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THE LABOUR FORCE

SEPTEMBER 1970

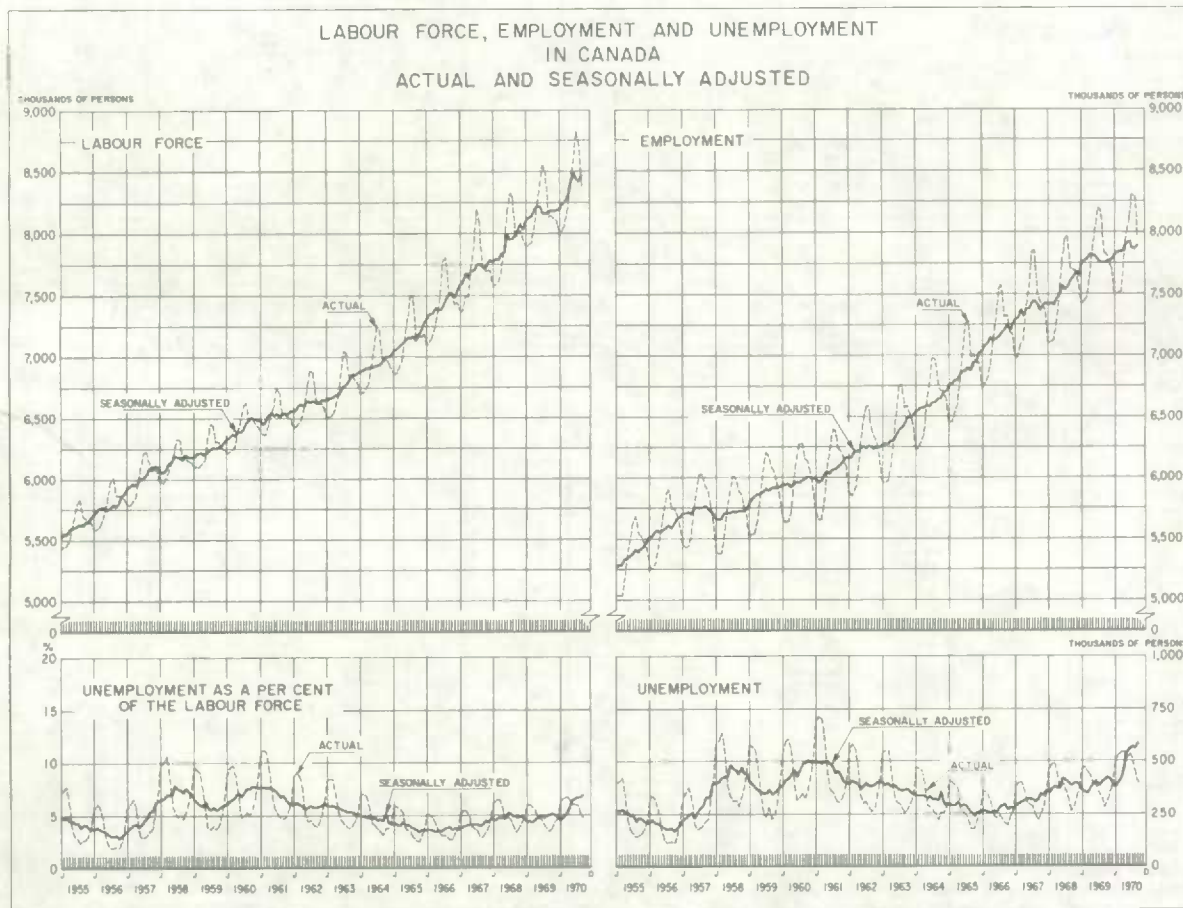
In the week ended September 19, 1970, the Canadian labour force was estimated at 8,384,000. This total included 7,986,000 persons employed for all or part of the week and 398,000 unemployed persons. Compared with August the labour force decreased by 336,000, employment having fallen by 286,000 and unemployment by 50,000. Both declines were below average in percentage terms. The labour force, the employed and the unemployed were higher than in September 1969 by 258,000, 139,000 and 119,000 respectively.

The 286,000 decline in employment from August was largely the result of 274,000 drop among men. The 50,000 decrease in unemployment resulted from a decline of 39,000 among men and 11,000 among women.

In all regions the September estimates of both employment and unemployment were lower than in August but higher than in last September.

