

## **Measurement of unemployment – a comparison of the new and the old Swedish Labour Force Survey (LFS)**

### **Introduction**

The Swedish LFS has been further harmonised in line with the EU's regulatory framework. In April 2005 the new Swedish LFS was introduced. The main change was the introduction of a new questionnaire.

The official Swedish definition of unemployment excludes the full-time students looking for work. This paper will deal with effects of the new questionnaire on the Swedish definition of unemployment and on the estimate of full-time students looking for work.

### **Measurement in the new LFS**

In the new LFS unemployment is measured according to what is stated in the annex to Commission regulation No 1897/2000. According to the regulation unemployed comprise persons who were:

- a) without work during the reference week, i.e. neither had a job nor were at work (for one hour or more) in paid employment or self-employment
- b) currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the end of the reference week
- c) actively seeking work, i.e. had taken specific steps in the four-week period ending with the reference week to seek paid employment or self-employment or who found a job to start later, i.e. within a period of at most 3 months.

The regulation also specifies in which order various questions are to be asked, i.e. the question on job search given to all persons without a job must not be preceded by a filter question.

There are two adaptations to the regulation that have had significant impact on the estimate of unemployment in the Swedish LFS. The first one is the exclusion of the filter question that preceded the question about search for employment. The second one concerns persons who have found a job to start later where the period has been prolonged from 1 to 3 months. The questions aimed to capture that variable have also been considerably changed.

### **The filter question**

In the old LFS the questions about search for employment were preceded by a filter question with the following wording "Would you have wished to have a job/an employment that particular week?" Respondents answering "no" to that question got no further questions about unemployment. In the

new LFS there is no filter question preceding the question about search for employment, which has the following wording: “Have you looked for work during the last 4 weeks, i.e. during the period .....? This also applies to work of only a few hours or self-employed work”.

*The effect of the exclusion of the filter question on unemployment according to the Swedish definition.*

The question about wish to work during the particular reference week is still in the questionnaire, but not as a filter for the job search question. By applying the condition formulated in that question, i.e. if the respondent would have wished to have a job/an employment that particular week, it is possible to estimate the effect of the exclusion of the filter question.

Table 1. Unemployed, Swedish definition, wished/did not wish to work the reference week. April and June 2005. New LFS. Thousands

Age	April 05		June 05			
	Unempl.	Wished	Did not wish	Unempl.	Wished	Did not wish
16-19	18	14	4	70	47	23
20-24	46	43	4	56	43	13
25-54	163	151	13	177	158	19
55-64	31	29	3	29	28	1
16-64	259	236	23	331	276	55
20-64	241	222	19	262	229	33

As can be calculated from table 1 about 9 percent of the unemployed in April did not wish to work during the reference week. In June that percentage increased to close to 17 percent and is highest in the younger age groups. That is probably due to students on summer vacation, which starts in the end of May/beginning of June, looking for a summer job or waiting for a summer job to start, but who for one reason or another did not wish to work the particular reference week. The next paragraph will deal with the effect on the unemployed full-time students.

*The effect of the exclusion of the filter question on unemployed full-time students*

The exclusion of the filter question has been of special importance for unemployed full-time students. Besides this the new questionnaire seems to give a higher estimate of involvement in education than the old questionnaire<sup>1</sup>. During the fourth quarter 2004 and first quarter 2005 a subsample was interviewed according to the new questionnaire which makes it possible to compare the new and the old LFS for the same period.

<sup>1</sup> The number of full-time students 20- 64 years of age irrespective of labour status were in a register study estimated to be about 364 000 persons in autumn term 2003, full-time students in labour market policy programmes excluded. The corresponding estimate for the new LFS Q4 2004 was 413 000, whereas in the old LFS estimated to 368 000. This indicates that the new LFS might be overestimating the number of full-time students, but as the compared periods are different it has to be further looked into.

The number of unemployed full-time students is higher in the new LFS, see table 2. It is especially striking in younger age groups.

