

Grey Areas of LFS Employment Calculation

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The Hungarian employment rate is one of the lowest among EU member states. A special grant offered by the EU provided a possibility for a deeper analysis of the problem fields, which could be caused by the most important non-survey-type differences. For Hungary it is extremely important to study the employment situation in agriculture because one third of the households perform some agricultural activity, but only 5 percent of the employed population work in the agricultural sector. A special study tried to find an answer to the question whether this second figure is true or false. The other investigated field was the real extent of student work.

KEYWORDS:

Labour force management.
Labour statistics.

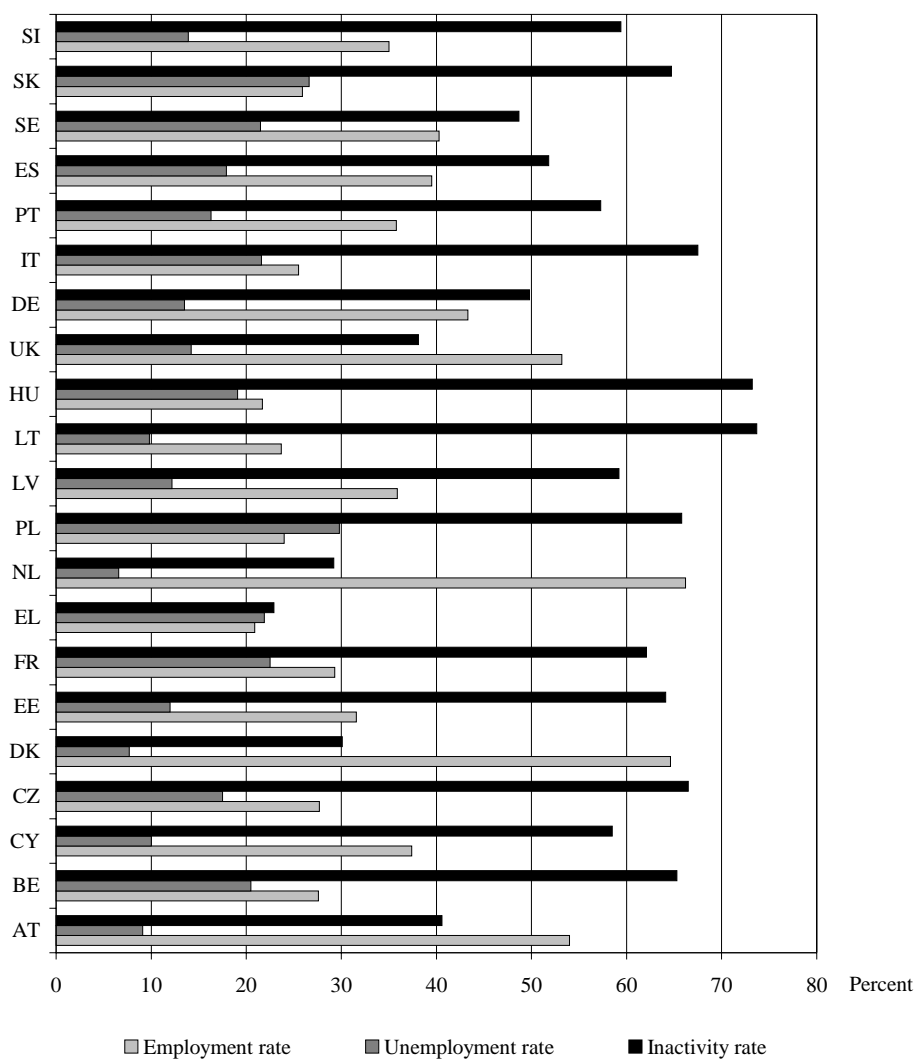
It is well known that Hungary is considered to be a rearguard regarding the level of the employed population aged 15–64 among EU member states. The reasons are known: the slowly and gradually increasing, traditionally low retirement age limit accompanied by the unfavourable health condition of the population is causing the low activity rate of people aged over 50; at the other end of the age scale, the population under 18 is retained in the schooling system indebted to the Act of Public Education, and nowadays the secondary school leavers continue their studies on day-time courses of tertiary education in greater shares than any other preceding generation; the labour market exclusion of the population of Roma and non-Roma people with low educational attainment developed in the 1990s was not only preserved but the phenomenon of inherited unemployment was appeared as well, that is to say, the young unemployed adult population looks on subsistence on benefits as a natural status.

