	311.6	65.2	241.6	63.5	359.1	120.5	396.9	77.8	415.0
Resource access	43.6	265.3	71.3	229.6	80.2	346.4	46.0	284.5	69.4	565.2
Research	17.5	56.4	25.6	77.2	26.6	89.4	34.2	103.6	35.4	117.1
Other	35.9	342.1	43.3	363.5	68.3	406.1	73.7	526.1	82.4	588.3
Total	229.7	1,247.7	300.9	1,247.8	354.7	1,677.9	395.9	2,016.1	389.0	2,407.8

Sources: Barron et al. (1986), Smyth et al. (1989) and Anon. (1992b)

SECTION 4. PRODUCTION AND SHIPMENTS

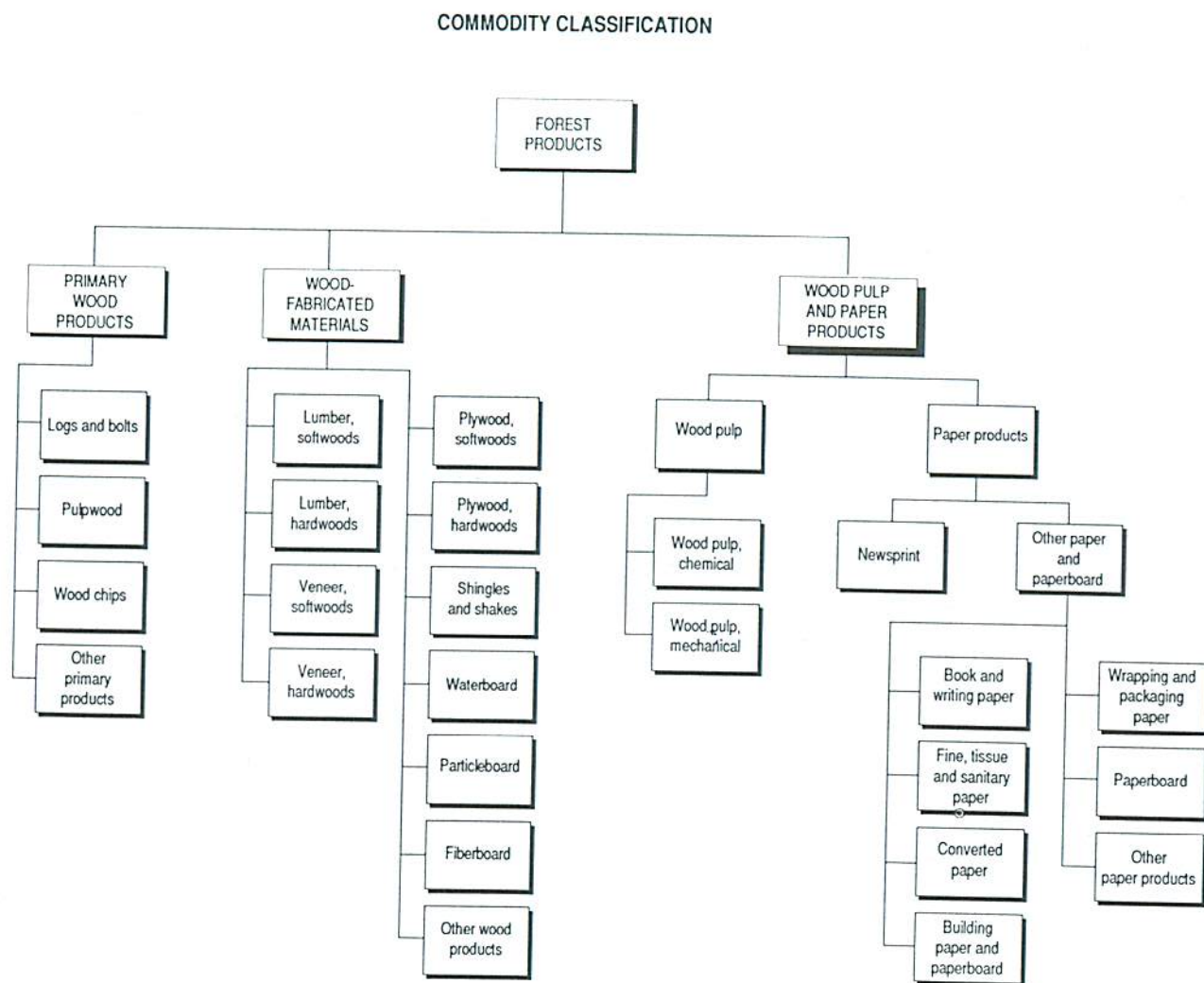


Figure 5. Standard commodity classification for forest products. (Source: Statistics Canada, International Trade Division.)

Table 4.1: Primary forest products harvested in Ontario from all categories of land ownership.

Year	Type of lumber	Volume (thousand m ³)				Total
		Logs and bolts	Pulpwood	Fuelwood	Miscellaneous	
1979	Softwood	6,782	9,183	297	133	16,395
	Hardwood	2,350	1,586	963	— ^a	4,899
	Total	9,132	10,769	1,260	133	21,294
1980	Softwood	6,768	9,345	255	113	16,481
	Hardwood	2,293	1,458	1,090	— ^a	4,841
	Total	9,061	10,803	1,345	113	21,322
1981	Softwood	6,937	10,619	382	127	18,065
	Hardwood	1,770	1,486	1,487	— ^a	4,743
	Total	8,707	12,105	1,869	127	22,808
1982	Softwood	6,139	8,835	359	113	15,446
	Hardwood	1,495	1,387	1,450	— ^a	4,332
	Total	7,634	10,222	1,809	113	19,778
1983	Softwood	7,244	10,761	431	107	18,543
	Hardwood	1,764	1,689	1,740	— ^a	5,193
	Total	9,008	12,450	2,171	107	23,736
1984	Softwood	9,487	11,995	360	7	21,849
	Hardwood	2,834	1,636	1,811	— ^a	6,281
	Total	12,321	13,631	2,171	7	28,130
1985	Softwood	9,423	12,245	360	7	22,035
	Hardwood	2,815	1,560	1,815	— ^a	6,190
	Total	12,238	13,805	2,175	7	28,225
1986	Softwood	10,017	13,164	349	9	23,539
	Hardwood	2,992	1,677	1,978	— ^a	6,647
	Total	13,009	14,841	2,327	9	30,186
1987	Softwood	9,716	13,101	344	9	23,170
	Hardwood	2,902	1,669	1,951	— ^a	6,522
	Total	12,618	14,770	2,295	9	29,692
1988	Softwood	9,906	12,331	357	13	22,607
	Hardwood	3,128	1,730	1,873	— ^a	6,731
	Total	13,034	14,061	2,230	13	29,338
1989	Softwood	9,511	12,987	349	17	22,864
	Hardwood	3,090	1,797	1,891	— ^a	6,778
	Total	12,601	14,784	2,240	17	29,642

^a included with softwood

Source: Anon. (1992c)

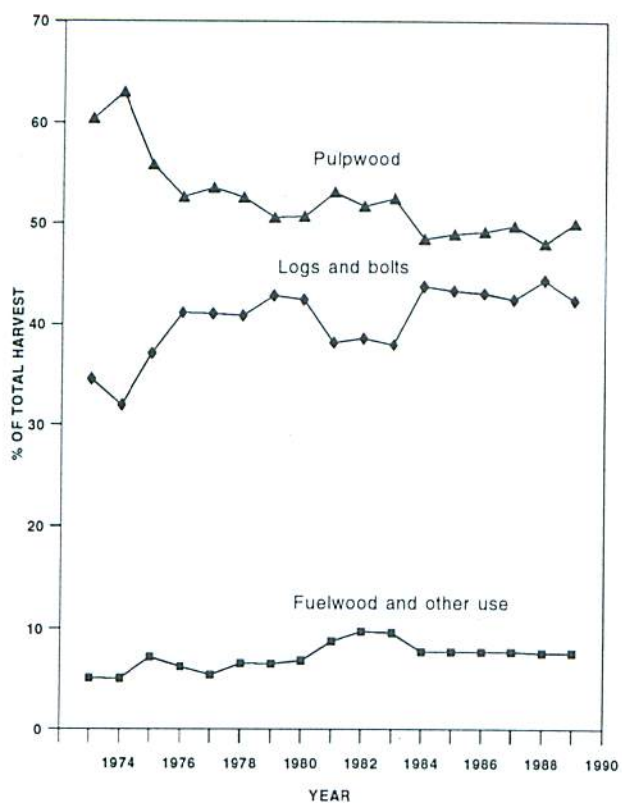


Figure 6. Allocation rates for harvested timber in Ontario, by category of primary use, from 1973 to 1989.

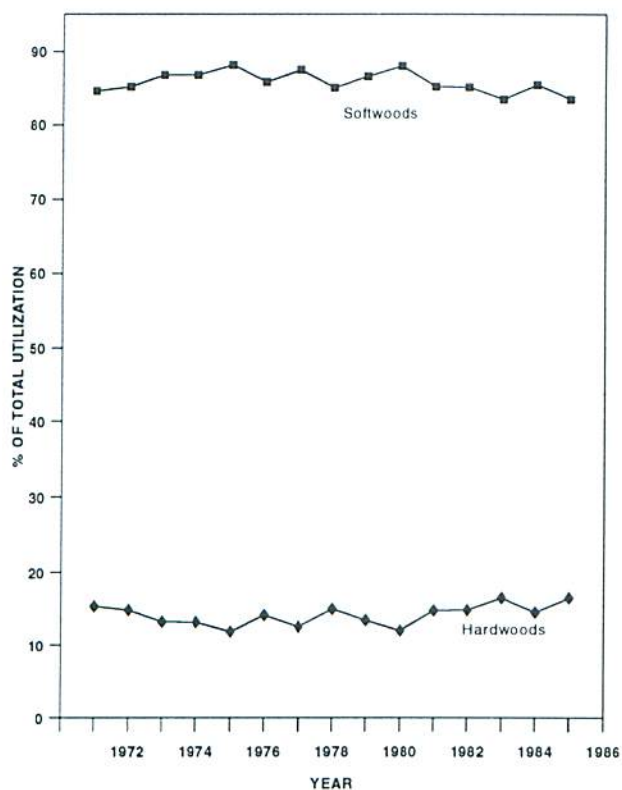


Figure 7. Relative rates of use of softwoods and hardwoods in pulp production in Ontario from 1971 to 1985.

Table 4.2: Volumes of roundwood received by primary wood-processing industries in Ontario from 1963 to 1990.

Year	Volume of wood received (thousand m ³)		
	Sawlogs and veneer logs	Pulpwood and miscellaneous	Total roundwood
1963	3,511	10,270	13,781
1964	3,907	10,035	13,942
1965	4,479	9,519	13,998
1966	4,509	10,975	15,484
1967	4,623	10,707	15,330
1968	5,196	11,361	16,557
1969	4,582	12,346	16,928
1970	4,731	11,918	16,649
1971	5,250	11,347	16,597
1972	5,222	11,463	16,685
1973	7,048	11,871	18,919
1974	7,323	13,107	20,430
1975	6,663	9,491	16,154
1976	6,768	10,296	17,064
1977	8,982	11,438	20,420
1978	10,568	12,009	22,577
1979	12,162	11,789	23,951
1980	12,176	12,230	24,406
1981	9,940	13,658	23,598
1982	7,313	12,820	20,133
1983	10,206	11,809	22,015
1984	11,144	12,753	23,897
1985	11,736	12,542	24,278
1986	11,993	13,324	25,317
1987	12,193	12,573	24,766
1988	12,662	11,955	24,617
1989	12,299	10,921	23,220
1990	10,992	10,392	21,384

Source: Anon. (1992d)

Table 4.3: Pulpwood and wood-residue consumption in Ontario from 1971 to 1988.

Year	Volume consumed (thousand m ³)			
	Pulpwood		Wood residue (chips only)	Total
	Softwood	Hardwood		
1971	8,826,188	1,622,895	1,792,745	12,241,828
1972	9,246,347	1,620,098	2,065,747	12,932,192
1973	9,231,612	1,475,923	2,403,626	13,111,161
1974	9,921,438	1,527,128	2,559,116	14,007,682
1975	6,739,000	933,000	1,763,000	9,435,000
1976	7,874,789	1,257,772	2,337,957	11,470,518
1977	9,146,015	1,304,872	3,368,456	13,819,343
1978	9,103,189	1,560,242	3,881,157	14,544,588
1979	9,672,002	1,519,145	4,107,950	15,299,097
1980	10,277,540	1,431,896	4,153,287	15,862,723
1981	9,779,330	1,655,178	4,319,348	15,753,856
1982	8,634,784	1,528,586	3,477,127	13,640,497
1983	9,585,687	1,885,428	4,003,082	15,474,197
1984	10,576,541	1,836,748	4,278,964	16,692,253
1985	9,624,299	1,911,597	4,726,781	16,262,677
1986	n/a	n/a	n/a	17,341,357
1987	n/a	n/a	n/a	17,626,491
1988	n/a	n/a	n/a	17,505,339

Sources: Anon. (1984a, 1985b, 1985c, 1990b)

Note: In 1986, Statistics Canada started collecting information on pulpwood and wood residues in an aggregated format. The old format for this information is retained in tables 4.3 and 4.4; the statistics are presented according the new format in tables 4.5, 4.6 and 4.7.

Table 4.4: Pulpwood and wood residue consumption, by region, from 1975 to 1990.

Category and Region	Consumption (thousand m ³), by year															
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Roundwood (softwood)																
Quebec	12,642	12,722	12,349	12,883	13,095	11,669	12,037	11,246	10,270	10,082	9,082	n/a	n/a	n/a	n/a	n/a
Ontario	6,739	7,875	9,146	9,103	9,672	10,278	9,779	8,635	9,586	10,577	9,624	n/a	n/a	n/a	n/a	n/a
B.C.	6,256	6,714	5,663	6,046	5,958	6,594	6,125	4,803	4,873	4,895	5,707	n/a	n/a	n/a	n/a	n/a
Other provinces	10,980	11,263	10,543	11,052	11,950	11,894	12,368	10,414	10,293	11,408	10,765	n/a	n/a	n/a	n/a	n/a
Total	36,617	38,574	37,701	39,084	40,675	40,435	40,309	35,098	35,022	36,962	35,178	n/a	n/a	n/a	n/a	n/a
Roundwood (hardwood)																
Quebec	849	1,019	1,106	1,336	1,391	1,355	1,441	1,183	1,465	1,792	1,446	n/a	n/a	n/a	n/a	n/a
Ontario	933	1,258	1,305	1,560	1,519	1,432	1,655	1,529	1,885	1,837	1,912	n/a	n/a	n/a	n/a	n/a
B.C.	179	241	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	n/a	n/a	n/a	n/a	n/a
Other provinces	925	830	1,931	1,843	1,326	1,240	1,312	1,116	1,383	2,006	1,886	n/a	n/a	n/a	n/a	n/a
Total	2,886	3,348	4,342	4,739	4,236	4,027	4,408	3,828	4,733	5,635	5,244	n/a	n/a	n/a	n/a	n/a
Wood residue (chips)																
Quebec	4,406	6,780	6,263	7,868	9,764	9,694	9,994	9,635	11,473	11,857	11,872	n/a	n/a	n/a	n/a	n/a
Ontario	1,763	2,338	3,368	3,881	4,108	4,153	4,319	3,477	4,003	4,279	4,727	n/a	n/a	n/a	n/a	n/a
B.C.	13,017	19,050	18,019	19,332	20,264	20,211	18,075	17,676	20,742	19,459	24,655	n/a	n/a	n/a	n/a	n/a
Other provinces	2,956	4,108	3,173	3,037	3,025	3,797	3,422	2,622	2,853	4,452	4,593	n/a	n/a	n/a	n/a	n/a
Total	22,142	32,276	30,823	34,118	37,161	37,855	35,810	33,410	39,071	40,047	45,847	n/a	n/a	n/a	n/a	n/a
Other wood residue and scrap																
Quebec	— ^b	— ^b	1,155	1,276	1,365	1,336	1,363	1,142	1,350	1,060	1,003	n/a	n/a	n/a	n/a	n/a
Ontario	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	n/a	n/a	n/a	n/a	n/a
B.C.	— ^b	— ^b	1,160	1,282	1,240	1,377	1,210	1,487	1,953	1,895	2,479	n/a	n/a	n/a	n/a	n/a
Other provinces	— ^b	— ^b	775	914	1,287	1,107	1,285	937	977	1,202	(a)	n/a	n/a	n/a	n/a	n/a
Total	1,915	2,565	3,090	3,472	3,892	3,820	3,858	3,566	4,280	4,157	3,482	n/a	n/a	n/a	n/a	n/a
Grand total	63,560	76,763	75,956	81,413	85,964	86,137	84,385	75,902	83,106	86,801	89,751	93,506	98,538	100,377	102,084	97,208

^a insignificant^b confidential

Sources: Anon. (1984a, 1985b, 1985c, 1990b)

Note: In 1986, Statistics Canada discontinued collection of disaggregated statistics for each province. We will cease reporting these statistics in future issues of this report.

Table 4.5: Wood pulp production and consumption in Ontario and Canada from 1967 to 1988.

Year	Wood pulp production (tonnes)			Wood pulp consumption (tonnes)		
	Canada	Ontario		Canada	Ontario	
		Total	% of Canada		Total	% of Canada
1967	14,385,555	3,282,895	22.8	10,345,146	2,494,499	24.1
1968	15,205,889	3,305,817	21.7	10,554,861	2,472,493	23.4
1969	16,864,460	3,593,399	21.3	11,625,032	2,674,441	23.0
1970	16,608,604	3,600,683	21.7	11,586,087	2,672,321	23.1
1971	16,541,206	3,447,429	20.8	11,316,582	2,579,151	22.8
1972	17,453,405	3,572,171	20.5	11,903,030	2,629,758	22.1
1973	18,562,565	3,668,985	19.8	12,484,992	2,826,472	22.6
1974	19,678,159	3,877,502	19.7	13,037,431	2,981,685	22.9
1975	15,112,744	2,540,483	16.8	10,024,814	1,861,647	18.6
1976	17,946,114	3,060,329	17.1	11,526,630	2,327,618	20.2
1977	18,167,792	3,662,361	20.2	11,821,249	2,718,440	23.0
1978	20,152,457	4,126,664	20.5	13,537,149	3,198,993	23.6
1979	20,728,490	4,321,817	20.8	13,787,542	3,383,751	24.5
1980	20,687,143	4,368,097	21.1	13,521,571	3,332,192	24.6
1981	20,572,085	4,394,267	21.4	13,759,262	3,264,151	23.7
1982	18,513,570	3,752,791	20.3	12,358,890	2,878,170	23.3
1983	20,195,267	4,216,883	20.9	— ^a	— ^a	— ^a
1984	20,463,574	4,365,776	21.3	— ^a	— ^a	— ^a
1985	20,173,413	4,271,840	21.2	— ^a	— ^a	— ^a
1986	20,317,283	4,181,877	20.6	— ^a	— ^a	— ^a
1987 ^b	23,035,000	4,372,000	19.0	— ^a	— ^a	— ^a
1988 ^b	23,367,000	4,447,000	19.0	— ^a	— ^a	— ^a

^a No longer reported.

^b Canadian Pulp and Paper Association estimates.

Sources: Anon. (1984a, 1985b, 1985c, 1990b)

Table 4.6: Receipts of pulpwood by domestic mills, by province, from 1986 to 1991.

Province	Pulpwood receipts (m')				
	1986	1987	1988	1989	1990
Newfoundland	1,639,032	1,802,034	1,915,081	— ^a	— ^a
Nova Scotia	3,114,461	3,134,661	3,236,364	4,155,760	3,530,594
New Brunswick	5,681,208	5,211,065	6,633,345	7,398,401	6,230,261
Quebec	1,3073,964	12,436,912	12,643,420	13,290,128	11,019,901
Ontario	1,2644,464	12,722,239	12,109,947	11,876,893	11,039,215
Manitoba	1,025,492	1,262,971	1,271,635	— ^a	— ^a
Saskatchewan	1,061,214	1,251,974	1,077,101	— ^a	— ^a
Alberta	2,002,506	1,496,685	1,772,500	1,766,727	2,136,082
British Columbia	5,569,338	6,20,680	6,145,287	5,241,766	3,925,639
Canada	45,811,679	45,539,221	46,804,660	47,688,040 ^b	42,067,424 ^b

^a included in the national total; not reported elsewhere separately

^b includes totals for Manitoba and Saskatchewan

Source: Anon. (1990b)

Table 4.7: Receipts of wood residues by domestic mills, by province, from 1986 to 1990.

Product/province	Wood residue receipts (m ³)				
	1986	1987	1988	1989	1990
Chips					
Newfoundland	16,872	26,000	32,800	— ^a	— ^a
Nova Scotia	389,857	476,417	679,532	743,916	818,544
New Brunswick	1,799,212	2,792,146	2,061,650	2,739,235	2,894,836
Quebec	12,824,110	14,565,771	15,257,506	14,960,826	— ^a
Ontario	4,110,017	5,180,223	5,484,621	5,764,744	— ^a
Manitoba	—	149,545	211,369	— ^a	— ^a
Saskatchewan	282,449	382,007	362,194	— ^a	— ^a
Alberta	1,532,505	1,823,978	1,926,078	2,286,265	2,581,813
British Columbia	21,305,983	26,047,313	25,502,861	24,853,596	24,099,366
Canada	42,261,005	51,443,400	51,518,611	52,011,411 ^b	50,724,128 ^c
Other residues^d					
Newfoundland	31,700	70,700	—	—	—
Nova Scotia	317	—	—	—	—
New Brunswick	—	—	47	—	—
Quebec	1,858,713	2,180,566	2,161,023	2,169,868	— ^a
Ontario	228,641	171,065	170,624	190,270	— ^a
Manitoba	—	—	—	—	—
Saskatchewan	—	—	—	—	—
Alberta	507	89,175	256	—	—
British Columbia	2,283,492	2,476,985	2,421,220	2,283,657	2,139,327
Canada	4,403,370	4,988,491	4,753,170	4,643,795	4,711,568 ^e

^a Included in the national total: not reported separately.

^b includes values for Manitoba and Saskatchewan

^c includes values for Manitoba, Saskatchewan, Quebec and Ontario

^d includes veneer cores, slabs and edgings, sawdust, shavings, etc.

^e includes values for Quebec and Ontario

Source: Anon. (1990b)

Table 4.8: Total consumption of pulpwood and wood residue, by province, from 1986 to 1990.

Province	Total pulpwood and wood residue consumption (m ³)				
	1986	1987	1988	1989	1990
Newfoundland	1,705,453	1,909,471	1,893,748	— ^a	— ^a
Nova Scotia	3,552,759	3,641,699	3,745,209	4,952,131	4,623,192
New Brunswick	7,546,509	7,963,724	8,505,366	9,660,397	9,029,934
Quebec	27,869,313	27,941,863	28,875,519	28,886,766	27,596,182
Ontario	17,341,357	17,626,491	17,505,339	17,636,019	16,283,693
Manitoba	1,075,831	1,349,582	1,352,784	— ^a	— ^a
Saskatchewan	1,447,060	1,608,326	1,573,530	— ^a	— ^a
Alberta	3,332,423	3,547,369	3,644,706	3,933,279	4,818,344
British Columbia	29,635,390	32,949,715	33,280,691	32,160,099	30,159,340
Canada	93,506,095	98,538,240	100,376,872	102,084,171 ^b	97,208,423 ^b

^a Included in the national total; not reported separately

^b includes values for Newfoundland, Manitoba and Saskatchewan

Source: Anon. (1990b)

Table 4.9: Pulpwood consumption and outputs of wood pulp and paper products in Ontario from 1977 to 1990.

Year	Pulpwood consumption (thousand m ³)	Wood pulp ^a output (thousand tonnes)					Paper output ^b (thousand tonnes)		
		Groundwood	Sulfite	Sulfate	Other	Total	News-print	Other paper and paperboard	Total paper and paperboard
1977	922.0	1,402.6	729.1	1,328.2	150.3	3,610.2	1,645.3	902.9	2,548.2
1978	893.4	1,479.8	612.0	1,566.7	144.1	3,802.6	1,759.4	939.3	2,698.7
1979	12,046.7	1,549.2	551.9	1,646.4	194.3	3,941.8	1,814.0	1,085.0	2,899.0
1980	12,753.8	1,486.7	536.6	1,799.1	185.1	4,007.5	1,788.7	1,077.5	2,866.2
1981	13,264.5	1,454.0	497.3	1,732.4	267.3	3,951.0	1,809.5	1,001.1	2,810.6
1982	13,725.9	1,150.6	379.4	1,561.5	231.0	3,322.5	1,511.6	952.5	2,464.1
1983	12,607.2	1,186.7	473.5	1,716.4	395.9	3,772.5	1,651.5	1,039.8	2,691.3
1984	13,531.4	1,288.6	503.1	1,903.2	416.5	4,111.4	1,824.8	1,122.5	2,947.3
1985	12,064.9	1,193.0	469.5	1,893.2	424.1	3,979.8	1,744.5	1,181.5	2,926.0
1986	17,341.4	1,240.4	325.2	2,153.6	442.6	4,161.8	1,820.2	1,306.1	3,126.3
1987	17,626.5	1,237.8	307.9	2,009.2	614.0	4,168.9	1,811.6	1,505.8	3,317.4
1988	17,505.3	1,281.7	290.2	2,172.3	486.2	4,230.5	1,860.6	1,501.4	3,362.0
1989	17,636.0	1,212.3	286.7	2,163.0	459.0	4,121.0	1,560.3	1,825.4	3,385.7
1990	16,283.7	1,128.8	259.5	1,984.1	549.5	3,921.8	1,461.7	1,791.5	3,253.2

^a Wood pulp production includes both integrated pulp and paper mills and integrated pulp mills.

^b Paper production does not include the output of non-integrated mills.

