



WOLIWEB

*The socio-economic determinants of citizens' work
life attitudes, preferences and perceptions, using
data from the continuous web-based European Wage
Indicator Survey*

Measuring wages, and calculating hourly wages in the *WageIndicator* dataset

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1. THE OVERALL OBJECTIVE OF WOLIWEB

WOLIWEB addresses the impact of the socio-economic framework on attitudes, preferences, and perceptions. Attitudes, preferences, and perceptions are inherently subjective in nature. They are potentially influenced by a host of factors related to one's socio-economic framework, referring to concepts such as occupation; labour market status; earnings; working, household and leisure time; marital status and family phase; socio-economic status; gender and ethnical background; and spatial characteristics. WOLIWEB focuses on four issues:

- perceptions of pay discrimination by gender or ethnicity in relation to any factual pay gap;
- preferences for more or fewer working hours in relation to working hours and household duties;
- attitudes towards collective bargaining coverage in relation to actual coverage by agreements;
- perceptions of job insecurity in relation to dismissals and reorganisations at the workplace.

The data needed for the proposed analyses are gathered through the international, continuous web-based *WageIndicator*, consisting of:

- an attractive website with labour market related information for a large public;
- a crowd-pulling Salary Check providing with very detailed salary information related to a set of variables such as education, firm size, supervisory position;
- a *WageIndicator* questionnaire with 67 – 85 questions; the dataset provides insight in issues related to work and wages;
- nation wide promotion, publicity, and answering visitors' email.

All WOLIWEB papers are downloadable from <http://www.wageindicator.org/>, section Research Lab.

2. WORK PACKAGE 2

This paper is WOLIWEB's Deliverable D07 'State-of-the-art-review on working hours'. This is a state-of-the-art-report regarding the measurement of wages, fringe benefits and attitudes towards wage-issues, resulting in proposals for the survey. It is part of Work Package 2 (WP2) 'Perceptions of pay and working time preferences'. As far as Measuring wages, and calculating hourly wages are concerned, according to the WOLIWEB proposal, the contribution to the modelling is fourfold.

1. WOLIWEB will produce working paper on wages, fringe benefits as regards gender/ ethnicity – based differences and as regards the family pay gap in 9 countries
2. WOLIWEB will produce working paper on attitudes towards wage issues as regards gender/ ethnicity – based differences and as regards the family pay gap in 9 countries
3. Based on a state-of-the-art report, the questionnaire will be designed to measure wages, fringe benefits and wage's preferences in great detail. In addition, the design will include the major variables that are assumed to influence wages.
4. Methods of calculating hourly wages from gathered data will be explored.

As far as the working time preferences are concerned, according to the WOLIWEB proposal, the contribution to the modelling is fourfold.

1. WOLIWEB will produce a working paper that models working hours preferences from (1) the characteristics of actual working hours, which includes actual and contractual hours, the firm's standard working week, presence of overtime payment and bonuses, the timing of work, staffing levels as a proxy for the daily workload, authority over working time, wage rates, and other variables, and (2) the characteristics of the household time, which includes number and age of children as a proxy for the daily workload in a standard family, housing, outsourcing of domestic duties, the use of day care, the use of employer's family-friendly policies, and other variables. Multinomial logit analyses will be used to estimate the preference for fewer or for more working hours across countries.
2. WOLIWEB will produce a working paper that models preferences for working days by adapting the model used for the prediction of working hours preferences (see 1).

3. Based on a state-of-the-art report, the questionnaire will be designed to measure working time characteristics and working time preferences in great detail, following the definitions of working hours from the OECD (Evans et al, 2001). In addition, the design will include the major variables that are assumed to influence the models.
4. The technological possibilities to apply a so-called weekly work grid for measuring the timing of work in the web-based questionnaire will be explored.

According to WP2 the work concerning working hours includes (p.24 Annex 1):

- review the literature as how to measure pay, including fringe benefits, pay perceptions, as well as their major determining variables;
- in cooperation with the national researchers draw an inventory as to how these issues usually are measured in national surveys;
- propose how to synchronize the questionnaire with regard to these issues
- report the findings in a State-of-the-art review (D07), to be discussed at the kick-off conference (M1);
- draw an analytical framework for understanding the relationship between perceptions of pay discrimination by gender or ethnicity and any factual pay gap;
- analyse and test this analytical framework across countries, using the Wage Indicator dataset;
- report the findings in a Working Papers (D07, D08) at the Final conference (M3) (provided funding).

The WP2 deliverables concerning wages include (p.19 Annex 1):

D07 1 State-of-the-art-review regarding the measurement of wages, fringe benefits and attitudes towards wage-issues, including the major determining variables, resulting in proposals for the survey

D08 2 Working papers on wages, fringe benefits and attitudes towards wage issues as regards gender/ethnicity based differences and as regards the family pay gap in 9 countries

As regards this WP, a first inventory, called 'National comments regarding the measurement of working hours, wages, collective bargaining coverage, job insecurity, education, ethnicity, self-employment and employee representation in the *WageIndicator* questionnaire', was distributed among the WOLIWEB partners in April 2004. National comments were received in May and June (see Appendix). These comments led to a proposal for the *WageIndicator* questionnaire, discussed at the launch meeting 8-10 July 2004 (the kick-off conference M1).

Based on the discussions at the meeting, a next paper was distributed among the partners, summarizing the decisions taken at the meeting: 'Proposal Country Specific Questions in the *WageIndicator* questionnaire', dated 16.07.2004. Partners could once more react and then the so-called master questionnaire was made. This version was distributed for translation. Since October 2004, the *WageIndicator* questionnaire became operational in the WOLIWEB countries, one after another.

This paper, D07, discusses the results of the discussions with regard to wages. In Section 3 reviews the possibilities of the web-based *WageIndicator* questionnaire. Section 4, theoretical approaches and measurement of wage measurement are reviewed. In Section 5, the questions about wages in the *WageIndicator* questionnaire are presented. The Appendix 1. lists the national comments on measuring wages. Appendix 2 and 3 briefly summarize other data sets with information on wages that have been used for cross-country comparisons. Finally we report in Appendix 4 on contracts in Poland. In this report we explain the situation in Poland more than in the other participating countries, because we feel that the reader has less information and knowledge on data collection and research on wages and working hours in Poland. Finally we also include proposals how to deal with the data, based on the questionnaire.

3. THE WEB-BASED *WAGEINDICATOR* QUESTIONNAIRE

The voluntary, web-based *WageIndicator* questionnaire aims to collect information on wages and working conditions of employed people and job seekers. Its target population consists of individuals in paid employment and job seekers, i.e. the labour force. It excludes individuals not in paid employment, such as housewives, pensioners or people doing voluntary or unpaid work. It aims to include all forms of waged employment, thus workers in dependent employment as well as apprentices, self-employed, own-account workers, people working on the basis on civil law (so called contracted by results and free-for-task contracted (Malkowska, 2004)- it concerns mainly Poland), workers in family businesses, partly unemployed/ disabled/retired workers, and students with a job on the side. The questionnaire should therefore include questions and answer sets that address these atypical groups.

The *WageIndicator* questionnaire is a voluntary questionnaire. Thus, a sampling frame is absent and no response rate can be given. In addition, possible biases due to Internet access, interest in wage- and work-related issues, and willingness to complete the questionnaire may all cause biases in the data. However, the large numbers of respondents to the *WageIndicator* questionnaire allow us to study the potential bias in order to explore appropriate weights. In the Netherlands in four years time, approximately 80,000 web visitors have completed the questionnaire. Since October 2004, more than 16,000 Germans, 6,000 Spaniards, 4,000 Belgians, 3,500 Englishmen have done so, and since January 2005 – more than 1,000 Poles.

All questionnaires, but particularly voluntary and frequently visited web-based ones require a user-friendly wording, design and layout. All questions need to be easy understandable, as this speeds up the pace of completion and reduces drop-out rates for visitors who have less advanced reading skills. The time a visitor spends on adapting to the wording, design and layout, has to be minimized and can better be spent on answering the questions. Advanced routing prevents visitors from answering questions that are not applicable to their group.

