Measuring income in comparative social survey research

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MEASURING INCOME IN COMPARATIVE SOCIAL SURVEY RESEARCH

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1 Introduction

Different surveys use different strategies to arrange the questionnaires and different accuracy to construct the income questions. This degree of precision depends on the research interest and the aims of the study.

Market research is interested in categorizing the purchasing power of a household and classifies the households into consumer groups. They focus on classes of income size and therefore they do not give a precise definition of income and they make no distinction between several surveyed population groups. In Germany, they ask for the monthly net income and they give a general instruction in the question wording. The answers are income brackets. In case the interviewed person refuses to answer, the interviewer often takes the freedom to estimate the household's income.

Social research uses income as a socio-economic indicator on social stratification and inequality. From this point of view the knowledge of size classes of the household income is sufficient. But social research defines the various income types and formulates separate questions for different population groups, for example the wording of the income question differs for the self-employed and for employees. In Germany, the monthly net income is surveyed by an open question and/or with income brackets and the amount is given.

Economic and socio-economic research is studying income distribution and the dynamics of changes in the economic situation of the respondent. The research question on how the total income is composed by it components and changes of the income types are of interest.

Therefore a precise measurement of income is needed. The several types of income are defined in detail and separated by their sources and types. Specific population groups and/or income recipients are interviewed according their characteristics. For a well-defined time period (e.g. monthly) gross and net income are asked through open questions and all other monetary resources of all persons living in the household, as well as payments to the household per se are asked for. In general the answer is given as a gross and/or net amount.

Subsequent we will compare two different instruments of income measurement.

2   The Surveys

The *"European Community Household Panel" (ECHP)* is a longitudinal study coordinated by Eurostat that follows the same individuals and households over time. The major aims of ECHP are to provide micro-data on household and person level about the income, the monetary well-being and the dynamics of the economic situation in the European community and its member states.

The household questionnaire of the 8th wave covered five income items.

The person questionnaire of the same wave asks for 50 different income objects.

Here we use the user data base version April 2004 available to the academic community. The 8th wave's interviews are carried out in 2001 and refer to the income reference year 2000.

In 15 EU countries 59,852 households with 121,122 members are surveyed.

The *"European Social Survey" (ESS)* is a pan-European cross sectional time series running every two years. In the 2002 survey, 23 countries participated and collected information on people's social attitudes, beliefs in values, social and political behavior.

In each participation country, the survey design of ESS is a random sample with a known inclusion probability of the selected contact person eligible for the interview. Only on household member aged 16 and over is asked; this person also answers the question about the household situation.

For 21 countries 40,856 responses are included into the data-base[1].

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1   Data base version date is Feb. 03, 2004

3   The Income Questions

The ESS question wording is: "… if you add up the income from all sources, which letter describes your household's total net income? If you don't know the exact figure, please give an estimate. Use the part of the card that you know best: weekly, monthly or annual income." (ESS 01/08/2002: F30) The interviewer hands over to the respondent a show card with answer categories:

Figure 1   ESS Card "Household Income"

CARD 56

YOUR   HOUSEHOLD   INCOME

	Approximate WEEKLY	Approximate MONTHLY	Approximate ANNUAL	
J	Less than €40	Less than € 150	Less than €1800	J
R	€40 to under €70	€150 to under €300	€1800 to under €3600	R
C	€70 to under €120	€300 to under €500	€3600 to under €6000	C
M	€120 to under €230	€500 to under €1000	€6000 to under €12000	M
F	€230 to under €350	€1000 to under €1500	€12000 to under €18000	F
S	€350 to under €460	€1500 to under €2000	€18000 to under €24000	S
K	€460 to under €580	€2000 to under €2500	€24000 to under €30000	K
P	€580 to under €690	€2500 to under €3000	€30000 to under €36000	P
D	€690 to under €1150	€3000 to under €5000	€36000 to under €60000	D
H	€1150 to under €1730	€5000 to under €7500	€60000 to under €90000	H
U	€1730 to under €2310	€7500 to under €10000	€90000 to under €120000	U
N	€2310 or more	€10000 or more	€120000 or more	N

Source: ESS 01/08/2002: Card56

Additional explanations are given to the interviewer at the end of the "project instructions": At the income question "you should obtain the *total net income* of the household from all sources, that is, *after tax*. Income includes not only earnings but state benefits, occupational and other pensions, unearned income such as interest from savings, rent, etc.