Source: Anon. (1992d)

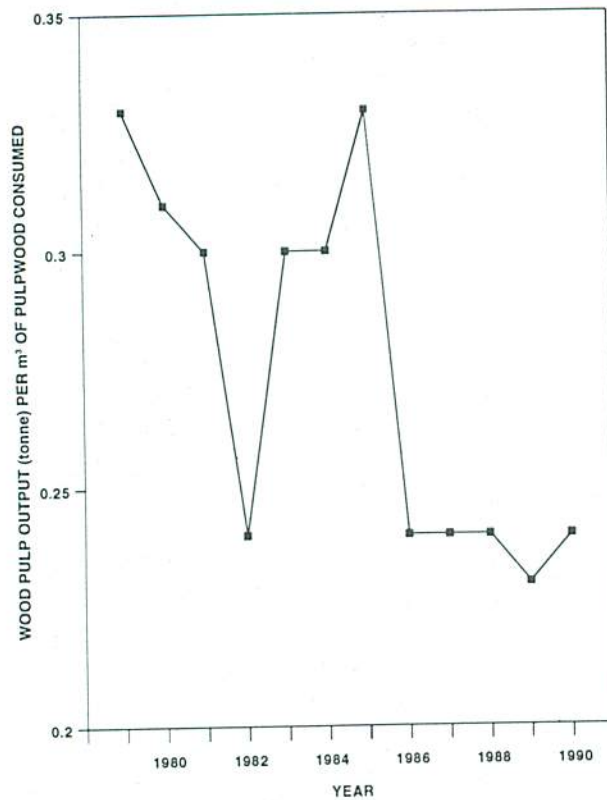


Figure 8. Trends in wood pulp recovery rates in Ontario from 1979 to 1990.

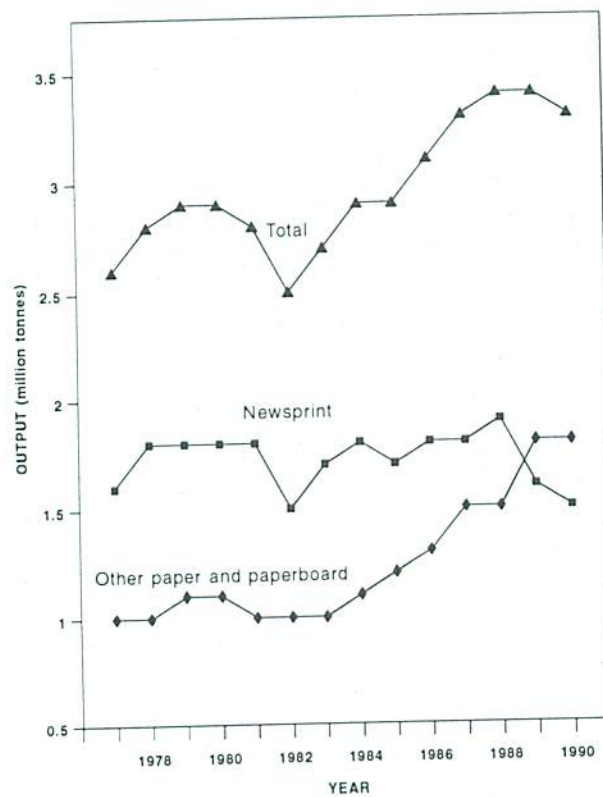


Figure 9. Output for the major categories of paper and paperboard products in Ontario from 1977 to 1990.

Table 4.10: Lumber production in Ontario, by species, from 1975 to 1990.

Year	Volume of lumber (thousand m ³)													Total lumber, all species ^a
	Spruce, balsam fir and jack pine	Red pine and white pine	Hem- lock	Other soft- woods	Total soft- woods	Birch	Elm	Oak	Maple	Pop- lar	Other hard- woods	Mixed hard- woods	Total hard- woods	
1975	1,583.5	329.6	37.7	14.4	1,965.2	59.2	15.9	22.4	225.7	44.2	51.2	23.5	445.7	2,410.9
1976	1,961.2	367.0	35.4	12.7	2,376.3	83.0	37.4	21.0	221.7	42.5	54.1	29.2	489.0	2,865.4
1977	2,483.5	374.9	51.2	8.9	2,918.6	67.8	8.5	27.2	275.5	57.5	69.9	19.3	525.6	3,444.2
1978	2,826.1	460.4	51.8	11.3	3,349.6	67.1	9.6	36.8	306.1	69.7	76.5	77.6	643.4	3,993.0
1979	2,778.4	428.7	58.9	31.7	3,297.8	75.6	6.1	39.0	344.7	83.2	109.1	37.5	685.6	3,983.4
1980	3,079.3	434.7	60.4	34.0	3,608.0	73.7	11.3	35.2	303.5	77.9	83.5	88.8	673.8	4,281.8
1981	3,108.3	429.4	69.5	17.5	3,617.0	80.2	3.0	40.3	276.3	93.1	84.2	33.1	610.1	4,227.1
1982	2,358.2	382.5	0.8	9.9	2,793.0	47.9	1.6	35.0	208.2	56.7	55.1	46.0	450.3	3,243.3
1983	3,055.4	488.5	49.0	13.2	3,606.0	52.7	— ^b	40.2	264.0	76.5	55.4	28.2	510.6	4,116.6
1984	3,335.8	566.1	48.2	22.2	3,972.2	71.2	— ^b	51.8	246.1	79.9	88.1	48.9	586.2	4,558.4
1985	3,625.5	541.9	48.4	14.0	4,229.0	78.9	— ^b	51.3	258.4	98.6	90.8	76.0	654.1	4,883.0
1986	3,629.7	586.7	54.8	14.4	4,285.7	64.0	— ^b	75.7	276.6	89.4	95.3	51.6	652.5	4,938.2
1987	3,803.2	585.1	67.3	14.5	4,470.2	78.9	— ^b	62.5	299.6	90.7	147.9	57.8	737.5	5,207.6
1988	3,930.8	609.8	62.8	64.0	4,667.4	61.1	— ^b	59.4	260.7	73.8	97.1	63.4	615.5	5,283.0
1989	4,138.3	485.6	31.3	47.7	4,702.8	45.7	— ^b	41.5	235.6	70.2	96.8	30.7	520.4	5,223.2
1990	3,515.8	438.8	15.1	6.5	3,976.2	42.8	— ^b	27.4	191.0	51.3	61.4	34.3	408.1	4,384.3

^a Totals may not add up precisely because of rounding.^b No longer reported.

Source: Anon. (1992d)

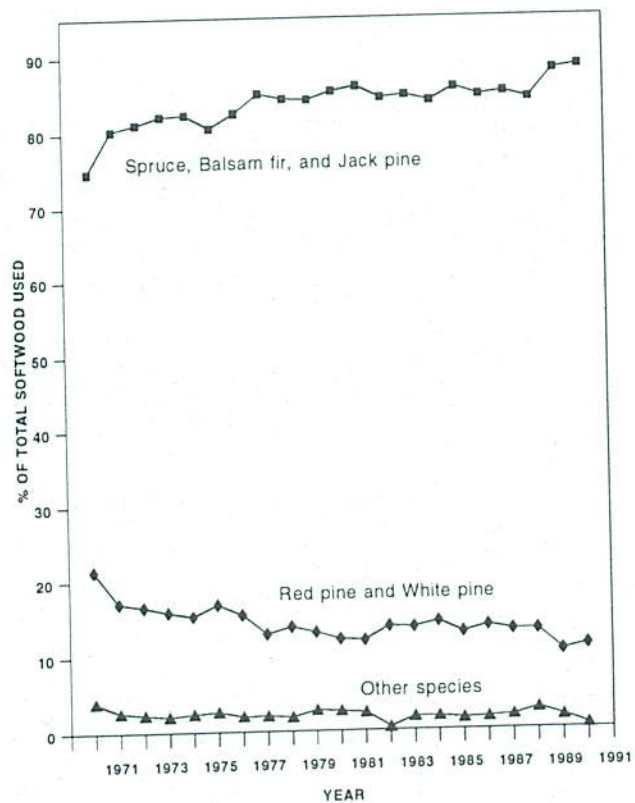


Figure 10. Mix of various softwood species in lumber production in Ontario from 1970 to 1990.

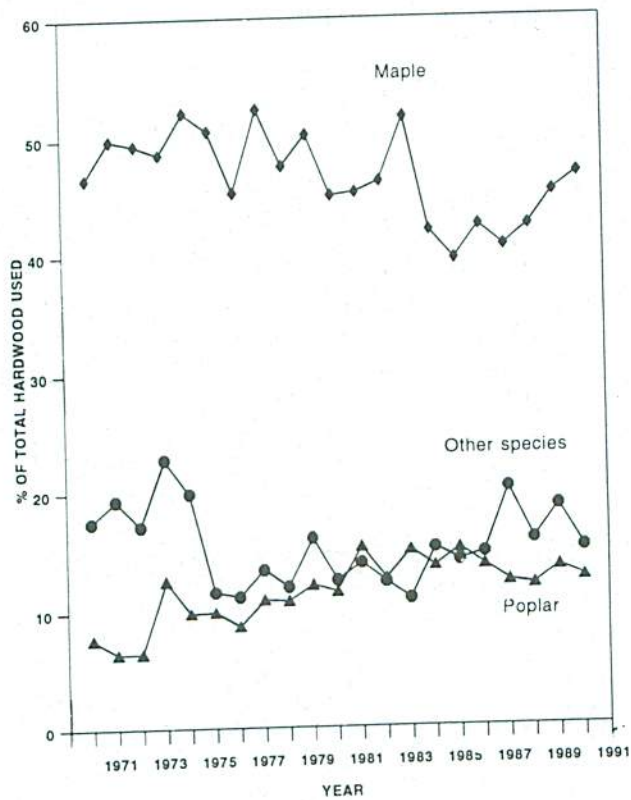


Figure 11. Mix of various hardwood species in lumber production in Ontario from 1970 to 1990.

Table 4.11: Lumber production in northern Ontario, by OMNR administrative region, from 1978 to 1989.

Year	Type	Lumber production (thousand m ³), by region				Total
		North-western	North Central	Northern	North-eastern	
1978	Softwood	256.0	824.0	1,352.4	555.7	2,988.1
	Hardwood	0.5	79.7	5.1	112.2	197.5
	Total	256.5	903.7	1,357.5	667.9	3,185.6
1979	Softwood	262.3	633.8	1,496.8	529.8	2,922.7
	Hardwood	3.7	27.1	10.0	130.6	171.3
	Total	266.0	660.9	1,506.8	660.4	3,094.0
1980	Softwood	250.9	873.4	1,489.8	614.8	3,228.0
	Hardwood	2.3	28.9	9.7	145.9	186.7
	Total	253.2	902.3	1,499.5	760.7	3,414.7
1981	Softwood	301.1	829.8	1,462.8	686.2	3,279.0
	Hardwood	1.9	37.7	10.3	123.8	173.8
	Total	303.0	867.5	1,473.1	810.0	3,452.8
1982	Softwood	229.5	524.7	1,197.5	559.3	2,510.1
	Hardwood	1.3	10.4	59.0	77.8	149.5
	Total	230.8	535.1	1,256.5	637.1	2,659.6
1983	Softwood	375.0	739.1	1,480.0	620.0	3,214.1
	Hardwood	0.3	2.9	8.3	106.7	118.2
	Total	375.3	742.0	1,488.3	726.7	3,332.3
1984	Softwood	352.2	849.2	1,494.4	867.2	3,563.0
	Hardwood	1.6	4.5	6.9	107.9	120.9
	Total	353.8	853.7	1,501.3	975.1	3,683.9
1985	Softwood	369.9	980.0	1,539.2	944.4	3,833.5
	Hardwood	0.4	3.2	4.8	112.5	120.9
	Total	370.3	983.2	1,544.0	1,056.9	3,954.4
1986	Softwood	412.0	1,014.1	1,612.8	856.7	3,895.6
	Hardwood	0.6	3.6	6.4	99.1	109.7
	Total	412.6	1,017.7	1,619.2	955.8	4,005.3
1987	Softwood	459.4	875.6	1,626.8	1,108.6	4,070.4
	Hardwood	0.9	8.3	15.7	94.8	119.7
	Total	460.3	883.9	1,642.5	1,203.4	4,190.1
1988	Softwood	417.9	947.7	1,705.6	1,170.8	4,242.0
	Hardwood	0.9	3.4	13.6	95.7	113.6
	Total	418.8	951.1	1,719.2	1,266.5	4,355.6
1989	Softwood	406.2	838.9	1,945.0	1,162.6	4,352.7
	Hardwood	0.8	0.2	15.6	81.2	97.8
	Total	407.0	839.1	1,960.6	1,243.9	4,450.5

Source: Anon. (1991b)

Table 4.12: Lumber production in southern Ontario, by OMNR administrative region, from 1978 to 1989.

Year	Type	Lumber production (thousand m ³), by region				Total
		Algonquin	Eastern	Central	Southwestern	
1979	Softwood	333.0	26.9	7.9	7.2	375.1
	Hardwood	269.1	83.5	54.5	107.2	514.3
	Total	602.1	110.4	62.4	114.4	889.4
1980	Softwood	333.3	26.5	13.3	5.9	379.0
	Hardwood	223.7	94.4	57.3	111.7	487.0
	Total	557.0	120.9	70.6	117.6	866.0
1981	Softwood	276.9	43.5	12.1	4.4	336.9
	Hardwood	225.6	61.1	46.3	103.4	436.3
	Total	502.5	104.6	58.4	107.8	773.2
1982	Softwood	217.3	33.5	24.3	5.2	280.2
	Hardwood	190.2	51.3	47.7	84.9	374.2
	Total	407.5	84.8	72.0	90.1	654.4
1983	Softwood	319.7	44.5	24.4	3.2	391.8
	Hardwood	215.6	42.8	45.7	88.3	392.4
	Total	535.3	87.3	70.1	91.5	784.2
1984	Softwood	328.1	35.6	41.9	3.5	409.1
	Hardwood	247.6	47.6	61.1	108.9	465.2
	Total	575.7	83.2	103.0	112.4	874.3
1985	Softwood	319.7	37.7	33.4	4.6	395.4
	Hardwood	294.6	52.3	66.3	119.8	533.0
	Total	614.3	90.0	99.7	124.4	928.4
1986	Softwood	333.0	29.4	21.0	6.6	390.0
	Hardwood	297.3	60.7	59.4	125.3	542.7
	Total	630.3	90.1	80.4	131.9	932.7
1987	Softwood	351.9	27.6	15.0	5.2	399.7
	Hardwood	335.1	60.5	44.7	140.5	580.8
	Total	687.0	88.1	59.7	145.7	980.5
1988	Softwood	376.9	24.9	18.3	5.3	425.4
	Hardwood	259.4	65.4	43.1	133.8	501.7
	Total	636.3	90.3	61.4	139.1	927.1
1989	Softwood	297.5	21.0	27.3	4.4	350.2
	Hardwood	199.5	68.3	42.3	112.5	422.6
	Total	497.0	89.3	69.6	116.9	772.8

Source: Anon. (1991b)

Table 4.13: Wood chip production in Ontario, by OMNR administrative region, from 1977 to 1989.

Year	Wood chip production (m ³), by region			Total
	North Central	Northern and Northeastern	All other regions	
1977	1,193,712	1,985,673	388,656	3,568,041
1978	1,438,356	2,110,467	492,001	4,040,824
1979	1,479,480	2,429,411	656,260	4,565,151
1980	1,342,023	2,691,778	484,693	4,518,494
1981	1,187,420	2,591,994	502,637	4,282,051
1982	853,698	2,224,792	345,690	3,424,180
1983	1,510,400	2,708,744	618,044	4,837,188
1984	1,844,864 ^a	3,155,926	746,710	5,747,500
1985	1,931,123 ^a	3,436,658	696,631	6,064,412
1986	1,726,719 ^a	3,569,197	762,337	6,058,253
1987	1,789,442 ^a	3,918,988	646,545	6,354,975
1988	1,798,679 ^a	4,166,713	597,949	6,563,341
1989	1,501,405 ^a	3,554,437	634,207	5,690,049

^a includes Northwestern Region

Source: Anon. (1991b)

Table 4.14: Roundwood consumption by sawmills in Ontario from 1970 to 1984.

Year	Roundwood consumption (thousand m ³)		Total
	Softwood	Hardwood	
1970	3,569	1,099	4,668
1971	3,855	919	4,774
1972	3,810	1,056	4,866
1973	4,615	1,100	5,715
1974	4,774	1,195	5,969
1975	3,624	750	4,374
1976	4,374	778	5,152
1977	5,957	799	6,756
1978	6,641	836	7,477
1979	7,751	927	8,678
1980	8,744	853	9,597
1981	7,929	861	8,790
1982	6,778	601	7,379
1983	7,091	626	7,717
1984	7,555	600	8,155

Source: Anon. (1984b)

Note: In 1984, Statistics Canada discontinued collecting these data.

Table 4.15: Quantity and value of roundwood shipments in Ontario, by primary product, from 1970 to 1989.

Year	Logs, bolts and other roundwood						Pulpwood							
	Softwood*		Hardwood		Total		Softwood		Hardwood		Total		Total roundwood	
	Quantity (thousand m ³)	Value (thousand \$)	Quantity (thousand m ³)	Value (thousand \$)	Quantity (thousand m ³)	Value (thousand \$)	Quantity (thousand m ³)	Value (thousand \$)	Quantity (thousand m ³)	Value (thousand \$)	Quantity (thousand m ³)	Value (thousand \$)	Quantity (thousand m ³)	Value (thousand \$)
1970	2,206	23,248	557	8,356	2,763	31,604	10,639	140,176	1,283	12,702	11,922	152,878	14,685	184,482
1971	2,680	29,785	606	9,205	3,286	38,990	9,336	129,269	1,051	9,643	10,387	138,912	13,673	177,902
1972	3,134	36,219	706	10,839	3,840	47,058	10,780	147,679	1,085	10,533	11,865	158,212	15,705	205,270
1973	2,696	33,940	690	11,192	3,386	45,132	11,142	162,605	1,203	13,975	12,345	176,580	15,731	221,712
1974	2,882	40,841	733	13,935	3,615	54,776	11,298	209,913	1,524	16,413	12,822	226,326	16,437	281,102
1975	2,629	46,432	494	12,612	3,123	59,044	7,866	174,412	594	9,883	8,460	184,295	11,583	243,339
1976	2,521	51,189	523	13,154	3,044	64,343	8,877	222,776	1,061	19,876	9,938	242,652	12,982	306,995
1977	3,641	79,086	609	14,839	4,250	93,925	9,370	255,049	1,182	24,417	10,552	279,466	14,802	373,391
1978	4,115	100,439	652	17,220	4,767	117,659	9,916	282,712	1,193	27,671	11,109	310,383	15,876	428,042
1979	4,145	112,307	727	21,684	4,872	133,991	10,053	314,650	1,323	34,414	11,376	349,064	16,248	483,055
1980	4,545	132,448	700	22,129	5,245	154,577	10,291	341,041	1,207	31,127	11,498	372,168	16,743	526,745
1981	3,581	118,481	1,062	37,251	4,643	155,732	10,075	363,999	2,137	66,779	12,212	430,778	16,855	586,510
1982	2,998	100,883	862	26,135	3,860	127,018	10,059	348,578	1,909	64,094	11,968	412,672	15,828	539,690
1983	3,975	137,052	687	27,328	4,662	164,380	9,879	379,779	2,387	83,058	12,266	462,837	16,928	627,217
1984	5,062	177,067	1,000	33,988	6,062	211,055	9,089	378,924	3,138	103,125	12,227	482,049	18,289	693,104
1985	4,716	177,145	691	27,661	5,407	204,806	10,696	432,007	2,429	76,687	13,125	508,694	18,532	713,500
1986	7,295	259,211	735	27,415	8,030	286,626	10,052	431,558	2,490	77,619	12,542	509,177	20,572	795,803

* includes less-important hardwoods

Note: Because Statistics Canada replaced the Industrial Commodity Classification with the Standard Classification of Goods, an extension of the Harmonized Commodity Description and Coding System, this type of information is no longer reported.

Source: Anon. (1992c)

Table 4.16: Veneer and plywood production in Ontario from 1977 to 1990.

Year	Production (m ³)		
	Veneer	Plywood	Total
1977	77,222	189,146	266,368
1978	98,344	212,517	310,861
1979	100,117	189,723	289,840
1980	112,775	194,193	306,968
1981	137,661	124,511	262,172
1982	117,319	89,267	206,586
1983	139,967	99,814	239,781
1984	147,135	105,425	252,560
1985	116,272	97,897	214,169
1986	117,544	120,961	238,505
1987	119,208	129,342	248,550
1988	93,185	134,810	227,995
1989	79,019	146,607	225,626
1990	71,405	137,474	208,879

Source: Anon. (1992d)

Table 4.17: Particleboard and waferboard production in Ontario from 1977 to 1990.

Year	Production (m ³)		Total
	Particleboard	Waferboard	
1977	228,235	250,273	478,508
1978	279,718	324,745	604,463
1979	284,814	377,885	662,699
1980	318,271	316,412	634,683
1981	320,811	339,591	660,402
1982	235,348	258,644	493,992
1983	256,207	460,195	716,402
1984	235,453	557,377	792,830
1985	310,152	542,579	852,731
1986	337,254	532,000	869,254
1987	369,917	536,396	906,313
1988	299,703	470,884	770,587
1989	345,599	519,326	864,925
1990	296,218	339,864	636,082

Source: Anon. (1992d)

Table 4.18: Production and shipments of pulp chips and number of producing and purchasing mills in Ontario from 1976 to 1989.

Year	Total production (m ³)	Total shipments (m ³)	Number of producing and shipping mills	Number of purchasing mills	
				Pulp mills	Other mills
1976	3,546,276	3,452,454	99	26	4
1977	4,334,735	4,335,609	107	22	2
1978	4,909,108	4,887,229	102	24	1
1979	5,546,101	5,382,339	106	26	1
1980	5,610,907	5,459,384	105	28	1
1981	5,051,645	4,907,706	102	27	2
1982	3,948,243	3,755,278	100	20	8
1983	4,845,196	4,697,022	105	23	6
1984	5,747,500	5,636,282	116	22	5
1985	6,064,412	5,927,437	119	24	6
1986	6,058,253	5,789,783	135	26	9
1987	6,354,975	6,290,306	95	26	3
1988	6,563,341	6,561,728	96	25	3
1989	5,690,049	5,517,468	99	25	3

Source: Anon. (1991b)

SECTION 5. TRADE IN FOREST PRODUCTS²

² In 1988 Statistics Canada started collecting export and import data according to a new format known as Harmony Systems. Major changes in Statistics Canada's data structure occurred, and the data were aggregated by selected products. As a result, the the information that was reported by Campbell (1990) was not directly comparable with that in previous years. Retaining a few of the statistics reported in previous years, this report presents a wider range of information on Ontario's trade in forest products.

Table 5.1: Ontario's exports and imports of roundwood from 1975 to 1989.

Year	Exports (m ³)	Imports (m ³)
1975	793,626	1,075,939
1976	813,998	1,392,310
1977	1,030,227	1,474,911
1978	974,626	1,657,498
1979	1,767,150	1,786,245
1980	1,604,959	2,001,547
1981	1,076,359	1,611,047
1982	702,565	1,119,297
1983	1,079,733	982,590
1984	924,495	1,232,850
1985	1,040,846	1,200,899
1986	1,365,175	1,082,784
1987	1,334,216	994,247
1988	1,428,885	974,014
1989	1,326,904	837,346

Source: Anon. (1991b)

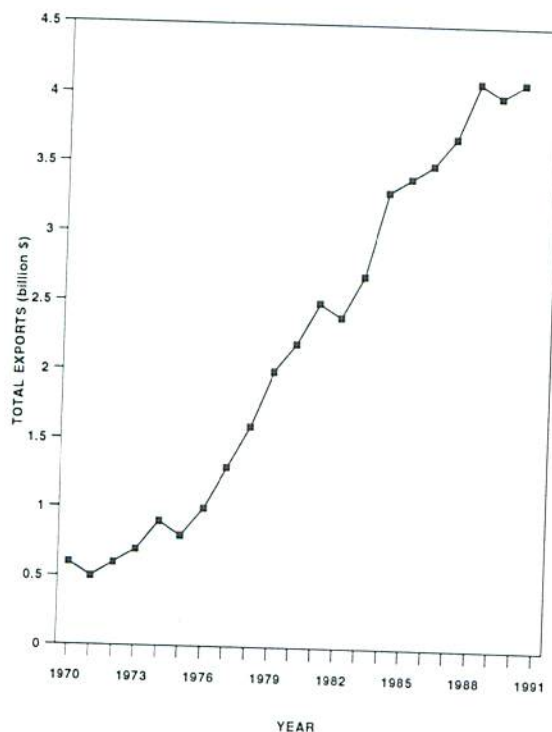


Figure 12. Total export values for forest products in Ontario from 1970 to 1990.

Table 5.2: Export and import values of forest products in Ontario from 1985 to 1988.