A questionnaire on the Internet is by nature self-administered. The mode of web-based self-administered questionnaires combines the advantages of Paper and Pencil Interviewing (PAPI) and Computer Assisted Telephone or Personal Interviewing (CATI or CAPI). Among others, it allows for alerts for unlikely combinations of answers or to warn respondents who are outside the target population.

A major advantage of web-based surveying is the complex routing through the questionnaire, which is not possible in paper-based self-administered questionnaires. The *WageIndicator* questionnaire has a unique routing through the questionnaire, based on the first question: 'Which description matches best your current employment activity?'. These groups are (A) employee, (B) self-employed/own-account worker/working for family business, working on the basis of contract by results and free-for task agreement (Poland) (C) apprentice/trainee, (D) school pupil/student in full-time education with a job on the side, (E) unemployed/looking for a job/sickness benefit/incapacity for work. In the latter case, if respondents have had a job, they are asked to complete the questionnaire for their last job, following the route of the employees (A). Routing can be used to address atypical cases properly for questions about wages and hours. This is particularly important in countries without an advanced, overall system of collective bargaining.

In the *WageIndicator* data, we aim to calculate a gross and a net hourly wage. This paper develops proposals how to deal with the atypical cases as far as wages are concerned. The paper does not discuss other issues related to wages, such as the voluntariness of overtime hours, trust being paid for work performed, and subjective attitudes and perceptions regarding hours and wages.

Data concerning hourly wages are used in many statistical analyses related to the labour market. For calculating hourly wages, detailed information about both wages and working hours is needed. If based on data gathered through questionnaires the questions should have high quality, and web-based questionnaires offer new opportunities for improvement. This paper discusses the calculation of hourly wages, based on the questions about wages and working hours in the web-based, voluntary *WageIndicator* questionnaire.

4. REVIEWING MEASUREMENT OF PAY IN SURVEYS

4.1 MEASURING WAGES

In Europe, wage information is primarily based on administrative data gathered through employer's personnel records. Wages are asked in labour market questionnaires, but comparability across countries is difficult and leads to crude measurement of hourly wages. Appendix 2 gives an example of how to construct comparable data on hourly wages in four European countries using national household panel data sets. A well-known questionnaire with wage information is the European Community Household Panel (ECHP). During 1994-2001 this survey included data in the 15 European Union countries of that period, which led to comparable data, but had the disadvantage of having less detailed information on most crucial variables such as education than national panel data. Furthermore, there were so many missing values that mostly only 4 or 5 countries could be used in more detailed analysis of the labour market (see for example Wetzels 2005). See for a brief description of this data source appendix 3. The successor called SILC data aims at solving these problems. However the data are not very detailed on wages, and working hours, because the data set aims to provide data on more than labour market issues and the questionnaire can not deal with specific groups because of the routing that can not be as complex as it is in web-based surveys. In other work-related surveys, questions about wage are considered too difficult or unnecessary to ask. Sometimes, wage is asked in brackets, which does not allow for calculating hourly wages. In other cases, questions about wage are perceived to lead to unreliable or missing data. Indeed, Plasman et al (2002) report that missing values for wages is a major problem in surveys with wage information. In some countries wages are reported as a weekly wage (England) and in some countries as a monthly wage (Poland).

A lot of research in the field of measuring wages in Poland cover typical full-time employed people with one job (Polish Central Statistics Office 2003). The subject of the sample survey presented in the publication by the Polish Statistics Office are demographic and occupational characteristics and monthly gross earnings of the persons employed full-time in October 2002. The survey covered national economy units of all kinds of activities in the public and private sector. Data on earnings was registered for individual persons, which allowed linking their demographic and socio-occupational characteristics with their monthly earnings. The survey was a sample survey and covered units in which the number of

employees exceeded 9 people.¹ The survey did not include apprentices, home workers, students maintaining vacation or diploma practices, members of working groups organized by other units and appointed to work in reporting unit, e.g. soldiers, labour corps members, convicts, people on maternity or child-care leave, sick leave, PhD students, hired in intervention² and public works. However, the information collected is very detailed. It includes personal wages and salaries (including flat wages and salaries, overtime bonuses, functions, seniority bonuses), fees paid to own employees for performing work in accordance with a labour contract (e.g. journalists, film producers, radio and television programmes producers). Moreover, payments for periods exceeding one month were included in the amount per one month³. An obligatory social security tax paid by employees is also included among components of wages and salaries. Monthly gross earnings didn't include any additional payments.⁴

The *Wageindicator* questionnaire covers different types of employment. It may cause some problems in comparison wages across countries. To make a comparison possible, the common dimension of wages is needed, which can be done by presenting wage as a hourly wage.

To advance comparisons of labour markets across countries, wage data should not only be traced in administrative records. Survey data should also include comparable wage information, primarily because of a larger range of explanatory variables. This paper is an attempt to design survey questions that facilitate calculations of hourly wages, which are comparable across countries. Therefore, both the questions about hours worked and the questions about wages need to be sound. This section provides an overview how wages and hours are asked in

¹ The sample included 22,9 thousand firms – 13,3 percent of all firms – i.e. 0,7 million of full time employees. After generalization the results are representative for 6,5 million of full-time employed persons.

² "hired in intervention works" – these are workers, who are employed by the private sector, but compensated by the government. This is method of fight with unemployment. "Hired in public works" is very similar to "hired in intervention works" – the main difference is that hired in public works work in public sector, while hired in intervention works work in private sector.

³ e.g. one third of the quarterly premium, one sixth of the last paid semi-annual premium, one twelfth of the annual premium or bonuses, additional wages and salaries of paid employees in budgetary sphere entities, payments from balance surplus in co-operatives and from profit for distribution in enterprises.

⁴ such as: anniversary prizes, gratifications, retirement severance-pays, one-time payments (compensatory) paid due to proposition and acceptance of inventive project resulting in a change in labour standards, compensations for lost vacations.

surveys. The next sections will provide a reflection on the questions in the *WageIndicator* questionnaire.

4.2 CALCULATING HOURLY WAGES

In a study by Beblo et al (2003), as well as in many other studies, gross hourly wages are calculated using information about individual gross labour income per month, divided by the reported number of 'normal' hours worked per week times the number of weeks per month.

For calculating hourly wages, actual weekly hours cannot be used, because for most employees wage is far more often levelled out over a period of time than actual weekly hours. In countries with a primarily well-educated workforce, with advanced industrial relations systems and/or with substantial collective bargaining coverage, the percentage of workers being paid per day cash in hand for every hour worked has decreased in the past century. Thus, the hours-input into the wage rate calculations should be usual hours. However, it would be better to use contractual hours plus overtime hours, including information whether the overtime hours are paid.⁵ For self-employed and for workers with no contractually agreed working hours, the usual hours worked should be used.

4.3 PROBLEMS

A major problem in calculating hourly wages relates to the issue of bonuses and allowances. Some surveys include bonuses, and others do not. For example the

⁵ Pannenberg (2002) reports that a large fraction of overtime hours is unpaid in West Germany. A similar situation is reported in Poland (According to Executive Summary of the Chief Labour Inspector's Report on the National Labour Inspectorate's activity in 2003 - 36,8% employers break the labour law regulations as far as overtime compensation is concerned). The National Labour Inspectorate, subordinate to the Sejm, is a body for supervision and inspection of the observance of labour law, in particular of occupational safety and health rules and regulations and working hours. The scope of its activity, powers and its organization structure is specified in the Act of 6 March, 1981 on the National Labour Inspectorate (Journal of Laws of 2001, No 124, item 1362 with further amendments) and in the NLI's statutes attached to the Regulation of the Speaker of the Sejm (the lower chamber of the Polish Parliament), dated 25 October, 2002 on bestowing the statutes on the National Labour Inspectorate (Journal of Executive Regulations of 2002, No 54, item 740 with further amendments). In the scope of its activity, the NLI co-operates with trade unions, employers' organizations, workforce self-government bodies, and the civic labour inspection.

German IAB wage measure includes bonuses and fringe benefits, while these are excluded from the German Socio-Economic Panel wage definition.

