

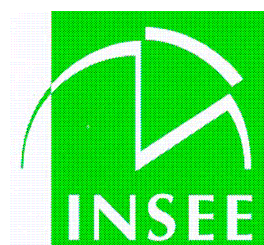
**Direction des Statistiques Démographiques et Sociales**

**F1007**

**Validating SHARE in France with other  
French surveys : health and income data**

*Christelle Garrouste - Pascal Godefroy - Anne Laferrère*

**Document de travail**



**Institut National de la Statistique et des Études Économiques**

**INSTITUT NATIONAL DE LA STATISTIQUE ET DES ÉTUDES ÉCONOMIQUES**  
Série des Documents de Travail  
de la  
DIRECTION DES STATISTIQUES DÉMOGRAPHIQUES ET SOCIALES  
Département des prix à la consommation, des ressources et des conditions de vie des ménages

**N°F1007**

**Validating SHARE in France with other French surveys :  
health and income data<sup>1</sup>**

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October 2010

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<sup>1</sup> This paper was prepared for and presented at the Xth Journées de Méthodologie Statistique, Paris, March 2009. It was also presented at the 2nd SHARE Users Conference in Mainz, October 2009. For a shorter version in French see Garrouste et al., 2010.

## Résumé

L'enquête SHARE sur les 50 ans et plus en Europe est avant tout une enquête européenne : le questionnaire est exactement le même dans les 13 pays et chaque échantillon national est de taille modeste. Des exploitations purement nationales ne sont donc pas envisageables, sauf exception. Nous mettons ici en relation les résultats de quelques variables clefs de SHARE avec ceux d'autres enquêtes de l'INSEE. Nous utilisons les données de santé, et celles de revenu, que nous rapprochons des enquêtes Santé, Logement, Budget des familles, et Revenu de l'INSEE. Le fait qu'en France l'agence de collecte de SHARE soit l'INSEE permet une comparaison dégagée des effets d'échantillonnage ou de la qualité des enquêteurs.

Notre hypothèse de travail est que le présupposé de SHARE (avoir un questionnaire unique) est facilement applicable dans les domaines qualitatifs comme celui de la santé ou dans un domaine quantitatif mais sans ambiguïté conceptuelle (par exemple le poids ou la taille), mais est plus difficile à tenir dans des domaines où chaque pays a ses propres systèmes et institutions. Par exemple, la notion de revenu ne se prête pas simplement à une interrogation unifiée. La France se révèle le seul pays à ne pas procéder au prélèvement à la source des salaires ou pensions. Nous mettons en avant des problèmes de traduction, d'unités de mesure, de période de référence.

Nous validons les données revenu séparément à la marge dite extensive (taux de réception de chaque type de revenu, taux de non réponse sur le montant conditionnellement à la réception de chaque type de revenu) et à la marge intensive (quelle est la distribution des revenus parmi les bénéficiaires).

Les données françaises de SHARE sont de bonne qualité quand les questions sont simples. L'indice de masse corporelle des hommes est par exemple exactement le même que selon l'enquête Santé. Il y a davantage d'erreurs dans les données quantitatives plus délicates à obtenir, mais davantage sur les montants que sur les taux de détention, et moins en vague 2 qu'en vague 1, ce qui est encourageant. En conclusion nous proposons quelques pistes pour améliorer la qualité des vagues suivantes de SHARE.

**Mots-clefs** : SHARE ; Méthode d'enquête ; Méthodologie d'enquête comparée ; Comparaison internationale ; Questionnaire d'enquête ; Méthode de collecte des données sur le revenu ; Méthode de collecte des données sur la santé subjective ; Erreur de mesure ; Non-réponse

## Abstract

The Survey of Health, Ageing and Retirement in Europe (SHARE) is cross national: the questionnaire is identical across all participating countries and, because of the modest size of the sample in each country, it is usually not feasible to proceed to solely national use of the data. Moreover, as SHARE is unique in Europe in terms of scope and target sample, its results cannot easily be validated by comparison with other similar cross national surveys. This paper attempts to relate some key SHARE variables to their counterparts in other French surveys. We concentrate on health and income data that we relate to various INSEE surveys on Health, Consumption, Housing and Income. Concentrating on France, where the SHARE survey agency is the National Statistical Institute, allows the comparison to abstract from sample design and interviewers' quality effects.

We surmise that an ex ante harmonized questionnaire such as SHARE is easier to apply in qualitative domains such as health, or in non-ambiguous quantitative measures such as weight and height, but is harder in domains where each country has its own institutions and concepts.

We assess the quality of the income questions both at the extensive margin (who gets what type of income, and non-response conditional on receiving) and at the intensive margin (what are the main quantiles of income distribution for recipients). We find that the French SHARE data are of good quality when the questions are simple. For instance, the body mass index of males is the same in the Health survey and in SHARE. However, discrepancies can be larger on quantitative data. They seem less important on the extensive than on the intensive margins, and generally less in wave 2 than in wave 1. We suggest some ways to improve the quality of future waves of SHARE.

**Keywords** : SHARE ; Survey Methodology ; Cross-country comparison ; Survey design ; Data collection ; Survey method for income data ; Survey method for subjective health data ; Measurement error ; Non-response

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## Introduction

The Survey of Health, Ageing and Retirement in Europe (SHARE) on individuals aged 50 and above is first of all a cross national survey<sup>2</sup>; only the whole European sample is currently large enough to be used on its own and each national sample is of a modest size. As SHARE is unique, its results cannot be easily validated by comparison to other cross-national European surveys<sup>3</sup>. Each country would have to do its own comparisons for validation. For instance in Sweden, wealth data were compared to register data (Johansson and Klevmarcken, 2007); and in Germany comparisons were made to the German Socio-Economic Panel (GSOEP). In France, the SHARE survey agency is also the National Institute of Statistics and Economic Studies. This situation allows the French team an easier access to other French surveys. Besides, it enables us to get rid of a “survey agency” effect, as the same interviewers do SHARE and the other INSEE surveys. We relate the results of some key SHARE variables to their counterparts in four other surveys: the Health, Housing and Household Budget surveys, and the Survey on Income and Life Condition (SILC), an ex post harmonized European survey.

All SHARE country teams translate from a so-called generic version of the questionnaire. The ‘generic’ qualifier stresses a unique characteristic of SHARE. The generic, English, version is from no particular country, neither the US, nor the UK, hence does not describe a concrete institutional national situation. We surmise that such an ex ante harmonized questionnaire is easier in qualitative domains such as subjective health, or in non-ambiguous quantitative measures such as weight and height, but is harder in domains where each country has its own institutions and concepts. This is particularly relevant in the employment and pension section where local idiosyncrasies are frequent. For instance, net wage does not have a unique meaning. France is the only European country where tax on wages or pensions is not withdrawn “à la source”, in a pay as you earn fashion, hence net cannot mean net of income tax. Issues of currency units, or reference period ambiguity are also important. Indeed, one of the motivations of this paper is that, comparing SHARE wave 1 imputed household income with the first results of INSEE Household Budget 2005 survey (Budget des Familles, BDF), we found important discrepancies between SHARE and BDF (Laferrère, 2007a; Garrouste, 2009a).

We assess the income questions quality both at the extensive margin (who gets what type of income, and non-response rates conditional on receiving each type of income) and at the intensive margin (what is the income distribution for recipients). The underlying rationale is that if quality is found good at the extensive margin, it makes imputation of missing or erroneous amounts easier than if one also has to impute income to total missing data.

The paper is organized as follows. Section 1 describes sample frame, sample size, and does some basic demographic comparisons. Section 2 is devoted to questions on health and body mass index

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<sup>2</sup> This paper uses data from SHARE Waves 1 & 2, as of December 2008. SHARE data collection in 2004-2007 was primarily funded by the European Commission through its 5th and 6th framework programmes (project numbers QLK6-CT-2001-00360; RII-CT- 2006-062193; CIT5-CT-2005-028857). Additional funding by the US National Institute on Aging (grant numbers U01 AG09740-13S2; P01 AG005842; P01 AG08291; P30 AG12815; Y1-AG-4553-01; OGHA 04-064; R21 AG025169) as well as by various national sources, especially by INSEE in France, is gratefully acknowledged (see <http://www.share-project.org> for a full list of funding institutions).

<sup>3</sup> One exception is the SILC survey on income. See Brugnolini et al. (2009) for SHARE SILC comparisons.

(BMI). Section 3 describes in some details how the income questions are asked in SHARE wave 1, SHARE wave 2, in the French SILC, and in other regular INSEE surveys. Then it compares income, both at the extensive and at the intensive margins<sup>4</sup>. Conclusions are drawn in Section 4.

## 1. Overall sample comparisons

The differences between SHARE and other surveys may come from many reasons. There might be differences in survey agency practices, in sample frames (sampling, geographical scope), differences in the date of the fieldwork, in the time reference of a question (e.g. last 12 months, last calendar year; last month or last quarter), in currency, in who the informant is, or in the framing of questions. In France, the SHARE survey agency is also the National Institute of Statistics and Economic Studies who conducts the surveys we use as benchmarks. This situation enables us to get rid of a “survey agency” effect that might be important in some other SHARE countries. The interviewers doing SHARE are also the ones doing the other INSEE surveys. Moreover, the SHARE sample frame is the same for SHARE as for other INSEE surveys. Nevertheless, the screening process to get at a sample of 50 year-olds and above (50+) may have produced some bias that we want to assess. This section briefly describes the sample frame and sample size, and presents some basic demographic comparisons on sample composition.

SHARE results and methodology are described in details in Börsch-Supan and Jürges (2005), Börsch-Supan et al. (2005) and Börsch-Supan et al. (2008). We use the following public data: SHARE1rel2-0-1\_imputations et SHARE1rel2-0-1\_ep / SHARE1rel2-0-1\_as / SHARE1rel2-0-1\_ho (wave 1) and SHARE2\_rel1-0-1\_ep (wave 2), together with internal data for wave 2: INCOME\_c\_version09\_w2\_op\_230209. To compare with each INSEE survey, respondents who are under 50 (e.g. for SILC 2006, those born after 1956) are dropped from the individual sample. Then all households that have at least one 50+ individual are kept. This is close to the definition of the SHARE full sample. When we mention individual level, we mean all individuals aged 50 and more at the date of the survey; when we mention household level we mean the corresponding household of those individuals, including all who live there at the date of the survey.

### 1.1 Sample frame and sample size

Most INSEE household samples are drawn in a so-called “master sample”, a huge representative sample of all dwellings<sup>5</sup>, built after each national census. SHARE and all the surveys used in this paper were drawn from the 1999 master sample, to which is added a draw from the stock of new dwellings built since that date. Weights are computed from sample weights and margin calibration. In SHARE wave 1 the margins included population composition by gender and age. In wave 2, housing

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<sup>4</sup> All numbered tables and figures are presented in Appendix A2 and A3 respectively.

<sup>5</sup> It is a sample of dwellings including primary, secondary and vacant homes. In household surveys, only those living in a primary home are interviewed, to avoid double counting.

tenure was added<sup>6</sup>. Calibration margins for other French surveys are usually more sophisticated, as they may involve models of non-responses, and extra calibration variables, depending on the survey. In the rest of the paper we often present both weighted and unweighted results.

From this comparison between SHARE and INSEE surveys, two differences appear (table 1)<sup>7</sup>. SHARE was conducted in only 6 (wave 1) or 7 (wave 2) regions, and in wave 2, individuals who moved to nursing homes were included. We shall not exclude them in our comparisons below (unless otherwise stated), since they are very few.

SILC has a rotational panel design in which a part of the sample is kept from one year to the next. In France nine independent panels of a duration of nine years each are visited 9 years in a row, with the replacement of a panel every year. This allows filling the longitudinal and cross-sectional needs of the survey. Table 2 gives the number of successfully interviewed households in 2006. The number of years in the panel gives, for each rotating group, the number of interviews that remained to be performed before the 2006 fieldwork. When the number of years in the panel equals one, the households (from rotating group 1) have been interviewed for the last time in 2006. The sub sample for which this variable equals 9 is the 2006 refresher sub sample.

Sample sizes are given in table 3. As mentioned above, the size of the SHARE sample, around 3,000 individuals, is modest compared to the Housing survey, which is slightly less than ten times its size; but also compared to SILC, which is three times higher.

Response rates are not directly comparable because SHARE had to go through a screening process to select the 50+. On the whole population the response rate in the 2002 Housing survey was 79.2 percent (81.1 percent when excluding those unable to answer). Also on the whole population, the response rate for the SILC 2006 refresher sample was 70 percent. It can be estimated to be 64.9 percent in SHARE wave 1, 67.0 percent in the 2004 sample, 62.2 percent in the 2005 sample (Laferrère, 2007b). According to a quick study made in 2005 to prepare SHARE wave 2, compliance in re-interviews in INSEE panels was usually around 90 percent for the whole population<sup>8</sup> and losses due to move/death around 4-5 percent. More precisely, for SILC 2005, in a second wave<sup>9</sup>, according to the age in 2005 of the reference person in 2004, the retention rate was 86.8 percent for those aged below 50 and 86.2 percent among the 50+.

SILC 2005 (w2)	Less than 50	50+
same address	87.4%	95,6%
other ordinary dwelling in France	9,4%	2,2%
move to institution or collective dwelling	0,5%	0,5%
move to DOM (oversea French département) or other country	0,7%	0,1%
move left no address	1,9%	0,5%
Died	0,05%	0,7%
Other	0,5%	0,2%
	100	100

<sup>6</sup> This is due to the fact that drawing in 2004 the households that had a person born before 1955 from the 1999 master sample was found to introduce some sample bias (Laferrère, 2007b). From wave 4 and on, a new regularly updated master sample will be available, as the French census has become permanent.

<sup>7</sup> All numbered tables are presented in the Appendix A2.

<sup>8</sup> The rate is slightly lower for households over 50. Households seem to become less cooperative over time.

<sup>9</sup> Source : written communication by Jean-Christophe Rincet (Insee, Nancy) to Anne Laferrère in 2005. Only for common budget households.



In SHARE wave 2, the retention rate in France was  $(2041+59)/(2041+84+1006)=67\%$ <sup>10</sup>.

SHARE	Number of individuals interviewed in wave 1			Only in wave 2 (refresher)	Total
	And in wave 2 (panel)	and dead (with an end of life interview)	and lost (refusals, moves, etc.)		
France	2041	84(59)	1006	973	4104

Many factors can explain the low retention rate in SHARE. Firstly, wave 1 in France was not clearly planned as a longitudinal survey, as the future financing possibilities remained uncertain. Secondly, unlike SILC or other French surveys, SHARE is not a mandatory official survey. Thirdly, when a potential next visit was mentioned in the end the wave 1 interview (in question EX024), it was announced that the second visit would be much shorter, and that the respondents could refuse it<sup>11</sup>. But no account was taken of their answer to this question, and those who refused to be contacted again were indeed recontacted. Fourthly, the second visit was even longer than the first, in contradiction to what was announced, which did not help the interviewers in converting the refusals. Fifthly, panel care was minimal and no permanent contact address was asked in wave 1, hence some of the movers could not be found, as there is no population register in France. Sixthly, the longitudinal questionnaire was not a truly dependent questionnaire, and many questions were asked all over again. This did not help the respondents to enjoy and accept the interview. Finally, some parts of the questionnaire were felt to be unclear by the interviewers, both in wave 1 and wave 2. Among them, the income module was mentioned. This is part of the motivation of this paper: how to improve the questionnaire in subsequent waves to get a better retention rate.

## 1.2 Demographics

We compare SHARE samples to SILC and Enquête Logement (EL), in terms of gender and age composition. When considering unweighted data, 53 percent of the 50+ are women in SILC 2006, 55 percent in EL 2006, as in SHARE 2004 and in the refresher sample of SHARE 2006, and 56 percent in SHARE 06, which is slightly higher, because of a retention bias. The more mobile individuals are the most difficult to retrieve and they are also the youngest (tables 4 and 5).

The refresher sample is younger than the longitudinal sample as individuals born in 1955 and 1956 became eligible. SHARE regions seem slightly younger than the country as a whole. The differences in age structure are not larger comparing SHARE to SILC than comparing EL to SILC.

Once calibrated weights are introduced, the proportion of women among the 50 + is around 55 percent in SHARE and EL, 54 percent in SILC (table 4)<sup>12</sup>. Hence sampling does not seem to be the source of major differences between surveys, at least at this broad level of comparison.

<sup>10</sup> It would be slightly higher if we had excluded those who had moved to another country and are ineligible, who cannot easily be isolated.

<sup>11</sup> By contrast SILC is a 'compulsory' survey.

<sup>12</sup> Based upon the data presented in Croda and Callegaro (2006), Table A1, there were 56,7 percent of women in the SHARE wave 1 sample; and, based upon the data presented on the SHARE website, there were 57 percent in SHARE wave 2.

## 2. Health and BMI

The table below lists the health variables that we compare in SILC, in the Health Survey (Enquête sur la santé et les soins médicaux 2002-2003) and in SHARE, and the number of observations for each of them.

Health Survey 03		SILC 2006			SHARE		
Name	Nb of respondents	Label	Name	Nb of respondents	Label	Name	Nb of respondents
Q1G	12 937	État de santé Heath	SANETA	8565	Wave 1		
					Health in general	PH003	1550
					Wave 1		
					Health in general	PH002	1570
					Wave 2		
		Limitation dans les activités courantes	DIM	8572	Limited activities	PH005	2806

### 2.1 Self-reported health

In all surveys the respondents are asked to rank their health on a five-point scale, but the scales differ. SILC, the Health survey, and half of the sample in SHARE wave 1, use the European scale (very good, good, fair, bad, and very bad; variable PH002) whereas another half of SHARE wave 1 and SHARE wave 2 use the US version of the self-reported health scale (excellent, very good, good, fair and poor; variable PH003). The European scale has two good categories, whereas the US scale has three; the middle category is "fair" in the European scale, and the middle category is "good" in the US scale.

The analysis of the distributions shows that it is difficult to merge the two scales into one (figure 1). In wave 1, whatever the scale, the mode of the distribution is "good" (= "*bonne*" in both scales) which corresponds to the second category in the European scale and to the third category in the US scale. In SHARE wave 2, the mode of the distribution is also "good". If responses are partly influenced by the order of response options, the wording and translation of the response options possibly matter more. "Excellent", the first option on the US scale, may have a different meaning than "very good", the first option on the European scale; the mean category "fair" in the US scale (that has been translated as "*acceptable*" in wave 1 and wave 2) may have a different meaning than the mean category "fair" in the European scale that has been translated as "*moyenne*" in SHARE wave1.

When they use the same scale, and close or similar wording (*Très bonne, Bonne, Moyenne, Mauvaise, Très mauvaise* for SHARE wave 1 and Health survey, *Très bon, Bon, Assez bon, Mauvais, Très mauvais* for SILC, ) the three surveys give similar results, the SHARE respondents being more optimistic than in the other surveys. A possible reason is that some randomly selected SHARE wave 1 respondents were asked the general health question *after* many questions on various affections; Clark and Vicard (2007) have shown that it produces a more optimistic view of one's own health than when the question is asked before (as in the Health survey) or is not asked along with objective health questions (as in SILC). Note also that SILC translated "fair" by "*assez bon*", that is "fairly good", which sounds better than "*moyenne*" ("average").