Table 2. Unemployed full-time students. Numbers (thousands) and difference new LFS - old LFS in percentage.

Age	Q4 2004			Q1 2005		
	New LFS	Old LFS	Diff %	New LFS	Old LFS	Diff %
16-19	23	14	+64	34	20	+70
20-24	20	12	+67	23	14	+64
25-54	31	26	+19	40	28	+43
55-64	5	5	0	5	7	-29
16-64	79	57	+39	102	69	+48
20-64	55	43	+28	67	48	+40

By applying the condition formulated in the filter question, i.e. if the respondent would have wished to have a job/an employment the particular reference week, the difference between the new and the old LFS decreases substantially for the unemployed full-time students and is not statistically significant except for the age group 16-64 in Q1 2005, see table 3.

Table 3. Unemployed full-time students who wished to have a job during the particular reference week. Numbers (thousands) and difference new LFS - old LFS in percentage.

Age	Q4 2004			Q1 2005		
	New LFS	Old LFS	Diff %	New LFS	Old LFS	Diff %
16-19	20	14	+43	28	20	+40
20-24	16	12	+33	18	14	+29
25-54	29	26	+12	35	28	+25
55-64	5	5	0	5	7	-29
16-64	69	57	+21	86	69	+25
20-64	49	43	+14	58	48	+21

The effect of the exclusion of the filter question varies not only between different population groups but also between seasons. There are no parallel surveys for quarter 2 and 3 the year 2005, but as was mentioned earlier the question about wish to work during the particular reference week is still in the questionnaire.

Table 4. Unemployed full-time students. New LFS. Divided up by wished and did not wish to work during the reference week. Thousands

Age	April 05			June 05		
	Total	Wished	Did not wish	Total	Wished	Did not wish
	16-19	46	37	9	48	18
20-24	18	13	6	26	6	21
25-54	30	25	5	45	30	16
55-64	5	5	0	3	3	0
16-64	100	80	20	122	55	67
20-64	54	43	10	74	38	36

Table 4 illustrates the effect of the exclusion of the filter question. The exclusion has a major importance in June when the summer vacation is near, that is when full-time students might not have wished to take on work during the reference week, but very well might be able to do so before the end of the two weeks following the end of the reference week.

### Found a job to start later

The questions about search for employment start with two questions about “found a job to start later” and respondents who found a job to start within 3 months and fulfil the requirements a and b in the regulation, i.e. being without work and available for work are considered unemployed. The prolongation of the period from 1 to 3 months and probably also the new set of questions concerning this variable have had an impact on the estimates especially during the summer season.

*The effect of new questions about the variable “found a job to start later” on unemployment according to the Swedish definition.*

The estimate of unemployed persons who had found a job to start later is higher in the new LFS than in the old LFS. For Q4 2004 the estimate for new LFS is 9 000 persons, vis-à-vis 5 000 for the old LFS. For Q1 2005 the corresponding estimates are 10 000 persons, vis-à-vis 6 000 persons. The difference can both be an effect of the prolongation of the period from 1 month to 3 months and of the new questions concerning this variable. The comparison is made for persons who wished to have a job during the reference week.

The seasonal effect is easily seen from table 5. There is a peak in June for unemployed persons who found a job to start later, especially for the age group 16-24, which probably can be explained by students, no longer in the LFS recorded as such during their summer vacation, waiting for jobs they have found to start later during their summer holiday.

Table 5. Unemployed persons who found a job to start later (within 3 months). Swedish definition, i.e. full-time students are excluded. April-July 2005. Thousands

Age	Wished to work during reference week				Did not wish to work during reference week			
	April	May	June	July	April	May	June	July
16-19	1	0	7	6	1	1	16	4
20-24	5	2	5	3	2	2	8	7
25-54	7	7	10	7	7	3	11	12
55-64	1	1	2	0	2	0	0	2
16-64	14	10	23	17	11	7	34	25
20-64	13	10	16	11	10	6	18	21

*The effect of new questions about the variable "found a job to start later" on unemployed full-time students.*

For unemployed full-time students there is also a peak in June and most of them did not wish to work the particular reference week, but were probably waiting for their summer break to start, two weeks later.