Piece-work or quota systems, as opposed to hourly rates, are a source of measurement problems. How problematic these are depends on the percentage of workers on performance systems and the share of the performance bonus in relation to a basic wage in the national labour market.

Another problem relates to taxation and social security contributions. According to Beblo et al (2003), the ECHP provides data about hourly wages that are difficult to compare across countries. Among others net wages in Germany and Poland mean earnings after tax and social security contributions, while in France they are net of social security contributions, but prior to taxation since taxes are computed annually.

Annual payments are another source of measurement problems. This primarily applies to holiday allowances and end-of-year bonuses. If last wages are reported in surveys, in contrast to normal wages, it should be checked whether the annual allowance is included in the reported wage and if not, it should be checked whether the employee is entitled to annual allowances.

Then, there is the problem that relates to paid vacation and holidays. To our knowledge, in most EU member states this paid leave is imposed by legislation. Therefore, corrections per country should be sufficient.

In Poland, there are also recent changes in the law as regards for example what are net wages. Malkovska (2004) is a kind of guide about measuring, recording and calculating wages taking into account the Polish law from 2004. In 2004 there were some very important changes in rules of contracting, working time, rules of calculating free days, rules of calculating net wage. There are a lot of practical exercises in the book, that allows reader to understand better how to calculate social contribution, tax deduction and finally – net wage.

Two recent publications by Borkowska (2004a, 2004b) report on different compensation and reward systems that are practiced in Poland today. All aspects of remuneration are concerned – e.g. functions and structure of wages, procedure of designing compensation and reward system, classification of compensation (base pay, total cash compensation, total performance pay etcetera). New methods of rewarding are described – such as long term compensation (shares, options). It is very interesting in a cross country comparison to come as close as possible to comparison of remuneration in all its aspects.

4.4 CALCULATING ANNUAL HOURS WORKED

For cross-country comparisons of working time, annual hours would provide a better indicator, but they are not useful for calculating hourly wages. World-wide comparisons of hours worked require corrections for paid leave, which may vary across countries from a six weeks paid holiday in some countries to a few paid days off in others. The ILO's worldwide Key Indicators of the Labour Market (KILM-data) use annual hours of work. In European Union member states, flexibilisation and annualisation of working hours weaken counting based on weekly hours.

However, using questionnaires to gather information about annual hours worked is difficult, as will be discussed in the next section. The review of 26 large-scale surveys shows that only a small minority allowed for calculating annual hours worked (Dragstra and Tijdens, 2004).

Hoffmann and Greenwood (2001) proposed two methods to calculate annual hours worked. The direct or averaging methodology estimates hours worked through averaging the actual weekly hours worked in a reference period. It requires a high frequency in data collection, ideally by continuous surveys. The component or accounting method uses contractual or usual weekly hours and estimates the components of the deviation to these normal weekly hours. This requires a question about working in the reference period, allowing to control annual hours worked for holidays, vacations, overtime, slack work and alike. This method is more appropriate when the surveys are not frequent.

5. IDENTIFYING WAGES IN WAGEINDICATOR

One of the aims of the *WageIndicator* questionnaire is to measure wages as reliable and as detailed as possible. Respondents are asked to have the last pay slip at hand, before entering the questionnaire. In the research team, a discussion was raised about asking normal wage instead of last wage. Yet, we decided to ask for last wage, because then people can complete the questions according to the slip, increasing the reliability of the data. Afterwards, in the dataset, controls have to be included for outliers due to the last wage. To tackle the informal labour market, a question is posed whether people are being paid cash in hand or into a bank account / by cheque. These groups have the same routing.

5.1 MEASURING WAGES

At the WOLIWEB launch meeting 8-10 July 2004, the research team decided to ask for gross and net last wage, including allowances and bonuses. The reliability of the information was a major argument to do so, because otherwise respondents need to subtract allowances in order to come to their wage without allowances, which may decrease reliability. The decision requires questions about wages and about allowances and bonuses. The question about the wage has an instruction to include allowances and bonuses.

Not all employees know their gross and their net wages. A selection question is posed first, followed by questions about gross and net wages. It runs as follows.

| | | |
|---------|-----------|--|
| gte2372 | wage both | Do you know your GROSS and your NET wage? |
| | | <input type="checkbox"/> 1 Yes, my gross and my net wage |
| | | <input type="checkbox"/> 2 Only my gross wage |
| | | <input type="checkbox"/> 3 Only my net wage |

If ticked gross and net wage, then a screen pops up:

| | | | |
|------|---------|--------------------------|-----------|
| E12 | | What was your last wage? | |
| E13a | wagegr1 | Gross wage | -> wagegr |
| E14b | wagene1 | Net wage | -> wagene |

If ticked gross wage, then a screen pops up:

| | | | |
|---------|---------|--------------------------------|-----------|
| | | What was your last gross wage? | |
| gte2396 | wagegr2 | Gross wage | -> wagegr |

If ticked net wage, then a screen pops up:

| | | | |
|------|---------|------------------------------|-----------|
| E15 | | What was your last net wage? | |
| E15a | wagene2 | Net wage | -> wagene |

The questions about wages have so-called masks, checking instantly that data-intake is numerical, that it includes at most two digits and that the gross wage is higher than the net wage. If the latter requirement is not met, an alert pops up 'Your gross wage cannot be lower than your net wage'.

We aim to explore the technical possibilities to add a check controlling that the net wage should be at least $0.4 * \text{the gross wage}$.

5.2 IDENTIFYING THE PAYMENT PERIOD

For calculating the hourly wages, a question is posed about the payment period. We know, based on our experiences with the Dutch *WageIndicator* questionnaire, that a small percentage of the respondents use the text box to specify their payment period. Particularly individuals in atypical shift work are replying here, for example those working in the offshore industry with its 12 hours shifts or in marine transport.

| E22 | wageperi | On which payment period was your last wage based? |
|-----|--------------------------|---|
| | <input type="checkbox"/> | 6 1 hour |
| | <input type="checkbox"/> | 5 1 day |
| | <input type="checkbox"/> | 4 1 week |
| | <input type="checkbox"/> | 3 2 weeks |
| | <input type="checkbox"/> | 2 4 weeks |
| | <input type="checkbox"/> | 1 1 calendar month |
| | <input type="checkbox"/> | 10 2 calendar months |
| | <input type="checkbox"/> | 11 3 calendar months |
| | <input type="checkbox"/> | 7 1 year |

| E23 | wagetext | If you want to specify your payment period, please do so here |
|-----|----------|---|
| | | |

We aim to evaluate the response in the text box after some time and reflect on implications for the question about the payment period.

5.3 ALLOWANCES IN THE LAST WAGE

The question about gross and net wage is followed by some questions about allowances and bonuses. A list of allowances is presented below. The list presented to a web-visitor is much shorter, because many allowances are country-specific. The question runs as follows.

Not if self-employed/family worker (country specific phrasing):