Product	Value (thousand \$)							
	1985		1986		1987		1988	
	Export	Import	Export	Import	Export	Import	Export	Import
Logs and bolts	885.7	14,357.2	2,167.7	22,271.6	3,530.1	24,389.9	5,158	31,789
Round timber (sawlogs)	903.6	6,319.9	952.6	4,938.6	2,168.5	5,245.8	1,243	9,721
Pulpwood	12.2	9,888.1	376.2	7,269.7	548.8	6,430.0	516	3,690
Pulpwood chips	1,173.1	229.4	2,318.3	233.2	1,298.7	269.9	1,414	932
Other crude wood materials	868.9	824.0	858.2	847.4	864.5	1,020.6	6,307	3,024
Lumber and timbers	885,083.5	122,234.2	895,245.4	168,190.9	715,689.0	215,116.2	552,520	260,011
Railway ties	890.8	3,614.8	357.7	2,540.2	666.5	1,044.1	104	1,637
Other sawmill products	3,453.1	8,409.1	2,544.5	9,952.8	3,927.5	10,301.7	7,594	1,702
Millwork	31,325.9	40,884.1	46,338.2	54,365.0	49,653.0	80,020.5	91,395	103,614
Veneer	48,687.7	13,082.5	58,187.4	15,163.0	64,096.3	19,692.0	63,836	24,701
Plywood	18,125.6	14,698.1	18,810.5	29,105.5	18,551.2	40,943.8	17,869	41,268
Other fabricated wood	141,115.6	31,712.5	118,849.3	35,270.6	94,799.3	39,557.8	111,791	106,650
Wood and similar pulp (market pulp)	501,302.2	68,769.4	542,668.3	62,275.6	700,740.2	57,694.5	877,500	48,525
Paper for printing	1,431,158.0	93,970.8	1,425,759.6	120,682.7	1,596,859.4	129,516.0	1,951,426	293,705
Fine paper	63,335.9	93,952.6	45,069.2	109,259.4	41,471.4	132,235.7	16,351	108,302
Tissue and sanitary paper	26,915.0	17,636.3	24,003.1	19,116.4	24,478.7	22,955.4	49,116	36,448
Wrapping paper	25,869.3	21,200.0	23,778.5	19,366.3	33,519.1	24,527.6	8,309	61,130
Paperboard	26,321.5	78,283.3	33,046.7	106,981.3	41,061.7	118,056.5	23,601	77,458
Building board and paper and machine board	63,557.5	18,911.0	70,278.0	21,830.2	66,714.4	26,857.5	75,278	71,929
Converted paper	85,268.5	135,425.6	133,628.0	157,571.2	154,115.7	155,219.5	184,748	189,033
Total forest products	3,356,253.6	797,322.1	3,445,237.4	972,258.9	3,614,754.0	1,115,541.1	4,046,526	1,420,859

Source: Anon. (1991b)

Table 5.3: Value of exports and imports of major forest products for Ontario and Canada in 1988^a.

Product type	Exports (thousand \$)		Imports (thousand \$)	
	Ontario	Canada	Ontario	Canada
A. Wood and wooden articles and charcoal				
Lumber	552,372.0	5,469,793.4	260,038.9	499,337.7
Veneer	63,828.6	146,376.6	24,710.1	45,885.7
Wood (lumber) continuously shaped	23,697.6	244,538.0	44,592.1	94,024.0
Particleboard	33,021.2	200,178.0	12,865.9	33,463.0
Plywood	17,940.7	144,563.1	41,278.0	94,945.5
Doors and their frames	31,850.1	54,347.8	9,213.2	14,062.6
All other articles (not elsewhere specified)	94,008.1	942,403.5	168,654.5	443,752.2
Subtotal	816,718.3	7,202,200.4	561,352.7	1,225,470.7
B. Wood pulp and other fibrous cellulosic material (e.g., waste paper)				
Mechanical wood pulp	474.7	142,608.4	415.0	3,558.3
Chemical wood pulp	876,604.5	6,130,257.3	45,112.3	149,511.0
Semi-mechanical wood pulp	381.7	165,367.0	2,170.3	5,638.9
Waste and scrap of paper/paperboard	12,292.7	53,219.0	98,929.1	138,072.0
All other pulps	45.2	37,093.6	833.3	6,411.1
Subtotal	889,798.8	6,528,545.3	147,460.0	303,191.3
C. Paper and paperboard				
Newsprint	1,546,072.9	6,195,174.8	2,470.6	3,563.2
Paper, fine	337,193.8	1,315,885.4	277,059.4	490,544.1
Paper, kraft	18,200.3	59,037.5	87,621.5	122,881.3
Paper, sanitary	20,137.1	32,930.1	33,979.2	50,594.1
Paperboards	29,964.2	369,237.3	75,868.3	103,655.4
All other papers and paperboards	409,916.3	911,102.6	571,280.7	905,798.5
Subtotal	2,361,484.6	8,883,367.7	1,048,279.7	1,677,036.6
Grand total	4,068,001.7	22,614,113.4	1,757,092.4	3,205,698.6

^a These data are not comparable with data from previous years, because Statistics Canada started reporting according to the Harmony System in 1988. Notice the importance of newsprint.

Source: Statistics Canada, special compilation

Table 5.4: Domestic exports (excluding re-exports) and imports of forest products in Ontario in 1989 and 1990.

Product type	Value (thousand \$)			
	1989		1990	
	Exports	Imports	Exports	Imports
A. Primary wood products	17,874	48,716	22,522	54,342
Logs and bolts - total	5,118	34,064	3,816	33,343
- softwood logs	179	4,100	317	4,754
Pulpwood - total	25	6,667	116	7,954
- softwoods	-	2,309	87	3,307
Wood chips	150	1,093	1,896	1,789
Other primary products	12,581	6,892	16,694	11,256
B. Fabricated materials	670,968	538,458	846,451	461,601
Lumber - softwoods	393,897	71,945	576,219	43,136
- hardwoods	52,025	162,176	50,959	142,586
Shingles and shakes	791	32	250	88
Veneer - softwoods	2,001	2,766	208	2,681
- hardwoods	56,671	28,689	63,028	28,053
Plywood - softwoods	1,649	23,542	730	18,064
- hardwoods	21,584	23,543	23,609	16,917
Waferboard	18,645	1,193	35,975	951
Particleboard	5,583	9,767	7,844	7,654
Fiberboard	5,198	27,421	3,313	23,261
Other wood products	19,219	62,769	18,875	51,804
Other not elsewhere classified	93,704	124,615	65,441	126,405
C. Wood pulp and paper products	3,214,208	1,273,513	3,274,080	1,346,194
Wood pulp - total	953,591	62,461	865,866	65,608
- chemical	953,306	61,005	865,866	63,890
Paper products	2,260,617	1,211,052	2,408,214	1,280,586
Newsprint	1,429,301	4,713	1,440,528	8,346
Other paper and paperboard	642,416	760,299	744,372	785,169
Book and writing paper	267,873	112,426	245,606	108,125
Fine paper	157,090	271,732	212,787	301,598
Tissue and sanitary	17,823	22,198	22,047	25,866
Wrapping and packaging	15,251	26,652	17,131	27,771
Paperboard	41,186	159,421	66,159	175,145
Building paper and paperboard	4,962	1,807	5,224	1,216
Converted paper	138,233	166,063	175,418	145,448
Miscellaneous paper products	188,900	446,040	223,314	487,072
Total forest products	3,903,050	1,860,686	4,143,053	1,862,137

Source: Anon. (1992a)

Table 5.5: Trends in Canada's share of the United States newsprint market from 1970 to 1990.

Year	Canada's exports		United States domestic supply		Other suppliers		Total market supply	Average price (US\$)	Price index (1972 = 100)
	Quantity ^a	Share (%)	Quantity ^a	Share (%)	Quantity ^a	Share (%)			
1970	5,591	62.9	3,008	33.9	285	3.2	8,884	178.72	92
1971	5,576	62.9	3,000	33.8	288	3.2	8,863	185.78	96
1972	5,833	62.4	3,220	34.4	298	3.2	9,350	193.51	100
1973	6,219	62.9	3,318	33.6	346	3.5	9,882	205.76	106
1974	6,304	65.4	3,136	32.5	193	2.0	9,633	246.92	128
1975	4,980	60.4	3,235	39.2	30	0.4	8,244	286.60	148
1976	5,671	62.9	3,295	36.5	52	0.6	9,018	311.40	161
1977	5,751	62.9	3,390	37.1	0	0	9,141	333.45	173
1978	6,443	65.9	3,333	34.1	0	0	9,776	348.33	181
1979	6,371	63.0	3,602	35.6	132	1.3	10,106	385.80	200
1980	6,118	59.4	4,058	39.4	125	1.2	10,301	436.00	226
1981	6,062	57.5	4,452	42.2	37	0.4	10,552	482.50	250
1982	5,584	56.5	4,251	43.0	42	0.5	9,877	495.00	257
1983	5,969	57.1	4,409	42.2	67	0.7	10,446	479.00	249
1984	6,500	56.5	4,807	41.8	189	1.7	11,496	517.50	269
1985	6,593	57.0	4,648	40.2	332	2.8	11,573	535.00	276
1986	6,672	56.8	4,777	40.7	299	2.5	11,749	543.75	281
1987	7,072	56.8	5,026	40.4	353	2.8	12,451	590.00	305
1988	6,989	56.8	5,033	40.9	275	2.3	12,297	650.00	336
1989	6,751	56.3	5,029	42.0	201	1.7	11,982	650.00	336
1990	6,423	52.8	5,580	45.9	160	1.3	12,163	670.42	346

^a Quantities are in thousands of metric tonnes.

Note: Ontario is Canada's second largest newsprint producer, following Quebec. Newsprint accounts for 50% of the total basic paper and paperboard produced in Ontario. In 1990, newsprint accounted for more than 61% of the total value of Ontario's basic paper and paperboard exports. More than 80% of this total export was destined for the U.S. market.

Source: Anon. (1990c)

SECTION 6. PRINCIPAL STATISTICS

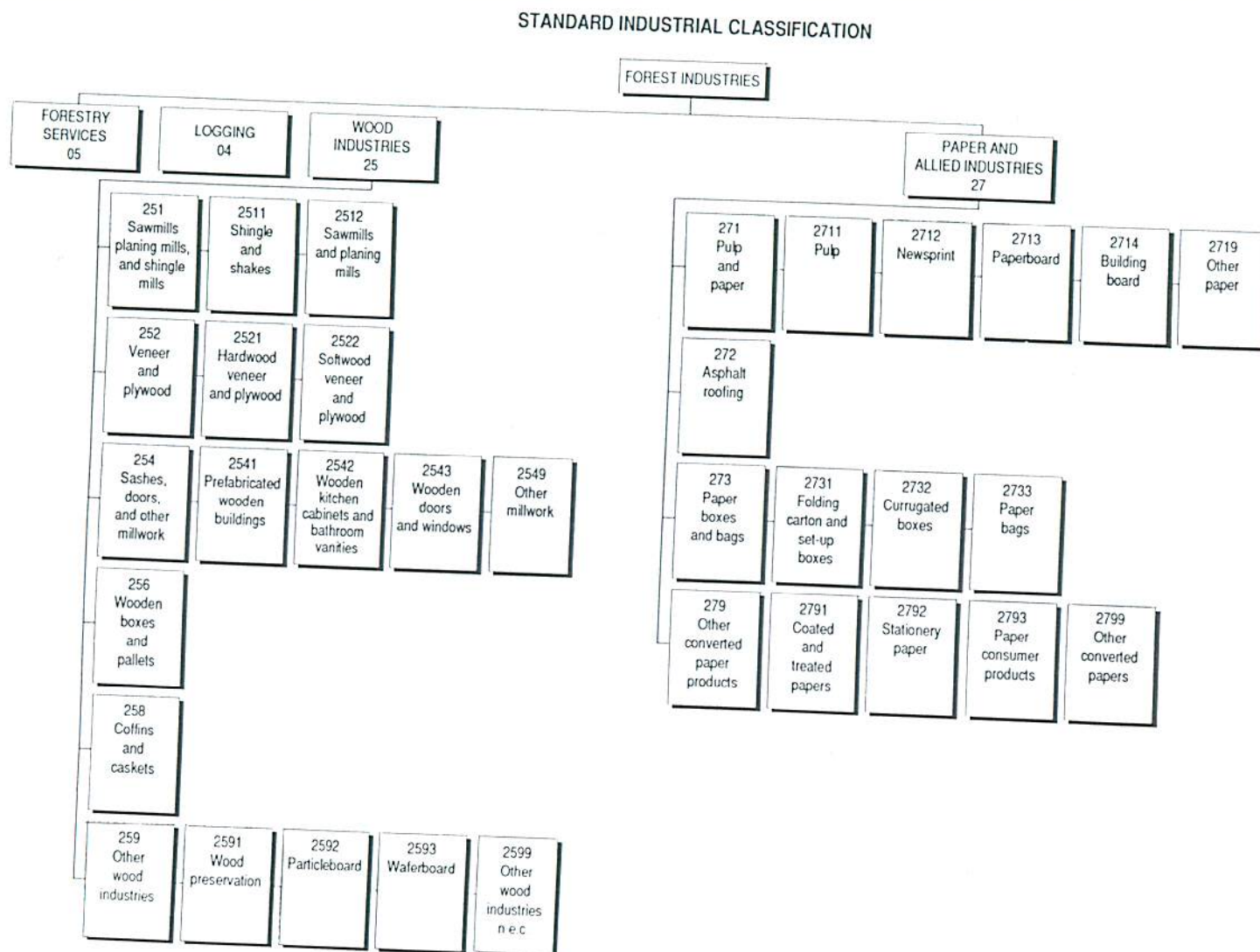


Figure 13. Standard industrial classification for the forest industries. (Source: Anon. 1980)

Table 6.1: Principal statistics for the logging industry in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)		Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added			
1970	474	8,246	19,637	67,433	5,224	99,272	218,052	110,454	9,567	79,745	111,533
1971	408	6,900	16,080	62,730	4,936	94,459	206,608	105,966	8,125	74,761	106,650
1972	393	6,598	15,861	69,594	6,262	104,970	234,063	116,776	7,783	81,892	117,993
1973	400	7,677	17,292	84,257	8,131	113,766	254,794	144,185	8,983	98,699	145,762
1974	380	8,225	18,543	103,433	11,329	150,366	326,247	186,730	9,673	121,454	188,240
1975	328	6,616	14,865	91,265	9,724	150,098	302,702	174,117	8,028	111,940	176,263
1976	269	6,307	12,802	103,363	11,014	153,503	353,893	195,277	7,694	126,888	196,735
1977	246	7,035	14,324	127,140	12,539	188,298	435,323	229,325	8,447	153,309	231,149
1978	245	8,099	16,562	150,301	15,045	244,909	504,960	251,259	9,569	179,797	253,658
1979	321	8,096	16,572	163,647	17,084	306,121	588,598	276,600	9,684	197,276	278,921
1980	391	8,015	16,692	179,478	24,072	365,267	668,003	316,822	9,578	215,652	319,883
1981	418	7,374	14,979	185,016	30,562	381,431	717,927	319,189	9,003	230,052	327,515
1982	418	5,683	11,370	149,796	33,320	346,243	678,892	283,108	7,079	193,796	287,982
1983	472	6,568	13,463	185,569	39,425	398,704	793,959	354,276	7,826	227,797	355,758
1984	484	8,264	17,283	230,988	44,724	514,580	922,640	391,493	9,515	275,809	394,618
1985	518	7,313	15,207	218,105	45,769	501,328	949,222	388,446	8,482	260,439	390,214
1986	570	7,419	14,551	229,653	49,755	536,816	1,014,980	447,395	8,527	271,810	456,310
1987	2,182	6,885	8,725	226,000	59,000	565,000	1,147,000	520,000	7,932	267,000	522,000
1988	1,727	6,630	13,976	231,400	51,200	662,800	1,201,000	492,000	7,566	270,700	496,100
1989 ^p	1,809	6,836	14,169	247,400	49,000	738,300	1,290,500	511,600	7,756	287,600	524,900

^p preliminary

Sources: Anon. (1990d, 1992c)

Table 6.2: Principal statistics for the wood industries in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)				
		Number	Person-hours paid (thousands)	Wages (thousands \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	744	13,261	28,553	70,735	5,532	155,710	305,284	144,413	16,010	92,529	147,005
1971	723	13,575	29,051	77,771	6,632	174,204	350,663	158,805	16,346	102,012	167,634
1972	724	15,076	32,042	92,172	7,726	216,554	437,650	213,057	18,102	121,115	217,738
1973	717	16,403	34,832	110,808	10,458	265,302	568,986	298,521	20,111	150,438	303,648
1974	729	16,070	34,115	125,927	12,864	308,703	620,109	318,225	20,047	173,369	327,552
1975	716	15,517	32,539	136,307	12,766	334,990	629,389	296,249	18,896	182,931	302,490
1976	683	16,537	34,399	161,822	17,560	386,943	734,318	336,439	19,872	212,338	353,413
1977	645	16,737	35,116	185,849	22,715	447,266	900,021	404,654	20,110	242,641	410,508
1978	708	18,268	38,368	216,347	27,712	541,656	1,077,960	511,100	21,946	279,405	515,319
1979	761	19,283	40,815	252,046	31,132	690,779	1,319,646	620,394	22,902	320,145	629,169
1980	778	18,035	38,088	260,081	33,475	712,136	1,275,892	554,159	21,348	328,796	570,631
1981	774	17,699	37,191	287,201	43,705	791,939	1,436,091	605,011	20,970	363,000	619,138
1982	794	15,817	31,752	256,192	46,144	678,065	1,256,365	517,939	19,015	334,260	525,522
1983	820	16,518	34,109	297,879	54,656	848,805	1,572,193	680,554	19,262	381,158	698,512
1984	838	17,524	36,530	335,434	61,127	929,171	1,795,703	701,217	20,840	432,202	774,790
1985	851	19,780	42,604	399,226	67,134	1,140,015	2,103,433	902,793	23,209	507,512	912,627
1986	877	20,760	44,489	433,398	60,082	1,275,365	2,329,098	1,010,505	23,717	534,913	1,015,591
1987	845	n/a	n/a	n/a	66,319	1,608,000	2,724,000	n/a	28,040	653,000	1,165,000
1988	926	25,301	53,681	570,200	72,400	1,647,500	2,906,000	1,207,500	29,185	734,000	1,234,500
1989 ^p	846	26,741	56,714	623,000	74,000	1,745,000	3,107,000	1,290,000	30,655	793,000	1,318,000

^p preliminary data.

Sources: Anon. (1970a, 1984b, 1984c, 1985d, 1985e, 1987a, 1990e)

Table 6.3: Principal statistics for the sawmills and planing mills industry^a in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)		Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
		Number	Person-hours paid (thousand)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added			
1970	292	4,677	10,355	24,750	2,474	50,358	99,022	47,242	5,361	30,123	47,899
1971	273	4,428	9,640	26,108	2,888	54,754	115,752	54,717	5,204	32,552	55,190
1972	267	4,778	10,213	29,980	3,455	61,634	144,976	77,624	5,595	37,604	77,889
1973	255	5,353	11,416	37,803	5,194	76,198	196,598	117,285	6,620	51,641	117,612
1974	261	5,158	11,037	43,187	6,694	90,960	198,957	113,447	6,557	60,078	114,210
1975	240	4,508	9,530	41,903	5,796	101,059	180,044	85,680	5,444	54,694	86,123
1976	222	4,642	9,846	49,421	7,324	117,179	222,918	99,427	5,660	64,385	110,125
1977	215	5,156	11,071	61,285	9,416	146,030	290,277	136,493	6,221	78,341	136,414
1978	225	5,752	12,259	74,847	11,727	187,757	396,084	197,297	6,888	95,015	197,672
1979	243	5,956	12,877	85,950	13,550	252,670	495,612	241,979	7,105	107,704	242,820
1980	235	6,009	12,861	97,454	14,875	290,029	480,955	199,429	6,967	118,193	200,208
1981	235	5,647	11,956	100,156	20,428	305,451	521,359	197,512	6,630	123,566	197,720
1982	221	4,976	9,876	88,481	21,713	265,789	451,470	157,593	6,005	113,256	161,104
1983	228	5,461	11,186	106,900	25,796	347,514	597,648	228,043	6,433	132,022	233,690
1984	225	5,787	11,670	117,362	28,537	413,224	669,101	241,409	6,886	147,815	242,281
1985	212	6,526	13,944	148,664	32,981	473,890	817,357	317,105	7,686	186,640	318,033
1986	210	6,798	14,152	162,261	31,071	501,265	851,314	322,652	7,685	193,852	323,225
1987	185	n/a	n/a	n/a	31,000	525,000	843,000	n/a	7,785	202,000	298,000
1988	170	6,894	14,452	180,100	32,000	561,600	891,200	305,500	7,788	214,000	309,900
1989 ^p	144	6,704	14,092	182,000	31,000	573,000	915,000	310,000	7,486	214,000	313,000

^a Does not include the shakes and shingles industry (SIC-2511), which is not significant in Ontario.

^p preliminary

Sources: Anon. (1984b, 1987a, 1990d, 1990e, 1992a)

Table 6.4: Principal statistics for the veneer and plywood industry in Ontario from 1970 to 1989.

1970 to 1987											
Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)				
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electric-ity	Material and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	29	1,978	4,031	9,505	857	18,446	35,075	15,081	2,283	11,871	15,482
1971	27	1,997	4,063	10,220	917	17,043	37,382	17,385	2,262	12,453	17,501
1972	25	2,166	4,453	12,260	1,110	18,655	43,715	23,284	2,432	14,848	23,354
1973	24	2,178	4,515	13,622	1,254	23,000	56,155	31,728	2,434	16,229	31,588
1974	22	1,921	3,945	13,841	1,220	22,779	52,052	29,224	2,189	16,820	29,331
1975	21	1,838	3,696	14,780	1,326	23,949	46,874	22,575	2,078	17,986	22,656
1976	20	1,796	3,441	16,174	1,454	25,088	50,814	23,973	2,039	19,583	24,542
1977	21	1,715	3,261	17,310	1,740	30,511	89,237	27,298	1,965	21,245	26,820
1978	22	2,020	4,035	22,912	2,140	39,126	88,946	47,169	2,317	28,108	46,554
1979	23	2,160	4,427	26,434	2,642	50,855	110,975	58,243	2,470	32,566	60,903
1980	24	2,146	4,395	28,915	3,025	59,572	112,240	52,005	2,443	35,532	54,380
1981	18	1,950	4,081	30,151	3,870	66,825	120,226	50,706	2,231	36,585	50,017
1982	21	1,753	3,326	25,501	3,930	52,495	98,834	41,190	2,016	32,336	41,104
1983	23	1,782	3,621	30,432	4,786	59,966	125,854	62,510	2,046	38,365	65,846
1984	24	1,889	3,938	35,870	4,845	69,234	138,718	57,987	2,176	45,694	72,022
1985	19	1,585	3,179	30,867	5,372	59,341	118,954	55,636	1,864	39,299	57,216
1986	18	- ^a	- ^a	- ^a	- ^a	- ^a	- ^a	- ^a	- ^a	- ^a	- ^a
1987	19	n/a	n/a	n/a	6,072	n/a	n/a	n/a	2,130	48,091	79,115
1988	19	1,943	4,122	43,900	6,300	99,400	182,600	80,200	2,217	54,600	80,100
1989 ^p	21	1,913	3,915	46,000	6,000	96,000	184,000	80,000	2,184	56,000	88,000

^a confidential

^a confidential^p preliminary

Sources: Anon. (1985e, 1987a, 1990e, 1992a)

Table 6.5: Principal statistics for sash, door, and other millwork industries in Ontario from 1970 to 1988.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)		Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added			
1970	261	3,393	7,397	19,166	1,176	54,004	100,973	45,799	4,490	27,778	47,265
1971	257	3,838	8,372	22,621	1,312	66,229	121,476	48,049	4,911	32,564	55,971
1972	273	4,716	10,126	29,553	1,482	94,371	161,504	68,257	5,960	42,134	72,418
1973	278	5,138	11,094	35,644	1,932	116,063	208,578	92,996	6,582	51,375	97,804
1974	279	5,165	11,178	41,324	2,283	129,719	237,505	110,455	6,714	60,672	118,376
1975	283	5,114	10,861	45,672	2,424	136,249	258,851	119,911	6,540	66,021	124,894
1976	282	5,935	12,514	57,837	3,151	162,191	297,071	134,517	7,233	78,844	139,934
1977	266	5,513	11,706	57,759	3,847	160,572	292,993	131,440	6,819	80,045	137,685
1978	303	5,786	12,189	63,740	4,314	178,215	328,703	146,669	7,169	87,361	150,713
1979	316	6,153	12,987	73,444	4,489	210,619	385,936	174,308	7,460	98,286	178,123
1980	322	5,456	11,500	70,449	4,885	188,733	362,780	167,877	6,668	94,941	178,889
1981	322	5,870	12,321	84,993	6,057	220,011	428,796	201,102	7,076	111,843	212,595
1982	343	5,335	11,101	81,659	7,013	197,830	395,613	187,948	6,481	109,655	191,269
1983	375	5,839	12,318	98,421	7,638	253,207	515,080	260,007	6,778	133,643	266,261
1984	381	6,074	12,873	108,291	8,659	211,391	576,147	239,230	7,403	146,916	295,558
1985	407	7,746	17,054	143,216	10,082	368,587	744,025	364,379	9,140	186,464	369,278
1986	443	9,957	21,748	192,141	11,730	503,981	998,968	492,837	11,440	244,215	495,703
1987	416	n/a	n/a	n/a	13,000	682,000	n/a	n/a	13,447	300,000	583,000
1988	474	12,081	25,642	251,200	16,000	678,400	1,314,200	628,400	14,110	343,600	645,300

Sources: Anon. (1985d, 1987a, 1990e)

Table 6.6: Principal statistics for the wooden box and pallet industry in Ontario from 1970 to 1989.