The current study does not focus on these basic characteristics but on the fields, where the Labour Force Survey (LFS) – considered to be the main source of labour market data internationally – does not produce a true picture due to its methodology. Two main areas were studied in detail: the first was the work of full-time students and the second was the measuring problems of the agricultural activity of the non-employed. It was possible on the basis of LFS ad-hoc modules that have been covering these subjects in the recent years. An EU grant application on the grey zones of the labour market was announced for which Hungary applied with the previously mentioned topics. The current study is based on the summary report of this grant.

1. Student work – employed in full-time education

Capturing the labour market activity of students studying on day-time courses stands to be a weak point in employment measuring. The Hungarian Labour Force Survey (HLFS) indicates a low employment rate in international comparison for young people including full-time students. (See Figure 1.)

Figure 1. Labour market indicators of youth (aged 15–24) in some EU member states, 2006



Source: CLFS (Community Labour Force Survey).

This rate broadly reflects the situation well, because combining study and employment has not got long traditions in Hungary, but the employment rate of students may be higher than it is indicated by LFS. This notion is based on the following reasons:

– In Hungary proxy answers are also allowed during data collection in LFS like in most other countries carrying out the same survey. It means that questions regarding the economic activity of students can be answered by any adult member of the household. The rate of proxy interviews is outstandingly high among students residing and studying in other settlements. They are not present at the time of data collection but belong to the household according to the LFS methodology as a part of its income and consumption unit, so their data have to be recorded. (A sampling unit of the Hungarian LFS is a dwelling. Theoretically, a group of students renting a dwelling can be also selected in the sample but it has little chance and the positive response is not likely.) It is quite common in household surveys that personal questions are answered by a household member living in the dwelling. It is rarely a student.

Table 1

Types of interviews of the supplementary survey "Youth on the Labour Market"
(percent)

Age-group and sex	Supplementary survey questions answered by			No answer	Youth, total
	the respondent	another family member	together		
15–19					
Male	26.3	71.0	97.3	2.7	100.0
Female	29.5	67.1	96.6	3.4	100.0
Both sexes	27.9	69.1	96.9	3.1	100.0
20–24					
Male	28.8	67.2	96.1	3.9	100.0
Female	44.0	52.8	96.8	3.2	100.0
Both sexes	36.4	60.0	96.4	3.6	100.0
15–24					
Male	27.6	69.1	96.7	3.3	100.0
Female	37.0	59.7	96.7	3.3	100.0
Both sexes	32.3	64.4	96.7	3.3	100.0
25–29					
Male	36.5	55.3	91.7	8.3	100.0
Female	57.1	34.1	91.2	8.8	100.0
Both sexes	46.6	44.8	91.5	8.5	100.0

Source: HCSO, Supplementary Survey of LFS, Quarter 4, 2006.

– If the student is present during data collection and answers the question him/herself, it will not be sure whether he/she interprets the question regarding the one-hour income earning activity as an activity besides his/her student status.

– The “Number of employed persons” from LFS can be interpreted as an average value. The “Number of persons engaged in casual work” (typical for working pensioners and students) can be higher than it is indicated by LFS according to its otherwise correct methodology. Other available data sources such as the number of placements provide information on the number of persons involved in this activity. However, this data is not suitable to validate LFS based information.

The labour market position and employment characteristics of young people are considered to be a key priority in the Hungarian labour statistics. From the commencement of LFS, a youth ad hoc module is connected to the core survey by two-three years. In the module of the fourth quarter 2006 a separate block was dedicated to this topic to clear the issue of employment of students besides studying. (See Table 1.)

The target population was students aged 15–29 studying on day-time courses during the week of data collection. Figure 2 shows the corresponding question block.