The decline in employment from August to September occurred mainly as a result of the seasonal return of young persons to school. Employment among persons 25 years and over increased by 117,000. Unemployment fell among persons 14-24 and 25 years and over.

Unemployment in September was 4.7 per cent of the total labour force, compared with rate of 5.1 in August of this year and 3.4 in the September, 1969. Seasonally adjusted, the unemployment rate this September was 6.9.



The Unemployed by Occupation and Industry

3rd Quarter 1970

The Labour Force Survey provides information about the occupation and industry attachments of members of the labour force. For the employed, current occupation and industry are reported. The unemployed are identified with the industries in which they last worked and the occupations which they last followed. From these data, unemployment rates for broad occupation and industry groups are calculated by expressing the number unemployed as a percentage

of the labour force classified in each group. In addition, percentage distributions have been made according to occupation and industry groups. Unemployment rates and percentage distributions for the third quarter of 1970, with comparative data for the first two quarters of 1970 and the two last quarters of 1969, are shown in the following tables - in Table 1 by occupation group, and in Table 2 by industry group.

Table 1 Occupation group	Percentage distribution of the unemployed (quarterly averages)					Unemployment rates(1) (quarterly averages)				
	1970			1969		1970			1969	
	3rd quar.	2nd quar.	1st quar.	4th quar.	3rd quar.	3rd quar.	2nd quar.	1st quar.	4th quar.	3rd quar.
All occupations	100	100	100	100	100	5.3	6.3	6.5	4.3	3.8
Office and professional(2)	21	18	17	20	21	2.6	2.6	2.4	1.9	1.9
Transportation	5	6	7	6	5	5.6	8.8	9.6	5.8	3.9
Service and recreation	11	9	8	12	12	4.7	4.6	4.4	4.2	3.8
Primary(3)	5	7	10	8	6	3.2	5.4	8.5	4.2	2.4
Craftsmen, production process and related workers	29	32	36	32	27	6.0	7.9	9.1	5.4	3.9
Labourers(4)	10	12	15	13	11	11.1	16.9	22.7	12.9	8.5
Never worked(5)	18	15	7	9	19	N/A	N/A	N/A	N/A	N/A
Total unemployed(000's)	455	529	518	350	315					

Table 2 Industry group	Percentage distribution of the unemployed (quarterly averages)					Unemployment rates(1) (quarterly averages)				
	1970			1969		1970			1969	
	3rd quar.	2nd quar.	1st quar.	4th quar.	3rd quar.	3rd quar.	2nd quar.	1st quar.	4th quar.	3rd quar.
All industries	100	100	100	100	100	5.3	6.3	6.5	4.3	3.8
Primary industries(6)	6	9	11	8	7	3.2	6.1	8.4	3.9	2.5
Manufacturing	22	22	24	25	21	5.1	6.0	6.5	4.7	3.4
Construction	13	17	22	16	12	9.9	15.8	21.9	10.4	6.5
Transportation and other utilities(7)	7	7	8	8	6	4.1	5.3	5.8	3.8	2.7
Trade	12	11	12	11	12	3.8	4.4	4.6	2.9	2.8
Service(8)	22	19	17	22	23	3.3	3.3	3.1	2.7	2.5
Never worked(5)	18	15	7	9	19	N/A	N/A	N/A	N/A	N/A
Total unemployed(000's)	455	529	518	350	315					

(1) The unemployed in an occupation group or an industry group as a percentage of the labour force in that group.

(2) Includes managerial, professional and technical, clerical, sales, and communication occupations.

(3) Includes farming, fishing, trapping, logging, and mining occupations.

(4) Includes labourers and unskilled workers not farming, fishing, logging, or mining.

(5) Comprises unemployed persons who never had a full-time civilian job lasting two weeks or more.

(6) Includes agriculture, forestry, fishing and trapping, and mines, quarries, oil wells.

(7) Includes transportation, storage, communication, and electric power, gas and water utilities.

(8) Includes community, business and personal service, public administration, and finance, insurance, real estate.

Note: The statistics in these tables are based on the 1961 Census Classification of Occupations and the 1960 Standard Industrial Classification.

Technical Notes

Scope of Labour Force Survey

The statistics contained in this report are based on information obtained through a sample survey of households. Interviews are carried out in about 30,000 households chosen by area sampling methods across the country(1). The Labour Force Survey, started in November 1945, was taken at quarterly intervals until November 1952. Since then it has been carried out monthly. Estimates of employment, unemployment and non-labour force activity refer to the specific week covered by the survey each month.