We construct a binary measure of self-reported health: those who report excellent, very good or good health on the US scale (very good or good health on the European scale ) are considered to be in good health. Figure 2 presents the percent of the population with good health by age (left panel), and by gender (right panel) in the three surveys. The Health survey measure lies in between SILC and SHARE for those aged 50-79, and somewhere above both for the 80+. As expected, the decline in self-reported health with age is important in all surveys. One more good health category in SHARE draws the result toward a better health state; but not so in the 80+ group that includes some people in nursing home in SHARE.

In the three surveys, a higher fraction of men than women reports good health. Figure 3 plots the gender gap by age group. Curiously, it is inverted in the 80+ group in SHARE; it is not so in SILC, nor in the Health survey. Is there a selection bias in SHARE longitudinal? The reason for the difference should be investigated in more details.

## *2.2 Disability*

Measures of disability are included in SHARE and SILC. In SILC, respondents are asked about difficulties, because of health problems, lasting at least six months, 'in activities that people usually do'. In SHARE respondents are asked about any difficulty in relation to health problems. The wording of the response items varies a little accross surveys: the scale is 'strongly limited', 'limited but not strongly', 'not limited' in SHARE, vs. 'yes very limited', 'yes limited', 'not limited at all' in SILC.

As a bias could possibly come from the interpretation of 'strongly' and 'very', we construct a binary measure of self-reported disability that makes the SILC and SHARE scale responses comparable. In both surveys those who report one of the two first modalities are considered to be limited. Figure 4 presents the percent of the population in SHARE and SILC limited by age (left panel), and by gender (right panel). As expected, the percentage of respondents answering 'yes' increases with age in the two surveys. Estimates from the two surveys are quite similar. Looking into the relation between disability and self-reported health within each survey, those who report good health report less disability than those who report bad health. Figure 5 again shows the surveys to be very similar.

## *2.3 Body mass index*

The body mass index (BMI) of individuals aged 51-66 in SHARE is now compared to the benchmark Health survey. In both surveys weight and height are self-rated. Using SHARE height and weight, gives a BMI which is nearly equal to the French Health survey (table 6): 26.5 for males aged 51-65 in both surveys, and 25.4 for women in SHARE against 25.3 for women in the benchmark survey (de Saint Pol, 2007).

We anticipated that an ex ante harmonized questionnaire such as SHARE is easy to apply in qualitative domains such as subjective health, or in non-ambiguous quantitative measures such as weight and height. The preliminary checks we conducted above validate this assumption. The French SHARE data seems close to other surveys when the questions are unambiguous. For instance the body mass index of males is the same in the Health survey and in SHARE.

### 3. Income

This section deals with income comparisons. When SHARE wave 1 gross and imputed household income were compared with the first results of the INSEE BDF (Household Budget Survey) 2005 survey, important discrepancies appeared (Laferrère, 2007a). SHARE median total gross income was 35,956€, while BDF was 23,079€, a ratio of 1.56 of SHARE to BDF. Even worse discrepancy was found on imputed income (median= 39,809€). On non imputed income, the first quartile was 42 percent higher in SHARE, the third quartile was 68 percent higher, the top decile was 2.3 times the benchmark, the top 5 percent was 2.9 times higher, and the top percentile was 4.1 times higher. Indeed, income in SHARE wave 1 was all the more too high that one climbed the income ladder. Earnings from dependent work were closer to benchmark than self-employment income. Looking at extreme values, some amounts appeared suspiciously high in SHARE. The maximum declared amount in SHARE was 1,072,135€ for earnings, when it was 28,789€ in BDF; the maximum annual unemployment benefit was 216,000€ when it was 89,270€ in the Housing survey with a sample that is some 20 times larger.

There is no obvious reason why SHARE would be more successful at getting high income than a regular INSEE survey. Such large amounts might be currency errors, francs instead of euros, hence 6.55 times too big. According to a careful study by Theulière (2008) one “buys bread in euros and a car in francs”, it might be an extra reason why the differences between SHARE wave 1 and its benchmark increased with the amount given, as larger amounts were more likely to be given in francs than smaller ones. The error might also increase with the respondent's age. Indeed in the 2006 Housing survey where respondents can choose the currency they use, 8 percent of the 50-59 give their pension in francs against 10 percent of the 80+.

Interviewers might also make typing errors, which the absence of any CAPI control in SHARE makes impossible to detect. It is known that some amounts are capped by regulations. For instance, in 2009, unemployment benefit cannot exceed 5,300€ per month, or 63,600€ per year. Hence, it is probable that the 18,000 € per month declared as unemployment benefits in 2004 by a couple were given in francs and should be transformed accordingly to 2,744 €, especially as lump sum payments are asked separately. But it might just as well be 1,800€ per month in case of a typing error. In the end the researcher using the data may have to discard this observation as an outlier. Such ex post data cleaning is costly, as each household has to be edited and its precise situation assessed carefully. Indeed, it has been shown that ex post cleaning of the data can be more harmful than beneficial, as it goes with a risk of selection bias (Bollinger, 2005). **Some CAPI internal soft checks during fieldwork would be useful to avoid major typing errors.** It is in the interaction between respondent and interviewer that the validity of the answer can be assessed (Did the respondent understand the question? Is the case special; and then described by entering a remark?). However such controls have to be planned ex ante, sometimes country by country, which is also costly.

### 3.1 Framing the income questions

In what follows we compare the way the income questions are asked in SHARE, in a regular INSEE survey such as the Housing survey (Enquête Logement, EL), and in SILC, the European income survey, that is considered the “gold standard” for income surveys in France<sup>13</sup>.

#### 3.1.1. In SHARE

In SHARE, individual and household incomes are mentioned in four different sections of the CAPI questionnaire.

1. The individual EP Employment and Pension module describes employment status, current monthly taken home pay from work, past year annual earnings or self-employment income, detailed types and amount of pensions, and of some individual benefits for each eligible household member<sup>14</sup>. Each eligible respondent is interviewed separately, hence each must be present and willing to answer; otherwise no individual income is known for the missing spouse.
2. The HO Housing module asks the housing respondent for real estate income.
3. Then in the HH Household Income module the household respondent answers about the non-eligible members' income and household level benefits.
4. Finally, in the AS Asset module the household respondent is asked about interest income. The eligible person answers for his or her own income; the household respondent for other income and household level income; the housing respondent for real estate income. The household and housing respondent can change between waves.

Between wave 1 and wave 2 some amendments were made. The main change was the attempt to go from gross to net *after tax* income amounts. This change was not implemented in France, because income tax is not paid “à la source”, in a pay as you earn fashion, as in all other European countries, but more than a year after reception, and is computed on the overall household<sup>15</sup> income, and not on individual wages, pensions or benefits. Hence net in France is net of social contributions and social taxes, but not net of income tax. In wave 2, a catch-all question was also added, to get at household monthly income, at the end of the HH Household Income module: “To summarize, how much was the overall income, after tax, that your entire household had in an average month in [previous year]?”; a card with letters (brackets) was offered in case of non-response. Note that the catch-all question is asked *before* the asset income module.

The SHARE mode of income questioning was not well received by the interviewers in France, who felt all was “mixed up”, somewhat redundant, and lacked clarity.

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<sup>13</sup> Note that some income amounts from SILC survey have been modified : when comparing with ERF (enquête revenus fiscaux) from income tax returns files, the benchmark distribution for SILC, discrepancies appeared. See Appendix A.1.3.6 about imputations in SILC.

<sup>14</sup> All individuals aged 50+ and their spouses in wave 1. One randomly chosen individual aged 50+ and his or her spouse in wave 2 (hence a maximum of two interviewed persons in wave 2).

<sup>15</sup> More precisely, it is computed at the fiscal unit level. For instance, a couple and its children make up a fiscal unit. An adult child living with his parents can choose to be an independent fiscal unit or not.

### 3.1.2. In a regular INSEE survey

In contrast to the SHARE survey, in INSEE surveys, income is typically treated at the very end of the interview, and separated from the employment section that usually comes at the beginning. This is done in order not to jeopardize the whole survey because many people do not like talking about their income. The income questions are neatly divided into two parts that can be called the extensive and the intensive margins. First, a list of all possible income sources (wages, benefits, self-employment, pensions, annuities, rents...) is offered and the household mentions whether any member of the household receives it; and in case of an individual income, who are the recipients (first names or id numbers are retrieved from the household composition module). Then, for each successive income type that was mentioned, amounts over the last 12 months are asked for, together with precisions about extras, for recipients. Finally, a verification is made from a CAPI internal computation to assess the overall plausibility of the household monthly income. Such verifications are deemed important for low-income households, who might forget that they get family transfers, for instance. They also help correcting for currency or typing errors.

Besides this overall plausibility check, a second difference with SHARE is that questions are asked for each household member, but not necessarily to the recipient her/himself. The concept of a single "household" respondent is absent, as the aim is to get accurate information from as many informants as possible. The source of information can be any knowledgeable member of the household<sup>16</sup>. Put differently, in the income module, INSEE interviews a household, whereas SHARE interviews an individual.

The separation between reception (extensive margin) and amounts (intensive margin) was devised over the years in CAPI<sup>17</sup>, and is made to facilitate non-response imputations. As telling whether a particular type of income is received and by whom is easier than giving the amount, the statistician has a better foundation for income imputation than if the interview had stopped in the middle of the income module out of unwillingness or inability to give amounts. SHARE uses the same device, but does it piecewise, as income is asked in many different modules of the questionnaire.

### 3.1.3. In SILC at INSEE

SILC is a survey on Income and Life Conditions; hence, the questions on income are detailed, with both a household level module (housing and family benefits, capital income) and individual modules for each person aged 16 or more in the household. Individual income includes earnings, unemployment benefit, pension, pre-retirement pension, minimum pension, survivor's pension, public disability insurance pension, sickness benefit, etc. Proxy respondents can be used for the individual income, meaning that each household member does not have to be present. Again, all reception

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<sup>16</sup> If a doubt remains on one of the household members' income because he is absent during the interview, the interviewer may call back and enter the missing amount or a correction by phone.

<sup>17</sup> Before CAPI, the paper questionnaire offered a table, with rows for income type, id number of the person (to be filled), reference period, and amount (to be filled). Wages, benefits, were asked monthly; for pensions, the reference period was not pre-filled, but could be any number of months; bonus, capital income, self-employment income, other incomes were asked annually. An order of magnitude of monthly household income in a catch-all question was also asked for. Bound et al. (2001) conclude that "annual earnings are reported with less errors than weekly earnings".

questions are asked before the amounts questions. The respondent is encouraged to look into his or her records to save time and improve accuracy.

Besides, both in the refresher sample and in the longitudinal questionnaire plausibility controls are introduced to improve the quality of the results. Controls, based on preloaded data, are made at the extensive margin (e.g. "Last year one of the household members received a pension, and now nobody receives a pension. Did you forget to mention it?") to avoid missing an income type, or double-counting. Longitudinal controls are also introduced at the intensive margins when income evolution between waves is judged implausible. They are so-called reactive controls. It implies that many variables are preloaded. Note that ELSA (English Longitudinal Study of Ageing) and HRS (Health and Retirement Study), SHARE sister surveys, also preload many variables such as jobs and type of pensions, but not income or wealth. The appendix (A1) describes the surveys in more details.

We now turn to comparisons. We compare SHARE wave 1 (2004/2005) and wave 2 (2006) with SILC 2006 (the gold standard "benchmark") and the income levels from the 2002 and 2006 housing surveys<sup>18</sup>. For INSEE surveys, we could make use both of public files and restricted release files with raw income data (before any correction or imputation).

### 3.2 Reception of types of income

Before concentrating on the four main types of income, namely, pensions, wages, self-employment income and unemployment benefit, we look into the declared current job situation at the date of the survey. We construct the job situation variable from EP009 and EP005 in SHARE<sup>19</sup>. In EL 2006 and SILC the job situation variable is built from NSTATU and NSITUA. In all surveys a retired individual who declares that he works and that he is an employee is classified as such<sup>20</sup>. In EL 2002, the order of the questions was different and no retired individual could be reclassified as active<sup>21</sup>. All those

<sup>18</sup> And, sometimes, the 2005 Household Budget survey (Budget des Familles).

<sup>19</sup> gen situation=ep009\_1 (1. Employee, 2. Civil servant, 3. Self-employed)  
 replace situation=1 if ep009\_1==1 & ep005\_==2 /\* employee employed \*/  
 replace situation=1 if ep009\_1==1 & ep005\_==3 /\* employee unemployed \*/  
 replace situation=1 if ep009\_1==1 & ep005\_==1 /\* employee retired \*/  
 replace situation=1 if ep009\_1==1 & ep005\_==4 /\* employee perm sick \*/  
 replace situation=1 if ep009\_1==1 & ep005\_==5 /\* employee homemaker \*/  
 replace situation=1 if ep009\_1==. & ep005\_==2 /\* employed no job \*/  
 replace situation=2 if ep009\_1==2 & ep005\_==2 /\* civil servant employed \*/  
 replace situation=2 if ep009\_1==2 & ep005\_==1 /\* civil servant retired \*/  
 replace situation=2 if ep009\_1==2 & ep005\_==4 /\* civil servant perm sick \*/  
 replace situation=3 if ep009\_1==3 & ep005\_==2 /\* self-employed employed \*/  
 replace situation=3 if ep009\_1==3 & ep005\_==1 /\* self-employed retired \*/  
 replace situation=3 if ep009\_1==3 & ep005\_==4 /\* self-employed perm sick \*/  
 replace situation=4 if ep009\_1==. & ep005\_==1 /\* retired no job\*/  
 replace situation=5 if ep009\_1==. & ep005\_==3 /\* unemployed no job\*/  
 replace situation=6 if ep009\_1==. & ep005\_==4 /\* sick no job\*/  
 replace situation=7 if ep009\_1==. & ep005\_==5 /\* homemaker no job\*/  
 replace situation=8 if ep009\_1==. & ep005\_==97 /\* other no job\*/

<sup>20</sup> gen situation=0

replace situation= 1 if nstatut=="3" | nstatut=="4" /\* employee\*/  
 replace situation= 2 if nstatut=="1" | nstatut=="2" /\* civil servant etat coll loc hlm hopital public\*/  
 replace situation= 3 if nstatut=="5" | nstatut=="6" | nstatut=="7" /\* self employed yc sal chef d'entrepr pdg\*/  
 replace situation= 4 if nsitua=="5" & nstatut<"1" /\* retired no job\*/  
 replace situation= 5 if nsitua=="4" & nstatut<"1" /\* unemployed no job\*/  
 replace situation= 7 if nsitua=="6" & nstatut<"1" /\* homemaker no job\*/  
 replace situation= 8 if nsitua=="7" & nstatut<"1" /\* other (invalid)\*/  
 replace situation= 8 if nsitua=="3" & nstatut<"1" /\* other no job\*/.

0.6 percent of retired individuals were working in EL2006.

<sup>21</sup> gen situation=0

variables are disconnected from the type of income the respondent gets. No survey makes an attempt to unify job situation and income, as one may well get wages, pension and self-employment incomes at the same time, and the current job situation may differ from that of the last 12 months or past year. Table 7 presents the results (Non-responses are left out of the computation for SHARE)<sup>22</sup>.

### Current job situation

The proportion of private sector employees varies from 16 (SILC 2006) to 20 (SHARE wave 2) percent; civil servants range from 7 (SHARE) to 8 (SILC, EL) percent; self-employed from 4 (SILC, SHARE wave 1) to 6 (SHARE wave2, EL 2002) percent. Currently employed individuals are thus a larger proportion in SHARE wave 2 than in SHARE wave 1. They represent a smaller proportion of the population in SILC (28 percent) than in EL 2006 (31 percent), or SHARE 06 and EL 2002 (33 percent). Conversely, retired with no job are 59 percent in SILC, versus 55 percent in EL 2006, 54 percent in SHARE wave 1, and only 50 percent in SHARE wave 2 and in EL 2002. There is no reason to consider SILC as the gold standard here, as its sample is small, and, contrary to SHARE wave 2 (and EL 2002), no attempt is made at classifying a retired wife getting a survivor's pension as homemaker or as "other".

Unemployed make up 3 percent of individuals (4 percent in SILC). All in all, the 3 surveys are close, with SHARE wave 2 slightly higher on employees. They may be better detected, as indeed in SILC and EL there are more earning recipients than classified as employees and civil servants (see table 9).

### Income

In INSEE surveys, income is net of all social contributions and net of taxes withdrawn *à la source*<sup>23</sup>, but it is not net of income tax. Pension (*Allocations de vieillesse*) includes basic pension, pre-retirement pension<sup>24</sup>, and the minimum pension. Survivor pensions and disability pensions are also asked for. The housing surveys, EL 2002 and 2006 define wages and self-employment income in the same way as SILC, but pensions include annuities<sup>25</sup>. Unemployment benefits include *allocation de solidarité spécifique*. In SHARE, pensions include all EP071 items, except unemployment benefits (EP071=4 in wave 1 and EP071=6 in wave 2, see the Appendix A1 for details).

---

```

replace situation= 1 if noccup=="1" & (nstatut=="3" | nstatut=="4") /* employee*/
replace situation= 2 if noccup=="1" & (nstatut=="1" | nstatut=="2") /* civil servant etat coll loc hlm hopit public*/
replace situation= 3 if noccup=="1" & (nstatut=="5" | nstatut=="6" | nstatut=="7") /*self emp. Inc.sal chef ent. pdg*/
replace situation= 4 if noccup=="5" /* retired */
replace situation= 4 if noccup=="6" /* self employed retired */
replace situation= 5 if noccup=="2" /* unemployed */
replace situation= 7 if noccup=="7" /* homemaker no job*/
replace situation= 8 if noccup=="8" /* other no job including survivor pensioner and invalid*/
replace situation= 8 if noccup=="3" /* student*/

```

<sup>22</sup> There are no missing values for those questions in INSEE surveys. The non-response rate was 3.3 percent in SHARE wave 1, which is high compared to other SHARE countries (Christelis, 2008).

<sup>23</sup> CSG: *contribution sociale généralisée*; CRDS: *contribution au remboursement de la dette sociale*

<sup>24</sup> Excluding those counted as unemployment benefits.

<sup>25</sup> And alimony in 2002.



	SILC 20006	EL 2002 2006	SHARE WAVE 1	SHARE WAVE 2
Wage	PY010N	NRSAL	EP041e1/EP205	EP041e1/EP205
Self-employment income	PY050N <sup>26</sup>	NRTNS	EP045e1/EP207	EP045e1/EP207
Pension	PY100N	NRRET	annpen1v +...+ annpen11v	Ypens1e+...+ Ypens16e
Unemployment benefit	PY090N <sup>27</sup>	NRCHO	annpen4v	Ypens6e

Table 8 gives the unweighted data on income reception, item amount non-response, mean observed amount, mean redressed amount, and number of observations per type of income. Table 9 is the same on weighted data. Unless otherwise specified, we comment on weighted data.

