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SURVEY OF PRODUCTION
IN
CANADA
1939



OTTAWA
1941

Price 25 cents

Summary of the Value of Production by Main Branches in Canada and the Provinces, 1939.

Revised to Embody a Correction regarding the Production of the Electric Power Industry. See Report of the "Survey of Production in Canada, 1939".

B. NET PRODUCTION

Division of Industry	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	\$	\$	\$	\$	\$
Agriculture	8,762,535	15,726,605	17,626,565	129,108,470	252,275,925
Forestry	493,737	10,466,856	18,816,348	101,755,803	67,720,835
Fisheries	867,861	8,005,779	3,942,157	1,915,927	3,010,252
Trapping	4,377	180,484	754,736	1,081,129	1,550,387
Mining	-	23,504,419	3,600,454	81,600,118	188,867,969
Electric Power	266,412	5,072,208	3,594,362	56,120,938	52,100,287
TOTAL PRIMARY PRODUCTION	10,394,922	62,956,351	48,334,622	371,582,385	565,525,655
Construction	1,116,959	9,787,395	8,553,866	60,007,310	68,535,712
Custom and Repair	338,284	2,831,914	1,981,374	26,144,471	38,110,035
Manufactures, n.e.s.	898,481	27,884,056	16,266,452	372,279,054	682,217,915
Manufactures Total (1)	1,243,979	35,885,563	27,041,195	470,385,279	791,428,569
TOTAL SECONDARY PRODUCTION (2)	2,699,222	48,504,872	37,576,435	556,537,060	898,074,316
GRAND TOTAL	12,748,646	103,459,716	75,136,314	830,013,220	1,354,389,317
	Manitoba	Saskatchewan	Alberta	British Columbia-Yukon	CANADA
Agriculture	66,687,260	183,045,715	141,139,175	31,693,750	846,066,000
Forestry	3,717,261	2,269,352	2,563,998	62,919,226	271,723,416
Fisheries	1,655,273	478,511	430,724	14,072,197	34,378,681
Trapping	583,449	589,538	737,285	2,438,027	7,919,412
Mining	12,401,404	6,391,404	26,049,861	50,816,415	393,232,044
Electric Power	8,393,044	4,330,867	5,542,712	14,443,062	149,863,892
TOTAL PRIMARY PRODUCTION	93,437,691	197,105,387	177,463,755	176,382,677	703,183,445
Construction	6,569,460	7,772,854	8,987,693	12,375,089	183,706,338
Custom and Repair	6,591,692	4,687,641	5,451,195	10,515,780	96,652,386
Manufactures, n.e.s.	42,657,709	16,010,501	27,831,734	54,368,502	1,240,414,404
Manufactures Total (1)	48,810,544	20,283,273	32,618,153	103,355,346	1,531,051,901
TOTAL SECONDARY PRODUCTION (2)	61,971,696	32,743,768	47,057,041	126,246,215	1,811,410,625
GRAND TOTAL	149,256,552	225,576,383	219,734,377	253,642,048	3,223,956,573

(1) The item "Manufactures Total" includes dairy factories, sawmills, pulp and paper mills, fish canning and curing and certain mineral industries, which are also included in other above headings.

(2) Secondary production includes the above mentioned duplication.

Summary of the Value of Production by Main Branches in Canada and the Provinces, 1939.

Revised to Embody a Correction regarding the Production of the Electric Power Industry. See Report of the "Survey of Production in Canada, 1939".

A. GROSS PRODUCTION

Division of Industry	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	\$	\$	\$	\$	\$
Agriculture	15,690,000	28,938,000	32,655,000	208,074,000	372,087,000
Forestry	679,109	16,497,802	34,022,200	176,834,286	117,598,252
Fisheries	1,336,634	12,136,646	6,103,515	2,415,207	3,010,252
Trapping	4,377	180,484	754,736	1,081,129	1,550,387
Mining	-	28,955,090	3,929,992	163,440,306	308,175,159
Electric Power	326,420	5,548,336	3,789,079	56,155,440	52,136,169
TOTAL PRIMARY PRODUCTION..	18,036,540	92,256,358	81,254,522	608,000,368	854,557,219
Construction	1,948,064	19,890,449	14,886,121	118,529,680	144,829,394
Custom and Repair	571,408	4,783,497	3,346,816	44,161,641	64,373,142
Manufactures, n.e.s.	2,149,058	64,587,978	39,356,346	799,163,485	1,455,910,412
Manufactures Total(1)	3,543,681	82,139,572	66,058,151	1,045,757,585	1,745,674,707
TOTAL SECONDARY PRODUCTION (2)	6,063,153	107,813,518	84,291,088	1,208,448,906	1,954,877,243
GRAND TOTAL	22,705,070	181,518,282	138,843,805	1,569,855,174	2,519,670,167
	Manitoba	Saskatchewan	Alberta	British Columbia-Yukon	CANADA
	\$	\$	\$	\$	\$
Agriculture	36,517,000	238,579,000	187,133,000	44,943,000	1,224,616,000
Forestry	5,820,349	3,018,165	4,883,771	106,678,356	466,032,290
Fisheries	1,655,273	478,511	430,724	25,317,151	52,883,913
Trapping	583,449	589,538	737,285	2,438,027	7,919,412
Mining	28,619,359	13,140,601	29,558,706	87,523,603	663,342,816
Electric Power	8,467,519	5,105,620	5,814,827	14,537,559	151,880,969
TOTAL PRIMARY PRODUCTION..	141,662,949	260,911,435	228,558,313	281,437,696	2,566,675,400
Construction	14,848,706	13,429,064	17,856,669	26,985,533	373,203,680
Custom and Repair	11,134,284	7,919,076	9,207,825	17,762,612	163,259,301
Manufactures, n.e.s.	110,197,959	46,462,001	75,421,468	125,394,160	2,718,642,867
Manufactures Total (1)	134,293,595	60,650,589	87,474,080	248,191,568	3,474,783,528
TOTAL SECONDARY PRODUCTION (2)	160,276,585	81,997,729	114,538,574	292,939,713	4,011,246,509
GRAND TOTAL	277,843,898	328,720,576	331,044,275	451,580,001	5,821,781,248

See overleaf for footnotes.

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P R E F A C E

Previous issues of the Survey of Production have dealt with the straight monetary value of production with no adjustment for price fluctuations. Essentially, it has been a record of the dollar value of Canadian and provincial production during the year under review as compared with the preceding year, together with three or four pages of analysis based on that record.

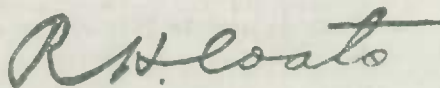
For the purposes of analysis, commodity production is divided into nine main branches, the first six being classed as "primary", the last three as "secondary", production. The analysis is concerned almost exclusively with the net production values for the two years under consideration, although gross figures are also given for the nine main branches. Three of the nine branches, forestry, fisheries and manufactures, are subjected to a detailed breakdown by industrial groups, net production value alone being shown in this respect.

The present report contains, in addition to the usual treatment the results of a study concerning the inter-war industrial structure, covering the period from 1919 to 1937. This study was also based upon gross and net values of production, but contrary to the previous practice of the report, includes adjustment for the general price level.

The report portrays the long-term trend of production values in the nine industrial groups over the nineteen-year period, the standard deviation of each of these groups from this long-term trend, and finally the correlation of the groups with the grand totals. The latter analysis shows to what extent the fluctuations in the value of production within a given group coincide with those of commodity production as a whole. A certain amount of explanation and analysis is presented along with this factual material.

The present Survey of Production, therefore, covers the twenty-one years of the inter-war period, the first nineteen through the long-term study, and the last two by the customary method. It is hoped that the additional research embodied in the new survey will be a contribution to Canadian economic statistics.

The present issue was prepared under the direction of Sydney B. Smith, M. A., of the General Statistics Branch.



R. H. Coats,
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DOMINION BUREAU OF STATISTICS

GENERAL STATISTICS BRANCH

OTTAWA - CANADA

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Chief, General Statistics Branch: Sydney B. Smith, M.A.

SURVEY OF PRODUCTION IN CANADA, 1939

The enterprises engaged in the production of commodities were definitely more active in 1939 than in the preceding year. The net value of output by the nine main branches after elimination of inter-group duplication and cost of materials, was \$3,264 million against \$2,975 million in 1938. The gain of 9.7 per cent was shared by the primary and secondary activities, but the advance registered by elementary operations was more pronounced.

The minor recession shown by the fisheries was overshadowed by the marked advances in the five other primary industries. The gain recorded by agriculture, the outstanding primary industry, was 14 p.c. or \$104 million. The greatest percentage gain was shown by the central electric stations, the value of the output rising 33 per cent to nearly \$190 million. The forestry industry was relatively more prosperous, the net revenue rising 11 per cent or more than \$27 million.

The rapid growth of the mining industry was continued in the year under review. The net value of the output, after the deduction of the value of ores used by smelters and the cost of fuel, purchased electricity, process supplies, freight and treatment charges, was \$393 million against the high level of \$374 million recorded in the preceding year.

Trapping, the smallest of the six primary industries, showed a gain of 20.5 per cent over 1938, but the absolute increase was of minor proportions. The net value of fish production was placed at \$34.4 million against \$35.6 million in the preceding year.

Mainly reflecting the expansion of agricultural and power activity, the primary group recorded a gain of 12.8 per cent in the net value of output over 1938. The total was \$1,743 million against \$1,545 million, representing an increase of nearly \$200 million.

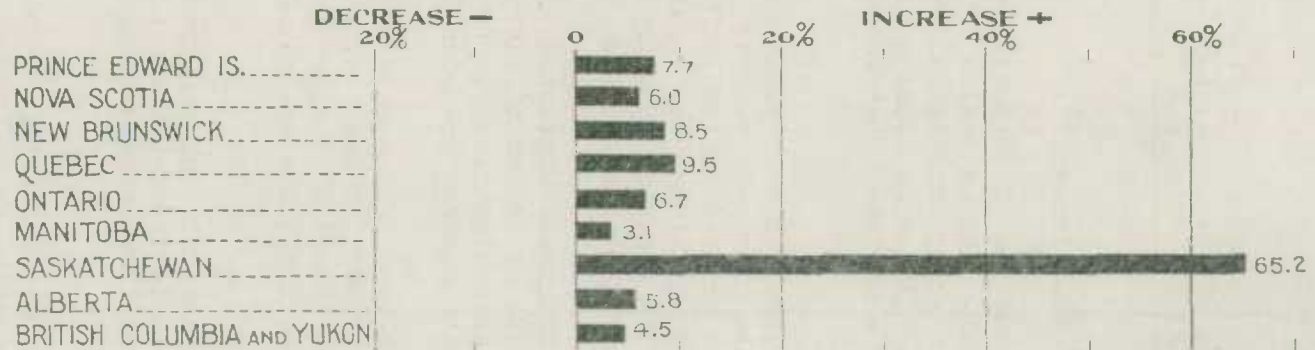
Manufactures and construction, the main factors in secondary production, recorded considerable betterment over the preceding year. The main in manufactures as determined by the annual census was \$103.8 million, the rise having been from \$1,428 million to \$1,531 million. The statistics cited embrace the manufacturing industries as presently defined in the reports of the annual census of manufactures published by the Bureau. For the purposes of the present report, it was necessary to segregate the industries normally operating in close connection with the primary group, the remainder constituting the category of manufactures, n.e.s.