We want figures *after* deductions of income tax, national insurance, contributory pension payments and so on. The questions refer to *current level* of income or earnings or, if that is convenient, to the nearest *tax* or other period for which the respondent is able to answer. The respondent is given a show card that enables them to choose between their weekly, monthly or annual income, whichever they find easiest. They will then give you the letter that corresponds to the appropriate amount. This system is designed to reassure the respondent about the confidentiality of the information they are giving." (ESS 15/07/2002: 21)

The ECHP measures income by using a sixteen page long section in the person's questionnaire. Every member (fifteen years and over) of an eligible household answers the person questionnaire. The first approach to income is a monthly calendar about the labor force status of the respondent. For the year prior to the year of the interview, month by month the employment situation is collected. (e.g. the eighth wave interviews carried out in 2001 ask about the situation in 2000). The second step forward to the incomes is a sequence on having or not various income sources. After this the respondent is asked to give net and/or gross amounts of his/her income details during the income reference year.

This list summarizes the income types mentioned in the ECHP interviews:

- as an employee
- self-employment
- income and benefits from sources other than work
- pensions
- private transfer
- capital
- reimbursement

One household member, considered as a reference person for the whole household, is also surveyed by a household questionnaire. Five pages of this questionnaire deal with incomes of the household.

4   First Analysis

Table 1   Distribution of Categorized Annual Income by Survey in Selected Countries and for Selected Income Categories (percent)

Survey	Germany	United Kingdom	Italy	Luxembourg
categories 1 to 3 (up to 6,000€)				
ESS	3.7	6.0	8.8	2.3
ECHP8	1.8	2.3	7.0	0.2
category 6 (from 18,000€ to 24,000€)				
ESS	18.4	12.6	16.5	12.0
ECHP8	16.1	12.8	16.8	11.7
category 9 (from 36,000€ to 60,000€)				
ESS	16.0	19.8	10.8	26.1
ECHP8	21.3	26.9	9.9	33.9
category 10 to 12 (from 60,000€ to 120,000€ and more)				
ESS	7.7	15.5	4.5	19.2
ECHP8	4.0	10.7	1.5	23.4

Table 2   **Mode and Median of Categorized Annual Income by Survey in Selected Countries**

Survey	Germany		United Kingdom		Italy		Luxembourg	
	Mode	Median	Mode	Median	Mode	Median	Mode	Median
ESS	6	7	9	7	4	6	9	8
ECHP8	9	7	9	7	5	5	9	9

Germany

In Germany, 3.7% of the ESS respondents tick the lowest three income categories (up to 6,000€ per year), the ECHP answers of the wave 8 add up to 1.8% of the households having the lowest income categories.

47% of the households surveyed in the ESS have an annul income up to 24,000€, this are 5% points more then households answering the ECHP wave 8 questionnaire.

For the ESS we find the mode at the income range of 18,000 to 24,000€ and the median at the income group of 24,000 to 30,000€, for the ECHP wave 8 the mode as well as the median are in the seventh category where the household has an annual income of 24,000 to 30,000€.

16% of the ESS household have an income of 36,000 to 60,000€, 21% of the ECHP wave 8 households have the same monetary resource.

Figure 2   **Box Plot "Household's Total Net Income Germany ESS and ECHP8"**
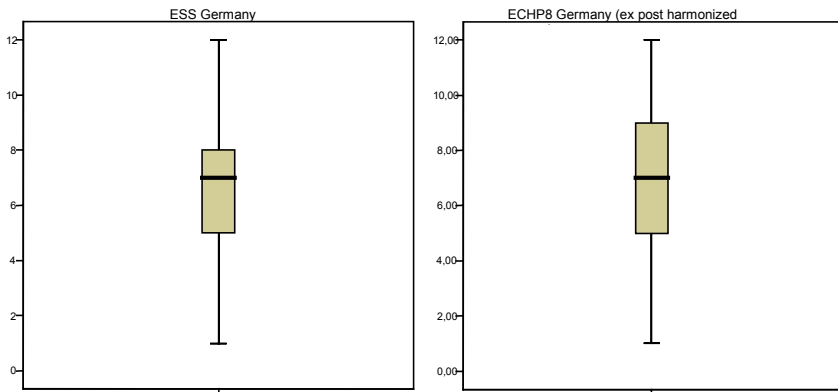
Looking at the upper end of the income categories, the ESS has nearly 8% of the observed households, the 8th wave of ECHP reports 4% of the households having 60,000€ and more annual income. In Germany this group of households at the upper end of the income distribution is small, but comparing both surveys this population is twice as big in ESS then in ECHP wave 8.