## Pensions

According to our SILC 2006 benchmark, 56 percent of the 50 + receive a pension (table 9). The rate is the same in the EL 2002 housing survey and is somewhat higher in EL 2006 (59 percent). In SHARE wave 1, 58 percent get at least one type of pension (56 percent, once survivor's pension is excluded<sup>28</sup>). In wave 2 this rate lowers down to 54 percent, 2 points less than in SILC. Hence, SHARE gets more pension recipients than SILC in wave 1, but less in wave 2. The reason might be that item 6 (public invalidity or incapacity pension) in wave 1 is not considered a pension in SILC. It is considered a benefit and 4.5 percent of the 50 + receive an invalidity pension (PY130N). If we exclude them, we indeed get 54 percent perceiving a pension in wave 1<sup>29</sup>. The fact that in wave 2 some of SHARE respondent are in nursing home should have no effect as they do not go through the Employment and Pensions (EP) module<sup>30</sup>.

If we look at detailed pension types (tables 10 and 11), the reception rates of basic pension (49-52 percent unweighted; 48-53 percent weighted) and survivor's pension (10-11 percent unweighted; 9-12 percent weighted) are very similar in all surveys. However, the reception rate of basic pension seems low in SHARE wave 2 by some 3 percentage points. This is perhaps because of a selective bias on missing spouses<sup>31</sup>. *Retraites complémentaires* (occupational old age pension) are mentioned by 31.5 percent in SILC, 30.5 percent in SHARE wave 2. Other differences seem to come from items of less importance, such as minimum old age income (*minimum vieillesse*) which is isolated in INSEE surveys and not in SHARE. However it is received by less than 1 percent of the 50+. Annuities (*rentes*) in

<sup>26</sup> *Bénéfices en espèces ou pertes de trésorerie en rapport avec une activité indépendante (y compris honoraires).*

<sup>27</sup> Includes pre retirement benefits if received for economic reasons.

<sup>28</sup> 13.4 percent get a survivor's pension.

```
gen
pensionr=(ep071d01_w1==1|ep071d02_w1==1|ep071d03_w1==1|ep071d05_w1==1|ep071d06_w1==1|ep071d07_w1==1|ep071d08_w1==1
|/ep071d09_w1==1|ep071d10_w1==1|ep071d11_w1==1)
```

```
tab pensionr [aweight=wtaci_w1]
```

```
gen
pensionsilc=(ep071d01_w1==1|ep071d02_w1==1|ep071d03_w1==1|ep071d06_w1==1|ep071d07_w1==1|ep071d08_w1==1|ep
071d09_w1==1|ep071d10_w1==1)
```

```
gen survivor=(ep071d05_w1==1|ep071d11_w1==1)
```

item 3 (pub dis insurance) is excluded in FR.

<sup>29</sup> "Pension d'invalidité" (public invalidity or incapacity pension) did not appear as such in SHARE, and in wave 2 "main public disability insurance pension or sickness benefits" (which had replaced "public invalidity or incapacity pension", translated by "une prestation publique d'invalidité, PSD, ACTP, AAH, APA") was translated as "une assurance invalidité publique (après accident du travail)". See Appendix for details on such changes.

<sup>30</sup> Some retirement homes are considered as ordinary dwellings (logements foyers pour personnes âgées) in INSEE surveys (in spite of their providing services), presumably inhabited by retirees, but the effect must be small.

<sup>31</sup> It is unclear why this underestimation only appears on weighted data, and not on unweighted data (table 10). Nothing is known about wave 1 missing spouses' pension.

SHARE (in EP089/EP094, item 2) are also reported by less than 1 percent of the population, as in EL 2002 and EL 2006.

## **Wages**

Among the 50+, 28.4 percent get some wages in SILC 2006 (table 9), 28.8 in the EL 2006 housing survey. In SHARE, the reception rate can be assessed from more than one answer. In wave 1, 30.1 percent said they had received a wage in year t-1; 23.9 percent said they were employee or civil servant, hence presumably had a wage at the date of the survey. In wave 2, 31.2 percent said they had received a wage in year t-1, 27 percent said they were employee or civil servant and went through the question about current wage. The answer to wage reception in year t-1 is extremely close in all surveys. It is slightly higher in SHARE because the question might have been answered by some of the self-employed, as it uses the generic word “earnings”.

There is no hint that the answer is better for monthly reception than for last year, on the contrary: reception rates are higher with the annual question. This is in line with what is found in SHARE for most countries (Garrouste, 2009b).

## **Self-employment income**

The reception of other types of income is less common. In SILC, 4.2 percent receive self-employment income. The corresponding reception rate is 4.8 percent in EL 2006, and 5 percent in SHARE wave 2 (5.8 percent for the current monthly question). It is only 3.4 percent in SHARE wave 1 (in the answer to the year t-1 question) whereas 4.1 percent say they are currently self-employed (5.5 percent in EL 2002).

In SHARE, slightly more mention being currently self-employed than having received an income from self-employment in the past year. As mentioned above, it is probable that some members of the professions declared their income as wages in SHARE wave 1, as the words used were “earnings from employment”. Indeed 68 percent of the self-employed declared an amount in EP205 (earnings from employment), i.e. 11 percent of all who declared something in this question. Conversely only 1 percent of the employees and civil servants declared an amount in EP207 (income from self-employment), i.e. 8 percent of all who answered something in this question.

## **Unemployment income**

In SILC, 5.5 percent receive unemployment income, as unemployment is a common path to retirement in France (only 3.8 percent are classified as unemployed having no job). The housing surveys give 3.7 percent in 2002 and 2006. Underestimation of unemployment income is more important in SHARE: only 2.9 percent get some in wave 1 (1.3 percent in wave 2). SHARE misses some unemployment benefits. A possible explanation is that they appear in the list of pensions, when in the French logic unemployment benefit is more linked to activity, and would be classified as a benefit, in a standalone

question. In wave 1, only 48 percent of the unemployed (in EP005) said they received unemployment benefit. In wave 2, the question on unemployment benefit is repeated twice. It is asked both in EP071 (to all) and EP110 (to longitudinal respondents. See Appendix A1 for details).<sup>32</sup>

It seems that SHARE does not miss much pension and employment income reception. A caveat is that the rates are those for responding individuals only. Some spouses were missing, especially in wave 1. For those missing persons nothing is known of their income reception. In wave 2, a question was asked at the end of the questionnaire, to describe the current employment situation of the missing partner and make imputations somewhat easier.

**To summarize:** SHARE manages to get close to the right reception rates for the three main types of income (i.e., pensions, wages and self-employment), but it misses the non-responding partner's income (figure 6). Unemployment income seems to be missed more often by SHARE. The reason might be that the overall logic of the income classification by SHARE is not well understood by the respondent. It might be useful to introduce more clearly the distinction between wages, benefits, self-employment, pensions, annuities, rents, and interests, both at the individual and household levels. Moreover, the list of benefits should be country specific.

### 3.3 Amount non-response

Another way to compare data quality is to look at non-response rates. Conditional on declaring receiving each type of income, what are the non-response rates when the income amount is asked? In a first step, we do not take into account the fact that in all surveys bracketed answer categories, or unfolding brackets (often the case in SHARE) are offered to non-respondents, which de facto reduces the gross non-response rates and helps in imputation.

In INSEE surveys the computation of non-response rates is straightforward, as the logic of the questioning is to ask for reception, then for the amount conditional on reception. In SHARE the computation is less straightforward, as the income amounts are not always asked after a clear "reception" question<sup>33</sup>. For instance, in questions on reception of earnings from employment last year, the item non-response is 17.5 percent in wave 1 for those who said they had some employment income (only 9.0 percent in wave 2); it is 26.2 percent for those who said they had some self-employment income (24.3 percent when asked in the current activity module EP045; it is 31.0 percent in wave 2) (table 9). For unemployment income, it was only 5.4 percent (2.9 percent in wave 2).

Overall, non-response rates are low for wages and unemployment income, average for pensions, and higher for self-employment income in all surveys.

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<sup>32</sup> One could look into more details at each type of income, particularly to benefits reception. According to the Housing survey, 18 percent of the 50+ households get some benefit income (*prestations sociales* in French), excluding unemployment benefits (not shown).

<sup>33</sup> Variables such as WAGE, SELF-EMPLOYMENT, PENSIONS and UNEMPLOYMENT have been computed from the most recent data sets (share1rel2-0-1\_imputations et INCOME\_c\_version09\_w2\_op\_230209), but non-response rates are based on share1rel2-0-1\_ep / share1rel2-0-1\_as / share1rel2-0-1\_ho (wave 1) and share2\_rel1-0-1\_ep (wave 2).

Amount non-response on wages is 7.3 percent in SILC, 9-10 percent in EL<sup>34</sup>. The question on last gross taken home pay from work, asked to all those who are currently active, has a 13.4 percent non-response rate for wage earners in SHARE wave 1 (and even 24.5 percent in wave 2). The non-response rate is lower (9.6 percent in wave 1 and 4.9 percent in wave 2) for net wages. Hence, although non-response rates for wages can be half higher in SHARE than in a regular INSEE survey, they are of the same order of magnitude when the respondent was asked for his/her net wage (i.e. what is written on the payroll) and what is commonly referred to as a 'net' wage in France (i.e. net of contribution but gross of tax). Hence, it is important to ask something that the respondent understands and is able to answer! Note that the non-response rate on this "last payroll" is even lower in SHARE wave 2 than in SILC.

For unemployment income, conditional on reception, the non-responses are lower in SHARE than in EL: less mention receiving, but those who do are more likely to give the amount. For pensions, the non-response rate is 11 percent in EL, 13 percent in SHARE wave 1 and 15 percent in SHARE wave 2. The non-response rate in SILC is 2.6 percent.

The SHARE wave 1 non-response rate for self-employment income, i.e. "amount of profit monthly average over last 12 months" is of the same order of magnitude as in the Housing survey. It is 3 points higher (26 percent) for annual gross. In 2006, the non-response rate was 25 percent in EL; it ranges from 31 (annual net) to 47 percent (net monthly) in SHARE. The non-response rate in SILC is a low 13 percent.

If we look at non-response rates by detailed pension type (tables 10 and 11; and Figure 6), the results are similar. For main public pension (*retraite de base*), the non-response rate was 13.7 percent in wave1 and 12.6 percent in wave 2, compared to 11.9 percent in EL 2002 and 10.6 in EL 2006. It is a low 0.5 percent in SILC! The spread is around 2 percentage points.

Non-responses are more frequent (34 percent in wave 1, 30 percent in wave 2) for the main survivor's pension (*pension de reversion d'un régime de base*). This is much more than in EL 2002 (17 percent) or EL 06 (19 percent), not to mention SILC (0.6 percent). Veteran pensions have a 8-9 percent non-response rate in EL, 12-13 percent in SHARE. Public invalidity pensions have a 11 percent non-response rate in EL, 11 percent in SHARE wave 1, and even 19 percent in SHARE wave 2.

All in all, the non-response rates are in general higher in SHARE than in other INSEE surveys. One could have thought that asking the very person that receives the corresponding type of income would help getting an amount better than asking a knowledgeable person of the household. It does not seem to be the case. It might be that more effort is put to get the information in a more "collective" approach, as is the case in INSEE surveys, as if a discussion was for instance taking place between spouses<sup>35</sup>. Some other tentative explanations might be the overall longer length of the SHARE questionnaire, or the fact that the income questions are asked in some disorder, hence might seem redundant and difficult to answer. The interviewers remarks after the survey go in that direction: many mention that the respondents do not like the SHARE income questions. While it might not be a proof in itself, it is to be noted that the interviewers do not make the same remarks for other INSEE surveys.

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<sup>34</sup> O'Prey (2009) reports slightly lower item non-response rates for EL 2006 on the whole population.

<sup>35</sup> To get more insight into that explanation, we should look at item non-response rate by household size. The difference between SHARE and INSEE surveys should be higher in 2 persons households, and lower in single person households.

To mitigate the low response rate in SHARE one should note that unfolding brackets are proposed after a refusal or a non-response to many of the amount questions. And then, what we call total non-response (no amount answered, even in brackets) is much lower, as many respondents are able to answer whether they earn more or less than the proposed amount in the unfolding bracket. Those who still refuse or are unable to answer are for instance only 0.4 percent for monthly wages in wave 1, and 4.9 percent in wave 2, or 3.3 percent in wave 2 for wages yearly amount, 12.6 percent for self-employment income.

In the 2006 Housing survey, brackets are proposed when neither the reference person nor the spouse, that is the main income providers, gave their wages (or unemployment income). In 53 (or 60) percent of the cases a bracket was given. Brackets are also proposed in SILC, and also considered here as non-responses.

To summarize, SHARE has more item non-responses than a regular INSEE survey, which in turn has more than SILC in France.

### *3.4 Amounts*

**We now turn to the comparison of the income amounts given in SHARE wave 2 with those given in the other benchmark surveys, EL 2006, and SILC 2006, for the main types of income.**

But before that, we replicate our 2007 exercise, comparing the overall household employment income in SHARE wave 2, to the same 2005 BDF benchmark (Garrouste, 2009a). This exercise, somewhat gross, is yet striking: the huge discrepancies spotted in wave 1 diminish. The ratio of the SHARE median to INSEE benchmark median is 1.09 in wave 2, when it was 1.18 in wave 1. Hence the two surveys seem now closer, even before any non-response imputations have been made in SHARE wave 2. On the other hand, the differences that were increasing with income level in wave 1 are now rather more important at low levels of income in wave 2 (Figure 7).

Nevertheless, before comparing SHARE with the Housing survey and SILC, a caveat is required. In spite of a very low non-response rate, SILC does lots of cleaning of the data. For example, 30.8 percent of pension income amounts are somewhat redressed. A precise description of the method is to be found in the Appendix A1, but the idea of the corrections is to compare the amount given with minima and maxima known from other sources, mainly from the tax return survey (ERF: Enquête revenus fiscaux). Hence imputations are sometimes performed even when the respondent gave an amount, in order to correct this amount. For this reason, we compare the amounts both on non redressed data and on redressed data whenever possible.

Comparing very detailed individual income would be meaningless, as SHARE is not meant to be accurate at this level. Besides, SHARE does not make sure to get the amount of all and every types of income. A few public benefits are left out (see Appendix A1 for details). It may seem to reduce the burden, but it also reduces the coherence of the questions, especially for the low income respondents for whom the benefits are important.

## Individual level

Let us now compare more precisely mean pensions, wages, self-employment income and unemployment income in SHARE wave 2 with SILC and the INSEE Housing survey (tables 8 and 9).

For pensions, the non-redressed amount of SHARE wave 2 is very close to SILC (14,100€ versus 14,016€), where the redressed SILC amount is 15,302€. EL06 is close too but slightly lower. The quality of SHARE data seems good. For wages, SHARE wave 2 is slightly above SILC (23,700€ versus 19,899€, corrected at 21,590 €). EL06 is close to SILC. SHARE data again seems of good quality. A similar conclusion can be drawn from mean self-employment income, when mean unemployment income is “too low” in SHARE and in EL 2006. However the equality of means can hide problems in distribution. To assess it we now turn to household income distribution.

## Household level

Table 12 and Figures 8-10 summarize the household level results. First, we quickly review the reception rates, defined as “at least one person in the household receives each main type of income” (figure 8). They are lower in EL than in SILC, except for pensions, but the underestimation is more important in SHARE. What was not apparent at the individual level is more striking here as the SHARE missing spouse effect appears. Some households failed to declare a wage or a pension, and, even more, an unemployment benefit. The SHARE underreporting is lower for wages (0.93 percent) and pensions (0.88 percent), higher for self-employment income (0.78 percent), and especially high for unemployment income (0.20 percent) (Figure 9).

The top left panel of Figure 10 presents household pensions. The median yearly household pension income in SHARE is 19,696€ compared to 15,000€ in the housing survey and 16,155€ in our gold standard benchmark SILC survey. Again, this is done before any thorough data cleaning in SHARE wave 2. Other quantiles are also higher in SHARE than in its benchmarks. It is probable that some currency errors occur in SHARE, and people mentioned francs when they should have answered in euros (one euro is 6.55957 francs). The ratio of SHARE to SILC quantiles increases with the amount of the pensions (Figure 11). It could mean that currency or typing errors are more important on larger amounts. Some may also have made errors in periodicity, such as answered month instead of quarter, as many pensions in France are received quarterly. It is also probable that some respondents give the same amount twice, as they may have already included, say their complementary pension in the basic pension. SILC is especially careful about such risk of double counting. Those errors are difficult to detect ex post but they could easily be avoided by some CAPI checks: “Did you give that amount already?; or, “So it means that you have on average X euros per month”.

The median yearly household wage income in SHARE is 24,000€, compared to 23,400€ in the Housing survey, and 23,306€ in SILC (Figure 10, bottom right panel). It is 3.0 percent higher in SHARE. All other quantiles are also very close, with no evidence of the problems we noticed for pensions. As the comparison is made before any thorough data cleaning in SHARE wave 2, the

discrepancy may be even reduced in the future. It would mean that the active younger respondents are less likely to make currency or periodicity errors than pensioners.

The median yearly household self-employment in SHARE is 14,400€ compared to 17,837€ in the Housing survey, and 17,000€ in SILC. It is 9.6 percent lower in SHARE, again before any thorough data cleaning in SHARE wave 2. Q1 and Q3 are extremely close in SHARE and its benchmarks. The differences are more important in SHARE for the 1<sup>st</sup> and last deciles. For low incomes, it might be because SHARE did not allow declaring a deficit. Anyway, the sample size is low, as SHARE misses some of the self-employed. Some of the self-employment income was declared as wages.

SHARE is no more out of benchmark target for unemployment income. The median is 6,000€ against 6,048€ in the Housing survey, and 6,680€ in our SILC gold standard.

Clearly, even if more is to be done in cleaning SHARE wave 2 data, the amounts given are plausible. Furthermore, along the line of what is suggested by Giorgiadis (2008a, 2008b), one can redress the reception as it is mentioned in the question on reception of an activity income in last year (EP205) by the reception as it is mentioned in the current income question (EP201). In the case of France, 103 persons answered that they had no earnings at all from employment in 2005, while they had mentioned that their current job situation in 2006 was employed, and how much they earned. Among them 53 are employees, 15 are civil servants and 28 self-employed. The correction reduces the abnormal number of households with no employment income in wave 1 and wave 2, with huge effect on computation of poverty rates among the 50+ from SHARE data.

## Conclusions

Our aim of validating SHARE data with other INSEE surveys has proven to be a more difficult task than foresighted. Even concentrating on only two types of data, health, and, in more details, income, was time consuming. Not only had we to plunge into some details of SHARE data, without relying on the work of the imputation team, as most users do, but we also had to look at raw files of INSEE surveys that are not always accessible to researchers. This paper does not pretend to do justice to such a wealth of data.

Nevertheless, we arrive at the following preliminary conclusions:

- Sampling issues do not seem to be the source of major differences between surveys, at least at this very broad level of comparisons. Nor is the fact that SHARE is only conducted in some regions.
- An ex ante harmonized questionnaire such as SHARE is easier to apply to qualitative domains such as subjective health or to non-ambiguous quantitative measures such as weight and height, than to income. Indeed, the body mass index of males is the same in the Health survey and in SHARE.
- As far as income is concerned, SHARE manages to get close to the right reception rates for the three main types of income, wages, pensions, and self-employment income, but misses the non-responding partner's income. Other less frequent types of income seems to be more frequently missed by SHARE than by INSEE benchmark surveys. The reason might be that the overall logic of the income classification by SHARE is not well perceived by interviewers and respondents. Also, the dispersion of the income question in the whole interview means that the effort asked from the respondent has to be repeated over and over again. It might be useful to more clearly introduce the distinction between wages, benefits, self-employment, pensions, annuities, rents, and interests, both at the individual and household level. Moreover, the list of benefits should be country specific, and the interviewers trained accordingly.
- SHARE has more item non-responses than a regular INSEE survey, and both have much more than SILC in France, even if in SHARE, unfolding brackets questions bring back the non-response rate to lower, more reasonable, levels.
- Concerning declared income amounts, they seem closer to benchmark in wave 2 than in wave 1, but more data cleaning and comparisons between various parts of the questionnaire is needed to get at the right income level.

