

Labour Force Statistics

2008, July

Unemployment fell in July 2008

According to the Labour Force Survey of Statistics Finland, the number of **employed persons** in July was 2 622 000, or 27 000 higher than a year earlier. Among wage and salary earners, the number of full-time employees increased and that of fixed-term or part-time employees decreased.

In July, the **employment rate**, that is, the proportion of the employed among persons aged 15 to 64, stood at 73,4 per cent, which was 0,5 percentage points higher than one year previously. The employment rate of men was 75,5 per cent and that of women 71,2 per cent. Adjusted for seasonal and random variation, the trend of the employment rate was 70,8 per cent.

According to the Labour Force Survey, there were 144 000 **unemployed** in July 2008, i.e. 17 000 fewer than in July of the year before. At 5,2 per cent, the **unemployment rate** was 0,6 percentage points lower than one year earlier. The trend of the unemployment rate was 6,4 per cent in July.

The rate of unemployment was lowest in the Province of Southern Finland, where it stood at 4,0 per cent, and highest in the Province of Lapland, at 8,0 per cent. In July 2008, the unemployment rate among young people aged 15 to 24 was 9,8 per cent, which was 0,2 percentage points higher than in the previous year's July. The trend of the unemployment rate among young people was 16,4 per cent.

In the January to July period of 2008, the average number of employed persons was 2 538 000 persons, or 50 000 higher than in the respective period of 2007. The number of unemployed persons was 183 000, which is 16 000 fewer than in the January to July period of 2007.

Changes in the labour force 2008/07– 2007/07, thousand persons

	2008/07	2007/07	Change, % 2008/07 - 2007/07
Employed	2 622	2 595	1,0
Unemployed	144	161	-10,7
Labour force	2 766	2 756	0,4
Total persons not in labour force	1 239	1 225	1,2
			Percentage points
Employment rate, %	73,4	72,9	0,5
Unemployment rate, %	5,2	5,9	-0,6
Labour force participation rate, %	69,1	69,2	-0,2
Unrounded figures are used in the Change column. The data are collected according to the ILO/EU definition.			

Links: Press release connected to this statistical release (inclusive of data of Ministry of Employment and the Economy):

http://tilastokeskus.fi/ajk/tiedotteet/v2008/tiedote_021_2008-08-26_en.html

Contents

Appendix tables

1.1 Key indicators in the Labour Force Survey by sex 2008/07 - 2007/07.....	3
1.2 Population aged 15-74 by labour force status and sex 2008/07 - 2007/07.....	3
1.3 Population aged 15-74 by sex and age 2008/07 - 2007/07.....	4
2.1 Labour force participation rate by sex and age 2008/07 - 2007/07.....	4
2.2 Labour force by sex and age 2008/07 - 2007/07.....	5
3.1 Employment rate by sex and age 2008/07 - 2007/07.....	5
3.2 Employed persons by sex and age 2008/07 - 2007/07.....	6
3.3 Employed persons by status in employment 2008/07 - 2007/07.....	6
3.4 Employed persons by employer sector 2008/07 - 2007/07.....	6
3.5 Employed persons by province 2008/07 - 2007/07.....	6
3.6 Proportion of part-time employed persons in all employed persons by sex 2008/07 - 2007/07.....	7
3.7 Part-time employed persons by sex 2008/07 - 2007/07.....	7
4.1 Employees by type of employment relationship (%) 2008/07 - 2007/07.....	7
4.2 Employees by type of employment relationship 2008/07 - 2007/07.....	7
5.1 Unemployment rate by sex and age 2008/07 - 2007/07.....	8
5.2 Unemployed persons by sex and age 2008/07 - 2007/07.....	8
5.3 Unemployment rate by province 2008/07 - 2007/07.....	8
6.1 Seasonally adjusted trends 2008/07.....	9
Figures	
1.1 Employed persons, trend and original series.....	10
1.2 Employment rate, trend and original series.....	10
2.1 Unemployed persons, trend and original series.....	10
2.2 Unemployment rate, trend and original series.....	11
Quality Description: Labour force survey.....	12

Appendix tables

1.1 Key indicators in the Labour Force Survey by sex 2008/07 - 2007/07

Indicator		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		Per cent (%)	Per cent (%)	Per cent (%)	Percentage points (%)
Employment rate (population aged 15-64)	Both sexes	73,4	74,4	72,9	0,5
	Males	75,5	76,5	75,1	0,4
	Females	71,2	72,2	70,7	0,6
Unemployment rate	Both sexes	5,2	6,8	5,9	-0,6
	Males	4,5	6,3	5,0	-0,5
	Females	6,0	7,4	6,8	-0,8
Labour force participation rate	Both sexes	69,1	71,5	69,2	-0,2
	Males	71,4	74,4	71,6	-0,2
	Females	66,7	68,6	66,9	-0,1

1.2 Population aged 15-74 by labour force status and sex 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		1000 persons	1000 persons	1000 persons	Per cent (%)
Labour force status	Sex				
Population aged 15-74	Both sexes	4 006	4 004	3 981	0,6
	Males	2 004	2 003	1 991	0,7
	Females	2 002	2 001	1 991	0,6
Labour force	Both sexes	2 766	2 862	2 756	0,4
	Males	1 431	1 489	1 426	0,3
	Females	1 336	1 373	1 331	0,4
Employed	Both sexes	2 622	2 668	2 595	1,0
	Males	1 366	1 396	1 355	0,8
	Females	1 256	1 272	1 240	1,3
Unemployed	Both sexes	144	195	161	-10,7
	Males	64	93	71	-9,0
	Females	80	102	91	-12,1
Total persons not in labour force	Both sexes	1 239	1 141	1 225	1,2
	Males	573	513	565	1,5
	Females	666	628	660	1,0

