

# Final report of the task force for evaluating the 2004 LFS ad hoc module on work organisation and working time arrangements



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## **Introduction**

The Task Force on Evaluation of the 2004 LFS Ad Hoc Module on Work Organisation and Working Time Arrangements met once in November 2005. Besides staff from Eurostat and DG EMPL the Task Force consisted of experts from INSEE (FR), ISTAT (IT), the Statistical Office of Hungary (HU), Statistics Finland (FI) and the ONS (UK).

The following report serves two main purposes. The first and the main objective is to assess the implementation of the ad hoc module in 2004 and make recommendations for the benefit of future repetitions of the module. A second objective of the report is to assess the quality of the data that were collected in 2004.

The material for this report are quality reports delivered from 23 of the participating countries describing the operation and providing quality estimates of the ad hoc module. These quality reports supplement quality reports on the core LFS in 2004 that all but two Member States delivered. Besides, ten Member States delivered final reports in accordance with grants they had received in order to implement the ad hoc module. Following the Task Force in November, further enquiries were made due to some irregularities in the data sets (Annex 6)

The report closely follows the discussions of the Task Force meeting in November and benefits from the prior analysis and contributions of each of the Task Force members. In addition, the expert from Italy undertook a separate analysis of columns 209 and 210, which is included in Annex 4 and the expert from DG EMPL made a separate analysis of the use of columns 216 and 217, which is included in Annex 5.

The report is organised in six main sections. The first section contains the executive summary with the main findings and the Task Force recommendation for future implementations of the module or ad hoc modules in general. The second section describes the ad hoc module in general terms and deals with quality issues not covered in other sections. The third section looks at the implementation of the ad hoc module, going into details for each of the 11 characteristics of the ad hoc module. The fourth section summarises quality aspects of the ad hoc module, using the standard format for quality that has been developed in Eurostat. It also deals with comparability across countries and with the previous ad hoc module conducted in 2001. The fifth section makes suggestions such as how best to present statistics from the ad hoc module while the sixth final last section covers two remaining issues on the relationship between the ad hoc module and the core questionnaire and on quality reports.

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## **Executive summary**

### **Main findings**

The ad hoc module 2004 on work organisation and working time arrangements was introduced into EU legislation in February 2003, replacing a planned module on transition from school to working life.<sup>1</sup> Previously an ad hoc module on the same subject, albeit with a different title, had been conducted with the EU-LFS in 2001.

The implementation of the ad hoc module constituted a considerable improvement compared to the 2001 module, providing valuable information with regard to the work organisation and working time arrangements in the participating countries.

There were, however, some problems on which this report necessarily focuses. Although experiences from the previous module were taken into account, the time and resources needed for the preparation of the ad hoc module 2004 were underestimated. The most serious consequences were inadequate documentation; errors and ambiguities in the implementation Regulation, especially with regard to filters; insufficient account taken of continuity with the 2001 ad hoc module and uselessness of one variable (column 220). From the side of the Member States, errors in the implementation in some countries have prevented the construction of EU aggregates, and therefore reduced the value of the ad hoc module.

### **Recommendation for future repetitions**

The Task Force considered that the lessons drawn from the implementation of the 2004 ad hoc module on work organisation and working time arrangements could be presented in two main headings: general recommendations and specific recommendations.

#### *General recommendations*

- The Task Force is of the opinion that three years are too short a period for repeating an ad hoc module. The very nature of ad hoc modules is to observe structural phenomena, which only change slowly.
- The Task Force recommends that a model questionnaire may be prepared in case of repetition of the 2004 ad hoc module. Besides enhancing comparability, this would also give better indication of the actual burden of the planned module.
- The Task Force recommends that subjective variables should be avoided if possible. Even if such questions may be easy to ask, they tend to be difficult to interpret, not the least in the multi-cultural settings of the EU. If such questions cannot be avoided then great care has to be taken in constructing and formulating the questions.
- The Task Force considers that the placement of the ad hoc module in the questionnaire and its connection with the core questions may affect results and comparability over time, as well as between countries. Thus there is additional need to carefully prepare modules which are closely linked to the core questionnaire.
- The Task Force recommends that greater care should be taken to maintain comparability with previous ad hoc modules when repeating a subject. Small and seemingly innocuous changes may cause full incomparability. It is thus better to repeat questions exactly in the same way as before, rather than tinker with them in order to make them “better”.
- The Task Force recommends improvements to the Quality Report Standard Form for ad hoc modules (see below).
- The Task Force recommends that the survey organisations improve the interviewer training, as written instructions may not be sufficient.
- The Task Force recommends that when preparing an ad hoc module, it should be tested and analysed what could be hidden behind an “other” category in the various countries.

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<sup>1</sup> Commission Regulation (EC) No 1626/2000 of 24 July 2000 (OJ No L 187/5).

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- The Task Force recommends that greater attention should be made to the definition and implementation of filters. The routing of questions have to be thought out, as well as the target groups. This is also of great importance, when filters are constructed from variables in the core questionnaire.

### *Specific recommendations*

The Task Force made the following recommendations for the revision of the variables defined in the 2004 ad hoc module:

- |                 |  |
|-----------------|--|
| Col. 204 (core) | The definition of shift work should be clarified and reformulated in order to enhance comparability.   |
| Cols. 209, 210  | The Task Force does not recommend to change the filter for column 209. The Task Force, however, recommends that col. 210 be limited to self-employed without employees or self-employed in local units with 3 persons or less.   |
| Col. 216        | The variable on working time flexibility should be clarified. The various categories may have been misallocated due to misunderstanding of the respondents as a result of difficulties in surveying contractual situations.  |
| Cols. 217, 218  | It is apparent that both annualised contracts and on-call work are rare phenomena in most of the Member States, and thus relatively little known. If the respondents do not know what is asked about, they may give an incorrect answer if they try to translate the question in to something they know. This could lead to overestimation. The Task Force therefore recommends that if a satisfactory solution were not found in the Member State, these variables should be left out in future implementations of the ad hoc module. |
| Col. 220        | The Task Force recommends that this variable should be dropped. If not, it should be simplified, taking the approach of general possibility rather than what actually happened in reference week. It is, e.g., of interest to know if a person with fixed start/end of the working day has nevertheless the possibility or flexibility of taking hours/days off.   |
| Cols. 221, 222  | Depending on the analysis, these variables could be reconsidered. While most of the Task Force members consider the subjective perspective important to analyse shift work and atypical working time arrangements, one Task Force member finds the variable of little or no value. The Task Force nevertheless agrees that the concept of “convenience” should be very well explained to the respondent and the questions formulated in a way to enhance comparability of the results.   |

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## **General description of the ad hoc module**

The ad hoc module on work organisation and working time arrangements (hereafter referred to simply as the ahm2004) was defined in Commission Regulation (EC) No 247/2003 of 10 February 2003<sup>2</sup>. The subject was also studied in an ad hoc module in 2001 (ahm2001).<sup>3</sup> The ahm2001 title was, however, different: “Length and patterns of working time”.

Participating countries were all the EU-25 Member States, the three EFTA countries as well as Bulgaria and Romania of the Candidate Countries.

Of the 30 participating countries, 25 conducted the ahm2004 in the spring, while Estonia, France, Luxembourg, Malta and the Netherlands spread the reference week over the whole year.

Every employed respondent in the respective survey period (quarter or all quarters of the year) constituted the sub-sample for the ahm2004 except in France, Malta, the Netherlands, Austria, Sweden and Norway. France restricted the sample to the last (sixth) wave of the survey in each quarter, the Netherlands restricted the sub-sample to the first wave interviews in each quarter, Malta restricted the sub-sample to a quarter of the first wave interviews in each quarter, Austria to telephone interviews and Norway to non-proxy interviews (16-74 years) only. Sweden limited the sub-sample to waves 5 to 7 and to the 15-74 years old only. These countries, not using the full core sample, all provided special weights for the sub-samples.

Participation in the ahm2004 was compulsory in the Czech Republic, Spain, France, Italy, Cyprus, Malta, Portugal and Slovakia, but voluntary in Denmark, Germany, Estonia, Latvia, Lithuania, Hungary, Austria, Slovenia, Finland, Sweden, United Kingdom, Bulgaria, Romania and Norway. Information is missing from the remaining countries.

The study group in ahm2004 consisted of employed persons, the self-employed (2 characteristics), employees (9 characteristics) and unpaid family workers (½ characteristic). These groups were identified from the core questionnaire, which also contributed for filtering purposes variables relating to shift work, atypical work, full-time/part-time distinction, work at home and number of persons working at the local unit.

Due to the close relation of the ahm2004 subject matter to the core LFS, especially the parts relating to working hours, shift work and atypical work (optional), 14 of the participating countries integrated the ad hoc module questions in the core questionnaire (Austria, Bulgaria, Cyprus, Czech Republic, Germany, Denmark, Estonia, Italy, Lithuania, Malta, Portugal, Slovenia, Slovakia and United Kingdom) while 8 countries kept the ad hoc module separate from the core (Spain, France, Hungary, Latvia, Finland, Sweden, Romania and Norway). Information is missing from eight countries.

In preparing the module, eight countries conducted a pilot survey (Denmark, France, Italy, Cyprus, Hungary, United Kingdom, Bulgaria and Romania), while five other (Czech Republic, Slovenia, Slovakia, Finland and Sweden) tested the ad hoc module in a laboratory or on staff. No information is available for the 17 other participating countries.

### *Burden*

The burden of an ad hoc module is a function of many factors, both subjective and objective.

Subjective factors can be relevancy of the questions to the situation of the respondent, or sensitivity of the questions. It is not possible to assess these factors in this report.

Objective factors are more readily estimated; usually simply by measuring the average number of minutes the respondent is subjected to questioning. This single measurement depends, however, on the aggregate of other factors like the number of questions put to the respondent, the clarity of the questions and the ease of answering (such as the number of categories).

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<sup>2</sup> OJ L 35/5.

<sup>3</sup> Commission Regulation (EC) No 1578/2000 of 19 July 2000 (OJ No L 181/39).

The ad hoc modules also differ in the size of the study group. Thus the total burden of an ad hoc module for the LFS sample population can be estimated by the sum of the time spent with each responding individual divided by the total number of respondents in the core LFS.

The quality report asked for the average number of minutes in administering the ahm2004. As it was not clear which denominator should have been used, the results are not reliable. The thirteen replying countries gave a range of 1.5 to 15 minutes.

Lacking reliable estimates of the time, the average number of questions responded to is also a good burden estimate. This information is not available for the ahm2004. On the other hand, the number of variables responded to is available which gives some indication of the relative burden. It must, however, be remembered that in most of the participating countries more than one question was needed to arrive at one variable.

Table 1 shows the number of variables with valid response per participating respondent and the number of variables with valid response for all respondents, in the quarter(s) during which the ad hoc module was administered.

**Table 1. Average number of valid responses per participating respondent and total (annual) sample respondents aged 15+**

	Per participating respondent <sup>1</sup>	Per all annual respondents aged 15+
<b>EU-25</b>	4.43	0.75
<b>BE</b>	5.46	0.82
<b>CZ</b>	5.77	0.87
<b>DK</b>	5.89	1.07
<b>DE</b>	2.54	1.28
<b>EE</b>	5.93	3.63
<b>GR</b>	3.95	0.56
<b>ES</b>	4.70	0.65
<b>FR</b>	4.15	0.42
<b>IE</b>	4.36	0.74
<b>IT</b>	4.02	0.53
<b>CY</b>	5.39	1.25
<b>LV</b>	5.55	0.84
<b>LT</b>	4.10	0.65
<b>LU</b>	5.41	3.20
<b>HU</b>	4.71	0.62
<b>MT</b>	5.89	0.43
<b>NL</b>	5.90	1.30
<b>AT</b>	5.64	0.36
<b>PL</b>	5.09	0.65
<b>PT</b>	4.72	0.79
<b>SI</b>	4.08	0.71
<b>SK</b>	5.82	0.77
<b>FI</b>	5.22	0.76
<b>SE</b>	5.12	0.41
<b>UK</b>	5.04	0.85
<b>BG</b>	5.01	0.64
<b>RO</b>	4.70	0.71
<b>IS<sup>2</sup></b>	.	.
<b>NO<sup>2</sup></b>	6.09	0.91
<b>CH</b>	4.89	3.61

<sup>1</sup>The participating respondents are the self-employed, employees and those unpaid family workers who work usually or sometimes atypical hours.