It is estimated that the net output of the custom and repair group at \$96.7 million recorded a decline of 2.5 per cent from the \$99.1 million produced in 1938.

Chart 1

VALUE OF NET PRODUCTION

PERCENTAGE CHANGE — 1939 COMPARED WITH 1938



NET PRODUCTION

PROVINCIAL DISTRIBUTION

1939

INDUSTRIAL DISTRIBUTION

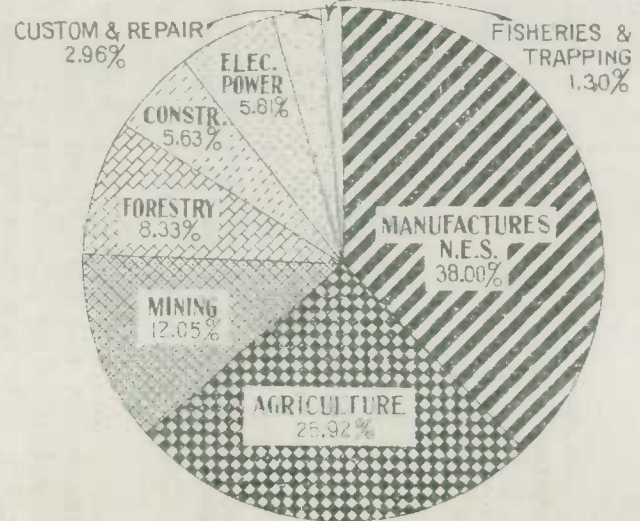
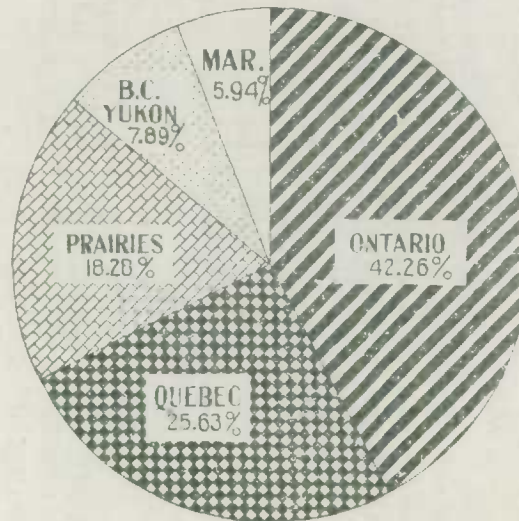


TABLE 1. - SUMMARY BY INDUSTRIES OF THE VALUE OF PRODUCTION IN CANADA, 1938 AND 1939

Division of Industry	1938		1939		Change in Net Value in 1939 from 1938	Percentage Change in Net Value from 1938	Percentage of net value by industry to Total Net Production 1939
	Gross	Net	Gross	Net			
	\$	\$	\$	\$	\$	p.c.	p.c.
Agriculture	1,062,645,000	742,020,000	1,224,616,000	846,066,000	+104,046,000	+ 14.0	25.92
Forestry	425,019,266	244,564,571	466,032,290	271,723,416	+ 27,158,845	+ 11.1	8.33
Fisheries	53,182,700	35,593,009	52,883,913	34,378,681	- 1,214,328	- 3.4	1.05
Trapping	6,572,824	6,572,824	7,919,412	7,919,412	+ 1,346,588	+ 20.5	0.25
Mining	653,781,836	374,415,674	663,342,816	393,232,044	+ 18,816,370	+ 5.0	12.05
Electric Power	144,331,627	142,320,725	191,769,745	189,752,668	+ 47,431,943	+ 33.3	5.81
Total Primary Production	2,345,533,253	1,545,486,803	2,606,564,176	1,743,072,221	+197,585,418	+ 12.8	53.41
Construction	353,223,285	176,661,077	373,203,680	183,706,338	+ 7,045,261	+ 4.0	5.63
Custom and Repair ..	146,399,500	99,086,100	163,259,301	96,652,386	- 2,433,714	- 2.5	2.96
Manufactures (a) ..	3,337,681,366	1,428,286,778	3,474,783,528	1,531,051,901	+103,765,123	+ 7.2	46.91
Total Secondary Production (b)	3,837,304,151	1,704,033,955	4,011,246,509	1,811,410,625	+107,376,670	+ 6.3	55.50
GRAND TOTAL	5,431,756,699	2,974,673,454	5,861,670,024	3,263,845,349	+289,171,895	+ 9.7	100.00

- (a) The item "Manufactures" includes dairy factories, sawmills, pulp and paper mills, fish canning and curing and certain mineral industries, which are also included in other headings above. This duplication amounting in 1938 to a gross of \$751,080,705 and a net of \$274,847,304 and in 1939 to a gross of \$756,140,661 and a net of \$290,637,497 is eliminated from the grand total.
- (b) Secondary production includes the above mentioned duplication. The percentage of the net manufactures, n.e.s. to the total net production in 1939 was 38.0.

TABLE 2. - SUMMARY BY PROVINCES OF THE VALUE OF PRODUCTION IN CANADA, 1938 AND 1939

	1938		Percentage of Total Net Value	1939		Percentage of Total Net Value	Percentage Change Net Value in 1939 from 1938
	Gross Value	Net Value		Gross Value	Net Value		
	\$	\$	p.c.	\$	\$	p.c.	p.c.
Prince Edward Island	20,458,390	11,832,958	0.40	22,706,224	12,749,800	0.39	+ 7.7
Nova Scotia	168,300,064	99,158,589	3.33	183,186,644	105,128,078	3.22	+ 6.0
New Brunswick	126,852,056	70,047,728	2.35	139,692,777	75,985,286	2.33	+ 8.5
Quebec	1,450,142,356	764,189,933	25.69	1,576,519,809	836,677,855	25.63	+ 9.5
Ontario	2,429,302,024	1,292,574,329	43.46	2,544,693,365	1,379,412,515	42.26	+ 6.7
Manitoba	263,484,363	145,101,719	4.88	278,248,245	149,660,899	4.59	+ 3.1
Saskatchewan	231,430,092	136,980,819	4.60	329,467,501	226,323,308	6.93	+ 65.2
Alberta	308,419,193	208,382,832	7.01	331,767,393	220,457,495	6.76	+ 5.8
British Columbia-Fukon-Northwest Territories ..	433,368,161	246,404,547	8.28	455,388,066	257,450,113	7.89	+ 4.5
GRAND TOTAL	5,431,756,699	2,974,673,454	100.00	5,861,670,024	3,263,845,349	100.00	+ 9.7

The total secondary output consequently was \$1,811 million compared with \$1,704 million, the percentage increase having been less than one-half that of the primary division. The amount of the gain was \$107 million or 6.3 per cent.

Eliminating the duplication in connection with the output of processing industries initially included with the primary activities the net value of commodity production was \$3,264 million in 1939 against \$2,975 million in the preceding year. The consequent advance in the value of the output was \$289 million or 9.7 per cent. A summary of the value of commodity production by the nine main branches is given in Table 1, page 5.

The index of industrial production comprising four of the nine industries recorded a gain of 22 per cent in 1940 over the preceding year, while the index of wholesale prices at 82.9 against 75.4 averaged 9.9 per cent higher. The preliminary estimate for the net value of agriculture, however, was only 4.7 per cent greater.

Canada's mineral production was valued at \$529.2 million in 1940, a gain of 11.5 per cent over 1939. This total is the gross value of metals and minerals produced and consequently on a different basis from the industrial totals used in this connection.

The evidence points to a considerable gain in commodity production in 1940 over the preceding year due in part to the acceleration in industries sharing in war contracts. Statistics for 1940 indicate that the upward trend of Canadian production was extended and progress made toward new records under the impetus of war demands.

Relative Importance of the Branches of Production.

The volume of agricultural production was much greater in 1939 than in the preceding year but the effect was tempered by a considerable decline in prices. The price index of Canadian farm products dropped from 73.6 in 1938 to 64.3 in the year under review. Despite the handicap of lower prices the net value of agricultural production rose 14 per cent over the level of 1938.

An index of the volume of manufacturing production rose 10.6 per cent in 1939, while the price index for fully and chiefly manufactured goods receded less than 4 per cent. The result was an increase of 7.2 per cent in the net value of manufacturing production as reported by the census of industry.

Due to the greater increase in agricultural production, the ascendancy of manufactures as the chief factor in commodity production was somewhat reduced in 1939. The output of agriculture was 25.9 per cent against 24.9 per cent in 1938. The relative share of manufactures was reduced from 48.0 per cent in the preceding year to 46.9 per cent. Eliminating the duplicated items, also included in the several extractive industries with which they are associated, we find that the output of manufactures not elsewhere stated (n.e.s.) was 38 per cent of the net total compared with 38.8 per cent in 1937. Mining retained third place in the year under review, contributing 12.1 per cent of the grand total. Forestry was responsible for 8.3 per cent of the net revenue, while electric power and construction contributed 5.8 and 5.6 per cent, respectively, reversing the order of the preceding year. Custom and repair, fisheries and trapping followed in order of importance.

