CONFIDENTIAL

PRELIMINARY REPORT

ON

MANUFACTURING INVENTORIES



Central Research and Development Staff Dominion Bureau of Statistics

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# FOREMORD

For some time there has been considerable interest in government circles in the improvement of current information on the level of inventories and their fluctuation, especially at the manufacturing stage. The Census of Industry's annual data on the value of manufacturing inventories are well known, but there is also a growing amount of additional information obtained on a monthly or quarterly basis. This memorandum attempts to present a picture of available data of the latter type together with some analysis of its importance. It is a special report of the Central Research and Development Staff of the Dominion Bureau of Statistics and was prepared by Mr. Clarence L. Barber.

In its present form this memorandum is addressed primarily to economists in the different departments of the Government. Inventory statistics are difficult to interpret and in publishing this type of statistics the Bureau would like to benefit from the experience and advice of others. The coverage must be extended to other industries and it may be that other departments are interested in having particular industries included. The extended introductory statement is written partly to bring out problems which must be faced in the presentation of the statistics.

The information is being circulated, for the present only, in this confidential form and is not for publication. The Bureau hopes to initiate a regular statistical report on different phases of the inventory situation for distribution to the general public.

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TABLE 1

VALUE OF THE PHYSICAL CHANGE OF MANUFACTURING INVENTORIES IN CERTAIN INDUSTRIES, CANADA,

BY QUARTERS, 1945-1946

(Thousands of dollars)

Annual Change In Year Ending March 31, 1946	- 5,392	+ 2,832	- 2,842	- 4,873	- 2,985	+ 1,577	+12,993	+ 1,098	NA	NA	- 854	NA		
Annual Change 1345	- 8,366	+ 6,540	+ 1,973	- 2,336	- 3,081	+ 1,817	+14,240	+ 2,500	+13,164	- 2,428	+ 137	+ 1,282	+25,442	
1 9 4 6 First Quarter	-5,952	+7,790	-3,540	-1,374	-3,649	+. 559	+7,573	-1,234	NA	NA	- 441	NA		
Fourth Quarter	- 6,635	+ 2,270	+ 1,104	+ 3,343	- 8,595	+ 5,395	+23,843	+ 2,119	- 1,788	- 82	- 598	+ 1,415	+21,989	
15 Third Quarter	+15,549	- 5,935	+ 1,650	+ 2,162	+ 1,280	- 2,376	- 8,799	+ 237	+11,041	+ . 296	- 511	- 385	+14,209	
<u>1</u> 3 . Second Quarter	- 8,354	- 1,295	- 2,056	- 8,504	+ 7,979	- 1,999	- 9,624	- 24	+ 7,409	- 1,116	+ 496	+ 436	-16,650	
First Quarter	uits and vegetables 8,926	bacco	cour milling + 1,275	aughtering and meat packing . + 663	iiry factories 3,745	ıgar refineries + 799	11p and paper + 8,820	sather tanneries + 168	m-ferrous metal, smelting and refining	stroleum products 1,526	1bber + 550	axtiles 134	Total 12 industries + 5,894	

Note: NA= Not Available

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TABLE 2(a)

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TABLE 2(b)

VALUE OF THE PHYSICAL CHANGE IN CERTAIN MANUFACTURING INVENTORIES, CANADA, BY MONTHS, 1946.

(Thousands of Dollars)

	January	February	March
Flour milling	+ 336	- 810	-3,666
Slaughtering and meat packing	-2,054	-1,116	+1,296
Dairy factories	-2,189	-1,876	+ 416
Sugar refineries	+ 615	- 543	+ 487
Pulp and paper	+6,256	+3,216	-1,899
Leather tameries	- 683	- 283	- 268
Non-ferrous metals, smelting and refining	+ 340	-1,013	NA
Petroleum products	-2,424	NA	NA
Rubber	+ 32	- 640	NA
Sawmills	NA	+ 97	NA

Note: NA = Not Available.

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# Preliminary Report on Manufacturing Inventories

Monthly information upon the stocks of goods held in a number of different manufacturing industries has been available for some time. In this report an effort has been made to combine this information into a single picture. The present report covers 1945 and 1946 to date. In a subsequent report similar information for 1944 and the annual change for earlier years will be presented to give more perspective to the data contained herein. At the present time the industries covered are not sufficiently representative to afford an indication as to what is happening to manufacturing inventories in all industries. No information is available on the "Iron and Steel Products" group of the Census of Industry and the information on the "Textile Products" group is very sketchy. (1) Steps are being taken to add to the information contained herein, and it is hoped that eventually a fairly complete coverage of the manufacturing field will be obtained.