Manufacturing activity											
Year	Number of establishments	Production and related workers			Cost (thousand \$)		Value (thousand \$)		Total activity		
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	75	1,512	3,161	8,305	444	1,6032	35,074	18,791	1,838	11,164	18,749
1971	80	1,538	3,215	8,597	545	1,6464	35,393	18,454	1,856	11,437	18,542
1972	75	1,572	3,299	8,785	539	17,853	37,512	18,961	1,896	11,627	18,952
1973	81	1,676	3,525	10,331	641	22,197	45,829	23,515	2,002	13,645	23,433
1974	89	1,841	3,915	13,182	904	35,343	64,955	29,056	2,221	17,305	28,920
1975	90	1,944	4,124	16,010	954	36,634	70,530	32,968	2,338	21,899	32,855
1976	86	1,855	3,929	16,281	1,124	36,635	74,264	36,659	2,240	21,736	36,448
1977	77	1,916	4,044	21,293	1,393	46,866	99,957	51,976	2,284	28,659	51,840
1978	77	1,878	3,947	20,006	1,478	53,651	98,567	44,437	2,312	26,311	44,436
1979	88	2,146	4,502	27,865	1,572	70,620	126,354	54,104	2,570	34,497	54,230
1980	89	1,846	3,837	22,782	1,531	64,733	120,392	54,122	2,250	30,336	53,939
1981	89	1,688	3,522	26,336	1,740	72,780	135,109	60,452	2,079	35,374	60,372
1982	102	1,637	3,426	24,435	2,526	60,336	118,734	56,024	2,013	33,079	55,927
1983	91	1,187	2,466	16,755	1,860	47,341	85,078	35,867	1,374	21,029	36,050
1984	96	1,256	2,612	18,713	2,202	59,199	105,158	44,183	1,445	23,293	44,169
1985	90	1,346	2,698	20,354	2,392	65,147	112,934	46,485	1,552	26,050	46,433
1986	96	1,370	2,782	20,785	2,419	65,938	119,474	50,856	1,609	27,361	51,379
1987	93	n/a	n/a	n/a	2,000	74,000	n/a	n/a	1,796	32,000	57,000
1988	102	1,602	3,398	28,000	2,000	80,000	143,000	61,000	1,834	37,000	62,000
1989 ^p	92	1,524	3,221	27,000	2,000	79,000	143,000	62,000	1,763	36,000	63,000

^p preliminary

^p preliminary

Sources: Anon. (1970b, 1987a, 1990e, 1992a)

Table 6.7: Principal statistics for the coffins and caskets industry in Ontario from 1970 to 1988.

Year	Number of establishments	Manufacturing activities					Value (thousand \$)		Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)		Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added			
1970	9	280	598	1,353	78	1,938	4,846	2,760	393	2,148	2,809
1971	9	279	602	1,479	78	1,789	4,768	2,944	371	2,280	3,034
1972	9	253	529	1,550	74	2,043	4,953	2,700	343	2,475	2,785
1973	9	238	477	1,351	112	2,219	5,044	2,791	311	2,182	2,795
1974	9	235	472	1,419	115	2,286	5,359	2,819	321	2,242	2,857
1975	9	213	451	1,595	113	2,275	5,382	3,216	264	2,219	3,311
1976	8	212	445	1,713	147	1,859	5,339	3,005	252	2,317	3,004
1977	8	212	445	1,713	147	1,859	5,145	3,010	220	2,108	3,007
1978	7	184	388	1,606	92	1,999	6,027	3,518	214	2,689	3,487
1979	7	170	374	1,764	128	2,631	6,071	3,431	190	2,296	3,390
1980	7	156	330	1,718	113	2,687	6,372	3,444	185	2,370	3,426
1981	8	153	320	1,783	99	3,012	6,372	3,444	185	2,370	3,426
1982	8	153	320	1,783	99	3,012	6,986	3,747	189	2,843	3,726
1983	8	154	321	2,159	126	3,471	6,796	3,469	155	2,402	3,452
1984	8	135	259	1,821	125	2,787	6,722	3,644	167	2,762	3,620
1985	6	146	274	2,118	135	3,159	7,387	4,131	148	2,811	4,113
1986	6	133	256	2,138	146	4,312	8,861	4,444	173	3,416	4,411
1987	5	159	343	2,732	146	4,312	— ^a	— ^a	— ^a	— ^a	— ^a
1988	3	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a	— ^a

^a confidential

Sources: Anon. (1970a, 1984c, 1987a, 1992a)

Table 6.8: Principal statistics for the "other wood industries" category in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)				
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Materials and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	78	1,421	3,011	7,656	503	14,932	30,294	14,740	1,645	9,445	14,801
1971	77	1,495	3,159	8,746	892	17,925	35,892	17,256	1,742	10,726	17,396
1972	75	1,591	3,422	10,044	1,066	21,998	44,990	22,231	1,876	12,427	22,340
1973	70	1,820	3,805	12,057	1,325	25,625	56,782	30,206	2,162	15,366	30,416
1974	69	1,750	3,568	12,974	1,648	27,616	61,281	33,224	2,045	16,252	33,858
1975	73	1,900	3,877	16,347	2,153	34,824	67,708	31,899	2,232	20,112	32,651
1976	65	2,097	4,224	20,396	4,360	43,991	83,912	38,858	2,448	25,473	39,360
1977	59	2,253	4,646	26,596	6,227	61,288	122,412	54,437	2,601	32,243	54,742
1978	74	2,662	5,564	33,078	7,925	80,276	159,633	72,010	3,046	39,921	72,457
1979	84	2,712	5,692	36,635	8,766	103,328	194,698	88,329	3,107	44,796	89,703
1980	100	2,425	5,175	38,698	9,060	106,057	193,153	77,282	2,835	47,424	79,789
1981	102	2,390	4,990	43,406	11,484	123,401	223,615	91,492	2,765	52,789	94,708
1982	99	1,981	3,764	34,295	10,837	98,828	184,918	71,715	2,345	43,532	72,666
1983	97	2,103	4,244	43,253	14,441	137,618	241,811	90,483	2,464	53,337	93,045
1984	106	2,385	5,181	53,060	16,738	172,998	299,192	114,277	2,782	65,673	116,647
1985	118	2,418	5,386	53,393	16,161	168,738	301,302	114,744	2,794	65,643	117,256
1986	128	2,635	5,807	58,211	14,862	204,181	359,342	144,160	2,983	69,485	145,284
1987	128	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1988	156	2,649	5,775	64,000	15,000	224,000	365,000	126,000	3,092	82,000	130,000
1989 ^p	133	2,695	5,814	66,000	15,000	238,000	386,000	133,000	3,174	84,000	139,000

^p preliminary

Sources: Anon. (1984c, 1987a, 1990e, 1992a)

Note: Information on the minor industry group "miscellaneous wood processing mills" (SIC-2599) is not included (unavailable).

Table 6.9: Principal statistics for the paper and allied industries group in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)		Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Materials and supplies	Shipments of goods of own manufacture	Value added			
1970	283	33,547	72,138	240,473	58,669	672,274	1,313,912	592,793	44,894	346,429	614,505
1971	289	32,980	69,810	249,841	64,119	697,061	1,367,409	607,577	43,867	359,156	627,388
1972	300	33,768	72,012	279,205	69,169	753,532	1,484,009	664,424	44,580	395,819	681,960
1973	289	34,795	73,501	313,219	75,146	861,171	1,748,334	805,718	45,391	436,485	822,195
1974	294	36,363	76,156	366,746	93,673	1,175,921	2,429,738	1,199,139	47,404	512,825	1,221,618
1975	302	33,965	62,455	336,145	93,260	1,064,969	2,126,440	958,518	45,178	497,082	999,360
1976	301	34,505	73,464	434,419	145,411	1,291,515	2,459,738	1,050,988	45,675	612,500	1,082,375
1977	287	33,233	68,858	492,122	197,186	1,440,021	2,826,618	1,193,018	43,488	682,113	1,207,415
1978	319	34,819	71,961	541,132	228,829	1,616,287	3,145,697	1,307,490	45,209	747,391	1,317,821
1979	334	35,811	74,455	600,095	252,575	2,007,804	3,872,204	1,643,402	46,172	827,101	1,661,591
1980	349	37,083	75,710	664,382	279,529	2,368,704	4,598,956	1,973,451	47,860	926,771	1,992,112
1981	342	36,277	75,236	749,579	324,781	2,702,821	5,129,830	2,121,588	47,381	1,044,810	2,136,084
1982	347	33,013	67,710	743,848	351,385	2,596,915	4,841,076	1,915,271	43,867	1,078,892	1,939,371
1983	301	31,175	64,833	789,178	381,788	2,676,283	5,041,629	1,993,123	42,001	1,110,512	2,010,011
1984	311	31,806	66,009	848,874	408,818	3,044,819	5,851,887	2,453,273	41,690	1,181,224	2,466,296
1985	317	31,251	65,893	893,032	404,953	3,186,653	5,968,237	2,468,039	40,990	1,245,331	2,476,804
1986	329	31,782	67,127	945,230	392,698	3,376,794	6,529,729	2,779,909	41,429	1,312,970	2,789,763
1987	322	n/a	n/a	n/a	393,658	3,788,000	7,213,000	n/a	42,316	1,364,278	3,289,695
1988	330	32,304	66,977	999,200	392,100	3,890,500	7,906,400	3,632,100	42,794	1,433,500	3,656,400
1989 ^p	351	32,198	68,537	1,049,000	410,000	4,079,000	8,149,000	3,671,000	42,333	1,493,000	3,702,000

^p preliminary

Sources: Anon. (1984c, 1984d, 1984e, 1984f, 1984g, 1984h, 1984i, 1987b, 1987c, 1990e, 1992a)

Table 6.10: Principal statistics for the pulp and paper industry in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)				
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	36	17,832	38,512	143,157	53,295	341,995	732,424	342,949	22,201	188,189	346,406
1971	37	17,132	35,946	144,593	58,158	339,829	728,289	330,373	21,305	190,348	331,835
1972	37	16,970	36,224	157,759	61,944	358,824	778,067	355,675	21,044	206,929	356,799
1973	37	17,326	36,562	174,969	67,593	406,916	932,061	450,338	21,271	227,160	451,839
1974	37	17,753	37,848	203,864	84,395	556,363	1,347,587	717,581	21,909	265,286	721,076
1975	37	16,417	26,570	164,662	82,775	440,049	1,031,209	503,784	20,912	233,645	517,889
1976	37	17,302	37,757	237,708	131,311	579,398	1,236,886	540,709	21,693	315,867	548,492
1977	37	17,329	35,774	295,510	181,396	740,843	1,603,037	681,778	21,604	383,016	688,718
1978	37	17,797	36,790	320,308	210,538	828,876	1,780,255	742,298	22,177	419,289	744,923
1979	37	17,881	37,413	348,539	231,900	1,029,954	2,233,098	977,118	22,539	461,813	981,529
1980	36	18,328	37,410	382,238	254,886	1,159,781	2,614,443	1,207,296	23,105	510,279	1,215,084
1981	36	17,879	37,407	426,891	294,149	1,290,917	2,847,780	1,274,219	22,776	570,463	1,275,857
1982	36	16,811	34,649	439,886	317,107	1,222,136	2,593,734	1,072,368	21,826	610,703	1,074,068
1983	34	16,148	34,090	476,606	349,823	1,322,017	2,818,209	1,137,397	21,708	644,317	1,134,029
1984	34	15,867	33,666	497,361	372,224	1,514,710	3,362,436	1,511,436	20,447	672,579	1,509,372
1985	35	15,272	32,801	514,055	365,281	1,553,015	3,373,869	1,458,577	19,831	701,648	1,450,985
1986	35	15,305	32,590	536,384	352,186	1,636,170	3,671,341	1,686,144	19,942	730,139	1,680,224
1987	36	n/a	n/a	n/a	350,136	n/a	n/a	n/a	19,873	747,588	2,090,655
1988	34	15,203	32,427	561,000	349,000	1,923,000	4,633,000	2,367,000	20,157	783,000	2,352,000
1989 ^p	34	15,059	33,007	580,000	365,000	2,023,000	4,708,000	2,348,000	19,758	798,000	2,343,000

^p preliminary

^p preliminary

Sources: Anon. (1984a, 1987c, 1990e, 1992a)

Table 6.11: Principal statistics for the asphalt roofing industry in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)		Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added			
1970	4	162	392	1,212	222	5,573	10,979	5,278	195	1,451	5,324
1971	4	194	444	1,489	292	7,613	15,119	7,259	229	1,767	7,426
1972	4	227	522	2,140	342	8,348	17,616	8,947	268	2,460	9,137
1973	4	261	572	2,313	459	9,847	19,330	8,677	302	2,661	9,128
1974	4	271	582	2,515	544	10,817	22,275	11,580	318	2,954	12,209
1975	4	289	626	3,119	799	15,855	28,860	11,963	334	3,751	12,721
1976	4	296	645	3,590	1,053	22,125	37,311	15,499	371	4,593	15,869
1977	4	304	661	4,075	1,392	26,425	44,185	18,003	397	5,289	18,195
1978	5	306	624	4,036	1,073	31,166	53,478	19,372	396	5,526	19,476
1979	5	345	692	4,847	1,527	43,006	66,559	25,433	439	6,695	26,264
1980	5	321	687	5,660	1,622	55,186	88,341	32,271	427	7,659	32,741
1981	5	353	685	6,093	1,838	64,144	102,732	33,176	458	8,486	33,943
1982	5	333	667	6,250	2,222	61,236	96,024	33,743	452	9,066	35,455
1983	5	327	670	6,592	2,525	83,598	111,652	28,483	385	7,965	28,635
1984	6	459	922	9,068	4,292	94,746	144,432	45,835	537	10,969	47,242
1985	7	467	986	10,469	4,826	107,835	107,245	59,187	564	13,243	61,291
1986	7	524	1,111	13,214	5,556	108,869	202,220	85,308	665	17,376	88,327
1987	7	n/a	n/a	n/a	5,899	n/a	n/a	n/a	674	18,258	104,020
1988	6	470	901	11,700	3,800	86,400	191,500	96,600	587	15,600	98,000
1989 ^p	6	444	887	12,000	4,000	92,000	203,000	111,000	548	16,000	112,000

^p preliminary

Sources: Anon. (1984d, 1987b, 1987c, 1992a)

Table 6.12: Principal statistics for the paper box and bag industry in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)				
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	131	8,471	18,222	53,303	2,804	180,242	307,386	125,751	11,628	80,945	125,777
1971	129	8,549	18,213	57,902	2,986	195,894	334,373	137,229	11,612	86,836	137,564
1972	133	9,077	19,541	66,758	3,598	214,739	364,261	148,019	12,132	97,515	148,901
1973	131	9,536	20,334	75,721	3,690	249,834	428,187	174,805	12,653	109,586	176,350
1974	138	10,057	20,702	89,082	4,484	341,870	570,877	238,029	13,236	129,431	241,765
1975	145	9,346	19,114	91,868	5,186	344,774	575,004	220,933	12,370	133,996	227,836
1976	146	9,226	19,299	108,747	7,041	388,695	652,092	262,179	12,244	154,343	265,314
1977	140	8,827	18,490	113,361	7,721	386,710	649,811	254,303	11,671	161,478	256,691
1978	153	9,303	19,368	124,123	8,969	431,365	724,944	289,250	12,163	174,463	290,744
1979	164	10,041	20,938	142,291	10,671	546,331	877,731	330,505	12,844	196,343	334,390
1980	172	10,462	21,385	157,638	12,483	617,940	996,106	375,445	13,350	219,893	378,310
1981	168	9,980	20,584	176,658	15,583	730,796	1,153,786	411,852	12,999	249,170	415,172
1982	171	8,730	17,610	162,677	16,194	687,158	1,121,204	421,545	11,441	236,530	430,262
1983	130	7,521	15,352	159,132	13,858	618,024	997,137	371,904	9,608	219,929	369,939
1984	134	7,801	16,134	178,179	15,040	718,984	1,135,582	411,157	9,995	243,398	409,428
1985	133	7,878	16,278	192,985	16,862	764,261	1,206,406	431,508	10,042	264,051	430,694
1986	137	7,990	16,866	206,837	16,578	822,826	1,295,858	458,131	10,048	276,998	460,099
1987	136	n/a	n/a	n/a	18,105	n/a	n/a	n/a	10,647	300,118	515,619
1988	147	8,361	17,610	229,000	21,000	1,012,000	1,620,000	597,000	10,999	331,000	603,000
1989 ^P	160	8,796	18,242	249,000	21,000	1,050,000	1,687,000	609,000	11,430	359,000	610,000

^P preliminary

^p preliminary

Sources: Anon. (1984i, 1987c, 1992a)

Table 6.13: Principal statistics for the converted paper products industry in Ontario from 1970 to 1989.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)				
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Materials and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	112	7,082	15,012	42,801	2,348	144,464	263,123	118,815	10,870	75,844	136,998
1971	119	7,105	15,207	45,857	2,683	153,725	289,628	132,716	10,721	80,205	150,563
1972	126	7,494	15,725	52,548	3,285	171,621	324,065	151,783	11,136	88,915	167,123
1973	117	7,672	16,033	60,216	3,404	194,574	368,756	171,898	11,165	97,078	184,878
1974	115	8,282	17,024	71,285	4,250	266,871	488,999	231,949	11,941	115,154	246,568
1975	116	7,913	16,145	76,496	4,500	264,291	491,367	221,838	11,562	125,690	240,914
1976	114	7,681	15,763	84,374	6,006	301,297	533,449	232,601	11,367	137,697	252,700
1977	106	6,773	13,933	79,176	6,677	286,043	529,585	238,934	9,816	132,330	243,811
1978	124	7,413	15,179	92,665	8,249	324,880	587,020	256,570	10,473	148,113	262,678
1979	128	7,544	15,412	104,418	8,477	388,513	694,816	310,346	10,350	162,250	319,408
1980	136	7,972	16,228	118,846	10,538	535,797	900,066	358,439	10,978	188,940	365,977
1981	133	8,065	16,560	139,937	13,211	616,964	1,025,532	402,341	11,148	216,691	411,112
1982	135	7,139	14,784	135,035	15,862	626,385	1,030,114	387,615	10,148	222,593	399,586
1983	132	7,179	14,721	146,848	15,582	652,644	1,114,631	455,339	10,300	238,301	477,408
1984	137	7,679	15,287	164,266	17,262	716,379	1,209,437	484,845	10,711	254,278	500,254
1985	142	7,634	15,828	175,523	17,984	761,542	1,280,717	518,767	10,553	266,389	533,834
1986	150	7,963	16,560	188,795	18,378	808,929	1,360,310	550,326	10,774	288,457	561,113
1987	143	n/a	n/a	n/a	19,518	n/a	n/a	n/a	11,126	298,315	579,401
1988	143	8,270	16,038	197,000	19,000	868,000	1,462,000	571,000	11,051	304,000	604,000
1989 ^p	151	7,900	16,402	209,000	20,000	914,000	1,550,000	603,000	10,597	319,000	637,000

^p preliminary

Sources: Anon. (1987b, 1987c, 1992a)

Table 6.14: Principal statistics for all manufacturing industries in Ontario from 1970 to 1988.

Year	Number of establishments	Manufacturing activity							Total activity		
		Production and related workers			Cost (thousand \$)		Value (thousand \$)				
		Number	Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Materials and supplies	Shipments of goods of own manufacture	Added	Number of employees	Salaries and wages (thousand \$)	Value added (thousand \$)
1970	12,736	562,858	1,182,424	3,711,437	417,851	13,226,000	24,009,636	10,524,756	806,638	5,942,507	11,459,488
1971	12,740	563,864	1,183,045	4,020,624	455,775	14,250,680	26,270,629	11,596,471	800,047	6,326,544	12,537,204
1972	12,589	583,932	1,232,655	4,507,383	491,741	16,020,243	29,225,025	12,869,823	821,614	6,989,621	14,050,099
1973	12,397	616,935	1,298,651	5,186,725	554,598	19,085,501	34,300,652	15,030,331	861,767	7,947,955	16,416,698
1974	12,662	632,850	1,325,495	5,914,093	692,739	23,577,721	41,404,361	18,128,835	883,730	9,074,122	19,920,508
1975	12,245	612,745	1,263,962	6,316,577	791,497	25,560,075	44,422,821	18,357,809	850,291	9,673,050	20,122,934
1976	11,879	616,341	1,284,244	7,254,035	1,065,373	28,660,762	49,646,124	20,362,370	851,811	10,971,295	22,095,600
1977	11,414	605,796	1,262,248	7,898,974	1,310,664	32,256,171	55,590,930	22,554,740	843,328	11,981,022	24,271,425
1978	13,079	633,499	1,322,642	8,830,505	1,536,347	38,110,181	65,111,869	25,910,549	880,806	13,369,952	27,787,323
1979	14,104	660,652	1,378,883	10,019,377	1,738,968	45,394,074	76,220,169	30,327,537	913,612	15,100,327	32,746,923
1980	14,454	648,765	1,341,611	10,696,759	1,932,356	48,925,336	82,171,108	32,246,690	909,964	16,454,317	34,811,414
1981	14,553	643,209	1,336,362	11,836,755	2,357,020	55,853,556	94,061,116	37,053,129	911,810	18,460,387	39,887,789
1982	14,822	589,649	1,211,764	11,819,718	2,558,412	55,969,857	93,939,308	35,163,603	848,403	18,949,786	38,130,960
1983	14,763	588,314	1,222,821	12,794,971	2,800,441	61,202,305	103,920,438	39,990,664	838,490	20,265,434	43,376,709
1984	15,263	627,517	1,330,996	14,669,948	3,088,475	72,327,466	121,726,422	47,051,974	880,927	22,646,619	50,962,100
1985	15,570	666,831	1,427,774	16,361,666	3,162,387	77,735,969	131,988,196	51,395,212	911,418	24,616,891	55,355,449
1986	16,140	695,466	1,509,567	17,620,789	3,022,650	78,999,904	136,847,551	54,836,429	934,918	26,056,617	58,420,761
1987	15,109	n/a	n/a	n/a	3,007,029	82,077,073	143,394,868	58,432,667	957,438	27,519,925	62,587,122
1988	16,477	746,929	n/a	20,379,700	3,120,600	90,917,100	157,535,700	63,881,200	993,795	30,111,300	69,452,200

Source: Anon. (1990e)

Note: Data are available only up to 1988.

Table 6.15: Principal statistics, by major manufacturing industry group, for Ontario in 1988.

Major industry group	SIC*	Number of establishments	Manufacturing activity								Total activity			
			Production and related workers				Cost (million \$)		Value (million \$)					
			Number		Person-hours paid (thousands)	Wages (thousand \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages (million \$)	Value added (million \$)	
			Male	Female										
Food	10	1,050	35,205	18,484	112,748	1,376.3	232.0	9,414.8	14,826.1	5,228.8	76,317	2,222.5	6,052.8	
Beverage	11	99	5,642	764	13,734	206.8	37.2	1,086.2	2,708.1	1,568.6	11,920	433.4	1,851.8	
Tobacco products	12	10	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	— ^b	
Rubber products	15	94	8,480	1,870	21,860	283.2	34.4	673.4	1,454.9	713.7	14,239	440.2	949.3	
Plastic products	16	611	15,749	8,543	50,362	506.4	73.1	1,875.6	3,390.0	1,463.1	29,748	709.9	1,569.5	
Leather and allied products	17	138	3,649	5,831	19,308	153.6	7.9	316.1	641.4	314.0	10,957	200.1	345.2	
Primary textile	18	72	5,679	2,317	16,815	197.3	48.6	602.4	1,338.5	703.5	10,458	298.7	737.1	
Textile products	19	384	6,406	6,090	25,510	223.3	26.8	801.2	1,460.0	636.5	15,325	322.8	686.0	
Clothing	24	699	5,639	24,369	63,331	476.1	15.8	813.3	1,812.3	985.0	34,549	618.0	1,058.8	
Furniture and fixture	26	761	21,836	6,793	60,327	588.2	33.0	1,280.4	2,571.4	1,265.3	33,284	746.6	1,283.1	
														(cont'd)

(cont'd)

Table 6.15: Principal statistics, by major manufacturing industry group, for Ontario in 1988 (concl.).

Manufacturing activity													
Major industries group	SIC ^a	Number of establishments	Production and related workers				Cost (million \$)		Value (million \$)		Total activity		
			Number		Person hours paid (million \$)	Wages (million \$)	Fuel and electricity	Material and supplies	Shipments of goods of own manufacture	Value added	Number of employees	Salaries and wages	Value added
			Male	Female									
Printing, publishing and allied	28	2,395	27,368	13,782	85,144	1,190.9	55.9	2,551.7	6,638.0	4,049.9	68,842	2,140.7	4,202.1
Primary metal	29	232	47,735	2,587	108,544	1,873.8	530.8	6,577.8	11,903.4	5,015.3	63,704	2,495.7	5,000.9
Fabricated metal products	30	3,091	73,037	11,670	177,241	2,109.2	171.8	5,785.5	10,943.6	5,038.1	100,771	2,707.6	5,247.4
Machinery	31	1,033	33,599	5,829	83,052	1,005.2	63.2	3,180.8	6,162.4	2,957.8	52,027	1,477.4	3,141.8
Transportation equipment	32	798	110,732	25,391	303,622	4,522.7	323.5	30,434.7	42,304.7	11,503.0	165,869	5,831.0	13,049.7
Electrical and electronic products	33	880	39,920	25,202	135,153	1,633.3	98.0	6,048.4	11,707.7	5,638.8	94,395	2,790.4	6,428.3
Non-metallic mineral products	35	597	20,876	2,198	49,855	677.9	277.1	1,576.0	4,159.2	2,335.2	29,354	934.0	2,501.2
Refined petroleum and coal products	36	52	2,707	104	6,771	133.9	123.0	4,142.0	5,376.2	970.8	7,635	376.6	964.0
Chemical and chemical products	37	684	22,430	7,532	64,063	914.8	456.6	5,945.7	12,571.0	6,258.8	56,679	2,002.2	6,866.8
Other manufacturing	39	1,541	- ^b	- ^b	- ^b	- ^b	- ^b	- ^b	- ^b	- ^b	- ^b	- ^b	- ^b
Wood	25	926	22,315	2,986	53,681	570.2	72.4	1,647.5	2,906.0	1,207.5	29,185	734.0	1,234.5
Total (all industries)	27	330	27,870	4,414	66,977	999.2	392.1	3,890.5	7,906.4	3,632.1	42,794	1,433.5	3,656.4
		16,477	556,143	190,786	1,584,186	20,379.7	3,120.6	90,917.1	157,535.7	63,881.2	993,795	30,111.3	69,452.2

^a Standard Industrial Classification (SIC)
^b confidential to meet secrecy requirements of the Statistics Act.
Source: Anon. (1990e)

^a Standard Industrial Classification (SIC)^b confidential to meet secrecy requirements of the Statistics Act.