TABLE 3. - DETAILED STATEMENT OF THE NET VALUE OF PRODUCTION IN CANADA FROM 1937 TO 1939,
INDICATING THE METHOD OF COMPUTATION BY GIVING SEPARATELY THE DUPLICATED ITEMS

Classification	1937	1938	1939
Total Agricultural Production	678,953,000	742,020,000	846,066,000
Forestry -			
Logs and bolts	58,004,070	52,759,660	55,685,197
Pulpwood	63,057,205	53,761,999	58,302,668
Sawn railway ties	3,129,207	2,222,509	2,048,186
Firewood	32,457,629	32,740,966	33,058,240
All other forest products	6,601,776	6,781,123	8,653,107
Less supplies	- 31,486,379	- 32,000,000	- 34,000,000
Total Woods Operations	131,763,508	116,265,857	123,747,398
Saw mill products	46,727,302	39,264,528	44,852,358
Pulp and paper mill products	106,002,017	89,034,186	89,034,186
Total Milling Operations	152,729,319	128,298,714	133,886,544
Total Forestry Production	284,492,827	244,564,571	271,723,416
Fisheries -			
Fish prepared domestically or sold fresh by fishermen	11,013,866	10,239,825	9,123,446
Sales to canning and curing establishments	12,179,219	12,589,724	12,807,991
Value added domestically	1,873,801	2,303,943	2,135,940
Fish canning and curing establishments (Value added)	13,909,406	15,359,484	16,008,545
Less fuel, electricity and supplies	- 4,536,813	- 4,899,967	- 5,697,241
Total Fisheries Production	34,439,481	35,593,009	34,378,681
Trapping -			
Fur Production (Wild Life)	10,477,096	6,572,824	7,919,412
Total Mineral Production	372,796,027	374,415,674	393,232,044
Electric Light and Power	140,963,914	142,320,725	189,752,668
Total Primary Production	1,522,122,345	1,545,486,803	1,743,072,221
Total Construction	176,029,679	176,661,077	183,706,338
Custom and Repair	98,484,982	99,086,100	96,652,386
Manufactures -			
Vegetable products	266,869,693	267,471,208	292,129,840
Animal products	118,117,971	118,950,278	122,821,410
Textiles	174,076,945	159,978,801	181,927,898
Wood and paper	306,961,553	277,002,267	303,662,441
Iron and steel	280,165,582	261,639,134	275,774,796
Non-ferrous metals	182,968,223	164,692,324	155,808,806
Non-metallic minerals	77,667,225	74,967,075	85,511,631
Chemicals	79,290,240	80,506,965	89,046,832
Miscellaneous	22,807,435	23,078,726	24,368,247
Total Manufactures (a)	1,508,924,867	1,428,286,778	1,531,051,901
Total Secondary Production	1,783,439,528	1,704,033,955	1,811,410,625
GRAND TOTAL	2,992,336,288	2,974,673,454	3,263,845,349

(a) Includes duplication.

(a) The item "Total Manufactures" includes the following industries which are also shown elsewhere, the amount of the duplication being deducted from the grand total

	1937	1938	1939
Dairy Factories	34,958,378	35,361,202	36,850,726
Saw mills and pulp and paper mills	152,729,319	128,298,714	147,976,018
Fish canning and curing	9,372,593	10,459,517	10,311,304
Mineral industries	118,165,295	100,727,871	95,499,449
Total	313,225,585	274,847,304	290,637,497
Manufactures, n.e.s.	1,195,699,282	1,153,439,474	1,240,414,404

Comparison of 1939 with 1938 by Provinces.

Each of the provinces recorded gain in the year under review over 1938. The striking feature was the marked recovery in the production of Saskatchewan, the net value rising from \$137 million to \$226 million, a gain of no less than 65 per cent. The estimate of net agricultural production was \$183 million contrasting with the low level of \$98 million in the preceding year. Aside from the pronounced gain in Saskatchewan due in part to betterment in climatic conditions, the greatest relative gain was recorded in Quebec. The advance in that province was from \$764 million to \$836 million amounting to 9.5 per cent. The increase in Ontario was 6.7 per cent, the standing having been \$1,379 million against \$1,293 million. The improvement in the Maritime provinces was general, New Brunswick taking the lead with a gain of 8.5 per cent. Prince Edward Island and Nova Scotia followed in the order named, with increases of 7.7 per cent and 6.0 per cent, respectively.

Alberta recorded an increase of 5.8 per cent while a gain of 3.1 per cent was shown in Manitoba. The net value of production in the British Columbia-Yukon area, favoured with marked diversification, was \$257.5 million against \$246.4 million, the gain having been 4.5 per cent. Expansion in the manufacturing and electric power industries was mainly instrumental in raising the net production at the western coast, but activity in forestry was also at a higher level.

Relative Production by Provinces, 1939.

Ontario continued to maintain in 1939 by a wide margin a pre-eminence in the output of commodities, producing 42.3 per cent of the Dominion total compared with 43.5 per cent in 1938. Minor recession was shown in the share produced by Quebec computed at 25.6 per cent. British Columbia remained in third place, the share having been 7.9 per cent.

The recovery in the fortunes of agriculture accounted mainly for the betterment in the position of Saskatchewan. The percentage of the Dominion total rose from 4.6 in 1938 to 6.9 in the year under review. Alberta's share was 6.76 per cent while Manitoba followed with 4.59 per cent. The contribution of 3.22 per cent in Nova Scotia took first place in the Maritime area, while New Brunswick's share was 2.3 per cent followed by Prince Edward Island with 0.4 per cent. On a regional basis, the Prairie Provinces produced 18.3 per cent of the commodities during the year under review, while the Maritimes accounted for 5.9 per cent of the national total.

Per Capita Production.

Net commodity production is appraised on a per capita basis by provinces in Table 6. This represents the net value of commodities produced by capital and labour, and as such measures the annual dollar return on the natural resources, plant and equipment. It is distinct from and must not be confused with the national income which includes in addition to net commodity production (less other deductions), the value of services, the utilities of time, place and possession, which although somewhat intangible, have a distinct value in the economic sense in the same manner as commodities produced. In many cases these services make possible the ready flow and disposition of the commodities.

Each of the nine provinces showed per capita betterment in 1939 over the preceding year. Owing to its pre-eminent industrial position and diversification, Ontario was in first place in this respect, with a net commodity output of \$368 per capita, a gain of more than \$21 from the level of 1938. British

TABLE 4. - VALUE OF PRODUCTION IN THE PROVINCES OF CANADA DURING 1938 AND 1939, BY INDUSTRIES.

	Prince Edward Island				Nova Scotia			
	1938		1939		1938		1939	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
	\$	\$	\$	\$	\$	\$	\$	\$
Agriculture	14,350,000	8,450,500	15,690,000	8,762,535	30,621,000	19,559,430	28,938,000	15,726,605
Forestry	640,691	465,676	679,109	493,737	15,969,645	10,237,628	16,497,802	10,466,856
Fisheries	1,312,368	847,789	1,336,634	867,861	12,316,472	8,060,634	12,136,646	8,005,779
Trapping	5,740	5,740	4,377	4,377	267,250	267,250	180,484	180,484
Mining	-	-	-	-	25,482,903	20,224,347	28,955,090	23,504,419
Electric Power	313,187	259,793	327,574	267,566	5,330,038	4,854,842	7,216,698	6,740,570
Construction	1,331,442	675,142	1,948,064	1,116,959	18,038,687	9,705,582	19,890,449	9,787,395
Custom and Repair	512,400	346,800	571,408	338,284	4,289,500	2,903,200	4,783,497	2,831,914
Manufactures (a)	3,570,667	1,131,902	3,543,681	1,243,979	74,860,605	31,375,251	83,139,572	35,885,563
GRAND TOTAL (a)	20,458,390	11,832,958	22,706,224	12,749,800	168,300,064	99,158,589	183,186,644	105,128,078

	New Brunswick				Quebec			
	1938		1939		1938		1939	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
	\$	\$	\$	\$	\$	\$	\$	\$
Agriculture	29,676,000	17,043,360	32,655,000	17,626,565	197,747,000	131,569,970	208,074,000	129,108,470
Forestry	32,382,183	18,276,104	34,022,200	18,816,348	151,060,149	82,579,127	176,834,286	101,755,803
Fisheries	4,773,409	3,113,855	6,103,515	3,942,157	2,406,750	1,876,531	2,415,207	1,915,927
Trapping	603,121	603,121	754,736	754,736	1,058,752	1,058,752	1,081,129	1,081,129
Mining	3,780,228	3,506,250	3,929,992	3,600,454	148,819,998	69,593,807	163,440,306	81,600,118
Electric Power	3,562,746	3,356,595	4,638,051	4,443,334	52,962,073	52,930,122	62,820,075	62,785,573
Construction	14,974,820	8,177,241	14,886,121	8,553,866	100,830,603	52,157,674	118,529,680	60,007,310
Custom and Repair	3,001,200	2,031,300	3,346,816	1,981,374	39,601,000	26,802,800	44,161,641	26,144,471
Manufactures (a)	58,570,952	23,865,877	66,058,151	27,041,195	983,123,599	428,614,079	1,045,757,585	470,385,279
GRAND TOTAL (a)	126,852,056	70,047,728	139,692,777	75,985,286	1,450,142,356	764,189,933	1,576,519,809	836,677,855

	Ontario				Manitoba			
	1938		1939		1938		1939	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
	\$	\$	\$	\$	\$	\$	\$	\$
Agriculture	341,309,000	239,382,400	372,087,000	252,275,925	87,632,000	61,340,800	96,517,000	66,687,260
Forestry	110,175,793	63,302,933	117,598,252	67,720,835	5,111,243	3,324,964	5,820,349	3,717,261
Fisheries	3,353,775	3,353,775	3,010,252	3,010,252	1,811,124	1,811,124	1,655,273	1,655,273
Trapping	824,412	824,412	1,550,387	1,550,387	509,496	509,496	583,449	583,449
Mining	318,041,840	181,897,886	308,175,159	188,867,969	29,623,498	15,144,672	28,619,359	12,401,404
Electric Power	49,988,137	49,952,866	77,159,367	77,123,485	7,926,813	7,850,699	8,871,866	8,797,391
Construction	151,435,842	73,036,721	144,829,394	68,535,712	14,247,661	6,230,265	14,848,706	6,569,460
Custom and Repair	57,725,300	39,069,600	64,373,142	38,110,035	9,984,500	6,757,700	11,134,284	6,591,692
Manufactures (a)	1,712,496,421	757,620,632	1,745,674,707	791,428,569	131,770,280	48,308,248	134,293,595	48,810,544
GRAND TOTAL (a)	2,429,302,024	1,292,574,329	2,544,693,365	1,379,412,515	263,484,363	145,101,719	278,248,245	149,660,899

(a) See page 11 for note in regard to duplication.

Columbia ranked second with a per capita output of \$327. Alberta was again in third place with \$279, while Quebec's position was bettered with a rise from \$241 to \$261. Saskatchewan's improved position was portrayed by the advance from the low point of \$146 in 1938 to \$238 in the year under review. The per capita returns for Manitoba recorded an increase of more moderate proportions at \$206. Nova Scotia, New Brunswick and Prince Edward Island followed in the order named.

The Dominion total of net commodity production at \$288 per capita was 8.7 per cent above the reading of \$265 for 1938, the estimated increase in the population having been less than one per cent.

The Value of Production during the Inter-war Period.

Recent extensive changes in the method of computation directed attention to the desirability for revision of the production statistics for earlier years. The implementation of the 23rd resolution adopted by the Conference of British Commonwealth Statisticians, meeting in 1935, was the most far-reaching alteration. The cost of fuel and electricity purchased was deducted from gross production in addition to the cost of materials. The remainder was regarded as the net value of production or "value added". Several industries have been eliminated from manufactures and the treatment of agriculture and custom and repair was somewhat altered. Tables 7 and 8 represent the result of a special study intended to establish comparability over the last twenty years. Further research may disclose additional changes, but it is thought that most of the necessary alterations have been effected. The record of the value of production over a period of twenty years constitutes a valuable instrument for the interpretation of economic conditions.