Table 6. Unemployed full-time student who found a job to start later (within 3 months). 2005. Thousands

Age	Wished to work during reference week				Did not wish to work during reference week			
	April	May	June	July	April	May	June	July
16-19	3	5	3	1	3	5	16	0
20-24	2	3	0	0	2	6	13	0
25-54	1	1	2	1	1	4	9	0
55-64	0	0	0	0	0	0	0	0
16-64	7	9	5	2	5	15	38	1
20-64	4	4	2	1	3	10	22	1

### Decomposition of the measure of unemployment

To summarize what has been shown in the earlier paragraphs the unemployment is broken down into its components. Table 7a-b shows the components of the Swedish definition of unemployment and table 8a-b shows the components of the unemployed full-time students.

Table 7a. Unemployed, Swedish definition, broken down in components. April-Aug 2005. Thousands.

	April	May	June	July	Aug
A Found a job to start within 3 months and wished to work during the reference week	14	10	23	17	17
B Found a job to start within 3 months, but did not wish to work during reference week	11	7	34	25	13
C Was looking for a job during previous 4 weeks and wished to work during ref.w.	222	210	253	261	254
D Was looking for a job during previous 4 weeks, but did not wish to work during ref.w.	12	6	21	24	19
Total	259	233	331	327	304

Table 7b. Unemployed, Swedish definition, distributed by components A-D. April-Aug 2005. Percent

	April	May	June	July	Aug
	%	%	%	%	%
A Found a job to start within 3 months and wished to work during the reference week	5	4	7	5	6
B Found a job to start within 3 months, but did not wish to work during reference week	4	3	10	8	4
C Was looking for a job during previous 4 weeks and wished to work during ref.w.	86	90	76	80	84
D Was looking for a job during previous 4 weeks, but did not wish to work during ref.w.	5	3	6	7	6
Total	100	100	100	100	100

The core of the unemployed, according to the Swedish definition consists of persons in group C, i.e. persons who also wished to work during the particular reference week. In June and July the percentage that this group makes up of the total unemployment decreases considerably and both the numbers and the percentages of the groups B, D and A increases. In August the pattern looks more like in April and May.

If the wish question had still been used as a filter question the unemployment figure for April 2005 according to the Swedish definition would have been 5,3 percent instead of 5,8 percent. In June when the exclusion of the filter question has been of most importance it would have been 6,0 percent instead of 7,1 percent.

Table 8a. Unemployed full-time students, broken down in components. April-Aug 2005. Thousands

	April	May	June	July	Aug
A Found a job to start within 3 months and wished to work during the reference week	7	9	5	1	1
B Found a job to start within 3 months, but did not wish to work during reference week	5	15	38	1	2
C Was looking for a job during previous 4 weeks and wished to work during ref.w.	73	84	50	23	35
D Was looking for a job during previous 4 weeks, but did not wish to work during ref.w.	14	31	29	3	5
Total	99	139	122	29	43

Table 8b. Unemployed full-time students, distributed by components A-D. April-Aug 2005. Percent

	April	May	June	July	Aug
	%	%	%	%	%
A Found a job to start within 3 months and wished to work during the reference week	7	6	4	4	2
B Found a job to start within 3 months, but did not wish to work during reference week	5	11	31	4	5
C Was looking for a job during previous 4 weeks and wished to work during ref.w.	74	60	41	82	81
D Was looking for a job during previous 4 weeks, but did not wish to work during ref.w.	14	22	24	11	12
Total	100	100	100	100	100

The group C is the core group also among the unemployed full-time students. The percentage that this group makes up of the total of

unemployed full-time students decreases considerably in May and above all in June.