<sup>2</sup> Age group 16-74



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## ***Problems encountered in the implementation of the survey***

With the exception of four MS, most indicated that they faced some issues implementing the module. Comments ranged from those that related generally to the module to more question specific observations.

The general comments can be summarised as follows:

- Questionnaire length: a number of MS expressed concern about the impact this module had on the overall length of the LFS questionnaire. General request to keep length to a minimum size in order to maximise survey quality (e.g. response).
- Question wording: the variable specifications in some instances resulted in a number of very long questions (in terms of number of words). There was a general request for this to be avoided. Both interviewers and respondents reported difficulties with a number of questions due to their complexity.
- Comparability: request to limit changes to repeated modules in order to aid comparisons.

In addition, a certain number of terms within the regulation were not recognised by MS – i.e. their employment laws did not recognise the concept, for example, of annualised hours contracts – and there was no guidance on how to deal with such a situation.

Most MS did not undertake pre-interview testing – either a pilot or laboratory tests – which may partly explain some of the problems encountered in the field. In particular, problems with comprehension of terms (both from interviewer and respondent) may have been identified if testing had been done.

### *Documentation and filters*

A recurring theme when studying the survey implementation was the dissatisfaction of many countries with the explanatory notes. These were seen as lacking in detail and in precision, especially with regard to columns 216 and 219 to 222. For future reference, this report makes some rectifications by publishing the frequently asked questions together with the explanatory notes in annex 1.

The Regulation itself is also an important piece of documentation. The Regulation specified the variables, response categories and the target groups for each variable (filters). The specification of the filters proved to be prone to ambiguities and errors, causing confusion among the Member States, especially at the processing stage. For the core questionnaire the category “Not applicable” is always defined precisely by listing the variables and values leading to this state. This was not the case in Commission Regulation (EC) No 247/2003, encouraging some participating countries to apply their own interpretation of what cases were “not applicable”.

*Col. 209 Control over own work methods and schedule;*

*Col. 210 Work for a single customer*

It seems evident that in col. 209 the “when” had a definitional problem, with a definite seasonal aspect to it, which should have been clarified. Likewise there are certain occupational groups, e.g. farmers, which were reported to have difficulty in answering the questions in a comparable way with other groups.

The Task Force also noted that for achieving good results, more than one question would be needed for col. 209.

The filter for Col. 210 caused some processing errors (Col 26=2 or Col 26=1 and Col 34/35<10), as several countries solved the filter from left to right instead of first the “and” operator and then the “or” operator as intended (i.e. Col 26=2 or (Col 26=1 and Col 34/35<10)). In addition, the reference to Col 34/35 did not rhyme with the structure of that variable, which refers to < 11 rather than <10.

Finally, the concern may be justified that the two variables are not sufficient in order to achieve the object of the variables, i.e. to describe the similarity of the self-employed to the conditions of the employee (dependency).

The Netherlands had suggested to Eurostat that a “don’t know” category should be added to col. 209. The Task Force did not agree with this.

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Italy suggested that the target population for the 2 variables should be confined to an even smaller sub-group of self-employed with 0 to 2 employees. Analysis of the results broken down by size of local unit, taking into account the NACE and ISCO classification (cf. Annex 4), supports this view with regard to column 210.

*Col. 211/212 Overtime hours in the reference week*

*Col. 213/214 Paid overtime hours in the reference week*

From 2006 paid and unpaid overtime will be incorporated in the core questionnaire. The definition will differ from that of the ad hoc module, which asked for total overtime and thereof paid overtime. This could cause problems of comparability with the ad hoc module, if the Member States change the actual questions. Similarly, comparability between countries can be adversely affected if Member States use different approach to arrive at paid and unpaid overtime. The Task Force thus recommends that the Task Force on the EU-LFS explanatory notes takes note of this for clarification of the variables.

The text for variable 211/212 did not make it sufficiently clear that employees with no overtime should be coded with 00, causing considerable effort in the post-processing of the data files. Taking both variables together it could be interpreted that persons with no overtime should only have been coded as 00 in the variable on paid overtime.

*Col. 215 Shift work patterns*

There seem to be different national practices and conventions with regard to shift work patterns. Thus the preferred method of asking should be referral to the national system and then trans-code the result into the EU system, instead of directly translating the EU categories into the national questionnaire, which may cause confusion for the respondents.

In preparing the 2004 ad hoc module, the preparatory Task Force in 2002 recommended that the words “according to a certain rotation pattern” would be added to the text specifying that shift work consists of a work organization where different groups of workers succeed each other.<sup>4</sup> The intention of this insertion was to exclude persons in a “fixed shift arrangement” from being considered as working shift work<sup>5</sup>. Accordingly, the modality “fixed shift” was deleted from the list of response categories in col. 215.

This definition was implemented differently if at all in the participating countries. Most countries ask about shift work (col. 204) without mentioning “fixed shift arrangements”. It means that workers in fixed shifts may either consider or not consider themselves as shift-workers. Some countries included the deleted response category 5 on fixed shift arrangements, while others followed the list of categories, but coded “fixed shifts” as “other”.

If the question on shift work is asked in a “spontaneous” way, the workers on “fixed shifts” may answer positively, which would necessitate a different question or questions than simply “do you work shifts?”.

A shift worker can work in a continuous or in a 2-shift system for instance, and have fixed working hours; a shift worker can always work in the same shift but this shift can have various time hours in a week or in a month.

Finally, the possibility of working “fixed shifts” within an otherwise rotating shift working environment is a form of flexibility, in which the employer can accommodate personal situation by assigning the worker always to same hours.

The Task Force concluded that it is necessary to reformulate or better explain the concept behind the shift work variable. This should be within the scope of the current Task Force on the EU-LFS explanatory notes.

Eurostat had asked Member States, which had kept code 5, to send this code in the micro data to Eurostat. The Task Force concluded that this code should be recoded to category 6, “other”. The code should not be used to correct col. 204 “shift work”.

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<sup>4</sup> The explanatory notes to the ad hoc module in 2004: “A persons is working shift (C204) when her/his work consists of a work organisation where different groups of workers succeed each other *according to a certain rotation pattern* at the same work site to perform the same operations” [emphasis in the original].

<sup>5</sup> See WG EMPL, September 2002, Doc. E1/EMPL/26/2002. The purpose of the shift work variable is defined in this document as “to identify the specific problem related to the rotation of the working hours”.

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### *Col. 216 Variable working hours*

The participating countries raised concerns with regard to this variable. Response categories were often confusing for respondents, e.g. unsure of their working time arrangement. There were also perhaps too many response categories.

It was suggested that division into 8 categories, whereof one (fixed start/end) is by far the most common (63.4% on the average), is perhaps too fine a division.

It was suggested that some of the uncertainty or confusion with the variable is due to the fact that the variable collects information about the contractual situation, which may not be known by the respondent.

At the request of the Task Force, DG Employment analysed columns 216 and 217 (see Annex 5). The DG concluded that “[f]rom the user’s point of view, the proposed classification of variable working hours (column 216) gives a good scope for the statistical analysis on traditional versus flexitime schemes. The variables appear to be meaningful and clearly interpretable in the view of European situation in working organizations and working time arrangements.”

### *Col. 217 Annualised working hours*

In some countries the concept of annualised contract was not known. It can be suggested that in such circumstances the Member States would have to be very careful in implementing the question, formulate it with specific examples, or leave the question out. In any event, the “European” concept should not be asked but the closest corresponding actual contractual situation in the country.

Several questions may be needed in order to conclude that a person has a contract of annualised working hours.

For the interpretation of the variable and col. 216, it was suggested that it could be said that “annualised working hours” are more driven by the interests of production, while “working time banking” is more driven by workers’ interests.

For future repetitions of the module, Italy proposed to use an alternative approach to collect information on variable working hours, concerning who drives working time flexibility, either the employer or the employee. This approach, based on actual rather than contractual situation, would allow a straight interpretation of results.

With regard to column 217, DG Employment concluded that “[t]he question of annualized working hours is an important one from the point of view of working time developments, but may be less significant for the analytical exercises, as these working arrangements are still rare.”

### *Col. 218 On-call work*

Like the annual hours contracts, the concept of on-call work was not clear in the explanatory notes and not widely known in many countries. In those circumstances the same suggestion applies as for col. 217 above.

### *Col. 219 Working time pattern of part-timers compared with full-time*

The Task Force did not consider this variable to have been problematic.

### *Col. 220 Possibility to work variable hours in the reference week*

This variable caused great difficulties in the field, and the results may not be so easily interpreted.

Five countries (DE, IT, FI, SE and UK) were exempt from implementing the variable by way of derogation. Four other participating countries did not administer the question and three more countries suffered from non-response of more than 80%.

The variable needs a complicated question structure. In the French LFS, e.g., it had to be built with 6 different questions.

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Filters were specified for individual categories, which caused additional confusion and should in general be avoided.

When initially creating the variable, the residual category “person chose and worked usual hours even if they could have chosen variable hours” was overlooked.

On the average, 72% of the responses were coded as “Other”, 20% with no-answer, while the residual 8% were divided into 6 categories.

In order to overcome some of the inherent difficulties in presenting the results, this variable could be collapsed into two main classes: persons for whom it was possible to work variable hours and those for whom this was impossible.

#### *Cols. 221 and 222 Convenience of working time arrangements on personal life situation*

The perception of “convenience” is not only subjective, but also relative, e.g. if the life situation were changed to fit work, the answer can be “convenient”. In some jobs, certain working time arrangements are the (virtually) only available (e.g. many nursing jobs). The “convenience threshold” of such jobs could be different from other occupations. Comparing the results between occupations and even countries should thus be done very carefully.

Column 222 was especially difficult in implementation and interpretation, e.g. person working at night during the weekend, it can be convenient for this person to work during the weekend but not at night, while another person may find both inconvenient.

As Col. 222 was for reasons of convenience separated from Col. 221, the variable excluded persons working shifts. This is unfortunate as not all shift workers work nights or weekends, while some do. Asking about the convenience of shift work on the personal life situation is thus different from asking about convenience of the time when worked.

Many of the participating countries did not notice that strict application of the filter for Col. 222 (Cols. 205, 206, 207, 208 = 1, 2 and Col. 204=3, 9 and Col. 218=0,9) includes the self-employed and unpaid family workers who usually or sometimes working during evenings, nights or weekends. This causes the results only to be comparable at EU level with regard to employees. In addition, the filter did not allow for Col. 204 or Col. 218 to be blank, which caused some extra efforts in the post-processing phase.

## **Quality**

Eurostat has promulgated the concept of quality as consisting of 6 main factors: relevancy, accuracy, timeliness and punctuality, accessibility and clarity, comparability and consistency. The following is a brief summary from the quality reports of these quality items. Consistency of the data could not be checked, as there exist no other sources on European wide level with regard to the subject of the ad hoc module.

## **Relevancy and non-response**

Non-response and availability of the variables can be classified into four main categories: 1. unit non-response in the core survey, 2. unit non-response in the ad hoc module, 3. non-response to individual variables in the ad hoc module and 4. non-collection of individual variables due to derogation in the Regulation. In the context of the Labour Force Survey and the ahm2004, categories 2 to 4 can all be lumped together as non-response item.

Table 2 gives a detailed view of the various types of non-response both for the ad hoc module and the related optional module on shift work and atypical work patterns. The table shows that columns 220 “Possibility to work variable hours in the reference week” and 222 “Convenience of working time arrangements for personal life situation (evening, night or weekend work)” are especially problematic. Column 217 “Annualised working hours” is also problematic as four participating countries did not cover this variable in addition to Germany which had derogation.