The sample used in the surveys of the labour force has been designed to represent all persons in the population 14 years of age and over residing in Canada, with the exception of: residents of the Yukon and Northwest Territories, Indians living on

reserves, inmates of institutions and members of the armed forces. These excluded categories amount to about three per cent of the total population 14 years of age and over.

Estimates derived from a sample survey are subject to sampling and non-sampling errors. Aspects of this subject in relation to the Labour Force Survey are reviewed under "Reliability of Estimates" on page 8.

- (1) For a comprehensive description of the design of the Labour Force Survey, see Dominion Bureau of Statistics, Canadian Labour Force Survey - Methodology, Catalogue No. 71-504, Ottawa, 1965.

Labour Force Statistics

Contents of the Tables - The results of the survey are presented in the tables on pages 4 to 7 of this report.

Canada, Labour Force (pages 4 and 5).

Tables 1 to 3 refer to the labour force, employment and unemployment and contain labour force participation and unemployment rates.

Canada, Employed (page 6). Tables 4 to 6 contain further detail on employment.

Canada, Unemployed (page 7). Table 7 contains further detail on unemployment.

Regions, Labour Force (page 7). Table 8 contains labour force data for the regions.

Supplementary Data - From time to time, additional data on particular aspects of the labour force or its components will be obtained. Such material, as it becomes available, will be either included in this report or released in separate reports.

Other Data Available - In addition to the published statistics, there is a considerable amount of data which can be obtained on request. Following is a list of material available.

For Canada only:

1. Age and sex distributions.
2. Marital status and sex distributions.
3. Employed -
 - (a) Reasons for working less than full-time.
 - (b) Hours worked by sex for total employed, agriculture and non-agriculture, and for paid workers, non-agriculture.
 - (c) Industry and occupation groups, by sex for total employed and for paid workers.
4. Persons not in the labour force by category.

For regions:

5. Labour force: by age; by sex, agricultural and nonagricultural.
Employed: by age.

For individual provinces of Atlantic and Prairie regions:

6. Population 14 years of age and over and labour force: by sex.
Total employed, total unemployed, and total persons not in labour force.

Definitions and Explanations

Labour Force - The civilian labour force is composed of that portion of the civilian noninstitutional population 14 years of age and over who, during the reference week, were employed or unemployed.

Employed - The employed includes all persons who, during the reference week:

- (a) did any work for pay or profit;
- (b) did any work which contributed to the running of a farm or business operated by a related member of the household; or
- (c) had a job, but were not at work, because of bad weather, illness, industrial dispute, or vacation, or because they were taking time off for other reasons.

Persons who had jobs but did not work during the reference week and who also looked for work are included in the unemployed as persons without work and seeking work.

Unemployed - The unemployed includes all persons who, through the reference week:

- (a) were without work and seeking work, i.e., did not work during the reference week and were looking for work; or would have been looking for work except that they were temporarily ill, were on indefinite or prolonged layoff, or believed no suitable work was available in the community; or
- (b) were temporarily laid off for the full week, i.e., were waiting to be called back to a job from which they had been laid off for less than 30 days.

Not in the Labour Force - Those not in the labour force include all civilians 14 years of age and over (exclusive of institutional population) who are not classified as employed or unemployed. This category includes those: going to school; keeping house; too old or otherwise unable to work; and voluntarily idle or retired. Housewives, students and others who worked part-time are classified as employed. If they looked for work they are classified as unemployed.

Canada, Labour Force

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(Estimates in thousands)

Note: Due to the introduction of revised weighting factors in March 1965, small adjustments have been made to estimates published before that time. See the March 1965 edition of this report, page 8.