This work could be extended in many ways. Firstly, it could be extended to other quantitative variables, such as consumption or assets. Secondly, sticking to income, SHARE could be assessed not against other French surveys, but against the actual income of the respondents. With due permission, households tax returns could be matched on name and address in the line of Johansson and Klevmarken (2007). Finally it would be interesting to do the same exercise in other SHARE countries.



### **Income questions: Summary of findings to help future waves of SHARE**

1. Some CAPI **internal checks during fieldwork** are required to avoid major typing or currency errors in income amounts. This is done in most surveys, both cross-sectional and longitudinal, with proper preloading.
2. Minor discrepancies between income questions, re-classification of some benefits, getting rid of some redundancies would improve the clarity of income questions for the respondents. Each country team should **check** with its specialized statistical institute or research center **that all types of income are reviewed**, with the correct corresponding local current name of income and benefit. Income questions are dispersed throughout the questionnaire, translation work would be alleviated if all income questions were summarized in one document (as we tried to do in the Appendix A1) so that the country team can better understand the rationale of the income questionnaire and the interviewers trained accordingly.
3. **Less is more:** SHARE asks for some types of income more than once, e.g. changing reference period, or using another word for a closely related concept, without explanation. Even if the way responses vary can be a research subject in itself, and if current income brings information that is different from last year income, a choice should be made and the risk is high that the redundant questions are not used at all, even for imputations, and just confuse the respondents. We suggest to separate whenever possible the income questions from the employment module.
4. **Gross and/or net?** It is important to **ask something that the respondent understands, knows**, and is able to answer. For instance the move from gross to net income (in the local sense of “what is written on your payroll” or “pension slip”) improved response rate and accuracy. It does not matter that “net” does not mean the same in all countries, depending on how much is withdrawn for tax ex ante. This can be dealt with after the fieldwork, especially as France seems the only exception.
5. **Who can answer the income questions?** The non-response rates are in general higher in SHARE than in other INSEE surveys. Besides, many spouses are missing. As one of the main differences with INSEE surveys is that SHARE is purely individual and does not allow spouses to cooperate in answering the Employment (EP) module, we feel this should be assessed. Getting at individual employment and income is done at INSEE by asking individual questions at the household level, i.e. not necessarily **to** the very eligible person, but to a knowledgeable person. There is a rationale for asking the “household” to answer the income questions, even at the individual level: gain in time, in active collaboration. Put differently, a proxy could be allowed for the EP module. A related issue is that SHARE has to be more precise in household/housing/finance respondents questions framed as “you”. Does “you” mean “you, personally” or “you and/or your spouse”, “you and the other household members”, “you and the former wave household members”, etc.
6. Concerning **reference period for income**, currently, in SHARE, income reference periods can be last payment (EP041, EP094), average monthly over last 12 months (EP045/305), annual in year t-1 (EP205/207; HO030; AS005 to AS058), average payment (EP078 wave 1),

typical payment (EP078 wave 2). In regular INSEE CAPI surveys only the annual over last 12 months income is asked. In the French SILC, most respondents are asked for an annual amount (last calendar year), because it helps relate to income tax returns; they are asked for last payment only when they cannot use their paper references; then a within-instrument computation of annual from monthly is provided and validation is asked from the household. Suggestion: only go for annual (last 12 months?). However this contradicts our point 3, unless the respondents are encouraged to refer to their tax documents.

7. SHARE does not make sure to get the amount **of all and every types of income**. A few public benefits are left out. It may seem to reduce the burden, but it also reduces the coherence of the questions, especially for the low income respondents for whom the benefits are important.

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## Appendix

### A1. Description of the income questions in SHARE, SILC and other INSEE surveys

Section 1 presents SHARE questions on income in some details, in wave 1 and in wave 2, and both the generic English version and the French translation. It is an attempt at a “polyglot concordance bible” of SHARE questionnaire, with just two languages, French and generic English. Section 2 quickly presents the questions in a regular basic INSEE survey. Section 3 describes the principles of SILC in France.

#### A1.1. Income in SHARE wave 1, and wave 2 modifications

The elements of the individual and household income can be found in four modules of the CAPI questionnaire. The most important is the individual EP **Employment and pension** module. Real estate income from previous year is to be found in the HO **housing** module (question HO030)<sup>36</sup>. Then the HH **Household Income** module is filled by the household respondent, and finally the **AS Asset** module is filled by the financial respondent, just after a consumption module. Wave 2 is the same as wave 1, except for a few changes, among which going from gross to net after tax amounts.

The EP module comes after all information on demographics, cognitive function, health and health care have been collected. Question EP005 asks whether the respondent is active or not<sup>37</sup>. Then the respondent is asked some questions about current job (both main and secondary job): status, hours of work, how many months a year he is working (EP014), qualification, industry, opinion on job, then in EP038 frequency of payment and, finally, how much he makes.

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<sup>36</sup> **HO029\_ RECEIVE INCOME OR RENT OF REAL ESTATE**

Did you [or your husband/wife/partner/] receive any income or rent from these properties in [previous year]?

**HO030\_ AMOUNT INCOME OR RENT OF REAL ESTATE LAST YEAR**

How much income or rent did you [or your spouse/partner/] receive from these properties during [previous year], after taxes?]

<sup>37</sup> An interviewer’s instruction was added in wave2, as many wave 1 widows with survivor’s pension had classified themselves as retired.

**EP005\_ CURRENT JOB SITUATION**

Please look at card 20. In general, which of the following best describes your current employment situation? IWER: Code only one. Only if respondent in doubt then refer to the following: 1. Retired from own work, includes semi-retired, partially retired, early retired, pre-retired. 2. Paid work, including also working for family business but unpaid – includes workers who are still employees of a firm though currently not paid. 3. Unemployed (Laid out or out of work, including short term unemployed). 4. Includes partially disabled or partially invalid. 5. Includes looking after home or family, looking after grandchildren. Recipients of survivor pensions who do not receive pensions from own work should not be coded as retired. If they do not fit in categories 2-5, they should go into Other.

1. Retired

2. Employed or self-employed (including working for family business)

3. Unemployed and looking for work

4. Permanently sick or disabled

5. Homemaker

97. Other (added in WAVE 2: Rentier, Living off own property, Student, Doing voluntary work)

### A1.1.1 Monthly income from main and secondary job

If current status (EP009) is employee (*salarié non fonctionnaire*) or civil servant (*fonctionnaire*), question EP041 is asked (table A1). The question was the same in wave 2, but was asked **after EP201** (see below) and the words “union dues” were suppressed. Note that it is not specified whether SHARE wants a super-gross (*super-brut*) income, before any deduction, i.e. including employers’ contribution, or what is commonly called gross income, *salaire brut*, that is after employer’s social security contributions have been deducted, but before other deductions. Besides, it may change from one country to another, as the contribution systems vary.

Then come questions EP214( Did this amount include any additional payments or bonus?)<sup>38</sup>, EP314 in wave 2 (After taxes, about how much did you receive overall as additional payments or bonuses?), and finally EP201 (table A1). In France, employees were not asked to give a “net of tax taken home from work” as taxes are computed annually, 6 months after the end of the calendar year and on the total family income. There is nothing like a net of tax wage. So the words “net of tax” were dropped. Wave 2 was identical to wave 1, except that EP201 was asked before EP041, and that the order of the words changed and “union dues” disappeared.

The same type of question is asked to self-employed (in EP009, translated by “à votre propre compte”): **EP045**. Note the difficulty of giving a “monthly income over the last twelve months” (not a calendar year). Note also the use of “income from your business” in the generic version, which is not really adapted to the liberal professions (physicist, lawyer...), *profession libérales*, who are usually classified as self-employed (or may have classified themselves so). Question EP045 was the same in wave 2 except for “before subtracting taxes” added at the end. Question EP305 on **net** income from self-employment was added in wave 2, and asked before the gross income question. In France, an interviewer’s instruction was added to question EP305 : “If the respondent cannot give the after tax income, enter CTRL K (don’t know)”. It was assumed that a self-employed might be more able to (try to) compute a net of tax monthly income than a non self-employed, which may be a rather far-fetched assumption...

Hence from this series of questions a first estimation of income from current employment can be computed.

EP041 and EP201 give last payment (wages) both before and after tax and other deduction (except in France). EP045 and EP305 (only in wave 2) give monthly income from business of self-employed over the last twelve months both before (and after tax in wave 2).

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<sup>38</sup> To which, in wave 2, the following instruction was added: Lump-sum payments are for example 13th and 14th salary payments, etc.

**Table A1. Monthly income from main and secondary job**

Generic WAVE 1	France WAVE 1	Generic WAVE 2	France WAVE 2
<b>To salaried workers</b>			
<p><b>EP041: TAKEN HOME FROM WORK BEFORE ANY DEDUCTIONS</b>            Before any deductions for tax, national insurance or pension and health contributions, <b>union dues</b> and so on, about how much was the last payment?</p>	<p><i>Quel a été le montant de votre dernier salaire brut avant tout prélèvement (Impôt, cotisation sociale ou cotisation à mutuelle...)?</i></p>	<p><b>EP041: TAKEN HOME FROM WORK BEFORE ANY DEDUCTIONS</b>            Before any deductions for tax, national insurance or pension and health contributions and so on, about how much was the last payment?</p>	<p><i>Avant tout prélèvement (Impôt, cotisation sociale ou cotisation à mutuelle...)</i></p>
<p><b>EP201: TAKEN HOME FROM WORK AFTER TAX</b>            And about how much was your last payment <i>after</i> all deductions for tax, national insurance or pension and health contributions, <b>union dues</b> and so on?</p>	<p><i>Et à combien s'est élevé votre dernier salaire net, après tous les prélèvements ?</i></p>	<p><b>EP201: TAKEN HOME FROM WORK AFTER TAX</b>            After all deductions for tax, national insurance or pension and health contributions and so on, how much was your last payment?</p>	<p><i>Après tous les prélèvements de cotisations de sécurité sociale/retraite/mutuelle, etc. quel a été votre dernier salaire (traitement)?</i></p>
<b>To self-employed</b>			
<p><b>EP045: TOTAL AMOUNT OF PROFITS AT THE END OF THE YEAR</b>            ...after paying for any materials, equipment or goods that you use in your work. On average what was your monthly income <b>before taxes</b> (emphasis is ours) from your business over the last twelve months?</p>	<p><i>Maintenant, j'aimerais vous interroger sur le revenu que vous tirez de votre activité indépendante. Je veux parler du revenu qui vous reste après avoir payé les équipements, les matières premières, ou les biens que vous utilisez pour ce travail. En moyenne, quel a été le revenu mensuel de votre activité <b>avant impôt</b> pendant les 12 derniers mois?</i></p>	<p><b>EP045: TOTAL AMOUNT OF PROFITS AT THE END OF THE YEAR</b>            ...after paying for any materials, equipment or goods that you use in your work, what was on average your monthly income from your business over the last twelve months <b>before subtracting taxes</b>?</p>	<p><i>Maintenant, j'aimerais vous interroger sur les bénéfices de votre activité, c'est-à-dire après avoir payé les équipements, les matières premières, et tous les produits que vous utilisez pour réaliser votre travail. En moyenne, quel était votre revenu par mois pendant les 12 derniers mois (<b>avant impôts</b>)?</i></p>
		<p><b>EP305_ TOTAL AMOUNT AFTER TAXES PROFITS END OF YEAR</b>            Now, we would like to know your monthly income from your business over the last twelve months <b>after</b> subtracting taxes?</p>	<p><i>Maintenant, nous aimerions connaître le revenu mensuel de votre activité durant les 12 derniers mois, après impôt (si vous le connaissez)?, <b>SI LE REPONDANT NE PEUT DONNER UN MONTANT APRES IMPOTS, FAIRE CTRL K (ne sait pas).</b></i></p>

### A1.1.2 Last year income from main and secondary job

Then come questions EP204/205 on earnings reception and income amount during the last year before the survey (table A2).

**Table A2. Last year income from main and secondary job**

Generic WAVE 1	France WAVE 1	Generic WAVE 2	France WAVE 2
<b>EP204_</b> Have you had any earnings at all from employment in 2003?	<b>EP204_</b> <i>Avez-vous touché des revenus d'activités en 2003 ?</i>	<b>EP204_</b> Have you had any wages, salaries or other earnings from <b>dependent</b> employment in [previous year]?	<b>EP204_</b> <i>Avez-vous touché des revenus d'activité salariée en [année précédente]? ENQ: Salaire, traitements (hors gains d'une activité d'indépendant)</i>
<b>EP205_ Before</b> any taxes and contributions, what was your approximate income from employment in the year 2003?	<b>EP205_</b> <i>Avant impôts et cotisations sociales, quels ont été approximativement vos revenus d'activité au cours de l'année 2003 ?</i>	<b>EP205_ After</b> any taxes and contributions, what was your approximate income from employment in the year [previous year]?	<b>EP205_</b> <i>Nets des cotisations sociales et autres cotisations, quels ont été approximativement ces revenus d'activité au cours de l'année [année précédente]?</i>
<b>EP206_</b> Have you had any income at all from self-employment or work for a family business in 2003?	<b>EP206_</b> <i>Avez-vous eu en 2003 un revenu d'activité en tant qu'indépendant ou dans le cadre d'une entreprise familiale?</i>	<b>EP206_</b> Have you had any income at all from self-employment or work for a family business in [previous year]?	<b>EP206_</b> <i>Avez-vous eu un revenu d'activité en tant qu'indépendant ou dans le cadre d'une entreprise familiale en [année précédente]?</i>
<b>EP207_ Before</b> any taxes and contributions, but after paying for any materials, equipment or goods that you use in your work, what was your approximate income from self-employment in the year [previous year]?	<b>EP207_</b> <i>Avant impôts et cotisations sociales, mais après paiements des matières premières, équipements ou produits utilisés dans votre activité, quel a été le revenu approximatif de votre activité indépendante en 2003 ?</i>	<b>EP207_ After</b> any taxes and contributions and after paying for any materials, equipment or goods that you use in your work, what was your approximate income from self-employment in the year [previous year]?	<b>EP207_</b> <i>Après paiement des cotisations sociales, des matières premières, équipements ou produits utilisés dans votre activité, quel a été approximativement le revenu de cette activité d'indépendant en [année précédente] ?</i>

In wave 2, the word “earnings” in EP204 was expanded to “wages, salaries or other earnings” and restricted to “from dependent employment in [previous year]?”. Overall, the word “dependent” employment was felt more restrictive than employment, even to salaried workers. EP207\_ EARNINGS PER YEAR BEFORE TAXES FROM SELF-EMPLOYMENT was changed to after tax in wave 2. Note that both EP204 and EP206 were asked to all.

This form of questioning may generate two types of problems. Firstly, the difference between earning last month (last payment), last 12 months, and last year has to be dealt with. Secondly, the change between waves makes it difficult to interpret income evolution between waves. For instance, with regard to the EP204 and EP206 questions, some inconsistency issues were encountered in wave 2 and, to a less extent, in wave 1, across all national data. As reported in Paccagnella (2008) and Georgiadis (2008a, 2008b), among those who are currently active (declaring being employed or self-employed in question EP005), a larger proportion than expected reported zero earnings from employment last year (EP204) and zero income from self-employment last year (EP206). Although this could be true in the case of the start of a new job/activity in the past few months preceding the interview, the proportion reported appeared too high to fit that specific case.

When considering all countries, the prevalence of income in last year equal to zero in wave 2 is 20.1 percent for employees or civil servants and 35.6 percent for self-employed. In wave 1, the same prevalence is 6.2 percent among employees or civil servants and 25.6 percent among self-employed. More specifically, in France, in wave 1, 1,103 persons answered “no” to EP204, when they had mentioned that their current job situation was employed or self-employed, that they work, and even reported how much they earned. 68 individuals mentioned plausible monthly earnings. By looking at who they are it can be inferred that they did have an income in 2003 but failed to answer “yes” to



EP204. They are employees (53) or civil servants (15). Moreover, 28 self-employed failed to answer “yes” to EP204, but nevertheless reported a positive income in EP045.

According to Paccagnella (2008), the reason why the prevalence increased between the two waves may be the change of formulation of the EP204 question, while EP206 remained unchanged. Georgiadis (2008a) suggests to take this income into account when estimating the household 2003 annual income<sup>39</sup>. He bases his remark on the comparisons of household poverty rates of SHARE countries computed from release 2 of wave 1 compared to SILC. Those rates are implausibly overestimated, as they are sensitive to those households with zero income. Following these findings, corrections were imputed in both waves by the Italian team in charge of the income module. In the case of employees or civil servants, an estimate of their annual employment income was computed by multiplying the amount of the payment (EP201 question) by the frequency of the payment (EP038 question) and the number of months normally worked in this job (EP014 question), controlling for extra payments in some months and taking care of the timing of bonus in each country<sup>40</sup>. In the case of self-employed workers, this value was computed multiplying the monthly income (EP045 question) by 12. Furthermore, question EP010 was identified as the correct variable to use to evaluate how long each individual has been in the job in wave 1 and for the refresher sample of wave 2. The longitudinal sample has extra information on change in job in EP141/127/128 (Weber, 2009).

Finally, the meaning of English words such as salary, earnings, wages, business income can be vague, and a precise translation is not straightforward: *salaires/traitement* (for a civil servant) / *revenu d'activité professionnelle d'indépendant*, rather than *bénéfice*. Note that dependent or salaried are both opposed to independent or self-employed; the word employee also exists... See below for more.

But those semantic problems are small compared to those arising with the questions meant to get the annual income from pensions in some detailed pension types. SHARE, a survey on retirement, wants to get at types of pensions, and not only an accurate amount of overall pension income, as in most ordinary INSEE surveys. Even SILC does not try to get to such details on the “pension pillars”.

### **A1.1.3. Pension income**

The pension section of the SHARE questionnaire opens with question EP071, asked to all respondents, which lists the type of pensions received (table A3). There have been major changes in the list, wording, and even item numbers between wave 1 and wave 2. In wave 2, this question was restricted to public schemes (1<sup>st</sup> pillar). Occupational (private) pensions were instead asked separately in EP324. Another change relates to long-term care insurance payments, which are covered by questions EP086 in wave 1 and by item 10 of question EP071 in wave 2.

Tables A4 and A5 below give a detailed comparison of items for the generic and the French versions. In France, a person can receive several pensions of a given category, for instance two different “basic”

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<sup>39</sup> He also notes that annual income is sometimes lower than 12 times monthly earnings, suggesting that a monthly income is easier to report than an annual income. This has been debated at INSEE. The risk is missing bonus, extras, or on the contrary basing the yearly computation on an extraordinary month (Georgiadis, 2008b).