1.3 Population aged 15-74 by sex and age 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		1000 persons	1000 persons	1000 persons	Per cent (%)
Sex	Age group				
Both sexes	15-74	4 006	4 004	3 981	0,6
	15-24	659	659	658	0,2
	25-54	2 115	2 116	2 121	-0,3
	55-74	1 231	1 229	1 203	2,4
	15-64	3 537	3 536	3 518	0,5
Males	15-74	2 004	2 003	1 991	0,7
	15-24	337	336	335	0,4
	25-54	1 074	1 076	1 076	-0,2
	55-74	593	591	580	2,4
	15-64	1 788	1 788	1 778	0,6
Females	15-74	2 002	2 001	1 991	0,6
	15-24	322	324	322	0,0
	25-54	1 042	1 040	1 045	-0,3
	55-74	638	638	623	2,4
	15-64	1 749	1 748	1 740	0,5

2.1 Labour force participation rate by sex and age 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		Per cent (%)	Per cent (%)	Per cent (%)	Percentage points (%)
Sex	Age group				
Both sexes	15-74	69,1	71,5	69,2	-0,2
	15-24	63,1	72,4	67,0	-3,9
	25-54	88,1	89,1	87,8	0,4
	55-74	39,5	40,7	37,8	1,7
	15-64	77,5	79,9	77,5	0,0
Males	15-74	71,4	74,4	71,6	-0,2
	15-24	60,6	69,9	65,4	-4,8
	25-54	91,0	92,2	91,0	0,0
	55-74	42,0	44,4	39,2	2,8
	15-64	79,1	81,7	79,1	0,0
Females	15-74	66,7	68,6	66,9	-0,1
	15-24	65,7	74,9	68,7	-3,1
	25-54	85,1	85,9	84,4	0,7
	55-74	37,2	37,2	36,5	0,8
	15-64	75,8	78,0	75,9	-0,1

2.2 Labour force by sex and age 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		1000 persons	1000 persons	1000 persons	Per cent (%)
Sex	Age group				
Both sexes	15-74	2 766	2 862	2 756	0,4
	15-24	416	477	441	-5,7
	25-54	1 864	1 886	1 861	0,1
	55-74	486	500	454	7,1
	15-64	2 740	2 825	2 727	0,5
Males	15-74	1 431	1 489	1 426	0,3
	15-24	204	234	219	-7,0
	25-54	977	993	979	-0,2
	55-74	249	263	227	9,6
	15-64	1 414	1 461	1 406	0,6
Females	15-74	1 336	1 373	1 331	0,4
	15-24	212	242	221	-4,4
	25-54	887	893	882	0,5
	55-74	237	237	227	4,5
	15-64	1 325	1 364	1 321	0,4

3.1 Employment rate by sex and age 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		Per cent (%)	Per cent (%)	Per cent (%)	Percentage points (%)
Sex	Age group				
Both sexes	15-74	65,5	66,6	65,2	0,3
	15-24	56,9	60,3	60,7	-3,7
	25-54	84,3	84,7	83,5	0,9
	55-74	37,6	39,0	35,4	2,2
	15-64	73,4	74,4	72,9	0,5
Males	15-74	68,2	69,7	68,1	0,1
	15-24	54,8	58,3	59,5	-4,7
	25-54	88,2	88,3	87,6	0,6
	55-74	39,6	42,4	36,7	2,9
	15-64	75,5	76,5	75,1	0,4
Females	15-74	62,7	63,5	62,3	0,4
	15-24	59,2	62,4	61,8	-2,6
	25-54	80,4	80,9	79,2	1,2
	55-74	35,8	35,8	34,2	1,6
	15-64	71,2	72,2	70,7	0,6

3.2 Employed persons by sex and age 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		1000 persons	1000 persons	1000 persons	Per cent (%)
Sex	Age group				
Both sexes	15-74	2 622	2 668	2 595	1,0
	15-24	375	397	399	-5,9
	25-54	1 784	1 792	1 770	0,8
	55-74	463	479	426	8,8
	15-64	2 597	2 631	2 565	1,2
Males	15-74	1 366	1 396	1 355	0,8
	15-24	185	195	200	-7,6
	25-54	947	950	942	0,4
	55-74	235	251	213	10,4
	15-64	1 351	1 368	1 335	1,1
Females	15-74	1 256	1 272	1 240	1,3
	15-24	191	202	199	-4,2
	25-54	837	841	828	1,1
	55-74	228	228	213	7,2
	15-64	1 246	1 263	1 230	1,3

3.3 Employed persons by status in employment 2008/07 - 2007/07

	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	1000 persons	1000 persons	1000 persons	Per cent (%)
Status in employment				
Employed persons total	2 622	2 668	2 595	1,0
Self-employed persons and unpaid family workers	314	334	313	0,4
Employees	2 308	2 334	2 282	1,1
-salaried employees	1 482	1 441	1 424	4,1
-wage earners	818	883	854	-4,1

3.4 Employed persons by employer sector 2008/07 - 2007/07

	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	1000 persons	1000 persons	1000 persons	Per cent (%)
Employer sector				
Employer sector total (incl. employer sector unknown)	2 622	2 668	2 595	1,0
Private sector	1 942	1 975	1 918	1,2
Public sector	672	674	674	-0,2
-state	158	167	166	-4,9
-municipality	514	507	508	1,3