Some monthly information is also available on wholesale and retail inventories, but since this is already available in confidential or published form, it is not included in this report at the present time. Only a limited amount of monthly information is available in the mining field. Eventually a more comprehensive report, covering inventories in all sectors of the economy, will be published.

All the original data covered by this report are available in the form of physical quantity stocks. The information is presented in terms of the value of the physical change month by month or quarter by quarter. The alternative would have been to value the physical stocks at the end of each month or quarter and show the change in their total value. The former procedure was adopted for two reasons. Since many of the industries covered have been receiving subsidies during the last few years, considerable difficulty was experienced in obtaining accurate prices to apply to the physical quantities. It was felt that the margin of error involved in applying prices to the physical change would be smaller. Secondly, it is felt that the value of the physical change in inventories is preferable for many purposes on the grounds that it is more closely correlated with changes in employment than changes in the total value of inventories, the latter being more subject to the influence of price changes.

Fluctuations in the volume of investment in inventories are of special significance. During any recovery, a period of inventory investment can normally be expected as the amount of goods and materials held at various stages of production is increased to the volume necessitated by a higher level of production. If inventories have been unduly depleted during an immediately preceding depressed period, the accumulation of goods required to attain normal stock levels will be that much larger. But once the higher level of production is reached, further investment in inventories can normally be expected to cease. Thus if an increase in business activity is based entirely, or even largely, upon the leverage influence of increased investment in inventories, it may be followed by a recession when the inventory accumulation ceases. During the inventory accumulation, increased payments to all parts of the economy exert a stimulating influence, which helps to lift business to a higher level of activity. Once these payments cease, the decreased demand for raw materials and labour will exert a depressing influence. If a general recession gets underway, it will be accentuated if business firms now allow their inventories to run down. This possibility of an inventory cycle in business activity makes a a knowledge of inventory changes essential to all these interested in anticipating fluctuations in economic conditions.

(1) Some quantitative impression of the coverage provided by this report may be obtained by referring to Table 3, p.9 and the immediately preceding summary statement. In some instances, inventory accumulations occur which are in excess of the amount required to meet normal production requirements. If prices are expected to rise, it will be prefitable to build up both raw material inventories to avoid inoreased costs and stocks of finished product in anticipation of higher selling prices. While the accumulation is occurring its stimulating influence will tend to raise employment and income to higher levels, but if more fundamental types of investment do not appear, just as in the case of a normal inventory accumulation, the cessation of this form of expenditure may easily initiate a recession. To the extent that the inventory accumulation has been excessive, the reduction in expenditure will be larger and the deflationary influence more severe. In either instance if other types of expenditure are increasing at the time that the additions to stocks cease, the recession can be avoided. But if a recession does begin, the subsequent depletion of the excessive stocks will make it more severe.

From the standpoint of governmental economic policy designed to secure full employment, it would be preferable to avoid any excessive inventory accumulation so that a recovery of business activity could proceed more slowly, but on a sounder basis. The more availability of better inventory information may help avoid some of the excesses that have occurred in the past. In instances where inventory accumulation is clearly becoming excessive in the face of this information, it might be desirable for the government to issue some official opinion regarding the situation. This would serve to focus business opinion upon the statistical information, but such a step should only be taken with full recognition of the depressing effects which might follow a sudden cessation of inventory accumulation.

Inventory accumulation may also exercise an important influence during inflationary periods. When as at present, and as was true following the last war, there are shortages of many goods relative to the volume of purchasing power; there is an incentive for firms to withhold goods from the market in anticipation of price rises if there is no price ceiling, or in expectation of the price ceiling being raised. This inventory accumulation, involving as it does additional income payments, tends to add to the volume of money demand and further increase the pressure on prices. This in turn makes it profitable to withhold goods for further price increases. Thus inventory accumulation can be an important aggravating factor in any period of price inflation. Those who argue that increased production rather than price control is the best method of avoiding inflation may frequently ignore this factor.

The discussion of investment in inventories has thus far been largely in terms of the change in the overall total, but for proper interpretation of any fluctuation, a more detailed analysis is required. To some extent the significance of an increased or decreased holding of inventories can be judged in terms of the causes of the ohange and the effects it may be likely to have on subsequent production. This in turn requires an understanding of the part inventories play in the economic system. Some significance also attaches to the stage in the economic process where the increase or decrease occurs and to the type of goods involved.