**Table 2. Non-response (unweighted) in the EU-LFS AHM 2004**

(Extracted 19 May 2006)

	Optional variables on atypical work													The ad hoc module					
	Col 204	Col 205	Col 206	Col 207	Col 208	Col 209	Col 210	Col 211/2	Col 213/4	Col 215	Col 216	Col 217	Col 218	Col 219	Col 220	Col 221	Col 222	Col 222	
BE	0	0	0	0	0	4	4	4	4	0	4	4	4	5	0	7	36	10	
CZ	2	2	2	2	2	2	4	0	0	2	2	2	2	1	0	2	3	3	
DK	0	0	1	0	1	1	4	0	0	0	1	0	0	2	1	1	0	0	
DE	1	100	100	100	100	100	100	12	13	19	20	100	100	14	100	100	100	100	
EE	0	0	0	0	0	4	6	0	0	0	0	0	0	6	1	0	0	1	
GR	0	0	0	0	0	3	9	9	9	19	5	-	33	34	7	27	76	33	
ES	2	2	2	2	2	2	6	2	2	0	2	2	3	2	0	0	40	0	
FR	0	0	0	0	0	4	7	-	-	-	1	0	1	3	0	47	30	32	
IE	0	0	0	0	0	10	63	14	14	15	14	14	14	16	85	14	29	32	
IT	0	1	1	1	1	0	3	3	3	2	1	-	1	1	100	49	85	72	
CY	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
LV	0	0	0	0	0	0	4	1	1	1	1	12	1	2	0	1	31	0	
LT	0	0	0	0	0	0	2	1	1	1	1	100	1	0	100	1	1	1	
LU	0	0	0	0	0	0	4	1	7	7	2	2	5	10	7	12	96	95	
HU	0	0	0	0	0	1	5	2	2	22	2	100	2	11	0	21	33	2	
MT	19	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	
NL	0	0	0	0	0	0	2	1	2	6	0	0	0	6	6	12	43	27	
AT	0	0	0	0	0	0	2	8	8	0	0	2	8	0	1	0	27	0	
PL	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	58	1	
PT	0	100	0	0	0	2	2	0	0	0	0	0	100	0	0	0	4	0	
SI	0	0	0	0	0	0	1	14	15	1	2	100	0	1	84	1	5	1	
SK	1	1	1	1	1	1	1	0	0	0	1	1	2	1	0	0	31	1	
FI	0	0	0	0	0	0	2	0	0	0	1	0	0	0	100	1	2	1	
SE	0	0	0	0	0	0	4	0	2	43	0	2	0	0	100	1	1	1	
UK	8	8	8	13	13	9	10	4	4	0	8	9	10	6	100	0	2	0	
BG	16.1	0	0	0	0	2	17	0	0	0	0	0	0	1	100	0	0	0	
RO	4.9	12.5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	27	0	
IS	19.3	0.0	0	0	0	0	67	64	1	35	1	100	100	10	100	13	1	0	
NO	11.5	-	0	1	0	0	22	2	0	8	2	0	0	4	0	8	1	1	
CH	20.3	0.1	0	0	0	4	4	2	2	1	5	1	0	100	100	1	4	6	

Note: Item non-response is defined as percentage of blanks of all eligible records. "-" (semicolon) data suppressed because of measurement concerns.

Module non-response is the share of respondents for which all employees or self-employed persons in the ad hoc module are blank or non-applicable.

Optional for Germany

Optional for Germany and Portugal

Optional for Germany, Italy, Finland, Sweden and United Kingdom

If restricted to employees working evenings, nights or weekends.

## Accuracy

Most of the participating countries provided information about the relative standard error (coefficient of variation) for overtime hours and paid overtime hours in the ahm2004 and the number of shift workers in the optional module on atypical working hours.

Table 3 shows this information. It has been reformulated in terms of confidence limits for the statistics in question, in order to provide better clarity to the reader.

**Table 3. Estimates and confidence limits for selected number of statistics in the ad hoc module 2004**

	Average number of overtime hours <sup>1</sup>	Average number of paid overtime hours <sup>1</sup>	Total number of persons working shifts (CORE)
BE	-	-	-
CZ	10.9 ±0.3	10.6 ±0.5	1,099.6 ± 29.3
DK	8.4 ±1.0	7.9 ±0.9	143.0 ± 15.1
DE	8.3 ±0.1	7.9 ±0.3	4,723.0 ± 81.9
EE	9.4 ±0.8	8.6 ±1.3	90.8 ± 21.7
EL	-	-	-
ES	3.7 ±0.3	3.8 ±0.3	2,541.9 ±109.6
FR	-	-	-
IE	-	-	-
IT	6.9 ±0.1	6.5 ±0.2	2,992.6 ± 73.3
CY	8.5 ±0.7	8.0 ±0.6	23.9 ± 2.6
LV	11.7 ±1.2	11.7 ±1.0	198.5 ± 32.1
LT	11.0 ±1.7	11.2 ±1.3	139.3 ± 14.7
LU	-	-	-
HU	-	9.6 ±0.6	653.3 ± 20.1
MT	9.7 ±2.4	9.7 ±2.6	21.9 ± 0.6
NL	-	-	-
AT	9.0 ±0.6	8.7 ±0.8	549.5 ± 35.7
PL	-	-	-
PT	9.6 ±0.7	9.5 ±1.3	636.8 ± 38.7
SI	15.3 ±0.8	8.6 ±0.7	245.9 ± 4.2
SK	11.0 ±0.5	11.5 ±0.3	504.1 ± 17.8
FI	7.8 ±0.4	7.6 ±0.5	490.3 ± 14.4
SE	-	-	-
UK	-	-	-
BG	9.5 ±0.9	9.6 ±1.3	556.2 ± 27.4
RO	11.6 ±0.6	11.1 ±0.4	1,339.3 ± 68.3
IS	-	-	-
NO	-	-	-
CH	-	-	-

<sup>1</sup> Only those who worked (paid or unpaid) overtime in the reference week.

Note: as the countries did not all calculate the coefficient of variation on exactly the same population (all employees, all working overtime, all working paid overtime) the confidence limits have been recalculated to apply to the averages above.

## Timeliness and punctuality

According to Commission Regulation (EC) No 246/2003 of 10 February 2003 on a multi-annual program of ad hoc modules 2004-2006, the deadline for the transmission of results of the ahm2004 was 31 March 2005. Of the 30 participating countries, 25 delivered the data on time while 5 countries transmitted the data files the day after and up to 50 days later.

Several countries (16) sent revisions after the initial transmission. Initial validation of the data sets was finished in October 2005. Ten participating countries never affirmed the validity of the first results. Due to the work of the Task Force a second round of validation was initiated in December with revised files from thirteen countries<sup>6</sup> transmitted in January and February 2006.

Dissemination of the results, on the Eurostat web-site or in Statistics in Focus, is envisaged in Spring 2006.

<sup>6</sup> As of 24 February 2006.

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## Accessibility and clarity

The data from the ad hoc module will be published in *Statistics in Focus* (3 issues) during the year 2006. It will as well be published free of charge on the public web-site of Eurostat.

In addition, members of the public can request customised frequency tables and limited cross-tabulation sets directly from Eurostat without charge.

All data published on the Eurostat web-site have meta-data attached to it in the standard format of the IMF (SDDS).

## Comparability between Member States

The common conceptual basis of the survey allows good international comparison on work organization and working time arrangements. It can be assumed that there aren't severe conceptual differences among the countries, though different implementations of similar concepts may occur.

There are nevertheless areas necessary to be enquired further, being the main causes for the differences. These include three main types of divergences: relatively high non-response, different answering patterns from the rest (outliers) and high incidence of the "other" category in the four variables (Cols. 215, 216, 219 and 220) where this category captures non-specified cases<sup>7</sup>. All the participating countries, which showed some irregularity in any of these three areas, were asked to clarify the situation or to send revised files with corrected data if the differences were due to errors.

In all, 29 participating countries were asked for additional information. All but five replied and eleven<sup>8</sup> have transmitted corrected data files. For better understanding of the data the country answers are given in Annex 6.

When examining the results of the enquiry, the responses fall into one or more of the following categories:

- The results represent the actual situation in the country.
- The incidence of the phenomenon in the country is so insignificant that in the judgment of the participating country it was useless to administer the question or to implement the category.
- Due to programming errors, part of the eligible respondents did not receive the question or the response category was skipped.
- Due to errors in administering filters, part of the eligible respondents did not receive the question.
- As the filter question could not be transmitted directly from the core to the ad hoc module a substitute filter question proved to be inconsistent with the core question.
- The national questionnaire does not allow itself to be fully transcoded into the European module, thus certain (national) categories must be returned as no answer for the ahm2004.

In some cases the Task Force does not recommend that the country results be published due to incomparability.

## Comparability with previous ad hoc module 2001

The ad hoc modules 2001 and 2004 are not fully comparable despite their similar subject. Some variables were excluded entirely from the 2004 module, and most of the remaining variables were changed. The comparability of each variable that was included in some form in both modules is evaluated below. However, this evaluation is based on the original variables alone. In order to assess comparability more deeply, the questionnaires and instructions used in each member state should be reviewed.

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<sup>7</sup> The definition of "outliers" and "high incidence" of "other" was arbitrary and based purely on "eyeballing" the results.

<sup>8</sup> By 24 February 2006.

### *Control over own work methods and schedule*

Ahm 2001: Col. 209	Ahm2004: Col. 209
1 = Determines own work methods and schedule	1 = person can determine how to do the work
0 = Subordinate relationship	2 = person can determine when to do the work
	3 = person can determine how and when to do the work
	0 = person cannot determine how or when to do the work

The target group of this variable was altered: employees were included in 2001 and not in 2004, but this is not a problem if the analysis is limited to the self-employed with less than 10 workers in the local unit. Comparability is limited more seriously by using separate codes for 'how' and 'when' in the 2004 module. This was done because it is possible to be independent in only one of the two aspects. The final results could be comparable on the level *has at least some control over methods or schedule / has no control at all*. However, comparability depends on the actual questionnaires and instructions used, and further information on them is required before making any comparisons.

### *Work for single firm or customer*

Ahm2001: Col. 210	Ahm2004: Col. 210
1 = works regularly for 1 firm or customer	1 = works regularly for 1 client or customer
0 = works regularly for > 1 firm or customer	0 = works regularly for > 1 client or customer

The target group was altered the same way as in col. 209: employees and self-employed with 10 or more workers in the local unit were excluded in 2004. By harmonising the target, group comparability could be achieved (if questionnaires are not very different).

### *Overtime hours in ref. week and paid overtime hours in ref. week*

Ahm2001: Col. 212/213, Col. 214/215	Ahm2004: Col. 211/212, Col. 213/214
... Number of overtime hours in the reference week	... Number of overtime hours in the reference week
... Number of paid overtime hours in the reference week	... Number of paid overtime hours in the reference week

These variables should be fully comparable.

### *Shift work patterns*

Ahm2001: Col. 216	Ahm2004: Col. 215
1 = continuous shift work, usually 4-shift system	1 = continuous shift work, usually 4-shift system
2 = semi-continuous shift work, usually 3-shift system	2 = semi-continuous shift work, usually 3-shift system
3 = 2-shift system: double day shift	3 = 2-shift system: double day shift
4 = sometimes night, sometimes day shift	4 = sometimes night, sometimes day shift
5 = fixed assignment to a given shift	
6 = other	6 = other

Code 5 (fixed shift) was excluded in 2004 because it was considered to be inconsistent with the definition of shift work. Due to some comments from the Member States it was added afterwards to the data, but only a few countries made use of it. Otherwise the variables are identical, so by combining codes 5 and 6 in the 2001 module they should be more or less comparable.