<sup>40</sup> For France, macro data on quarterly social contribution were used (gross labor income per person, by sector of occupation). Most sectors give more at the end of the year, presumably in December, except for finance, where bonus arrive usually in March.

pensions if she has worked successively in the private sector and as a civil servant, or two or more complementary pensions. In the loop of detailed questions that follows question EP071, where several questions are asked about benefits of the different types, an instruction to interviewers explains that people are requested either to give totals for all benefits of the given item, or characteristics of the most important among these benefits (depending on the kind of question that is asked).

Both in wave 1 and wave 2, question EP071 mixes **pension** (linked to previous work life) and **benefits** linked to a state (being disabled) or linked to both a state and previous work (being unemployed). In addition, each country applies deviations from the generic questionnaire, some of which potentially problematic. For instance, in Belgium, item 1 includes minimum old age income, which is considered as a benefit in France (hence was put in EP110); in Greece, in wave 1, item 4 on disability pensions was merged to items 3 and 10 and two additional categories were created: one for special benefits (mainly for poor, with  $\epsilon\kappa\alpha\sigma$  as a supplement on small pensions for poor pensioners) and one for persons who have more than four children.

**Table A3. Pension sources. Comparison between wave 1 and wave 2**

<b>PENSIONS SOURCE Wave 1</b>	<b>PENSIONS SOURCE Wave 2</b>
<b>EP071d01.</b> Public old age pension	<b>EP071d01.</b> Public old age pension  <b>EP071d02.</b> Public old age supplementary pension or public old age second pension
<b>EP071d02.</b> Public early retirement or pre-retirement pension	<b>EP071d03.</b> Public early retirement or pre-retirement pension
<b>EP071d03.</b> Public disability insurance	<b>EP071d04.</b> Main public disability insurance pension, or sickness benefits  <b>EP071d05.</b> Secondary public disability insurance pension, or sickness benefits
<b>EP071d04.</b> Public unemployment benefit or insurance	<b>EP071d06.</b> Public unemployment benefit or insurance
<b>EP071d05.</b> Public survivor pension from your spouse or partner	<b>EP071d07.</b> Main Public survivor pension from your spouse or partner  <b>EP071d08.</b> Second Public survivor pension from your spouse or partner
<b>EP071d06.</b> Public invalidity or incapacity pension	
<b>EP071d07.</b> War pension	<b>EP071d09.</b> Public War pension
<b>EP086.</b> Long-term care insurance payments	<b>EP071d10.</b> Public long-term care insurance
<b>EP071d08.</b> Private (occupational) old age pension	<b>EP324d01-02-03.</b> Occupational old age pension from your last/ second/ third job
<b>EP071d09.</b> Private (occupational) early retirement pension	<b>EP324d04.</b> Occupational early retirement pension
<b>EP071d10.</b> Private (occupational) disability or invalidity insurance	<b>EP324d05.</b> Occupational disability or invalidity insurance
<b>EP071d11.</b> Private (occupational) survivor pension from your spouse or partner's job	<b>EP324d06.</b> Occupational survivor pension from your spouse or partner's job

**Table A4. Comparison of generic and French versions of EP071 in wave1**

EP071 Generic version Wave 1	French version	English translation (if different from generic)	Comments
1. Public old age pension	Une retraite de base (ex. : régime général ou assimilé, régime spécial du secteur public, régime de base de non salarié)	Basic pension (general or assimilated regime, special regime for the public sector, basic regime of self-employed)	1 is used for <u>basic</u> pensions. The relevant dichotomy is not between public and private pensions, but between basic and complementary pensions. Basic pensions are generally co-managed by the State and social partners, complementary pensions are organized on a professional basis, exclusively managed by social partners, but the two systems are considered as public (all these schemes are considered by the EU as first pillar schemes).
2. Public early retirement or pre-retirement pension	Une préretraite publique	Public preretirement pension	This category is limited to pre-retirement. The concept of early retirement does not have a clear meaning in France, where the first age of eligibility to pension entitlements (60 in the private sector) is more or less confounded with the normal age at retirement.
3. Public disability insurance			No benefit of this kind can be distinguishable from those covered by category 6
4. Public unemployment benefit/insurance	Une prestation d'assurance chômage	Unemployment benefit	Why is a benefit included in this pension question?
5. Public survivor pension from spouse/partner	Une pension de réversion d'un régime de base	Survivor pension from a basic regime	Applies to survivor pensions of <u>basic</u> regimes (see item 1).
6. Public invalidity/incapacity pension	Une prestation publique d'invalidité (AAH, APA)	A public invalidity pension (AAH, APA)	Note that APA (a <b>benefit</b> dedicated to old disabled people) could have been dealt with through questions EP085-088.
7. War pension	Une pension d'ancien combattant		
8. Private (occupational) old age pension	Une ou des retraites complémentaires	One or several complementary old age pensions	This item is used for <u>complementary</u> pensions (see item 1).
9. Private (occupational) early retirement pension	Une préretraite d'entreprise	A pre-retirement pension paid by the employer	
10. Private (occupational) disability/invalidity insurance	Une prestation d'invalidité versée par l'entreprise	A invalidity benefit paid by the employer	
11. Private (occupational) survivor pension from spouse/partner's job	Une pension de réversion d'un régime complémentaire	A survivor pension from a complementary regime	Used for survivor pensions from <u>complementary</u> schemes (see item 1)

**Table A5. Comparison of generic and French versions of EP071 in wave2**

	<b>EP071 Generic version Wave2</b>	<b>French version</b>	<b>English translation (if different from generic)</b>	<b>Comments</b>
1.	Public old age pension	Une retraite de base (régime général ou assimilé, spécial du secteur public, de base de non salarié)	Basic pension (general or assimilated regimes, special regime for the public sector, basic regime of independent workers)	This item is used for <u>basic</u> pensions (see table above).
2.	Public old age supplementary pension or public old age second pension	Une ou des retraites complémentaires(ex: ARRCO, AGIRC, IRCANTEC <sup>41</sup> , autres régimes complémentaires)	One or several complementary old age pensions	This item is used for <u>complementary</u> pensions (see item 1) <sup>42</sup> .
3.	Public early retirement or pre-retirement pension	Une préretraite publique (ex : ASFNE <sup>43</sup> )	Public pre-retirement pension	(see table above)
4.	Main public disability insurance pension, or sickness benefits	Une assurance invalidité publique (après accident du travail...)	A public disability insurance after a work related accident.	Fairly uncommon in France .
5.	Secondary public disability insurance pension, or sickness benefits			Does not apply and was dropped.
6.	Public unemployment benefit/insurance	Une prestation d'assurance chômage	Unemployment benefit	
7.	Main public survivor pension from your spouse or partner	Une pension de réversion d'un régime de base	Survivor pension from a basic regime	Applies to survivor pensions of <u>basic</u> regimes (see item 1).
8.	Secondary public survivor pension from your spouse or partner	Une pension de réversion d'un régime complémentaire obligatoire	A survivor pension from a complementary regime	Used for survivor pensions from <u>complementary</u> schemes (see item 1)
9.	War pension	Une pension d'ancien combattant		
10.	Public long-term care insurance			Dropped (redundant with EP110)
96.	None of these	Aucune de ces prestations		

Question **EP324** was added in wave 2 to get cover the items initially included in EP071 in wave 1 but excluded from EP071 in wave 2 (see table A6).

<sup>41</sup> ARRCO (association pour le régime complémentaire des salariés) for employees. AGIRC (association générale des institutions de retraite des cadres) for executives.

<sup>42</sup> An IWER note mentions: Include in 2 the special annuities, indemnités viagères de départ (IVD) received by a retired farmer.

<sup>43</sup> An IWER note mentions: 3. A salaried aged 55+, laid off for economic reasons, and with no possibility of another job, may benefit from the Allocation spéciale du fonds national pour l'emploi (ASFNE) which allows early retirement of 57+, if a plan is negotiated with the government.

**Table A6. Comparison of generic and French versions of EP324 in wave2**

EP324_ OCCUPATIONAL PENSION INCOME SOURCES	In French
Have you received income from any of these sources in the year [{previous year}]? IWER:CODE ALL THAT APPLY	<i>Avez-vous perçu des revenus d'une ou plusieurs des sources suivantes au cours de l'année [année précédente] ? ENQ :CES TYPES DE RETRAITES SONT RARES EN FRANCE. CODER TOUT CE QUI S'APPLIQUE</i>
1./2./3. Occupational old age pension from your last/ second/ third job	<i>1./2./3. Une retraite surcomplémentaire d'entreprise de votre dernier/ deuxième/ troisième emploi</i>
4. Occupational early retirement pension	<i>4. Une préretraite d'entreprise</i>
5. Occupational disability or invalidity insurance	<i>5. Une prestation d'invalidité versée par l'entreprise</i>
6. Occupational survivor pension from your spouse or partner's job	<i>6. Une surcomplémentaire de réversion de votre conjoint/partenaire versée par son entreprise</i>

The *amount* of the pension (EP078) received from each source selected in questions EP071 and EP071 and EP324 (wave 2) is then asked in question EP078<sup>44</sup> (see table A7). **Before taxes** becomes **after taxes**, **average** becomes **typical**. Instructions to interviewers are added to define what is a typical payment<sup>45</sup>: Amount is an ordinary typical-regular payment, excluding any extras, such as bonus, 13<sup>th</sup> month, etc.

**Table A7. Comparison of generic and French versions of EP078 across waves**

Wave 1	Wave 2	Wave 2
<b>EP078:</b> AVERAGE PAYMENT OF PENSION IN 2003 <b>Before taxes</b> , about how large was the <b>average</b> payment of [your public old age pension/.../your private (occupational) survivor pension from your spouse or partner's job] in 2003?	<b>EP078_</b> TYPICAL PAYMENT OF PENSION IN LAST YEAR <b>After taxes</b> , about how large was a <b>typical</b> payment of [your public old age pension/.../your occupational survivor pension from your spouse or partner's job] in [{previous year}]? IWER:AMOUNT IN [FLCURRIT] IS AN ORDINARY TYPICAL-REGULAR PAYMENT, EXCLUDING ANY EXTRAS, SUCH AS BONUSSES, 13TH MONTH ETC.	<b>EP078_</b> <i>En [année précédente], à combien s'élevait en moyenne un versement normal de [votre retraite de base/.../votre surcomplémentaire de réversion]?</i> <i>ENQU :MONTANT EN [EUROS] .IL S'AGIT D'UN VERSEMENT ORDINAIRE HABITUEL, A L'EXCLUSION DE TOUTES INDEMNITES EXCEPTIONNELLES COMME DES PRIMES, DES BONUS, UN TREIZIEME MOIS ETC.</i> <sup>46</sup>

After question EP074 on the periodicity of payment, a new question **EP208\_ HOW MANY MONTHS RECEIVED INCOME SOURCE** was added in wave 2 to get at a true yearly income in case the pension was not received for the whole year, with the following instruction: "Not how many payments

<sup>44</sup> In wave 1, the amount of the (public and private) long-term care insurance (item 10 in EP071) was asked separately in question EP086: "How much do you get each month from long-term care insurance? IWER: AMOUNT IN [{local currency}]".

<sup>45</sup> In Austria:

IWER "Sozialhilfe" includes also a support for disabled people  
Staatliche Sozialhilfe: financial aid paid to people who cannot pay for themselves, e.g. due to disability.

<sup>46</sup> In wave 1 the instruction in France was « Donner leur total (après avoir ramené les versements à une même période de temps, par exemple le mois ou le trimestre, si besoin) ».

were made, but the time span. Example: The pension was received during the whole year, the answer is 12. In case the respondent started receiving it in November, the answer is 2<sup>47</sup>.

#### A1.1.4 Other types of individual incomes

Other types of incomes are subsequently asked. For instance, question EP089 targets other individual incomes, such as private regular transfers. The main modification between wave 1 and wave 2 is the replacement of private health insurance payments by long-term care insurance payments from a private insurance company. Whereas in wave 1 long-term care insurance payments benefited from a separate question (EP086), which did not differentiate between private and public types of insurance, in wave 2, public long-term care insurance payments are incorporated in EP071 (except in France, where it is in EP110) and private long-term care insurance payments are in EP089 (table A8).

**Table A8. Comparison of generic and French versions of EP086 and EP089 across waves**

EP086 or EP089 Wave1	EP089 Wave2	In French Wave 1	In French Wave 2
<b>EP086: Long-term care insurance payments</b>		<i>“Combien touchez-vous par mois au titre de cette assurance dépendance?”</i> ,	
<b>EP089:</b> Did you receive any of the following regular payments or transfers during 2003?	<b>EP089:</b> Did you receive any of the following regular payments or transfers during the year [previous year]?	Avez-vous reçu un de ces paiements ou transferts en 2003?	Avez-vous reçu régulièrement l'une des prestations ou des rentes suivantes dans le courant de l'année [précédente]?
1. Life insurance payment	1. <b>Regular</b> life insurance payments	1. <i>Une rente d'un contrat d'assurance vie</i>	1. Une rente d'un contrat d'assurance vie <b>liquidée, décès, PEP</b>
2. Private annuity/private personal pension	2. <b>Regular</b> private annuity or private personal pension payments	2. <i>Une rente d'un plan d'épargne retraite individuel (ex: PREFON, Madelin)<sup>48</sup></i>	2. Une rente d'un plan d'épargne retraite <b>volontaire</b> (Préfon, Madelin, <b>Cref, Fonpel, COREVA, etc.</b> ), <b>une rente viagère</b>
3. Private health insurance payment <sup>49</sup>			
4. Alimony	3. Alimony	4. <i>Une pension alimentaire</i>	3. <i>Une pension alimentaire</i>
5. Regular payments from charities	4. Regular payments from charities	5. <i>Des versements d'organismes caritatifs</i>	4. <i>Des versements d'organismes caritatifs</i>
	5. <b>Long-term care insurance payments from a private insurance company</b>		5. <i>Une rente d'assurance privée dépendance ou soins de longue durée</i>
96. None of these		96. <i>Aucune de ces prestations</i>	

<sup>47</sup> Pendant combien de mois avez-vous reçu [votre retraite de base /votre retraite complémentaire obligatoire /votre préretraite publique / ... /votre pension de réversion surcomplémentaire ] en [année précédente]?

ENQUETEUR: Non pas combien de versements ont été effectués mais l'intervalle de temps. Exemple: Si la retraite a été perçue durant toute l'année, la réponse est 12. Dans le cas où le répondant a commencé à la percevoir en novembre, la réponse est 2.

<sup>48</sup> 2. An annuity from a personal pension plan (PREFON, Madelin): Such plans are not widespread in France : the two examples concern civil servants (PREFON) and self employed (Madelin).

<sup>49</sup> In wave 1, item 3 was dropped in France (considered as irrelevant or non significant).

Payments from *Mutuelles* are not asked for. Instead, HC058 asks if one has a complementary insurance (Mutuelle, complémentaire CMU). Moreover, out of pocket expenditures are asked in HC045 and after.

The total amount of last payment of such other regular payments (before any tax and contribution) is asked in question EP094, and the period covered by that payment is asked in question EP090. In wave 2, the amount is *after tax*.

#### EP094\_ TOTAL AMOUNT IN THE LAST PAYMENT

After any taxes and contributions, about how large was the average payment of [your life insurance payments/your private annuity or private personal pension payments/your alimony/your regular payments from charities/your long-term care insurance payments] in [previous year]?

#### A1.1.5 Reception of individual benefits

Finally, new questions on the reception of individual benefits were added in wave 2, such as **EP110** on public benefits (table A9). Note that this question is asked only to longitudinal respondents, not to the refresher sample and that **no amounts** are asked for these benefits.

**Table A9. Comparison of generic and French versions of EP110 in wave 2**

EP110_ RECEIVED PUBLIC BENEFITS	France
We would also like to know about times since our last interview through the present in which you received public benefits, such as early retirement benefits or unemployment benefits. Please look at card 23. Since [month year previous interview] have you received any of the benefits listed on this card?	<i>Nous aimerions aussi en savoir plus sur les périodes pendant lesquelles vous avez reçu des allocations ou aides publiques depuis notre dernier entretien. S'il vous plaît, regardez la carte 23. Depuis [mois année interview précédente] avez-vous bénéficié de l'une des allocations ou prestations suivantes?</i>
1. old age pension benefits	<i>1. minimum vieillesse /minimal old age income</i>
2. early retirement pension benefits	<i>2. allocation de préretraite</i>
3. unemployment benefits	<i>3. allocation chômage</i>
4. sickness benefits	<i>4. indemnité journalière de maladie</i>
5. disability insurance benefits	<i>5. prestation d'invalidité (PSD, ACTP, AAH, APA<sup>50</sup>)</i>
6. social assistance	<i>6. aide sociale, RMI/social help, minimum income for those under 65</i>
96. none of these	<i>96. aucune</i>

Moreover, whereas the words “disability insurance pension, or sickness benefits” appear in EP071 item 4, the words “disability insurance benefits” appear in EP110 item 5. There are no precise written instructions, but it seems that EP071 is for work related accident (hence the added precision in French

<sup>50</sup> IWER: PSD: Prestation spécifique dépendance specific dependency allocation (replaced by APA since 31/12/2001),. ACTP: Allocation compensatrice pour tierce personne ; AAH: Allocation adulte handicapé (minimum income to handicapped/disabled adult),. **APA** : Allocation Personnalisée d'Autonomie. Les indemnités d'accident du travail sont à classer en 5/ Benefits after a work related accident are to be coded 5.

As of 31-12-2006, 745,000 persons received AAH. They were 536,000 in 1994. The increase is attributed to a change in age regulation (some who got a child allocation, now receive an adult allocation), and to an increase in the prevalence of handicap due to premature births and an increase survival rate of premature children. The 1999 INSEE HID survey revealed that 40 percent of AAH beneficiaries had been disabled from birth. 27 percent are aged 50-59. It is possible to work and get AAH (which is a differential benefit), but as soon as one gets a pension above 588 € per month, one ceases to receive AAH (Reference : Nicolas and Robert, 2008).

APA goes to dependent 60 +, whether they live at home or in an institution ; it is not mean tested.

EP071 item 4). The new question EP110 is, thus, used for benefits linked to disability/"dependence"/invalidity.

income, main public disability insurance pension	received disability insurance benefits			Total
	not selec	selected	.	
not selected	1,844	51	961	2,856
selected	23	4	15	42
.	0	0	70	70
Total	1,867	55	1,046	2,968

Note that the term "pension d'invalidité", used in French surveys is missing in SHARE FR, as we used instead the term "assurance". For wave 4 we have put "pension d'invalidité" in EP071, item 4, as it should be.

Furthermore, in wave 2, Unemployment benefit is asked both in EP071 (to all) and EP110 (to the longitudinal sample). However, the response frequency to both questions differs significantly:

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. tab ep071d06 ep110d03 if country==17 , miss
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income, public unemployment benefit	received unemployment benefits			Total
	not selec	selected	.	
not selected	1,856	40	965	2,861
selected	5	21	11	37
.	0	0	70	70
Total	1,861	61	1,046	2,968

While 21 respondents selected both answers, 5 selected only EP071, which was asked first, and 40 selected only EP110. Could it be because there are less items on the showcard 23 (linked to question EP110) than on the showcard 29 (linked to question EP071)?

