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MACHINE SHOPS

1961

The list of firms normally included in this report has been omitted from this issue, along with certain tables. See introductory text for details.

ANNUAL CENSUS OF MANUFACTURES

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SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- ... figures not appropriate or not applicable.
- nil or zero.

EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1961 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. Implementation of the new definition of the establishment in the 1961 Census has resulted in certain changes and necessitated some adjustments to the statistics for previous years in order to maintain comparability of the data. (See following note on "Establishment".)

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1961, are as follows:

Period Covered

Firms are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

Establishment

The reporting unit in the Census of Manufactures is the **establishment**. Beginning with the 1961 Census, the establishment is defined as follows:

The smallest unit which is a separate operating entity capable of reporting all the following:

- Materials and supplies used,
- Goods purchased for resale as such,
- Fuel and power consumed,
- Number of employees and their pay,
- Inventories,
- Shipments or sales.

The establishment is to be distinguished from smaller subdivisions or departments which do not have records which permit them to report all items required of an establishment. Prior to 1961, some establishments were required to submit two or more separate reports when they were engaged in operations which were classifiable to different industries. Beginning with 1961, separate reports for such operations will be required only in cases where accounting records can provide all the elements of principal statistics enumerated above. Special reporting arrangements were made with respondents when the acceptance of combined reports would have seriously affected the statistics for particular industries or areas. Where continuity of industry statistics was affected by this change in reporting procedures, adjustments to the data were made back to 1957 in order to maintain comparability of the series for recent years.

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing operations. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were principally engaged in manufacturing operations. Beginning with the 1961 Census, establishments (accounting entities) which are not primarily engaged in manufacturing are no longer included as manufacturing establishments in the basic industry statistics. Again adjustments to the industry statistics were made to reflect the removal of such reporting units for the period 1957-1960. These reporting units are now listed as establishments in other Bureau industry surveys, such as Wholesale Trade, Construction, etc. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

Many firms have more than one manufacturing establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements described earlier.

Prior to 1961, the main emphasis in the Census of Manufactures was on manufacturing activity whereas, beginning with 1961, each establishment reports on the total operations carried out within its accounting boundaries (except income from investments such as rent, interest and dividends). However, data on different activities (manufacturing, selling, construction by own labour force etc.) are requested separately. The 1961 statistics in this report are confined to manufacturing activity in order to maintain comparability with previous years. In the 1962 reports it is planned to show both 1961 and 1962 data on the "total activity" basis in addition to the data on manufacturing operations.

Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level, and clerical employees. Working owners and partners are also included in this category but will be shown separately in subsequent years.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, handling, warehousing and delivery staff. Employees on new construction work, in retail or wholesale operations, on outside piece work, etc, are not included.

Production workers are reported by months, an average for the year being obtained by summing the monthly figures and dividing by twelve. This procedure is followed even though the plant did not operate in all months. Figures on employment refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included with salaries, but will be shown separately in subsequent years. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the establishment including freight, duty, etc.

Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the establishment, of materials, supplies and components actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants or reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

Factory Shipments

Factory shipments generally refer to shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishment for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm which are treated as separate establishments are included. Goods bought or received as transfers and resold without further processing are not included. Values are requested

on f.o.b. establishment basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, air craft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on finished units delivered in the year under review.

Inventories

Values represent the book value of manufacturing inventory. Figures consist of inventory at the plant and at warehouses or selling outlets which are treated as extensions of the plants for the purpose of reporting shipments.

Value added by Manufacturing

Value added is compiled by deducting the cost of materials, fuel and electricity consumed from the value of production (value of shipments adjusted for changes in the value of inventories of finished goods and goods in process). Value added is sometimes referred to as net production.¹

Standard Industrial Classification

The revised Standard Industrial Classification which was introduced with the 1960 Census of Manufactures provides for a breakdown of the universe into 140 industries arranged in 20 major groups compared with 135 industries in 17 major groups in the old classification which was used in the compilations for the years 1949 to 1959 inclusive. Full details are contained in the Standard Industrial Classification Manual, Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Establishments engaged solely in repair work are not included in manufacturing industries (except in the case of furniture, shipbuilding, boat building, aircraft and railroad rolling stock industries) but establishments principally engaged in assembling parts into complete units are included.

¹ To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of advertising, insurance and other business costs which are not collected in the annual Census of Manufactures. Value added figures for the primary industries, manufacturing and construction are published in D.B.S. publication 61-202, Survey of Production.