| E29 | | Did your last wage include allowances and if so, how much? |
|-------|-----------|--|
| E29a | washifts | <input type="checkbox"/> Shift / unsocial hours / weekend allowance |
| E29b | waovrtm | <input type="checkbox"/> Overtime bonus |
| E29c | waovrt1 | <input type="checkbox"/> Overtime premium |
| E29d | wadirty | <input type="checkbox"/> Dirty/dangerous work allowance |
| E29e | waincove | <input type="checkbox"/> Inconvenience or hardship allowance |
| E29f | watips | <input type="checkbox"/> Tips |
| E29g | wasenior | <input type="checkbox"/> Seniority bonus |
| E29h | waskill | <input type="checkbox"/> Skill bonus |
| E29i | waskill1 | <input type="checkbox"/> Skill premium |
| E29j | watarget | <input type="checkbox"/> Target-related incentive bonus |
| E29k | wafuncti | <input type="checkbox"/> Function bonus |
| E29l | waperfom | <input type="checkbox"/> Performance allowance or commission |
| E29m | waconsig | <input type="checkbox"/> Attainability or consignment allowance |
| E29n | waxmas | <input type="checkbox"/> Christmas bonus |
| E29o | wayearn1 | <input type="checkbox"/> End-of-year bonus |
| E29p | wayearnd | <input type="checkbox"/> End-of-year bonus, Christmas bonus |
| E29q | wa13mth | <input type="checkbox"/> Annual bonus (13th, 14th, or 15th 'month') |
| E29r | wa13mnt1 | <input type="checkbox"/> 13th 'month' |
| E29s | waannual | <input type="checkbox"/> Annual bonus |
| E29t | wahollid | <input type="checkbox"/> Holiday allowance |
| E29u | wagroupb | <input type="checkbox"/> Group performance allowance |
| E29v | wateam | <input type="checkbox"/> Team/departmental bonus |
| E29w | waperso1 | <input type="checkbox"/> Personal performance allowance |
| E29x | waperson | <input type="checkbox"/> Personal allowance |
| E29y | wamarva1 | <input type="checkbox"/> Labour market supplement |
| E29z | wamarval | <input type="checkbox"/> Market value allowance |
| E29za | wacommute | <input type="checkbox"/> Commuting / public transport allowance |
| E29zb | waprofit | <input type="checkbox"/> Profit sharing |
| E29zc | wacooper | <input type="checkbox"/> Payments from balance surplus in cooperatives |
| E29zd | wastock | <input type="checkbox"/> Stock options |
| E29ze | waattend | <input type="checkbox"/> Attendance allowance |
| E29zf | waoother | <input type="checkbox"/> Other |

We aim to control the observations with overtime bonus for reporting overtime hours and payment of overtime hours. When preparing the wage-input for the hourly wage calculations subtract the rightly reported overtime bonuses from the reported wages.

5.4 ANNUAL ALLOWANCES OVER THE PAST 12 MONTHS

Asking for allowances in the last wage bares the risk that a reported bonus may not be paid with a payment interval equal to the payment period of the last wage. Some allowances are typically paid on a non-regular, mostly annual basis. The holiday allowance is the most likely candidate for affecting the hourly pay calculations, because in a number of countries it is a legal part of the wage, but paid at irregular intervals, but this may apply also to the end-of-year/Christmas bonus and 13th 'month' bonus. As we measure the last wage including bonuses and allowances, two problems arise:

- (1) When a respondent has not ticked such an allowance, we do not know whether this is because the respondent never receives this bonus/allowance or because it is not received in the month measured (Christmas bonuses will not be measured in questionnaires completed in July).
- (2) When the respondent has ticked such a bonus/allowance, we still do not know whether this bonus/allowance is paid on an annual, bi-annual or monthly basis.

The first problem can be solved with an extra question asking whether any annual bonuses or allowances are received. The second problem needs to be checked with a similar question about annual bonuses or allowances. The question runs as follows:

| E31 | | Do you receive any of the following annual bonuses? | |
|------|----------|---|---|
| E31a | franholi | <input type="checkbox"/> | Holiday allowance |
| E31b | franendy | <input type="checkbox"/> | End-of-year bonus |
| E31c | franxmas | <input type="checkbox"/> | Christmas bonus |
| E31d | fran12ha | <input type="checkbox"/> | 12.5 th 'month' |
| E31e | fran13mo | <input type="checkbox"/> | 13th 'month' |
| E31f | fran14mo | <input type="checkbox"/> | 14th 'month' |
| E31g | fran15mo | <input type="checkbox"/> | 15th 'month' |
| E31h | franprof | <input type="checkbox"/> | Profit share |
| E31i | francoop | <input type="checkbox"/> | Payments from balance surplus in cooperatives |
| E31j | franothe | <input type="checkbox"/> | Other annual bonus |

Finally, can we calculate the hourly wages properly? This is no problem when in E29 the bonus is ticked and the amount is given. It is however a problem when the bonus is not ticked in E29, but is ticked in E31. For respondents who receive a 12 ½ - 15th 'month', we can estimate the amount of the bonus, using their monthly wages. For respondents who receive a Holiday allowance, End-of-year / Christmas bonus, we propose to calculate the amount of the bonus based on the common national percentages for these bonuses.

| Country | Holiday allowance | End-of-year / Christmas bonus |
|----------------|---|---|
| Belgium | No info available | No info available |
| Denmark | 12,5% of annual salary | Paid once a year, % not known |
| Finland | No information available | No information available |
| Germany | Not possible to complete | Not possible to complete |
| Italy | No information available | No information available |
| Netherlands | 6% of annual wage | Paid once a year, % not known |
| Poland | 5% (depends on nr of persons in family) – this information concerns public sector, there is no information about private sector | End-of-year 8 – 10% of annual wage, Christmas b. 1- 5% of annual wage – this information concerns public sector, there is no information about private sector |
| Spain | No information available | No information available |
| United Kingdom | The proportion of gross pay accounted for bonuses depends largely on sector: that is, generally | |

| | | |
|--|--|--|
| | speaking it will be 3%-5% of gross pay; in financial services, whereas variables have a much greater role, it will be between 8%-12% on average. | |
|--|--|--|

We aim to explore further the percentages for holiday allowances and for End-of-year or Christmas bonuses.

We aim to calculate hourly wages including and excluding the annual bonuses.

5.5 ADDITIONS TO PAY AND WORK-RELATED SCHEMES OR BENEFITS

The questionnaire includes one question listing other additions to pay received from the employer in the past 12 months. This question includes items such as lower rate of interest on mortgage, public transport pass, housing allowance, and contributions to a savings scheme, leased car, or company car. Here, the amount of money involved is not asked, because the answers are assumed to be not very reliable. Although the value of these additions to pay may be substantial and therefore may affect labour market behaviour, from the data-collection point of view we are not able to valorise these additions.

In addition, the questionnaire includes a list of work-related schemes or benefits, such as a pension scheme, either at company or industry level, Flexible Benefit Plan, maternity / parental leave scheme (above statutory minimum), company-based day care / crèche, free housing, canteen or food vouchers. Although the tax authorities may perceive these benefits as wage elements, from the data-collection point of view we are not able to valorise these work-related schemes or benefits.

We will not estimate the value of these additions, benefits and schemes.

We aim to explore the extent of these additions, benefits and schemes by running frequencies across and within countries.

5.6 TAX-DEDUCTION AND SOCIAL SECURITY CONTRIBUTIONS

The *WageIndicator* questionnaire has no questions about tax-deduction and social security contributions in net earnings. The main reason is that survey questions typically do not ask this information. The second reason is that it requires an exploration of cross-country differences in tax-deduction and social security contributions, which has not been done so far. For the Netherlands, the

questionnaire includes a question about the amount of a tax-deductible mortgage.

We aim to explore how net wages can be controlled for tax-deduction and social security contributions to allow for a cross-country comparison of net wages.

5.7 A TYPICAL CASES: SELF-EMPLOYED

Self-employed and family workers typically have an annual gross income. This assumes a payment period for 12 months. Similar situation is in Poland with people, who work on the basis of civil contract (contract by results and free-for-task agreement). If the person was self-employed for less than 12 months, a question follows to identify this case.

| | | |
|--|----------|--|
| <i>If self-employed/family worker:</i> | | |
| What was your annual gross income? | | |
| E24a | wagegr3 | Gross income |
| <i>If self-employed/family worker:</i> | | |
| E25 | wagemon4 | Was this income earned in 12 months or less? |
| | | <input type="checkbox"/> 1 12 months |
| | | <input type="checkbox"/> 2 Less than 12 months |
| | | <input type="checkbox"/> 7 I don't know |
| <i>If earned in less than 12 months:</i> | | |
| gte2715 | wagemon7 | In how many months was this income earned? |
| | | -- |

We aim to calculate the weekly wage $\text{'Gross income'}/\text{months} \times 4.3$.

We aim to assign the don't knows for income period a missing value.

5.8 A TYPICAL CASES: PERFORMANCE RELATED PAY

As said before, piece-work and other forms of performance related pay may cause difficulties in the measurement of hourly wages. How problematic these are depends on the percentage of workers on performance systems and the share of the performance bonus in relation to a basic wage in the national labour market.