Figure 2. Some questions of the youth ad hoc module questionnaire, Quarter 4, 2006

9.	Do you attend any kind of education, training, course, etc. presently? yes, full-time education (1) yes, but not full-time education (2) <input type="checkbox"/> no (3) <input type="checkbox"/>																																
	<input type="checkbox"/> GO TO QUESTION 13.!																																
10.	Did you work during your full time education? <input type="checkbox"/> APPRENTICESHIP AND VACATION WORK SHOULD BE EXCLUDED! yes, during school holiday and school year regularly (1) yes, during school holiday and school year casually (2) yes, during school year regularly (3) yes, during school year casually (4) yes, only during school holiday (5) no (6) <input type="checkbox"/>																																
	<input type="checkbox"/> GO TO QUESTION 13.!																																
11.	What type of work did you do during your full time education and how many hours a year? <input type="checkbox"/> FILL IN ALL OF THE ROWS BELOW! <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> IF THE ANSWER IS YES, PLEASE ESTIMATE THE NUMBER OF DAYS OR NUMBER OF HOURS WORKED. </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">yes(1)</th> <th style="text-align: center;">no(2)</th> <th style="text-align: center;">Number of days</th> <th style="text-align: center;">Number of hours</th> </tr> </thead> <tbody> <tr> <td>A. compulsory traineeship, vocational training</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>B. not compulsory traineeship, vocational training</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>C. work organised by school</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>D. work transmitted by fraternity</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>E. other work</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>				yes(1)	no(2)	Number of days	Number of hours	A. compulsory traineeship, vocational training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B. not compulsory traineeship, vocational training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C. work organised by school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	D. work transmitted by fraternity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	E. other work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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12.	Why did you work when participating formal education? Work to get own wage or salary (1) To spend free time (2) Work to get professional experience (3) Other reason (4) <input type="checkbox"/>																																

7.4 thousand young people of 846 thousand full-time students were qualified as employed according to the core questionnaire of the fourth quarter 2006. (More precisely, 7.4 thousand people considered to be employed reported themselves as studying on day-time courses during four consecutive weeks before the time of data collection.) This value equals to 8.7 thousand on an annual average in 2006 (the lowest value was measured in the fourth quarter and the highest was quantified in the third quarter). Low values are expounded by the small number of observations. The different seasonal tendency of different years is explained by this as well.

Eighty percent of students considered to be employed based on the core survey are studying in tertiary education. The mean of actually worked hours per week based on the core questionnaire equals to 26.7, which is fairly high. This value was 32.3 hours for students in Ph.D. programmes and 30.5 hours for participants of post-secondary vocational training courses. The dispersion of data of hours refers to data collection errors. The unreal data of hours, as well as the incoherence of the age-related education level and information on hours verify the measurement error at 15 percent of the respondents. Additional controls are justified.

The previously mentioned fact shows low soundness in measuring the employment rate of full-time students. The youth ad-hoc module was based on reverse logic: it focused on students studying on day-time courses and asked whether the respondent had worked besides his/her classes in the previous year. (See Table 2.) The share of proxy interviews was also noticeably high but the measurement error due to oblivion and denial was reduced by the formulation of questions on whole-year information.

According to the youth module, about 90 thousand full-time students aged 15–29 were working during the past 12 months by the following splits:

- only during school terms: 16 thousand persons (of which 8 thousand regularly),
- only between school terms/holidays: 43 thousand persons,
- during school terms and holidays: 31 thousand persons (of which 10 thousand regularly).

The universe of regularly working students equals to 18 thousand persons according to the LFS methodology. This value should be raised by the number of holiday workers in the months of July and August. It is apparently not the case on the basis of the core survey.

All together the penetration rate of students is not very high. 7.2 percent of full-time pupils aged 15–19 were working during the past 12 months, of which every fifth regularly. (Work is allowed legally after the age of 16.) This type of income earning activity is more typical for students aged 20–24. 18 percent of them were working, but the share of regulars was not higher than it was in the younger age group.

Table 2

The type and frequency of work done by youth during full-time education, 2006*
(percent)

Denomination	Work* done in the previous year during full-time education					
	during school holiday and school year		during school year		only during school holiday	total
	regularly	occasionally	regularly	occasionally		
Distribution of persons worked during full-time education (persons)	10.8	24.1	9.1	8.3	47.7	100.0
Of which:*						
compulsory traineeship, vocational training	11.6	26.0	14.6	11.5	36.3	100.0
non-compulsory traineeship, vocational training	14.6	26.0	6.3	6.0	47.0	100.0
work organised by school	20.7	39.0	13.8	2.4	24.0	100.0
work transmitted by fraternity	12.2	34.4	3.0	6.3	44.1	100.0
other work	12.9	21.4	4.5	3.7	57.5	100.0

* All types of work are included.