The commodity-producing division as contrasted with the commodity handling and facilitating activities, plays the most important role as an originator of income. Its share in the inter-war period was somewhat less than half the total of income produced and a marked reduction was shown in the last decade. Being greatly affected by external demand and price decline, the income produced in this division in the last ten years was markedly lower than in the first ten.

The main objective of the present section is to set forth the relative importance of the nine branches of commodity production, the trend of advance or decline during the period of nineteen years ended 1937 and the relative sensitivity of the different groups to the impact of depression and recovery. Manufactures even after eliminating the inter-group duplication, was considerably more productive than agriculture over the entire period. The position was otherwise in the first decade when the net revenue of agriculture was estimated at \$1,123 million against \$1,020 million, the value added by manufactures, n.e.s. The greater decline of agricultural production in the later decade more than counter-balanced the ascendancy of the early years. The average production of agriculture during the twenty years was \$896 million comparing with \$1,032 million in manufactures, n.e.s. Forestry, mining and construction followed in the order named.

The long-term trend of the different groups may be considered in two sections. The trend of net value of production expressed in fluctuating prices was downward for five of the groups out of the nine. The primary industries including agriculture, forestry, fisheries and trapping showed a declining trend over the twenty years, while electric power and mining recorded a marked increase in opposition to the general tendency. An advancing movement was also recorded by manufacturing and repair work while construction fell off slightly. The index of the total net value receded at the rate of one point per year.

TABLE 4. - VALUE OF PRODUCTION IN THE PROVINCES OF CANADA DURING 1938 AND 1939, BY INDUSTRIES (Concluded)

	Saskatchewan				Alberta			
	1938		1939		1938		1939	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
	\$	\$	\$	\$	\$	\$	\$	\$
Agriculture	144,559,000	98,164,500	238,579,000	183,045,715	173,520,000	134,788,440	187,133,000	141,139,175
Forestry	2,904,224	2,161,347	3,018,165	2,269,352	4,889,559	3,509,608	4,883,771	3,563,998
Fisheries	468,646	468,646	478,511	478,511	492,943	492,943	430,724	430,724
Trapping	537,516	537,516	589,538	589,538	506,066	506,066	737,285	737,285
Mining	12,375,136	7,029,842	13,140,601	6,391,404	27,898,325	24,931,056	29,558,706	26,049,861
Electric Power	4,737,862	4,019,721	5,852,545	5,077,792	5,546,544	5,253,250	6,537,945	6,265,830
Construction	11,020,224	7,208,193	13,429,064	7,772,854	13,166,662	7,011,373	17,856,669	8,987,693
Custom and Repair	7,100,400	4,805,700	7,918,076	4,687,641	8,256,900	5,588,400	9,207,825	5,451,195
Manufactures (a)	61,027,853	16,143,335	60,650,589	20,283,273	86,675,500	30,755,626	87,474,080	32,618,153
GRAND TOTAL (a)	231,430,092	136,980,819	329,467,501	226,323,308	308,419,193	208,382,832	331,767,393	220,457,495

	British Columbia - Yukon - N. W. T.			
	1938		1939	
	Gross	Net	Gross	Net
	\$	\$	\$	\$
Agriculture	43,231,000	31,720,600	44,943,000	31,693,750
Forestry	101,885,779	60,707,184	106,678,356	62,919,226
Fisheries	26,247,213	15,567,712	25,317,151	14,072,197
Trapping	2,260,471	2,260,471	2,438,027	2,438,027
Mining	87,759,908	52,087,814	87,523,603	50,816,425
Electric Power	13,914,227	13,842,837	18,345,624	18,251,127
Construction	28,177,344	12,458,886	26,985,533	12,375,089
Custom and Repair	15,928,300	10,780,600	17,762,612	10,515,780
Manufactures (a)	225,585,489	90,471,828	248,191,568	103,355,346
GRAND TOTAL (a)	433,368,161	246,404,547	455,388,066	257,450,113

(a) Duplication by Provinces. The totals for manufactures involve duplicated amounts which were deducted in computing the grand total for each province. The duplication arises from including in two places a number of industries which may be regarded as extractive or as manufacturing processes. The following statement gives the amount of the duplication by provinces -

	1938		1939	
	Gross	Net	Gross	Net
	\$	\$	\$	\$
Prince Edward Island	1,578,105	350,384	1,394,623	345,498
Nova Scotia	18,876,036	8,029,575	18,551,594	8,001,507
New Brunswick	24,472,603	9,925,975	26,701,805	10,774,743
Quebec	227,467,568	82,992,929	246,594,100	98,106,225
Ontario	316,048,496	115,866,896	289,764,295	109,210,654
Manitoba	25,132,252	6,176,249	24,095,636	6,152,835
Saskatchewan	13,350,769	3,557,981	14,188,588	4,272,772
Alberta	12,533,306	4,453,930	12,052,612	4,786,419
British Columbia - Yukon - N. W. T.	111,621,570	43,493,385	122,797,408	48,986,844
CANADA	751,080,705	274,847,304	756,140,661	290,637,497

After adjustment for price changes, effected by dividing by the general index of wholesale prices, an advance in the volume of production was recorded for seven of the nine groups. Slight decline was shown in agriculture and trapping while a marked advancing trend was recorded by electric power, mining and custom and repair.

Construction showed the greatest sensitivity to cyclical influences. Mining, trapping and manufactures, n.e.s., also recorded fluctuations of considerable magnitude. Each of the nine groups except construction and electric power showed significant correlation with the total of net production. The output of forest products followed the fluctuations of net commodity production more closely than that of any other group. Fisheries, agriculture and manufactures, n.e.s., also showed a close relationship to the general movement.

RELATION OF COMMODITY PRODUCING ACTIVITIES TO THE CANADIAN ECONOMIC SYSTEM

Information regarding the general totals of the national income, serves only as an introduction to a discussion of the constituent divisions and groups. The trend of the income of the various components is a significant phase of the present study. The general estimate conceals many changes in the relations and movements of the constituents, essential for an understanding of the working of the Canadian economic system.

We are here concerned with the national income as a measure of the net productivity of the Canadian economy. The inter-war period was characterized by the continuance of the process towards greater diversification. In the early history of the Dominion, a wealth of natural resources led to concentration upon the production of staples in the form of foodstuffs and industrial raw materials, a large proportion of which was exported to countries in a more advanced stage of economic development. While the primary industries still occupy a most important place in the Canadian productive system, the more rapid growth of the secondary and service divisions has resulted in a better balance for the economy. The system has been adapted during the last twenty years to meet the demands of the domestic market, while maintaining a credit balance on current account with other countries.

In this statement regarding the productive sources of the national income the main objective will be to set forth: (1) the relative importance of the different activities; (2) the inter-war trend of decline or advance; and (3) the sensitivity of different types of activity to the impact of depression and recovery. For purposes of analysis, the net national product will be broken down according to the major types of activity, such as agriculture, manufactures, finance and service, with their subdivisions.

The relative importance of three economic divisions and fourteen major groups is the first topic of discussion. The industrial and service groups are assembled in three economic divisions. Division 1 coincides roughly with the list of groups included in the Survey of Production published by the Bureau annually since 1921. The division consequently comprises the sectors of the economic system engaged in the production of commodities whether of a primary or secondary nature. The primary industries include agriculture, forestry, fisheries and trapping, mining and electric power, while the secondary section embraces manufacturing, construction and custom and repair.

TABLE 5. - PERCENTAGE OF THE VALUE OF THE NET PRODUCTION ON EACH PROVINCE OF CANADA BY INDUSTRIES
TO THE NET OUTPUT, 1938 AND 1939

	Prince Edward Island		Nova Scotia		New Brunswick		Quebec		Ontario	
	1938	1939	1938	1939	1938	1939	1938	1939	1938	1939
Agriculture	71.4	68.7	19.7	15.0	24.3	23.2	17.2	15.4	18.5	18.2
Forestry	3.9	3.9	10.3	10.0	26.1	24.8	10.8	12.2	4.9	4.9
Fisheries	7.2	6.8	8.2	7.6	4.4	5.2	0.2	0.2	0.3	0.2
Trapping	0.1	0.0	0.3	0.1	0.9	1.0	0.2	0.1	0.1	0.1
Mining	-	-	20.4	22.4	5.0	4.7	9.1	9.8	14.1	13.7
Electric Power	2.2	2.1	4.9	6.4	4.8	5.8	6.9	7.5	3.9	5.6
Construction	5.7	8.8	9.8	9.3	11.7	11.3	6.8	7.2	5.6	5.0
Custom and Repair	2.9	2.7	2.9	2.7	2.9	2.6	3.5	3.1	3.0	2.8
Manufactures, n.e.s.	6.6	7.0	23.5	26.5	19.9	21.4	45.3	44.5	49.6	49.5
GRAND TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Manufactures (p.c. to grand total net production)	9.6	9.8	31.6	34.1	34.1	35.6	56.1	56.2	58.6	57.3

	Manitoba		Saskatchewan		Alberta		British Columbia-Yukon		CANADA	
	1938	1939	1938	1939	1938	1939	1938	1939	1938	1939
Agriculture	42.3	44.5	71.7	80.9	64.7	64.0	12.9	12.3	24.94	25.92
Forestry	2.3	2.5	1.6	1.0	1.7	1.6	24.6	24.4	8.22	8.33
Fisheries	1.2	1.1	0.3	0.2	0.2	0.2	6.3	5.5	1.20	1.05
Trapping	0.4	0.4	0.4	0.3	0.2	0.3	(x)0.9	0.9	0.22	0.25
Mining	10.4	8.3	5.1	2.8	12.0	11.8	21.2	19.7	12.59	12.05
Electric Power	5.4	5.9	2.9	2.2	2.5	2.8	5.6	7.1	4.78	5.81
Construction	4.3	4.4	5.3	3.4	3.4	4.1	5.1	4.8	5.94	5.63
Custom and Repair	4.7	4.4	3.5	2.1	2.7	2.5	4.4	4.2	3.33	2.96
Manufactures, n.e.s.	29.0	28.5	9.2	7.1	12.6	12.7	19.0	21.1	38.78	38.00
GRAND TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.00	100.00
Total Manufactures (p.c. to grand total net production)	33.3	32.6	11.8	9.0	14.8	14.8	36.7	40.1	48.01	46.91

(x) Includes the trapping industry of the Northwest Territories.