The questions to identify this group run as follows:

| | | |
|-----|----------|---|
| E08 | wageflex | Now we want to ask about your LAST wage. Was your last wage dependent on your individual performance from ... |
| | | <input type="checkbox"/> 1 piece work |
| | | <input type="checkbox"/> 2 sales targets |
| | | <input type="checkbox"/> 3 customers, patients |

-
- | | | |
|--------------------------|---|---------------------|
| <input type="checkbox"/> | 4 | agricultural output |
| <input type="checkbox"/> | 5 | other |
| <input type="checkbox"/> | 0 | none of these |
-

If ticked 'piece work (wageflex eq 1-5) and wageba1:

| | | |
|-----|--------------------------|---|
| E09 | wagefle1 | What percentage of your last wage was dependent on your individual performance? |
| | <input type="checkbox"/> | 1 0 - 20 % |
| | <input type="checkbox"/> | 2 20 - 40 % |
| | <input type="checkbox"/> | 3 40 - 60 % |
| | <input type="checkbox"/> | 4 60 - 80 % |
| | <input type="checkbox"/> | 5 80 - 100 % |

| | | |
|------|--------------------------|-------------------------------|
| E19a | wageba1 | Did you receive a basic wage? |
| | <input type="checkbox"/> | 1 yes |
| | <input type="checkbox"/> | 0 no |

| | | |
|---------|---------|--|
| gte2393 | | What was the basic part of your last wage? |
| gte2399 | wageba2 | Basic wage |

We aim to assign missing values to observations with a performance pay from 80 - 100 % as a percentage of the last wage.

We aim to calculate the wages of those paid performance pay for 20% and over, provided that a wage is given, and taking the mean of the percentage category:

- percentage= 20 - 40 %: $wagegros = basic\ wage/30 * 100.$
- percentage= 40 - 60 %: $wagegros = basic\ wage/50 * 100.$
- percentage= 60 - 80 %: $wagegros = basic\ wage/70 * 100.$
- percentage= 80 - 100 %: $wagegros = basic\ wage/90 * 100.$

5.9 PPP'S AND NATIONAL CURRENCIES

For the cross-country comparisons, the real (purchasing power) value of wages requires a PPP rate.

The variables in dataset relating to wage, allowances and household income are in the national currencies. Out of the WOLIWEB countries, Denmark, United Kingdom and Poland have no Euro currency. In the wage questions, the applicable currency shows up in the questions about wage, allowances and household income. In Poland, workers may be paid in multiple currencies. This question runs as follows:

| | | |
|-----|--------------------------|---|
| E10 | wagecurr | In which currency did you receive your last wage? |
| | <input type="checkbox"/> | 1 PLN |
| | <input type="checkbox"/> | 2 Euro |
| | <input type="checkbox"/> | 3 GB Pound |
| | <input type="checkbox"/> | 4 US Dollar |

We aim to explore whether recent PPP rates can be collected to add a variable with PPP's on an annual basis.

5.10 THE WAGE INPUT IN THE HOURLY WAGE CALCULATION

The wage input in the hourly wage calculation is for employees as follows:

- monthly gross wage, including allowances and bonuses and including an estimation of the annual paid allowances and bonuses, but controlled for overtime pay, as proposed in section 5.3;
- monthly gross wage, excluding allowances and bonuses and excluding any annual paid allowances and bonuses;
- monthly net wage, including allowances and bonuses and including an estimation of the annual paid allowances and bonuses, but controlled for overtime pay, as proposed in section 5.3;
- monthly net wage, excluding allowances and bonuses and excluding any annual paid allowances and bonuses.

Here, the wages are standardised to monthly wages by controlling for payment period.

The wage input in the hourly wage calculation is for self-employed as follows:

- monthly gross wage, whereby the annual wage is divided by number of months paid.

5.11 CALCULATING THE HOURLY WAGE

The calculation of hourly wages depends on reported payment period. The payment period can be one month, four weeks, two weeks or one week.

If the payment period is one month - hourly wages are calculated by dividing the monthly wages by the weekly waged hours * 4.3 weeks in a month.

If the payment period is four weeks - hourly wages are calculated by dividing the wages by the weekly waged hours * 4 weeks.

If the payment period is two weeks - hourly wages are calculated by dividing the wages by the weekly waged hours * 2 weeks.

If the payment period is one week - hourly wages are calculated by dividing the wages by the weekly waged hours.

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APPENDIX 1: NATIONAL COMMENTS ON MEASURING WAGES

BE

1: What were your last wages If your salary is variable, you can indicate the average salary of the last three month. If your salary is variable, you can indicate the average salary of the last three month. Gross wages: _____, __ euro Net wages: _____, __ euro

2a. What is your gross taxable annual wage? This is the amount you have to fill in next to the categorie T of your tax declaration. _____, __ euro

2b. If you didn't work during the whole of the year, please indicate the number of months you have worked to earn this salary.

DE

We consider it rather impossible for respondents to tell net wages by excluding allowances or overtime pay. A net wage excluding all these payments is very difficult to calculate and German pay slips usually do not give these informations. Furthermore it is rather unclear, what is meant by variable income elements. Does this term include for example piece work bonuses?

So we propose to ask only for gross monthly salaries and net wages but only ask respondents not to include holiday pay, christmas bonuses or back pay but including overtime pay.

We propose to modify the question E03 according to question 59 in the 'Individual question form' of the SOEP, the German socio economic panel of the DIW (see page 14, question 59 in the English version of the SOEP-questionnaire: http://www.diw.de/deutsch/sop/service/fragen/fr2004/personen_en_2004.pdf.)

DK

In the following we are presenting two surveys concerning wages. *We recommend that you ask questions similar to SURVEY2* because these questions are the best to measure "hourly earnings" from Statistics Denmark.

In the following we comment on three specific questions before we go on with our comments based on the two surveys.

General comments:

E02: In a Danish context this question may not be so relevant. It is required by law to receive your salary via a bank account for the major part of all employees. The category "Cash in hand" will therefore only be relevant for a limited number of people and in general it is not that interesting from a researcher's point of view.

E03_1: First of all we are wondering why it is necessary to include both gross and net wages. As you can see below it is very difficult for Danes to state their net wage. Furthermore, it is difficult to measure net wage.

Secondly, why should variable income not be included? If it is possible to measure some variable incomes such as overtime payment, then it might be an interesting variable.

Thirdly, it is stated that there should be "No decimal places" even though there are decimal places in the WIQ.

E05: As noted in connection with working hours it should be possible to answer for instance 37.5 hours.

With regards to calculate the hourly wages it is stated that question D07 is used. What is the purpose of question E05 then and would it not be better to use question E05 since this states the working hours for the person and not the organisation?

Furthermore you should be aware that this question is asked differently in the Danish survey.

As you can see from question 1 below the question simply concerns how many hours people "normally" work.

Another point of departure is the Danish equivalent to the European Community Household Panel (ECHP) - "Welfare of Danish Families" – made by The Danish National Institute of Social Research (Socialforskningsinstituttet). The data have been collected from 1994 to 2001 and include personal interviews with approximately 5,600 individuals.

Eurostat frequently publishes documentation about the ECHP. You will find a description of the user database, variables, constructions of weights etc. here: http://forum.europa.eu.int/Public/irc/dsis/echpanel/library?l=/user_db&vm=detail&sb=Title

The original questionnaire and variable list is attached as a file to this document.

The questionnaires are meant as a guide to what questions should be asked of the households and persons in the survey around Europe. The countries have translated the questionnaires into their respective national languages – in Denmark this is done by The Danish National Institute of Social Research.

In the Danish version question number 48 concerning monthly earnings is asked very similarly to the English original ECHP-questionnaire (also very similar to the WIQ questions). Except that in the Danish questionnaire overtime payment is not mentioned specifically.

The Danish question:

QUESTION 48: What is your normal income from work? What is the gross amount per month, i.e. before taxes, pension and all other allowances? And what is the net amount, i.e. the amount received?

SURVEY2: The following comments refer to another major Danish labour force survey made by the *Rockwool Foundation Research Unit* (2003). It is our opinion that gross wage will have to be the only category and we recommend defining gross wage as: "normal salary before tax and allowances, excluding pension but including overtime payment".