#### **A1.1.6. Other household members income, other benefits, total household income check**

After questions on children, financial transfers, and housing (including HO030 on income from real estate), the questionnaire returns to income in a household level module. HH001 asks the household respondent whether non-eligible household members contributed to the household income. Note that it does not ask whether eligible non-respondents contributed, hence no income was known for non-responding spouse/partner in wave 1.

#### **HH001\_ OTHER CONTRIBUTION TO HOUSEHOLD INCOME**

**Although we may have asked you [or other members of your household] some of the details earlier, it is important for us to understand your household's situation correctly. In the last**



year, that is in [previous year], was there any household member who contributed to your household income and who is not part of this interview?

IWER:IF NECESSARY READ LIST OF ELIGIBLES: PART OF THIS INTERVIEW ARE [list with eligible respondents]

Question HH002 then asks the amount of total income of the other household members (table A10). In wave 2, **before** any tax or contribution was replaced by **after** any tax or contribution.

**Table A10. Comparison of HH002 across waves**

AMOUNT OF TOTAL INCOME OF OTHER HH MEMBERS Wave 1	AMOUNT OF TOTAL INCOME OF OTHER HH MEMBERS Wave 2
<b>HH002: TOTAL INCOME OTHER HOUSEHOLD MEMBERS</b> Can you give us the approximate total amount of income received in 2003 by other household members <b>before</b> any tax or contribution?	<b>HH002: TOTAL INCOME OTHER HOUSEHOLD MEMBERS</b> Can you give us the approximate total amount of income received in [previous year] by other household members <b>after</b> any tax or contribution?

After HH010 (filter question: Some households receive payments such as housing allowances, child benefits, poverty relief etc.. Has your household or anyone in your household received any such payments in [previous year])?<sup>51</sup>, HH011 (table A11) asks for the approximate total amount of income (**before** any tax and contribution in wave 1 and **after** any tax or contribution in wave 2) received in the previous year from other sources<sup>52</sup>.

**Table A11. Comparison of HH011 across waves**

HH INCOME FROM OTHER SOURCES Wave 1	HH INCOME FROM OTHER SOURCES Wave 2
<b>HH011_ ADDITIONAL INCOME RECEIVED BY ALL HOUSEHOLD MEMBERS IN LAST YEAR</b> Please give us the approximate total amount of income from these benefits that you received as a household in 2003, before any taxes and contributions.	<b>HH011_ ADDITIONAL INCOME RECEIVED BY ALL HOUSEHOLD MEMBERS IN LAST YEAR</b> Please give us the approximate total amount of income from these benefits that you received as a household in [previous year], <b>after</b> any taxes and contributions.

Whereas the module HH in wave 1 stops with question HH011, in wave 2, the following questions were added:

**HH017\_ TOTAL INCOME RECEIVED BY ALL HOUSEHOLD MEMBERS IN LAST MONTH**  
 To summarize, how much was the overall income, **after tax**, that your entire household had in an average month in [previous year]? Translated in French as “Finalement, à combien estimez-vous le

<sup>51</sup> **HH010\_ INCOME FROM OTHER SOURCES**

Certains ménages reçoivent des allocations comme les allocations logement, les allocations familiales, une allocation de revenu minimum etc. Votre ménage, ou un membre de votre ménage, a-t-il reçu des prestations de ce type en [année précédente]?

An instruction was added in wave 2, to remind the respondent of the names used in France for those benefits : ENQUETEUR :ALLOCATION LOGEMENT: ALF (ALLOCATION LOGEMENT A CARACTERE FAMILIAL) , ALS (ALLOCATION LOGEMENT A CARACTERE SOCIAL) OU APL (AIDE PERSONNALISÉE AU LOGEMENT)

<sup>52</sup> In France : Pouvez-vous s'il vous plaît m'indiquer le montant total des allocations de ce type perçues par votre ménage en [année précédente] ?

revenu total mensuel moyen, **après impôts**, de votre ménage en [année précédente]? ENQUETEUR: On essaie bien ici de faire évaluer au ménage dans son ensemble son revenu mensuel net d'impôts».

Here we tried to get at **after** tax household income even in France. If respondents fill in HH017 with RF/DK, the next question (HH018) asks them to indicate a broad income class among those indicated in the showcard 42.

Cavapozzi (2008) highlighted the presence of outliers in the raw distribution (right tail) of HH017 for wave 2 (see his Annex 2 for details) across countries, which may be explained either by the fact that some respondents report an annual income amount instead of a monthly income because of misinterpretation of the question; or by the presence of non-responding partners. After correcting for these two points, a new variable was computed (HH017\_c). However, although the corrective strategy appeared ameliorative, some unreliable amounts remained in the right tail of HH017\_c (at least 5 percent). It was therefore agreed that HH017\_c should only be used for ex-post checks (Weber, 2009).

With regard to the presence of non-responding partners, in France, their rate reached 5.3 percent in wave 1 and 10.6 percent in wave 2. The numbers are respectively 12.0 percent and 13.6 percent for the whole SHARE sample. However, imputed weights correct for these missing values in both waves.

#### **A1.1.7 Income from assets**

Finally, after a Consumption module, which also asks for amounts of expenditures, asset incomes are asked in the AS 'Assets' module, each one after asking the financial respondent whether the HH (couple) owns the asset (table A12). The main difference between wave 1 and wave 2 is again the replacement of 'before taxes' by 'after taxes' amounts, except in France where the specification 'after taxes' was dropped. In addition, whereas wave 1 asks for the amount (without further specification), wave 2 asks for the **total** amount for **both partners**.

**Table A12. Comparison of income from assets (AS) questions across waves**

INCOMES FROM ASSETS Wave 1	INCOMES FROM ASSETS Wave 2
IWER: AMOUNT IN {{local currency}}; <b>BEFORE TAXES</b>    enter an amount	IWER: AMOUNT IN {{local currency}}; <b>AFTER TAXES</b> ; CODE TOTAL AMOUNT FOR <b>BOTH PARTNERS</b> {enter an amount}
<b>AS005_ INTEREST FROM BANK ACCOUNTS</b> About how much interest income did you [or] [your] [husband/wife/partner] receive from such accounts in 2003?	<b>AS005_ INTEREST FROM BANK ACCOUNTS</b> <b>After taxes</b> , about how much interest income did you [and your] [husband/wife/partner/] receive from such accounts in [previous year]?
<b>AS009_ INTEREST FROM GOVERNMENT BONDS</b> About how much interest income did you [or] [your] [husband/wife/partner] receive from these bonds in 2003?	<b>AS009_ INTEREST FROM BONDS</b> <b>After taxes</b> , about how much interest income did you [and your] [husband/wife/partner/] receive from these bonds in [previous year]?
<b>AS015_ DIVIDEND FROM STOCKS</b> About how much dividend income did you [or] [your] [husband/wife/partner] receive from these stocks in 2003?	<b>AS015_ DIVIDEND FROM STOCKS</b> <b>After taxes</b> , about how much dividend income did you [and your] [husband/wife/partner] receive from these stocks in [previous year]?
<b>AS058_ INTEREST OR DIVIDEND ON MUTUAL FUNDS</b> About how much interest or dividend income did you [or] [your] [husband/wife/partner] earn with mutual funds or managed investment accounts in 2003?	<b>AS058_ INTEREST OR DIVIDEND ON MUTUAL FUNDS</b> <b>After taxes</b> , about how much interest or dividend income did you [and your] [husband/wife/partner/] earn with mutual funds or managed investment accounts in [previous year]?

## A1.2. The income questions in the French Housing surveys

This section presents the income questions in a regular basic INSEE CAPI survey, taking the Housing 2002 cross sectional survey as an example. Activity is dealt with in a CV section, called here *Tronc Commun des enquêtes Ménages* (Fixed Common Trunk of Households Surveys). Questions are asked for all individuals aged 16+. Note that they are asked **for** all individuals, but it does not have to be **to** all individuals personally. Any knowledgeable household member can answer.

### **OCCUPA** What is the current situation of M?

IWER: Will be classified as having a job a person who:

Is self employed or salaried, even part-time; helps a family member in his/her job even with no pay; is a paid intern, interim etc. including sick, maternity leave, vacations etc.

Do not include military service, pre-retirement or invalidity.

- 1 Has a job
- 2 Unemployed (registered or not at ANPE)
- 3 Student or unpaid internship
- 4 Military service
- 5 Retired (from a salaried job) or pre-retired
- 6 Retired from a business (former farmer, artisan, shopkeeper)
- 7 Homemaker (including parental leave)
- 8 Other non employed (inc. those who only have a survivor pension, and invalids).

If OCCUPA=1

Is M effectively working, or in long term leave (more than one month)?

If OCCUPA=2 to 8

ACTPA Have M been professionally active in the past, even a long time ago?

If Yes, when did M stop working.

If OCCUPA=1 or ACTPA=yes, or (M is a widow and ACTPA=no), questions are asked about detailed Status (salaried, self-employed in 7 positions), professional position (10 positions), precise firm activity, full time or part time.

These questions refer to former situation if OCCUPA= 2 to 8, or to husband's occupation for never employed widows. There are additional questions for farmers about size of land and type of production.

Then the survey goes on with housing questions. Income is purposely dealt with at the very end of the survey. Income is treated in two parts: first, a **list** of income sources is offered and the respondent mentions whether any member of the household receives each type or not; then, if yes, **amounts over the last 12 months** are asked for, together with precisions about extras. Finally, verification is made to assess the overall plausibility of the household income.

The income section begins with an introductory motivation "Income questions are important because they are used to evaluate the housing budget share. We shall first be interested in income types that each household member receives, then by the corresponding amounts".

### **A1.2.1. Section A - EXISTENCE OF RESOURCES**

RSAL Did anybody receive any salary or *traitement* (a civil servant salary) during the last 12 months?

If yes, a list of household members is proposed and the id number of those who get the salary is entered.

The same process is repeated for unemployment benefits (*Indemnités de chômage et allocation de solidarité spécifique*).<sup>53</sup> Family, handicap, or education benefits, which are received at the household level, are enumerated in detail<sup>54</sup> (tables A13-A14).

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<sup>53</sup> Y a-t-il dans votre ménage une ou plusieurs personnes qui ont perçu des indemnités de chômage ou l'allocation de solidarité spécifique au cours des 12 derniers mois (*versées par l'ASSEDIC*) ?

- Non compris : indemnités de licenciement, prime de départ

- Do not include the pre-retired

<sup>54</sup> With the following RVER added question (for family and handicap), because they may be directly added on the payroll: Par qui ces prestations ont-elles été versées? 1. En totalité par la caisse d'allocations familiales (CAF) ou en totalité par la Mutualité Sociale Agricole (MSA).2. En totalité par l'employeur. 3. En partie par la CAF ou la MSA, en partie par l'employeur.

**Table A13. Family , allowances, disability benefits (Prestations familiales, handicap)**

<i>Prestations familiales</i>	<i>Family Allowances</i>
1. Allocations familiales (y.c. allocation d'adoption)	1. Family Allowances (inc. adoption)
2. Complément familial ( <i>ne pas prendre en compte le supplément familial de traitement des fonctionnaires</i> )	2. Family Complement ( <i>excl. Family supplement of civil servants</i> )
3. Allocation de parent isolé (API)	3. Lone parent benefit
4. Allocation de soutien familial (ASF)	4. Family support benefit (ASF)
<i>Prestations familiales liées à la naissance ou à la présence de petits enfants</i>	<i>Family Allowances linked to the birth or presence of young children</i>
5. Allocation pour jeune enfant (APJE)	5. Young child benefit
6. Allocation parentale d'éducation (APE) (congé parental)	6. Parent education allowance (parental leave)
7. Aide à la famille pour l'emploi d'une assistance maternelle (AFEAMA)	7. Help to families who employs a mother's help (child)
8. Allocation de garde d'enfant à domicile (AGED)	8. Allowance for child at home custody
9. Prestation d'accueil du jeune enfant (PAJE)	9. Young child allowance
<i>Prestations handicap</i>	<i>Disability benefits</i>
10 Allocation pour adulte handicapé (AAH)	10 Handicapped adult benefit
11. Allocation d'éducation spéciale (AES)	11. Special Education allowance
12. Aucune de ces prestations	12. None of those

**Table A14. School allocation, scholarships/Aide à la scolarité**

1. Allocation de rentrée scolaire (ARS)	1. Allowance for the New school year
2. Aide à la scolarité (élève des collèges) (ASCO)	2. Help for a middle school age child
3. Bourses d'étudiants ou allocation...(BOU)	3. Student scholarship
4. Non, aucune de ces aides (AUC)	4. None of those

**Long-term care benefit / APA**

Q: Does any of the household members get a personal autonomy allowance/ *allocation personnalisée à l'autonomie* (A.P.A.)? IWER : These are allowances (prestations) given to handicapped persons or elderly needing long term care (*personnes âgées dépendantes*) to cover the expenses linked to their health status. Those benefits are paid by the local administration (*Conseil Général*).

**Minimum Income/Allocations RMI**

**RMIC/RMIA** During the last 12 months, did the reference person or spouse/other household members receive RMI?

**Pensions**

**RRET** During the last 12 months, did any of the household members draw a pension, a *retraite* (retirement income), a pre-retirement pension, a *rente* (life annuity)?

Again, the id number of the persons drawing a pension is asked for. And for each person who gets a pension, a question on the type of pension (see table A15).

**Table A15. RRETI Quel(s) type(s) de pension ou de retraite M. a-t-il perçu ?**

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1. Une retraite (de base ou complémentaire)	1. A pension (basic or complementary)
2. Une pension de réversion (y.c. allocation d'assurance veuvage)	2. A survivor's pension
3. Le minimum vieillesse	3. Old age minimum income
4. Une préretraite	4. A pre-retirement pension
5. Une allocation ou majoration pour tierce personne	5. An allocation or surcharge for third party
6. Une indemnité viagère de départ (anciens agriculteurs uniquement)	6. A special life annuity for retired farmers
7. Une retraite d'ancien combattant (homme uniquement)	7. War pension
8. Une pension d'invalidité (y.c. rente d'accident du travail et allocation supplémentaire d'invalidité)	8. A disability pension (inc. Work accident, and supplementary invalidity allocation)
9. Une autre pension	9. Other pension
10. Une rente (assurance-vie, rente-éducation, etc.)	10. An annuity (death insurance, rente-education, etc.)
11. Une autre rente viagère	11. Another life annuity

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### **Self-Employment Income/ Revenus non salariaux**

**RNSAL** During the last 12 months, did one of the household members get non salaried income (self-employed /*indépendants*, *chefs d'entreprise/CEO*, *professions libérales/liberal professions*) ?

These incomes can be : *un bénéfice agricole (BA)*, *un bénéfice industriel et commercial (BIC)*, *un bénéfice non commercial (BNC)*, *des revenus de gérants et associés (RGA)*.

And again, the id number of the persons receiving self-employment income is asked for.

### **Real estate income/ Revenus fonciers**

During the last 12 months, did one of the household members get rents from housing, garages, offices, or shops, or did he get farm rent/*fermages* ?

### **Investment income/ revenu d'investissement**

In 2002, there was only one question "Did your household get interest, dividends, from saving accounts, bonds, actions, obligations, SICAV etc. In 2006 the question was more detailed, and enumerated types of investment (see table A16).

**Table A16. Among the following financial investments, which ones are held by the household members?**

1	Livrets d'épargne exonérés : livret A, bleu, jeune, bancaires, LEP, CODEVI et comptes courants rémunérés	Non taxed saving accounts, and remunerated current bank account
2	Livrets soumis à l'impôt : livret B, « superlivrets », ...	Taxed saving accounts
3	Épargne logement : livrets, ou comptes, ou plans	Housing contractual saving
4	Valeurs mobilières : actions ou obligations, plan d'épargne action (PEA), parts de SARL, SICAV, FCP, SCPI...	Securities: SHAREs or bonds, saving plan in SHAREs (PEA), parts in SARL, SICAV, FCP, SCPI...
5	Assurance-vie, épargne retraite : PEP, retraite complémentaire...	Life insurance, contractual pension savings : PEP, complementary pension savings
6	Bons d'épargne, bons anonymes, bons du Trésor, de capitalisation...	Bonds
7	Autre placement financier	Other financial investment
8	Aucun placement financier	No financial investment

**Other types of income**

**RTRA** Did your household get alimony, regular financial transfers from family or from friends, including free rent, directly or indirectly?

If yes, the type of transfer was asked (table A17).

**Table A17. Type of received transfers**

1	Le paiement (direct ou indirect) du loyer	Rent payment (direct or indirect)
2	Une pension alimentaire	Alimony
3	Une autre aide financière régulière	Another financial transfers from family or from friends

**A1.2.2. Section B - Income amount**

"Now we are interested in the various incomes that your household received during the last 12 months". For each person listed in the previous section, and for each type of income (wages and bonus, unemployment, pension), total net amount is asked<sup>55</sup>. It is followed directly by a question on bonus<sup>56</sup>. After each income type, a question asks for confirmation: Did you describe all wages received by your household in the last 12 months/*depuis 12 mois* ? If not, the list of persons who receive the income can be modified. In case of non-response, a question asks for the amount in brackets.

In the French Housing surveys, the net income is **net of social contributions**, as it appears on the paycheck; it is not net of income tax. Income tax is paid annually after an income tax return is filled in in May t+1 for income in year t.

<sup>55</sup> **REVER** : Quel est le montant TOTAL "NET" des salaires de M perçus depuis 12 mois ? **IWER** : INCLURE si possible les PRIMES dans ce montant. Sinon, la question suivante permet de les recenser. Sickness benefits (Les indemnités journalières (prestations maladies, indemnités de maire, ...)) are to be declared as wages.

<sup>56</sup> (EN PLUS du montant que vous venez de m'indiquer, est-ce que M. a perçu des primes ou des indemnités (*13<sup>ème</sup> mois, primes de fin d'année, participation ou intéressement, ...*) ? if yes, Quel est le montant de ces compléments de salaire pour les 12 derniers mois ?).

Depending on the answer to REVER (cf. footnote 54), questions are asked separately on family benefits paid by CAF or MSA (*Ne pas inclure dans ce montant les aides au logement (APL, AL)*), or in case they are directly paid by the employer (for civil servants), whether they were already included in the wages, and if not, what was their amount. If REVER is unknown, or no amount can be given, RMFAMTRA is asked.

**RMFAMTRA** Could you nevertheless give a bracket for the TOTAL AMOUNT of family benefits (*prestations familiales*) received by your household during the last 12 months (including help to school age children). 10 brackets.

If RSCO $\neq$  4 and if RMFAMTRA is not asked :

**RMSCO** During the last 12 months, you benefited from [New School Year benefit / Help to school aged children /a scholarship], What is the amount of this benefit (aide) for the last 12 months?

Again, similar questions are asked for RMI. For each type of pension a loop asks for the amount<sup>57</sup>, with in the end a verification question, as above (did you describe all pensions and other retirement incomes), and a bracket question in case of non-response.

For non-salaried incomes, the questions are divided into two. First, "What is the amount of non salaried incomes received by M. during the last 12 months, or the last income reported to the tax authorities/*bénéfice déclaré au fisc* (or an estimation<sup>58</sup>)? Secondly, if income is zero, what is the amount of ANNUAL deficit?, with the same check/bracket. For real estate income, both gross, and net of expenses income are asked, as well as possible deficit. For dividends and interest income, only brackets are directly proposed. Finally, other types of income (alimonies, etc.) are reviewed.