TABLE 6. - PER CAPITA NET COMMODITY PRODUCTION

	1 9 3 8			1 9 3 9		
	Net Commodity Production	Estimated Population	Net Commodity Production Per Capita	Net Commodity Production	Estimated Population	Net Commodity Production Per Capita
	\$	000	\$	\$	000	\$
Prince Edward Island	11,832,958	94	125.88	12,749,800	95	134.21
Nova Scotia	99,158,589	548	180.95	105,128,078	554	189.76
New Brunswick	70,047,728	445	157.41	75,985,286	451	168.48
Quebec	764,189,933	3,172	240.92	836,677,855	3,210	260.65
Ontario	1,292,574,329	3,731	346.44	1,379,412,515	3,752	367.65
Manitoba	145,101,719	720	201.53	149,660,899	727	205.86
Saskatchewan	136,980,819	941	145.57	226,323,308	949	238.49
Alberta	208,382,832	783	266.13	220,457,495	789	279.41
British Columbia - Yukon - Northwest Territories	246,404,547	775	317.94	257,450,113	788	326.71
GRAND TOTAL	2,974,673,454	11,209	265.38	3,263,845,349	11,315	288.45

The second division is engaged in transportation, communication and the sale of commodities and related activities. The term "commodity handling" applied to this division is only roughly applicable. Steam railways engage in passenger traffic although freight is the main source of income, and communication is only partly bound up with the movement and sale of commodities. The combined transportation and communication activities, however, are more connected with commodity handling than with service or production in the restricted sense. The other activities, consisting of finance, government and service other than custom and repair, are for convenience described as the "facilitating" division. These include financial organizations such as banking, trust, loan and mortgage, investment and insurance. Under real estate is entered not only the operations of the industry itself but also non-farm residential and commercial net rentals and mortgage interest. Government, including Dominion, provincial and local administration, is an expanding enterprise included under this heading. Finally, professional, educational and other service activities, exclusive of custom and repair, complete the division.

Commodity production contributed to the national income a yearly average of \$1,972 million during the twenty years under review, compared with \$954 million derived from the handling division and \$1,316 million from the facilitating activities. It is surprising to find that more than thirty per cent of the national income was derived from activities other than the production and distribution of commodities.

For convenience a number of minor classes have been combined, thus reducing for purposes of study the thirty original groups to fourteen major divisions. The classification follows with appropriate adaptation, the Bureau's general grouping system. Agriculture includes the income derived by the farmer in woods operations on his own property, but excludes entirely the return from the value added in dairy factories. Forestry comprises the activities of lumber and pulp and paper mills, as well as woods operations on lands other than farmers' wood lots. Manufacturing is exclusive of processes carried on in close connection with the primary industries, the exceptions comprising sawmilling, pulp and paper, fish curing and packing, non-ferrous metal smelting and several mineral industries, such as cement, salt, lime and clay products.

The following activities are included under transportation - steam and electric railways, water and road transportation, civil aviation, storage and express. The telegraph and telephone industries comprise communications.

The finance industries, embrace banking, trust companies, stock and bond dealers, loan and mortgage companies, insurance and real estate. The latter heading comprehends non-farm mortgage interest and net rentals, paid and imputed. The service groups are manifold, embracing as they do professional, educational and other activities.

The outstanding groups as sources of production were agriculture and manufacturing, n.e.s. After eliminating the duplication with the primary industries noted above, manufactures took second place in the inter-war period. Agriculture enjoyed prosperity during the first decade and retained in respect to the amount of income produced the foremost place in the period as a whole, despite the reversal of later years. The contribution of agriculture was no less than 15.9 per cent of the total national income produced as compared with a percentage of 15.1 for manufactures, n.e.s.

Chart 2

RELATIVE POSITION OF THE MAIN BRANCHES ACCORDING TO ANNUAL AVERAGE GROSS AND NET VALUE OF PRODUCTION 1919-1938

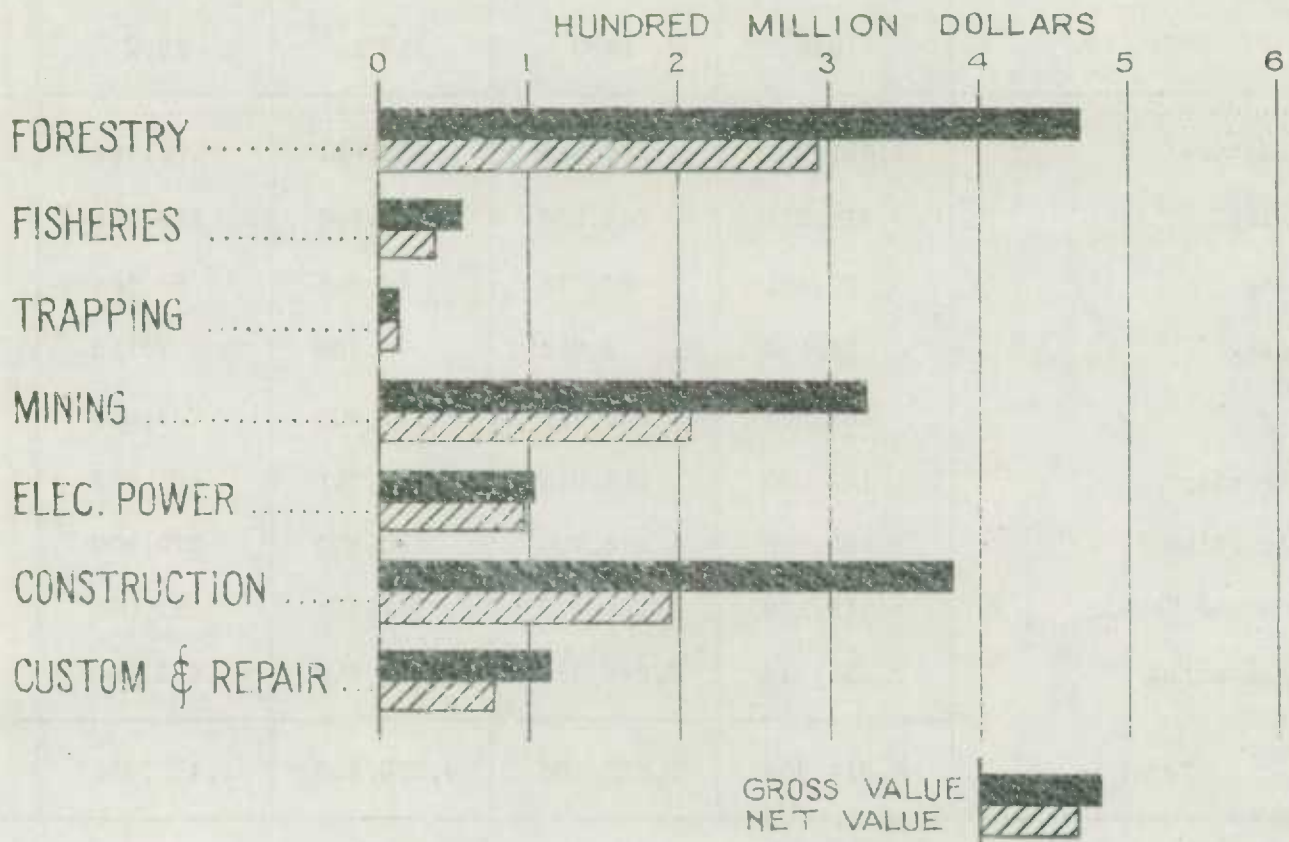
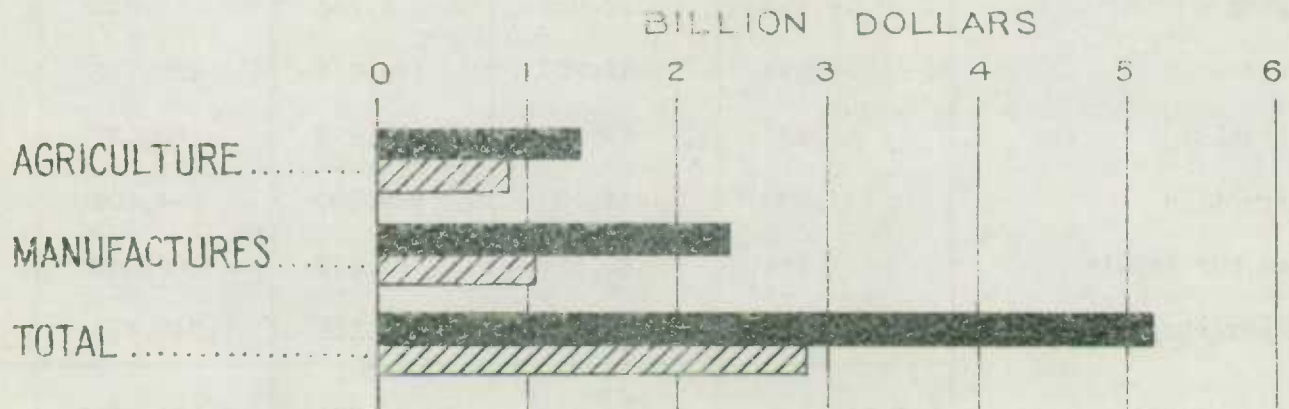


TABLE 7.- GROSS VALUE OF PRODUCTION
\$000

	1919	1920	1921	1922
Agriculture	2,109,291	2,011,201	1,586,126	1,389,394
Forestry	524,691	656,078	432,042	444,819
Fishing	70,854	63,588	43,456	53,425
Trapping	14,468	13,059	9,763	16,812
Mining	193,555	242,257	179,912	190,713
Electricity	47,933	53,436	58,272	62,173
Construction	337,200	444,100	366,800	384,400
Custom and Repair	71,334	85,317	82,252	82,542
Manufacturing	2,669,845	3,054,914	2,076,181	1,940,454
Total	6,039,171	6,623,950	4,634,804	4,564,732
	1929	1930	1931	1932
Agriculture	1,631,081	1,235,319	839,881	766,794
Forestry	611,337	544,296	379,184	266,691
Fishing	70,581	63,743	39,655	33,666
Trapping	16,356	9,853	8,708	7,118
Mining	360,534	320,423	291,000	237,883
Electricity	122,883	126,038	122,311	121,213
Construction	590,900	538,700	390,800	270,900
Custom and Repair	145,276	136,475	131,354	117,055
Manufacturing	3,165,546	2,648,836	2,067,412	1,612,161
Total	6,714,494	5,623,683	4,270,305	3,433,481