In Germany, the respondents of ESS overestimate there total household income at the lower and upper extremes of the income distribution in reference to the ECHP8; at the lower end about 2% of the answering persons and at the upper end about 4% of the inter-viewed people. In the middle part of the income groups both surveys show the same results.

United Kingdom

In ESS the income categories up to 6,000€ annually are three times often answered as in ECHP wave 8 (ESS = 6% and ECHP8 = 2.2%).

The cumulative frequencies for the categories 1 to 6 (up to 24,000€) differ about 6% between both surveys (ESS = 46% and ECHP8 = 40%).

ESS and ECHP8 have the median at category 7 (24,000 to 30,000€) and the mode at category 9 (36,000 to 60,000€).

19% of the ESS respondents in the United Kingdom have a total annual net household income from 36,000 to 60,000€. The ECHP8 reports nearly 29% of the household in the same category.

At the upper end of the income categories (60,000€ and more) both surveys differ at 50% of the observed cases. In ESS 15% of the surveyed households answer in these categories. In ECHP8 10% of the households are in these income group.

In general, the upper income classes are more frequent in United Kingdom as in Germany.

Respondents, living in households with household income at the bottom or the top end of the income scale, overestimate the total household income; the interviewed persons in the middle categories underestimate their household revenue.

Comparing the cumulative frequency distributions of the two studies, up to the income category 6 (18,000 to 24,000€) the ESS has about 7% more cases in each group as the ECHP8. At the income group 9 (36,000 to 60,000€) the ECHP8 reports more often answers as the ESS.

Table 3   Cumulative Frequencies of Total Net Household Income for United Kingdom

Income Categories			ESS	ECHP wave 8
1:		up to 1,800	0.8	0.5
2:	1,800	– 3,600	2.6	1.0
3:	3,600	– 6,000	6.0	2.3
4:	6,000	– 12,000	22.3	13.6
5:	12,000	– 18,000	34.9	26.5
6:	18,000	– 24,000	46.1	39.3
7:	24,000	– 30,000	55.3	51.2
8:	30,000	– 36,000	64.7	62.3
9:	36,000	– 60,000	84.5	89.2
10:	60,000	– 90,000	93.7	97.6
11:	90,000	– 120,000	97.1	99.1
12:	120,000 +		100.0	100.0

Italy

Up to the income category 3 (3,600-6,000€) the household's income do not differ between ESS and ECHP8.

The cumulative responses up to category 6 (18,000 to 24,000€) differ about 2.5%. in ESS 63.9% of the households have an income up to 24,000€, in ECHP8 66.4% of the households are in the income categories 1 to 6.

In ESS, the median of the income measure is at class 6 and in ECHP8 the income median is the category 5 (12,000 to 18,000€).

In ECHP8 only 1.5% of the Italian households state a high income of 60,000€ and more, in ESS 4.5% of the respondents live in households telling this amount.

Taking the ECHP8 as a reference, interviewees of ESS with low or high household income overestimate the amount asked in the survey. Respondents in the middle categories of this monetary item underestimate the total net household income.

In general, we find small differences in the categorized measurement of household income between the two studies.

Luxembourg

In Luxembourg, lower categories of the income variable are not present in the wave 8 of ECHP. Only 0.2% of the households report an amount up to 6,000€ per year. The ESS tells us that 2.3% of the households are in the same income group.

In ESS, about 3% more households have income up to 24,000€; cumulative percent of all households from category 1 to 6 in ESS is 21% and in ECHP8 is 19%.

In the ESS of Luxembourg the median is at the income range of 30,000 to 36,000€, the median of ECHP8 is at the category 36,000 to 60,000€.

19.2% of the ESS respondents live in households with more than 60,000€. The same amount is given by 23.4% of the ECHP8 households.

Respondent with lower household income overestimate – and interviewees with high household income underestimate the amount of the total net household income during the ESS interview and compared to the ECHP8 outcomes.

In Luxembourg, the observed population with low income is rather small, whereas the upper end of the income distribution is common.

The upper half of the two cumulative frequencies shows remarkable differences in Luxembourg. In category 7 vary 9% points, in category 8 the difference is 12% points and in the ninth response category both surveys diverge with 4% points.