It is possible for most Danes to distinguish between gross and net wages but it will be very difficult to deduct variable income elements, overtime and pension.

E03_1, E03_2 & E04:

There is only one question concerning wages in the survey made by *Rockwool Foundation Research Unit*. However, this is related to a question on working hours:

Both questions are presented here with subsequent methodical comments:

Question 1: How many hours a week do you normally work?

Response categories: open category including half hours.

Question 2: What is your normal salary before tax and allowances but including overtime payment?

Response categories: (in the survey you are supposed to tick a category and state a number)

- | | |
|---------------|---------|
| 1. Year: | Amount: |
| 2. Month: | Amount: |
| 3. Two weeks: | Amount: |
| 4. Week: | Amount: |
| 5. Hour: | Amount: |

Methodical Comments:

1. The two questions are combined to calculate how much people are paid by the hour. The hourly wages are therefore calculated differently than in the WIQ.

2. You should be aware that the Rockwool Foundation Research Unit finds a very clear correlation between the answers in the survey and the variable Statistics Denmark names "hourly earnings". The questions asked in the survey therefore seem to be a good way to measure wages for both public and private employees. Hourly earnings form the largest part of the total earnings and represent what most people understand as hourly earnings. *Hourly earnings* are defined by Statistics Denmark as: "Earnings excluding remuneration for time not worked and fringe benefits". *Hourly earnings* therefore describe the gross wage including overtime payment but not including pensions paid by the employer and fringe benefits.

However there can be added a few methodical comments to the differences between the survey and register information from Statistics Denmark:

A. The calculated average hourly earning is slightly lower than "hourly earnings" in the earnings statistics from Statistics Denmark, which is probably due to the fact that some people forget to include overtime payment in the survey.

B. There are no significant differences between the calculated average hourly earning and register information from Statistics Denmark when you look at sex, age, occupation and gross wages.

C. There are significant but small differences between the calculated average hourly earning and register information from Statistics Denmark when you look at occupation, education and gross wages: People with lower occupation and education seems to state a higher gross wage than we can see in the earnings statistics. As an example people with a yearly gross wage less than 150.000 DKK answer that they receive 113 DKK per hour while the statistics show an amount of 106 DKK.

This is in agreement with for instance Körmendi & Noordhoek who argue that people tend to give socially acceptable answers (see Körmendi & Noordhoek, 1989: 80-81).

3. Concerning the register information from Statistics Denmark you should be aware that it includes all public employees in the public sector but approximately 82% of the total number of employees in the private sector only. The primary reasons are that the register only includes companies with more than 10 employees and does not include the agricultural and fishery sectors.

With regard to the wage indicator questionnaire you should be aware of the following:

1. *Overtime payment* is included in the survey made by the *Rockwool Foundation Research Unit* and not in the wage indicator questionnaire. This might cause problems for the measurement of wages in Denmark if people are asked to exclude overtime payment.

2. You should also note that *pension* paid by the employer might amount to a considerable part of many people's salary. The survey made by the *Rockwool Foundation Research Unit* shows that most people do not include pension in what they call a "normal" salary. Furthermore, it is very difficult to measure pension in a survey. Therefore in our opinion it would be a good idea to clarify in the wage indicator questionnaire that pension is not included (assuming the answer was measured in "hourly earnings").

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4. The Danish National Institute of Social Research: "Welfare of Danish Families" (European Community Household Panel - ECHP) (The original English questionnaire and variable list is attached)
As far as we know the lowest and highest 1% of the wages are not deleted in the survey made by Rockwool Foundation Research Unit.

ES

The most important problem we have is with the inclusion or not of the allowances. In question E03_1 it is explicitly said that the respondent should not include the allowances in the estimation of the last wages. This contradicts with question E06, that asks whether these last wages include allowances (??). It is not clear, and it should be extremely clear what should be included or not. In general, we think that a good principle is to include in the wage estimation the allowances that are somehow permanent or consolidated (if one works always by night, one includes the night allowance in the idea of one's wage). What should not be included is all allowances or extra payments that are not permanent, but associated to some special or variable aspect of the job (if one works sometimes by night and then receives a varying wage because of the allowance associated). This way we could avoid many mistakes associated to the fact that many people understand some allowances as part of the wage and some others do not. For instance, in the university, the actual wage (not including the allowances of different types: productivity, etc) is in many cases one third (1/3) of the total wage received. And it is permanent and consolidated, but still we are speaking about allowances. So we suggest to ask for the non-variable income in question E03_1 (no matter if it includes allowances, as long as they are permanent); and ask differently for a) permanent allowances that might be included in the wage estimation; and b) variable allowances that he receives although he has not included in the wage estimation.

Another problem here is with the extra holiday payments. In the Spanish law, it is compulsory to pay at least 2 bonus monthly payments as holiday allowances. But in many cases the value of these 14 payments is divided by 12 and these is the monthly wage. In other cases it is not, so there are actually 14 months paid in the year. So, for example if there are two persons (A and B) with the same annual wage, but person A has the system of 12 + 2 (14) payments; and person B has the system of 12 payments, person B will appear as having a higher wage, incorrectly. So another question that should be asked is how many salaries per year she receives.

A suggestion: we may add a kind of "Tip", suggesting the respondent to have at hand the last pay slip or wage statement, what would make much easier the completion of this part of the questionnaire.

There are no similar surveys, in fact. The most important survey concerning wages is the "Encuesta de Estructura Salarial" (Wage Structure Survey), which is completely different because the universe is Spanish firms, not workers (it is the managers who fill in the questionnaire). The other good sources for income are not specifically designed for measuring wages, but the income of the Spanish families (again, the universe is different). In this sense, the most important one is the European Household Panel.

Encuesta de Estructura Salarial 2002 It is completely different: the questionnaire is filled by managers of the firm, and the questions refer to the whole workforce. European Household Panel Quarterly Gross monthly income from salaried work Calculations of hourly wages come from estimations provided by Spanish firms, in the Encuesta de Estructura Salarial.

Usually, the analysis of the extreme wages (and also incomes) is considered not reliable at all.

FI

I do not understand the difference between questions E03_1 and E03_2 (if the difference does not concern the use of the gross+ net wages or only net wages.

If this is the difference it would be necessary to define what we mean by terms "gross" and "net". Does "gross" mean for example wage before tax at the source. In general employers give the wage and salary information directly to the state statistical office. In some surveys it has been possible to use official tax information etc.

The survey that we use as the basic comparison survey below asks first form of pay, then dependence on performance and finally opinion of the employee in question about he/his wage or salary level.

SURVEY1 Finnish Quality of Work Life Survey. 1977, 1984,1990,199, 2004. This is an example about how the above mentioned survey asks the opinions about wage level.

In your opinion, is your pay fair in comparison with the remuneration paid in other occupations?

RESPONSE CATEGORIES

1. Clearly higher than it should be.....
2. Somewhat higher than it should be.....
3. About right
4. Somewhat lower than it should be...
5. or clearly lower than it should be?...

PL

In your questionnaire gross hourly wages are only accepted in the range of euro 1 to 100. In Poland the minimum should be lower. The minimum monthly wage in Poland in 2004 is 824 PLN (average exchange rate according to National Central Bank in 27. 05. 2004 is 1 € = 4,6721 PLN). According to Polish labour law it is possible to give for new employee in his/hers 1 year of work the minimum wage minus 20% - that is 659,2 PLN gross, and in second year – minimum wage minus 10%. A lot of employers use this possibility. That means that there are people who can earn gross 659,2 PLN monthly – about 4 PLN per hour (taking into account exchange rate that is 0,856 euro gross) and 3,2 PLN net – € 0,684 net. So for Polish circumstances the range could be gross 0,856 euro to about 100 euro, and net 0,684 euro to 88 euro.

The problem that requires tackling is net or gross wage. Please take into account, what we are afraid of, it is possible that majority of Polish workers cannot indicate the gross wage. They know how much are they paid but after taxation. If we use the two categories of wage it is possible that one of them is not proper.