IN NINE MAIN BRANCHES, 1919 - 1938.
\$000

	1923	1924	1925	1926	1927	1928
	1,397,085	1,494,830	1,709,815	1,714,477	1,825,950	1,806,020
	522,414	523,665	537,628	555,771	558,626	586,113
	54,015	56,014	61,886	73,053	63,877	70,668
	16,163	14,783	14,777	14,289	17,638	16,595
	211,100	213,178	242,458	280,518	286,684	316,243
	67,497	74,617	79,342	88,934	104,033	112,327
	396,500	385,200	404,700	452,300	510,300	578,200
	87,347	91,808	96,253	106,551	117,267	131,925
	2,162,600	2,084,369	2,235,687	2,478,453	2,628,183	2,899,708
	4,914,721	4,938,964	5,382,546	5,764,346	6,112,558	6,517,799
	1933	1934	1935	1936	1937	1938
	804,610	931,204	938,983	1,065,966	1,039,492	1,062,645
	257,287	313,658	344,747	400,292	494,344	425,019
	35,637	45,662	45,387	51,082	51,156	53,083
	7,259	8,637	8,877	9,214	10,477	6,573
	269,107	352,422	421,366	510,434	662,631	653,782
	117,532	124,464	127,178	135,865	143,547	144,332
	207,700	176,800	215,500	258,040	351,874	353,223
	113,046	115,885	120,716	128,224	145,512	146,400
	1,574,891	1,898,970	2,094,220	2,343,786	2,794,578	2,595,236
	3,387,069	3,967,702	4,316,974	4,902,903	5,693,611	5,440,293

Chart 3

LONG-TERM TRENDS OF THE GROSS AND NET VALUE

OF

PRODUCTION BY NINE MAIN BRANCHES

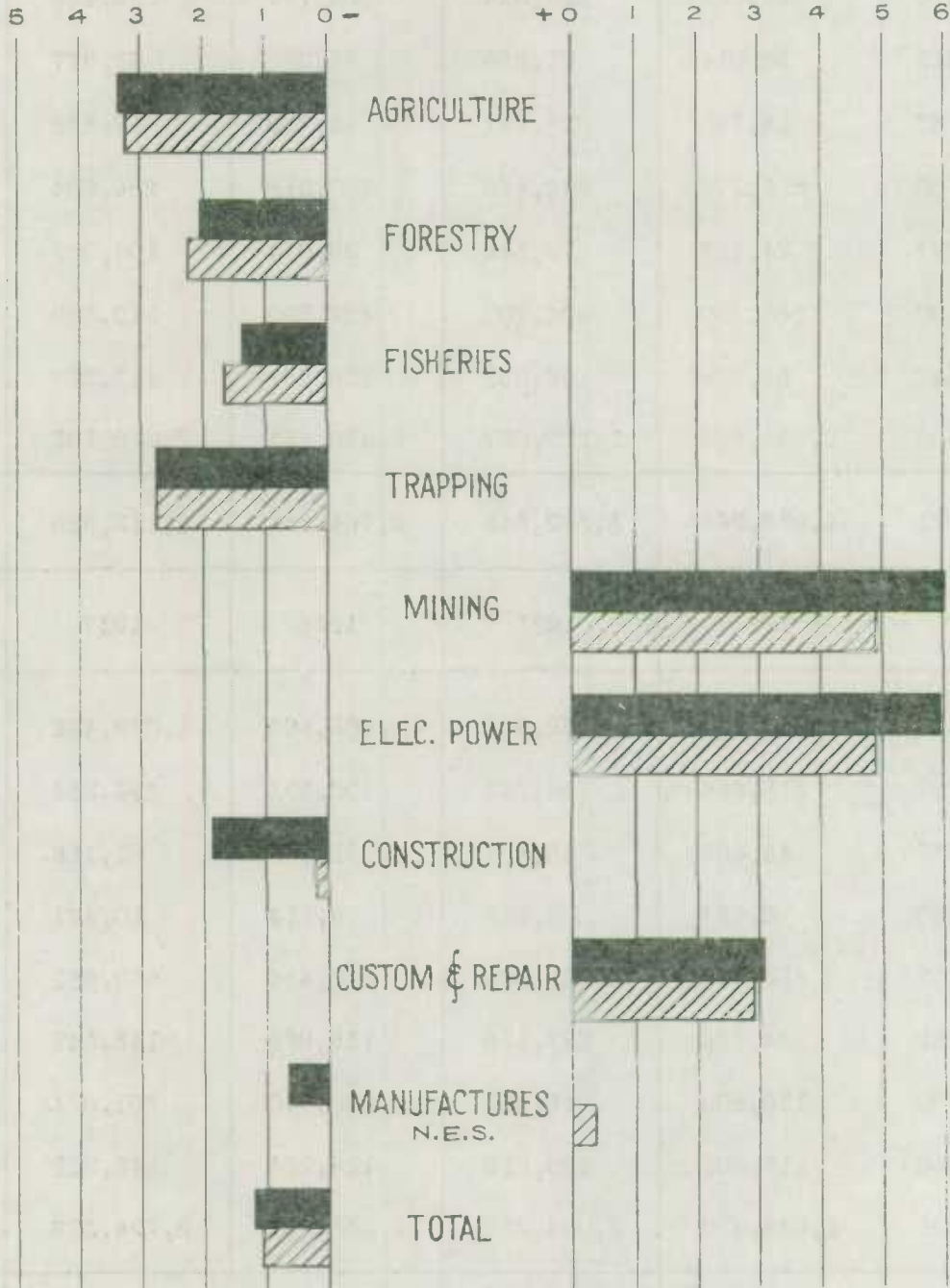
WITHOUT PRICE ADJUSTMENT — 1926=100

DECREMENTS

DECLINING TRENDS

INCREMENTS

INCREASING TRENDS



GROSS VALUE
NET VALUE



Service, including custom and repair, and trade groups competed for third and fourth places, with percentages of 12.9 and 12.2, respectively. Government, transportation and finance followed in the order named. The seven above-mentioned groups are the major contributors to Canadian income, their combined share amounting to not less than about 85 per cent. The remaining groups of construction, forestry, mining, electric power, fisheries and trapping, telegraph and telephone also play an important role, but are somewhat overshadowed by the magnitude of the larger activities.

Agriculture and manufactures n.e.s. stand out in this comparison as Canada's leading industries. The remainder may be divided into two sections according as their average contribution to the national income was greater or less than \$100,000,000. The first section consists of ten classes ranging in order of size from government to professional activities. A marked falling off in magnitude is recorded in comparing the industries in this section. The annual average income produced by government was \$465 million, while professional activities averaged \$153 million. Between these limits retail trade took second place with a contribution of \$344 million, while steam railways followed with \$274 million. Other service, real estate, construction and wholesale trade followed in the order named. The returns from forestry and mining were both slightly in excess of that for professional services.

The second section, headed by educational activities, consisted of eighteen classes participating in the production of income on a descending scale of importance.

The economic structure is constantly changing, sometimes slowly as consumer wants gradually shift or as new inventions are gradually developed and put into use. The automobile and the radio are excellent examples, calling for new production arrangements. Economic changes are sometimes violent, as when a wave of mergers rapidly alters the industrial scene or a new impetus is given to labour organization by a shift in public policy. An understanding of the Canadian economy is a first step towards the reconciliation of present operating policies with the essential nature of the system.

While the aggregate of the money income of Canada recorded decline during the last twenty years, the reduction was by no means general throughout the entire field. The industries engaged in commodity production and handling show a decline in the second decade from the first of 18.1 per cent and 15.6 per cent, respectively. The facilitating industries as defined above, on the other hand, recorded an increase of approximately 11 per cent.

Referring to the major groups, agriculture was relatively prosperous during the twenties, but met with a severe setback in the latter half of the period. The reversal was due to several adverse conditions, notably the world-wide depression and consequent lack of demand in external markets for the agricultural surplus. This situation was aggravated by the policy of self-sufficiency adopted in most European countries. In addition to the extremely low level of farm prices, the crop volume was reduced by a succession of droughty seasons. The yearly average income produced declined from \$856 million in the first decade to \$495 million in the second.

Forestry and the minor extractive industries also showed a declining trend during the twenty years. Construction was expanded in the first decade by the backlog of residential building accumulated during the war period and by the

TABLE 8.- NET REVENUES
\$000

	1919	1920	1921	1922
Agriculture	1,457,429	1,238,988	770,084	902,522
Forestry	357,688	419,376	272,798	277,948
Fisheries	51,027	43,629	31,325	37,415
Trapping	14,468	13,059	9,763	16,812
Mining	137,093	180,340	132,610	145,840
Electricity	45,305	50,241	55,242	59,947
Construction	105,944	156,538	193,328	184,647
Custom and Repair	48,485	58,465	57,874	58,505
Manufacturing	1,095,601	1,247,369	891,975	853,240
Total	3,313,040	3,408,005	2,414,999	2,536,876
	1929	1930	1931	1932
Agriculture	1,020,223	826,415	550,307	494,324
Forestry	371,690	331,568	233,162	242,933
Fisheries	48,612	42,212	27,421	23,128
Trapping	16,356	9,853	8,708	7,118
Mining	253,155	215,687	190,163	158,076
Electricity	119,869	123,443	120,418	119,379
Construction	314,743	373,434	306,309	226,918
Custom and Repair	85,104	90,914	89,732	80,295
Manufacturing	1,428,733	1,238,484	1,035,383	793,302
Total	3,658,485	3,252,010	2,561,603	2,145,473

IN NINE MAIN BRANCHES
\$000

	1923	1924	1925	1926	1927	1928
	976,660	1,021,634	1,154,868	1,169,889	1,261,031	1,277,939
	328,660	329,633	333,186	339,587	340,787	359,867
	38,313	39,514	42,793	50,526	44,673	49,594
	16,163	14,783	14,777	14,289	17,638	16,595
	152,364	150,313	168,489	187,857	200,218	225,033
	64,858	72,229	77,075	86,796	101,730	110,046
	236,097	126,364	204,915	217,095	259,156	185,099
	61,584	63,446	65,722	73,734	80,739	90,355
	918,231	868,269	926,414	1,046,194	1,154,643	1,199,269
	2,792,930	2,686,385	2,988,239	3,185,967	3,460,615	3,513,797
	1933	1934	1935	1936	1937	1938
	513,306	575,541	606,870	679,341	678,953	742,020
	153,241	208,207	198,545	231,938	284,493	244,565
	24,351	29,771	30,269	34,235	34,440	35,593
	7,259	8,637	8,877	9,214	10,477	6,573
	182,323	218,942	238,581	231,972	372,796	374,416
	115,664	122,462	125,123	133,561	140,964	142,321
	124,474	108,077	120,815	135,851	176,030	176,661
	78,067	79,496	83,471	87,482	98,485	108,956
	749,967	868,068	937,275	1,041,378	1,195,699	1,153,439
	1,948,652	2,219,201	2,349,826	2,644,972	2,992,337	2,984,544

considerable acceleration in industrial construction. The hard times during the greater part of the last decade led to marked contraction in both lines. The mining and electric power industries, favoured by a background of important natural resources, maintained an upward trend over the period. The manufactures group was remarkably well maintained despite the temporary impact of the depression.

The two major groups constituting the commodity-handling activities experienced a reversal in the last decade. The income produced by steam railways alone declined more than 32 per cent between the decades, while gains in the group were limited to road transportation, civil aviation, storage and telephones. Declines were shown in retail and wholesale trade, the reversal in the latter being relatively more important.