3.5 Employed persons by province 2008/07 - 2007/07

	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	1000 persons	1000 persons	1000 persons	Per cent (%)
Province				
Whole country (incl. Åland)	2 622	2 668	2 595	1,0
Southern Finland	1 139	1 168	1 128	0,9
Western Finland	928	926	912	1,8
Eastern Finland	246	258	252	-2,4
Oulu	214	222	211	1,3
Lapland	80	79	77	3,8

3.6 Proportion of part-time employed persons in all employed persons by sex 2008/07 - 2007/07

	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	Per cent (%)	Per cent (%)	Per cent (%)	Percentage points (%)
Sex				
Both sexes	10,4	11,3	12,2	-1,7
Males	6,7	8,4	7,9	-1,2
Females	14,6	14,5	16,8	-2,3

3.7 Part-time employed persons by sex 2008/07 - 2007/07

	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	1000 persons	1000 persons	1000 persons	Per cent (%)
Sex				
Both sexes	274	301	316	-13,3
Males	91	117	107	-15,0
Females	183	184	209	-12,4

4.1 Employees by type of employment relationship (%) 2008/07 - 2007/07

Employment relationship	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	Per cent (%)	Per cent (%)	Per cent (%)	Percentage points (%)
Employees total	100,0	100,0	100,0	0,0
-permanent full-time job	74,7	73,1	72,0	2,7
-permanent part-time job	6,7	6,7	7,4	-0,7
-fixed-term full-time job	15,3	16,4	16,7	-1,4
-fixed-term part-time job	3,2	3,8	3,8	-0,7
Fixed-term job total	18,5	20,2	20,6	-2,1
Part-time job total	9,9	10,5	11,3	-1,4

4.2 Employees by type of employment relationship 2008/07 - 2007/07

Employment relationship	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	1000 persons	1000 persons	1000 persons	Per cent (%)
Employees total	2 308	2 334	2 282	1,1
-permanent full-time job	1 725	1 706	1 643	5,0
-permanent part-time job	155	156	169	-8,2
-fixed-term full-time job	354	384	382	-7,4
-fixed-term part-time job	73	88	88	-16,6
Fixed-term job total	427	472	470	-9,1
Part-time job total	228	244	257	-11,1

5.1 Unemployment rate by sex and age 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		Per cent (%)	Per cent (%)	Per cent (%)	Percentage points (%)
Sex	Age group				
Both sexes	15-74	5,2	6,8	5,9	-0,6
	15-24	9,8	16,7	9,5	0,2
	25-54	4,3	5,0	4,9	-0,6
	55-74	4,7	4,2	6,2	-1,5
	15-64	5,2	6,9	5,9	-0,7
Males	15-74	4,5	6,3	5,0	-0,5
	15-24	9,6	16,6	9,0	0,6
	25-54	3,1	4,3	3,8	-0,6
	55-74	5,6	4,6	6,2	-0,6
	15-64	4,5	6,4	5,0	-0,5
Females	15-74	6,0	7,4	6,8	-0,8
	15-24	9,9	16,7	10,1	-0,2
	25-54	5,6	5,8	6,1	-0,5
	55-74	3,9	3,8	6,2	-2,4
	15-64	6,0	7,4	6,9	-0,9

5.2 Unemployed persons by sex and age 2008/07 - 2007/07

		Year/Month			Change
		2008/07	2008/06	2007/07	2008/07 - 2007/07
		1000 persons	1000 persons	1000 persons	Per cent (%)
Sex	Age group				
Both sexes	15-74	144	195	161	-10,7
	15-24	41	79	42	-3,5
	25-54	80	94	91	-11,7
	55-74	23	21	28	-18,4
	15-64	143	195	161	-11,3
Males	15-74	64	93	71	-9,0
	15-24	20	39	20	-0,4
	25-54	31	42	37	-16,6
	55-74	14	12	14	-1,2
	15-64	64	93	71	-9,7
Females	15-74	80	102	91	-12,1
	15-24	21	41	22	-6,2
	25-54	50	52	54	-8,4
	55-74	9	9	14	-35,5
	15-64	79	102	91	-12,5

5.3 Unemployment rate by province 2008/07 - 2007/07

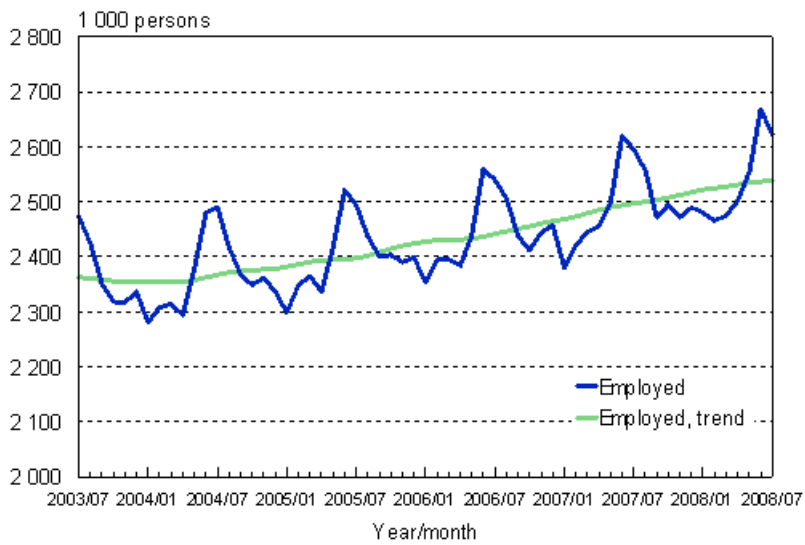
Province	Year/Month			Change
	2008/07	2008/06	2007/07	2008/07 - 2007/07
	Per cent (%)	Per cent (%)	Per cent (%)	Percentage points (%)
Whole country (incl. Åland)	5,2	6,8	5,9	-0,6
Southern Finland	4,0	5,6	4,6	-0,6
Western Finland	5,4	6,6	5,3	0,1
Eastern Finland	7,3	9,8	9,7	-2,4
Oulu	7,3	8,6	9,1	-1,8
Lapland	8,0	11,9	8,1	0,0