Inventories of goods at various stages of production provide part of the flexibility in the economic system. Before any good comes on the market substantial preliminary production and processing of materials is required and during this time payments are being made to labour in the form of salaries and wages, to independent entrepreneurs such as farmers in payment for materials used, while corporate enterprises at various stages of production will be accumulating profits. In a continuing process of production, the flexibility provided on the goods' side between the time the initial income payments are made and when the goods become available for sale has a counterpart in the flexibility provided on the expenditure

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side by individual and corporate cash balances. These cash balances--money in circulation, demand and saving deposits--bridge the gap between a person's receipts and expenditures. This makes it possible for the economy to run at a high level of activity without requiring a close correspondence between receipts and payments from cash balances over a short period of time, e.g. wheat (a farmer whose receipts are concentrated within a few months of the year may accumulate a large cash balance and spend it gradually throughout the year.) This payment is made by whomever finances the inventory accumulation of wheat.

As some of the series presented in this report indicate, there are important seasonal fluctuations in inventories in a number of industries. Accumulation of inventories in these instances may be part of the process whereby seasonal production is stored to meet a steady year round demand, e.g. canned fruits and vegetables, or a means by which a pronounced seasonal demand is met with a more uniform production throughout the year, e.g. concentration of retail sales in December. The traditional method of treating seasonal fluctuations has been to attempt to remove them and study the adjusted series. In studying monthly or quarterly inventory movements, this would be useful in helping to determine to what extent a general inventory accumilation was being obscured by seasonal movements. At the same time, the seasonal fluctuation itself is important as an indication of the amount of flexibility present within the economic system. Close study of seasonal fluctuations of the different components of gross national expenditure, net national income and individual savings would help to indicate how much fluctuation is possible in these items without initiating a general recession of business activity. As the series presented here are expanded, it is proposed to show annual totals by quarters to enable judgment as to the non-seasonal movement present in the series. The original data by months and quarters will also be presented, since it is believed they have an analytical value of their own.

Some separation of inventory holdings is desirable on the basis of a difference in both demand and supply conditions. From the demand standpoint, manufacturing inventories in total can be classified into two general groups, durable goods and non-durable goods. This is a customary classification, the economic basis for which is the fact that the demand for, and hence the production of, durable goods fluctuates more over the business cycle than the production of non-durable commodities. In view of this, it may become possible at some future time to establish a classification based explicitly upon the income elasticity of demand, that is, the extent to which sales of the commodity fluctuate relative to gross national expenditure or perhaps in this case the gross value of manufacturing production (using deflated totals) rather than on the basis of the physical durability of the goods.

From the viewpoint of supply, it can be noted that many agricultural products, which in turn become the raw material inventories for a number of the agriculture processing industries, tend to fluctuate with climatic conditions as well as in response to demand. A small tobacco crop or fruit and vegetable crop will cause a decline in inventories in the manufacturing stages of these industries, which is independent both of demand and the production plans of the primary producers. In addition, agricultural production is sometimes characterized by a negative elasticity of supply, meaning that production increases when the price declines. In an attempt to maintain his income, the farmer may expand his production in the face of declining prices. Inventories of this type deserve separate analysis from inventories in other lines of manufacturing.

An industry's relation to import or export trade is also important. In a number of lines of manufacturing activity, the raw materials used are primarily

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imported. This is true of such industries as the petroleum products industry, sugar refining, and cotton textiles. In such instances, an increase in inventories will cause a proportionate increase in imports which will partially offset its stimulating influence. To the extent that the increased payments are made to firms or persons outside of the country, these payments will not cause increased employment or production in this country. Separate classification of this type of industry would be desirable for analytical purposes. Again, inventory fluctuations in industries producing primarily for export may be very significant. An accumulation of inventories here may be the first indication of a decline in export demand. This subgroup too, deserves some special attention.

The following is a suggested classification, incorporating the above considerations:

A. Durable Goods

- (a) Industries whose raw materials are primarily imported;
- (b) Industries whose finished products are primarily exported;
- (c) Other.
- B. Non-Durable Goods
  - (a) Industries whose raw materials are primarily domestic agricultural production;
  - (b) Industries whose raw materials are primarily imported;
  - (c) Industries whose finished products are primarily exported (exclusive of those included in (a));
  - (d) Other.