Table 1 Summary	S.D. (1)	1970		1969		1968	
		Sept. 19	August 22	Sept. 20	August 23	Sept. 21	August 24
<u>Total</u>							
Population 14 years of age and over(2)		15,099	15,068	14,719	14,687	14,349	14,316
Labour force	a	8,384	8,720	8,126	8,489	7,971	8,284
Employed	a	7,986	8,272	7,847	8,171	7,709	7,965
Agriculture	d	558	614	581	636	605	653
Non-agriculture	a	7,428	7,658	7,266	7,535	7,104	7,312
Unemployed	d	398	448	279	318	262	319
Not in the labour force	a	6,715	6,348	6,593	6,198	6,378	6,032

Participation rate (3)	a	55.5	57.9	55.2	57.8	55.6	57.9
Unemployment rate (4)							
Actual	d	4.7	5.1	3.4	3.7	3.3	3.9
Seasonally adjusted		6.9	6.7	5.0	4.9	4.8	5.0
<u>Men</u>							
Population 14 years of age and over(2)		7,482	7,467	7,295	7,279	7,113	7,096
Labour force	a	5,674	5,987	5,513	5,833	5,440	5,741
Employed	a	5,393	5,667	5,323	5,609	5,258	5,515
Agriculture	d	465	519	483	531	505	558
Non-agriculture	a	4,927	5,148	4,840	5,078	4,753	4,957
Unemployed	d	281	320	190	224	182	226
Not in the labour force	b	1,808	1,480	1,782	1,446	1,673	1,355

Participation rate (3)	a	75.8	80.2	75.6	80.1	76.5	80.9
Unemployment rate (4)	d	5.0	5.3	3.4	3.8	3.3	3.9
<u>Women</u>							
Population 14 years of age and over(2)		7,617	7,601	7,424	7,408	7,236	7,220
Labour force	b	2,710	2,733	2,613	2,656	2,531	2,543
Employed	b	2,593	2,605	2,524	2,562	2,451	2,450
Agriculture	e	93	95	98	105	100	95
Non-agriculture	b	2,500	2,510	2,426	2,457	2,351	2,355
Unemployed	e	117	128	89	94	80	93
Not in the labour force	a	4,907	4,868	4,811	4,752	4,705	4,677

Participation rate (3)	b	35.6	36.0	35.2	35.9	35.0	35.2
Unemployment rate (4)	e	4.3	4.7	3.4	3.5	3.2	3.7

(1) "S.D." = Standard deviation. For explanation, see "Reliability of Estimates", page 8.

(2) Excludes inmates of institutions, members of the armed services, Indians living on reserves and residents of the Yukon and Northwest Territories.

(3) The labour force as a percentage of the population 14 years of age and over.

(4) The unemployed as a percentage of the labour force.

Note: With the exception of Table 2, all statistics refer to a specific week, the last day of which is indicated.

Note: Due to the introduction of revised weighting factors in March 1965, small adjustments have been made to estimates published before that time. See the March 1965 edition of this report, page 8.

Table 2 Annual averages, 1946-1969		S.D. (1)	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959		
Population 14 years of age and over (2)			14,638	14,264	13,874	13,475	13,128	12,817	12,536	12,280	12,053	11,831	11,605		
Labour force	a		8,162	7,919	7,694	7,420	7,141	6,933	6,748	6,615	6,521	6,411	6,242		
Employed	a		7,780	7,537	7,379	7,152	6,862	6,609	6,375	6,225	6,055	5,965	5,870		
Agriculture	d		535	546	559	544	594	630	649	660	681	683	700		
Non-agriculture	a		7,245	6,992	6,820	6,609	6,268	5,979	5,726	5,565	5,374	5,282	5,170		
Unemployed	d		382	382	315	267	280	324	374	390	466	446	372		
Not in the labour force	a		6,475	6,344	6,179	6,055	5,986	5,884	5,787	5,665	5,531	5,420	5,363		
Participation rate(3)	a		55.8	55.5	55.5	55.1	54.4	54.1	53.8	53.9	54.1	54.2	53.8		
Unemployment rate (4)	d		4.7	4.8	4.1	3.6	3.9	4.7	5.5	5.9	7.1	7.0	6.0		
			1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946
Population 14 years of age and over (2)			11,388	11,123	10,807	10,597	10,391	10,164	9,956	9,732	9,615	9,268	9,141	9,007	8,779
Labour force			6,137	6,008	5,782	5,610	5,493	5,397	5,324	5,223	5,163	5,055	4,988	4,942	4,829
Employed			5,706	5,731	5,585	5,364	5,243	5,235	5,169	5,097	4,976	4,913	4,875	4,832	4,666
Agriculture			718	748	777	819	878	858	891	939	1,018	1,077	1,096	1,122	1,186
Non-agriculture			4,988	4,983	4,808	4,546	4,365	4,377	4,278	4,158	3,958	3,837	3,779	3,711	3,480
Unemployed			432	278	197	245	250	162	155	126	186	141	114	110	163
Not in the labour force			5,250	5,115	5,025	4,987	4,898	4,767	4,632	4,509	4,453	4,213	4,153	4,065	3,950
Participation rate(3)			53.9	54.0	53.5	52.9	52.9	53.1	53.5	53.7	53.7	54.5	54.6	54.9	55.0
Unemployment rate (4)			7.0	4.6	3.4	4.4	4.6	3.0	2.9	2.4	3.6	2.8	2.3	2.2	3.4