6.1 Seasonally adjusted trends 2008/07

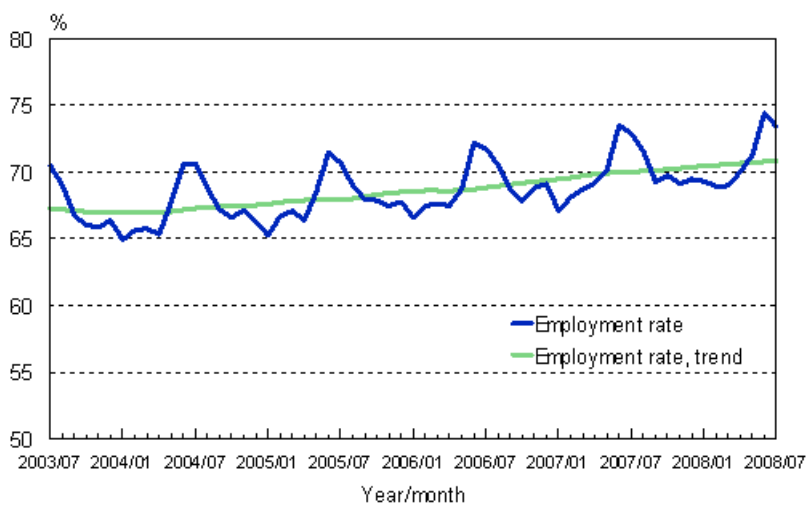
Year/Month	Employed	Unemployed	Unemployed job seekers (Ministry of Employment and the Economy)	Unemployment rate, aged 15–74	Unemployment rate, aged 15–24
	1000 persons	1000 persons	1000 persons	Per cent (%)	Per cent (%)
2006/07	2 441	204	249	7,8	18,6
2006/08	2 446	204	246	7,7	18,5
2006/09	2 451	204	243	7,7	18,4
2006/10	2 455	201	239	7,6	18,1
2006/11	2 460	195	236	7,4	17,5
2006/12	2 465	191	233	7,2	17,1
2007/01	2 468	190	230	7,2	17,2
2007/02	2 473	191	228	7,2	17,4
2007/03	2 479	189	225	7,0	17,2
2007/04	2 485	182	222	6,9	16,3
2007/05	2 490	178	220	6,8	15,7
2007/06	2 494	181	217	6,8	15,7
2007/07	2 497	183	215	6,9	15,9
2007/08	2 500	184	213	6,9	16,0
2007/09	2 503	184	212	6,9	16,2
2007/10	2 508	182	210	6,8	16,3
2007/11	2 512	179	208	6,7	16,2
2007/12	2 517	177	207	6,6	15,9
2008/01	2 522	173	205	6,4	15,4
2008/02	2 525	170	204	6,3	14,9
2008/03	2 528	168	203	6,2	14,6
2008/04	2 531	169	202	6,2	15,0
2008/05	2 534	172	201	6,3	15,7
2008/06	2 537	172	199	6,4	16,2
2008/07	2 539	168	198	6,4	16,4

Figures

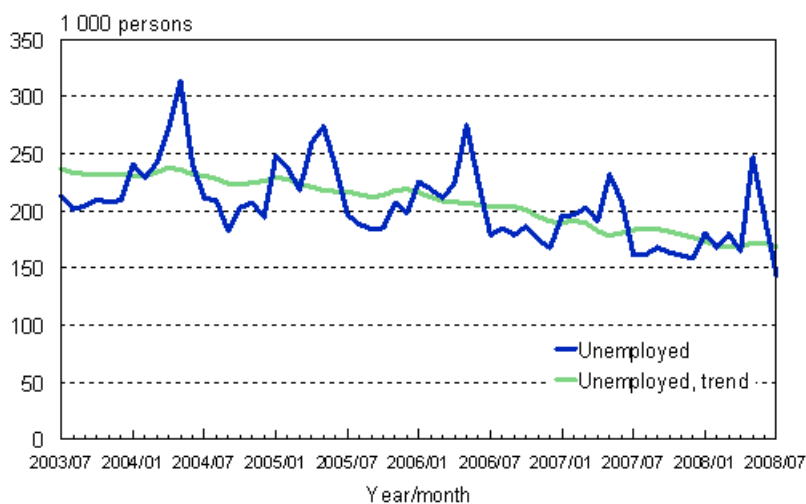
1.1 Employed persons, trend and original series



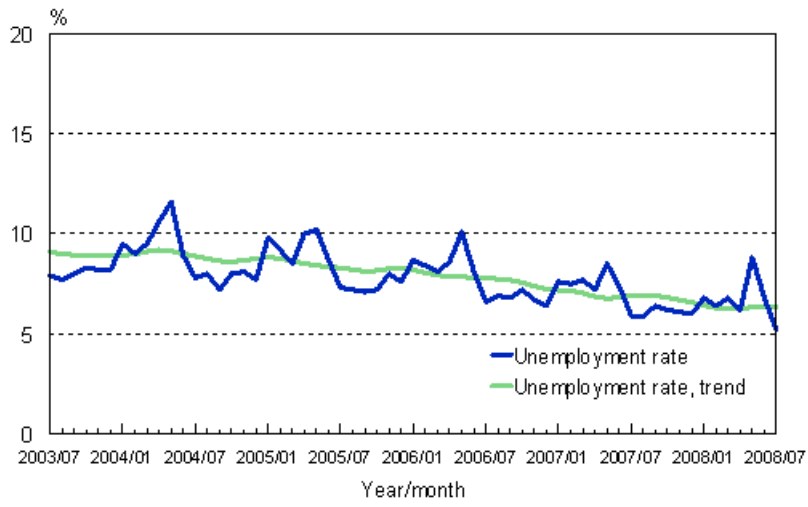
1.2 Employment rate, trend and original series