### *Variable working times*

Ahm2001: Col. 217, Col. 218	Ahm2004: Col. 216, Col. 217
Col. 217 1 = fixed start and end of a working day	Col. 216 1 = fixed start and end of a working day
2 = annualized hours contract	2 = staggered working hours
3 = working time banking	3 = working time banking with possibility only to take hours off



	4 = working times by mutual agreement		4 = working time banking with possibility to take full days off
	5 = determines own work schedule		5 = start and end of working day varying by individual agreement
	6 = other		6 = determines own work schedule
Col. 218	1 = can use credit hours to take full days or weeks off 0 = cannot use credit hours to take full days or weeks off	Col. 217	1 = person has annualised hours contract 0 = person has not an annualised hours contract

The variables were changed considerably. Col. 217 was problematic in 2001 because the categories were not mutually exclusive: the variable included both daily working schedule and more long-term arrangements. It is possible to derive some comparable information from these variables (e.g. *fixed start and end / other*), but it would require further information about the questionnaires used.

#### On-call work

Ahm2001: Col. 219	Ahm2004: Col. 218
1 = a minimum number of hours is agreed... 2 = reports to work only when called 0 = other	1 = person reports to work only when called 0 = other

In 2001 on-call work was included in the same variable with min-max contracts, and therefore the results are not comparable. In addition the target group was changed; shift workers were excluded in 2004. Judging from the Finnish LFS (28 % of on-call workers working shifts) leaving the shift workers out may significantly limit the results even if this type of work may be considered inconsistent with the definition of shift work.

#### Reason / convenience of this working time arrangement

Ahm2001: Col. 220, Col. 221	Ahm2004: Col. 221
Col. 220 1 = shift work was the type of job the person was looking for (personal initiative) 2 = shift work was not the type of job person was looking for but no similar job available without shift work (similar within this occupation or industry)	1 = shift work is convenient for personal life situation 2 = on-call work is convenient for personal life situation 0 = shift work or on-call work is not convenient for personal life situation
Col. 221 1 = these working time arrangements were the type of job the person was looking for (personal initiative) 2 = these working time arrangements were not the type of job person was looking for but no similar job available with ordinary working time arrangements (similar within this occupation or industry)	

In 2001 the initial reason for choosing a certain working time arrangement was asked of employees who do shift work (Col. 220) and those who have an annualised hours, min-max or zero-hours contract or working time banking (Col. 221). It was seen as problematic in many ways. Firstly, different working time arrangements in Col. 221 were not mutually exclusive and therefore some information was lost by combining them in the same variable. Secondly, for those who had started working several years ago it was difficult to remember the reason. Thirdly, asking the initial reason did not tell anything about the person's current situation, it was not even possible to know whether the variables referred to the current job. Therefore it was decided to change the viewpoint in 2004 and ask about the convenience referring to the person's current situation. Because of the considerable changes, the variables are not comparable.

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## **Presentation of the results**

Generally speaking, a starting point for the interpretation of results of 2004 ad hoc module may be the conceptual framework outlined in Doc. E1/EMPL/26/2002 “Ad hoc module 2004 on the work organization and working time arrangement”, which includes the conclusions of the 2002 task force evaluating the 2001 ad hoc module.

The interpretation of results should consider labour market flexibilization in relation to both production organization and its effects on labour supply. As a matter of facts, the spreading of new forms of employment and of working time flexibility is related to economic changes, and changes in the production processes are brought by increased economic competition. Looking at the other side of the medal, these changes have relevant implications on working conditions, social protection, retirement schemes, reconciliation between work and family life. The interpretation of ahm2004 results should also take into account ahm2001 results, whenever comparability occurs.

In following paragraphs the ad hoc module variables are clustered in six groups of subjects. For each group indicators, break down variables useful for interpretation of results are presented.

Discussion should concern the general framework (i.e. the six groups), in addition to indicators and break down variables. However, the detail at which data should be presented and the extension of tables and/or graphs depend on the user to whom information is addressed and on the form of dissemination. The general proposal presented so forth should therefore be adapted accordingly.

### **1. Employment relationship (Col. 209, 210)**

These two variables aim at assessing borderline cases of own-account workers who supply their own personal services to another business although they do not have an employment contract.

- These two variables should be presented together in a cross-tabulation.
- Incidence on total self-employment.
- Possible breaking down by economic activity and/or occupation (detail to be decided) for self-employed who cannot determine how or when to do the work or have only one customer.
- Maybe keep separated self-employed with and without employees.
- Maybe draw up self-employed who cannot determine how or when to do the work or have only one customer near to employees with temporary job or work contract of limited duration (non standard form of employment on the side of paid work).
- 2001-2004 differences.

### **2. Overtime (Col. 211\_212, 213\_214)**

Possible indicators:

- Employees who performed overtime per 100 employees.
- Employees who performed overtime broken down by paid/unpaid overtime.
- All overtime was unpaid.
- Overtime was partially paid.
- All overtime was paid.
- Average overtime hours per employee.
- Average overtime hours per employee who performed overtime.
- Incidence of paid (or unpaid) overtime hours out of total overtime hours.

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Possible break down variables:

- Economic activity.
- Occupation.
- Gender.
- Part-time/full-time (?)
- Other (?)
- 2001-2004 differences.

### **3. Shift work patterns (Col. 215)**

Shift workers by shift-work pattern per 100 employees.

Possible break down variables:

- Economic activity.
- Gender.
- Core/non-core hours.
- Other (?)
- 2001-2004 differences.

### **4. Working time arrangements (Col. 216, 217, 218)**

Employees by working time arrangement per 100 employees:

- Fixed start/end.
- Staggered working hours.
- Working time banking, hours off.
- Working time banking, days off.
- Mutual agreement.
- No formal boundaries.
- Annualized hours.
- On-call work.

Possible break down variables:

- Economic activity.
- Occupation.
- Gender.
- Core/non-core hours.
- Part-time/full-time (?)
- Other (?)
- 2001-2004 differences.

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## 5. Working time pattern of part-timers (Col. 219)

Part-timers by part-time patterns per 100 employees.

Possible break down variables:

- Gender.
- Age (young/adult/old).
- Reason for working part-time.
- Need for care facilities.
- Core/non core hours.
- Other (?)

## 6 Convenience of working time arrangements for personal life situation (Col. 221, 222)

- Shift workers.
- On-call workers.
- Evening workers.
- Night workers.
- Saturday workers.
- Sunday workers.
- All workers in non core hours for whom their working time arrangement is convenient for personal life situation per 100 workers with the same working time arrangement.

Possible break down variables:

- Gender.
- Age (young/adult/old).
- Other (?)

### ***Other issues***

#### **Module integration**

In the Quality Report some confusion related to the meaning of “integration of the module in the questionnaire”. Some of the answers in the Quality Reports may not be valid due to this. The issue, however, is the question of whether the ad hoc module is implemented in a separate block or if the individual questions are integrated into the route of the core questionnaire as logical follow up of core questions.

Italy implemented the ad hoc module by integrating the ad hoc questions in the core part on working hours. No undesired effects on the core questions were detected; the overall ad hoc module response was higher than on the average. In view of ISTAT this method helped preventing annoyance and confusion of the respondents, which a separated block of questions at the end of the questionnaire would have produced.

Integration of the ad hoc module in the core questionnaire is, however, not practicable in case of paper questionnaires. Hungary reported that implementing the module separately necessitated some of the core questions to be asked again, sometimes producing different results. The view of HCSO was that in these cases, the ad hoc module produced more reliable results, which has caused them to make some subsequent changes to the core questionnaire.

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In a CAI instrument, answers to core questions can be transferred to the ad hoc module in automated filters. Thus inconsistencies can be avoided. By this method, however, there is an increased risk of programming errors, which causes eligible respondent groups to be bypassed in the course of the interview.

As both inconsistencies and routing errors occurred for some countries in the application of the ahm2004, this turned out to be real dangers, which must be paid attention to in the future implementation of an ad hoc module of this type.

In general, the Task Force does not recommend integration of an ad hoc module in the questionnaire. When the subject, however, is closely related to the core business of the LFS, then such integration could be envisaged, provided there is no adverse affect on the core questions, no time series disturbing.

Pre-tests are thus recommended, but the Task Force acknowledges that it could be difficult to measure effects of the ad hoc module questions on the core questions in a small pilot study. Such pre-tests are also important when the ad hoc module is separate from the core module, both in order to overcome problems of inconsistency and to prevent routing errors if the variables from the core questionnaire are used to identify the target group for variables of the ad hoc module.

## The Quality Reports

The form for the ad hoc module Quality Report can be improved:

- Better estimation of response burden and costs. More precise estimates can be suggested, such as a simple count of questions or estimation of average routes through the questionnaire.
- A quality report should also include a description (table) of the trans-coding from national variables to Eurostat variables.
- As special training of interviewers on the subject and implementation of the ad hoc module can affect the results, an item relating to interviewer training or special instructions in lieu of training should be added to Quality Reporting.

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# Annexes

### Explanatory notes

#### **Definition of variables and response categories of the 2004 ad hoc module on work organisation and working time arrangements (rev. Sept. 03)**

No control over when and how to do the work this variable helps to determine which elements of the self-employed are similar to the conditions of an employee. There are three elements to take into account: is it laid down what is to be done, the way in which it is done and the time when it is done.

- The first element is not within the discretion of the self-employed because the customer determines the output or product or a mission statement determines the objectives.
- Therefore only *how* and *when* are observed in this variable. (C209=0): the employed person can not determine when (when to start and finish work and when to take breaks) and how to do the work.
- The working times are within the discretion of the self-employed even when a deadline is agreed or when the harvest season is given *ex ante*.

Overtime (C211\_212) includes all hours worked, paid or unpaid, in excess of normal hours, which are the number of hours fixed in each country by or in pursuance of laws, regulations, collective agreements or employment contract... or where not so fixed, the number of hours in excess of which any time worked is remunerated at overtime rates or forms an exception to the recognised rules or custom of the establishment or of the process concerned (Reduction of hours of work recommendation (n° 116), ILO, 1962). Hours compensated at long term in hours or days off are excluded, for example, in the case of working time banking or working time reduction when the number of usual weekly working hours is above the number of hours according to the contract but these additional hours are compensated in extra days off.

A person is working shift (C204) when her/his work consists of a work organisation where different groups of workers succeed each other *according to a certain rotation pattern* at the same work site to perform the same operations (Council directive 93/104/EC concerning certain aspects of the organisation of working time).

- Continuous shift work (C215=1): covers 7 days, 24 hours/day
- Semi-continuous shift work (C215=2): covers 5 weekdays, 24 hours/day
- Double day (C215=3): early morning and late afternoon

Fixed start/end of the working day (C216=1): a regular (not necessarily constant) long-term pattern of fixed daily working times without the possibility to start or end the working day later/earlier.

Staggered working hours (C216=2) ( $\neq$  fixed start/end of the working day): workers may start earlier and finish later outside a range of hours according to regulation or collective agreement when presence is compulsory. But there is no account systems of credit and debit hours allowing employees to take time off - this being the case of working time banking. The number of hours worked each day is equal to the contractual number.

Working time banking ( $\neq$  fixed start/end of the working day): a system of accumulation and settlement of debit and credit hours around the standard number of weekly or monthly working hours. Over a longer period, the average number of working hours is equal to the number of contractually agreed working hours. Working time banking (“horaire à la carte, Arbeitszeitkonten”) should not be interpreted as an arrangement of total autonomy when to start and finish work.

Start/end of the working day varying by mutual agreement (C216=5): the start and end of the working day usually vary daily or weekly and they are individually agreed with the employer. This is a residual category and it applies only when the regulations in the cases 1 - 4 do not apply.

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Other: (C216=7): this includes the frequent case of a fixed start of the day until the work is finished because no category is specified which precisely matches this case.

Annualised hours contract (C217): only the annual number of hours, for example 1600 hours, is specified but the distribution of the weekly number of hours worked varies throughout the year. [Alternative contracts that are not annualised hours, usually specify a weekly number of hours]. This number of weekly working hours is usually determined by the employer dependent on production or service needs.