#### Detailed Statement on Manufacturing Inventories by Industries

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## 1. Fruit and Vegetable Preparations

Inventory holdings in this industry are subject to a pronounced seasonal fluctuation. Stocks of canned goods are built up during the third quarter of the year when canning is at its peak and decline throughout the rest of the year. This movement may vary somewhat from year to year, depending on the lateness of the season and the relative importance of different products in the total.

Stocks of canned goods by type of product are obtained quarterly from the canner. These were valued at the average price per pound as reported to the Census of Industry in 1944. Current prices are available for only a few canned fruits and vegetables and these do not include the subsidy paid to the canner. Information from the Wartime Prices and Trade Board indicated that ceiling prices and subsidies were unchanged in 1945 over their level in 1944. Prices calculated from the value and quantity of materials as reported to the Census of Industry vary to some extent with the changing relative importance of different firms in the total, but they do include the canners' subsidy.

Information on stocks of fruits and vegetables frozen for reprocessing or preserved in SO2 are available monthly. These make up a substantial part of the canners' year end raw material inventory.

Comparison of the value of inventories in this industry as reported to the Census of Industry with the stocks of canned goods reported quarterly is rendered difficult because firms holding about one-third of the total report to the Census for a year end between February 28 and April 30, a period during which there is a seasonal decline in inventory holdings. It is believed that the inventory covered by this report represents almost all of the industry's finished goods inventory and perhaps 40 per cent of its other inventory. Such items as containers, packaging materials and sugar which make up 45 to 60 per cent of the value of materials used are probably the chief stock items not covered.

#### 2. The Tobacco Industries

Stocks of unmanufactured tobacco are reported quarterly to the Census of Industry. Although these stocks include tobacco which is already processed, the latter is reported on an equivalent raw stock basis. These stocks are subject to a pronounced seasonal fluctuation, with an accumulation usually occurring during the first quarter of the year and a decline during the remaining three quarters. These stocks are believed to be equivalent to the total inventory in the tobacco processing industry and the raw material inventory in the tobacco products industry. No information is available as to the amount of tobacco in process in the tobacco products industry or of the finished products on hand in the latter industry.

#### 3. Flour Milling

Information on the production and stocks of flour milling is collected monthly by the Agricultural Branch. These stocks include both raw materials and finished products and should be complete. However, there is a substantial discrepancy between the value of these physical stocks and the value of inventory reported to the Census of Industry. It is believed that the difference is due to stocks both of raw materials and finished products which are held elsewhere than at the mill. The stocks covered in this report are mill stocks only. Direct comparison is hampered by the fact that firms holding from 65 to 70 per cent of all inventories in this industry make their report to the Census for the year ending July 31 or August 31.

Wheat stocks were valued at the domestic selling price to millers. Where wheat products are sold for domestic consumption, a drawback is subsequently paid to the millers, but it is believed that their inventory will be valued at its original purchase price. Wheat flour was valued at the domestic selling price. Export prices of flour have been rising continuously during the last year and are now over \$2.00 per barrel above the domestic price which has remained fixed since 1943. However, this higher price would not be reflected in the inventory valuation at cost. An estimate of the cost of flour based on the domestic purchase price of wheat corresponded closely with the domestic selling price of flour.

## L. Meat Packing Industry

Information on the cold storage holdings of beef, pork, mutton, lamb, veal, pork in cure, and lard are available monthly. A small percentage of these stocks are owned by wholesale butchers but it is estimated that at least 95 per cent are owned by the packers. These stocks were valued at the average price per pound for each type of meat as reported to the Census of Industry, with adjustments for the percentage change in price shown by the price indexes for each of these products. Hides and skins held by packers are included along with those held by tanners and dealers in the inventory changes for leather tanneries. Comparison of the value of stocks included with the value of inventory reported to the Census of Industry indicates about a 60 per cent coverage of the total inventory in this industry.

## 5. Leather Tanneries

Stocks of raw hides and finished leather are reported monthly. The amount of leather in process is considered to be equivalent to the estimate of three months' production made by the tanners. Prices were obtained from the Census and the Prices Branch. Coverage can be considered almost complete.

# 6. Sugar Refineries

Stocks of raw and " refined sugar are reported weekly. This represents almost the entire inventory in this industry. Prices of raw and refined sugar before excise tax were available from the Prices Branch. There is a fairly pronounced seasonal fluctuation in the stocks of both raw and refined sugar. Since these movements are partially offsetting, the total inventory is somewhat more stable, though still markedly seasonal.