Source: Anon. (1990e)

SECTION 7. EMPLOYMENT HIGHLIGHTS

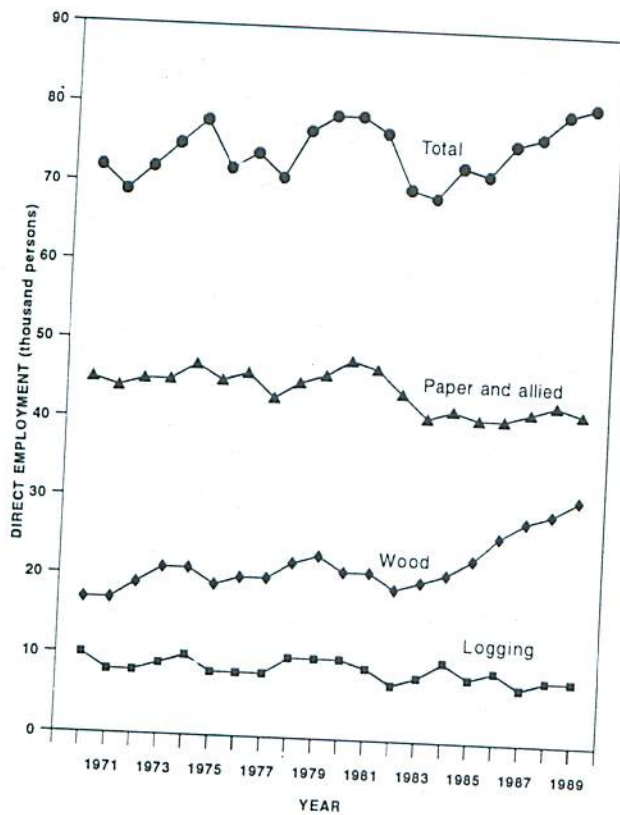


Figure 14. Employment levels in Ontario from 1970 to 1989, by major forest industry group.

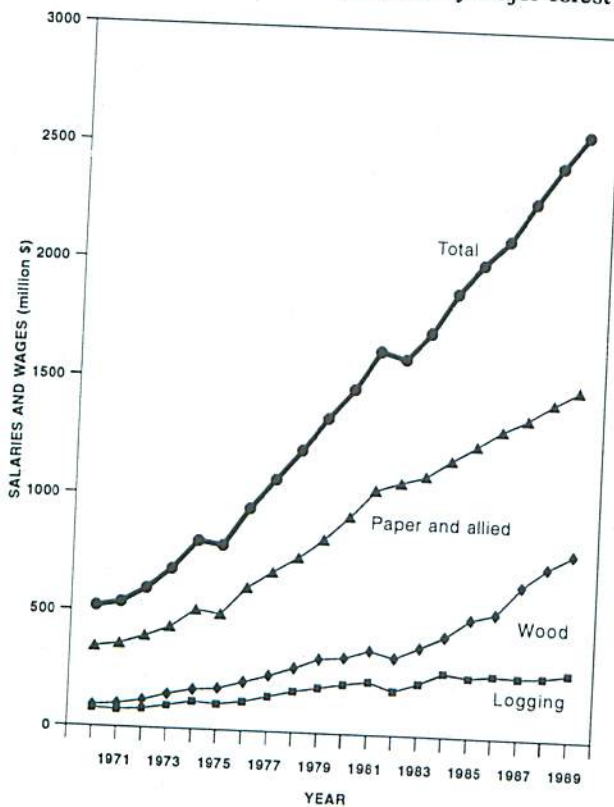


Figure 15. Salaries and wages in Ontario from 1970 to 1989, by major forest industry group.

Table 7.1: Employment summary for the forest products sector in Ontario from 1970 to 1989.

Table 7.1: Employment summary for the forest products sector								
Year	Number of employees							
	Logging	Wood industries			Paper and allied industries			Total (all industries)
		Sawmills and planing mills	Other wood industries	Total	Pulp and paper mills	Other paper and allied industries	Total	
1970	9,567	5,361	11,303	16,664	22,201	22,693	44,894	71,125
1971	8,125	5,204	11,631	16,835	21,305	22,562	43,867	68,827
1972	7,783	5,595	13,003	18,598	21,044	23,536	44,580	70,961
1973	8,983	6,620	14,042	20,662	21,271	24,120	45,391	75,036
1974	9,673	6,557	13,950	20,507	21,909	25,495	47,404	77,584
1975	8,028	5,444	13,840	19,284	20,912	24,266	45,178	72,490
1976	7,694	5,660	14,206	19,866	21,693	23,952	45,645	73,205
1977	8,447	6,221	13,889	20,110	21,604	21,884	43,488	72,045
1978	9,569	6,888	15,054	21,942	22,177	23,032	45,209	76,720
1979	9,684	7,105	15,797	22,902	22,539	23,633	46,172	78,758
1980	9,578	6,967	14,381	21,348	23,105	24,756	47,861	78,787
1981	9,003	6,630	14,340	20,970	22,776	24,605	47,381	77,354
1982	7,079	6,005	13,010	19,015	21,826	22,091	43,917	70,011
1983	7,826	6,433	13,129	19,562	20,708	20,293	41,001	68,389
1984	9,515	6,886	13,954	20,840	20,447	21,243	41,690	72,045
1985	8,482	7,686	15,521	23,207	19,831	21,159	40,990	72,679
1986	8,527	7,685	18,167	25,852	19,942	21,487	41,429	75,808
1987	7,244	7,785	20,255	28,040	19,873	22,443	42,316	77,600
1988	7,566	7,788	21,397	29,185	20,157	22,637	42,794	79,545
1989	7,756	7,486	23,169	30,655	19,758	22,575	42,333	80,744

Sources: Anon. (1987a, 1987c, 1990d, 1990e)

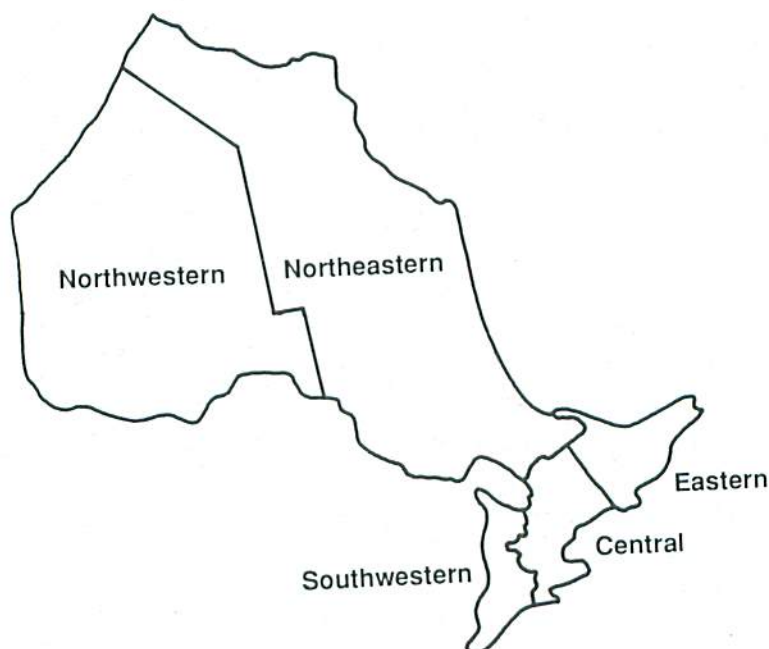


Figure 16. Economic regions of Ontario.

Table 7.2: Employment and payroll in the forest products manufacturing sector in Ontario compared with those for all other manufacturing industries, by economic region, from 1974 to 1986.

Economic Region/year	Forest products		All other products	
	Number of employees	Payroll (thousand \$)	Number of employees	Payroll (thousand \$)
<u>Northwestern</u>				
1974	9,681	111,332	3,617	35,368
1975	9,717	109,993	3,572	39,775
1976	10,630	142,877	3,105	42,268
1977	10,719	181,313	3,451	49,552
1978	11,096	201,962	3,741	54,309
1979	11,618	226,925	3,572	57,716
1980	11,443	251,940	3,137	56,787
1981	11,438	278,751	3,390	68,345
1982	10,491	270,474	2,778	59,860
1983	10,610	313,461	2,656	62,347
1984	10,710	323,461	3,250	70,347
1985	10,412	374,331	3,025	80,810
1986	10,388	359,465	3,030	80,514
<u>Northeastern</u>				
1974	10,465	111,099	22,881	277,034
1975	9,842	95,035	24,075	317,008
1976	9,899	132,486	34,537	494,567
1977	10,473	159,267	24,093	390,150
1978	10,877	182,540	21,469	353,960
1979	11,037	196,155	21,729	400,611
1980	11,375	220,293	24,589	482,746
1981	11,169	244,576	24,569	534,280
1982	10,191	246,646	20,394	529,114
1983	10,120	262,572	18,442	510,944
1984	10,416	277,358	17,475	542,662
1985	10,524	308,267	18,404	594,323
1986	10,322	317,410	18,281	597,003
<u>Eastern</u>				
1974	6,555	62,834	57,699	520,648
1975	5,694	58,230	54,178	546,004
1976	6,212	73,221	52,950	603,115
1977	5,963	83,840	51,098	643,356
1978	6,760	96,824	54,837	743,480
1979	6,838	110,078	57,139	851,552
1980	6,875	116,084	58,114	957,186
1981	6,485	127,335	58,512	1,085,592
1982	6,335	141,350	56,157	1,155,402
1983	6,303	150,505	56,037	1,244,924
1984	6,875	184,300	63,603	1,506,246
1985	6,653	170,172	57,891	1,422,147
1986	7,203	440,022	59,544	1,497,914

(cont'd)

Table 7.2: Employment and payroll in the forest products manufacturing sector in Ontario compared with those for all other manufacturing industries, by region, from 1974 to 1986 (concl.).

Economic Region/year	Forest products		All other products	
	Number of employees	Payroll (thousand \$)	Number of employees	Payroll (thousand \$)
<u>Central</u>				
1974	34,242	336,813	570,863	5,740,034
1975	32,135	338,003	548,047	6,129,128
1976	32,069	392,282	548,723	6,915,603
1977	30,162	406,852	534,789	7,388,555
1978	31,626	446,134	559,733	8,275,881
1979	46,450	714,674	573,012	9,264,517
1980	32,862	550,334	587,976	10,377,391
1981	32,883	626,953	584,116	11,468,789
1982	29,971	625,089	541,765	11,652,327
1983	28,192	640,125	534,816	12,383,233
1984	28,999	693,367	565,980	13,897,397
1985	30,757	773,584	591,551	15,245,598
1986	33,147	859,139	612,238	16,411,092
<u>Southwestern</u>				
1974	5,600	46,009	124,613	1,329,223
1975	5,198	50,278	114,730	1,340,850
1976	5,049	55,044	117,794	1,565,401
1977	4,833	61,925	122,570	1,804,708
1978	5,195	64,892	127,186	2,032,148
1979	5,465	75,802	127,556	2,169,828
1980	5,119	75,086	116,883	2,167,643
1981	4,780	83,846	118,505	2,480,250
1982	4,397	78,115	110,802	2,549,881
1983	3,903	75,029	112,653	2,830,973
1984	4,245	84,607	121,891	3,411,115
1985	4,243	86,867	125,731	3,729,917
1986	4,652	102,765	126,752	3,835,718

Source: Anon. (1986b)

Note: The forest products manufacturing sector includes only the Wood Industries (SIC-25) and the Paper and Allied Industries (SIC-27). Contributions of directly related industries that produce products with higher value added (printing, publishing, and allied industries, and furniture and fixture industries) are not included because these industries are classified at higher production levels.

Table 7.3: Sectoral employment profiles for selected northern Ontario communities in 1986.

Industry	Number of employees, by community												
	Thunder Bay	Sudbury	Kapuskasing	Espanola	New Liskeard	Elliot Lake	Kirkland Lake	North Bay	Sault Ste. Marie	Sturgeon Falls	Timmins	Fort Frances	Kenora
Agriculture	875	565	140	435	585	55	335	565	620	250	390	265	270
Fishing and trapping	155	100	n/a	55	10	30	20	30	85	n/a	60	55	115
Logging and forestry	3,730	725	1,115	380	260	175	615	490	1,150	165	1,515	880	1,775
Mining (incl. milling, quarrying)	1,630	8,690	45	315	575	3,790	1,450	345	850	140	2,635	65	1,395
Manufacturing	13,175	7,305	3,825	1,375	1,045	1,360	690	3,750	11,965	925	6,000	1,610	3,230
Food	805	380	20	45	85	15	95	215	120	20	150	35	110
Beverage	90	150	25	n/a	10	10	25	30	105	n/a	80	n/a	15
Rubber products	n/a	85	n/a	n/a	n/a	25	n/a	65	n/a	n/a	n/a	n/a	n/a
Plastic products	45	25	n/a	n/a	25	n/a	10	85	n/a	n/a	n/a	n/a	n/a
Primary textile	10	n/a	n/a	n/a	n/a	n/a	n/a	90	n/a	n/a	n/a	n/a	n/a
Textile products	30	30	n/a	n/a	10	n/a	n/a	45	n/a	n/a	n/a	n/a	n/a
Clothing	130	45	n/a	n/a	n/a	n/a	n/a	n/a	10	n/a	n/a	20	10
Wood industries	1,760	395	1,310	190	435	70	285	795	1,400	285	1,055	415	700
Furniture and fixtures	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	65	n/a	n/a	35	35
Paper and allied products	7,180	100	2,240	915	35	30	10	440	545	470	1,130	955	1,955
Printing and publishing	480	455	65	75	90	65	50	290	250	n/a	175	25	160
Primary metal	160	4135	55	70	145	1,015	15	25	8,845	20	3,035	10	15
Fabricated metal products	375	585	15	n/a	10	n/a	45	215	230	10	60	n/a	30
Machinery	150	430	n/a	n/a	35	25	110	400	20	30	65	10	25
Transportation equipment	1,380	60	15	10	70	20	n/a	170	75	20	80	45	105
Electrical and electronic	85	95	10	n/a	n/a	n/a	10	40	40	n/a	50	n/a	n/a

(cont'd)

Table 7.3: Sectoral employment profiles for selected northern Ontario communities in 1986 (concl.).

Industry	Number of employees, by community												
	Thunder Bay	Sudbury	Kapuskasing	Espanola	New Liskeard	Elliot Lake	Kirkland Lake	North Bay	Sault Ste. Marie	Sturgeon Falls	Timmins	Fort Frances	Kenora
Non-metallic minerals	140	200	15	20	10	40	n/a	90	115	10	35	25	25
Refined petroleum and coal	25	20	n/a	25	n/a	n/a	n/a	10	20	n/a	n/a	n/a	n/a
Chemical and chemical products	1,115	100	10	n/a	n/a	35	40	435	85	25	50	N/A	25
Other manufacturing	15	75	10	n/a	n/a	n/a	n/a	65	35	10	20	20	15
Construction	4,760	4,260	625	515	570	370	425	2,400	2,935	450	1,910	575	1,285
Transportation and storage	6,715	3,540	940	360	545	275	600	2,665	2,520	205	2,085	675	2,070
Communication and other utility	2,455	2,570	275	255	470	265	210	1,575	1,280	130	845	370	705
Wholesale trade	3,120	3,030	335	215	245	190	300	1,235	1,560	210	940	265	580
Retail trade	10,275	10,650	1,790	1,310	1,275	1,510	1,190	5,305	7,120	705	4,540	1,425	3,175
Finance and insurance	1,615	2,060	250	120	170	180	180	735	1,085	130	625	165	390
Real estate and insurance	1,005	1,090	130	110	105	n/a	n/a	510	665	45	500	150	255
Business services	2,315	2,030	135	135	245	210	205	1,030	1,395	80	785	200	520
Government services	6,850	7,550	900	805	420	705	565	4,645	3,125	515	2,225	1,145	3,145
Education services	6,125	7,095	1,125	670	815	785	760	2,595	3,545	380	2,485	850	1,540
Health and social services	7,650	6,250	1,250	710	790	710	955	3,375	4,250	560	3,010	950	2,160
Accommodation, food and beverage services	6,475	5,860	1,135	960	770	910	715	3,345	4,585	560	2,530	1,320	3,135
Other services	4,560	5,140	470	445	495	510	550	2,425	2,960	225	1,560	515	1,285

Source: Anon. (1986c)

Table 7.4: Total employment in Canada, by major region and for Canada as a whole, in all sectors from 1966 to 1990.

Year	Employment (thousands)					
	Atlantic	Quebec	Ontario	Prairie	B.C.	Canada
1966	583	2,027	2,714	1,233	684	7,242
1967	593	2,085	2,799	1,254	720	7,451
1968	598	2,081	2,873	1,299	742	7,593
1969	607	2,126	2,979	1,331	788	7,832
1970	612	2,128	3,037	1,337	805	7,919
1971	625	2,175	3,113	1,356	834	8,104
1972	642	2,205	3,239	1,393	865	8,344
1973	679	2,330	3,380	1,451	920	8,761
1974	703	2,401	3,523	1,523	976	9,125
1975	710	2,434	3,576	1,570	995	9,284
1976	717	2,456	3,643	1,641	1,021	9,477
1977	718	2,476	3,708	1,698	1,050	9,651
1978	744	2,530	3,835	1,774	1,103	9,987
1979	770	2,619	3,993	1,868	1,144	10,395
1980	795	2,694	4,053	1,953	1,213	10,708
1981	801	2,723	4,171	2,037	1,270	11,001
1982	773	2,574	4,063	2,007	1,202	10,618
1983	784	2,616	4,089	1,995	1,190	10,675
1984	805	2,692	4,235	2,010	1,191	10,932
1985	812	2,768	4,377	2,045	1,220	11,221
1986	833	2,825	4,524	2,080	1,270	11,531
1987	857	2,918	4,689	2,092	1,306	11,861
1988	893	3,001	4,862	2,132	1,358	12,245
1989	912	3,031	4,949	2,158	1,435	12,486
1990	926	3,055	4,937	2,185	1,469	12,572

Source: Anon. (1991c)

SECTION 8. FINANCIAL STATISTICS AND PRICE INDICES

Table 8.1: Capital and repair expenditures in the forest sectors of Ontario and Canada from 1970 to 1991.

Capital and repair expenditures (million \$)						
Year	Ontario				Canada	Ontario total as % of total for Canada
	Logging	Wood	Paper and allied	Total		
1970	26.5	30.3	162.7	219.5	1,155.2	19
1971	26.7	25.3	160.8	212.8	1,207.5	18
1972	31.5	39.8	132.7	204.0	1,212.1	17
1973	46.0	63.2	162.1	271.3	1,432.0	19
1974	58.6	92.2	251.6	402.4	1,803.4	22
1975	59.7	80.5	282.6	422.8	1,722.7	25
1976	54.7	58.6	392.4	505.7	2,013.9	25
1977	73.5	59.0	385.2	517.7	2,174.9	24
1978	80.0	69.8	289.3	439.1	2,353.9	19
1979	97.3	80.3	404.8	582.4	2,856.5	20
1980	126.4	104.7	530.7	761.8	3,657.3	21
1981	139.1	101.7	898.7	1,139.5	4,447.7	26
1982	81.6	80.0	810.0	971.6	3,765.8	26
1983	97.8	85.8	493.3	676.9	2,982.5	23
1984	120.4	105.8	608.7	834.9	3,437.5	24
1985	123.2	94.2	908.8	1,126.2	4,432.2	25
1986	127.7	111.3	676.8	915.8	4,658.0	20
1987	111.6	195.1	778.7	1,085.4	5,952.5	18
1988	117.1	252.3	1,026.9	1,396.3	7,524.0	20
1989	120.1	217.0	1,450.3	1,787.4	9,429.5	19
1990 ^a	127.7	160.9	1,290.7	1,579.3	8,413.8	19
1991 ^b	130.6	123.0	1,256.6	1,510.2	7,864.6	19

Sources: Anon. (1990d, 1992e)

^a Preliminary^b Revised intentions

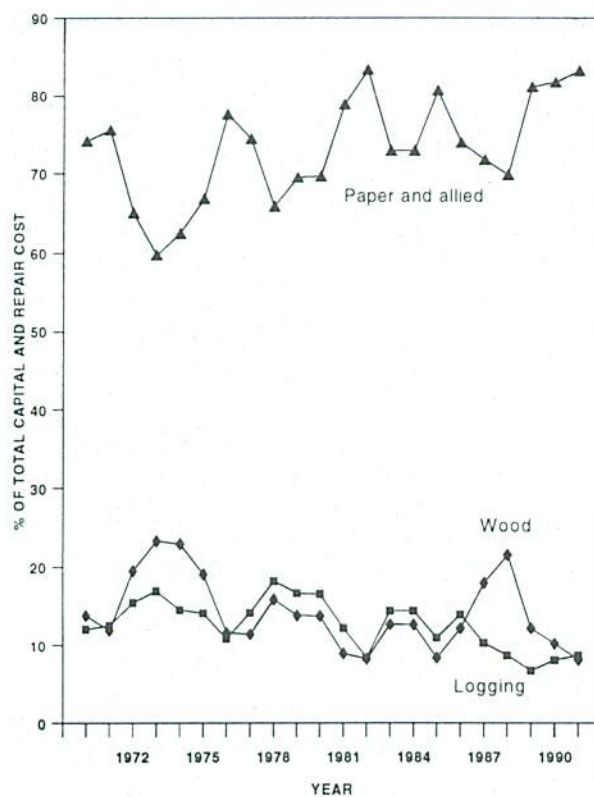


Figure 17. Shares of each major forest industry group in Ontario in total capital and repair expenditures, from 1970 to 1991.

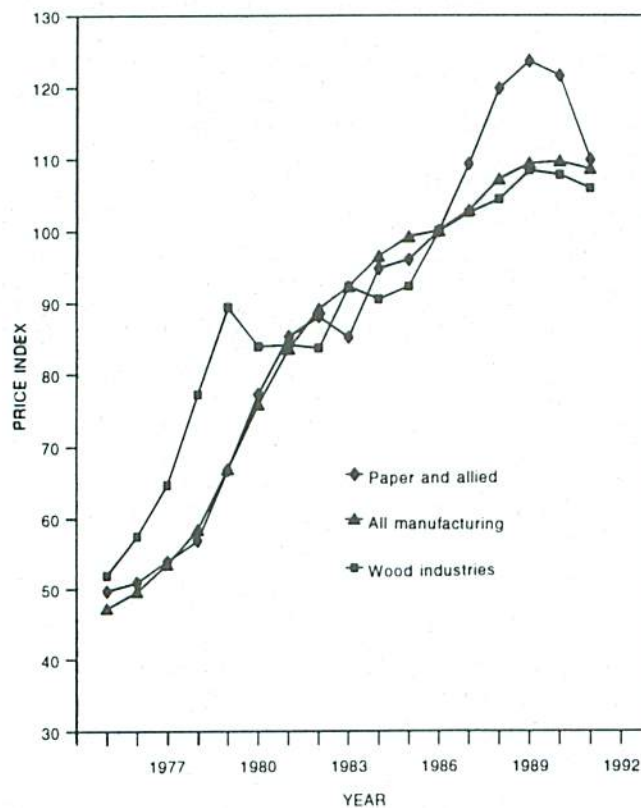


Figure 18. Industry product price indices for major forest products manufacturing industry groups and for all manufacturing industries in Ontario from 1975 to 1991.

Table 8.2: Corporate taxable income of the forest sector in Ontario and Canada from 1974 to 1987.

Year	Corporate taxable income (thousand \$)								Forestry ^a as % of total manufacturing	
	Forestry		Wood industries		Paper and allied		Total manufacturing		Canada	Ontario
	Canada	Ontario	Canada	Ontario	Canada	Ontario	Canada	Ontario		
1974	42,160	4,172	182,922	37,986	744,411	261,061	6,279,829	2,972,730	14.8	10.1
1975	28,942	2,105	150,364	32,336	387,540	107,563	6,219,613	2,832,804	8.6	4.9
1976	43,436	2,753	245,446	35,027	375,114	70,511	5,850,503	2,771,188	10.6	3.8
1977	56,817	3,429	332,455	35,196	392,895	81,251	5,535,218	2,567,026	13.1	4.5
1978	65,406	5,573	554,759	52,091	644,059	151,874	6,762,325	2,965,755	17.7	6.9
1979	126,210	7,589	697,696	79,470	1,291,115	284,771	9,509,852	4,113,256	20.9	8.9
1980	147,949	11,374	318,650	57,150	1,378,262	409,936	10,863,269	4,622,537	15.6	10.1
1981	84,185	8,525	207,635	58,474	837,138	365,371	9,642,383	4,523,486	10.8	9.4
1982	75,200	9,983	133,859	46,402	336,566	108,618	6,204,744	3,022,859	7.6	5.1
1983	98,463	11,600	236,027	58,587	347,003	174,776	8,533,173	4,438,489	6.8	5.3
1984	125,607	17,780	270,794	67,429	697,628	288,279	12,185,743	6,831,500	7.9	5.2
1985	132,406	17,139	308,054	74,924	868,384	390,959	12,816,038	6,973,764	9.2	6.7
1986 ^r	146,624	20,842	468,385	92,156	1,110,172	439,462	14,038,499	7,611,788	11.2	6.9
1987 ^r	183,733	22,995	716,099	126,704	1,648,074	628,085	14,074,423	6,814,325	16.1	10.8

Source: Anon. (1987d, 1992a)

^a total for wood and paper and allied industry groups as a proportion of total manufacturing^r revised statistics for each major forest industry group

Table 8.3: Industrial product price indices for selected wood and paper products in Canada from 1956 to 1990 (1986 = 100).