(Example: someone gives 1000 PLN as net wage, and gross wage 1200 – which of them should we accept?)

Propositions of solution:

1. The system can automatically calculate the gross wage in accordance to net wage.
2. It could be useful to put a link to "help instruction" about calculation gross and net wages.

There could be separate place for putting the currency sign – in Poland most of people are paid in PLN, but some receive their salary in EURO, GBP or USD. It appears necessary to indicate this to avoid misleading. In on-line survey Internet Wage List made by Gazeta Wyborcza the sign of currency is mentioned

In most surveys there are questions concerning only gross wage or only net wage. Wages include different elements

Study of Population's Economic Activity, every 3 months: How high was your net wage in the last month in your main job? (specify) in PLN)

Internet Wage List (by Gazeta Wyborcza), on-line survey (all time): How high is your present total monthly wage? Give the gross and net wage

Choose the currency sign (PLN, EUR GBP, USD)

You can describe your wage – what are the elements of your wage

Central Statistical Office – form Z12 October 2002 Indicate total gross wage for total number of employees mentioned before

Information from form Z12 embrace personal wages and salaries (including flat wages and salaries, overtime bonuses, functions, seniority bonuses), fees paid to own employees for performing work in accordance with a labour contract (e.g. journalists, film producers, radio and television programmes producers).

Moreover, payments for periods exceeding one month were included in amount due to one month (e.g. one third of the quarterly premium, one sixth of the last paid semi-annual premium, one twelfth of the annual premium or bonuses, additional wages and salaries of paid employees in budgetary sphere entities, payments from balance surplus in co-operatives and from profit for distribution in enterprises). An obligatory social security tax paid by employees is also included among components of wages and salaries

Monthly gross earnings didn't include payments such as: anniversary prizes, gratifications, retirement severance-pays, one-time payments (compensatory) paid due to proposition and acceptance of inventive project resulting in a change in labour standards, compensations for lost vacations.

The Study of Population Economic Activity does not allow to calculate hourly wage because the working time is given for the week of the study and wage is for the last month.

The average hourly wages are calculated on basis of total number of working hours for all employed in the company and total gross wage (the employer survey)

UK

Following the introduction of a minimum wage, using total pay divided by hours was found to underestimate pay, largely due to large amounts of unpaid overtime (and some understatement of pay). Now the main Labour Force Survey asks for an hourly rate where applicable, and uses this as the better estimate of pay at the lower end. But the above approach should be fine for Woliweb purposes.

APPENDIX 2: CROSS COUNTRY COMPARITIVE RESEARCH

USING NATIONAL DATA

From 1983 onwards some European countries started to collect household panel data with labour market information. A few researchers started to conduct cross country comparative research based on these national data sets (Wetzels 2001, Gustafsson, Kenjoh and Wetzels, 2003).

Wetzels (2001) reports on how to construct comparable data from the household panel data for her research. Here we will only briefly report on the comparison of hourly wage data (chapter 5 in: Wetzels 2001). We use for Germany the German Socio Economic (SozioÖkonomische) Panel (GSOEP, Wagner et al.(1991)). For the United Kingdom we use the British Household Panel Study (BHPS, Taylor (1992)). For the Netherlands we use the Arbeidsaanbodpanel (labour supply panel) collected by Organisatie voor Strategisch Arbeidsmarktonderzoek (OSA, Allaart et al (1987)), and for Sweden we use the HUShällens ekonomiska levnadsförhållanden (HUS, Flood et al. (1996)). One of the aims of the household panel data collections is to gain insight into the functioning of the supply side of the labour market, by connecting information on individual supply of labour of household members. The panel-character of the data sets, means that the initial representative sample of the country's household population has been followed over time. Households are dropped e.g. when all household members have reached age 65, or if all household members refuse to participate. Such households have been replaced in a manner that each wave provides a cross sectional representation of the national population of households⁶.

The household panel data sets are not totally similar across countries, even if we only work with the sections on the labour market position and the household composition. Furthermore, the data sets have different degrees of standardisation over time because in some countries new research topics emerge that replace old by new requested information. However, by carefully comparing the data sets we have been able to construct a comparative data set suited to analyse empirically our research interests.

Table A.1. presents the questions posed on earnings and weekly worked hours in BHPS, GSOEP, HUS and OSA. Employed Germans are asked their "Arbeitsverdienst brutto letzter Monat" including paid overtime work plus other benefits excluding vacation benefits. In the subsequent wave vacation benefits are included in a question concerning different categories of payment during the past year but there are many missing values due to panel attrition and non-response. Swedish HUS data provide three ways of measuring gross earnings. First, similar to the request in GSOEP, Swedes were asked to state their earnings before taxes according to the form being paid, hourly, weekly, monthly or yearly. Secondly, HUS requests employment income in the year prior to the interview, "inkomst av tjänst". Thirdly, HUS respondents have been asked whether they would allow a match of HUS survey information to tax register information on income earned. In the 1984 survey about two thirds of the respondents did allow

⁶ For example, OSA uses the random walk method for replacement of households, variables for selection are sex, age, family size and region. It is requested that all household members of the newly selected household participate in the interview, otherwise the household is considered as non responding, and a new household is recruited.

such a matching. The tax register information is also available for all three data sets in 1993: the panel, the former 'drop-outs' of 1984-1993, and the additional sample of 1993. In 1993 74% of the panel respondents, and about 89% of the additional sample and the sample of former 'drop-outs' gave permission. For all three 1993 groups, when respondents gave permission, tax register information is available for 4 years: 1985, 1987, 1990 and 1992. The information from the tax registers is employment income, so it can be compared to the direct question. Information on earnings by tax register is not available in GSOEP.

Table A.1 Original descriptions of gross earnings and hourly wages used in cross country research

| | |
|-------------------|--|
| Britain (BHPS) | The last time you were paid, what was your gross pay - that is including any overtime, bonuses, commission, tips or tax refund, but before any deductions for tax, national insurance or pension contributions, union dues and so on? |
| GSOEP (GSOEP) | How high were your earnings last month? If you received any additional payments last month, e.g., holiday money or back-pay please do not include these. Also do not include child benefit even if received from employer. However, do include money earned for overtime. If possible please enter for both: Gross earnings, in other words earnings before deductions for tax and social security; net earnings, in other words the amount after deductions for tax and social security. |
| Netherlands (OSA) | Can you tell me your earnings before taxes and social premiums? Do not include any extra's (in Dutch: ploegendienst, overwerk, fooien, reiskosten-, representatie-, of vakantie-vergoeding etc.); the first amount on your pay check |
| Sweden (HUS) | What are your regular weekly (biweekly, monthly, annual, or hourly) earnings, before taxes and other deductions? The information on average earnings in 1986 is "before taxes and other deductions". In 1984 the question is after deductions. There are two questions on 'inkomst av tjänst': 1. 'How much did your income from employment amount to in the calendar year prior to the interview?'. This includes wages, insurance payments, pensions, but excludes capital income and deductions from employment. In 1988 and 1991 this includes deductions from employment. Prior to 1988 income from employment has been reduced by SEK 3,000 (schablon=travel cost compensation). 2. 'How much did your cash earnings amount to in the year prior to the survey year. This is usually the major part of 1. |

| | |
|----------------------------|---|
| Britain (BHPS) 1+2 | 1. Thinking about your (main) job, how many hours, excluding overtime and meal breaks, are you expected to work in a normal week? 2. And how many hours overtime do you usually work in a normal week? (Including unpaid overtime) |
| Germany (GSOEP) | How many hours (per week) do you actually working on average, including overtime? |
| Netherlands (OSA) 1+2+3 | contracted working hours unpaid overwork per week paid overwork per week |
| Sweden (HUS) | On average, how many hours per week are you currently working at your main job, including both paid and unpaid overtime? |

Note BHPS: British household panel data set; GSOEP: German household panel data set; OSA: Dutch household panel data set; HUS: Swedish household panel data set.