Table 3 Age, sex, and marital status Week ended September 19, 1970	Total	14-19 years all persons	20-64 years				65 years and over all persons
			Men		Women		
			Married	Other	Married	Other	
Population 14 years of age and over(2)	15,099	2,501	4,262 a	1,218 b	4,372 a	1,166 c	1,580
Labour force	8,384 a	789 c	4,080 a	975 c	1,530 c	793 c	216 d
Employed	7,986 a	691 c	3,949 a	884 c	1,492 c	760 c	210 d
Unemployed	398 d	98 e	132 d	91 e	38 f	33 f	6 g
Not in the labour force	6,715 a	1,712 b	182 d	243 d	2,842 b	372 d	1,364 a
Participation rate (3) - 1970, Sept. 19	55.5 a	31.5 c	95.7 a	80.0 a	35.0 c	68.0 b	13.7 d
Aug. 22	57.9	45.0	96.1	87.8	33.2	67.9	13.3
Unemployment rate (4) - 1970, Sept. 19	4.7 d	12.4 e	3.2 d	9.3 e	2.5 f	4.2 f	2.8 g
Aug. 22	5.1	10.0	3.3	10.1	3.0	5.1	3.3

(1) (2) (3) (4) See footnotes on opposite page.

Note: a) The alphabetic symbol following each estimate in table 3 indicates its standard deviation. For explanation, see "Reliability of Estimates", page 8.

b) Newfoundland included in estimates only from 1950.

Canada, Employed

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(Estimates in thousands)

Note: Due to the introduction of revised weighting factors in March 1965, small adjustments have been made to estimates published before that time. See the March 1965 edition of this report, page 8.

Table 4 Summary	S.D. (1)	1970		1969		1968	
		Sept. 19	August 22	Sept. 20	August 23	Sept. 21	August 24
Total employed	a	7,986	8,272	7,847	8,171	7,709	7,965
Agriculture	d	558	614	581	636	605	653
Non-agriculture	a	7,428	7,658	7,266	7,535	7,104	7,312
Employed, non-agriculture	a	7,428	7,658	7,266	7,535	7,104	7,312
Usually work 35 hours or more	a	6,584	6,928	6,482	6,873	6,381	6,706
At work 35 hours or more	a	6,024	5,606	5,961	5,603	5,884	5,544
At work less than 35 hours, or not at work	c	559	1,322	521	1,270	497	1,162
Due to economic reasons(2)	e	73	82	68	83	65	79
Due to other reasons(3)	c	487	1,240	453	1,187	432	1,083
Usually work less than 35 hours	c	844	730	784	662	723	606

Table 5 Industry	S.D. (1)	1970		1969		1968	
		Sept. 19	August 22	Sept. 20	August 23	Sept. 21	August 24
Total employed	a	7,986	8,272	7,847	8,171	7,709	7,965
Agriculture	d	558	614	581	636	605	653
Other primary industries	d	231	250	218	243	235	249
Manufacturing	c	1,803	1,849	1,821	1,909	1,805	1,835
Construction	c	520	546	531	558	513	546
Transportation and other utilities	c	703	727	702	725	682	702
Trade	c	1,330	1,354	1,260	1,320	1,238	1,297
Finance, insurance, real estate	d	363	362	362	377	317	335
Community, personal, other services	c	1,999	2,046	1,927	1,906	1,858	1,860
Public administration	c	480	525	445	497	456	488

Note: Since late 1962, statistics in Table 5 have been published on a 3-month average basis. However since January 1966, it has been possible to provide monthly estimates of the employed by industry. Accordingly, beginning with the February 1968 report, the statistics in Table 5 refer to the monthly reference periods. Industry estimates on the 3-month average basis are available on request from the Special Surveys Division.