Year	Price index (1986=100)						
	Wood industries				Paper and allied industries		Total (all manufacturing industries)
	Sawmills and planing mills	Shingle mills	Veneer and plywood	Total	Pulp and paper mills	Total	
1956	28.6	16.3	27.5	24.6	22.4	23.0	24.3
1960	27.1	14.9	24.2	24.0	22.8	23.5	25.3
1965	29.5	19.6	26.1	26.3	24.2	24.8	26.4
1970	32.1	24.1	29.3	30.7	26.8	27.8	30.1
1975	54.0	51.7	51.8	51.9	50.4	49.7	47.2
1976	60.6	66.0	55.1	57.5	51.1	50.9	49.6
1977	70.6	79.8	57.0	64.7	54.5	53.9	53.5
1978	85.8	92.2	71.7	77.2	57.7	56.9	58.4
1979	101.6	91.2	78.7	89.4	68.8	66.8	66.9
1980	90.0	88.6	77.3	83.9	80.0	77.2	75.8
1981	85.1	88.7	86.6	84.1	87.8	85.3	83.6
1982	83.8	85.0	80.7	83.7	88.9	88.1	89.2
1983	94.8	100.3	87.5	92.3	83.5	85.2	92.3
1984	90.4	105.5	84.4	90.5	95.2	94.8	96.5
1985	91.6	95.0	86.7	92.3	95.3	96.0	99.2
1986	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1987	101.4	102.5	100.6	102.5	110.7	109.3	102.8
1988	103.3	118.2	99.1	104.4	122.3	119.8	107.2
1989	106.9	121.4	105.2	108.4	126.1	123.6	109.4
1990	104.8	129.0	101.4	107.8	123.3	121.6	109.7
1991	102.1	134.3	100.5	105.9	108.5	109.9	108.6

Source: Anon. (1991d)

Note: Prices are factory gate selling prices for goods of domestic production.

Table 8.4: Industrial product price indices for wood pulp and paper products in Canada from 1981 to 1990 (1986=100).

Year	Price index (1986=100)											
	Wood pulp						Paper products					
	Total (paper and paper products)	Sulfite bleache		Sulfate bleached		Paper products		Other paper for printing	Fine papers n.e.s.	Wrapping paper	Paperboard	Building board
		Domestic	Export	Domestic	Export	Domestic	Export					
1981	85.1	109.5	104.6	99.2	101.8	77.6	81.3	81.7	83.6	86.4	79.8	84.7
1982	88.1	101.1	96.7	94.3	95.3	84.9	85.1	86.4	88.5	91.4	84.2	90.0
1983	85.2	83.2	83.4	85.0	82.3	81.3	80.3	86.2	89.0	88.6	87.9	92.6
1984	94.9	100.3	101.5	103.5	104.2	89.3	89.1	93.0	96.0	92.9	96.0	95.1
1985	96.1	93.2	87.5	92.7	88.9	98.2	97.3	99.3	97.2	94.9	98.6	100.4
1986	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1987	109.4	127.4	124.8	126.1	124.7	105.7	105.1	103.2	107.0	108.9	107.7	97.0
1988	119.8	144.9	144.7	148.1	145.7	118.1	111.8	113.7	116.7	118.2	115.3	96.5
1989	123.7	166.9	160.1	161.3	161.8	117.7	105.2	116.1	121.2	121.1	117.8	94.0
1990	121.6	150.3	145.7	153.2	152.2	120.3	104.6	114.8	118.5	119.6	112.5	93.8
1991	109.9	115.9	105.3	106.7	105.7	122.6	102.6	111.2	111.5	113.5	106.5	92.6

Source: Anon. (1991d)

Note: Prices are factory gate selling prices for goods of domestic production.
n.e.s = not elsewhere specified.

Table 8.5: Industry product price indices for miscellaneous forest products in Canada from 1981 to 1990 (1986 = 100).

Year	Price index (1986=100)									
	Wood chips	Shingles	Shakes	Veneer			Plywood			
				Birch	Other hardwoods	Softwood	Birch	Other hardwoods	Douglas-fir	Other softwoods
1981	114.0	97.2	79.7	104.8	85.3	85.8	82.7	90.5	88.7	77.5
1982	120.9	95.3	73.9	93.6	87.8	79.1	84.1	85.6	80.0	68.5
1983	97.4	107.5	94.6	103.4	93.2	86.3	87.1	91.9	83.9	83.3
1984	100.4	112.2	100.4	105.3	96.5	85.5	95.0	97.8	78.9	73.9
1985	99.5	100.9	89.8	89.2	96.9	91.9	94.0	97.4	82.1	79.9
1986	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1987	112.8	105.9	99.3	111.8	103.5	103.1	100.0	106.9	95.7	97.7
1988	123.6	122.0	115.5	107.6	107.3	104.0	96.7	106.3	93.0	92.5
1989	142.3	128.1	115.9	103.6	111.6	n/a	96.0	103.6	102.0	105.6
1990	140.9	125.3	130.5	107.2	116.2	n/a	98.4	105.5	98.1	94.1
1991	131.8	131.9	135.6	98.6	120.9	n/a	103.0	105.6	98.6	96.2

Source: Anon. (1991d)

Note: Prices are factory gate selling prices for goods of domestic production.

Table 8.6: Selected interest rates in Canada and the United States from 1971 to 1990.

Year	Interest rate (%)				
	Canada			United States	
	Bank prime lending rate	5-year conventional mortgage rate	Government of Canada bonds over 10 years	Bank prime lending rate	Government 5-year bond
1971	6.5	9.4	6.9	5.7	6.0
1972	6.0	9.2	7.2	5.3	6.0
1973	7.6	9.6	7.6	8.2	6.9
1974	10.8	11.2	8.9	10.8	7.8
1975	9.4	11.4	9.0	7.7	7.8
1976	10.0	11.8	9.2	6.8	7.2
1977	8.5	10.4	8.7	6.9	7.0
1978	9.7	10.6	9.3	9.2	8.4
1979	12.9	12.0	10.2	12.8	9.5
1980	14.3	14.3	12.5	15.4	11.7
1981	19.3	18.1	15.2	18.7	14.4
1982	15.8	17.9	14.3	14.6	12.9
1983	11.2	13.3	11.8	10.8	10.8
1984	12.1	13.6	12.8	12.0	12.2
1985	10.6	12.2	11.0	9.9	10.1
1986	10.5	11.2	9.5	8.3	7.2
1987	9.5	11.1	9.9	8.2	7.9
1988	10.8	11.6	10.2	9.4	8.5
1989	13.3	12.1	9.9	10.9	8.5
1990	14.1	13.2	10.9	10.0	8.4

Source: Anon. (1991c)

Table 8.7: Prices of currencies of Canada's major trading partners from 1968 to 1990.

Year	Currency price (Canadian \$/foreign unit)									
	Belgian franc	French franc	German mark	Italian lira	Japanese yen	Dutch guilder	Swedish krona	Swiss franc	British pound	U.S. dollar
1968	0.0216	0.218	0.270	0.00173	0.00299	0.298	0.209	0.250	2.579	1.077
1969	0.0215	0.208	0.275	0.00172	0.00301	0.297	0.208	0.250	2.574	1.077
1970	0.0210	0.189	0.286	0.00167	0.00292	0.289	0.201	0.242	2.502	1.044
1971	0.0208	0.183	0.291	0.00163	0.00291	0.289	0.198	0.246	2.469	1.010
1972	0.0225	0.196	0.311	0.00170	0.00327	0.309	0.208	0.259	2.479	0.991
1973	0.0258	0.226	0.378	0.00172	0.00370	0.360	0.230	0.317	2.452	1.000
1974	0.0252	0.204	0.379	0.00150	0.00335	0.365	0.221	0.330	2.288	0.978
1975	0.0277	0.238	0.414	0.00156	0.00343	0.403	0.246	0.394	2.259	1.017
1976	0.0256	0.207	0.392	0.00119	0.00333	0.373	0.227	0.395	1.781	0.986
1977	0.0297	0.217	0.459	0.00121	0.00398	0.434	0.238	0.445	1.857	1.063
1978	0.0363	0.254	0.570	0.00135	0.00548	0.529	0.253	0.644	2.191	1.141
1979	0.0400	0.276	0.640	0.00141	0.00537	0.584	0.273	0.705	2.486	1.171
1980	0.0400	0.277	0.644	0.00137	0.00519	0.589	0.276	0.698	2.720	1.169
1981	0.0324	0.222	0.532	0.00106	0.00545	0.482	0.238	0.613	2.430	1.199
1982	0.0271	0.189	0.509	0.00091	0.00497	0.462	0.198	0.609	2.158	1.234
1983	0.0242	0.162	0.483	0.00081	0.00519	0.433	0.161	0.588	1.869	1.232
1984	0.0225	0.149	0.456	0.00074	0.00546	0.404	0.157	0.552	1.728	1.295
1985	0.0232	0.153	0.468	0.00072	0.00577	0.415	0.160	0.562	1.771	1.366
1986	0.0312	0.201	0.643	0.00094	0.00830	0.570	0.195	0.777	2.038	1.389
1987	0.0356	0.221	0.739	0.00102	0.00919	0.656	0.209	0.891	2.173	1.326
1988	0.0336	0.207	0.703	0.00095	0.00961	0.625	0.201	0.844	2.193	1.231
1989	0.0301	0.186	0.631	0.00086	0.00860	0.559	0.184	0.725	1.941	1.184
1990	0.0350	0.215	0.724	0.00098	0.00810	0.642	0.197	0.844	2.082	1.167

Source: Anon. (1991c)

SECTION 9. SELECTED GENERAL ECONOMIC INDICATORS

Table 9.1: Canadian consumer price indices for major commodities and for an aggregate of all commodities (excluding food) from 1961 to 1991 (1986=100).

Year	Consumer price index (1986=100)							All commodities (excluding food)
	Food	Housing	Clothing	Transportation	Health and personal care	Recreation and reading	Tobacco and alcohol	
1961	20.7	24.3	34.2	24.0	24.0	29.6	21.6	23.9
1962	21.0	24.6	34.5	24.0	24.4	29.9	21.9	24.2
1963	21.7	24.9	35.4	24.0	25.1	30.3	21.9	24.6
1964	22.1	25.3	36.2	24.2	25.9	30.8	22.3	25.1
1965	22.6	25.7	36.9	25.2	27.1	31.3	22.7	25.7
1966	24.1	26.4	38.3	25.7	27.9	32.2	23.2	26.6
1967	24.4	27.6	40.2	26.8	29.4	33.8	23.8	27.6
1968	25.2	28.8	41.4	27.6	30.5	35.5	26.0	28.7
1969	26.3	30.3	42.6	28.8	32.0	37.6	27.0	30.0
1970	26.9	31.8	43.4	30.0	33.4	38.9	27.3	31.0
1971	27.2	33.3	44.0	31.2	34.1	40.2	27.8	31.9
1972	29.2	34.8	45.1	32.0	35.7	41.3	28.5	33.4
1973	33.5	37.0	47.4	32.8	37.5	43.0	29.4	36.0
1974	39.0	40.3	51.9	36.1	40.7	46.8	31.0	40.3
1975	44.0	44.3	55.0	40.3	45.4	51.7	34.8	44.3
1976	45.2	49.2	58.1	44.7	49.3	54.8	37.2	48.5
1977	48.9	53.8	62.0	47.8	52.9	57.3	39.9	52.3
1978	56.5	57.9	64.4	50.6	56.7	59.6	43.1	55.7
1979	63.9	61.9	70.3	55.5	61.9	63.7	46.2	60.1
1980	70.8	66.9	78.6	62.6	68.0	69.7	51.4	66.1
1981	78.9	75.3	84.2	74.1	75.4	76.8	58.0	74.6
1982	84.6	84.7	88.9	84.5	83.4	83.4	67.0	83.4
1983	87.7	90.4	92.5	88.7	89.2	88.8	75.5	88.7
1984	92.6	93.8	94.7	92.5	92.7	91.8	81.6	92.3
1985	95.2	97.1	97.3	96.9	95.9	95.6	89.4	96.2
1986	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1987	104.4	104.0	104.2	103.6	105.0	105.4	106.7	104.3
1988	107.2	108.6	109.6	105.6	109.6	111.3	114.6	108.9
1989	111.1	114.3	114.1	111.1	114.4	116.2	125.2	114.7
1990	115.7	119.5	117.3	117.3	120.0	121.3	136.1	120.3
1991	121.2	124.7	128.4	119.4	128.4	130.2	159.5	127.3

Sources: Anon. (1991c, 1991e)

Table 9.2: Real gross domestic product at factor cost (1986 prices) for selected industries and total for the manufacturing sector from 1984 to 1990.

Industry	Real GDP (million \$)						
	1984	1985	1986	1987	1988	1989	1990
Agriculture and related services	3,193.3	3,100.2	2,521.1	2,702.2	2,637.4	2,807.7	3,014.5
Fishing and trapping	47.0	45.5	46.3	45.7	50.9	47.5	49.1
Logging and forestry	618.4	487.6	659.7	617.3	633.0	627.7	618.6
Mining, quarrying and oil	2,037.3	1,998.3	2,144.9	2,372.9	2,492.3	2,719.9	2,681.8
Food	4,075.3	4,449.8	4,400.6	4,208.7	n/a	n/a	n/a
Beverage	1,182.5	1,238.0	1,155.6	1,138.8	n/a	n/a	n/a
Wood	773.4	899.5	924.5	913.7	n/a	n/a	n/a
Furniture and fixture	866.2	963.5	1,020.0	982.7	n/a	n/a	n/a
Paper and allied	2,419.3	2,296.2	2,350.3	2,504.6	n/a	n/a	n/a
Printing, publishing and allied	2,606.2	2,844.9	2,950.0	2,884.8	n/a	n/a	n/a
Primary metal	3,610.0	3,633.8	3,494.8	3,863.5	n/a	n/a	n/a
Fabricated metal	3,201.5	3,696.2	3,906.9	4,022.2	n/a	n/a	n/a
Refined petroleum and coal products	608.7	548.3	554.2	587.6	n/a	n/a	n/a
Chemical and chemical products	3,657.3	3,508.8	3,737.3	3,821.7	n/a	n/a	n/a
All manufacturing	43,886.9	46,428.2	46,891.6	48,223.0	50,811.2	50,637.8	47,477.7

Source: Anon. (1990f)

Table 9.3: Private and public investment in Canada, by region, from 1970 to 1991.

Year	Investment (million \$), by region					
	Atlantic	Quebec	Ontario	Prairies	British Columbia	Yukon and Northwest Territories
1970	1,635	3,418	6,928	3,431	2,233	153
1971	1,876	4,150	7,460	3,615	2,899	184
1972	1,779	4,824	8,237	4,177	2,895	306
1973	2,219	5,827	9,715	5,053	3,433	372
1974	2,685	7,398	11,816	6,472	4,096	416
1975	2,913	9,170	12,920	8,308	4,423	482
1976	3,159	9,813	13,948	10,995	5,197	525
1977	3,038	10,702	14,732	11,992	5,593	540
1978	3,456	10,794	15,561	13,842	6,201	506
1979	4,211	11,854	17,093	17,064	7,451	681
1980	4,209	12,819	19,106	19,559	9,519	982
1981	4,781	13,739	22,741	24,801	11,885	1,657
1982	5,643	13,098	22,423	23,409	10,102	2,087
1983	6,087	13,947	22,724	19,474	9,346	1,942
1984	6,143	15,748	24,891	18,076	8,787	1,733
1985	6,950	19,240	31,864	20,882	10,189	1,378
1986	7,140	21,030	38,396	19,856	9,576	1,088
1987	7,057	24,941	44,966	20,582	10,781	836
1988	7,944	27,454	50,398	23,530	12,710	899
1989	8,813	29,548	57,207	23,410	15,925	1,159
1990 ^a	8,607	30,322	53,259	25,545	17,712	943
1991 ^b	9,295	31,068	55,079	26,843	17,147	820

Source: Anon. (1991c)

Note: Investment refers to new capital and repair expenditures.

^a Preliminary

^b Intentions

Table 9.4: Implicit Canadian price indices^a for gross domestic product, by major economic sector, from 1970 to 1990.

Implicit price index (1986=100)										
Year	Personal expenditures on consumer goods and services	Government current expenditures on goods and services	Gross fixed capital formation				Exports of goods and services ^b	Imports of goods and services ^c	Terms of trade	Gross domestic product
			Total	Government	Non-residential	Housing				
1970	33.4	26.5	40.3	34.2	41.1	30.2	34.8	38.3	90.9	32.8
1971	34.2	28.1	42.4	36.0	43.2	32.1	34.9	39.1	89.1	33.9
1972	35.7	30.3	45.0	38.1	45.9	35.1	36.3	40.1	90.3	35.8
1973	37.9	32.5	49.4	42.0	50.3	41.3	41.2	43.0	95.7	38.9
1974	41.9	37.0	57.5	51.1	58.2	49.0	53.3	51.6	103.4	44.6
1975	46.3	42.0	63.5	56.9	64.2	52.8	58.9	59.2	99.6	49.0
1976	49.8	47.4	67.8	59.6	68.8	57.4	60.5	59.6	101.6	53.2
1977	53.4	51.5	71.5	63.4	72.3	59.7	64.3	66.3	97.0	56.6
1978	57.5	55.3	75.3	67.9	76.0	63.0	67.5	72.3	93.5	59.9
1979	62.4	60.6	80.6	73.7	81.4	68.0	79.0	79.2	99.8	65.9
1980	68.6	66.8	83.5	79.9	83.8	73.8	89.7	84.4	106.3	73.0
1981	76.3	75.6	89.0	87.7	89.2	81.8	95.1	88.3	107.7	80.9
1982	84.1	84.5	94.4	93.9	94.5	83.5	97.0	92.5	104.9	87.9
1983	89.4	89.5	95.0	96.3	94.7	86.6	97.5	92.2	105.8	92.3
1984	92.9	93.2	96.9	99.0	96.6	90.2	101.0	97.0	104.1	95.2
1985	96.3	96.9	98.5	100.8	98.1	92.7	102.0	99.5	102.5	97.6
1986	100.0	100.0	100.0	100.0	100.0	99.9	100.0	100.0	100.1	100.0
1987	103.9	103.9	103.7	100.3	104.1	110.2	101.7	98.5	103.3	104.7
1988	108.1	107.6	107.0	103.1	107.4	118.5	102.2	96.2	106.2	109.7
1989	113.1	112.0	111.6	105.8	112.3	128.2	103.9	96.5	107.7	114.9
1990	117.9	117.3	112.3	108.8	112.8	127.7	103.5	97.8	105.8	118.3

Source: Anon. (1991c)

^a These price indices reflect not only changes in real prices, but also expenditure patterns within and between the major economic sectors. An implicit price index for gross domestic expenditure is derived by dividing the total current dollars by the total constant dollars.

^b Excludes investment income received from non-residents.

^c Excludes investment income paid to non-residents.

Table 9.5: Quarterly number of housing starts across Canada and totals for the United States from 1968 to 1991.

Year		Number of housing starts						
Quarter (Q)		Atlantic	Quebec	Ontario	Prairies	B.C.	Canada	U.S.
1968	Q1	10,300	42,200	78,500	26,400	26,800	184,200	4,932,000
	Q2	9,800	47,200	83,700	34,500	27,300	202,500	4,690,000
	Q3	11,400	44,100	71,900	30,300	23,300	181,000	4,995,000
	Q4	12,500	49,700	87,100	37,600	27,600	214,500	5,198,000
1969	Q1	14,800	52,400	116,700	46,500	33,500	263,900	5,686,000
	Q2	15,400	47,700	81,100	46,600	37,700	228,500	4,958,000
	Q3	13,900	41,300	77,500	37,700	31,300	201,700	4,608,000
	Q4	11,000	37,000	68,700	32,200	24,200	173,100	4,457,000
1970	Q1	12,600	36,800	56,800	28,300	33,500	168,000	4,087,000
	Q2	12,000	34,100	58,400	21,400	18,500	144,400	4,124,000
	Q3	10,900	50,700	78,000	22,200	26,100	187,900	4,903,000
	Q4	15,200	58,900	102,900	37,900	33,400	248,300	5,574,000
1971	Q1	17,300	47,400	65,600	38,200	35,600	204,100	5,770,000
	Q2	17,100	54,800	93,100	38,200	29,600	232,800	6,326,000
	Q3	17,100	51,100	90,300	44,300	36,700	239,500	6,732,000
	Q4	17,900	52,700	98,700	39,100	37,900	246,300	7,142,000
1972	Q1	14,700	57,600	100,600	49,500	32,900	255,300	8,020,000
	Q2	17,000	55,000	110,200	41,300	34,700	258,200	7,232,000
	Q3	17,200	56,300	103,700	37,900	37,300	252,400	7,598,000
	Q4	15,900	55,200	96,400	33,200	35,500	236,200	7,678,000
1973	Q1	23,700	55,300	118,600	34,300	29,200	261,100	7,721,000
	Q2	22,000	60,100	106,700	39,700	46,200	274,700	7,187,000
	Q3	21,900	59,100	111,100	39,500	38,300	269,900	6,565,000
	Q4	20,600	61,500	109,500	40,200	33,000	264,800	5,279,000
1974	Q1	16,700	65,000	119,000	40,200	37,500	278,400	5,516,000
	Q2	17,800	59,900	94,200	38,000	38,000	247,900	5,074,000
	Q3	19,000	52,300	74,300	32,200	26,300	204,100	4,039,000
	Q4	16,800	36,900	67,200	31,200	25,500	177,600	3,358,000
1975	Q1	14,800	39,200	57,500	24,800	26,000	162,300	3,299,000
	Q2	17,000	52,200	71,500	34,100	26,600	201,400	3,548,000
	Q3	20,300	58,700	79,600	48,400	39,500	246,500	4,268,000
	Q4	23,400	62,400	101,500	57,500	42,800	287,600	4,674,000
1976	Q1	30,000	63,500	95,800	62,000	36,000	287,300	4,804,000
	Q2	22,700	75,400	83,600	57,300	38,600	277,600	4,852,000
	Q3	19,100	69,500	79,800	58,300	34,700	261,400	4,951,000
	Q4	17,100	63,000	83,700	66,400	40,200	270,400	5,854,000
1977	Q1	12,000	69,000	71,000	47,000	33,000	232,000	5,760,000
	Q2	16,000	58,000	82,000	60,000	34,000	250,000	6,204,000
	Q3	16,000	59,000	84,000	64,000	31,000	254,000	6,677,000
	Q4	19,000	49,000	75,000	66,000	31,000	240,000	6,936,000
1978	Q1	18,000	62,000	84,000	97,000	34,000	295,000	5,779,000
	Q2	13,000	43,000	61,000	63,000	24,000	204,000	6,741,000
	Q3	14,000	38,000	78,000	61,000	30,000	221,000	6,656,000
	Q4	15,000	39,000	70,000	65,000	27,000	216,000	6,679,000
1979	Q1	14,000	41,000	54,000	75,000	22,000	206,000	5,270,000
	Q2	16,000	43,000	54,000	56,000	26,000	195,000	5,903,000
	Q3	13,000	38,000	57,000	51,000	29,000	188,000	5,155,000
	Q4	12,000	44,000	60,000	54,000	32,000	202,000	4,193,000

(cont'd)

Table 9.5: Quarterly number of housing starts across Canada and totals for the United States from 1968 to 1991 (concl.).

Year	Quarter (Q)	Number of housing starts						
		Atlantic	Quebec	Ontario	Prairies	B.C.	Canada	U.S.
1980	Q1	11,000	28,000	56,000	39,000	38,000	172,000	4,128,000
	Q2	10,000	26,000	36,000	37,000	33,000	142,000	3,446,000
	Q3	12,000	31,000	35,000	45,000	35,000	158,000	4,556,000
	Q4	11,000	32,000	41,000	41,000	43,000	168,000	4,937,000
1981	Q1	12,000	33,000	42,000	49,000	49,000	185,000	4,553,000
	Q2	10,000	38,000	67,000	54,000	47,000	216,000	3,962,000
	Q3	9,000	29,000	53,000	45,000	47,000	183,000	3,274,000
	Q4	8,000	19,000	37,000	43,000	28,000	135,000	2,867,000
1982	Q1	7,000	21,000	46,000	45,000	42,000	161,000	2,593,000
	Q2	7,000	19,000	28,000	44,000	16,000	114,000	3,087,000
	Q3	10,000	17,000	33,000	30,000	13,000	103,000	3,545,000
	Q4	10,000	37,000	49,000	26,000	15,000	137,000	4,060,000
1983	Q1	10,000	27,000	55,000	40,000	22,000	154,000	5,436,000
	Q2	21,000	53,000	61,000	42,000	29,000	206,000	5,468,000
	Q3	13,000	34,000	51,000	25,000	20,000	143,000	5,661,000
	Q4	11,000	40,000	52,000	16,000	19,000	138,000	5,352,000
1984	Q1	7,000	47,000	41,000	22,000	21,000	138,000	6,184,000
	Q2	11,000	40,000	47,000	16,000	17,000	131,000	5,944,000
	Q3	13,000	40,000	55,000	20,000	18,000	146,000	5,262,000
	Q4	11,000	42,000	48,000	15,000	11,000	127,000	5,048,000
1985	Q1	10,000	52,000	34,000	13,000	20,000	129,000	5,642,000
	Q2	13,000	42,000	65,000	17,000	17,000	154,000	5,623,000
	Q3	20,000	43,000	74,000	26,000	17,000	180,000	5,426,000
	Q4	15,000	58,000	77,000	23,000	19,000	192,000	5,704,000
1986	Q1	10,000	47,000	58,000	24,000	26,000	165,000	6,334,000
	Q2	16,000	64,000	81,000	19,000	20,000	200,000	6,124,000
	Q3	20,000	60,000	88,000	22,000	20,000	210,000	5,882,000
	Q4	14,000	66,000	91,000	23,000	19,000	213,000	5,528,000
1987	Q1	9,000	73,000	105,000	25,000	26,000	238,000	5,812,000
	Q2	16,000	78,000	108,000	22,000	28,000	252,000	5,322,000
	Q3	16,000	66,000	113,000	25,000	35,000	255,000	5,366,000
	Q4	13,000	78,000	92,000	24,000	26,000	233,000	5,070,000
1988	Q1	8,000	65,000	83,000	17,000	27,000	200,000	4,848,000
	Q2	14,000	61,000	100,000	20,000	31,000	226,000	4,889,000
	Q3	16,000	48,000	107,000	24,000	32,000	227,000	4,846,000
	Q4	13,000	60,000	106,000	21,000	31,000	231,000	5,076,000
1989	Q1	7,000	45,000	105,000	17,000	40,000	214,000	4,981,000
	Q2	14,000	52,000	92,000	18,000	34,000	210,000	4,480,000
	Q3	16,000	43,000	92,000	25,000	42,000	218,000	4,441,000
	Q4	15,000	55,000	89,000	22,000	39,000	220,000	4,457,000
1990	Q1	7,000	46,000	88,000	29,000	56,000	226,000	4,727,000
	Q2	12,000	60,000	64,000	25,000	39,000	200,000	3,925,000
	Q3	14,000	38,000	61,000	19,000	30,000	162,000	3,625,000
	Q4	14,000	46,000	45,000	16,000	26,000	147,000	3,319,000
1991	Q1	7,000	27,000	34,000	11,000	22,000	101,000	2,895,000
	Q2	10,000	50,000	46,000	14,000	28,000	148,000	n/a
	Q3	16,000	40,000	70,000	17,000	36,000	179,000	n/a
	Q4	12,000	55,000	56,000	18,000	40,000	181,000	n/a

Sources: Canada Mortgage and Housing Corporation, special compilation; Anon. (1992f)

Table 9.6: Annual numbers of housing starts, by region and for Canada as a whole.