Source: HCSO, Supplementary Survey of LFS, Quarter 4, 2006.

Table 3

The type of work done by youth aged 15–29 during full-time education, 2006*

Sex	The type of work* done in the previous year during full-time education									
	compulsory traineeship, vocational training		non-compulsory traineeship, vocational training		work organised by school		work transmitted by fraternity		other work	
	yes	no	yes	no	yes	no	yes	no	yes	no
Male	26 452	25 619	4 722	47 350	5 632	46 439	10 933	41 139	22 432	29 639
Female	15 765	22 191	2 646	35 312	3 555	34 402	11 828	26 127	16 228	21 730
Both sexes	42 217	47 810	7 368	82 662	9 187	80 841	22 761	67 266	38 660	51 369

* All types of work are included, multianswer was possible.

Source: HCSO, Supplementary Survey of LFS, Quarter 4, 2006.

The other segment of the youth module focused on the type of work. The total number of observations was about 120 thousand. (See Table 3.) 35 percent of the to-

tal was related to obligatory professional practice. It was followed by the – mainly self-organised – other type work with 32 percent, while on the third place the student co-operation organised work of 19 percent can be found. This latter kind is quite popular among students since about 22.6 thousand cases of such type of work were recorded.

Information from student co-operatives can be used as a verification of data of the youth module. It can directly be compared to the number of persons reported “working with student co-operatives”. The HCSO contacted the eight most important student co-operatives and obtained the following data:

These student co-operatives had 63 500 registered members as an annual average in 2007 of which 44 thousand persons worked seizing the job opportunities offered by the student co-operatives. The work type in about 10 percent of these 44 thousand cases is not known. A monthly average of 4.5 thousand people from a further 40 thousand was working during school terms, while 7.6 thousand persons were working in holiday. Presumably, persons working during school terms were also engaged in working in summer holiday. At the same time, the number of persons considered to be regularly working during the whole year hardly reached the number of one thousand.

There is a considerable difference between the data of the core LFS and the youth module, which is difficult to measure because of the following reasons:

- In the module the annual headcount of concerned persons was asked, while quarterly average headcount data were available based on the core survey.
- Headcount as a common indicator was rejected. Working time data were used as a starting point. Actually, the worked hour data of the core survey were transformed into annual data, like ad-hoc module information.

In the youth ad-hoc module the annual worked time could be recorded in number of days and number of hours as well. The majority of respondents (97.7%) answered in terms of days. Annual working hour data based on number of days were produced by empirical multipliers.

Obligatory professional practice included in the employment related questions of the module was measured and multiplied as well. It can not be interpreted as employment but as part of the educational program in the Hungarian educational system. Full-time students reporting only obligatory professional practice as work were

excluded from data production for the current study. Data production related to the supplementary survey was completed by using information of the core LFS (gender, age-group, economic activity, educational level). (See Table 4.)

Table 4

Youth in full-time tertiary education who performed work in the previous year, 2006*
(persons)

Sex and field of education or training	Work done in the previous year during full-time education					
	during school holiday and school year		during school year		only during school holiday	total
	regularly	occasionally	regularly	occasionally		
	by gender					
Male	2 331	3 743	1 035	812	5 577	13 498
Female	716	3 353	280	1 260	6 570	12 179
Total	3 047	7 096	1 315	2 072	12 147	25 677
	Of which: by field of education or training (FET)**					
FET 1	211	548	78	268	2 660	3 765
FET 2	187	340	203	109	912	1 751
FET 3	1 603	2 012	148	809	2 953	7 525
FET 4	726	2 351	550	100	1 690	5 417
FET 5	320	181	94	590	1 555	2 740
FET 6	0	0	0	0	52	52
FET 7	0	752	243	0	761	1 756
FET 8–9	0	210	0	197	1 563	1 970

* Compulsory traineeship and vocational training are excluded.