2.1 Unemployed persons, trend and original series



2.2 Unemployment rate, trend and original series



Quality Description: Labour force survey

1. Relevance of statistical information

The Labour Force Survey is a sample survey providing monthly, quarterly and annual statistics on participation in the labour market, employment, unemployment and working hours among the population aged between 15 and 74. Approximately 12,000 persons are interviewed each month about their labour market activities during one week. Based on the information given by the respondents, the survey provides an up-to-date and comprehensive picture of the labour force and changes in the labour market.

The results of the survey are used, inter alia, in preparing labour market projections and plans, as support for decision-making and in the follow-up of the employment effects of different measures. Key users of the results are ministries, authorities responsible for regional planning, employers' and employees' organisations, universities and research institutions, international organisations and the European Union. Statistics Finland uses the data, inter alia, in the compilation of the National Accounts. Public attention focuses each month especially on the changes in unemployment and employment from the corresponding month in the previous year.

The current data content of the Labour Force Survey is based mainly on the EU Regulation on the organisation of a labour force sample survey in the Community (Council Regulations No 577/98, 2257/2003 and 430/2005). More detailed information on the European Union Labour Force Survey is available at http://circa.europa.eu/irc/dsis/employment/info/data/eu_lfs/index.htm.

The Labour Force Survey mainly describes persons. Since 2003, information is obtained from a sub sample also on the structure of households and the activities of all working-age members of a household with regard to the labour market. Since 1999 a unified EU ad hoc- survey with annually changing topics has been conducted in connection with the Labour Force Survey.

The concepts and definitions used in the survey follow the recommendations of ILO, the International Labour Organisation of the UN, and the regulations of Eurostat, the Statistical Office of the European Communities. In the basic classification of the labour market situation, the population is divided into the employed, the unemployed and the economically inactive.

Definitions:

- A person is **employed** if he/she has during the survey week been in gainful employment at least one hour against wages or salary or fringe benefits, or to make profit, or has been temporarily absent from work. Persons absent from work during the survey week are classified as employed if (1) the reason for absence is maternity or paternity leave or (2) the absence has lasted less than three months or (3) he/she is paid a wage or salary or earnings-related benefit amounting to at least one-half of his/her normal wage or salary. (Points 2 and 3 were revised as from the beginning of 2008) The employed are divided into wage and salary earners, entrepreneurs and unpaid workers in a family member's enterprise.
- A person is **unemployed** if he/she is without work during the survey week, has actively sought employment in the past four weeks as a wage or salary earner or entrepreneur and would be available for work within two weeks. A person who is without work and waiting for an agreed job to start within three months is also classified as unemployed, if he/she could start work within two weeks. Persons laid off for the time being who fulfil the above-mentioned criteria on job seeking and availability for work are also classified as unemployed.
- The **labour force** comprises all persons aged between 15 and 74 who are employed or unemployed during the survey week.
- The **economically inactive population** consists of persons who are not employed or unemployed during the survey week. The economically inactive can also be described with the concept persons outside the labour force. For information on the other concepts used in the Labour Force Survey see: http://tilastokeskus.fi/til/tyti/kas_en.html.

Statistical classifications used in the Labour Force Survey include the Standard Industrial Classification (TOL 2002, ISIC REV 3.1), the Classification of Occupations 2001 (ISCO-88) and the Classification of Occupations 1987, the Classification of Socio-economic Groups 1989, the Classification of Education 1997 (ISCED 1997) as well as the regional classifications Major Region, Province, Region and Employment and Economic Development Centre.

2. Methodological description of the statistical survey

The population of the Labour Force Survey consists of persons aged between 15 and 74 who are permanent residents of Finland. The population includes also persons residing abroad temporarily (less than a year) as well as foreign nationals registered in the Finnish Population Information System who will reside in Finland at least one year (<http://www.vaestorekisterikeskus.fi/vrk/home.nsf/www/populationinformationsystem>). Information is delivered to Eurostat, the Statistical Office of the European Communities, also on persons younger than 15 and aged 75 or older (who are not interviewed). In the survey, age is determined on the basis of real age at the time of the interview. Hence a 14-year-old can belong to the sample but is included only after he/she has turned 15. Correspondingly the most aged persons are left out of the survey when they turn 75.

The sample of the Labour Force Survey is drawn twice a year as a stratified random sample from the Statistics Finland population database, which is based on the central population register. The survey is a panel survey in which one person is interviewed five times. The interviews are conducted every three months apart from the fourth interview, which is conducted six months after the third interview. The first and last interviews are 15 months apart. The sample in each month consists approximately of 12,000 persons, which is, on average, every 300th person from the population. The sample consists of five rotation groups which have joined the survey in different months. The sample changes gradually so that different persons answer the questions during three consecutive months. In consecutive quarters three-fifths of the respondents are the same. In consecutive years the overlap is two fifths.

Statistics Finland's interviewers collect the data with computer-assisted telephone interviews. In 2007 approximately 115,000 interviews were conducted. The non-response rate of the survey was 20.2 per cent on average.

The results from the sample are weighted to correspond to the entire population aged between 15 and 74. The effects of non-response on the results are corrected by using so called weight calibration, in which weighting is used to produce the correct population distributions by region, gender and age. Information of the Ministry of Employment and the Economy's job seeker register is also used as supplementary data.