Short Forms

Since 1949, in order to ease the reporting burden for smaller firms, a one-page short form has been used asking only for certain principal items of shipments. For purposes of publication, missing data were estimated on the basis of appropriate ratios. For the 1959 and 1960 censuses the general limit for short forms was raised from \$50,000 to \$100,000 value of shipments and a new intermediate form was used. This form is a shortened version of the long form in that some of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the short and inter-

mediate forms there are lower cut-offs for a number of industries in which the smaller firms account for a larger share of total shipments.

In the 1961 Census, in addition to the question on shipments of goods of own manufacture, questions on employment and payroll and on total revenue were added on all short forms. The other elements of principal statistics, viz. value of materials, fuel and electricity, and inventories, are generally estimated by using ratios based on the change in the value of shipments from year to year. This is to permit the complete compilation of basic industry statistics by industry and by geographic location. The proportion of the estimated data is generally less than 5 per cent of the total in each category of principal statistics.

MACHINE SHOPS

1961

Data presented in this report under the heading of Machine Shops reflect the implementation of the revised Standard Industrial Classification (S.I.C.) and New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilation of 1961 industry statistics—see items “Standard Industrial Classification” and “Establishment” in the Explanatory Notes section of this report. For statistical purposes the industry titled Machine Shops in the revised Standard Industrial Classification covers establishments primarily engaged in producing machine parts and equipment, other than complete machines, for the trade. This industry includes machine shops providing custom and repair services.

The introduction of the new definition of establishment (reporting unit) in the 1961 Census of Manufactures has resulted in certain changes and necessitated some adjustments to the statistics. For the most part the changes involved combinations of reporting units and transfers to Wholesale Trade.

As a result of increased work loads and staff shortages it has been necessary to suspend publication of certain tables normally contained in this report. It is planned to resume publication of these tables in the 1962 reports. In general the tables affected are the following: Directory of firms—Imports—Exports—Capital and Repair Expenditures.