The record in the facilitating activities was more favourable, advances being shown in finance, government and service. In the finance section, gains were recorded in banking, trust companies, insurance and stock and bond dealing, overshadowing declines in loan and mortgage and real estate. The expansion of government activities in recent years was reflected in the rise of more than 22 per cent in income produced.

A mathematical process known as least squares was employed to give a more exact measurement of the inter-war trend than could be obtained by the percentage analysis of the two decades. This process consists in fitting a straight line to the annual data in such a way that the depression areas are approximately equal to the spaces apportioned to prosperity. The main purpose of the calculation is to determine whether the trend is upward or downward over a given period and to establish the amount of the annual increment or decrement. The calculations indicate that fourteen of the thirty industries recorded an upward trend from 1919 to 1937, while an adverse situation obtained in the other sixteen. Civil aviation, electric power, trust companies and mining showed the greatest relative advance, while forestry, agriculture and construction experienced the worst reversals.

Knowledge of the general features of economic depression leads to the expectation that various industries will react unequally to the drastic contraction which characterized the last decade of the period under review. An analysis of the economic structure is not only made necessary by the depression in economic activity which followed 1929 but is greatly aided by that development. The rapid drop in national income from a value of over \$5.1 billion in 1929 to under \$2.8 billion four years later and the considerable recovery since that time gives the economic analyst what is almost equivalent to a laboratory experiment on the basis of which many structural characteristics may be observed.

Some industries, sheltered from the pressure of changing conditions, continued to give employment and pay out only moderately changed volumes of income to labour and capital. Others, more exposed to adverse changes in competitive markets and supplying services which were easily dispensed with in hard times, recorded shrinkages in employment and income relatively greatly in excess of the total for the economic system as a whole.

A rough measure of the amplitude of fluctuations is afforded by computing the percentage decline from 1929 to 1933 and the rebound from that low point to 1937. The aggregate declined 44 per cent during the four years, probably one of the most far-reaching depressions on record. Declines were general in the three main divisions but considerable variation was shown in the extent of the change.

TABLE 9. TIME ANALYSIS OF GROSS VALUE OF PRODUCTION IN NINE
MAIN BRANCHES OF INDUSTRY, 1919-1938.

\$'000

Industries	Average 20 years Per cent	Average 10 years 1919-1928	Average 10 years 1929-1938	Average 20 years 1919-1938	Increment(+) or Decrement(-) Long term trend		Standard Deviation 1919-1937	Coefficient of Correlation with Total
					At fluctuating prices 1919-37	At fixed prices 1919-37		
					Agriculture	26.3		
Forestry	9.1	574,184	403,685	468,935	- 2.06	+ 0.40	17.02	.95
Fisheries	1.1	61,083	48,965	55,024	- 1.37	+ 1.02	14.68	.89
Trapping	0.2	14,836	9,307	12,072	- 2.77	+ 0.45	19.44	.67
Mining	6.2	235,661	407,958	321,810	+ 6.08	+ 10.61	25.46	.72
Electricity	2.0	74,856	128,536	101,696	+ 5.99	+ 10.05	9.25	.60
Construction	7.4	425,970	335,443	380,707	- 1.88	+ 0.50	27.92	.76
Custom and Repair	2.2	95,259	129,994	112,627	+ 3.13	+ 6.78	11.65	.75
Manufactures, n.e.s.	45.5	2,423,089	2,279,563	2,351,326	- 0.65	+ 2.91	17.69	.98
TOTAL	100.0	5,549,356	4,775,048	5,162,205	- 1.20	+ 1.86	15.98	-

TABLE 10. TIME ANALYSIS OF NET REVENUE IN NINE MAIN BRANCHES
OF INDUSTRY, 1919-1937.

\$'000.

Industries	Average 20 years Per cent	Average 10 years 1919-1928	Average 10 years 1929-1938	Average 20 years 1919-1938	Increment(+) or Decrement(-) Long term trend		Standard Deviation 1919-1937	Coefficient of Correlation with Total
					At fluctuating prices 1919-37	At fixed prices 1919-37		
					Agriculture	31.4		
Forestry	10.3	335,953	250,034	292,994	- 2.24	+ 0.46	15.12	.92
Fisheries	1.3	42,880	33,003	37,942	- 1.64	+ 0.82	14.51	.89
Trapping	0.4	14,834	9,307	12,071	- 2.77	+ 0.45	19.44	.64
Mining	7.3	168,015	249,611	208,813	+ 4.94	+ 8.88	21.84	.71
Electricity	3.5	72,346	126,320	99,334	+ 4.91	+ 10.63	11.67	.53
Construction	6.9	186,918	206,331	196,625	- 0.20	+ 2.64	33.51	.45
Custom and Repair	2.7	65,890	88,200	77,046	+ 2.97	+ 6.78	9.26	.73
Manufactures, n.e.s.	36.2	1,020,120	1,044,172	1,032,145	+ 0.39	+ 3.42	19.42	.82
TOTAL	100.0	3,030,080	2,675,710	2,852,899	- 1.03	+ 2.01	14.13	--