Table 6 Class of worker, agriculture and non-agriculture, and sex Week ended September 19, 1970	Total	Paid workers	Own account workers	Employers	Unpaid family workers
Total employed	7,986 a	6,896 a	532 c	357 c	202 d
Agriculture	558 d	115 e	258 d	55 f	130 e
Non-agriculture	7,428 a	6,780 a	273 d	302 d	72 e
Men	5,393 a	4,540 a	455 c	324 c	73 d
Agriculture	465 d	96 e	253 d	53 f	64 e
Non-agriculture	4,927 a	4,444 a	203 d	271 d	10 f
Women	2,593 b	2,355 b	76 e	33 e	129 d
Agriculture	93 e	19 f	6 g	2 g	66 e
Non-agriculture	2,500 b	2,336 b	71 e	31 e	63 e

(1) "S.D." = Standard deviation. For explanation, see "Reliability of Estimates", page 8.

(2) Economic reasons for not working 35 hours or more include short time, layoff for part of the week and termination or start of employment during the week.

(3) Other reasons for not working 35 hours or more include illness, bad weather, industrial dispute, vacation, and reasons such as a statutory holiday in the week.

Note: The alphabetic symbol following each estimate in table 6 indicates its standard deviation. For explanation, see "Reliability of Estimates", page 8.

Note: Due to the introduction of revised weighting factors in March 1965, small adjustments have been made to estimates published before that time. See the March 1965 edition of this report, page 8.

Table 7 Unemployed	S.D. (1)	1970		1969		1968	
		Sept. 19	August 22	Sept. 20	August 23	Sept. 21	August 24
Total unemployed	d	398	448	279	318	262	319
Without work and seeking work	d	381	426	265	298	249	300
Seeking full-time work	d	358	397	249	275	234	275
Seeking part-time work	f	23	29	16	23	15	25
On temporary layoff up to 30 days	f	17	22	14	20	13	19

Without work and seeking work	d	381	426	265	298	249	300
Seeking under 1 month	d	112	97	88	86	83	82
Seeking 1-3 months	d	130	184	100	115	91	131
Seeking 4-6 months	e	61	65	30	36	38	38
Seeking more than 6 months	e	78	79	47	61	37	49

Table 8 Regional distributions Week ended September 19, 1970		Canada	Atlantic region	Quebec	Ontario	Prairie region	British Columbia
Population 14 years of age and over		15,099	1,388	4,304	5,434	2,427	1,546
Men		7,482	688	2,122	2,681	1,222	769
Women		7,617	700	2,182	2,753	1,205	777
Labour force		8,384 a	671 b	2,333 b	3,111 a	1,394 b	875 b
Men		5,674 a	463 b	1,609 a	2,069 a	943 a	590 b
Women		2,710 b	208 c	724 c	1,042 c	451 c	285 d
Employed		7,986 a	636 b	2,186 b	2,997 a	1,350 b	817 b
Men		5,393 a	435 b	1,502 b	1,994 a	914 b	548 b
Women		2,593 b	201 c	684 c	1,003 c	436 c	269 d
Agriculture		558 d	28 e	111 e	140 e	257 d	23 f
Non-agriculture		7,428 a	607 b	2,075 b	2,857 b	1,093 c	795 c
Paid workers		6,896 a	555 c	1,904 b	2,689 b	1,020 b	727 c
Men		4,540 a	372 c	1,289 b	1,752 b	647 b	479 b
Women		2,355 b	183 c	615 c	937 c	372 c	248 d
Unemployed		398 d	35 e	147 e	114 e	44 e	58 e
Men		281 d	28 e	107 e	75 e	29 e	42 e
Women		117 e	7 f	40 f	39 e	15 g	16 f
Not in the labour force		6,715 a	717 b	1,971 b	2,323 b	1,033 b	671 c
Men		1,808 b	225 c	513 c	612 c	279 c	179 c
Women		4,907 a	492 b	1,458 b	1,711 b	754 b	492 c

Employed	1970, September 19	7,986 a	636 b	2,186 b	2,997 a	1,350 b	817 b
	August 22	8,272	661	2,237	3,128	1,407	839
	1969, September 20	7,847	624	2,153	2,934	1,330	806
	August 23	8,171	651	2,257	3,056	1,381	826
	1968, September 21	7,709	630	2,151	2,859	1,311	758
	August 24	7,965	647	2,203	2,981	1,346	788

Unemployed	1970, September 19	398 d	35 e	147 e	114 e	44 e	58 e
	August 22	448	39	171	124	50	64
	1969, September 20	279	32	124	68	22	33
	August 23	318	38	138	83	26	33
	1968, September 21	262	28	99	73	26	36
	August 24	319	35	124	89	31	40

(1) "S.D." = Standard deviation. For explanation, see "Reliability of Estimates", page 8.