The figures published in the Labour Force Survey, as figures collected with any sample survey, are so-called estimates. An estimate is an estimation of a quality of the population derived by applying a mathematical operation (estimation) to sample observations. For example, the number of the unemployed in 2008, which was 181,000 persons, is an estimate of the number of unemployed persons aged between 15 and 74 resulting from such a procedure.

Quarterly and annual estimates are averages of monthly estimates. Working days and working hours are estimated on the basis of the number of calendar days in the relevant month. Quarterly and annual estimates of working days and working hours are sums of monthly estimates.

The employment and unemployment numbers in the Labour Force Survey vary relatively regularly in different months of the year. Variation which occurs annually in similar ways has been removed from the so-called trends which are also published from the Labour Force Survey. The direction of long-term developments and cyclical variations are easier to see from a trend than from unadjusted monthly data. Due to the method used, the last data of the trend are revised somewhat when the data of the following month are inserted into the series. This preliminary nature of trends must be taken into account when drawing conclusions. As from June 2007, the trend components of the time series are calculated with the Tramo/Seats method recommended by Eurostat, the Statistical Office of the European Communities.

3. Correctness and accuracy of data

The reliability of the estimates of the Labour Force Survey is affected by non-response (see above), measurement error and random variation due to sampling.

Measurement errors arise, inter alia, due to the fact that questions can be understood or interpreted differently and respondents may not report some information. Developing the questionnaire and training the interviewers are measures used to contain measurement errors.

Random variation due to sampling means that figures calculated from different samples differ somewhat from each other. When evaluating roughly the magnitude of random variation due to sampling in different situations, the main principle is that **1) the larger the sample is from which the figures are calculated and 2) the larger the population described by the figures is, the less uncertainty due to sampling there will be in the figures.** For instance, quarterly figures are more accurate than monthly figures describing the same phenomenon, as quarterly data have been collected by interviewing thrice the number of persons than the monthly data. Annual figures are the most accurate. The second principle means that the figures of the employed and the unemployed, that is the estimates, based on a sample of the same size are the more accurate the larger the subgroup they apply to. As the relevant subgroup becomes smaller, random variation due to sampling increases. Therefore e.g. the numbers of the unemployed in different age groups or in different regions are not as reliable as the number of all the unemployed.

Inaccuracy due to sampling is assessed with the standard error of the estimate. The magnitude of the standard error is influenced by the size of the sample and the variance of the variable being investigated. Standard error can be used to calculate the **confidence interval**, within which the value of the population lies with a certain probability. The **95 per cent confidence interval** used in the Labour Force Survey **is the interval within which the real value of the property being investigated lies with a probability of 95 per cent.** For example, the confidence interval of the number of the unemployed in January 2008 is $181,000 \pm 15,000$, i.e. 166,000-196,000. The share to be added to the estimate or deducted from it, in this case 15,000, is obtained by multiplying the estimate's standard error, here 7,500 persons, with the coefficient of the 95 per cent confidence interval.

Examples of the accuracy of the number of the employed and the unemployed by size of subgroup

To illustrate the magnitude of random variation, examples of the estimates of different numbers of the employed and the unemployed, their 95 per cent confidence intervals and other key figures of reliability are presented in the following tables 1-3. The magnitude of random variation in the examples is a rough estimate of the upper boundary of random variation, when the figure being investigated is **a correspondingly large estimate of the number of the employed or the unemployed by gender, age or region.** In correspondingly large subgroups by industry, the confidence interval is wider. The examples in table 1 refer to monthly estimates. Tables 2-3 include the corresponding data for quarterly and annual estimates.

Table 1. Examples of the accuracy of monthly estimates of different sizes: the numbers of the employed and the unemployed by gender, age and region.¹⁾

	Monthly estimate	Monthly estimate's 95% confidence interval	Standard error	Relative standard error
	persons	persons	persons	%
Employed	2 400 000	± 27 800	14 200	0,6
	1 200 000	± 21 000	10 700	0,9
	600 000	± 15 300	7 800	1,3
	300 000	± 11 600	5 900	2,0
	100 000	± 6 700	3 400	3,4
	50 000	± 4 700	2 400	4,8
	10 000	± 2 900	1 500	15,0
Unemployed	230 000	± 15 100	7 700	3,3
	120 000	± 11 800	6 000	5,0
	90 000	± 10 800	5 500	6,1
	60 000	± 9 000	4 600	7,7
	30 000	± 6 900	3 500	11,7
	20 000	± 5 100	2 600	13,0
	10 000	± 3 700	1 900	19,0

1) The data can be used as indicative estimates of the accuracy of comparable numbers of the employed and unemployed by gender, age and region.

We can see from table 1 that if the monthly estimate of the employed in the subgroup is 300,000 persons, the real number of the employed lies, with a probability of 95 per cent, within the range 300,000 ± 11,600 persons. The size of this confidence interval relative to the size of the estimate is clearly larger than the corresponding share in the large estimate on the first row of the table. For estimates of less than 300,000 persons the confidence intervals are relatively even wider.

A comparison of data in tables 1–3 illustrates also that annual and quarterly data are more accurate than monthly data. The 95 per cent confidence interval corresponding to the estimate of the employed in a subgroup of 300,000 persons examined above, that is 300,000 ± 6,700 persons (table 2), is clearly narrower than the confidence interval of the monthly estimate. Annual estimates are even more accurate than quarterly estimates (table 3). This difference in accuracy is, however, not as large as the corresponding difference between monthly and quarterly data.