On-call work (or “zero hours” contract; C218): on-call work is an open-ended contract without a guarantee for a fixed number of hours, workers are called into work and report to work at a short notice only when needed. [Although the employer has no obligation to provide work, a minimum number of hours may be agreed in some cases between the employer and the worker.] On-call workers can be scheduled to work for several days or weeks in a row but they do not have a regular schedule. This situation is different from stand-by hours when the person “on duty” is waiting for an emergency call.

#### Working time patterns of part-timers (C219)

Part-time employed persons should compare their own schedule with a full-time equivalent schedule in their job. If no equivalent full-time schedule exists, the personal schedule should be compared with a five days schedule of normal working hours.

#### Possibility to work variable hours in the reference week (C220):

This variable should capture all situations when somebody has taken hours or days off independently when they are compensated. Therefore, it is not a simple copy of the information about the reasons why somebody has worked less in the reference week than usually. For example, a person may have taken a half day off but the total working hours may be longer in the reference week than usually due to overtime. The information of C220 refers to the half day off (C220=3)

Two different sets of categories are distinguished: categories 1 or 5 in the case of working time banking and categories 2, 3 or 6 else.

- Reduction of credit hours (category 1): there is no lower limit for the reduction of hours
- Has taken a few hours off (category 2): the occurrence should be identified independently of a balance by additional hours later in the reference week
- Has taken 0,5 or  $\geq 1$  day off (category 3): this category is distinct from the previous categories because it covers the case of holidays, including special leave
- Reduction of credit hours or a few hours off and having taken days off (category 4) is a combination when a reduction of the working hours occurred (category 1) simultaneously with a short leave of half a day, a full day... in the reference week (categories 2 and 3)
- Wanted to take credit hours but not possible (category 5): the negative case of category 1
- Wanted to take hours, 0,5 or  $\geq 1$  day off (category 6): the negative case of categories 2 or 3
- The residual category 7 applies only when situations 1-6 have not occurred in the reference week. Therefore, when only a situation of leave initiated by the employed (lay-off) or “force majeure” (strike, bad weather... - beyond individual control) occurred or when only extra hours were performed, then this person is classified in this category.



Convenience of shift work and on-call work for personal life situation (C221)				
Response possibilities:			Dependent on:	
			Shift work (V204)	On-call work (V218)
9			3	0
2		0	3	1
1		0	1	0
1 (*)	2	0	1	1
(*) applies when both shift work and on-call work are convenient		The zero code occurs when V204=3 or V218=0 or when one or both arrangements are not convenient		

Convenience of working time arrangements for personal life situation (C222)					
Response possibilities		Dependent on:			
		Evening work (C205)	Night work (C206)	Saturday work (C207)	Sunday work (C208)
	9 (does not apply)	3	3	3	3
1 (*)	3 (*)	1,2	3	3	3
1 (*)	3 (*)	3	1,2	3	3
1 (*)	3 (*)	...			
1 (**)	3 (***)	1,2	1,2	3	3
1 (**)	3 (***)	...			
1 (**)	3 (***)	1,2	1,2	1,2	1,2
(*) this code applies unambiguously to a single arrangement (**) this code refers to more than one arrangement and applies when all these arrangements are convenient (***) this code refers to more than one arrangement and applies when at least one arrangement is not convenient					

## Answers to questions

### Column 209 (OWNMTSCH)

#### *Concepts and definitions*

- . The identification criterion is related with subordination when performing the work. Can the self-employed person decide how to do the work? Or: is there another person giving instructions how the work should be carried out and does this other person monitor or control the self-employed worker while (s)he is working and can this other person penalise shortcomings? These aspects go beyond the tools (hardware and software) provided to the self-employed person but, the supply of tools and premises are an element but not a sufficient element in the subordinated relationship. (For example, when a self-employed consultant works in your office to help you design the questionnaire, this consultant may use your hardware and software but he may keep full control over the work). Examples of economically dependent workers who seem to be self-employed because they do not have an employment contract: taxi or truck drivers, sales representatives, outworkers in the clothing industry, etc.

For example: civil engineer making projects of buildings (he works as self-employed, he works for a private company that gives him project work). He is a part of working team of this company = his working place is in this company, this company gives him PC hardware and software needed for his work (does it mean the company influences his working methods?), the company determines his working time. Does this person determine “how to do the work” or not? Tools and premises are not sufficient conditions to consider the position of this engineer as subordinate; code ‘1’ seems to apply.

Please also refer to annex 1 entitled “Explanatory notes”.

Please also refer to annex 4 for an analysis of C209.

### Column 210 (SINGCUST)

#### *Filter*

- . The filter is ambiguous because of missing parentheses (cf. Regulation 247/2003 of 10 February 2003): C26=2 or (C26=1 and C34\_35 < 10).
- . There is a loss when strictly taking C34\_35<10, because of the existing code 14 “Do not know but less than 11 persons”. To avoid this loss it should have been written: C26=2 or (C26=1 and C34\_35 <= 10).

#### *Coding*

- . There is an error in the English description of code ‘0’ (cf. Regulation 247/2003 of 10 February 2003). It should have been: “Works regularly for more than one client or customer”.

Please also refer to annex 4 for an analysis of C210.

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## Column 211\_212 (OVERTHOR)

### *Coding*

- . Code '00' must be used for a person who did not make any overtime (i.e. zero overtime hour made).

### *Calculation of weighted hours*

- . For each individual separately (i.e. record by record or line by line), the number of overtime hours she/he made is multiplied by her/his weighting coefficient.  
The sum of all these individual results provides the total volume of overtime hours made by the population.

Please also refer to annex 1 entitled "Explanatory notes".

## Column 213\_214 (POVERTOR)

### *Filter*

- . The filter is implicitly the same as for C211\_212 (i.e. C26=3) because C213\_214 refers to C211\_212.

### *Calculation of weighted hours*

- . For each individual separately (i.e. record by record or line by line), the number of paid overtime hours she/he made is multiplied by her/his weighting coefficient.  
The sum of all these individual results provides the total volume of paid overtime hours made by the population.

## Column 215 (SHIFTPAT)

### *Coding*

- . Code '3': a "double day-shift" consists of a shift starting in the morning, immediately followed by a 2nd shift that day; the sum of both shifts covers a very long day.
- . Code '4': a day/night shift (for example in car manufacturing but also in services) consists of two clearly separated shifts.
- . C215 was initially planned not to consist of the description of work organization seen from the firm's perspective, but to consist of the description of work organization for the respondents themselves. C215 concerns the pattern of the individual employee.

### *Concepts and definitions*

- . One should consider that "night" work is work done during the sleeping hours, which are difficult to strictly precise because of different country cultures. One should consider that working between 19h00 and 24h00 is more evening work than night work.
- . Shift involves different groups of workers (according to the explanatory notes).  
NB: any 2 part-timers who would share their jobs do not work shift.
- . There is a big problem in defining and classifying (particularly in a harmonised way) "persons working fixed shifts". This must still be studied and discussed before any decision to be taken.

Please also refer to annex 1 entitled "Explanatory notes".

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## Column 216 (VARWKHRS)

### *Coding*

- . C216 refers to a contractual arrangement or pattern. Any form of overtime should not be taken into account.
- . Code '1': shift work is independent from the working time arrangement. Therefore, a fixed start/end of the working day (code '1') does not mean a constant start/end of the working day. There may be a certain pattern in the case of shift work or part-time work. However, the start /end of each working day can be fixed (not flexible) in the case of shift work. These persons may have no possibility to start one hour earlier or later, they need to start on the fixed time.
- . Code '2': the hours of the morning or the afternoon shift are usually fixed because there is an established rotation pattern and the different shifts depend on each other. Staggered working hours allow employees to start/finish their day at different times ensuring an appropriate staff coverage and presence during peak or core hours. People are working outside the times that working hours should normally fall in their enterprise/ local unit.

Please also refer to annex 1 entitled “Explanatory notes”.

## Column 217 (ANNWKHRS)

### *Coding*

- . The possibility of sub-annual (for example, half-yearly) limits for the number of hours is not provided in the coding. Therefore a 6-monthly contract (in our example) is coded as '0'. An exception for a yearly contract could be a teacher term-time contract (because teachers do not work during Summer holidays).  
NB: an annualised hours contract is not dependent on a permanent or fixed-term contract. Code '1' refers to the current employment situation, independent of a possible other job during the holiday months. The hours specified in the contract refer to a year or to term-time (about 10 months) in the case of teachers (this indeed excludes half year substitutes due to the illness of a teacher).

### *Concepts and definitions*

- . Annualised hours are restrictively defined, i.e. the total number of hours per year is set by contract. It does not include a monthly set number of hours (although this could be considered as annualised hours). A specification of weekly hours is excluded.

Please also refer to annex 1 entitled “Explanatory notes”.

## Column 218 (ONCALLWK)

### *Coding*

- . If, for instance, a person has an open-ended contract without a guarantee for a fixed number of hours, but works as a stand-by employee (not paid during stand-by time), this person should be coded '1'. Reason: even if there is a contract, there is not a fixed number of hours, this is why one do not consider that this person is “on duty” with a “stand-by time” strictly speaking.

Please also refer to annex 1 entitled “Explanatory notes”.

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## Column 219 (WKTPPTFT)

### *Coding*

- . Code '5' refers to a regular pattern over a longer period although some deviations are possible (e.g. when a part-time colleague takes holidays).

Please also refer to annex 1 entitled "Explanatory notes".

## Column 220 (VARHRSRW)

### *Coding*

- . Code '3' also covers special leaves (legal or contractual) such as: sick leave, leave to care for children, study leave, paid or unpaid leave, leave defined by employment law for wedding or funeral, etc..
- . Code '7' also covers persons who voluntarily chose not to ask for or who did not want to take (and consequently did not take) any time off, whether they could have done it or not.
- . Codes '2' and '6' are not exclusive: a person may have taken some hours off (code '2'), but she/he actually wanted to take more than a few hours and could not do so (code '6').  
Solution proposed: the variable domain being the "possibility to work variable hours in the reference week", it is suggested to code '2' such a person.

### *Concepts and definitions*

- . C220 captures different situations when somebody has taken hours off or wanted to take hours off but could not do it. This is independent of the requirement to compensate these hours later or of a reduced pay. This is independent of the reason. Codes '1' to '6' apply in the case of hours off on the initiative of the employee. Code '7' applies in situations of leave initiated by the employer.

Please also refer to annex 1 entitled "Explanatory notes".

## Column 221 (WKT1PERS)

### *Coding*

- . Persons for who shift work or on-call work would be indifferent for personal life situation should be coded 'Blank'.

### *Filter*

- . Shift work (C204=1) and on-call work (C218=1) can be grouped, here, without it changes something to their independent nature. The purpose of C221 is to know whether shift work or on-call work is convenient or not.

## Column 222 (WKT2PERS)

### *Coding*

- . There is a coherence problem in modalities (cf. Regulation 247/2003 of 10 February 2003): French '0' = English '3'. Eurostat used the English version: '0' was converted into '3'.
- . Persons for who evening, at night or week-end work would be indifferent for personal life situation should be coded 'Blank'.
- . The following problem was not taken into account: for instance, a person can work both in the evening and during the week-end, finding one "convenient" but the other one "not convenient". Due to such a situation

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of possible opposite answers relating to different schedules (evening work, at night work, Saturday work, Sunday work), the grouping of C205, C206, C207 and C208 may lead to a higher level of non-answers than expected.

Solution proposed when possible to recover the information: code “convenient” if no schedule is not convenient and at least one schedule is convenient; code “not convenient” if at least one schedule is not convenient; code “no answer” if there was no answer relating to any schedule.

### *Filter*

. Some countries have forgotten to take into account the self-employed persons.

Should a Module Regulation be more explicit in the module filter specifications by reminding the filters relating to the used core variables themselves?