Note: The alphabetic symbol following each estimate in table 8 indicates its standard deviation. For explanation, see "Reliability of Estimates", page 8.



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Reliability of Estimates

(a) Sampling Error

The estimates in this report are based on a sample of households. Somewhat different figures might have been obtained if a complete census had been taken using the same questionnaires, interviewers, supervisors, processing, etc. as those actually used in the Labour Force Survey. This difference is called the sampling error of the estimates. In the design and processing of the Labour Force Survey extensive efforts have been made to minimize the sampling error. The sampling error (expressed as a per cent of the estimate it refers to) is not the same for all estimates; of two estimates the larger one will likely have a smaller per cent sampling error and of two estimates of the same size the one referring to a characteristic more evenly distributed across the country will tend to have a smaller per cent sampling variability. Also, estimates relating to age and sex are usually more reliable than other estimates of comparable size.

than 0.5% of the estimate, the letter "b" indicates that the standard deviation is between 0.6% and 1.0% of the estimate and so on as shown in the table below.

Alphabetic designation of per cent standard deviations

Alphabetic indicator	Per cent standard deviation
a	0.0% - 0.5%
b	0.6% - 1.0%
c	1.1% - 2.5%
d	2.6% - 5.0%
e	5.1% - 10.0%
f	10.1% - 15.0%
g	15.1% -

(b) Non-sampling Errors

Errors, which are not related to sampling, may occur at almost every phase of a survey operation. Interviewers may misunderstand instructions, respondents may make errors in answering questions, the answers may be incorrectly entered on the questionnaires and errors may be introduced in the processing and tabulations of the data. All these errors are called non-sampling errors. Some of the non-sampling errors will usually balance out over a large number of observations but systematically occurring errors will contribute to biases. Non-sampling errors can be reduced by a careful design of questionnaires, intensive training and supervision of interviewers and a thorough control of the processing operation. In general, the more personal and more subjective inquiries are subject to larger errors. Also, data referring to persons with less stable labour force status will have relatively large non-sampling errors.

The actual standard deviation of an estimate is not the same each month. Since the standard deviations of the current estimates are not available at the time when this report is published, the alphabetic indicators are based on the average standard deviations during the last year. They should, therefore, be interpreted only as indications of the order of magnitude of the standard deviations.

(d) Standard Deviation of Month-to-Month Changes

A rough upper limit for the standard deviation of the difference (change) between two estimates referring to two months up to a year apart may also be indicated using the table above. For most characteristics published in this report the standard deviation of the difference between two estimates is likely to be somewhat smaller than the standard deviation of the smaller of the two estimates or in the immediately preceding range.

(c) Alphabetic Indicators of Standard Deviation

The sampling error, as described under (a) is not known. A quantity, called the standard deviation, can however be estimated from sample data itself. The standard deviation of an estimate is a statistical measure of its sampling error. It also partially measures the effect on non-sampling errors, but does not reflect any systematic biases in the data. The chances are about 68 out of 100 that the difference between a sample estimate and the corresponding census figure would be less than the standard deviation. The chances are about 95 out of 100 that the difference would be less than twice the standard deviation and about 99 out of 100 that it would be less than 2 1/2 times as large.

For example, suppose that a hypothetical estimate in May and June was 513,000 and 625,000 respectively and the per cent standard deviation of both estimates was indicated by the letter "c", i.e. it was between 1.1% and 2.5%. The difference between the May and June estimates (112,000) would, therefore, have a standard deviation which would likely be smaller than 2.5% of 513,000, i.e. it would likely be smaller than 12,800.

(e) Current Estimates of Standard Deviations

Standard deviations are computed monthly for several estimates and month-to-month changes. These are available usually in a few weeks after the publication of this report and can be obtained on request. Beginning with 1966, an annual report on the standard deviations during the last year will be released.

The standard deviations of the estimates, expressed as a per cent of the estimates, are indicated by letters. The letter "a" indicates that the standard deviation is smaller