Data on earnings is only available for the employed, excluding the self-employed. Using the information on labour force status, persons with zero earnings, because of not being employed are included in our sample, rather than to lose these observations. The survey request that a person indicates whether (s)he was at

work the week prior to the interview. HUS applies a slightly different definition of "employed" than GSOEP, which does not give specific information for those on leave or expecting to return to work soon. In HUS 'employed' means that the respondent performed paid work during the last week or that (s)he had time off, was ill or on leave for less than 8 weeks, or that (s)he expected to return to work within one week. Therefore Swedish persons for whom we do not have information on earnings could be either not employed or on leave for more than 8 weeks or not expecting to return within one week. "Looking for work" means that the respondent was looking for work or was laid off and did not expect to return to work within one week. "Not in the labour force" means that (s)he was either unemployed, retired, disabled, keeping house or was a student and was not looking for work, or (s)he had time off or was ill or on leave, and this had been the case for more than 8 weeks.

Pre tax hourly wages are to be found by dividing monthly pre tax earnings by hours worked per week times number of weeks per month. GSOEP and HUS⁷ provide similar and consistent over time (across waves within the survey), information on hours worked per week. In GSOEP this is called "Tatsächliche Wochenarbeitszeit" which is weekly worked hours including paid and unpaid overtime work. We do not have information on average worked hours per week for those on leave for Germany. Like the information on earnings, the information on average hours of work per week is only available for employed people in HUS, which implies that we do not have information for those on leave for more than 8 weeks.

HUS provides two other sources of information on hours worked per week. First, weeks spent on various activities, including full time and part time employment in the calendar year prior to the interview is requested.⁸ Unfortunately this information is only available for 1983 and 1985. Secondly, there are spell-data on (changes in) hours worked per week, but this information is in categories, which does not make it possible to distinguish between working e.g. 25 and 33 hours. This information is not relevant for this study, because it is not comparable to the other Swedish or GSOEP requests on weekly hours of work.

Since we do not have direct information on hourly wages, we calculate hourly wage from gross earnings per week divided by normal working hours per week including paid and unpaid overtime. For gross earnings, we use gross monthly earnings in BHPS, GSOEP, OSA and the majority of employees in HUS. In order to obtain gross earnings per week, monthly earnings are divided by 4.3. Additionally, for HUS, respondents report their earnings based on how to be paid. Annual earnings are divided by 46 and bi-weekly earnings are divided by 2. In case hourly earnings are reported, this is regarded as the hourly wage.

However, after doing this procedure, we have a few very strange cases, that is much lower wages below the minimum wages and very high wages. To avoid our

⁷ The question on 'hours of work per week' is worded as follows: "On average how many hours per week are you currently working at your main job, including paid and unpaid overtime?". In :1984, 86, 88, 91 93 (also for former drop outs).

⁸ The retrospective method starts with: 'How many weeks did you spend on leave?'. Several other categories then follow and the last questions concern the weeks spent on full-time and part-time employment. Finally the interviewed person is asked how many hours per week (s)he worked during the weeks stated as full-time work and how many hours during the weeks working part-time.

wage estimations to be affected by these strange cases, which are occurred because of miss reporting, and some extreme cases, we exclude the observations with 1 % of the lowest and 1 % of the highest wage distribution from our wage estimations.

APPENDIX 3: CROSS COUNTRY COMPARATIVE RESEARCH

USING EUROPEAN DATA: THE ECHP-DATA AS AN EXAMPLE

The European Community Household Panel (ECHP) is a longitudinal survey co-ordinated and supported by the Eurostat. The survey involves a representative sample of households and individuals interviewed for eight years (1994-2001) in each of the 15 countries⁹. The standardized methodology and procedure in data collection yield comparable information across countries, making the ECHP a unique source of information for cross-countries analyses at the European level. The aim of the survey, in fact, is to provide comparable information on EU population, representative both at the longitudinal and the crosswise level.

The data collected cover a wide range of topics on living conditions (income, employment, poverty and social exclusion, housing, health, migration, and other social indicators). Therefore the ECHP survey allows for analyses of how individuals and households experience change in their socio-economic environment and how they respond to such changes, and for analyses of how conditions, life events, behaviour, and values are linked each other dynamically over time.

One of the most crucial issue concerns the high incidence of missing values, (for example education variables)¹⁰.

⁹ Austria (from 1995), Belgium, Denmark, Finland (from 1996), France, Germany, Greece, Italy, Ireland, Luxembourg, the Netherlands, Portugal, Spain, Sweden (from 1997) and U.K..

¹⁰ For a detailed analysis of the ECHP see Locatelli, Moscato and Pasqua (2000).

APPENDIX 4: THE MOST POPULAR CONTRACTS CONCERNING

WORK IN POLAND

The following contracts are widespread in Poland.

1. On the basis of civil law
 - Special contract 1 - contract by results - „Umowa o dzieło”
 - Special contract 2 - free-for-task agreement - „Umowa zlecenie”
2. On the basis of labour law
 - contract of employment – permanent contract, fix-term contract, replacement contract

Ad 1) CONTRACT BY RESULTS

- 1 There are two partners of the contract – contractor, who agrees to do some work and client who agrees to pay for results of this work (e.g. writing a book)
- 2 It is not subordinate relationship
- 3 Client has to pay for result
- 4 Written form is required
- 5 The time limit is agreed, but working hours are not
- 6 The cost of achieving income is 20% (without copyright) or 50% (with copyright) of contractor’s income – this amount diminishes the basis of tax calculation
- 7 Social security contribution is not paid

Ad 2) FREE-FOR-TASK AGREEMENT

- 1 There are two partners of the contract – contractor, who agrees to do some work and client who agrees to pay for doing this work (e.g. teaching), contractor gives a promise to do the work as good as he can, but doesn’t give a promise to achieve results
- 2 It is not subordinate relationship
- 3 Client doesn’t have to pay if the partners agreed so
- 4 Written or verbal form
- 5 The time limit is agreed, but working hours are not
- 6 The cost of achieving income is 20% (without copyright) or 50% (with copyright) of contractor’s income
- 7 There is an obligation to pay social security contribution

Ad 3) CONTRACT OF EMPLOYMENT

- 1 There are two partners of the contract – employee, who agrees to do some work and employer who agrees to pay for work and secure the good working condition
- 2 It is subordinate (work) relationship
- 3 Employer has to pay agreed amount of money for employee in agreed period of time
- 4 Written form is required
- 5 Working hours are agreed
- 6 The cost of achieving income is 102,25 PLN per month (1227 PLN per year)
- 7 There is an obligation to pay social security contribution

CONTRACT BY RESULT, FREE-FOR-TASK AGREEMENT, AND CONTRACT OF**EMPLOYMENT COMPARED**

| Type of contract | Legal basement | Object of the contract | Relation ship | Secured good working condition | Form of agree ment | Working hours | Cost of achieving income | Social security contributi on and health |
|--------------------------|----------------|------------------------|-------------------------------------|--------------------------------|--------------------|---------------|--------------------------------------|--|
| Contract by results | Civil law | Results of work | Equal (contract or - client) | No | Written | Not agreed | 20% 50% | No |
| Free-for-task agreeme nt | Civil law | Doing a work | Equal (contract or - client) | No | Written or verbal | Not agreed | 20% 50% | Yes |
| Contract of employem ent | Labour law | Doing a work | Depende nce (employe e - employer) | Yes | Written | Agreed | 102,25 PLN per month (1227 per year) | Yes |

The proposition was to put contract by results and free-for-task agreement as a separate answer in question A01 and make the same routing for this respondents as for self-employed

Question A01 „Which description matches best your current employment activity?“ Employee

- Family worker / working for family business
- Self- employed
- Apprentice / trainee
- In a job creation scheme
- School pupil, student in full-time education
- Unemployed / looking for a job
- Sickness benefit / incapacity for work
- other

Question E01 and E03 „what kind of contract do you have?“

- permanent contract (labour law)
- fixed-term contract (labour law)
- apprentice, trainee (civil law, no-name agreement)
- replacement contract (labour law)
- community work scheme / subsidized employment (labour law)
- contractor / labour-only subcontractor contract with temp agency (labour law)
- seasonal work (labour law, sort of fix-term contract)

This proposition was accepted.