Table 2. Examples of the accuracy of quarterly estimates of different sizes: the numbers of the employed and the unemployed by gender, age and region.¹⁾

	Quarterly estimate	Quarterly estimate's 95% confidence interval	Standard error	Relative standard error
	persons	persons	persons	%
Employed	2 400 000	± 16 100	8 200	0,3
	1 200 000	± 12 500	6 400	0,5
	600 000	± 8 800	4 500	0,8
	300 000	± 6 700	3 400	1,1
	100 000	± 4 700	2 400	2,4
	50 000	± 3 900	2 000	4,0
	10 000	± 2 000	1 000	10,0
Unemployed	230 000	± 8 800	4 500	2,0
	120 000	± 6 900	3 500	2,9
	90 000	± 6 100	3 100	3,4
	60 000	± 5 100	2 600	4,3
	30 000	± 3 500	1 800	6,0
	20 000	± 3 100	1 600	8,0
	10 000	± 2 400	1 200	12,0

1) The data can be used as indicative estimates of the accuracy of comparable numbers of the employed and unemployed by gender, age and region.

Table 3. Examples of the accuracy of annual estimates of different sizes: the numbers of the employed and the unemployed by gender, age and region.¹⁾

	Annual estimate	Annual estimate's 95% confidence interval	Standard error	Relative standard error
	persons	persons	persons	%
Employed	2 400 000	± 15 700	8 000	0,3
	1 200 000	± 11 400	5 800	0,5
	600 000	± 7 800	4 000	0,7
	300 000	± 6 100	3 100	1,0
	100 000	± 3 300	1 700	1,7
	50 000	± 2 500	1 300	2,6
	10 000	± 800	400	4,0
Unemployed	230 000	± 7 100	3 600	1,6
	120 000	± 5 700	2 900	2,4
	90 000	± 4 500	2 300	2,6
	60 000	± 3 500	1 800	3,0
	30 000	± 2 400	1 200	4,0
	20 000	± 2 000	1 000	5,0
	10 000	± 1 600	800	8,0

1) The data can be used as indicative estimates of the accuracy of comparable numbers of the employed and unemployed by gender, age and region.

Statistical description of the reliability of estimation

The estimation procedure of the Labour Force Survey is based on the calibration of weights in which the original sample weights calculated on the basis of the sample design are adjusted with a regression model to get the desired population distributions.

The accuracy of estimates is evaluated on the basis of their standard error. **Standard error** (the square root of the sample variance) describes how neatly the value of the parameter estimated from the observations is concentrated around the parameter of the population. The magnitude of the standard error is affected by sample design, the number of observations in the relevant population or subgroup, variation due to the distribution of the research variable as well as properties of the mathematical formula.

Key figures of reliability derived from the standard error are the confidence intervals and relative standard error. **Confidence interval** describes the width of the range in which the real value of the parameter is relative to the estimate calculated from the sample. When calculating the confidence interval, the desired level of risk is fixed. The 5 per cent risk level applied in the Labour Force Survey means that if the samples were drawn again, in 95 cases out of one hundred the real value of the parameter would be within the confidence interval and in 5 cases out of one hundred it would be outside the confidence interval.

Relative standard error (coefficient of variation) is the percentage share of the standard error of the estimate. Proportioning the standard error to the estimate's size removes the effect of the scale of the variable. Hence the values of the relative standard error of different variables and the values of the standard error of the same variable in different subgroups are easy to compare with one another.

In the monthly and quarterly data of the Labour Force Survey, the estimator of the standard error is the variance estimator of the generalised regression estimator (GREG). The statistical accuracy of the annual estimates and its evaluation is also affected by the fact that the sample of the Labour Force Survey changes gradually during the year. In consecutive quarters 60 per cent of the respondents are the same. During one year 90 per cent of the interviewees have been interviewed at least twice. The responses given by the same persons in different interviews during the year correlate to one another if the person's labour market status does not change between interviews. To account for this correlation in variance estimation, the Labour Force Survey uses an approximation of single stage cluster sampling in which a within-cluster variance is calculated for persons interviewed several times during the year. Clusters are formed on the basis of interviewee's age. Within-cluster variance is zero if the interviewee's labour market status does not change during the year between different interviews.

For example, the standard error calculated for annual estimate of the unemployed in a subgroup of 230,000 persons is 3,600 persons and the confidence interval is 230,000 ± 7,100 persons. If the interviews on which the

annual estimate is based had all been with different persons, the standard error of the estimate of the unemployed had been 2,300 persons and the confidence interval $230,000 \pm 4,500$ persons. Interviewing the same persons again in different quarters of the year explains why the difference in the accuracy of the annual and quarterly data of the Labour Force Survey is not as big as could be expected on the basis of the number of interviews conducted.

4. Timeliness and promptness of published data

The results of the Labour Force Survey are released monthly, quarterly and annually. Quarterly and annual results are the averages of monthly results, i.e. they describe the situation on an "average" week during the survey period. Data on labour input are sums of the results of periods. The released data are final. Only seasonal adjustment slightly alters the latest seasonally adjusted monthly results.

Monthly data are released approximately three weeks from the end of the survey month. Quarterly data are released simultaneously with the last monthly data of each quarter. Quarterly data are statistically more reliable than monthly data and contain more detailed data, inter alia, employment and labour input by industry and more specific regional data. Quarterly deliveries of data are made to the EU, which are used to compile statistics on EU Member States. The most detailed data are released in the annual statistics which is finalised approximately six months from the end of the survey year.