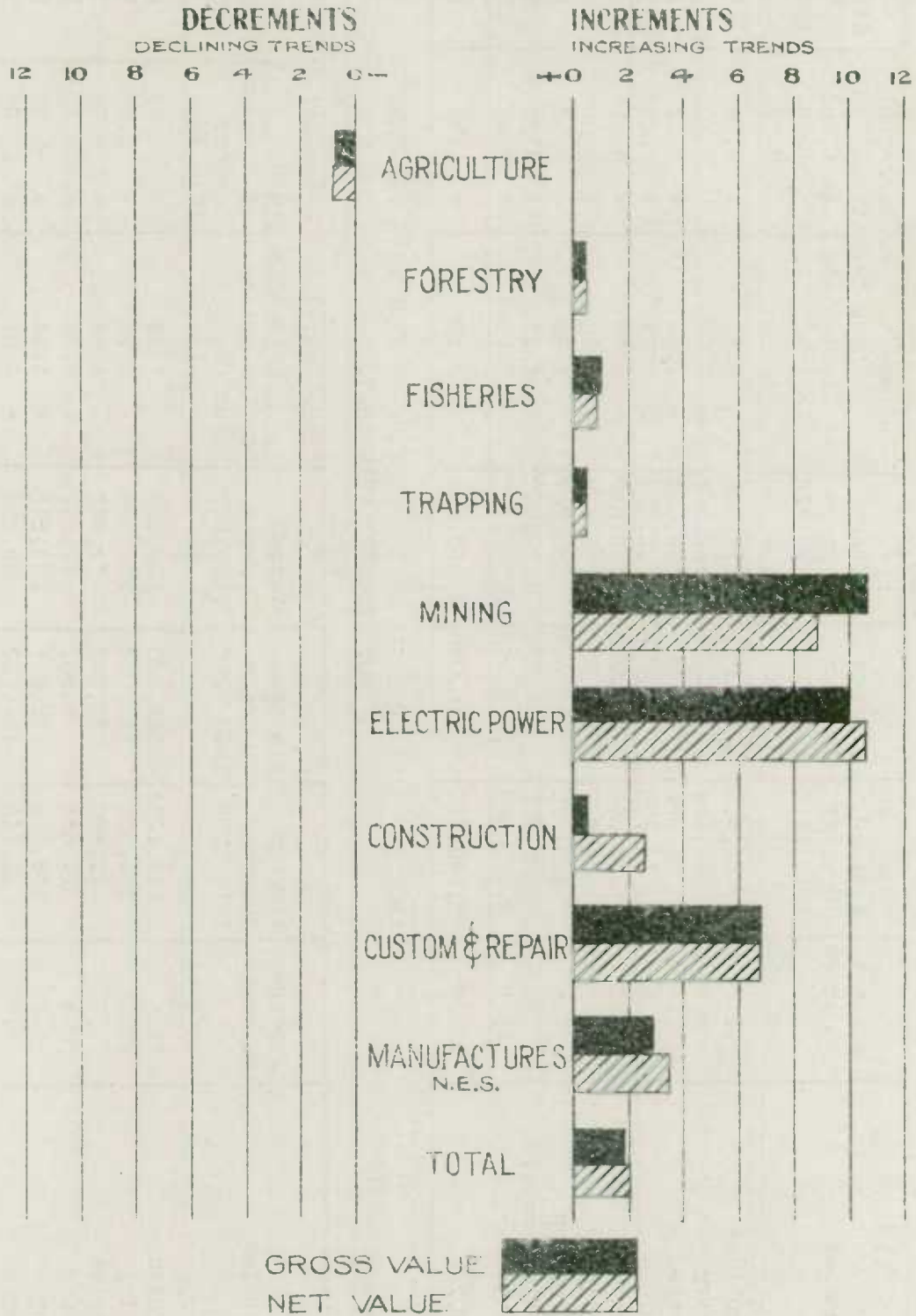
Chart 4

LONG-TERM TRENDS OF THE GROSS AND NET VALUE

OF

PRODUCTION BY NINE MAIN BRANCHES

WITH PRICE ADJUSTMENT -- 1926=100



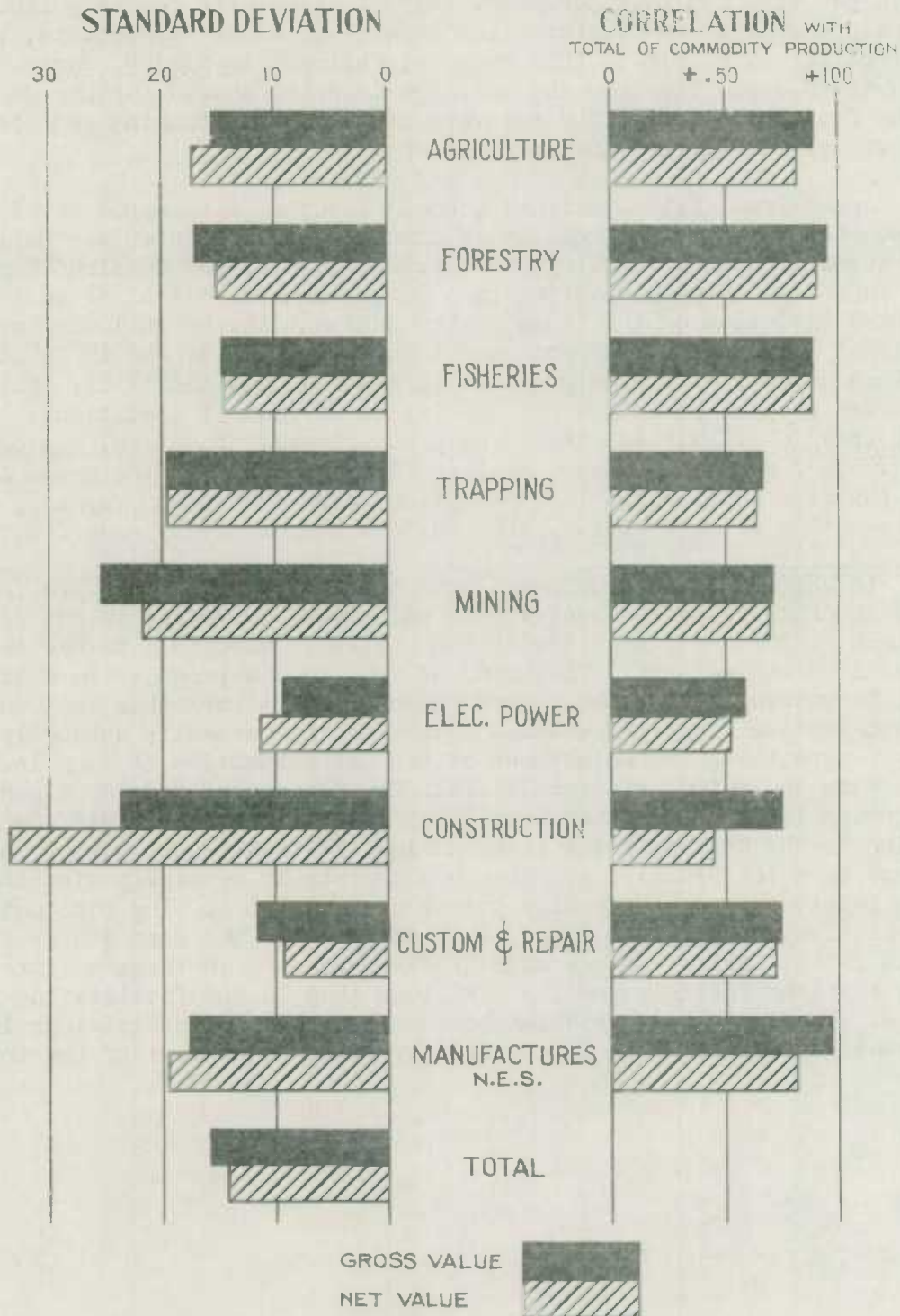
The total for commodity production dropped nearly 56 per cent, while handling activities declined 47.6 per cent. The facilitating industries were more successful in resisting the ravages of the depression, the decline being limited to 20.3 per cent. The variation in the recovery from 1933 to 1937 was also noteworthy, the national total rising 52.3 per cent. The commodity production, handling and facilitating activities made general advances of 83 per cent, 40.6 per cent and 29.2 per cent, respectively. The forestry industry, including pulp and paper and lumber mills as well as woods' operations, recorded the greatest relative gain in this respect, followed by mining, agriculture and manufactures, n.e.s. The loan and mortgage industry showed further decline during the four years, while the recovery of education, banking and electric railways was of relatively minor proportions.

Apart from civil aviation, a small industry with rapid development, mining recorded the greatest relative fluctuation in the inter-war period. This industry was followed by forestry, manufactures n.e.s. and construction. The trapping industry, largely catering to a luxury demand, was sixth on the list. The standard deviation of the index of the national income including negative international balances on dividends and interest was 13.82 and it is interesting that sixteen industries showed greater fluctuation than the total, while fourteen recorded greater resistance to the impact of general conditions. Four groups of service activities, including professional, education, custom and repair and other service recorded smaller fluctuations than the grand total. Eight of the nine industries, (the exception being custom and repair), engaged in the production of commodities, were subject to relatively wide fluctuation.

It should not be overlooked that the above analysis refers to income expressed in changing price levels. The relatively important trends and fluctuations of the net production of industries reduced to a volume basis would present a different pattern. The trend of real income produced by a large number of industries would make a more encouraging picture than that outlined in the present section. The price index system of the Bureau is unusually comprehensive, permitting the adjustment of the net production of many industries concerned with the output of commodities. The correction for the finance and service groups is another matter, involving almost insuperable difficulties. The decline in the General Price Level during the twenty-year period leads to an increase in total real income which would probably be widely distributed among the thirty groups. Commodity prices are subject to wide fluctuations and marked variation in long-term trend, in contrast with the more stable situation in service rates. Price changes undoubtedly accounted in large measure for the wider fluctuations in the commodity divisions than in the facilitating activities. The indicated variation between the three main divisions in trend and fluctuation would be greatly modified by price adjustment of the totals.

Chart 5

STANDARD DEVIATION AND COEFFICIENTS OF CORRELATION OF GROSS AND NET VALUE OF PRODUCTION 1919-1937



APPENDIX A

EXPLANATION OF GENERAL METHOD

Definition of "Production".

The term "Production" is used in this connection in its popular acceptance, i.e., as including such processes as the growing of crops, extraction of minerals, capture of fish, conversion of water power into electrical current, manufacturing, etc., -- in economic phrase, the creation of "form utilities". It does not include various activities which are no less "productive" in the broad and strictly economic sense, such as (a) transportation, refrigeration, merchandising, etc., which add to commodities already worked up into form the further utilities "place", "time" and "possession", and (b) personal and professional services, such as those of the teacher and doctor, which are not concerned with commodities at all, but are not on that account any less useful to a civilized society, -- representing, in economic language, the creation of "service utilities".

"Gross" and "Net" Production.

The values of products are shown under two headings, namely, "gross" and "net". "Gross" production represents the total value of all the individual commodities produced under a particular heading. "Net" production represents an attempt to eliminate the value of materials, fuel, purchased electricity and process supplies consumed in the production process. Following Resolution 23 of the Conference of Commonwealth Statisticians of 1935, deductions were made in all branches of industry with the exception of trapping, where it is felt they are unimportant. These eliminations include such items as seed and feed in agriculture, lumbering supplies, fishermen's supplies, salt and containers, process supplies for mines, and similar deductions for other industries. Depreciation, depletion and other miscellaneous expense such as taxes, advertising, etc., are considered more germane to a study of national income and are consequently not taken into account in an estimate of net production.

The cost of fuel and purchased electricity is deducted in accordance with resolution 23 of the Conference of British Commonwealth Statisticians, 1935. This resolution has been complied with for the years 1935 to 1939, and, as far as possible, revisions have been effected for previous years. It is felt that this further refinement will establish a uniform system, conforming with the practice of most other Commonwealth countries and the United States.

For purposes of ordinary economic discussion, the net figure should be used in preference to the gross, in view of the large amount of duplication which the latter includes.

Interpretation of Items.

The primary industries of agriculture, fishing, forestry, mining, etc., are separated in this statement from the secondary or manufacturing process. The close association between the two at points and the overlappings that are apt to occur have already been pointed out. As further explaining the procedure that has been followed in drawing up Table 3, the following notes are appended:

1. Agriculture.

The annual estimates prepared by the Agricultural Branch of the Bureau have been accepted as a basis of gross and net. Provincial distribution of the net has been arranged on the experience of decennial and quinquennial returns.

2. Forestry.

Under the head of "Forestry", an attempt is made to show the extent of operations in the woods, or the products of round or unmanufactured timber as distinguished from the product of milling operations, the latter being limited to the making of first products such as pulp and paper, lumber, lath, shingles and cooperage stock.

3. Fur Production.

It will be noted that the general item of fur production is limited to wild life output. To obtain a total of the pelts produced in Canada, it will be necessary to add the wild life output to that of the production of pelts on fur farms.

4. Mineral Production.

The Bureau presents the detailed statistics of industries duplicated in mining and manufacturing (the chief of which are smelters, brick, cement, lime, etc.) in its reports on mineral production, since their product is the first to which a commercial value is ordinarily assigned. The industrial value of the product is used.

5. Total Manufactures.

The figure given for this heading is a comprehensive one, including the several items listed with the extractive industries above, though also frequently regarded as "manufactures", namely, dairy factories, fish canning and curing, sawmills, pulp and paper mills, and certain mineral industries. The duplication of these items is eliminated from item "manufactures n.e.s.", and therefore from the grand total. It should be noted that "central electric stations" and "dyeing, cleaning, and laundry work" have been dropped from the Census of Manufactures, the latter having been transferred to service.

6. Manufactures, n.e.s.

The figures given for manufactures, n.e.s., are exclusive of all duplicated items as displayed in Table 3 that are frequently included under the heading of manufactures; hence it is obvious that the grand total is obtained by adding the values for manufactures, n.e.s., and for the other eight divisions.

Change in Method of Compilation beginning 1935.

Attention is drawn to important changes in the method of compilation as used in the present bulletin. The most important change in the method of compilation during recent years, was the application to all industries of the resolution adopted by the Conference of British Commonwealth Statisticians, of 1935, which provided for the additional deduction of the cost of fuel, purchased electricity and process supplies from the amount of gross production. Comparability in the totals of net production was consequently broken with the results for the years prior to 1935 but for that period an attempt has been made to revise the estimates on the new basis.

Tabular Statement of the Sources and Methods used in the preparation of the totals for Gross and Net production, 1937 - 1939.

Division of Industry	Source of Original Data	Comment on Method
Agriculture	Monthly Bulletin of Agricultural Statistics, March, 1941.	Gross is the total given in Monthly Bulletin of Agricultural Statistics. The value of seed and feed used is the deduction.
Forestry	Annual bulletins on operations in the woods, sawmilling and pulp and paper industries.	Gross is sum of products of woods operations, sawmilling and the pulp and paper industries. Cost of raw materials, supplies, fuel and electricity make up the deduction.
Fisheries	Annual report of Fisheries Statistics.	Gross equals fish caught and landed, factory output and value added domestically. Net is the historical figures given in report, less fuel, electricity, supplies, salt, containers, etc.
Trapping	Reports on Fur Farms, and Production of Raw Furs.	From the fur production of the season 1939-40 was deducted the value of pelts sold by fox farms and miscellaneous fur farms, during the calendar year.
Mining	Annual report on the Mineral Production of Canada.	Industrial total, i.e., net value of sales was taken as net production. Value of ores used by smelters and cost of fuel, purchased electricity, process supplies, freight and treatment charges are added to make up the gross.
Electric Power	Annual report on Central Electric Stations in Canada	Total revenue, interprovincial sales excluded, is regarded as the gross, and cost of fuel used in generating plants is deducted to give the net.
Construction	Report on the Construction Industry.	Total value of work performed regarded as the gross. Cost of materials deducted for net.
Custom and Repair	Special tabulation Repair and Service groups. Basis 1930 Census of Merchandising and Service.	Net obtained by deducting cost of materials and supplies from gross receipts. Includes "dyeing, cleaning, etc." and automobile garages.
Manufacturing	General Report on the Manufacturing Industries of Canada.	Since 1936 Census of Manufacturing does not include "Central Electric Stations" and "Dyeing, cleaning and laundry work". Revised gross and net given in bulletin "Advance Report on the Manufacturing Industries in Canada".



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