#### 7. Dairy Factories

Information is available on the stocks of butter, cheese, milk powder, casein, and condensed and evaporated milk in the hands of the dairy factories. Current prices were available from the Prices and Agricultural Branches. The movement in the stocks in this industry is very seasonal, stocks being accumulated during the summer months and depleted during the remainder of the year. In addition to the stocks of butter and cheese held at the factory, there are large stocks held in cold storages throughout Canada by various owners. The stocks covered by this report amount to only about one-half of the total inventories in this industry, but it is believed that they cover the most variable portion.

#### 8. Petroleum Refineries

Information is available monthly on the raw materials in process and finished products of this industry. The finished products are broken down by type of product and include stocks at bulk tank stations (wholesale) as well as at the refinery. Prices were obtained from the Census of Industry reports and from the Prices Branch. Some margin of error is involved in valuing stocks of crude petroleum, because of the varying amount of subsidy on this product during the past year.

Inventories in this industry are subject to a fairly substantial month to month variation, without any evidence of a definite seasonal pattern. The coverage is almost complete.

# 9. Pulp and Paper Industry

Information on physical stocks in all stages of this industry are available monthly. Data on stocks of newsprint and woodpulp are collected monthly by the industry's association; the former are published while the latter are made available in confidential newsheet form. Information on stocks of pulpwood held by the various companies is collected monthly by the Department of Reconstruction and Supply. Inasmuch as most of the pulpwood is cut on company limits or on their behalf and purchased as soon as it is cut, their inventories reflect the seasonal nature of the logging industry. Though there is a ceiling on pulpwood prices, it apparently does not apply to wood cut on the companies' timber limits for their own use; the average cost of pulpwood used as reported to the Census of Industry has increased continuously during the last few years and is well above ceiling prices. Thus some uncertainty attaches to the proper valuation of the change in pulpwood stocks. A conservative valuation was used, one consistent with the industry's reported value of raw material inventory. The data do not include that part of this industry which is located in Western Canada and British Columbia, but the latter held only about 7 per cent of the total inventory in this industry in 1943.

# 10. Non Ferrous Smelting and Refining

Information is available monthly on the physical stocks of refined metals in this industry. This covers only the finished product inventory, except in the case of aluminium where information is available on the stocks of bauxite. Since in recent years the finished products inventory in this industry has amounted to only 10 per cent of the total inventory, it provides only a partial picture of inventory fluctuations. On the other hand, in the years 1931 to 1934, finished products were somewhat over 50 per cent of total inventories. Up until the end of August the stocks of refined copper included a large amount held on United Kingdom account. These have not been reported since that time, but are believed to have been all exported by now. The figure for September includes only the change in stocks privately held, whereas those for earlier months include the change in stocks held both on United Kingdom and private account.

#### 11. Sawmills

In January, 1946, the Forestry Branch began to collect information on the finished stocks of lumber held at sawmills, including both those stocks owned by the mills and those held on consignment. In the first reports no information was collected for the portion of this industry located in British Columbia, but it is expected that it will be included in the near future. In the past stocks of finished lumber have amounted to about one-half of the firms' total inventory. No monthly information is available regarding the stock of raw materials (logs).

#### 12. The Rubber Industry

Monthly reports on the stocks of natural, synthetic and reclaimed rubber are obtained monthly by the Rubber Controller. These include stocks held both by the government and private industry. In total they amount to only a small part of the industries' total inventory and provide little indication as to the fluctuation in the total.

#### 13. The Textile Industry

Quarterly reports on certain textile stocks are obtained by the Wartime Prices and Trade Board. Information is obtained on stocks of cotton, woollen, rayon and nylon yarn in the hands of the weavers and of rayon and nylon yarn in the process of being woven. A number of large firms that spin their own yarn do not report any stocks, apparently considering these stocks as part of their in-process inventory. No information is available on stocks in the secondary industries such as men's and women's clothing. Thus this information does not offer an accurate indication of changes in total inventories in the textile industry.

Some picture of the coverage of the total manufacturing industry provided by this report can be gained by reference to Tables 3 and 4. In summary, it may be stated that almost complete coverage is obtained in the pulp and paper industry, the petroleum products' industry, the leather tanning industry, and the flour milling industry. Satisfactory coverage is obtained for the fruit and vegetable preparations and dairy products' groups, and fairly substantial coverage for the tobacco industry and the slaughtering and meat packing industry. Information for the sawmilling and the non-ferrous mining and smelting industries covers finished products only. In the rubber and textile industries, the information provided is very sketchy.