** Persons with FET 0 are excluded.

Source: HCSO, Supplementary Survey of LFS, Quarter 4, 2006.

The findings of the research focused on the reliability of data on the number of persons working besides studies are summarised here:

– Working besides studying on day-time courses has got different social traditions and penetrations by countries. It stands a better chance to be reflected correctly by LFS in countries having long tradition in this field. More realistic information can be obtained, if the referred person will answer the question him/herself. It has a higher chance if the respondents are selected on personal level or there is a consider-

able share of young people living separately from their parents in households available for the survey, which is the case for example in Nordic countries. Neither of these findings covers the Hungarian situation; consequently LFS underestimates the number of students working besides studying. Only every second or third referred person can be qualified as employed compared to the real situation.

- If the aim is to monitor the working habits (working time, goal) of students in an internationally comparable way, then an ad-hoc module can be the appropriate form (for example the next wave of the ad hoc module “Transition from school to work”).

- It has to be considered whether the full-time students should be left out from the employed – at least for some of their indicators – during school term. As the support for this decision, the youth employment rates of different countries have to be analysed by age brackets according to the current LFS methodology.

2. People engaged in agricultural work

It is well known that the supplementary agricultural activity of households represents a significant quantity in Hungary, contributing to the improvement of their income situation. At the same time, the number of persons employed in agriculture as a main activity has been declining for years. According to the Labour Force Survey (LFS) data, 4.7 percent of the employed persons worked in agriculture in 2007. (It was 7.4 percent in 1998.) From another point of view, the number of persons registered as self-employed in agriculture did not reach 50 thousand (46.2) in 2007, which was 1.2 percent.

It is typical that the households’ social and work related incomes are completed by agricultural activity. It has got two types. In the first case, a part of market consumption is replaced by agricultural production. In the second case, sales of agricultural products produce income.

According to the LFS definitions, if the respondent does one hour agricultural work, for example selling agricultural surplus products on a small scale on the reference week, it will be a sufficient condition of being qualified as an employed. But social and social insurance related incomes (for example child-birth related allowance, pension) have stronger characterising effect than incomes from agricultural selling. If the latter one is not significant in determining the income situation of the household or its aim is not specifically agricultural product production (which is true in most cases), it will not indicate a positive answer to the question about one-hour income earning activity the week before. Because of the “overlooking” of this mar-

ginal agricultural income, those people will be also classified as inactive who – although they satisfy the condition of one hour earning activity – have been considered as employed theoretically. The basic concept of LFS gives priority for employed status against unemployed or inactive status. If there is no social income besides agricultural work, there will be a higher chance for a respondent producing agricultural product only for own consumption to be classified as employed.

Supplementary agricultural activity, but even information related to involvement in agricultural activity has been included in the questionnaire of the first quarter module three times since 2004. Its formulation is shown by Figure 3.

Figure 3. A question of the LFS Supplementary Survey questionnaire concerning agricultural work, Quarter 1, 2005–2007

1.	Did you do any agricultural work last year? (including self consumption!)	
	(1) yes, during the whole year (2) yes, number of days: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> (3) no <input type="checkbox"/>	

Inclusion of this question block makes the study of engagement in agricultural activity combined with labour market status including information on the volume of work possible. (How many days did he/she do agricultural work?) This question provides for the possibility to filter out hobby workers in agriculture. For the classification of the employed, information would be needed about whether the agricultural product was marketed. This question block did not produce information regarding this problem.

Table 5

Persons who performed agricultural work by economic activity
and by time spent in this work, 2004–2006*

Economic activity*	Agricultural work			Population aged 15–74 answered	Agricultural work			Population aged 15–74 answered
	done during the whole year	done not during the whole year	not done		done during the whole year	done not during the whole year	not done	
	persons				percent			
	2004							
Employed	137 900	1 003 256	2 700 342	3 841 498	3.6	26.1	70.3	100.0
Unemployed	5 955	88 916	199 962	294 833	2.0	30.2	67.8	100.0
Inactive	93 576	1 106 681	2 327 737	3 527 994	2.7	31.4	66.0	100.0
<i>Total</i>	<i>237 431</i>	<i>2 198 853</i>	<i>5 228 041</i>	<i>7 664 325</i>	<i>3.1</i>	<i>28.7</i>	<i>68.2</i>	<i>100.0</i>

(Continued on the next page.)