. For more exactitude, Eurostat changed the filter by adding the “Blank” modality to C204 and C218.

## **General**

### *Code “Not applicable”*

. For any variable, the “Not applicable” modality reflects the non-filter situation and cannot be interpreted in any other way.

### *Code “I don’t know”*

. In the absence of significant difference between “I don’t know” and “No answer”, and due the scarcity of such a proposed modality, it was asked to recode the few “I don’t know” as “No answer”.

### *Core variables used as filters*

. Should a Module Regulation be more explicit in the module filter specifications by reminding the filters relating to the used core variables themselves?

### *Ad hoc module construction*

. It should be paid more attention to each variable construction, definition and filter.

. For a single variable, one should pay attention to have exclusive codes (e.g. C220).

. For a single variable, it should be avoided to group several aspects which could lead to opposite answers (e.g. C222).

. It should also be more taken into account possible comparisons with previous modules on the same theme.

### *Optional variables*

. If a variable has not been surveyed, code “No answer” should be used where there should be answers and code “Not applicable” should be used for the rest.

## Annex 3

### Specification of the 2004 ad hoc module on “work organisation and working time arrangements”

NB1: all Member States and regions are concerned.

NB2: the data are collected only for the main job.

NB3: the variables on shift work, evening work, Saturday and Sunday, work which appear as columns 204 to 208 in the “Annex to the Commission Regulation (EC) No 1575/2000 concerning the codification to be used for data transmission from 2001 onwards” must be surveyed in 2004 for the same reference period as the ad hoc module referred to in Article 1 of the “Commission Regulation (EC) No 247/2003 of 10 February 2003 adopting the specification of the 2004 ad hoc module on work organisation and working time arrangements provided by Council Regulation (EC) No 577/98”.

NB4: the text and filters have been corrected in order to achieve better clarity.

Var. name	Column	Code	Description	Filters/Remarks
OWNMTSCH	209		<b>Control over own work methods and schedule</b> <i>- Optional for Germany -</i>	C26 = 1,2
		1	Person can determine how to do the work	
		2	Person can determine when to do the work	
		3	Person can determine when and how to do the work	
		0	Person can not determine how or when to do the work	
		9	Not applicable (C26 = 3,4,9,blank)	
	Blank	No answer		
SINGCUST	210		<b>Work for single customer</b> <i>- optional for Germany -</i>	C26 = 2 or (C26 = 1 and C34/35=01-10, 14)
		1	Works regularly for just one client or customer	
		0	Works regularly for more than one client or customer	
		9	Not applicable (C26 ≠ 2 and (C26 ≠ 1 or C34/35 = 11,12,13,15,99,blank))	
	Blank	No answer		
OVERTHOR	211/212		<b>Overtime hours in the reference week</b>	C26 = 3
		00	No overtime	
		01-98	Number of overtime hours	

		99	Not applicable (C26 = 1,2,4,9,blank)	
		Blank	No answer	
<b>POVERTOR</b>	213/214		<b>Paid overtime hours in the reference week</b>	C26 = 3
		00	No paid overtime or no overtime (C211/212 = 00)	NB:
		01-98	Number of paid overtime hours	C213/214 ≤ C211/212
		99	Not applicable (C26=1,2,4,9,blank)	
		Blank	No answer	

Var. name	Column	Code	Description	Filters
<b>SHIFTPAT</b>	215		<b>Shift work patterns</b>	C204 = 1
		1	Continuous shift work, usually four-shift system	
		2	Semi-continuous shift work, usually three-shift system	
		3	Two-shift system: double day-shift	
		4	Sometimes night, sometimes day-shift	
		6	Other type of shift	
		9	Not applicable (C204 = 3,9,blank)	
		Blank	No answer	
<b>VARWKHRS</b>	216		<b>Variable working hours</b>	C26 = 3
		1	Fixed start and end of a working day	
		2	Staggered working hours, banded start/end	
		3	Working time banking with possibility only to take hours off	
		4	Working time banking with possibility to take full days off (besides taking hours off)	
		5	Start and end of working day varying by individual agreement	
		6	Determines own work schedule (no formal boundaries)	
		7	Other	
		9	Not applicable (C26 = 1,2,4,9,blank)	
		Blank	No answer	
<b>ANNWKHRS</b>	217		<b>Annualised working hours - optional for Germany -</b>	C26 = 3 and C216 ≠ 6
		1	Person has an annualised hours contract	
		0	Person has not an annualised hours contract	
		9	Not applicable (C26 = 1,2,4,9,blank or (C26 = 3 and C216 = 6))	
		Blank	No answer	



<b>ONCALLWK</b>	218		<p style="text-align: center;"><b>On-call work</b> <i>- optional for Germany and Portugal -</i></p> <p>1 Person reports to work only when called 0 Other 9 Not applicable (C26 = 1,2,4,9,blank or (C26 = 3 and C204 = 1)) Blank No answer</p>	C26 = 3 and C204 ≠ 1
<b>WKTPTFT</b>	219		<p style="text-align: center;"><b>Working time pattern of “part-timers” compared with “full-timers”</b></p> <p>1 Less hours per day 2 Half a day less per week 3 Less days per week 4 Less hours per day and less days per week 5 One week in two 6 Other 9 Not applicable (C46 = 1,9,blank) Blank No answer</p>	C46 = 2-8
<b>Var. name</b>	<b>Column</b>	<b>Code</b>	<b>Description</b>	<b>Filters</b>
<b>VARHRSRW</b>	220		<p style="text-align: center;"><b>Possibility to work variable hours in the reference week</b> <i>- optional for Germany, Italy, Finland, Sweden and the United Kingdom -</i></p> <p>1 [C216 = 3, 4] person has reduced her/his credit hours 2 [C216 ≠ 3,4] person has taken a few hours off (without the need to take holidays) 3 [C216 ≠ 4] person has taken half a day, one or more days off 4 Person has reduced her/his credit hours balance or has taken a few hours off and has also taken half a day, one or more days off (on different days of the week) 5 [C216 = 3, 4] person wanted to take credit hours but could not do so (and has not taken holidays) 6 [C216 ≠ 3, 4] person wanted to take a few hours, half a day, one or more days off but could not do so 7 Other (hours actually worked ≥ contractual, lay-off etc.) 9 Not applicable (C24 = 2,3,4,5,9 or C26 = 1,2,4,9,blank or C58 = 1 or C216 = 5,6,7,9,blank) Blank No answer</p>	C24 = 1 and C26 = 3 and C58 ≠ 1 and C216 = 1-4
<b>WKT1PERS</b>	221		<p style="text-align: center;"><b>Convenience of working time arrangements for personal life situation</b> <i>- optional for Germany -</i></p>	C204 = 1 or C218 = 1

		1	Shift work is convenient for personal life situation	
		2	On-call work is convenient for personal life situation	
		0	Shift work or on-call work is not convenient for personal life situation	
		9	Not applicable (C204 = 3,9,blank and C218 = 0,9,blank)	
		Blank	No answer	
<b>WKT2PERS</b>	222		<b>Convenience of working time arrangements for personal life situation - optional for Germany -</b>	C205, C206, C207, C208 = 1,2 and C204 = 3,9,blank
		1	Work in the evening, at night or during weekend is convenient for personal life situation	and C218 = 0,9,blank
		3	Work in the evening, at night or during weekend is not convenient for personal life situation	
		9	Not applicable ((C205 = 3,9,blank and C206 = 3,9,blank and C207 = 3,9,blank and C208 = 3,9,blank) or C204 = 1 or C218 = 1)	
		Blank	No answer	

<b>SHIFTWK</b>	204		<b>Shift work</b>	C26 = 3
		1	Person works shifts	
		3	Person does no work shifts	
		9	Not applicable (C26 = 1,2,4,9,blank)	
		Blank	No answer	

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## Annex 4

### An analysis of variables “Control over own work method and schedule” and “Work for single customer”

Nicola Massarelli (ISTAT)

Here follow some comments on 2 specific aspects:

- Should these variables be addressed only to self-employed working in small local units (e.g. max 2-3 workers)?
- Did these variables cause particular problems to farmers? Comments on this specific aspect are based on NACE and ISCO information. As it was predictable, the analysis on NACE A-B (agriculture) and ISCO 6+92 (skilled agricultural & fishery workers + unskilled agricultural, fishery & related labourers) lead to same conclusions.

#### Col 209 “Control over own work method and schedule”:

1. The incidence of no answers for NACE A-B (all countries except DE<sup>9</sup> and NL<sup>10</sup>) is 0.8%, less than general average for all NACE codes, which is 2.5%. 0.8% is also the incidence of no answer for ISCO 6+92.
2. Considering single countries, the incidence of no answers for NACE A-B and for ISCO 6+92 is relatively high for BE, EE, IE and UK. Nevertheless, it seems to be a problem specifically related to NACE A-B and to ISCO 6+92 only for EE. As a matter of facts, BE, IE and UK have a high incidence of no answers for all NACE and ISCO codes.
3. Considering all countries (except DE and NL), the incidence of “When&How” is higher for NACE A-B (89.3%) and ISCO 6+92 (89.8%) than for other sectors or occupations.
4. The incidence of “When&How” is higher for NACE A-B than for other sectors in all countries except BE, DK, EE, LT, MT, NO. The incidence of “When&How” is higher for ISCO 6+92 than for other occupations in all countries except BE, EE, LT, MT, NO. MT shows very high incidence of “Cannot determine” (47.7%,) both for NACE A-B and for ISCO 6+92.

These results suggest that col. 209 doesn't present any specific problem in relation with NACE A-B and ISCO 6+92, maybe except for EE.

5. Considering the number of persons working at the local unit (all countries except DE and NL), the incidence of no answers is rather stable and lower than 2% up to 9 persons, whereas it gets higher for larger local units, especially for those with 20 persons or more.
6. No answers are 2.5% for self-employed without employees.

For the future the possibility to limit the range of this variable to self-employed without employees + self-employed with employees in local units with no more than 9 workers may be considered, although there's no strong evidence for restricting col. 209 filter.

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<sup>9</sup> All cases for which col. 209 was applicable have been coded as “no answer”.

<sup>10</sup> All cases for which col. 209 was applicable have been coded as “When&How”.

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### Col 210 “Work for single customer”:

7. Col. 210 had a worse performance than col. 209. Actually, the overall incidence of no answers (all countries except DE<sup>11</sup>) for this variable is 7.0%.
8. Similarly to col. 209, the incidence of no answers for NACE A-B (all countries except DE) is 5.3%, less than general average for all NACE codes. The incidence of no answers for ISCO 6+92 is even lower (4.3%).
9. Considering single countries, the incidence of no answers for NACE A-B and for ISCO 6+92 is particularly high for several countries: BE, EE, IE, LV, IS. Nevertheless, all these countries have a high incidence of no answers for all NACE and ISCO codes. BE, EE, LV and IS coded as “no answer” all self-employed without employees.
10. NO and BG have an incidence of no answers for NACE A-B (45.1% the former, 22.9% the latter) and ISCO 6+92 (NO 44.9%; BG 21.8%) much higher than for other NACE and ISCO codes. For CH the incidence of no answer for NACE A-B and ISCO 6+92 is more than double of Total.

Generally speaking, col. 210 seems to be problematic for several countries. In all these countries it is even more problematic for the agricultural sector (i.e., the incidence of no answers is higher than in other sectors) and for agricultural occupations (i.e., the incidence of no answers is higher than in other occupations).