Table 4   Cumulative Frequencies of Total Net Household Income for Luxembourg

Income Categories	ESS	ECHP wave 8
1: up to 1,800	0.2	0.0
2: 1,800 – 3,600	1.3	0.1
3: 3,600 – 6,000	2.3	0.2
4: 6,000 – 12,000	3.5	1.3
5: 12,000 – 18,000	9.2	7.7
6: 18,000 – 24,000	21.2	19.4
7: 24,000 – 30,000	40.4	31.8
8: 30,000 – 36,000	54.6	42.6
9: 36,000 – 60,000	80.8	76.5
10: 60,000 – 90,000	94.1	93.9
11: 90,000 – 120,000	98.8	98.4
12: 120,000 +	100.0	100.0

The first comparative approach across the four countries shows a common pattern for the two data sets: The group of respondents with low household income (up to 6,000€ annually) and the respondent's group living in rich households (more than 60,000€) are rather small. In Germany, Italy, United Kingdom and Luxembourg the "poor" overestimate the total net household income. The "rich" also overreport the household's income in Germany, Italy, and United Kingdom, whereas in Luxembourg this group of people at the upper end of the income scale underestimates the amount. Taking the ECHP wave 8 as a reference, we see an underestimation of income in the middle categories of the income variable in every country. For Luxembourg the response rates in the central part of the income measurement are relatively close for the two studies used.

5   Characteristics Having an Impact on the Response Quality

From former research we assume that

1. the household size,
2. the selected respondent's knowledge about the financial situation of the other household members and the household as a total ,
3. the main source of incomes, and
4. the cognitive ability of the interviewee to remember the monetary amounts

will influence the response on total net household income.

5.1   The impact of household size

The ECHP8 is the 8th wave of a panel study, whereas the ESS is a strictly random sample with the known inclusion probability of each sampled unit into the survey.

In the lower income categories we find more households with one or two members. At the upper end of the income scale larger households are more frequent. This is true in all observed countries; and is much more noticeable in ECHP8 as in ESS. In greater households the probability increases to have more then one income earner. Having in mind, that an interviewed person does not like to answer in extreme responses, we assume that the respondent living in large households underreports the amount of the household income.

The ESS illustrates the following situation:

- In Germany one person households answer the question on household income with the lower income categories.
- In Italy and Luxembourg two- or three person households are positioned in the lower income groups.
- Large household with five or more members can also be found in the lower income classes of the ESS.

The ECHP8 points out the circumstances:

- In Italy, 3.9% of the low income households are units with five or more household members.
- In Germany and Luxembourg we do not identify large households in the lower part of the income distribution.

Both data show remarkable divergence of about 7 row % up to 14 row %. So far we conclude that the household income measurement of ESS is not reliable for research.

Table 5   Household Income Categories by Household Size in Germany, Italy and Luxembourg (row percent)

Income-Category	Germany				Italy				Luxembourg			
	Household size											
ESS	1	2	3,4	5+	1	2	3,4	5+	1	2	3,4	5+
1-3	60.9	24.1	8.0	7.0	23.2	37.5	30.4	8.9	27.3	22.7	36.4	13.6
4	55.7	26.4	15.1	2.8	17.9	32.5	36.6	13.0	66.7	16.7	8.3	8.3
5	39.8	36.1	21.2	2.9	9.8	27.6	53.7	8.9	36.4	16.4	32.7	14.6
6	13.0	61.9	31.1	3.9	9.5	24.8	60.0	5.7	35.0	29.9	28.2	6.9
7	8.6	37.6	43.2	10.6	5.7	19.5	64.3	10.3	18.2	24.6	44.9	12.3
8	6.9	36.1	51.6	5.4	6.7	15.6	51.1	26.6	13.0	28.3	46.4	12.3
9	7.2	38.6	46.4	7.8	1.4	10.1	71.0	17.4	8.3	18.5	59.4	13.7
10-12	7.8	35.8	43.0	13.4	6.9	3.4	69.0	20.7	2.1	21.9	55.1	20.9
ECHP8												
1-3	71.7	24.2	4.0	0.0	54.3	17.1	24.8	3.9	75.0	0.0	25.0	0.0
4	72.7	19.8	7.1	0.4	37.4	28.7	28.4	5.5	89.3	3.6	7.1	0.0
5	55.5	31.3	11.6	1.5	17.5	30.0	44.1	8.3	70.3	20.0	9.0	0.6
6	22.9	48.0	25.1	4.0	5.2	29.2	56.1	9.4	53.7	30.7	13.7	1.8
7	8.8	39.1	44.0	8.0	2.4	17.0	69.1	11.5	35.9	36.9	23.6	3.7
8	4.4	36.4	51.5	7.8	1.6	16.9	68.3	13.2	25.4	37.5	29.5	7.6
9	2.7	31.8	54.1	11.4	2.0	9.9	65.7	22.3	9.8	34.3	45.4	10.5
10-12	6.3	24.4	52.0	17.2	6.2	17.3	63.0	13.6	3.9	27.0	53.0	16.1

5.2   The impact of the respondent's family relation to the main income earner

The ESS sample design selects randomly a household member as interview partner. A responding person can have a close family relationship to the main income earner. These are the partner of the main bread winner and him or her self. The other cases like the children and/or the parents and/or other relatives we interpret as interviewees, having a distant relation. During the interview we expect that answers form a close respondent are more reliable then from a far-away person. By increasing distance to the main income earner, the answer underestimate the "real" total net household income, because the state of information about the financial situation of the household decreases.