TABLE 1. Principal Statistics: Machine Shops, by Provinces, 1957-61

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year and province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Gross value of work done
	number				dollars		
1957							
Newfoundland	3	74	228,735	12,088	125,675		503,466
Prince Edward Island.....	2						
Nova Scotia	19	184	552,213	29,801	380,639	1	1,177,892
New Brunswick	13	248	718,339	34,122	754,235		1,880,427
Quebec	153	2,089	7,148,618	322,912	4,893,795		14,160,502
Ontario	271	2,531	8,193,283	376,731	5,079,276		18,266,832
Manitoba	40	315	1,047,805	42,676	722,682		2,324,795
Saskatchewan	16	60	207,816	12,960	165,953		428,715
Alberta	66	942	3,630,998	138,602	2,851,549		8,509,384
British Columbia	112	1,090	4,308,377	174,798	3,503,544		9,722,696
Canada	695	7,533	26,036,184	1,144,690	18,477,348		56,974,709
1958							
Newfoundland	3	76	241,275	13,715	99,394	287,126	410,624
Prince Edward Island.....	2						
Nova Scotia	21	194	611,414	33,949	396,598	814,061	1,244,608
New Brunswick	15	294	936,328	38,762	678,808	1,737,620	2,481,013
Quebec	168	1,855	6,692,556	296,774	5,050,174	9,009,100	14,292,537
Ontario	290	2,500	9,149,647	381,075	5,532,634	12,876,433	18,851,364
Manitoba	44	348	1,330,703	46,833	1,244,806	1,791,200	3,082,366
Saskatchewan	20	98	298,722	15,284	153,736	427,053	579,811
Alberta	62	821	3,441,530	133,466	3,214,765	4,808,802	8,336,016
British Columbia	118	927	3,807,102	155,500	2,648,770	5,296,183	8,098,566
Canada	743	7,113	26,509,277	1,115,358	19,019,685	37,047,578	57,376,905
1959							
Newfoundland	2	60	194,074	10,100	94,968	293,130	397,048
Prince Edward Island.....	2						
Nova Scotia	23	187	635,432	37,763	497,770	838,170	1,359,615
New Brunswick	14	246	893,203	40,241	504,292	1,931,886	2,431,180
Quebec	162	2,002	7,389,538	332,421	6,319,353	10,792,139	16,952,089
Ontario	291	2,527	9,730,961	434,324	5,766,900	15,236,680	20,886,410
Manitoba	42	371	1,493,770	57,561	1,215,216	2,252,360	3,442,169
Saskatchewan	20	98	325,542	25,253	226,164	508,188	712,145
Alberta	63	817	3,559,812	140,695	3,101,016	5,464,567	8,682,849
British Columbia	118	1,006	4,382,592	194,990	3,313,888	6,583,783	9,809,717
Canada	737	7,314	28,604,924	1,273,348	21,039,567	43,900,903	64,673,222
1960							
Newfoundland	2	62	183,732	9,947	85,209	307,240	402,396
Prince Edward Island.....	2						
Nova Scotia	24	240	792,998	45,098	713,304	1,125,269	1,881,961
New Brunswick	16	245	864,906	48,364	516,924	1,557,963	2,018,794
Quebec	159	2,048	7,720,469	321,181	6,752,555	11,632,813	18,530,326
Ontario	306	2,759	10,559,183	464,634	6,220,976	17,070,910	23,742,563
Manitoba	42	400	1,667,410	58,732	1,210,803	2,478,825	3,718,439
Saskatchewan	21	96	343,908	25,499	251,356	483,697	77,761
Alberta	64	966	4,288,630	168,182	3,619,939	6,713,476	10,235,763
British Columbia	121	1,058	4,470,811	205,459	3,574,953	6,717,953	10,536,569
Canada	757	7,874	30,892,047	1,347,096	22,946,019	48,088,146	71,844,422
1961							
Newfoundland	2	85	297,811	11,298	457,341	400,955	870,430
Prince Edward Island.....	1						
Nova Scotia	24	230	824,318	43,021	721,220	1,165,458	1,919,212
New Brunswick	17	237	836,256	43,121	839,301	1,231,696	2,150,467
Quebec	167	2,201	8,494,382	351,907	8,632,030	12,910,842	21,705,261
Ontario	308	2,840	11,234,124	495,383	8,023,134	15,426,998	23,928,872
Manitoba	44	416	1,771,730	64,200	1,885,454	2,431,815	4,411,213
Saskatchewan	22	111	385,495	21,815	308,505	560,093	889,818
Alberta	64	932	4,340,234	171,920	4,318,986	6,191,721	10,547,853
British Columbia	129	1,092	4,731,017	215,309	3,991,837	6,836,161	11,018,440
Canada	778	8,144	32,915,367	1,417,974	29,177,808	47,155,739	77,441,566

¹ Because of lack of inventory data "Value added" is not available for 1957.

TABLE 2. Inventories:¹ Machine Shops, 1961

	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
Opening: ²				
Newfoundland	49,873	2,629	—	52,502
Prince Edward Island				
Nova Scotia	217,864	3,482	—	221,346
New Brunswick	241,069	139,182	39,496	419,747
Quebec	1,370,933	569,340	451,737	2,392,010
Ontario	1,100,061	508,500	341,414	1,949,975
Manitoba	344,693	52,020	144,213	540,926
Saskatchewan	101,378	22,100	23,266	146,744
Alberta	905,334	288,127	153,151	1,346,612
British Columbia	859,449	120,668	182,585	1,162,702
Canada	5,190,654	1,706,048	1,335,862	8,232,564
Closing:				
Newfoundland	49,520	1,793	—	51,313
Prince Edward Island				
Nova Scotia	218,841	13,969	—	232,810
New Brunswick	289,729	91,139	51,190	432,058
Quebec	1,547,959	705,265	505,330	2,758,554
Ontario	1,243,089	631,147	235,410	2,109,646
Manitoba	383,568	37,917	128,572	550,057
Saskatchewan	97,366	19,800	26,161	143,327
Alberta	865,024	325,938	250,114	1,441,076
British Columbia	876,561	142,515	185,605	1,204,681
Canada	5,571,657	1,969,483	1,382,382	8,923,522

¹ Book value of all manufacturing inventories owned and held at plant and plant warehouses.

² The opening inventory for 1961 differs from the closing inventory for 1960 because of the receipt of revised data, the inclusion of new establishments, the removal of figures for establishments which did not operate in 1961, changes in classification and the implementation of the New Establishment Concept.