A global household income is computed by CAPI from all previously given answers, and the following message appears: "Your household income over the last 12 months amounts to TI euros, or FI francs, hence around MI euros, or MF francs per month (excluding the income for which you did not provide the amount). Do you agree with this estimation?" In case of disagreement, a table appears on the screen with the amounts of the 7 main income types, and the respondent is asked "on which amount do you disagree", and they can be corrected.

Another internal CAPI check is to compare income with rents or monthly mortgage repayment. If income is below either number, the following question appears.

**RVERIFA** You declared your rent/mortgage is x per month, and your income is M, are you sure you did not forget anything, or did not get mixed with the currency unit?

1. No, there must be an error (that the interviewer will correct)
2. Yes, this is because one or more household members did not get any income for part of the year.

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<sup>57</sup> If  $RMRET(retraite)$  between 1 and 999 997 and  $RMRET(pension de réversion) = 0$  or  $(RMRET(pension de réversion)$  between 1 et 999 997 and  $RMRET(retraite) = 0$ ) :

This amount of X Euros that you gave, does it include both the pension and the survivor's pension ?

<sup>58</sup> It is typically difficult for a self-employed to assess her income before she has filled her tax return. This is done quite late in year y+1.



3. Yes, for other reasons.

if 3 , reasons are given in clear.

In the whole sample, the check was activated for 244 households (0.8 percent of the sample). If RVERIF is different from 1, 2 or 3, there is another automatic check in case the monthly income is less than 1000 francs (152 euro):

**RVERIB** Are you sure you did not forget anything, or did not mix the currency unit?

In the whole sample, the check was activated for 56 households (0.2 percent of the sample). If the household refuses to give the income, or one of the amounts, an order of magnitude for the average monthly household income is asked (including amounts already mentioned), in 11 brackets.

In 2006, the verification questions and internal check were dropped<sup>59</sup>, and a question on total estimated asset was added (brackets and 15 modalities, in francs and euro).

“In your opinion, if you had to estimate what the members of your household possess today, how much could you retrieve from it? (Include all forms of assets/*biens* ; vehicles, furniture, real estate, financial investments, businesses, etc...If you borrowed, do not deduce the debts)”.

Finally, as it is a housing survey, housing benefits are asked separately, in the rental housing and home ownership sections. For tenants, the question on housing allowances is detailed into 6 questions (Does your rent receipt/bill (quittance) include a housing benefit (ALS, ALF or APL), if no, Do you benefit from ALS, ALF or APL. What is the monthly amount of the last payment (you can read it on the bill, or on a paper from CAF, CMSA or your employer (SNCF, RATP...)). Did it include extras or back payment (*rappe*l); if yes, was is the typical payment?). For owners, there are 4 questions similar to the ones for tenants.

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<sup>59</sup> The drop of verification questions and internal checks was made to save time. However, the process of data cleaning proved more difficult and the questions will be reintroduced in the next survey.

### **A1.3. The income questions in SILC France**

This section presents the income questions in a regular SILC survey in France. Incomes are asked in great details, both at household and individual levels. Indeed, the household respondent answers the SILC TCM (CV) plus a household questionnaire (housing benefits, family benefits) and for each 16+ an individual questionnaire is filled (about wages, pensions, unemployment benefit, etc.). A proxy is allowed to give individual level answers.

#### **A1.3.1 Use of documents and administrative data**

Respondents are asked whether they want to use documents (tax assessment, pay slip, etc.) during the interview, and the questionnaire is different if the respondent actually does so. For instance if the respondent uses his tax assessment document he is asked to give his net taxable wage income (i.e. annual earnings before tax); if not, he is first asked to use the annual wages summary that employers send to employees every year. Finally, if he does not use it, he is simply asked about the number of months worked during the last year and his monthly employment income, eventually with brackets in case he refuses to or cannot give the precise amount. Four out of five responding households made use of such a document. This document is pre filled by the tax administration, and is related to employment incomes in 2005 (for the 2006 survey).

As SILC is a survey about income, and as the respondents know it (for instance they are asked to prepare their documents beforehand), very few households refuse to answer to income questions (generally they are non-responding households).

Since 2008, when the household gives permission, the income tax returns are matched (using name and address) with SILC to lighten the survey burden for the respondents and get more precise income amounts. Questions on amounts are dropped in most of the cases (most households give permission), but the questions about reception of type of incomes keep being asked, in order to facilitate post imputation in case of a matching error.

#### **A1.3.2 Mode of questioning**

The general strategy is the same as in all INSEE surveys, first to screen all types of income, then to ask for amounts. A list of different sources of income is given and the household respondent mentions whether any member of the household receives it or not. Various types of resources (11 types in all) are screened in the same way (yes/no): wages, self-employment income, unemployment benefits, pre retirement pension and pension, disability pension and handicapped adult benefit, family allowances and student scholarship, housing allowance, minimum income, real estate income, financial income, alimony and financial help received from parents or friends.

At that point, and for a first step, a list of the current types of income received by the household is read to the household respondent and whether he is going to use documents or not, he is asked to provide a first estimation of the current global *monthly* household income:

“You indicated that you currently receive [list of the type of resources]. Taking into account all type of income and not making too precise calculations, what is currently the monthly amount of the resources for the entire household?”<sup>60</sup>.

It is a net (from social contribution but before taxes) income. Then currency (francs or euro) and a confirmation are asked.

### A1.3.3 Checks

Numerous checks are performed during the fieldwork to get more precise answers and to make the data cleaning process easier.

#### Internal controls:

Controls on inclusion are performed to avoid double counting. For instance, after they answered about earnings respondents are asked to give items that might be excluded from the amount they have just given, for instance because they are non taxable<sup>61</sup>. Then the corresponding amounts are asked. Answering in francs is allowed for some amounts, especially when they are old (selling price of housing, amortization table for loan interests, etc.);

#### External controls (use of preload):

As SILC is a panel, preload data are used to perform checks during the fieldwork:

a) Verification of amounts: a warning message appears when amounts from the current and former waves are filled, and amount of the current wave has decreased by more than 20 percent (or 50 percent depending on the amount) or increased by more than 30 percent (100 percent). For instance: “during the last survey, the total monthly resources for your household were €2,555, it has significantly increased. Can you please confirm that this total is currently €3,500?”

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<sup>60</sup> En prenant en compte tous ces types de revenus et sans faire de calculs trop précis pour l’instant, quel est actuellement le montant MENSUEL des ressources de l’ensemble de votre ménage? Il s’agit du revenu net (de cotisations sociales et de C.S.G.) avant impôts. Si les revenus sont fluctuants, prendre une moyenne. Pour répondre à cette question, il est prévu de ne pas recourir aux documents. Dans la suite de l’enquête on demandera plus de précisions sur l’année ^AN.

<sup>61</sup> Dans la liste suivante, quels sont les éléments de rémunération que vous avez[^PRENOM a] perçus en ^AN mais qui ne sont pas inclus dans les montants précédents ?

Ces éléments peuvent être non imposables en partie ou en totalité, imposables dans une rubrique particulière de la déclaration, imposables à la source ou à l’étranger, etc.

Ne pas tenir compte des prestations familiales ni des indemnités de remboursement de frais professionnels, mais inclure la rémunération d’activités occasionnelles.

Tendre la carte **IN7** (Suppléments non imposables 2005)

Plusieurs réponses possibles

1. Rémunérations non imposables en France
2. Primes, pourboires et commissions, compléments de rémunération exonérés
3. Participation et intéressement aux résultats versés par l’entreprise
4. Dividendes versés aux dirigeants salariés de leur entreprise
5. Stock options reçues gratuitement ou acquises en dessous de leur valeur
6. Abondement versé par l’entreprise sur un plan d’épargne entreprise ou plan d’épargne pour la retraite collectif (PERCO)
7. Rémunération d’activités électives
8. Rémunération d’assistantes maternelles
9. D’autres éléments de rémunération (à l’exclusion des prestations familiales et des indemnités de remboursement de frais professionnels)
10. Aucun des éléments cités ci-dessus

DN

REFUS

b) Verification of “global absence”: a warning message appears if at least one response option was selected in the former wave, and none is in the current wave;

c) A verification of missing options: a warning box appears if one option was selected in the former wave and the option is not selected in the current wave.

Some sets of questions are different if asked in longitudinal, in order to increase the quality of the answers. For instance, in the individual part of the questionnaire:

- refresher sample: *Did you [did ^PRENOM] contribute voluntarily (à titre privé) in year^AN to an individual pension plan (plan d'épargne retraite ou un fonds de pension destinés à vous assurer une rente de retraite) or invalidity pension plan or fund (PERP, ancien PEIR, PREFON, CREF, contrats Madelin, Fonpel, ancienne COREVA, organic complémentaire volontaire, complémentaire d'ancien combattant etc ...)?*

(Do not include life insurance contract (contrat d'assurance-vie) with possible *sortie en capital*)

- longitudinal sample :

In year ^AN-1 you had contributed to an individual pension plan or invalidity pension plan or fund (same list as above). Did you keep on contributing in ^AN ?

Even without any suspicious evolution, the respondent is asked to confirm the former monthly amount for the global household income.

#### **A1.3.4 Other household level income**

Then the recent changes in household composition are explored, and the section on detailed family benefits for 2005 begins. The household respondent only mentions whether any member of the household received it or not. The corresponding amounts will be asked at the individual level, in the individual part of the questionnaire. Again verifications are performed in case of a panel member.

Then for each child between 9 and 15 years old, whether they get a student scholarship is asked, and this time the amounts are asked directly to the household respondent, since a child under 16 is not a SILC respondent. Verifications on the amounts are performed. Note that this question is asked differently whether the household respondent declared to receive a student scholarship in the former wave or not.

After two modules that are not related to income (modules on child care, and housing), come questions about housing benefits. The regularity of the benefits is asked (the number of months in 2005 the household received it). If it is regular (each month of the former year) a monthly amount is asked, if it is irregular, an annual amount. Verification by comparison to the former wave amount: If (more than 80 € per month and less than 80 percent or more than 130 percent of the former amount) or if (less than 80 € per month and less than 50 percent or more than 200 percent of the former amount), confirmation is asked.

Then comes the part of the household questionnaire about real estate income. The household respondent is asked whether the household owns another dwelling apart from the one they live in. Depending on what the respondent has answered in the former wave, they are asked if they still rent out housing or land or if they rent out housing or land; then if yes how much they get for the global rent. Both gross, and net of expenses income is asked, along with possible deficit. Comparisons between current and former answers are performed for verification.

[There are also modules on income tax, wealth tax, local tax, credits, and savings].

### A1.3.5 Income questions in the individual part of the questionnaire

#### a) Wages/earnings

The objective is to retrieve all the wages (from principal or secondary activity), and questioning is different whether the respondent is willing to use paper documents or not. A first question identifies self-employment. Then the annual wage before taxes is asked in a three steps process:

- Did you get wages, *traitement* (for civil servant) for your main or secondary activity last year ? <sup>62</sup>
- Then a question about wages from different jobs (if yes, how much?).
- Then the amount that has been declared for tax (i.e. before tax and annual) is asked. <sup>63</sup>

**Remark: only when the respondent does not use documents**, an annual wage is computed from the monthly wage and the respondent is asked to give his agreement. For each jobs, a loop asks for

- duration of the payment : for how many months did you get this wage (salaire ou traitement) .
- usual monthly wage (if non-response brackets for monthly wages (less than 500, 1000, 1250, 1500, 2000, 2500, 3000, 5000, 8000, more)),
- elements that are not included in the amount that the respondent has just given. Contribution types and annual corresponding amounts are also asked for.

Then an annual wage is computed, and confirmation is asked for<sup>64</sup>. A correction can be done directly by the interviewer.

And a check ! (n/n-1)

- b) In kind benefits
- c) Self-employment income
- d) Unemployment benefits and lay-off indemnity
- e) Pre-retirement income (if individual >34)

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<sup>62</sup> Avez-vous [^PRENOM a-t-il(elle)] perçu **au cours de l'année ^AN** des salaires, traitements, ou rémunérations, soit au titre de votre [son] activité principale soit au titre d'une activité secondaire, de jobs d'été, de vacances... ?Inclure :- droits d'auteur, piges- activités éducatives ou associatives, activités électives- heures de ménage ou de services aux particuliers- rémunérations de gérants dirigeants de société- rémunérations de salariés d'une entreprise familiale etc...

<sup>63</sup> **Quel est le montant déclaré au fisc en France de tous les salaires, traitements, ou rémunérations que vous avez [^PRENOM a] perçus pour l'année ^AN ? Il s'agit du montant à reporter sur la déclaration, avant tout abatement.** Annual brackets if non-response (less than 4000, 8000, 14000, 22000, 37000, 46000, 80000, more)

<sup>64</sup> **Sur la base des éléments que nous avons enregistrés, le montant total de votre salaire reçu en ^AN se situerait ^texte 1 ou ^texte 2. Etes-vous d'accord avec cet ordre de grandeur ? Sinon à corriger.**

There is a verification that in case the respondent declares to have received an indemnity for early retirement or a pre retirement pension they are not double counted in unemployment benefits or wages.

f) Annual pensions – retirement income (if individual >34)

For the 35-59 year-olds, first the presence of a retirement income is asked before the set of questions about retirement income; for the 60+, the set of questions is systematically launched.

**In the following list, what are the elements of pensions, retirement income, annuities, that [Name] received in year ^AN? Code all that apply**

1. *Retraite de base / public pension*
2. *Retraite complémentaire obligatoire (ARRCO, AGIRC,...) / Mandatory private complementary pension*
3. *Retraite surcomplémentaire mise en place par l'entreprise (art. 82, art. 83, art.39), qui complète les retraites obligatoires*
4. *Pension de réversion (y compris allocation d'assurance veuvage) / A survivor's pension*
5. *Retraite complémentaire, provenant de contrats de retraite volontaire (loi Madelin, Préfon, Cref, Fonpel, ancienne COREVA, organisme complémentaire volontaire, complémentaire d'ancien combattant, etc...)/ Voluntary private pension*
6. *Rente provenant de contrats d'assurance-vie liquidés, décès, rente éducation ou PEP /*
7. *Rente viagère provenant de la vente d'un bien immobilier/ annuity from selling real estate*
8. *Minimum vieillesse / Minimum pension*
9. *Autres revenus de pensions, retraites et rentes (y c. Indemnité viagère de départ des anciens agriculteurs)/ other pension income*
10. *Aucune pension, retraite ou rente/ no pension income*

If somebody declared he was retired and does not mention any item in the list, he is asked for a confirmation. For each type of retirement income the periodicity is asked before the amount is asked. If the respondent agrees to look into his documents, then the annual amount is asked for. Roughly 80 percent of the responding households agree to use their documents.

Remark: for those who disagree, and since one can get different pensions from different “caisses de retraite” (in case the respondent has been employed by various economic sectors), the number of pension organisms providing a pension is asked. For each of them either they declare that the periodicity of the pension is regular, and they are asked for (1) the periodicity (month, quarter) (2) the amount corresponding to this periodicity; or they declare that it is irregular and they are asked for the annual amount.

For many respondents, separating pensions by types in the above list is difficult as, for instance, items 1 and 2 may be received lumped together. To avoid double counting, after each pension amount, the following question is asked:

*Is this amount already included in what you mentioned before?*

If yes, the respondent is asked to name in which type it was included (type 1 to 7 in the above list).

If the respondent declared receiving the minimum pension (minimum vieillesse) he is also asked whether he received it for himself or for his family.

Then an annual pension is computed, and confirmation is asked, even if respondents have agreed to use their documents, therefore for every respondents. If the respondent disagrees, a correction can be done directly by the interviewer. Checks of consistency between the two last waves are also performed.

g) épargne retraite

Prefon, Cref, loi Madelin

h) family benefits

i) aides sociales

j) scholarships (16-30 years old)

k) other types of income:

1. Indemnités journalières de maladie ou de maternité (health day benefits)
2. Indemnités journalières d'accident du travail
3. Allocation Adulte Handicapé (AAH)
4. Pension militaire d'invalidité ou de victime de guerre
5. Pension d'accidenté du travail
6. Pension d'invalidité
7. Aide personnalisée à l'autonomie (APA)
8. Prestation spécifique dépendance (PSD)
9. Allocation compensatrice pour tierce personne (ACTP)

And, finally, any exceptional income.

### **A1.3.6 Imputations**

Some income amounts from the 2006 SILC survey have been modified. Indeed, when comparing with ERF (enquête revenus fiscaux) from income tax returns files, the benchmark distribution for SILC, discrepancies appeared. Many reasons can explain these differences: francs / euro errors, periodicity errors (especially on pensions). Depending on whether the household is being interviewed for the first time or is in the longitudinal sample, two different imputation methods have been performed for individual incomes. In the case of a new sample an income equation is estimated on respondents and is used to impute non-respondents' income. In the second case of the longitudinal sample the income given by the individual in the former wave is used for the imputation. A ratio between current and

former income is estimated on the field of the 2005 and 2006 respondents, and this ratio is used to compute the income on those who only responded to the 2005 survey. This method is being used for imputations of wages and retirement pensions.

More precisely, for wages (PY010N), first, one must determine which individual responses would be imputed: they are compared with maxima that are observed in ERF, taking account of gender and socio-professional category. Then, if necessary, imputations are performed according to an 8 different groups stratification, that depends on gender, whether the job is qualified or not, and whether the individual is private employee or public servant. In each of these groups a set of independent variables is used to explain wages, with the variables being common to all groups: seniority, seniority squared, atypical job or not, and education level (diploma). Concerning private sector employees, the type of the contract, working in Ile-de- France or not, the proportion of women in the sector, and being an executive or not is added. In the public sector, being a teacher or not, working for the national state or not (fonction publique d'état), and the qualification.



## A2. Descriptive and Analytical Tables

**Table 1. Sample frames: Comparison between SHARE and INSEE surveys**

	Regions	Date of field work	Sample
SHARE 04-05 Wave 1	Ile de France, Nord Pas de Calais, Pays de Loire Aquitaine, Rhône-Alpes, Languedoc-Roussillon	Summer 2004 or Summer 2005	Ordinary households with at least one individual. born before 1955
SHARE 06 Wave 2	Idem + PACA <sup>65</sup>	Nov. 2006 - Jan. 2007	Panel (+ nursing home if the person moved after wave 1 <sup>66</sup> )+ refresher sample (ordinary households with at least one individual. born before 1957)
Housing survey EL 2002	Metropolitan France	Dec 2001- Jan 2002	Ordinary households.
Housing survey EL 2006	Idem	2006	Idem <sup>67</sup>
SILC 2006	Idem	2006	Idem. Rotating panel.
Health Survey 02	Idem	2002-2003	Idem
BDF 05	Idem	2005	Idem

**Table 2. Number of SILC Households**

Remaining number of years in the panel	Number of households
1	516
2	527
3	538
4	532
5	569
6	541
7	504
8	908
9	1 034
Total	5 669

NB: Households with at least one 50+ successfully interviewed in 2006 (by rotating groups). Remaining number of years in the panel before the 2006 survey.