Table 6   **Household Income Categories by Respondent's Relation to the Main Income Earner in Germany, United Kingdom, Italy and Luxembourg (cumulative percent) in the ESS**

Income Category	Germany		United Kingdom		Italy		Luxembourg	
	Relation to Main Income Earner							
	close	distant	close	distant	close	distant	close	distant
1	0.2	1.3	0.5	1.4	0.9	0.5	0.3	0.0
2	0.9	3.3	1.1	4.9	2.9	2.6	0.9	2.2
3	1.6	8.8	3.2	10.4	7.4	12.0	1.7	3.4
4	6.3	28.0	13.5	36.1	24.9	35.4	2.2	6.2
5	19.0	53.2	24.9	50.6	44.3	54.7	5.7	16.1
6	39.8	65.8	36.9	60.7	62.7	66.7	14.8	34.2
7	59.4	76.6	47.1	68.2	77.8	77.1	34.2	53.1
8	73.2	83.9	57.1	76.6	84.7	84.4	48.6	66.8
9	91.2	95.1	81.0	89.9	95.5	95.3	77.4	87.6
10	97.4	98.7	92.5	95.7	99.1	97.9	92.3	97.8
11	99.1	99.1	96.7	97.7	99.6	99.0	98.5	99.4
12	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
valid n	1,640	696	1,092	692	445	192	650	322

The table shows that far-away replaying persons answer the income questions by ticking one or two income categories lower than the main income earner or his/her partner.

5.3   The impact of the main source of income

Other sources of inaccuracies in the measurement of income are the main sources of income. A respondent living in a household with the income mainly from work can remember the periodical and regular amount of the wage and salary. The same is true for pensions as a main source. Unemployment benefits, social benefits or grants, income from investments, savings or property and income from other sources are additional elements, which the respondent has to add-up to the total net household income. An increasing number of income sources will increase the complexity of remembering and summing up the household income. Particular difficulties to answer the income question we expect from respondents living in households with self employment income as the main source.

Table 7   Main Source of Household Income (column percent)

Main Source	Germany	United Kingdom	Italy	Luxem-bourg
ESS				
Wages and Salaries	58.1	57.5	57.2	63.7
Income from self-employment or farming	6.6	4.3	16.8	6.8
Pensions	26.4	26.3	23.5	26.0
Unemployment, redundancy benefit	4.5	1.7	0.9	0.9
Any other social				
Any other social benefits or grants	2.0	8.1	0.6	1.3
Income from investments, savings, etc.	0.6	1.0	0.2	0.1
Income from other sources	1.8	1.1	0.8	1.1
valid n	2,893	2,029	1,123	1,510
ECHP8				
Wages and Salaries	61.6	58.6	49.5	65.0
Income from self-employment or farming	5.4	5.7	15.2	3.0
Pensions	23.9	23.2	30.2	24.8
Unemployment, redundancy benefit	3.0	0.3	1.0	0.2
Any other social benefits or grants	4.2	9.8	2.0	5.9
Private income	1.9	2.4	2.0	1.2
valid n	5,559	4,779	5,525	2,428

Both surveys give the same impression on the main income sources of the households.

In Germany, United Kingdom and Luxembourg the most frequent monetary resource is income from dependent work, followed by pensions and retirement benefits. Both categories cover 80% to 90% of all income sources.

In Italy the ESS reports a lower rate of pensioners as the ECHP8, the ESS surveyed 23.5% households with old age pensions and the ECHP8 reports that 30.2% of the Italian households have pensions as the main income source.

In Germany we also see a remarkable proportion of household living from unemployment benefits.

In United Kingdom social transfers are often given as main income source (9.6% of the ECHP8 households and 8.1% of the ESS households).

In Luxembourg, the respondent from a household with self-employment income as main source underreports the amounts in ESS compared to the ECHP wave 8.

In Germany and Italy, the highest income category of self-employed is overestimated during the interviews of ESS.

Wages and salaries and pensions show in both surveys the similar answering behavior of the interviewees.