Year	Number of housing starts					Canada
	Atlantic	Quebec	Ontario	Prairies	B.C.	
1950	7,451	28,515	33,430	15,599	7,536	92,531
1960	8,125	28,589	42,282	17,858	12,004	108,858
1970	12,480	47,118	76,675	26,939	27,316	190,528
1971	17,259	51,782	89,980	39,867	34,765	233,653
1972	16,502	55,746	102,933	39,416	35,317	249,914
1973	21,922	59,550	110,536	38,894	37,627	268,529
1974	18,114	51,642	85,503	35,444	31,420	222,123
1975	19,538	54,741	79,968	43,057	34,152	231,456
1976	20,793	68,748	84,682	61,253	37,727	273,203
1977	16,346	57,580	79,130	60,310	32,358	245,724
1978	14,095	43,671	71,710	69,573	28,618	227,667
1979	13,626	41,730	56,887	57,461	27,345	197,049
1980	10,864	29,186	40,127	40,878	37,546	158,601
1981	9,316	29,645	50,161	47,266	41,585	177,973
1982	8,412	23,492	38,508	35,641	19,807	125,860
1983	14,393	40,318	54,939	30,388	22,607	162,645
1984	10,834	41,902	48,171	17,824	16,169	134,900
1985	14,707	48,031	64,871	20,248	17,969	165,826
1986	15,609	60,348	81,470	21,671	20,687	199,785
1987	13,791	74,179	105,213	23,859	28,944	245,986
1988	13,418	58,062	99,924	20,671	30,487	222,562
1989	13,391	49,058	93,337	20,702	38,894	215,382
1990	12,250	48,070	62,649	21,941	36,720	181,630

Source: Anon. (1991f)

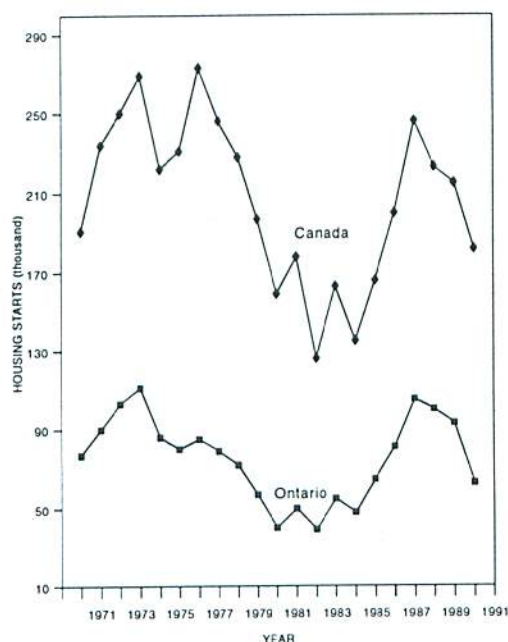


Figure 19. Trends in the annual numbers of housing starts in Ontario and Canada from 1970 to 1990.

Table 9.7: National and provincial gross domestic products at market prices from 1970 to 1990.

Year	Gross domestic product (million \$)											Canada ^a
	Newfound-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and Northwest Territories	
1970	1,204	241	2,220	1,666	22,484	37,131	3,688	3,043	7,097	9,317	263	88,354
1971	1,306	257	2,386	1,823	24,271	40,575	3,937	3,450	7,787	10,349	282	96,423
1972	1,369	286	2,735	2,079	27,217	45,718	4,340	3,563	8,868	11,880	346	108,401
1973	1,609	368	3,124	2,424	30,928	52,736	5,164	4,515	11,241	14,709	449	127,267
1974	1,943	424	3,496	2,836	36,342	61,599	6,123	6,069	15,746	17,437	577	152,592
1975	2,228	461	3,894	3,112	40,944	68,164	6,915	6,907	18,598	19,486	595	171,304
1976	2,647	571	4,521	3,652	47,697	78,188	7,861	7,859	21,321	22,990	609	197,916
1977	2,997	602	4,916	3,962	52,211	84,662	8,303	8,130	24,424	25,647	759	216,613
1978	3,223	682	5,569	4,459	58,122	92,414	9,208	9,259	28,968	28,732	863	241,499
1979	3,907	786	6,093	5,385	64,939	104,363	10,319	10,468	35,480	33,360	1,032	276,132
1980	4,095	846	6,292	5,019	72,220	114,994	11,188	12,400	43,148	38,239	1,239	309,680
1981	4,643	1,009	7,345	5,953	81,513	131,831	13,160	14,339	49,934	44,691	1,229	355,647
1982	5,059	1,051	8,462	6,527	86,228	137,310	14,014	14,760	52,896	46,115	1,476	373,898
1983	5,485	1,165	9,629	7,493	92,274	151,945	14,911	15,235	55,386	48,151	1,588	403,262
1984	5,947	1,297	10,701	8,375	100,991	171,499	16,520	16,390	58,941	51,119	1,874	443,654
1985	6,368	1,320	11,934	9,007	107,994	183,561	17,661	17,436	65,351	54,499	2,225	477,306
1986	6,782	1,498	13,031	10,079	117,493	202,710	18,421	17,145	57,317	57,342	2,306	504,124
1987	7,385	1,587	13,967	10,887	129,593	223,775	19,542	17,191	59,614	62,866	2,542	548,949
1988	7,912	1,781	14,898	11,764	142,417	251,325	21,541	18,120	61,810	69,291	2,712	603,571
1989	8,406	1,897	16,019	12,645	151,801	273,352	23,485	19,610	66,415	76,332	2,873	652,835
1990	8,732	2,001	16,916	13,187	157,210	281,210	23,990	20,494	71,203	81,085	2,957	678,985

Source: Anon. (1991c)

^a Totals do not include federal government activities abroad and the residual errors of estimation.

10. MISCELLANEOUS INFORMATION

Table 10.1: Glossary of Terms

Balance of trade: the difference between the dollar (or other money) value of a country's exports and imports of merchandise or of goods and services.

Board-foot: foot-board measure (fbm); an imperial unit of measure, comprising 1 ft² of wood 1 inch thick.

Consumer price index (CPI): measures the rate of change in a typical basket of consumer goods and services, including housing, food, and health care. It can be broken down into food and nonfood items, goods and services, and other components.

Domestic exports: include goods grown, extracted or manufactured in Canada, including goods of foreign origin that have been materially transformed in Canada.

Establishment: the smallest unit capable of reporting certain specified input and output data; usually a plant or mill.

Even-aged stand: a forest stand in which all the trees are of one age or were planted at one time.

Forest inventory: a survey of an area to determine such data as area, condition, timber volume and species, for a specific purpose, such as planning, purchasing, evaluating, managing, or harvesting.

Forestry: the scientific management of forests for the continuous production of goods and services.

Forest stands: management units that make up a forest. A stand can be defined as a reasonably homogeneous unit that can be clearly differentiated from surrounding stands by its age, composition, structure, site quality, or geography.

Fuel and electricity (cost of): consumption of purchased fuel and electricity only, at a laid-down cost that includes transportation and handling charges, duties, etc. Applies to large establishments only. Data for nonmanufacturing activity are included under manufacturing activity except where an ancillary office uses a separate "head office" report. In this latter case, the fuel reported is included under cost of materials for "total activity" only.

Gross domestic product (GDP): the monetary value of goods and services produced within the geographical boundaries of Canada and available for domestic consumption, export or investment. There are three methods of measuring GDP: (i) the final expenditure approach, which measures expenditures on goods and services by final users (consumers, government, business) on the capital account, and net expenditures by non-residents; (ii) the income approach, which measures the labor and capital costs of producing goods and services plus other charges against production; and (iii) the value added by industry approach, which measures the value added by industries in the production process by subtracting their *intermediate* input costs from the value of their gross outputs.

Gross merchantable volume: volume of the main stems of trees or stands, excluding the stump and top, but including defective and decayed wood.

Gross total volume: volume of the main stems of trees or stands, including the stump and top as well as defective and decayed wood.

Hardwood: a member of the deciduous or broad-leaf tree group.

Immature: in even-aged management, those trees or stands that have grown past the regeneration stage but that are not yet mature.

Materials and supplies (cost of): generally, consumption of purchased items only at a laid-down cost that includes transportation and handling charges, duties, etc. Includes transfers between units of the same company and work done on contract by others. At the manufacturing activity level, this item represents purchased items used in manufacturing operations.

Mature: in even-aged management, those trees or stands that are sufficiently developed to be harvestable and that are at or near rotation age (includes overmature trees and stands if an overmature class has not been recognized).

Mechanical pulp: pulp produced from roundwood or chips by mechanically breaking down wood fibers; also referred to as *groundwood pulp*.

Newsprint: paper produced mainly from mechanical pulp for use in printing newspapers.

Non-reserved (land): forest land that, by law or policy, is available for timber harvesting.

Ownership/tenure: the holding, particularly as to manner or term, of a property where the responsibility for forest management rests with the forest owner. Legislation defines a number of forestry tenures by which the cutting of timber and other rights to Crown land are assigned.

Panelboard: a board produced from other wood products (e.g., plywood, particleboard and waferboard).

Paperboard: a thick, rigid paper, such as boxboard or containerboard, that is used for producing corrugated cardboard boxes, etc.

Particleboard: a panelboard that consists mainly of wood particles (usually sawdust) and resins, bonded together under heat and pressure.

Patent (private) land: (a) industrial land owned by a large corporate entity for commercial forestry purposes, and (b) non-industrial land, owned by corporations or individuals, that may or may not be used for commercial forestry purposes. The corporations may include churches, municipalities, villages, townships, companies, limited partnerships, organizations and associations.

Plywood: a panelboard produced from cross-grained layers of veneer and resins bonded together under heat and pressure.

Production forest: all productive forest land managed primarily for growing timber for industrial (commercial) use unless otherwise reassigned.

Production forest reserve: production forest stands which, in the opinion of photo interpreters, may constitute a logging or silvicultural problem.

Productive forest land: all forest areas capable of growing commercial timber.

Protection forest: all productive forest land managed primarily to exert a beneficial influence on the soil, water, and overall landscape.

Pulp: the primary raw material for making paper, produced by mechanically or chemically breaking down wood into a fibrous solution.

Re-exports: exports of goods of foreign origin that have not been materially transformed in Canada, including foreign goods withdrawn for export from bonded Customs warehouses.

Reforestation: the process of re-establishing a forest after it has been logged or otherwise stripped of merchantable trees.

Regeneration: the renewal of a forest crop by natural or artificial means.

Reserved land: forest land that, by law or policy, is not available for the harvesting of forest crops.

Salaries and wages: these are compiled before deductions for income tax and employee-paid portions of both employee benefits and social insurance. They include payments for regular work, overtime, and paid leave as well as bonuses, commissions paid to regular employees, severance pay, etc. Withdrawals of working owners and partners of unincorporated businesses are excluded.

Silviculture: the theory and practice of controlling the establishment, composition, care and development of stands of trees to achieve the objectives of management.

Selling price index: an index that shows changes in the overall inflation rate or the rate of price change for a particular sector of the economy, with the base year equal to a value of 100.

Softwood: a member of the coniferous tree group.

Sulfate/kraft pulp: chemical pulp produced using sodium sulfate in the process.

Sulfite pulp: chemical pulp produced by "cooking" wood in a solution of sulfurous acid and bisulfite salt.

Total exports: the sum of domestic exports and re-exports.

Uneven-aged stand: a forest stand that has at least three distinct age classes with some gaps in the age-class distribution of individual trees.

Value added, manufacturing activity: value of shipments of goods of own manufacture plus net change in inventory of goods in process and finished goods, less cost of materials and supplies used, fuel and electricity.

Value added, total activity: consists of value added for both manufacturing and nonmanufacturing activity. The latter is calculated by subtracting relevant commodity inputs from nonmanufacturing revenue or output; these commodity inputs are net of the change in inventories of goods purchased for resale. Nonmanufacturing revenues include depreciable fixed assets produced by the unit's own work force for their own use, revenue from product rentals, etc., but exclude nonoperating revenue such as real property rentals, dividends and interest.

Value of shipments of goods of own manufacture: net selling value of goods made by the reporting establishment, or for its account, from its own materials. Excludes discounts, returns, allowances, sales tax, excise taxes and duties, returnable containers, and common or contract carriers' charges for outward transportation (but not its own carriers' delivery expense). Includes repair and custom revenue, transfer to reporting units of the same firm, all exports, and the book value of its own products shipped the first time on a rental basis. Includes consignment shipments to other countries, but domestic consignment shipments are included in inventory units sold.

Veneer: a slice (sheet) of wood produced from a log using a lathe-like peeling machine; often used for making plywood.

Volume: the amount of wood in a tree, stand, or other specified area, according to some unit of measurement or some standard of use.

Wood chips (pulp chips): fragments of wood, approximately 1 inch (3 cm) across, produced from timber that cannot be used for the production of lumber and/or veneer.

Wood residues: byproducts such as sawdust, shavings, edging, slabs, bark and hog fuel.

Working group: an aggregate of stands, including potential forest areas assigned to this category, with the same predominant species, and managed under the same rotation and broad silvicultural system.

Table 10.2: Existing Forest Management Agreement areas in Ontario as of 1992.

FMA number	Company name	Forest name	Date signed	Effective date amended	Effective date amended	Productive area (km ²)	Total area (km ²)
500200	Abitibi-Price Inc.	Iroquois Falls	Apr. 28, 1980	Apr. 1, 1985	Apr. 1, 1990	7,352.4	9,353.4
500300	C.P. Forest Products	English River	June 20, 1980	Apr. 1, 1985	Apr. 1, 1990	4,624.2	6,265.9
500400	E.B. Eddy Forest Products	Upper Spanish	Aug. 11, 1980	Apr. 1, 1985	Apr. 1, 1990	5,587.3	7,146.6
500500	E.B. Eddy Forest Products	Lower Spanish	Aug. 11, 1980	Apr. 1, 1985	Apr. 1, 1990	5,132.9	6,603.1
500600	Spruce Falls Power and Paper	Gordon Cosens	Sept. 9, 1980	Apr. 1, 1985	Apr. 1, 1990	13,867.9	16,104.1
500700	Abitibi-Price Inc.	Spruce River	Dec. 15, 1981	Apr. 1, 1986	Apr. 1, 1991	5,992.1	7,523.2
500800	Great West Timber Ltd.	Black River	Mar. 31, 1982	Apr. 1, 1986	Apr. 1, 1991	2,198.2	2,552.1
500900	Domtar Inc.	Lake Nipigon	Mar. 31, 1982	Apr. 1, 1986	Apr. 1, 1991	5,189.0	6,129.2
501000	Quebec and Ontario Paper	Nagagami	Mar. 14, 1983	Apr. 1, 1987	Apr. 1, 1992	3,819.3	4,496.1
501100	Pineland Timber Ltd.	Pineland	Feb. 28, 1983	Apr. 1, 1987	Apr. 1, 1992	3,273.0	3,932.9
501200	Boise Cascade Canada	Seine River	Mar. 7, 1983	Apr. 1, 1987	Apr. 1, 1992	1,891.0	2,690.5
501300	Boise Cascade Canada	Manitou	Mar. 7, 1983	Apr. 1, 1987	Apr. 1, 1992	2,735.9	3,910.1
501400	Malette Inc.	Romeo Malette	Feb. 21, 1983	Apr. 1, 1987	Apr. 1, 1992	5,095.7	6,056.5
501500	Domtar Inc.	White River	June 16, 1983	Apr. 1, 1988	Apr. 1, 1993	4,873.9	5,757.9
501700	Quebec and Ontario Paper	Driftwood	June 20, 1983	Apr. 1, 1988	Apr. 1, 1993 ^a	1,442.7	1,718.3
501800	Quebec and Ontario Paper	Timmins	June 20, 1983	Apr. 1, 1988	Apr. 1, 1993	1,603.8	1,895.0
502000	Boise Cascade Canada	Patricia	Apr. 2, 1984	Apr. 1, 1989	Apr. 1, 1994 ^b	4,560.5	6,512.4
502100	Boise Cascade Canada	Pakwash	Apr. 2, 1984	Apr. 1, 1989	Apr. 1, 1994	2,982.8	3,977.2

(cont'd)

Table 10.2: Existing Forest Management Agreement Areas in Ontario as of 1992 (concl.).

FMA number	Company name	Forest name	Date signed	Effective date amended	Effective date amended	Productive area (km ²)	Total area (km ²)
502200	Dubreuil Forest Products	Magpie	Feb. 24, 1984	Apr. 1, 1989	Apr. 1, 1994	3,197.2	3,874.8
502300	C.P. Forest Products	Trout Lake	Sept. 24, 1984	Apr. 1, 1989	Apr. 1, 1994	7,365.8	9,758.5
502400	C.P. Forest Products	Dog River-Matawin	June 13, 1985	Apr. 1, 1990	Apr. 1, 1995	6,773.0	8,735.6
502500	C.P. Forest Products	Brightsand	June 13, 1985	Apr. 1, 1990	Apr. 1, 1995	3,087.8	4,365.1
502600	Kimberly-Clark Canada	Nakina	June 13, 1985	Apr. 1, 1990	Apr. 1, 1995	7,241.4	9,058.9
502700	Kimberly-Clark Canada	Longlac	June 13, 1985	Apr. 1, 1990	Apr. 1, 1995	8,570.8	10,006.8
502800	Hearst Forest Management	Hearst	Nov. 6, 1986	Apr. 1, 1992	Apr. 1, 1997	10,097.8	12,062.2
502900	C.P. Forest Products	Black Sturgeon	July 17, 1986	Apr. 1, 1991	Apr. 1, 1996	4,518.7	5,340.6
503000	Superior Forest Management	Superior Forest	May 28, 1987	Apr. 1, 1992	Apr. 1, 1997	7,207.1	8,531.7
503100	McKenzie Forest Products	Lac Seul	July 23, 1987	Apr. 1, 1992	Apr. 1, 1997	5,404.5	6,601.0
Total (28 agreements) ^c						145,686.6	180,961.7
1989 total area under licence							261,991.6
Total area under FMA							180,961.7
FMA as a % of the licenced area							69.1%

Source: Ont. Min. Nat. Resour., Forest Management Partnership Project, Sault Ste. Marie, Ont.

^a FMA 501600 (Cochrane) and FMA 501700 (Gardiner) were amalgamated into Driftwood Forest FMA 501700, effective 1 April 1988.

^b FMA 501900 (East Patricia) and FMA 502000 (Lake of the Woods) were amalgamated into Patricia FMA 502000, effective 1 April 1989

^c as a result of amalgamation

Table 10.3: Directory of wood-processing firms in Ontario.

A. SAWMILLS

1. All-Weather Wood Products Ltd., Watford
2. T.W. Ansley, Thessalon
3. R.F. Ashton, Blackstock
4. Atikokan Forest Products, Sapawe
5. Atkinson Timber Products, Tillsonburg
6. L. Bacon, Uxbridge
7. Bass Lake Lumber, Orillia
8. Brouwer Forest Products Ltd., Keswick
9. L. Byler, Mount Elgin
10. Byway Lumber Ltd., Perth
11. C.P. Forest Products Ltd., Dryden
12. C.P. Forest Products Ltd., Thunder Bay
13. G. Carruthers, Cobourg
14. Carson Lake Lumber, Pembroke
15. Chapleau Forest Products Ltd., Chapleau
16. H&R Chartrand, Noelville
17. Cheminis Lumber Ltd., Kearns
18. Chisholm's Ltd., Roslin
19. G. Coultis & Son Ltd., Thedford
20. Craig Hardwoods Ltd., Auburn
21. Custom Sawmill Ltd., Hearst
22. Dament & Charles Lumber Mfg. Ltd., Pembroke
23. Delaware Sawmill, Delaware
24. Domtar Inc., Lumber Division, White River
25. Dubreuil Brothers Ltd., Dubreuilville
26. Dubreuil Brothers Ltd., Dubreuilville
27. R.J. Dungey & Sons Ltd., Mitchell
28. P. Duchesne, Fauquier
29. Wm. Dysievick, Thunder Bay
30. E&G Custom Sawing Ltd., Kenora
31. E.B. Eddy Forest Products Ltd., Timmins
32. E.B. Eddy Forest Products Ltd., Nairn
33. Edgewood Lumber Ltd., Hawkesville
34. Elk Lake Planing Mill Ltd., Elk Lake
35. Elk Lake Planing Mill Ltd., Englehart
36. Emedi Lumber Ltd., Downsview
37. H. Engeneski Lumber Ltd., Scotland
38. Erie Wood Products Ltd., Aylmer
39. F&R Sawmills Ltd., Port Perry
40. Falconbridge Ltd., Falconbridge
41. Featherhorn Custom Sawing, Kendal
42. Fenelon Falls Lumber Ltd., Fenelon Falls
43. Field Lumber Ltd., Field
44. Field Lumber Ltd., Field
45. Foothills Lumber Ltd., Hematite
46. Freymond Lumber Ltd., Bancroft
47. Fryer Forest Products Ltd., Monetville
48. Giroux & Vezina Ltd., Field
49. Goulard Lumber Ltd. (1971), Sturgeon Falls
50. Great West Timber Ltd., Thunder Bay
51. B.E. Grein Lumber Ltd., Ayton
52. A. Griesse, Kenabeck
53. Gulick Forest Products Ltd., Palmer Rapids
54. Olav Haavaldsrud Timber, Hornepayne
55. W.G. Hallman Lumber Ltd., Walter's Falls
56. Hampel-Gibson Forest Products Ltd., North Bay
57. A. Hanson & Sons Logging Ltd., Langton
58. Harcourt Lumber Co., Harcourt
59. L. Heideman & Son, Eganville
60. High Falls Lumber Co. Ltd., Wawa
61. Hogan Lake Timber Ltd., Pembroke
62. Ben Hokum & Sons Ltd., Killaloe
63. W. Howard, Cobourg
64. M.W. Hunter Lumber Ltd., Gooderham
65. Inwood Forest Products Ltd., Upsala
66. Isabelle Brothers Ltd., Opasatika
67. Jamot Lumber Ltd., Alban
68. Jan Forest Products Ltd., L'Amable
69. Jan Lumber Ltd., L'Amable
70. V. Hensen, Campbellford
71. Jermyn Lumber Co., Bobcaygeon
72. Kakabeka Timber Ltd., Kakabeka Falls
73. Ignace Saw, Ignace
74. J.H. Keeso & Sons Ltd., Listowel
75. Kenney's Logging Ltd., Strathroy
76. Kitchener Forest Products, Petersburg
77. Klemmer Lumber Ltd., Elmwood
78. A. Koricina, St. Marys
79. A. Kreger, Sleeman
80. B.A. Lachance Lumber Ltd., Harty
81. A&L Lafreniere Lumber Ltd., Chapleau
82. Lahaie Lumber Ltd., Alban
83. Lajambe Forest Products Ltd., Kearney
84. Lajambe Forest Products Ltd., Garden River
85. Lajambe Forest Products Ltd., Sundridge
86. Lajambe Forest Products Ltd., Heyden
87. Lajambe Forest Products Ltd., Sault Ste. Marie
88. Albert Larocque Lumber Ltd., Hawkesbury
89. Lecours Lumber Co. Ltd., Hearst
90. D.G. Leech, Caledon
91. A. Lucke, Stratton
92. Ken MacLennan Sawmill Ltd., Dalkeith
93. Malette Inc., Malette Lumber Division, Timmins
94. Malette-United Sawmill Inc., Hearst

(cont'd)