11. Considering the number of persons working at the local unit (all countries except DE, BE, EE, LV, IS, IE, NL and UK<sup>12</sup>), the incidence of self-employed working for 1 client or customer is quite high (25.3%) for self-employed without employees. Nevertheless, considering self-employed with employees in the different local unit dimensions, the incidence ranges from 7.2% to 10.5% in local units with up to 9 workers; on the other hand, the incidence is very low (1.1%) in local units with 10 workers.
12. Over 90% (90.4%) of self-employed working for 1 client or customer has no employees. Self-employed without employees + self-employed with employees working in local units of 3 persons or less include 96.0% of self-employed working for 1 client or customer.
13. Apart from DE, IE, NL, UK, BE, EE, LV and IS, self-employed without employees + self-employed with employees working in local units of 3 persons or less include at least 87.6% (in CH) of self-employed working for 1 client or customer. Anyway, only 3 countries include less than 90% of self-employed working for 1 client or customer (DK, MT, CH), whereas 4 (among which is FR) include more than 99% of cases.
14. Excluding UK, IE and NL, self-employed working for single customer in local units with 4-10 workers are 176,000, just 3.8% of all 4,632,000 self-employed working for single customer.

For the future, these results suggest that the range of this variable may be limited with no harm at self-employed without employees + self-employed in local units with up to 3 workers.

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<sup>11</sup> All cases for which col. 210 was applicable have been coded as “no answer”.

<sup>12</sup> BE, EE, LV, IS didn't ask col.210 to self-employed without employees; for UK, IE and NL, data for self-employed with employees working in local units with up to 10 persons can't be broken down by size of local unit.

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## Annex 5

### Variable working hours from a user perspective

#### *Background*

The subject of working time has been important to the work of the *International Labour Organization*<sup>13</sup>. The *Council Directive*<sup>14</sup> laid down minimum safety and health requirements for the organization of working time: they apply to minimum periods of daily rest, weekly rest and annual leave, to breaks and maximum weekly working time, and to certain aspects of night work, shift work and patterns of work.

The gradual broad socio-economic trends: globalization, intensification of competition, development in information and communications technologies, and new patterns of consumer demand for goods and services in the ‘24-hour economy’ have had an enormous impact on working time. From the perspective of the enterprise, strategies such as new methods of flexible production and a much more flexible organization of work, including working time appeared. From the perspective of employees, various developments have shaped their needs and preferences in relation to working life, with changes reflected in a variety of working time arrangements: conventional full-time, permanent, weekday work; and the duration and/or timing of work: part-time, flexi-time, time banking accounts, working “on call”, and the averaging of working time over periods.

The modernization of the Community legislation on working time has been then necessary with a view to responding better to new realities and demands from both employers and workers and provide the resources to meet the growth and employment objectives in the context of the Lisbon strategy with the reconciliation of work and family life as essential elements for achieving its objectives.

As well as aiming to create more and better jobs, policymakers across the 25 countries of the new European Union are increasingly faced with the pressing issues of balance work-life commitments: flexibility at work, pension reform, time management, and labour market restructuring.

Different aspects of flexibility can be expressed by four dimensions: quantitative and qualitative cross-tabulated with external and internal flexibility. The qualitative internal flexibility includes working time (overtime, weekend work, varying work hours...).

*European Foundation for the Improvement of Living and Working Conditions*<sup>15</sup> carried out the EU-wide survey on working time and work-life balance and finds that both companies and employees profit from flexible working time: higher degree of job satisfaction, better adaptation of working hours to the workload and lower absenteeism.

In the chapter on flexibility security and quality in work of the *Employment in Europe 2003* report, there are examined different flexible working time arrangements using data from the 2001 ad hoc module to the Labour Force Survey.

#### *2004 ad hoc module variables*

In the view of world socio-economic changes, policy trends, performed research, the 2004 ad-hoc module on work organization and working time arrangements amounts to a good source of knowledge and statistical data on work organization and working time arrangements.

The work organization developments, e.g. in order to cope with trends and policy strategies presented above, imply increasing role of work-life balance, work flexibility, including a quantitative internal dimension of flexibility – variable working hours (column 216 of the EU-LFS survey) and annualized working hours (column 217).

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<sup>13</sup> ILO's first Convention, the Hours of Work (Industry) Convention, 1919 (No. 1).

<sup>14</sup> Council Directive 93/104/EC of 23 November 1993 concerning certain aspects of the organisation of working time.

“Proposal for a Directive of the European Parliament and of the Council amending the Directive 2003/88/EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organisation of working time” adopted by the European Commission on 22 September 2004, COM(2004)607 final.

Amended proposal for a Directive of the European Parliament and of the Council amending Directive 2003/88/EC concerning certain aspects of the organisation of working time COM (2005)246 final of 31.05.2005.

<sup>15</sup> European Foundation for the Improvement of Living and Working Conditions is a European Union body set up to contribute to the planning and design of better living and working conditions in Europe, with one of its themes being work-life balance.

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### *Variable working hours*

The *Employment in Europe 2003* report analysed average usual working hours and overtime hours, the actual timing work and the extent of work outside the core working hours, working time distribution and the extent of flexible working hours and working time arrangements.

The 2004 ad hoc module question on variable working hours introduces more insight in the nature and formal side of the flexible time arrangements if such exist, indicating the employees' choice over working hours, their rights to influence the length and scheduling of their working hours. The question 216 covers several options of variable working hours for employees – from the most rigid *fixed start and end of the working day* and *staggered working hours* to the most flexible *own work schedule*.

The proposed variable working hours schedules are reflected in the ILO's series on working time and work organization<sup>16</sup>, for example:

- Under staggered working hours schemes, workers or groups of workers start and finish work at slightly different times, fixed by the worker or the employer. Thus an employee has some opportunity to fix the hours, but then they remain unchanged.
- Flexitime allows workers to vary their starting and ending times and, even the number of hours that they work in a particular week, in general with “core” hours established.
- The working time banking involves keeping track of hours worked in order to build up “credits” or accumulate “deficits” in hours worked over the longer periods than in case of flexitime, with the rules how the excess hours accumulated in the time banking account can be spent. In this matter the 2004 ad hoc module distinction between possibilities of taking hours off only or days off (besides hours off) is relevant.

### *Annualized working hours*

ILO distinguishes the annualized working hours (column 217) and hours-averaging schemes that allow variations in weekly hours of work, while requiring that a fixed annual total or a weekly average of working hours be reached, with some respects or restrictions concerning: minimum and maximum limits on daily and weekly hours, no overtime premium, notice periods for changes in schedules, reference periods, conditions for the payment of overtime.

Advantages and disadvantages of these schemes for the employer and for the employee, the need for negotiation make the annualized working hours an interesting concept, but still rarely applied.

### *Other schedules*

Distinguished by ILO compressed workweeks involve working hours being scheduled over fewer than normal working days and result in longer working days, but fewer days being worked each week. Though an interesting concept, compressed workweeks are rarer even than annualized working hours.

### *Conclusion*

From the user' point of view, the proposed classification of variable working hours (column 216) gives a good scope for the statistical analysis on traditional versus flexitime schemes. The variables appear to be meaningful and clearly interpretable in the view of European situation in working organizations and working time arrangements.

The question of annualized working hours is an important one from the point of view of working time developments, but may be less significant for the analytical exercises, as these working arrangements are still rare.

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<sup>16</sup> ILO's aspects of working time and work organization: working time and health, overtime, rest periods, part-time work, night work, paid annual leave, negotiating working time, shift work, staggered hours schemes, weekend work, working time family measures, annualized hours schemes, compressed workweeks, flexitime and “time banking schemes”, on-call work and “zero hours” contract, right to influence working time, work-sharing and job-sharing, working time and productivity, multiple job-holding.

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## Annex 6

### Non-response, outliers and high prevalence of “other”

The following is a collection of answers to a special enquiry to the participating countries in December 2005 with regard to certain irregularities in the data sets, such as high non-response, distribution of categories markedly different from the average, or unusually high prevalence of the “other” category in certain variables. In some cases, when no answer to this enquiry was received, the answers were taken from the country original reports; or when it was obvious that a certain group was erroneously excluded from the variable, this was recorded.

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#### Col 209 When and how (EU-25=79%)

<i>Outliers</i>	<b>HU</b>	40%	Ratio of self employed who can determine when and how to work can be so low because a considerable part of them have ‘employee similar’ conditions of employment. It means, that from the employee side it is worth employing workers not as employed but as sub contractors because of ‘tax evasion’ reasons (in order to avoid the high labour cost after the living labour). From the self-employed side it’s also convenient, because he/she is registered at minimum wage, and after that he/she can pay less contributions as well.
	<b>MT</b>	19%	At a local level self-employed persons tend to take more orders from clients than they can handle in a reasonable time. Therefore many tend to be in a position to control the method of work but not the time (schedule) of when this work is to be carried out. Most probably that is why we have more code ‘3’ than the EU average.
	<b>NL</b>	100%	In NL’s point of view, the category “control over own work methods and schedule” is relevant for self-employed persons only. In accordance with the ad hoc module of 2001, in developing the questionnaire the assumption was made those self-employed persons can determine their own work methods and schedule. So this variable does not give any additional information to the variable that distinguishes the self-employed, because this variable only concerns self-employed persons and for them the following assumption is made (code ‘3’): the outcome of this variable is that 100% is coded ‘3’ (person can determine when and how to do the work).

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#### Col 210 Work for a single customer (EU-25=15%)

<i>Non-response</i>	<b>IE</b>	63%	?
	<b>BG</b>	17%	Relatively high non-response (17%) mainly comes from self-employed people (without employees) working in agriculture. Most of them only produce for consumption in their households. Other formal reason is that members of producer’s cooperatives were not asked the corresponding question, but their number is not significant (less than 2% of the target population).
	<b>IS</b>	67%	ERROR: self-employed without employees were not included.
<i>Outliers</i>	<b>RO</b>	85%	Self-employed with employees – who, in a greater extent work regularly for more than one client or customer - represent a small part of the target population, while self-employed without employees – who, in most of the cases declared that they work regularly for just one client or customer - represent majority of the target population.

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**Col 211/212 Pct working overtime (EU-25=14%)**

<i>Non-response</i>	<b>FR</b>	80%	Due to computing error, only part of the employees was given the question. The variable will be suppressed.
	<b>IS</b>	64%	ERROR: no overtime was coded as 'Blank'.
<i>Outliers</i>	<b>EL</b>	4%	?
	<b>IS</b>	100%	ERROR: no overtime was coded as 'Blank'.

**Col 213/214 Pct working paid overtime (EU-25=7%)**

<i>Non-response</i>	<b>FR</b>	80%	Due to computing error, only part of the employees was given the question. The variable will be suppressed.
<i>Outliers</i>	<b>IS</b>	34%	?

**Col 215 Shift work patterns (Continuous shifts: EU-25=22%)**

<i>Non-response</i>	<b>DE</b>	19%	?
	<b>EL</b>	19%	?
	<b>FR</b>	58%	Due to computing error, only persons changing jobs were asked about their shift work patterns if working shifts. The variable will be suppressed.
	<b>HU</b>	22%	In the ad hoc module, it was asked about shift work patterns without using the filter col204=1. It was used a separate (and repeated) question, which caused inconsistency with the core data.
	<b>SE</b>	43%	?
	<b>IS</b>	35%	?
<i>Outliers</i>	<b>DK</b>	2%	It was already mentioned in the report that the instructions for the 2004 ad hoc module were found insufficient. For many variables interpretations had to be made. C215 is one of those variables. In C215 coding, it was focused on the organization of the work for the respondents themselves and not on the organization of the work seen from the firm's perspective. That is to say, for instance, that if a person only works within the same shift but this shift is organized as a continuous shift, the person will be placed in category '6' (other) and not in '1'. This could explain the high number in "other" and the low number in '1'. Other countries may have chosen a different approach?
	<b>SI</b>	4%	It was difficult to distinguish between continuous shift work, usually 4-shift system from semi-continuous shift work, usually 3-shift system. The situation was simplified and the result is as such. In general, there is a mixture of both codes "continuous shift work" with "3-shift system".
<i>The "other" category</i>	<b>DK</b>	61%	Same answer as above.
	<b>ES</b>	63%	In code '6', not only "other type of shift" was taken into account, but also "fixed shift work" which is very common in Spain.
	<b>IE</b>	24%	?
	<b>SE</b>	40%	?