Comparing social transfers in ESS and ECHP8, only very few cases are observed in Luxembourg and Italy who answered the income measurement and social benefits as the main source. In ESS, about 2/3 of the respondents with social transfers ticked the lowest income categories; in ECHP8 only 28% of the households have less then 12,000€ annual total net income.

5.4 The impact of income composition

The ECHP interviews ask for 21 possible income sources. Every member of a household aged 15 and older is requested to remember these monetary items and give the amount received.

Table 8   Number of Income Sources by Proportion of Individuals in ECHP Wave 8

	Germany	United Kingdom	Italy	Luxembourg
no income source	6.6	1.4	24.6	17.3
one income source	0.0	0.0	0.0	0.0
2	0.8	0.6	1.1	0.0
3	5.5	5.3	11.5	7.0
4	7.6	5.9	17.7	10.5
5	5.3	8.8	6.3	26.1
6	19.8	25.6	27.1	8.6
7	18.2	12.4	3.3	19.7
8	9.5	18.2	6.1	4.1
9	9.4	11.1	1.7	4.6
10	7.0	5.8	0.4	1.9
11	8.6	3.6	0.2	0.3
12	1.5	1.0	0.0	0.0
13 and more income sources	0.2	0.2	0.0	0.0
valid n	10,624	8,521	13,392	4,916

Most of the persons have to give an account for five or six different incomes.

In Italy 24% of the ECHP individuals have no income from any source. The highest proportion of people having income receive the money from six various sources. 63% of the Italians have three to six different incomes.

In Germany between six and eleven income sources are answered. More then 72% of the individual have to report on such complex income composition.

In the United Kingdom most of the interviewees have to remember five to nine sources of revenues. 9% of the ECHP individuals have more then nine income sources.

In Luxembourg, most people have to sum up five different income components, and 17% have no income sources to mention. Only 11% of the Luxembourg ECHP individuals have more then seven different incomes.

5.5 The impact of remembering income

The detailed fieldwork instrument of ECHP shows the complexity of to measure total net household income. At least four different sources, in average six and sometimes 13 and more income components are reality for the respondent.

The straightforward questions of ESS recall only the main income source of the respondent's household. These are income from work, a periodical source and a constant amount of money, the interviewed person can answer the ESS query. The same is true for payments replacing the income from work, like pensions, unemployment benefits and alimonies; these are easily remembered by the interviewees.

For all other types of income the questionnaire has to ask separate questions to remind the interview partner about this monetary item.

At the same time, the household member selected for the interview must have the knowledge about the variety of the household income components. The ESS surveyed a randomly selected member of the household as a reference person. This can be the main income earner or his/her partner with a good knowledge on the income or other household members having weak information about monetary items.

The following graphs illustrate the proportion of well informed respondents minus the proportion of less informed interviewees by income category. A negative bar shows that more less informed interview partners then well informed have chosen that income brackets.

The less informed reference persons dominate in the lower income categories. In Germany, the impact on the fourth and fifth income group is observable. In United Kingdom, the less informed persons of contact have an influence only on category 5; up to the income group 8, there is a balance between good informed answers and reference persons with a weak knowledge on the total net household income.

For Italy, we assume that in category 3 and 4 the less informed people underestimate the amount of the household income, and there is a slight effect on the top two income groups.

In Luxembourg, the influence of respondents with less knowledge on the total household income is visible in the lower part of the income distribution.

For the other states of ESS, we observe that up to the income category 8 in countries with an higher average of total net household income the proportion of less informed respondents are larger then the proportion of well informed; and we again assume that the sum of the total net household income is underestimated (e.g. Switzerland, Sweden and Finland). The impact of less informed reference persons in countries with a lower average of income is seen in the categories 1 and 2; in Portugal, Hungary and Poland these income ranges are dominated by the less informed answering person.

A particular situation is empirical visible in Poland. From category 5 to category 11 we have as much informed as not informed responses and the twelfth group is mainly built by respondents with less knowledge of the income.