TABLE 3. Principal Statistics, classified according to Type of Ownership: Machine Shops, 1961

Type	Estab-lish-ments	Em-ployees	Salaries and wages	Cost at plant of materials used	Gross value of work done
	number		dollars		
Individual ownership	285	1,114	3,639,928	3,032,938	8,385,171
Partnerships	105	624	2,117,059	1,397,963	4,467,859
Incorporated companies	388	6,406	27,158,380	24,746,907	64,588,536
Totals	778	8,144	32,915,367	29,177,808	77,441,566

TABLE 4. Principal Statistics grouped according to Value of Work Done: Machine Shops, 1961

Establishments reporting gross value of work done	Estab-lish-ments	Em-ployees	Salaries and wages	Cost at plant of materials used	Gross value of work done
	number		dollars		
Under \$10,000.....	73	118	235,198	122,852	477,299
\$ 10,000 to \$ 24,999	158	441	1,248,678	812,115	2,657,461
25,000 " 49,999	186	957	3,303,269	2,130,385	6,836,699
50,000 " 99,999	160	1,401	5,317,361	3,613,253	11,121,420
100,000 " 199,999	118	1,911	7,979,641	5,582,796	16,921,049
200,000 " 499,999	57	1,724	7,371,229	6,813,450	17,907,850
500,000 " 999,999	21	1,065	4,895,398	5,856,253	12,775,660
1,000,000 " 4,999,999	5	527	2,564,593	4,246,704	8,744,128
Totals	778	8,144	32,915,367	29,177,808	77,441,566

TABLE 5. Employees and their Earnings: Machine Shops, 1961

Province	Employees					Earnings			
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total	
	Male	Female	Male	Female					
	number					dollars			
Newfoundland	}	12	1	70	2	85	44,954	252,857	297,811
Prince Edward Island		49	10	169	2	230	208,276	616,042	824,318
Nova Scotia.....		53	19	165	—	237	262,323	573,933	836,256
New Brunswick.....		412	96	1,655	38	2,201	2,293,947	6,200,435	8,494,382
Quebec.....		547	166	2,069	58	2,840	3,218,076	8,016,048	11,234,124
Ontario.....		101	17	296	2	416	623,009	1,418,721	1,771,730
Manitoba		31	4	75	1	111	126,737	258,758	385,495
Saskatchewan.....		193	43	686	10	932	1,189,085	3,151,149	4,340,234
Alberta.....		268	59	759	6	1,092	1,461,525	3,269,492	4,731,017
British Columbia									
Canada.....		1,666	415	5,944	119	8,144	9,427,932	23,487,435	32,915,367

TABLE 6. Production Workers by Months: Machine Shops, 1961

Month	Establishments reporting monthly detail ¹	
	Male	Female
January.....	4,544	102
February.....	4,558	96
March.....	4,606	98
April.....	4,619	103
May.....	4,667	104
June.....	4,820	105
July.....	4,805	102
August.....	4,790	100
September.....	4,789	116
October.....	4,804	111
November.....	4,779	112
December.....	4,804	113
Average for establishments reporting monthly detail	4,757	106
Average estimated for small establishments ²	1,187	13
Average for all establishments.....	5,944	119

¹ The number of production workers, by months, was collected only for large establishments.² The monthly detail of production workers was not collected from small establishments. Only annual averages were collected from these establishments.

TABLE 7. Fuel and Electricity Used: Machine Shops, 1961

Kind		Quantity	Cost at plant
			\$
1. Establishments reporting commodity detail: ¹			
Bituminous coal:			
(a) From Canadian mines	ton	1,464	23,078
(b) Imported	"	687	8,511
Sub-bituminous coal (from Alberta mines only)	"	103	1,628
Anthracite coal	"	151	3,793
Lignite coal	"	117	627
Coke	"	73	1,801
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	672,568	283,749
Fuel oil including kerosene or coal oil	"	911,791	160,840
Wood	cord	413	4,157
Gas:			
(a) Liquefied petroleum gases	Imp. gal.	20,151	4,714
(b) Other manufactured gas	M cu. ft.	1,834	3,122
(c) Natural gas	"	173,356	91,625
Other fuel	2,981
Electricity purchased	kwh.	18,446,537	461,579
Steam purchased	700
2. Estimate for establishments for which no data were collected: ²			
Cost of fuel and electricity		—	365,069
3. All establishments:			
Total cost of fuel and electricity		—	1,417,974

¹ Large establishments.² Small establishments.

... Figures not appropriate or not applicable.

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