(Continuation.)

Economic activity*	Agricultural work			Population aged 15–74 answered	Agricultural work			Population aged 15–74 answered
	done during the whole year	done not during the whole year	not done		done during the whole year	done not during the whole year	not done	
	persons				percent			
	2005							
Employed	129 811	933 236	2 808 787	3 871 834	3.4	24.1	72.5	100.0
Unemployed	6 362	103 717	212 058	322 137	2.0	32.2	65.8	100.0
Inactive	81 420	1 032 733	2 385 102	3 499 255	2.3	29.5	68.2	100.0
<i>Total</i>	217 593	2 069 686	5 405 947	7 693 226	2.8	26.9	70.3	100.0
	2006							
Employed	115 183	1 012 452	2 757 744	3 885 379	3.0	26.1	71.0	100.0
Unemployed	4 606	101 869	207 526	314 001	1.5	32.4	66.1	100.0
Inactive	50 189	1 052 929	2 376 359	3 479 477	1.4	30.3	68.3	100.0
<i>Total</i>	169 978	2 167 250	5 341 629	7 678 857	2.2	28.2	69.6	100.0

* Quarter 1, following the reference year.

Source: HCSO, Supplementary Survey of LFS, Quarter 1, 2005–2007.

From the point of further researches the most interesting category is persons engaged in agricultural activity during the whole year. The number of persons in this category was between 237.4 thousand and 169.9 thousand in 2004–2006, decreasing continuously. (See Table 5.) It is in accordance with other data sources, such as the Household Budget Survey (HBS), which showed a decline in the supplementary agricultural activity of households in the same period.

Among persons engaged in agricultural activity during the whole year, the employed people worked mostly in the agricultural sector. It provides opportunity to test the quality of this question block, but this group is not the matter of further researches.

The last available data for 2006 show 4 606 unemployed persons and 50 189 people with inactive status, engaged in agricultural activity during the whole year. Among them 49 549 were unemployed or inactive during the whole year observed. It is practical to filter out persons likely to be employed from the universe of these people.

The method was the following:

1. Persons aged over the national employment age limit were excluded (the employment age limit was set at 61). This reduced head-

count into its half. This is reasoned by the fact that people aged 62 and over must receive pension. In their case any agricultural activity is considered to be supplementary, daily routine activity.

2. Inactive or unemployed persons who are engaged in agricultural activity during a whole year and have got a self-employed family member working in agriculture must be considered as employed, namely family helpers. (See Table 6.)

Table 6

The number of unemployed and inactive persons aged 19–61 by whom agricultural work was done during the whole year by type of subsidies received, 2004–2006

Sex	Persons								
	Total	received subsidies						did not receive subsidies	having at least one person in their households who was self-employed in agriculture
		subtotal	of which						
			child-birth related allowance	old-age pension/allowance	disability pension/allowance	job seeking assistance	other subsidies		
	2004								
Male	27 222	20 049	225	4 291	11 589	3 944	0	7 173	713
Female	27 495	19 268	3 508	4 920	8 790	1 856	194	8 227	1 723
Both sexes	54 717	39 317	3 733	9 211	20 379	5 800	194	15 400	2 436
	2005								
Male	21 805	14 755	385	3 908	7 763	2 699	0	7 050	831
Female	25 101	16 389	2 247	5 153	6 571	2 121	297	8 712	1 009
Both sexes	46 906	31 144	2 632	9 061	14 334	4 820	297	15 762	1 840
	2006								
Male	14 401	9 961	0	2 642	5 362	1 760	197	4 440	533
Female	14 845	9 243	1 575	2 400	3 464	1 622	182	5 602	896
Both sexes	29 246	19 204	1 575	5 042	8 826	3 382	379	10 042	1 429

Source: HCSO, Core Survey of LFS, 2006; Supplementary Survey of LFS, Quarter 4, 2006.

Using these figures we made the following calculation to estimate the number of “missing” agricultural workers for 2006. (See Table 7.)