Figure 4   Well Informed vs. Less Informed Interviewees in Germany
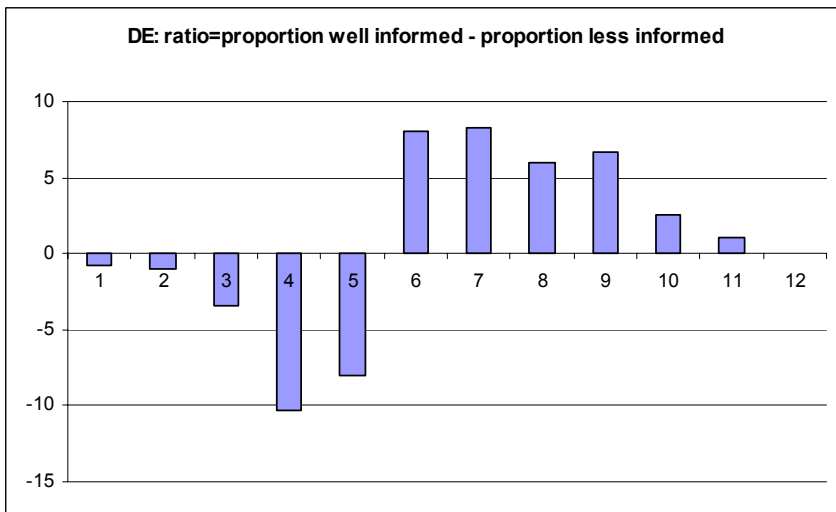
Figure 5   Well Informed vs. Less Informed Interviewees in Poland
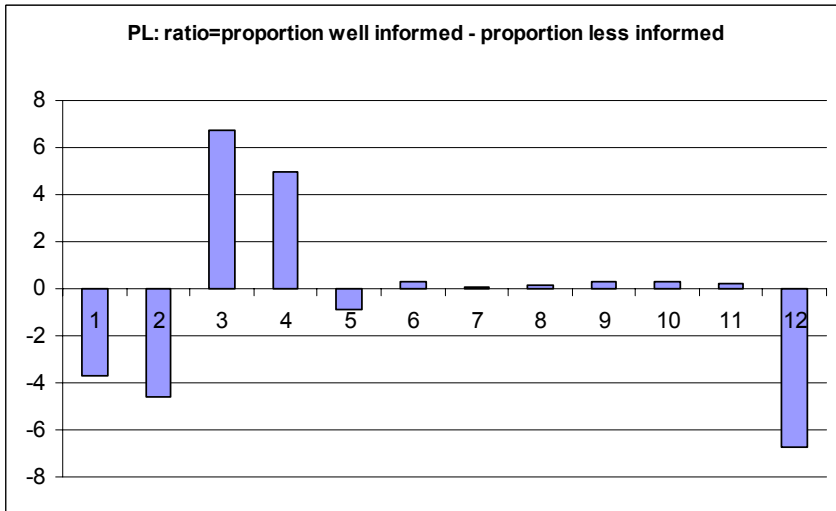
6   Categorizing Income for Comparative Social Research

We are looking for "optimal" answer categories for the interviews asking the income question in various national contexts.

By cutting the income variable of ECHP8 into 5% groups of the population and sorting the ESS categories into the ECHP8 distribution, we illustrate the need to adjust the income brackets to national financial circumstances and the national income distributions.

The ESS category 36,000€ to 60,000€ covers the 9th to the 15th 5% percentiles of the income distribution in Luxembourg. In Germany, the same income group covers the 15th to 19th 5% percentiles. In Portugal, the richest 5% of the population have a total net household income of 36,000€ to 60,000€. Also, the poorest 5% of the Luxembourg people have a higher household income than 55% of the Portuguese population and 50% of the Italians.

Respondents from all countries need about six ESS categories to answer the income question.

We propose for Germany, United Kingdom and Finland a system of income categories starting with an annual total net household income up to 5,000€. The scale continues in 5,000€ steps to the amount of 60,000€. The top category is 70,000€ and more (see Tables 10 and 11).

Table 9   5% Percentiles of the Total Household Net Income in ECHP8 for Selected Countries

Income Percentiles		Germany	United Kingdom	Italy	Luxem-bourg	Portugal	Finland
No	%						
1	5%	8,658	7,781	5,163	16,039	2,394	6,203
2	10%	11,327	10,632	7,218	19,503	3,328	8,309
3	15%	13,752	12,535	8,728	22,310	4,141	10,258
4	20%	15,769	14,961	10,071	24,374	4,920	12,504
5	25%	17,507	17,271	11,310	27,088	5,658	14,504
6	30%	19,537	19,612	12,395	29,509	6,453	16,176
7	35%	21,249	21,829	13,634	32,308	7,388	17,844
8	40%	23,129	24,316	14,901	34,620	8,394	19,654
9	45%	24,745	26,774	16,205	37,067	9,389	21,432
10	50%	26,541	29,400	17,849	39,530	10,385	23,572
11	55%	28,032	31,865	19,419	42,142	11,333	25,765
12	60%	29,780	34,816	21,156	45,378	12,381	28,056
13	65%	31,767	37,552	22,987	49,571	13,553	30,226
14	70%	33,816	40,861	25,100	53,859	14,816	32,438
15	75%	36,108	44,335	27,165	59,059	16,398	34,883
16	80%	39,097	48,239	29,541	63,653	18,516	37,697
17	85%	42,763	53,432	32,592	70,746	20,950	40,990
18	90%	47,796	61,142	37,092	79,787	24,744	46,582
19	95%	56,613	72,806	45,489	95,240	32,166	56,414
Valid N		5,559	4,779	5,525	2,428	4,588	3,106