A. SAWMILLS (concl.)

95. Manitou Lumber, Emo
96. Maple Dell Sawmill, Lakeside
97. Maple Haven Sawmill, Ingersoll
98. J.E. Martel & Sons Lumber Ltd., Chapleau
99. McKenzie Forest Products Inc., Hudson
100. G. McNabb Pallet Manufacture, Hepworth
101. McRae Mills Ltd., Whitney
102. Midway Lumber Mill Ltd., Thessalon
103. Maurice Miller Lumber Ltd., Barrie
104. Murray Bros. Lumber Co. Ltd., Madawaska
105. Nadrofsky Lumber, Huntsville
106. T.J. Neuman Ltd., Palmer Rapids
107. Normick Perron Inc., Cochrane
108. Normick Perron Inc., Kirkland Lake
109. Northern Wood Preservers Inc., Thunder Bay
110. Oak Valley Tree Farm Inc., Roseneath
111. Odorizzi Lumber Co. Ltd., Golden Valley
112. J. Pack Custom Sawmill & Firewood, Pontypool
113. Parkinson's Saw Mill Ltd., Guelph
114. R.L. Payne, Lakefield
115. Pineal Lake Lumber Co., Chapleau
116. PM Lumber Ltd., Hanover
117. Port Arthur Lumber & Planning, Thunder Bay
118. Porter Lumber Ltd., Port Dover
119. N. Procknow, Elmwood
120. Quebec & Ontario Paper Co., South Porcupine
121. Quebec & Ontario Paper Co., South Porcupine
122. Robert Ritchie Forest Products, Elmvale
123. RKM Wood Products, Tiverton
124. Roka Lumber Ltd., Pontypool
125. C. Wm. Ross & Son Sawmill, Woodville
126. O.E. Rothwell Lumber, Lanark
127. Isidore Roy Ltd., Sturgeon Falls
128. Roy's Lumber & Mining Timber, Britt
129. Shaw Lumber, Eganville
130. Shelly's Sawmill Inc., Wallacetown
131. Sherindale Custom Sawing, Woodview
132. Simpson Log Works, Lindsay
133. J.R. Simpson Lumber Ltd., Cambridge
134. Skookum Bay Logging, Red Lake
135. M.G. Slater Lumber Ltd., Gormley
136. Springwater Mills Ltd., St. Thomas
137. Spruce Falls Power & Paper Co., Kapuskasing
138. G. Stein Ltd., Palmer Rapids
139. Stone-Consolidated Inc., Gilles Bros. & Co. Ltd., Braeside
140. Tembec Forest Products Inc., Huntsville
141. Tembec Forest Products Ltd., Mattawa
142. Tembec Forest Products Ltd., Alban
143. Thompson Hardwoods of Thedford Ltd., Thedford
144. Alva Thompson & Sons Ltd., Bracebridge
145. Townsend Lumber Inc., Tillsonburg

146. Trilake Timber Co., Kenora
147. Tyrone Mills Ltd., Bowmanville
148. Gale Walker, Lindsay
149. Wilson Forest Products Ltd., Madoc
150. R. Winkworth, Hastings
151. Gale Walker, Lindsay
152. Wilson Forest Products Ltd., Madoc

B. LOGGING

1. AMFAN Logging Corp., Atikokan
2. Anderson Bros. Timber Shop, Atikokan
3. Murkro Logging Ltd., Atikokan
4. Henry Cranston Logging, Bruce Mines
5. W. Bouchard Logging Ltd., Chapleau
6. Wilfred Bouchard Logging, Chapleau
7. FGP Contracting, Dorion
8. Pawleight Timbering Inc., Dorion
9. Mike Prpich Logging, Echo Bay
10. H. Fiset & Sons Ltd., Elk Lake
11. A&A Logging Co. Ltd., Espanola
12. Derden Forest Products, Fort Frances
13. Larry Caul, Fort Frances
14. Donway Slashing, Geraldton
15. Venture Processing, Geraldton
16. Kenogami Lake Lumber Ltd., Hornepayne
17. Silver Falls Contractors Ltd., Kaministiquia
18. Towanda Timber Ltd., Kaministiquia
19. D'Amours Contracting Ltd., Kapuskasing
20. L. Clouthier Logging, Kapuskasing
21. Synco Timber Ltd., Kapuskasing
22. JR Logging Ltd., Kapuskasing
23. Kimberly-Clark Canada Inc., Longlac
24. Atway Transport, Manitouwadge
25. Jorgenson Timber, Mine Centre
26. Team Contracting, Nipigon
27. J&P Poisson Logging, Sault Ste. Marie
28. Ranger Logging Ltd., Sault Ste. Marie
29. Beckerton Forest Products Ltd., Spanish
30. Foleyet Timber Ltd., Sultan
31. Leo Levesque Trucking Ltd., Terrace Bay
32. Nor-Chip Ltd., Thessalon
33. Bruce Hynnes Contracting Inc., Thunder Bay
34. Buchanan Forest Products Ltd., Thunder Bay
35. Fortier Timber, Thunder Bay
36. Harvey Hamel Logging Ltd., Thunder Bay
37. Hawkeye Forest Products Ltd., Thunder Bay
38. Macri Logging Inc., Thunder Bay
39. Norway Timber Ltd., Thunder Bay
40. PJ Timber Ltd., Thunder Bay
41. Ranta Timber Ltd., Thunder Bay
42. River Lake Lumber Ltd., Thunder Bay

(cont'd)

B. LOGGING (concl.)

43. Shuniah Forest Products Ltd., Thunder Bay
44. H. Fiset & Sons Ltd., Timmins
45. Nighthawk Timber Co., Timmins
46. Timmins Forest Products Ltd., Timmins
47. Basalyga Bros. Ltd., Upsala
48. J.H. Poulin Construction Ltd., Wawa
49. Gogama Forest Products Ltd., Westree
50. G.W. Sutherland Constraction Co., Worthington

C. PULP AND PAPER MILLS

1. Abitibi-Price Inc., Iroquois Falls
2. Abitibi-Price Inc., Fort William Division, Thunder Bay
3. Abitibi-Price Inc., Provincial Papers Division, Thunder Bay
4. Abitibi-Price Inc., Thunder Bay/Lakehead, Thunder Bay
5. Boise Cascade Canada Ltd., Kenora
6. Boise Cascade Canada Ltd., Fort Frances
7. C.P. Pacific Forest Products Ltd., Thunder Bay
8. C.P. Pacific Forest Products Ltd., Dryden
9. Domtar Inc. Fine Papers Division, Cornwall
10. Domtar Inc., Trenton
11. Domtar Inc., Red Rock
12. E.B. Eddy Forest Products Ltd., Espanola
13. James River - Marathon, Marathon
14. Kimberly-Clark of Canada Ltd., Terrace Bay
15. MacMillan Bloedel Ltd., Sturgeon Falls
16. Malette Inc., Kraft Pulp & Power Division, Smooth Rock Falls
17. Nordfibre Co., North Bay
18. Quebec & Ontario Paper Co. Ltd., Thorold
19. Spruce Falls Power & Paper Co., Kapuskasing
20. St. Marys Paper Inc., Sault Ste. Marie

D. VENEER AND PLYWOOD MILLS

1. Birchland Veneer Ltd., Thessalon
2. Canada Veneers Ltd., Pembroke
3. Columbia Forest Products Ltd., Rutherglen
4. Eddy Match Co. Ltd., Canadian Splint Division, Pembroke
5. Forest Ply Industries, Blind River
6. Interforest Ltd., Durham,
7. Lajambe Forest Products Ltd., Sault Ste. Marie
8. Levesque Plywood Ltd., Hearst

9. MacMillan Bloedel Ltd., Nipigon
10. Norbord Industries Inc., Cochrane
11. Pannill Veneer Co. Ltd., Kitchener
12. Superior Hardwood Veneers Ltd., Rankin Reserve
13. Weldwood of Canada Ltd., Longlac
14. Wilberforce Veneer & Lumber Co. Ltd., Wilberforce

E. BOARD MILLS

1. Combiboard Materials, Bancroft
2. Domtar Inc. Building Products Division, Huntsville
3. Grant Forest Products, Englehart
4. Levesque Plywood Ltd., Hearst
5. Malette Inc., Timmins Waferboard Division, Timmins
6. Proboard Ltd., Atikokan
7. Rexwood Products Ltd., New Liskeard
8. Weldwood of Canada Ltd., Longlac

F. OTHER MILLS

1. Atikokan Energy Products, Caland Ore Site
2. Blue Giant Firewood Ltd., Oakwood
3. Canada Buff Products Ltd., Bothwell
4. Devon Mills Ltd., Chapleau
5. Mr. Firewood Ltd., Burk's Falls
6. Gainford & Son Cedar Fencing Ltd., Athens
7. Hemiwood Ltd., Atikokan
8. Homestead Logs Ltd., King City
9. Jan Woodlands Ltd., L'Amable
10. Johnston Cedar Post Ltd., Carleton Place
11. Keenan Industries Ltd., Owen Sound
12. C.R. Kennedy Wood Products Ltd., Teeswater
13. Lanark Cedar Canada Inc., Carleton Place
14. R. & L. Lauzon, Moonbeam
15. J.B. Lavoie, Timmins
16. J. Lutes, Norwood
17. A. Miller, Exeter
18. R.J. Moore Hardwoods Inc., Cambridge
19. J. Murphy, Lanark
20. Nor-Chip Ltd., Sault Ste. Marie
21. Northern Pressure-Treated Wood Products, Kirkland Lake
22. Trans-Canada Pole, Thornton

Sources: Anon. (1992g,h)

Table 10.4: Population of selected northern Ontario census divisions, by census year.

Census division	1981	1986	% change 1981–1986	1991	% change 1986–1991
Algoma District	133,553	131,841	–1.3	127,269	–3.5
Cochrane District	96,875	93,712	–3.4	93,917	0.2
Kenora District	59,421	52,834	–12.5	58,748	11.2
Manitoulin District	11,001	9,823	–12.0	11,192	13.9
Nipissing District	80,268	79,004	–1.6	84,723	7.2
Parry Sound District	33,528	33,828	0.9	38,423	13.6
Rainy River District	22,798	22,871	0.3	22,997	0.6
Sudbury District	27,068	25,771	–5.0	26,178	1.6
Sudbury Regional Municipality	159,779	152,476	–4.8	161,210	5.7
Thunder Bay District	153,997	155,673	1.1	158,810	2.0
Timiskaming District	1,288	40,307	–2.4	38,983	–3.3
Northern Ontario	819,576	798,140	–2.7	n/a	–
Southern Ontario	7,805,531	8,303,554	6.0	n/a	–
Ontario	8,625,107	9,101,694	5.2	10,084,885	10.8

Sources: Anon. (1987d, 1991g)

Table 10.5: Population of selected northern Ontario communities, by census year.

Community	1981	1986	% change 1981-1986	1991	% change 1986-1991
Atikokan	4,452	4,345	-2.5	4,047	-6.9
Blind River	3,444	3,553	3.1	3,355	-5.6
Dryden	6,640	6,462	-2.8	6,505	0.7
Dubreuilville	988	961	-2.8	983	2.3
Elliot Lake	16,723	17,984	7.0	14,089	-21.7
Espanola	5,836	5,491	-6.3	5,527	0.7
Fort Frances	8,837	8,870	0.4	8,891	0.2
Hearst	5,533	5,559	0.5	6,079	9.4
Iroquois Falls	6,339	6,191	-2.4	5,999	-3.1
Kapuskasing	12,014	11,378	-5.6	10,344	-9.1
Kenora	9,817	9,621	-2.0	9,782	1.7
Kirkland Lake	12,219	11,604	-5.3	10,440	-10.0
Marathon	2,277	3,437	33.8	5,064	47.3
New Liskeard	5,551	5,286	-5.0	5,431	2.7
Nipigon/Red Rock	4,129	3,939	-4.8	3,759	-4.6
North Bay	51,268	50,623	-1.3	55,405	9.5
Sault Ste. Marie	82,697	80,905	-2.2	81,476	0.7
Sioux Lookout	3,074	3,098	0.8	3,311	6.9
Smooth Rock Falls	2,352	2,208	-6.5	2,043	-7.5
Sturgeon Falls	6,045	5,895	-2.5	5,837	-1.0
Sudbury	91,829	88,717	-3.5	92,884	4.7
Thessalon	1,620	1,522	-6.4	1,543	1.4
Thunder Bay	112,486	112,272	-0.2	113,946	1.5
Timmins	46,114	46,657	1.2	47,461	1.7

Sources: Anon. (1987d, 1991g)

Table 10.6: Conversion factors.

A. Measurement units used in the Ontario Forest Industry Mill Information System.

1. Definitions:

1 FBM = 1 board-foot (12"x12"x1")
1 MBM = 1,000 FBM
1 MSF = 1,000 ft² (veneer or panelboard)
1 m³ = 1 cubic metre = 35.3147 ft³
1 cunit = 100 ft³
1 cord = 128 ft³ (4'x4'x8')
1 tonne (metric) = 1,000 kg
1 ton (imperial) = 2,000 lbs

2. Metric Conversion Factors:

To convert to metric units, simply multiply the number in imperial units by the conversion factor (e.g., 1 MBM roundwood x 5.1282 = 5.13 m³, approximately).

Roundwood:

1 MBM = 5.1282 m³
1 cunit = 2.8317 m³
1 cord = 2.4070 m³

Lumber:

1 MBM = 2.3596 m³
1 cunit = 1.3029 m³
1 cord = 1.1075 m³

Veneer:

1 MSF @ 3/8" = 0.88489 m³
1 MSF @ 1/6" = 0.39265 m³
1 MSF @ 1/10" = 0.23597 m³
1 MSF @ 1/16" = 0.14748 m³
1 MSF @ 1/26" = 0.09076 m³
1 MSF @ 1/28" = 0.08427 m³
1 MSF @ 1/30" = 0.07866 m³

Softwood residues:

1 bone-dry ton = 2.4067 m³
1 bone-dry tonne = 2.6525 m³
1 cunit = 2.8321 m³
1 green ton = 1.2035 m³
1 green tonne = 1.3262 m³

Hardwood residues:

1 bone-dry ton = 3.4530 m³
1 bone-dry tonne = 3.8052 m³
1 cunit = 4.0634 m³
1 green ton = 1.7268 m³
1 green tonne = 1.9030 m³

Products by weight:

1 ton = 0.9072 tonnes

1 tonne = 1.1023 tons

Products by volume:

1 U.S. gallon = 3.785 L

1 imperial gallon = 4.546 L

3. Other conversion factors:**Roundwood:** (when presented by weight)White pine 1 tonne = 1.1198 m³ & 1 ton = 1.2344 m³Red pine 1 tonne = 1.1820 m³ & 1 ton = 1.3030 m³Jack pine 1 tonne = 1.2376 m³ & 1 ton = 1.3642 m³Spruce 1 tonne = 1.3004 m³ & 1 ton = 1.4334 m³Balsam fir 1 tonne = 1.0870 m³ & 1 ton = 1.1982 m³Hemlock 1 tonne = 1.1273 m³ & 1 ton = 1.2426 m³**Mixed spruce/**pine/fir 1 tonne = 1.2100 m³ & 1 ton = 1.3338 m³Poplar 1 tonne = 1.0091 m³ & 1 ton = 1.1123 m³Birch 1 tonne = 0.8873 m³ & 1 ton = 0.9781 m³Mixed hardwood 1 tonne = 0.8929 m³ & 1 ton = 0.9842 m³**Panelboards:** (plywood, waferboard, particleboard, etc.)1 MSF @ 1/4" = 0.58997 m³1 MSF @ 3/8" = 0.88496 m³1 MSF @ 1/2" = 1.17925 m³1 MSF @ 5/8" = 1.47493 m³1 MSF @ 3/4" = 1.76991 m³**Ties:**One average railway tie is approximately 0.2036 m³**B. Canadian yard/pound units and their metric (SI and derived) equivalents****Length:**

1 chain (22 yards) = 20.1168 m (exactly)

1 foot = 0.3048 m (exactly)

1 inch = 2.54 cm (exactly)

1 mile = 1.60934 km

1 yard = 0.9144 m (exactly)

Area:

1 acre = 0.404686 ha

1 mil-acre = 4.04686 m²1 square foot = 0.0929030 m²1 square inch = 6.4516 cm²1 square mile = 2.58999 km²1 square yard = 0.836127 m²**Volume or capacity:**1 cord (128 stacked ft³) = 3.62456 m³ (stacked)1 ft³ = 0.028 3168 m³1 yd³ = 0.764555 m³1 cunit (100 ft³ of solid wood) = 2.83168 m³

1 gallon = 4.54609 L (exactly)

Mass or weight:

1 ounce (avoirdupois) = 28.3495 g
1 pound (avoirdupois) = 0.453592 kg
1 ton (2,000 lb) = 0.907185 tonne

Ratios:

1 cord per acre = 8.95647 m³ (stacked)/ha
1 ft³/ac = 0.0699725 m³/ha
1 mile per gallon = 0.354006 km/L
1 lb/ft³ = 16.0185 kg/m³
1 ft²/ac = 0.229568 m²/ha
1 ton (2,000 lb) per acre = 2.24170 t/ha

C. Metric (SI and derived) units and their Canadian yard/pound equivalents.**Length:**

1 cm (centimetre) = 0.393701 inch
1 km (kilometre) = 0.621371 mile
1 m (metre) = 0.0497097 chain (1 chain = 22 yards)
1 m (metre) = 3.28084 feet
1 m (metre) = 1.09361 yards

Area:

1 cm² (square centimetre) = 0.155000 square inch
1 ha (hectare) = 2.47105 acres
1 km² (square kilometre) = 0.386102 square mile
1 m² (square metre) = 0.247105 mil-acre
1 m² (square metre) = 10.7639 square feet
1 m² (square metre) = 1.19599 square yards

Volume or capacity:

1 L (litre) = 0.219969 gallon
1 m³ (cubic metre) = 35.3147 cubic feet
1 m³ (cubic metre) = 1.30795 cubic yards
1 m³ (cubic metre) = 0.353147 cunit (1 cunit = 100 ft³ of solid wood)
1 m³ (stacked) = 0.275896 cord (1 cord = 128 stacked ft³)

Mass or weight:

1 g (gram) = 0.0352740 ounces (avoirdupois)
1 kg (kilogram) = 2.20462 pounds (avoirdupois)
1 t (tonne) = 1.10231 tons (1 ton = 2,000 lb)

Ratios:

1 kg/m³ (kilogram per cubic metre) = 0.0624280 pounds per cubic foot
1 km/L (kilometre per litre) = 2.82481 miles per gallon
1 m²/ha (square metre per hectare) = 4.35600 square feet per acre
1 m³/ha (cubic metre per hectare) = 14.2913 cubic feet per acre
1 m³(stacked)/ha (stacked cubic metre per hectare) = 0.111651 cords per acre
1 t/ha (tonne per hectare) = 0.446090 tons (1 ton = 2,000 lb) per acre

Source: Bowen (1974)

LITERATURE CITED

- Anon. 1970a. Coffins and caskets industry. Statistics Can., Ottawa, Ont. Cat. No. 35-210 (discontinued).
- Anon. 1970b. Miscellaneous wood industries. Statistics Can., Ottawa, Ont. Cat. No. 35-209 (discontinued).
- Anon. 1980. Standard industrial classification 1980. Statistics Can., Standards Div., Ottawa, Ont. 528 p.
- Anon. 1984a. Pulp and paper mills. Statistics Can., Ottawa, Ont. Cat. No. 36-204 (discontinued).
- Anon. 1984b. Sawmills and planing mills and shingle mills. Statistics Can., Ottawa, Ont. Cat. No. 35-204 (discontinued).
- Anon. 1984c. Miscellaneous wood industries. Statistics Can., Ottawa, Ont. Cat. No. 35-208 (discontinued).
- Anon. 1984d. Asphalt roofing manufacturers. Statistics Can., Ottawa, Ont. Cat. No. 36-205 (discontinued).
- Anon. 1984e. Miscellaneous paper converters. Statistics Can., Ottawa, Ont. Cat. No. 36-206 (discontinued).
- Anon. 1984f. Paper and plastic bag manufacturers. Statistics Can., Ottawa, Ont. Cat. No. 36-207 (discontinued).
- Anon. 1984g. Corrugated box manufacturers. Statistics Can., Ottawa, Ont. Cat. No. 36-213 (discontinued).
- Anon. 1984h. Folding carton and set-up box manufacturers. Statistics Can., Ottawa, Ont. Cat. No. 36-214 (discontinued).
- Anon. 1984i. Paper box and bag manufacturers. Statistics Can., Ottawa, Ont. Cat. No. 36-216 (discontinued).
- Anon. 1985a. Forest Resources 1980. United Nations, Food Agric. Organ., Rome, Italy.
- Anon. 1985b. Reference tables 1985. Can. Pulp Paper Assoc., Montreal, Que. 85 p.
- Anon. 1985c. Paper and allied products industries. Statistics Can., Ottawa, Ont. Cat. No. 36-250.
- Anon. 1985d. Sash, door, and other millwork plants. Statistics Can., Ottawa, Ont. Cat. No. 35-205.
- Anon. 1985e. Veneer and plywood mills. Statistics Can., Ottawa, Ont. Cat. No. 35-206.
- Anon. 1986a. The forest resources of Ontario. Ont. Min. Nat. Resour., Toronto, Ont. 100 p.
- Anon. 1986b. Manufacturing industries of Canada, sub-provincial areas. Statistics Can., Ottawa, Ont. Cat. No. 31-209 (discontinued).
- Anon. 1986c. Census 1986. Statistics Can., Ottawa, Ont.
- Anon. 1987a. Wood industries. Statistics Can., Ottawa, Ont. Cat. No. 335-250B (discontinued).
- Anon. 1987b. Other converted paper products industries, including asphalt roofing industry. Statistics Can., Ottawa, Ont. Cat. No. 36-215.
- Anon. 1987c. Paper and allied products industries. Statistics Can., Ottawa, Ont. Cat. No. 36-250B (discontinued).

- Anon. 1987d. Population and dwelling counts, provinces and territories. Statistics Can., Ottawa, Ont. Cat. No. 92-114.
- Anon. 1989. A guideline to the Canadian system of national accounts. Statistics Can., Ottawa, Ont. Cat. No. 13-589E. 105 p.
- Anon. 1990a. Statistics 1988-89. Ont. Min. Nat. Resour., Toronto, Ont. 117 p.
- Anon. 1990b. Pulpwood and wood residue statistics. Statistics Can., Ottawa, Ont. Cat. No. 25-001.
- Anon. 1990c. Reference tables 1990. Can. Pulp Paper Assoc., Montreal, Que. 37 p.
- Anon. 1990d. Canadian forestry statistics. Statistics Can., Ottawa, Ont. Cat. No. 25-202.
- Anon. 1990e. Manufacturing industries of Canada, national and provincial areas. Statistics Can., Ottawa, Ont. Cat. No. 31-203.
- Anon. 1990f. Provincial gross domestic product by industry. Statistics Can., Cat. No. 15-203.
- Anon. 1991a. Statistics 1989-90. Ont. Min. Nat. Resour., Toronto, Ont. 106 p.
- Anon. 1991b. Ontario forest industry statistical report for 1989. Ont. Min. Nat. Resour., Toronto, Ont. 107 p.
- Anon. 1991c. Quarterly economic review, annual reference tables. Can. Dep. Finance, Ottawa, Ont. 148 p.
- Anon. 1991d. Industry price indexes. Statistics Can., Ottawa, Ont. Cat. No. 62-011.
- Anon. 1991e. The consumer price index. Statistics Can., Ottawa, Ont. Cat. No. 62-001.
- Anon. 1991f. Housing starts and completions. Statistics Can., Ottawa, Ont. Cat. No. 64-002.
- Anon. 1991g. Census divisions and census subdivisions: population and dwelling counts. Statistics Can., Ottawa, Ont. Cat. No. 93-304.
- Anon. 1992a. Selected Forestry Statistics Canada 1991. For. Can., Policy and Econ. Dir., Ottawa, Ont. Inf. Rep. E-X-46. 231 p.
- Anon. 1992b. Compendium of Canadian forestry statistics. National forestry database. Can. Counc. For. Ministers, Ottawa, Ont. 86 p.
- Anon. 1992c. Logging industry. Statistics Can., Ottawa, Ont. Cat. No. 25-201.
- Anon. 1992d. Ontario forest industry statistical report for 1990. Ont. Min. Nat. Resour., Toronto, Ont. 38 p.
- Anon. 1992e. Private and public investment in Canada, intentions. Statistics Can., Ottawa, Ont. Cat. No. 61-205.
- Anon. 1992f. Survey of current business. U.S. Dep. Commerce, Washington, D.C.
- Anon. 1992g. Directory, primary wood using industries in Ontario 1992. Ont. Min. Nat. Resour., Toronto, Ont.
- Anon. 1992h. Northern Ontario business directory '92. Laurentian Business Pub. Co., Sudbury, Ont.
- Barron, D.E., Smyth, J.H., Campbell, K.L. and Martel, J.-P. 1986. Forest management expenditures in Canada, 1977-83. Gov't of Can., Can. For. Serv., Sault Ste. Marie, Ont. Joint Rep. 9. 80 p.

- Bowen, M.G. 1974. Selected metric (SI) units and conversion factors for Canadian forestry. Dep. Environ., Can. For. Serv., Ottawa, Ont.
- Campbell, K.L. 1990. Selected forestry statistics, Ontario: 1989. For. Can., Ont. Region, Sault Ste. Marie, Ont. Misc. Rep. 98. 110 p. + appendix.
- Daniel T.W., Helms, J.A. and Baker, F.S. 1979. Principles of silviculture. McGraw-Hill Book Co., Toronto. Ont. 500 p.
- Gross, H.L., Roden, D.B., Churcher, J.J., Howse, G.M. and Gertridge, D. 1992. Pest-caused depletions to the forest resource of Ontario, 1982-1987. For. Can., Ont. Region, Sault Ste. Marie, Ont. Joint Rep. 17. 16 p. + appendices.
- Reed, F.L.C. 1991. Canada's timber situation in 2050, p. 135-143 in D.G. Brand, *Ed.* Canada's timber resources. For. Can. Chalk River, Ont. Inf. Rep. PI-X-101. 174 p.
- Smyth, J.H. and Campbell, K.L. 1987. Selected forestry statistics, Ontario, 1987. Gov't of Can., Can. For. Serv., Sault Ste. Marie, Ont. Joint Rep. 14. 51 p.
- Smyth, J.H., Campbell, K.L., Lapointe, G. and Martel, J.-P. 1989. Forest management expenditures in Canada, 1983-85. For. Can., Ont. Region, Sault Ste. Marie, Ont. Joint Rep. 14. 15 p.