In Table 3 the number of establishments in each industry is given. This gives some indication of how much work would be involved in extending the coverage of our inventory information. Where there are only a small number of firms holding a large part of the total inventories information should be fairly readily obtainable.

# TABLE 3

VALUE OF MANUFACTURING INVENTORIES IN FORTY LEADING INDUSTRIES OF CANADA, RANKED BY VALUE OF INVENTORY, 1938 (Millions of dollars)

		Number of Establishments	Value of Inventory
	Buln and namer	- OR	60 5 x
	Non-ferrous metal refining & smelting	1/1	34.7 x
	Sawmills	3.836	30.2 x
	Tobacco	93	28.2 x
5	Petroleum products	57	27.0 x
-	Electrical apparatus and supply	191	25.4
	Primary iron and steel	55	23.8
	Agricultural implements	38	21.0
	Fruit and veretables	348	19.6 x
10	Distilleries	15	17.5
	Slaughtering and meat-packing	138	17.2 x
	Machinery	214	16.5
	Autos	15	14.9
	Rubber	50	14.6 x
15	Sheet metal products	148	13.4
-	Hosiery and knitted goods	171	13.4
	Cotton yarn and cloth	36	13.0 x
	Clothing, men's factory	198	12.9
	Leather tanneries	83	12.0 x
20	Railway rolling stock	37	11.5
	Castings, iron	231	11.0
	Flour and feed mills	1,086	10.3 x
	Coke and gas	33	10.3
	Sugar	10	10.2 x
25	Miscellaneous foods	223	9.0
	Fish curing and packing	597	8.8
	Boots and shoes, leather	221	7.5
	Biscuits, confectionery, cocoa	223	1.2
20	Planing mills, sash and door	669	7.0
20	Silk and artificial silk	29	0.9 x
	furniture	425	0.9
	Automotive supplies	00	0.1
	Clothing, women's factory	575	0.0
75	Drewerles	07	0.0
22	Wine and wine mode	171	6.2
	Button and chasses	2 668	0.2
	Weeller and cheese	£, 300 E0	5.0 x
1.0	Reideas and structurel stool	21	5.1
40	bridges and scructural steel	21	
	Total		571.7 77
	All Industries		739

x Industries completely or partially covered by this report.

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# TABLE 4

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# VALUE OF MANUFACTURING INVENTORIES IN FORTY LEADING INDUSTRIES OF CANADA, RANKED BY VALUE OF INVENTORY, 1943

# (Millions of dollars)

		Value of	
		Inventory	
	Miscellanaous chemical uraducts	183 5	(63)
	Airoraft	161.5	(2.8)
	Shiphuilding and repairs	132.2	(2.3)
	Tron and steel products (n.e.s.)	87.9	(1.1)
5	Pulp and paper	83.0	()
	Electrical apparatus and supply	69.7	
	Autos	57.6	
	Non-ferrous metal refining and smelting	53.7	
	Торассо	48.6	
10	Primary iron and steel	48.0	
	Slaughtering and meat-packing	43.0	
	Petroleum products	41.5	
	Machinery	38.3	
	Sawmills	29.9	
15	Flour and feed mills	29.6	1
	Scientific and professional equipment	29.4	(1.9)
	Sheet metal products	28.3	
	Auto supplies	26.8	
	Clothing, men's lactory	20.8	
20	Rallway Folling Stock	20.0	
	Fruit and vegetables	64.1	
	Distriction of the second seco	23 3	
	Agricultural implements	23.0	
25	Brass and copper products	18.8	
~~	Cotton varn and cloth	17.4	
	Foods. miscellaneous	17.0	
	Sugar refineries	16.4	
	Bridges and structural steel	16.1	
30	Hosiery and knitted goods	15.6	
	Clothing, women's factory	15.4	
	Breweries	14.8	
	Coke and gas products	14.4	
	Medicinal and pharmaceutical preparations	14.2	
35	Castings	13.9	
	Hardware and tools	13.5	
	Acids, alkalies and salts	12.9	
	Paints, pigments and varnishes	11.7	
	Boots and snoes, leather	10.7	
	Pearner ranneries	TO-0	
	Total	1,571.7	86 % of
			total
	All Industries	1,829	

(--) Inventories in 1938.