Table 7

*Estimation of the number of potentially employed persons by whom agricultural work was done during the whole year, 2006**

Denomination	Persons
1. <i>Persons aged 15–74</i>	169 978
Of which:	
2. not employed	54 795
3. not employed during the whole year	49 549
4. aged not 19–61	20 303
5. having a self-employed family member who worked in agriculture	1 429
6. 6. = 3. – 4. – 5.	27 817
7. Multiplying factors ₁ **	0.5
8. Multiplying factors ₂ **	0.8
9. Estimated total ₁ (9. = 6. × 7. + 5.)	15 338
10. Estimated total ₂ (10. = 6. × 8. + 5.)	23 683
11. Estimated total average (11. = (9. + 10.)/2)	19 510

* On the basis of data given by respondents in Quarter 1 following the reference year.

** Multiplying factor for persons working at most 30 hours in a year.

Source: HCSO, Supplementary Survey of LFS, Quarter 4, 2006.

About half or two thirds of the remained “mixed” group are likely to be employed based on experts’ opinion. The estimation set out from the number of persons engaged in agricultural activity during the whole year gave about 19 500 employed persons as a surplus in 2006. There is a greater universe of people reported not full year agricultural activity. Thus, the number of not employed persons reporting not full year agricultural activity was above 1 million in every year. (See Table 8.)

The same method (namely the exclusion of persons older than 61 years and the determination of probability scale based on existing agricultural self-employed family members) was used for filtering as it was developed for persons reporting agricultural activity during the whole year. According to the ad-hoc module, about 2 167 thousand people did some agricultural work in 2006, among which almost 527 thousand individuals aged 19–61 were non-employed in the whole year. (See Tables 8 and 9.)

A volume limit was added to the former criteria based on the following question: “How many days did you do agricultural work during the year?” It can be seen that more than 60 percent of the persons in question did work of less than 30 days. They were excluded from the further research. The group of inactive or unemployed persons aged less than 62, who were doing at least 31-day agricultural work, constitutes a smaller part of the total universe.

Then persons with agricultural self-employed family members were selected, and they were classified as family helpers. After this, according to the number of worked days different multiplying factors were applied, and the number of the employed was determined. The multiplying factors were as follows: 31–60 days 0.1; 61–90 days 0.3; 91–180 days 0.5; 181– days 0.8.

The multiplying factors reflect the characteristics of agricultural activity such as it is in limited extent for market production (that's why people, who worked more than 180 days, received just 0.8 as a multiplying factor although they were working almost during the full agricultural season). The probability that a respondent was doing agricultural work on the reference week is higher, if he/she reported a higher number of working days during the year. It is also reflected by the multiplying factors.

Table 8

The number of persons aged 15–74 who performed agricultural work not during the whole year by economic activity, 2004–2006*

Economic activity*	Agricultural work performed for						Total
	less than 31	31–60	61–90	91–180	181–270	more than 271	
	days						
	2004						
Employed	682 808	183 777	55 283	70 529	9 079	1 780	1 003 256
Unemployed	55 123	18 851	6 742	7 697	503	0	88 916
Inactive	654 015	242 669	92 637	103 365	12 988	1 007	1 106 681
Total	1 391 946	445 297	154 662	181 591	22 570	2 787	2 198 853
	2005						
Employed	650 590	160 424	49 353	63 023	8 392	1 454	933 236
Unemployed	63 632	20 893	7 312	11 220	660	0	103 717
Inactive	640 746	213 828	71 942	93 656	12 417	144	1 032 733
Total	1 354 968	395 145	128 607	167 899	21 469	1 598	2 069 686
	2006						
Employed	733 556	150 848	52 142	66 390	9 023	493	1 012 452
Unemployed	65 143	19 667	5 409	9 473	2 054	123	101 869
Inactive	688 821	201 180	64 518	88 358	9 138	914	1 052 929
Total	1 487 520	371 695	122 069	164 221	20 215	1 530	2 167 250

* Quarter 1 following the reference year when the interview was carried out.

Source: HCSO, Supplementary Survey of LFS, Quarter 1, 2005–2007.