If the wish question had still been used as a filter question the number of unemployed full-time students would have been 93 000 in May instead of 139 000. In June the number would have been 55 000 instead of 122 000.

### Type of studies

Looking into what type of studies unemployed full-time students are pursuing, most of them are found in Upper secondary school, at University and in different types of Labour market policy programmes.

Table 9. Unemployed full-time students by type of studies. Q2 2005.  
New LFS.Thousands

Type of studies	Number
9-year compulsory school	3
Swedish tuition for immigrants	3
Upper secondary school	43
Municipal adult education	7
Folk high school	2
University/university college	28
Foreign education	..
Other education, <i>Advanced vocational education, Beckman's School, International Business School, RMI School of Communication, Pålman's Business Institute, seminary</i>	1
Labour market training through Public Employment Service	2
<b>Total in regular education</b>	<b>89</b>
Computer/activity center	2
Municipal Youth programmes	1
Youth Guarantee program for persons 20-24 years old	1
Employability Rehabilitation Programme	..
Activities within Councelling Guidance and Placement Service	4
Project with Employment Policy Orientation	9
Work Practice scheme	13
<b>Total in labour market policy education</b>	<b>30</b>
Other	1
<b>Total</b>	<b>120</b>

### Wished weekly working hours for unemployed full-time students

Unemployed full-time students who wished to work the particular reference week get a question about how many hours per week they would like to work. Their distribution by wished weekly working hours can be seen in table 10.

Table 10. Unemployed full-time students who wished to work the reference week by wished weekly working hours. Percent. Q2 2005

	1-14 hours	15-19	20-24	25-34	35-	Part. nr <sup>1</sup>	Sum	Total number
Regular education	27	8	16	5	42	2	100	47 100
Of which:								
Upper secondary school	37	12	16	6	27	1	100	24 700
University	25	4	16	2	53	0	100	9 800
Adult education, Folk high school, other	5	4	15	5	66	5	100	12 600
Labour market policy education	0	0	1	1	98	0	100	27 500

1) Partial nonresponse

Most of the full-time students in upper secondary school, and this is the biggest group in regular education, wished to work only a few hours per week. Of course there is a big difference between being an unemployed full-time students in upper secondary school, compared to other categories of unemployed persons. A majority though of the unemployed full-time students at university level wished to have a full-time job, and so did almost all of the persons in labour market policy education.

### Comparison of unemployment according to the Swedish definition and the EU-definition

The difference between the Swedish and the EU-definition of unemployment is that the unemployed full-time students are included in the EU-definition. There has of course always been a gap between the Swedish and the EU-definition of unemployment, but it used to be less for the months of May, June and July than for the other months of the year. The pattern might have changed to be the other way round, i.e. the difference will have its peak for May, June and July, see diagram 1 and 2.

Diagram 1:

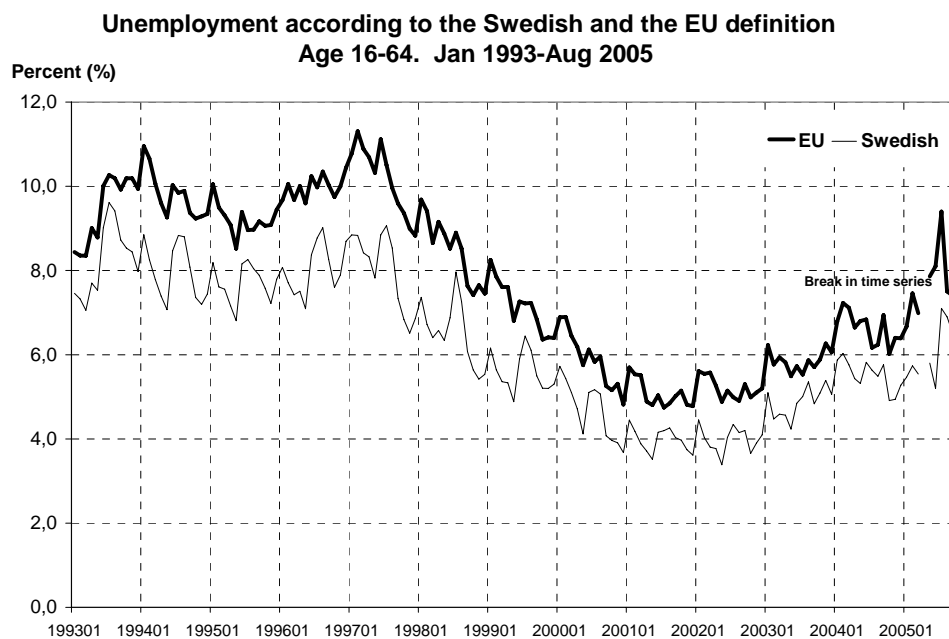
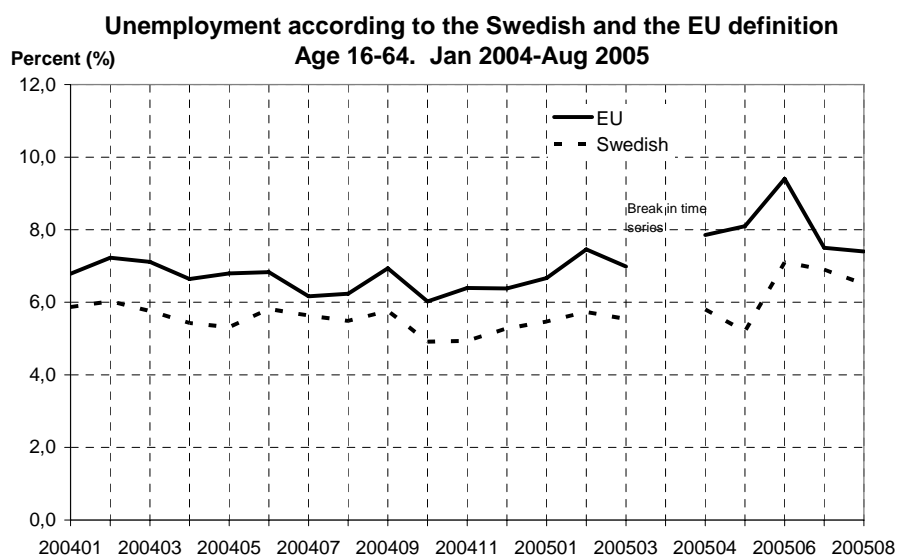


Diagram 2:



## Conclusions

The exclusion of the filter question and the change in the variable "found a job to start later" have had and will have an impact on the estimate of unemployment, both according to the Swedish definition of unemployment and the EU-definition, which contrary to the Swedish definition includes unemployed full-time students. The size of that impact varies substantially between seasons and between age groups. The exclusion of the filter question seems to have a greater impact than the change in the variable "found a job to start later".

If the filter question about wish to work the particular reference week, had still been used as a filter for the job search question the unemployment figure for April 2005 according to the Swedish definition would have been 5,3 percent instead of 5,8 percent. In June when the exclusion of the filter question has been of most importance it would have been 6,0 percent instead of 7,1 percent.

If the unemployed full-time students are included in the definition of unemployment (EU-definition) and the filter question had still been used, the unemployment according to the EU-definition would have been 7,0 percent in April 2005 instead of 7,9 percent. In June it would have been 7,1 percent instead of 9,4 percent.

The impact of the change of the variable "found a job to start later" can be estimated from the parallel surveys in the fourth quarter of 2004 and first quarter of 2005. The number of persons belonging to the group increased by around 80 percent (9 000 in the new LFS compared to 5 000 in the old LFS) for the fourth quarter of 2004. This variable has a strong seasonality and the prolongation of the period from 1 to 3 months is certainly important for that strong seasonality. Anyhow it is the exclusion of the filter question that has had the greatest importance for the peak in unemployment that has been noticed in the summer months, especially in June.