<b>UK</b>	44%	C215 is derived directly from a standard LFS variable (ShfTyp). The 44 percent observed in “other type of shift” (code 6 for C215) includes respondents with shift patterns coded from ‘5’ to ‘9’ - which account for just over half in this category - along with code ‘10’ “Other type of shift work”. It was not collected any information on what makes up category ‘10’. Interviewers were required to read the question “What type of shift pattern do you work?” and were instructed to code to this frame. It is suspected that the high level in the “other” category reflects difficulties interviewers had coding to this frame (differences in the types of shift-working are quite subtle and they are suspected quite difficult to identify) along with some residual types of shift working not already captured by codes ‘1’ ‘9’.
		Split shifts 4%
		Morning shifts 2%
		Evening or twilight shifts 6%
		Night shifts 9%
		Weekend shifts 2%
		Other type of shift work 22%
<b>IS</b>	56%	?
<b>NO</b>	66%	A separate alternative was found for a specific type of shift work (“turnusarbeid” in Norwegian) and these persons were added to “others”.
<b>CH</b>	23%	?

#### Col 216 Variable working hours (Fixed start/end: EU-25=68%)

<i>Non-response</i>	<b>DE</b>	20%	?
<i>Outliers</i>	<b>DK</b>	38%	It is believed that in various European countries, it is likely that flexible work arrangements are more widespread in DK compared to most other EU countries. The fact that SE has the same “irregularity” as DK for this variable indicates that flexible work is indeed a Nordic phenomenon.
	<b>SE</b>	39%	?
<i>The “other” category</i>	<b>NL</b>	12%	This group (code ‘7’) mainly contains (92%) persons whose working hours are dependant on the amount of work (also see report).

#### Col 217 Annualised working hours (EU-25=12%)

<i>Non-response</i>	<b>EL</b>	11%	?
	<b>IT</b>	29%	This item was probably not sufficiently known by respondents. This explains high non-response rates and may have caused wrong allocations. IT expresses some concern on the reliability of these figures.
	<b>LV</b>	12%	Unfortunately, LV cannot find the reason(s) for non-response in Col217.
	<b>LT</b>	100%	By Lithuanian legislation, annualised working hours are not included in the employment contract.
	<b>HU</b>	100%	Col217 was not asked at all in the ad hoc module because it is not “normal” in Hungary.
	<b>SI</b>	100%	This phenomenon is not significant for SI, thus questions relating to this variable were not asked.

	<b>IS</b>	100%	“Annualised working hours” is not relevant because this type of employment contract does not exist in IS.
<i>Outliers</i>	<b>EL</b>	56%	Due to the formulation of the relevant question in the Greek ad-hoc questionnaire, a lot of interviewed persons thought that they should answer in the affirmative when (by contract) they were working during a constant number of hours every day. It is then suggested this figure is not included in Eurostat Publication.
	<b>IT</b>	41%	See above. The variable will be suppressed.
	<b>CY</b>	0%	The pilot test (questionnaire tested on 50 households) gave nobody having annualised hours contracts. After the pilot test, CY tried to find out which companies worked with annualised hours contracts and discovered that it was usually airline companies (especially pilots and air stewards). Most people have weekly hours contracts, only 16 (actual number) replied that they had annualised hours contracts. 7 out of 16 worked in the transport sector. The rest are rare cases.
	<b>NL</b>	0%	According to the explanatory notes, it concerns the existence of the person’s contract in which only the annual number of hours is specified. This information is already existent in the questionnaire. Persons who denote to be employed for a fixed number of hours are asked for how many hours they are employed. All persons who give a number of hours they are employed are asked whether that is per week, per month, per year or in lessons hours. The persons who are employed for a fixed number of hours per year are seen as the ones having an annualised contract. This variable is made with the variables Col26, Col216, W1_VastUren and W1_Periode.
	<b>PT</b>	25%	There is no clear explanation for this fact. It could be the consequence of a misunderstanding of the question; it could be a specific characteristic of the national labour market.
	<b>SE</b>	31%	?
	<b>BG</b>	0%	The incidence of annualized working hours is negligible in BG. Such a type of working time is not specified in the Bulgarian labour legislation (Labour Code) - the longest period for banking working hours is 4 months. Only people without written employment contract (but other type of contract or without any contract) might have annualized working time.

#### Col 218 On-call work (EU-25=3%)

<i>Non-response</i>	<b>EL</b>	33%	?
	<b>IS</b>	100%	?

#### Col 219 Working time pattern of part-timers (Other: EU-25=9%)

<i>Non-response</i>	<b>EL</b>	34%	?
	<b>LU</b>	10%	?
	<b>IS</b>	10%	?
	<b>CH</b>	100%	?

<i>The “other” category</i>	<b>MT</b>	22%	This might be attributed to persons who work on a part-time basis only during weekends. None of the other variables was adequate to describe this situation which is very common in the hotel and catering industry. In addition, in the health sector some part-time work relates to working night hours only and once more none of the other variables was adequate to describe this pattern.
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<b>FI</b>	28%	Code “other” in Col219 seems to be most common in the age groups 15-24 and 55+, which are also the most common age groups for part-time workers in general. In the youngest age group, most of the “other” cases are students who work less than 15 hours a week. They probably have quite irregular working schedule, so it may be difficult for them to define their working time pattern. The part-time workers aged 55 or more are usually part-time pensioners, who have individually defined working time patterns. One very common pattern is two weeks work - two weeks off, which should have probably been included in the question; now they presumably are all in the category “other”. Some part-time pensioners can also arrange a pattern with longer periods of work and free time alternating.
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**Col 220 Possibility to work variable hours (Other: EU-25=91%)**

<i>Non-response</i>	<b>ES</b>	98%	The “no answer” in Col220 corresponds to people who said they did not take any hour off because they did not need to.
	<b>IE</b>	85%	?
	<b>LT</b>	100%	There are not any possibility to work variable hours in Lithuania by country legislation.
	<b>SI</b>	84%	?
	<b>BG</b>	100%	This variable has not been included in the Bulgarian questionnaire.
	<b>IS</b>	100%	?
	<b>CH</b>	100%	?
<i>Outliers</i>	<b>EE</b>		Category 4 is missing. This was expected because of the small sample.
	<b>FR</b>		Category 4 is missing.
	<b>IE</b>		Category 1 is missing.
	<b>CY</b>		Categories ‘1’ and ‘5’ are missing. In CY, employees do not work with “working time banking” systems with possibilities to take hours/days off (col216 codes ‘3’ and ‘4’). CY could accept codes ‘1’ or ‘5’ if the filter was as specified in the filter column (see Regulation). As there was not any response for ‘3’ or ‘4’ (only 1 actually), there also was no response for ‘1’ and ‘5’.
	<b>LV</b>		Category 7 is missing.
	<b>LU</b>		Category 5 is missing.
	<b>MT</b>		Category 7 is missing. This was not included in the questionnaire by mistake.
	<b>SI</b>		Category 4 is missing.
	<b>NO</b>		Category 3 is missing.

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**Col 221 Convenience of shift work or on-call work**

<i>Non-response</i>	<b>EL</b>	27%	?
	<b>FR</b>	47%	See above for C215.
	<b>IT</b>	49%	The modality “shift work or on call work is neither convenient nor inconvenient for personal life situation” was included. From the pilot survey, it had been noticed that this option was the most relevant. Therefore, excluding it would have brought to an overestimation of convenience of these working time arrangements. Shift workers for who shift work is indifferent for personal life situation are 1,356,000. “Indifferent” for call workers are 208,000. These cases have been recoded as ‘Blank’. As a consequence, 30% and 15% are the cases for who shift work or on call work is strictly convenient. Actual “don’t know” cases are 78,000 for shift work and 20,000 for on call work.

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<b>LU</b>	12%	?
<b>HU</b>	21%	Like for col215, in the ad hoc module it was asked about shift work convenience without using the filter col204=1, but using a separate (and repeated) question, which caused inconsistency with the core.
<b>IS</b>	13%	?

**- Convenience of shift work (EU-25=71%)**

<i>Outliers</i>	<b>AT</b>	92%	The respondents indicated - contrary to the expectations - such a high level of convenience concerning these working time patterns.
	<b>FI</b>	90%	It is difficult to explain. Most of the people working in shifts have probably chosen their profession knowing that it includes shift work and have arranged their life in a way that it suits their work. Those who find shift work not convenient have probably already moved to other types of working time arrangements. NB: previous research in Finland suggests that shift workers are generally happy with their working times. The ones who are not happy are mainly parents with small children.

**- Convenience of on-call work (EU-25=76%)**

<i>Outliers</i>	<b>BE</b>	26%	?
	<b>AT</b>	95%	The respondents indicated - contrary to the expectations - such a high level of convenience concerning these working time patterns.
	<b>IT</b>	30%	See above.
	<b>EL</b>	28%	Concerning the low percentage of people that find convenient for their personal life to work in the evening, at night or during weekend and to work when they are called to, EL thinks that they reflect the fact that these forms of working time arrangements are usually obligatory (the employees are forced and to not choose to work that way).

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**Col 222 Convenience of evening/night/weekend work (EU-25=70%)**

<i>Non-response</i>	<b>BE</b>	36%	Self-employed and unpaid family workers were not asked the question.
	<b>EL</b>	76%	Self-employed and unpaid family workers were not asked the question.
	<b>ES</b>	40%	Self-employed and unpaid family workers were not asked the question.
	<b>FR</b>	30%	As this variable was initially not correctly filtered to the ad hoc module, the decision was made to ask the question on work in the evening, night or weekends in one question. This caused inconsistencies with the 4 variables in the core data, with more than 4,000 respondents answering differently when asked the single question (most of them not working during these hours). The results, however, should not be biased.
	<b>IE</b>	29%	?
	<b>IT</b>	85%	There are two reasons for this very high “blank” rate: 1) A wrong filter was applied, the question was asked to the employees only. The information is therefore missing for 4,442,000 self-employed, which have been recoded as ‘Blank’. 2) As for col221, the “indifferent” answer category was included. Employees for who working atypical hours is indifferent for personal life situation are 3,143,000. Actual “don’t know” answers are 196,000.
	<b>LV</b>	31%	Self-employed and unpaid family workers were not asked the question.
	<b>LU</b>	96%	?

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	<b>HU</b>	33%	As for col221, it was asked about the convenience of evening/night/weekend work in the ad hoc module without using the filter col205, col206, col207, col208 = '1','2', but using a separate (and repeated) question, which caused inconsistency with the core.
	<b>NL</b>	43%	(See report). Persons who said that they usually don't work in the evening or at night, don't get the question about shift (W1_ploegend) because it is obvious that they don't work in a shift schedule. These persons didn't get the question TevrANZZ, although they should have had. Persons who sometimes or regularly work in the evening (W1_Avond = 1 or 2), night (W1_Nacht = 1 or 2), on Saturday (W1_Zaterdag = 1 or 2) or Sunday (W1_Zondag = 1 or 2), and who don't work in a shift schedule (W1_PloegenD = 2) now get the question TevrANZZ. So persons for who it is obvious that they don't work in a shift schedule (W1_PloegenD = empty) are mistakenly forgotten.
	<b>AT</b>	27%	Self-employed and unpaid family workers were not asked the question.
	<b>PL</b>	58%	The target population for this variable was limited in PL to employees only, so there is a lack of information for other employed persons (= high non-response rate).
	<b>SK</b>	31%	During the preparation work on the ad hoc module questionnaire, working group documents were used, where it was said that self-employed persons should answer only two questions and the rest would be for the employees. It was quite misleading and influenced the preparation of our questionnaire. Self-employed and unpaid family workers were thus not asked the question.
	<b>RO</b>	27%	Unpaid family workers were excluded.
<i>Outliers</i>	<b>EL</b>	40%	See above for on-call work.
	<b>IT</b>	18%	See above.
	<b>LU</b>	94%	?
	<b>RO</b>	7%	Indeed, for most of the people, work in the evening, at night or during weekend is not convenient for personal life situation.

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