Table 9

*The number of all the year round unemployed or inactive persons aged 15–74
who performed agricultural work not during the whole year by age-group, 2004–2006*

Age-group	Agricultural work performed for						Total
	less than 31	31–60	61–90	91–180	181–270	more than 271	
	days						
	2004						
19–29	74 378	13 637	6 063	4 410	372	0	98 860
30–39	50 359	18 034	6 318	8 084	1 144	0	83 939
40–49	60 008	22 940	9 547	9 179	1 563	202	103 439
50–61	156 393	62 706	23 737	28 519	3 776	351	275 482
62–74	257 912	114 245	42 738	46 016	4 759	84	465 754
Other	50 531	6 026	2 170	373	252	69	59 421
Total	649 581	237 588	90 573	96 581	11 866	706	1 086 895
	2005						
19–29	72 095	14 084	3 440	4 351	437	0	94 407
30–39	50 380	15 341	5 520	7 019	209	0	78 469
40–49	52 224	16 949	7 269	9 451	923	0	86 816
50–61	152 709	56 110	18 204	28 258	3 473	64	258 818
62–74	259 192	103 261	36 151	44 185	6 453	80	449 322
Other	45 663	5 870	1 104	527	0	0	53 164
Total	632 263	211 615	71 688	93 791	11 495	144	1 020 996
	2006						
19–29	72 367	11 785	3 148	3 319	409	123	91 151
30–39	55 399	11 844	4 096	6 896	1 288	0	79 523
40–49	50 532	18 573	4 856	7 074	482	0	81 517
50–61	172 745	55 357	17 453	26 661	2 396	40	274 652
62–74	285 176	99 249	33 660	40 977	5 336	874	465 272
Other	47 081	3 926	1 194	391	0	0	52 592
Total	683 300	200 734	64 407	85 318	9 911	1 037	1 044 707

Source: HCSO, Supplementary Survey of LFS, Quarter 1, 2005–2007.

Summing up the results, the estimation has produced about 68 thousand employed persons as a surplus, which is a bit under the preliminary expectations. (See Tables 7 and 10.) It would raise the 50.9 percent employment rate of persons aged 15–74 by 0.8 percent points (51.7%).

Table 10

Estimation of the number of potentially employed persons who performed agricultural work not during the whole year, 2006

Denomination	Agricultural work performed for					Total
	1–30	31–60	61–90	91–180	181–	
	days					
1. Persons aged 15–74	1 487 520	371 695	122 069	164 221	21 745	2 167 250
Of which:						
2. not employed	753 964	220 847	69 927	97 831	12 229	1 154 798
3. not employed who worked in agriculture	683 300	200 734	64 407	85 318	10 948	1 044 707
4. aged not 19–61	332 257	103 175	34 854	41 368	6 210	517 864
5. having a self-employed family member who worked in agriculture	6 417	3 073	1 014	1 102	224	11 830
6. 6. = 3. – 4. – 5.	344 626	94 486	28 539	42 848	4 514	515 013
7. Multiplying factors	0.0**	0.1	0.3	0.5	0.8	–
8. Estimated total (6. × 7. + 5.)*	0	12 521	9 575	22 526	3 835	48 457

* Quarter 1 following the reference year.

** Multiplying factor for persons with at most 30 hours in a year.

Source: HCSO, Supplementary Survey of LFS, Quarter 4, 2006.

*

On the basis of the results, it is very likely that LFS underestimates the employment rate of students and the role of agricultural employment. It contributes – although not significantly – to the low employment rate of population aged 15–64. It is strengthened by the classification of persons receiving maternity related benefits since they are classified as inactive regardless of their employment status according to the strict LFS methodology. This methodological concept is not consistently observed by all countries (for example Austria) or it can not be complied in consequence of national regulation. (In Sweden the virtual activity of mothers with little children is higher than in Hungary because the period of child caring can be used freely as a time bracket.) Gainful activities (especially occasional work or work in the informal economy) besides receiving child care related benefits remain hidden in LFS similarly to working besides pension or regular benefits.

To sum up the results, the national employment rate would exceed the current level if LFS was the perfect measuring tool. It is not likely that Hungary can improve

its place in the rank of EU member states (but we can be closer to the value of Romania, where the persons engaged in agricultural activity for production for own consumption are considered to be employed, as with the practice in Portugal). Similar underestimation due to other reasons is conceivable in other member states. We do not neglect the fact that the strength of LFS does not rely on the determination of levels but on the measurement of move in time and in international comparison.