5. Accessibility and transparency/clarity of data

The results of the Labour Force Survey are published in the Labour market series of the Official Statistics of Finland. The key monthly and quarterly results are released on predefined days in the Internet on the home page of the Labour Force Survey http://tilastokeskus.fi/til/tyti/index_en. The links on the home page lead, among other things, to a description of the statistics, concepts and definitions as well as the free of charge tables from the statistical databases of the Labour Force Survey (StatFin). Data are available over the Internet also from Statistics Finland's chargeable time series database (ASTIKA).

The annual publication of the labour force statistics contains a description of survey methodology, definitions of key concepts, descriptions of classifications used as well as the survey questionnaire. The tables of the annual publication are available also in electronic form. Statistics on the education of the labour force and occupational structure are published every other year also in the OSF Labour market series. In addition, Labour Force Survey data are published regularly in the Statistical Yearbook of Finland and the Bulletin of Statistics. Chargeable special compilations can be requested from the Labour Force Survey's information service.

Labour Force Survey data are not released outside Statistics Finland in identifiable form (Statistics Act 280/2004, Personal Data Act 523/1999). Data can only be released for purposes of scientific research and statistical study on the basis of a specific authorised permission and all the identifiers must be removed from it. The data files for the EU Labour Force Survey are delivered to Eurostat, the Statistical Office of the European Communities, without identifiers. Labour Force Survey data are protected according to the protection class defined in Statistics Finland's data protection guidelines.

Information service: tyovoimatutkimus@stat.fi and tel. +358 9 1734 2030.

6. Comparability of statistics

A monthly Labour Force Survey has been conducted since 1959. During this time the data content, data collection methods and methodology have been revised on several occasions. A comparable time series of the key data exists since 1989.

In the beginning, the survey with more limited data content was conducted as a postal inquiry. In 1976 the data contents expanded and methodology was modernised. During 1977–1993 the survey consisted of a monthly inquiry and supplementary annual interviews conducted over the telephone. The data collection of the monthly inquiry was changed in 1983 from a postal inquiry to a telephone interview, as a result of which non-response dropped from 30 to 4 per cent.

When Finland joined the European Union, the Labour Force Survey was harmonised with the EU Labour Force Survey. In the beginning, during 1995–1998, the EU Labour Force Survey data were collected as a separate

interview survey in the spring. The monthly survey was gradually revised to correspond to the EU Labour Force Survey. In 1997 the data content of the monthly survey was extended, the data collection became a computer-assisted telephone interview (CATI) and the concepts and definitions were harmonised to match the guidelines and recommendations of the European Union and the UN's International Labour Organization (ILO) better than before. The definition of an unemployed person was revised in May 1998 and the published time series were revised to correspond with the new definitions retroactively as from 1989 onwards.

In April 1999 the Labour Force Survey's data content extended again with the combining of the monthly survey and the EU Labour Force Survey into a single continuous Labour Force Survey. As from the beginning of the year 2000 the survey changed over into a continuous survey week, whereas previously data for each month had been collected on one survey week. This change-over affected data on working days and hours worked, which are not entirely comparable with earlier data as from the year 2000 onwards. As from the year 2003 the data content of the survey extended with the so-called household module, which is collected from a subsample.

As from the beginning of 2008 the data collection method and data content of the survey were revised, and the definitions of key concepts were made more accurate in accordance with the amendments of the EU regulations. (see http://tilastokeskus.fi/til/tyti/tyti_2008-02-19_men_001_en.html). These changes are expected to have only a small effect on key results.

7. Coherence and consistency/uniformity

In addition to the Labour Force Survey, Statistics Finland's statistics related to the labour market include the Job vacancy survey, the Quality of working life survey, statistics on labour disputes, statistics on accidents at work as well as an annual register-based employment statistics (RES).

Of these the RES provides data on the labour market activities of the population (http://tilastokeskus.fi/til/tyokay/index_en.html). Its data differ from those of the Labour Force Survey due to data collection methods and definitions of the employed and the unemployed. The RES is based on total data derived from the administrative data of different authorities. The RES data on a person's activities refer mainly to the last week in the year. Data on unemployment is based on the Ministry of Employment and the Economy's register of unemployed job seekers. The statistics are finalised in a good 1 ½ years, preliminary data are ready after roughly one year. Since employment statistics are total data, they offer better regional data (also data on municipalities) as well as better data on small population groups, e.g. small industries and occupations than the Labour Force Survey. The concepts of the employment statistics based on administrative registers are not internationally comparable.

Statistics Finland uses the Labour Force Survey data in the compilation of National Accounts. Because of this, among other things, the definitions of the key concepts in the Labour Force Survey such as population, employment, working hours, follow as closely as possible the recommendations of the national accounts (the UN System of National Accounts, SNA, and the European System of Accounts, ESA). The definition of the public sector used in the Labour Force Survey is somewhat different from the sectoral classification of the national accounts. In national accounts, conscripts are classified as employed, according to the ILO recommendation, whereas in the Labour Force Survey, conscripts are regarded as economically inactive.

The results of the Finnish Labour Force Survey published by Eurostat, the Statistical Office of the European Communities, differ from those published in Finland in that conscripts are not included in the Eurostat data. In most EU countries conscripts are not included in the target group of the Labour Force Survey, i.e. the so-called household population. This causes differences especially in the results concerning the 15 to 24-year-olds.

The Ministry of Employment and the Economy also publishes data on unemployed job seekers. The Ministry's data are based on the register based Employment Service Statistics, which describe the last working day of the month. The definition of unemployed applied in the Employment Service Statistics is based on legislation and administrative orders which make the statistical data internationally incomparable. In the Employment Service Statistics an unemployed person is not expected to seek work as actively as in the Labour Force Survey. There are differences also in the acceptance of students as unemployed.

Suomen virallinen tilasto
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Labour Market 2008

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