In Luxembourg the income responses begin with the income up to 10,000€. At the top of the income scale Luxembourg needs 10,000€ brackets until 110,000€ is reached.

Italy and Portugal need an extension at the bottom part of the income distribution. The first group is the annual household income up to 2,500€, continued in 2,500€ classes until 15,000€ is reached. From here, 5,000€ groups up to the top of 60,000€ completes the income response categories.

The proposed income categories take into account the differences in the national income distributions (see Table 11). These diversities are observed and measured by income brackets of 5000€. For countries with a larger population at the bottom end of the income curve, the income classes are in 2500€. At the top end of the income inequality, our proposed income scales take into account the population size with high incomes. In a wealthy country, the scale continues in 10000€ brackets. Comparing Luxembourg and Portugal illustrates the advantages. 0.5% of the population in Portugal has a total net household income of 60,000€ and more; but every fourth respondent in Luxembourg lives household with 60,000€ and more.

Table 10   The Distribution of the Nineteen 5% Percentiles from ECHP8 by the 12 Income Categories of ESS in Selected Countries

ESS categories	Germany	United Kingdom	Italy	Luxembourg	Portugal	Finland
			No. of the ECHP8	5% percentile		
up to 1,800	---	---	---	---	---	---
1,800 – 3,600	---	---	---	---	1-2	---
3,600 – 6,000	---	---	1	---	3-5	---
6,000 – 12,000	1-2	1-2	2-5	---	6-11	1-3
12,000 – 18,000	3-5	3-5	6-10	1	12-15	4-7
18,000 – 24,000	6-8	6-7	11-13	2-3	16-17	8-10
24,000 – 30,000	9-12	8-10	14-16	4-6	18	11-12
30,000 – 36,000	13-14	11-12	17	7-8	19	13-15
36,000 – 60,000	15-19	13-17	18-19	9-15	---	16-19
60,000 – 90,000	---	18-19	---	16-18	---	---
90,000 –120,000	---	---	---	19	---	---
120,000 and more	---	---	---	---	---	---

Table 11   Proposed System of Income Categories for European Countries

No	Income Categories in EURO	Germany	United Kingdom	Italy	Luxembourg	Portugal	Finland
1.0	up to 2,500			1.5		5.8	
2.1	2,500 – 5,000			3.8		16.3	
2.2	up to 5,000	0.9	1.9				3.5
3.0	5,000 – 10,000	6.2	7.8				10.9
3.1	5,000 – 7,500			7.3		15.7	
3.2	7,500 – 10,000			9.3		13.1	
3.3	up to 10,000				0.6		
4.0	10,000 – 15,000	11.1	12.3		3.2		12.3
4.1	10,000 – 12,500			11.8		12.0	
4.2	12,500 – 15,000			10.3		10.1	
5	15,000 – 20,000	13.6	11.7	16.6	7.1	11.6	15.0
6	20,000 – 25,000	15.1	10.3	12.9	9.9	7.0	11.9
7	25,000 – 30,000	15.1	10.1	10.4	10.9	3.4	11.4
8	30,000 – 35,000	12.2	8.7	6.5	8.9	1.9	10.6
9	35,000 – 40,000	8.6	8.3	3.9	10.0	1.0	8.5
10	40,000 – 45,000	5.6	6.3	1.7	8.9	0.7	4.8
11	45,000 – 50,000	4.2	6.0	1.6	6.3	0.3	3.5
12	50,000 – 55,000	2.5	4.1	0.8	5.5	0.3	2.2
13	55,000 – 60,000	1.3	3.0	0.7	5.2	0.3	1.4
14	60,000 and more			0.9		0.5	
15	60,000 – 70,000	1.7	4.3		8.1		1.8
16	70,000 and more	2.0	5.3				2.2
17	70,000 – 80,000				5.5		
18	80,000 – 90,000				3.9		
19	90,000 – 100,000				2.5		
20	100,000 – 110,000				1.2		
21	110,000 and more				2.3		

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