**Table 3. SHARE and “SHARE equivalized” INSEE surveys**

	Level	Eligibility	Sample size
SHARE France 2004/05	Household	With at least one respondent born before 1955	2,110
	Individual	Respondents (born before 1955)	3,038
SHARE France 2006	Household	With at least one respondent born before 1957	2,038
	Individual	Respondents (born before 1957)	2,793
SHARE France refresher	Household	First interview 2006 with at least one respondent	638
	Individual	First interviewed in 2006 (born < 1955)	860 (693)
EL 2002	Household	With at least one respondent born before 1955	17,533 (10,220)
	Individual	Respondents born before 1955	27,723 (16,010)
	Household	With at least one respondent born before 1957 (in SHARE regions)	17,134 (10,507)
EL 2006	Individual	Respondents born before 1957 (in SHARE regions)	26,860 (16,441)
	Household	With at least one respondent born before 1957 (in SHARE regions)	5,669 (2,651)
SILC-EU 2006 France	Household	With at least one respondent born before 1957 (in SHARE regions)	5,669 (2,651)
	Individual	Respondents born before 1957 (in SHARE regions)	8,636 (4,003)

Source: Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC 2006.

<sup>65</sup> Only a refresher sample in PACA (Provence-Alpes-Côte d'Azur).

<sup>66</sup> No housing questions were asked in nursing homes.

<sup>67</sup> The sampling for this survey was more complicated. See Briant (2009).

**Table 4 Individual Sample composition (unweighted data)**

Sample	Female	50-59	60-69	70-79	80+	all
SHARE 2004-05 born<1955	55.0	40.7	26.1	22.7	10.6	100
SHARE 2006 born<1957	55.8	37.9	28.9	22.1	11.2	100
SHARE 2006 Refresher Sample	54.5	45.1	26.8	20.2	7.9	100
EL 2002 born<1955	53.9	45.6	24.8	21.2	8.4	100
EL 2002 born<1955 SHARE regions	54.2	47.4	24.3	20.3	8.0	100
EL 2006 born<1957	54.6	41.7	26.5	21.1	10.7	100
EL 2006 SHARE regions born<1957	54.5	41.8	26.6	20.9	10.7	100
SILC 2006 France born<1957	52.9	39.6	27.9	21.8	10.6	100
SILC 2006 France born<1957 on SHARE regions	53.2	41.8	27.7	20.3	10.1	100

Source: Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC 2006.

**Table 5. Individual Sample composition (weighted data)**

Sample	Female	50-59	60-69	70-79	80+	all
SHARE 2004-2005	55.6	37.2	31.5	20.9	10.2	100
SHARE 2004-2005 born<1955	54.2	40.7	25.1	22.8	11.5	100
SHARE 2006 born<1957	55.8	38.5	25.7	22.8	13.0	100
SHARE 2006 Refresher Sample	52.1	47.2	24.9	21.1	6.8	100
SHARE 2006 Refresher Sample born<1955	53.9	39.0	28.8	24.4	7.8	100
EL 2002 born<1955	54.2	44.7	24.4	21.7	9.2	100
EL 2002 <55 SHARE regions	54.6	46.5	24.0	20.8	8.7	100
EL 2006 born<57	54.7	40.1	26.1	21.9	11.9	100
EL 2006 in SHARE regions born<1957	54.9	41.1	25.8	21.2	11.9	100
SILC 2006 France born<1957	54.1	35.7	28.2	23.0	13.1	100
SILC 2006 on SHARE regions born<1957	54.6	37.9	27.9	21.6	12.6	100
SILC 2006 France born<1955	54.3	30.6	30.4	24.8	14.2	100

Source: Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC 2006.

**Table 6. Comparison of BMI in SHARE wave 1 and Health survey 2002**

	SHARE wave 1 <66	Health Survey 2002 51-65
Males	26.5	26.5
Nb obs	825	
Females	25.4	25.3
Nb obs	814	

Source: Authors and de Saint Pol's computation from SHARE wave 1 and INSEE Health Survey 2002.

**Table 7. Occupation of Individuals (weighted data)**

	EL 2002		SHARE wave 1		EL 2006		SHARE wave 2		SILC 2006	
	<i>Freq.</i>	%	<i>Freq.</i>	%	<i>Freq.</i>	%	<i>Freq.</i>	%	<i>Freq.</i>	%
1 employee	5249	18,9	524	17,8	4597	17,1	555	20,1	1367	15,9
2 civil servant	2355	8,5	210	7,2	2283	8,5	208	7,5	667	7,8
3 self employed	1540	5,6	128	4,3	1371	5,1	161	5,8	388	4,5
1+2+3 <i>Total with job</i>	9144	33,0	862	29,3	8251	30,7	925	33,5	2422	28,2
4 retired no job	13757	49,6	1594	54,3	14865	55,3	1378	49,9	5036	58,7
5 unemployed no job	957	3,5	94	3,2	884	3,3	88	3,2	328	3,8
6 sick no job			55	1,9			76	2,7		
7 homemaker no job	2236	8,1	324	11,0	2018	7,5	257	9,3	581	6,8
8 other no job	1629	5,9	8	0,3	843	3,1	41	1,5	209	2,4
<b>Total</b>	<b>36 867</b>	<b>100</b>	<b>2937</b>	<b>100</b>	<b>35111</b>	<b>131</b>	<b>2765</b>	<b>100</b>	<b>8576</b>	<b>100</b>

*Source : Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC 2006.*

**Table 8. Individual income: comparison between SHARE FR and other French surveys (unweighted data)**

	% reception	% amount non response	amount in € observed	amount in € redressed	Nb Observa- -tions
<b>Pensions</b>					
SHARE 2004/05 (Monthly)	56.1	-	1 841	1 692	1 018
SHARE 2004/05 (Annual)	56.1	-	14 184	14 101	518
SHARE 2004/05 (Average)	56.1	12.3	6 664	-	1 495
EL 2002 (annual)	56.5	11.6	12 297	12 876	15 474
EL 2006 (annual)	57.4	10.6	13 867	14 566	13 628
SILC 2006 (annual)	52.4	0.7	14 016	15 650	4 503
SHARE 2006 (Monthly)	59.5	-	1 399	-	1 319
SHARE 2006 (Annual)	59.5	-	14 436	-	189
SHARE 2006 (Typical)	59.5	13.3	3 556	-	1 468
<b>Wages</b>					
SHARE 2004/05 (annual gross)	31.7	17.4	30 070	27 887	795
SHARE 2004/05 (monthly gross)	25.3	12.5	2 444	-	672
SHARE 2004/05 (monthly net)	25.3	9.0	2 336	-	699
EL 2002 (annual net of SS)	30.6	9.9	20 155	20 658	8 610
EL 2006 (annual net of SS)	29.7	6.8	21 302	21 727	7 238
SILC 2006 (annual net of SS)	31.8	8.8	19 899	22 066	2 742
SHARE 2006 (annual "net")	28.4	10.9	23 285	-	721
SHARE 2006 (monthly gross)	24.7	26.6	2 440	-	515
SHARE 2006 (monthly "net")	24.7	5.7	1 976	-	662
<b>Self-employment</b>					
SHARE 2004/05 (annual gross)	3.4	29.8	37 929	37 641	73
SHARE 2004/05 (monthly last 12 months)	4.2	27.8	10 939	-	91
EL 2002 (annual)	5.5	23.3	19 014	20 483	1 485
EL 2006 (annual)	4.3	24.3	24 754	25 701	1 145
SILC 2006 (annual)	4.1	12.9	28 718	27 326	357
SHARE 2006 (annual net)	4.2	31.9	31 596	-	81
SHARE 06 (gross monthly last 12 months)	4.6	39.2	5 755	-	79
SHARE 2006 (net monthly last 12 months)	4.6	53.1	5 163	-	61
<b>Unemployment</b>					
SHARE 2004/05 (Monthly)	3.1	-	1 823	1 364	58
SHARE 2004/05 (Annual)	3.1	-	14 396	14 366	27
SHARE 2004/05 (Average)	3.1	5.4	5 794	-	88
EL 2002 (annual)	3.7	9.1	7 186	7 600	1 049
EL 2006 (annual)	4.1	6.6	8 211	8 308	1 097
SILC 2006 (annual)	5.7	2.6	10 344	10 474	496
SHARE 2006 (Monthly)	1.3	-	1 053	-	31
SHARE 2006 (Annual)	1.3	-	8 850	-	3
SHARE 2006 (Typical)	1.3	5.6	1 741	-	34

Source : Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC 2006.

Notes: reception for pension is reception of at least one type of pension;

In SHARE 2004/05, the "average" amount presents the average amount of income received. independently of the periodicity of reception. i.e. every calendar month (4 weeks), three months (13 weeks), six months (26 weeks) or full year (12 months);

In SHARE 2006, the "typical" amount presents the typical amount of income received. independently of the periodicity of reception. i.e. every calendar month (4 weeks). three months (13 weeks). six months (26 weeks) or full year (12 months);

In SILC 2006, pension excludes survivor pensions and disability pensions; includes pension, annuities, pre retirement pensions. minimum vieillesse;

% amount of non response for SILC and other surveys: brackets are counted as non response.

**Table 9. Individual income: comparison between SHARE FR and other French surveys (weighted data)**

	% reception	% amount non response	amount in € observed	amount in € redressed	Nb Observations
<b>Pensions</b>					
SHARE 2004/05 (Monthly)	58.0	-	1 964	1 822	1018 (1024)
SHARE 2004/05 (Annual)	58.0	-	14 169	14 088	515
SHARE 2004/05 (Average)	58.0	12.8	6 687	-	1 492
EL 2002 (annual net of SS)	56.5	11.6	12 297	12 986	15 474
EL 2006 (annual net of SS)	59.2	10.6	13 767	14 525	15 427
SILC 2006 (annual net of SS)	56.4	-	14 016	15 302	4 503
SHARE 2006 (Monthly)	54.2	-	1 540	-	1 319
SHARE 2006 (Annual)	54.2	-	14 100	-	189
SHARE 2006 (Typical)	54.2	14.9	3 561	-	1 468
<b>Wages</b>					
SHARE 2004/05 (annual gross)	30.1	17.5	30 001	27 881	795
SHARE 2004/05 (monthly gross)	23.9	13.4	2 452	-	672
SHARE 2004/05 (monthly net)	23.9	9.6	2 297	-	699
EL 2002 (annual net of SS)	30.6	9.9	20 155	20 710	8 610
EL 2006 (annual net of SS)	28.8	9.2	21 569	21 930	7 238
SILC 2006 (annual net of SS)	28.4	7.3	19 899	21 590	2 742
SHARE 2006 (annual "net")	31.2	9.0	23 790	-	721
SHARE 2006 (monthly gross)	27.0	24.5	2 472	-	515
SHARE 2006 (monthly "net")	27.0	4.9	1 992	-	662
<b>Self-employment</b>					
SHARE 2004/05 (annual gross)	3.4	26.2	35 038	34 263	72
SHARE 2004/05 (monthly last 12 months)	4.1	24.3	10 014	-	91
EL 2002 (annual net of SS)	5.5	23.3	19 014	20 659	1 485
EL 2006 (annual net of SS)	4.8	25.4	24 281	25 489	1 145
SILC 2006 (annual net of SS)	4.2	-	28 718	25 523	357
SHARE 2006 (annual net)	5.0	31.0	26 027	-	81
SHARE 2006 (gross monthly last 12 months)	5.8	40.6	4 278	-	79
SHARE 2006 (net monthly last 12 months)	5.8	46.9	3 501	-	61
<b>Unemployment</b>					
SHARE 2004/05 (Monthly)	2.9	-	1 830	1 389	58
SHARE 2004/05 (Annual)	2.9	-	14 421	14 391	27
SHARE 2004/05 (Average)	2.9	5.4	5 831	-	88
EL 2002 (annual net of SS)	3.7	9.1	7 186	7 720	1 049
EL 2006 (annual net of SS)	3.7	6.5	8 973	9 155	1 097
SILC 2006 (annual net of SS)	5.5	-	10 344	10 270	496
SHARE 2006 (Monthly)	1.3	-	965	-	31
SHARE 2006 (Annual)	1.3	-	8 259	-	3
SHARE 2006 (Typical)	1.3	2.9	1453	-	34

Source : Authors' computation from SHARE wave 1, wave 2, EL 2002, 06 and SILC 2006.

N.B. See notes in table 8.

**Table 10. Individual reception rate of each type of income and item non response conditional on reception (unweighted data, individual level)**

	% receiving				% item non response			
	SH W1	SH W2	SILC 2006	EL 2006	SH W1	SH W2	SILC 2006	EL 2006
Retraite de base	49.2	52.0	51.4	50.6	13.4	11.5	0.5	10.6
Préretraite publique	0.5	0.5	1.2	0.9	13.3	0.0	-	8.4
Pension de réversion d'un régime de base	10.4	10.1	10.2	10.8	31.7	26.7	0.6	17.0
Prestation publique d'invalidité (pension d'invalidité)	2.8	1.5	4.4	2.9	10.7	16.7	-	8.9
Pension d'ancien combattant	3.5	4.2	-	2.3	13.2	10.8	-	8.9
Retraites complémentaires obligatoires	29.6	33.4	31.5		24.6	23.1	0.4	
Préretraite d'entreprise	0.6	0.2	-		11.1	16.7	-	
Prestation d'invalidité versée par l'entreprise	0.8	0.2	-		4.4	0.0	-	
Pension de réversion d'un régime complémentaire <sup>68</sup>	4.4	5.1	-		34.3	32.9	-	
Retraite surcomplémentaire d'entreprise (premier emploi)	-	1.2	-		-	17.1	-	
Retraite surcomplémentaire d'entreprise (deuxième emploi)	-	0.1	-		-	0.0	-	
Surcomplémentaire de réversion du conjoint/partenaire versée par son entreprise	-	0.1	-		-	0.0	-	
Other pensions				1.4			-	7.9
Minimum vieillesse				0.6			-	7.0
Annuities				0.6			-	9.9
<b>All pensions (1)</b>	<b>56.1</b>	<b>59.5</b>	<b>60.3</b>	<b>57.4</b>	<b>12.3</b>	<b>13.3</b>	<b>0.6</b>	
Unemployment	3.1	1.3	5.7	4.1	5.4	5.6	2.6	6.6
Monthly wages before deductions	25.3	24.7	-		12.5	26.6	-	
Monthly wages after deductions	25.3	24.7	-		9.0	5.7	-	
Annual wages from employment	31.7	28.4	31.8	29.7	17.4	10.9	8.8	9.3
Monthly earnings self-employment before tax	4.2	4.6	-		27.8	39.2	-	
Monthly earnings self-employment after tax	-	4.6	-		-	53.1	-	
Annual earnings self-employment	3.4	4.2	4.1	4.3	29.8	31.9	12.9	24.3

Source : Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC06.

Note: See Appendix, section 1.3 for the translation of pension items in English;

(1) Percentage receiving at least one type of pension;

For SILC, all pensions include minimal old age income, annuities, and life insurance payment (assurance-vie).

<sup>68</sup> Included in line 3 (survivor pension) in INSEE surveys.

**Table 11. Individual reception rate of each type of income and item non response conditional on reception (weighted data, individual level)**

	% receiving				% item non response			
	SH w1	SH w2	SILC 2006 (2)	EL 2006	SH w1	SH w2	SILC 2006	EL 2006
Retraite de base/basic pension	51.0	47.6	51.4	53.1	13.7	12.6	0.5	10.6
Préretraite publique	0.5	0.3	1.2	0.9	15.4	0.0	-	7.3
Pension de réversion d'un régime de base	11.5	9.2	10.2	12.2	33.8	29.6	0.6	19.2
Prestation publique d'invalidité (pension d'invalidité)	2.6	1.5	4.4	3.0	11.5	19.3	-	8.8
Pension d'ancien combattant	3.9	3.7	-	2.7	12.6	12.2	-	10.5
Retraites complémentaires obligatoires	29.6	30.5	31.5		24.8	23.6	0.4	
Préretraite d'entreprise	0.5	0.2	-		10.7	20.8	-	
Prestation d'invalidité versée par l'entreprise	0.7	0.2	-		4.2	0.0	-	
Pension de réversion d'un régime complémentaire <sup>69</sup>	4.7	5.4	-		35.5	40.8	-	
Retraite surcomplémentaire d'entreprise (premier emploi)	-	1.1	-		-	22.8	-	
Retraite surcomplémentaire d'entreprise (deuxième emploi)	-	0.2	-		-	0.0	-	
Surcomplémentaire de réversion du conjoint/partenaire versée par son entreprise	-	0.1	-		-	0.0	-	
Other pensions				1.5				8.8
Minimum vieillesse				0.5				12.4
Annuities				0.6				11.3
<b>All pensions (1)</b>	<b>58.0</b>	<b>54.2</b>	<b>60.3</b>	<b>59.5</b>	<b>12.8</b>	<b>14.9</b>	<b>0.6</b>	
Unemployment	2.9	1.3	5.7	3.7	5.4	2.9	2.6	6.5
Monthly wages before deductions	23.9	27.0	-		13.4	24.5	-	
Monthly wages after deductions	23.9	27.0	-		9.6	4.9	-	
Annual wages from employment	30.1	31.2	31.8	28.8	17.5	9.0	8.8	9.2
Monthly earnings self-employment before tax	4.1	5.8	-		24.3	40.6	-	
Monthly earnings self-employment after tax	-	5.8	-		-	46.9	-	
Annual earnings self-employment	3.4	5.0	4.1	4.8	26.2	31.0	12.9	25.4

Source : Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC06.

Note: See Appendix 1.3 for the translation in English;

(1) Percentage receiving at least one type of pension;

For SILC, all pensions include minimal old age income, annuities, and life insurance payment (assurance-vie).

(2) Unweighted

<sup>69</sup> Included in line 3 (survivor pension) in INSEE surveys.

**Table 12. Household income: comparison between SHARE FR and other French surveys**

	sample size	% reception (1)	Mean (unweighted)	Mean (weighted)	10%	25%	Median	75%	90%	95%	99%	max	min
<b>SHARE 06</b>													
non imputed (weighted)													
Wages	1010	36,2	28 367	28 502	6 500	13 300	24 000	38 000	55 000	73 000	105 000	133 500	200
Self-employment	153	5,5	23 150	24 822	3 500	7 200	14 400	29 600	65 000	85 000	100 000	108 000	500
Pension	1659	59,4	24 604	25 007	8 760	12 960	19 696	30 480	47 400	60 000	99 500	263 600	48
Unemployment	54	1,9	9 627	8 891	1 600	3 600	6 000	11 040	18 000	28 800	45 000	45 000	200
<b>EL 2006</b>													
Wages	6896	37,7	28 900	29 345	6 720	14 000	23 400	38 845	57 000	71 000	121 000	483 500	15
self-employment	1090	7,0	27 655	27 597	1 000	6 462	17 837	33 136	65 000	100 000	156 000	687 000	-37000
Pension	11424	69,1	19 307	18 937	6 670	10 428	15 000	24 000	35 840	43 776	68 000	302 000	27
Unemployment	1312	6,7	8 078	8 827	1 500	3 350	6 048	11 000	16 800	27 500	55 200	75 000	16
<b>SILC 2006</b>													
Wages	2480	38,7	30 253	29 148	6 763	13 934	23 306	38 479	55 240	69 556	116 047	234 000	10
Self-employment	398	7,0	28 318	25 937	2 000	7 200	17 000	29 500	54 000	97 774	168 000	500 000	200
Pension	3569	67,4	20 087	19 331	7 216	11 040	16 155	23 712	34 891	43 020	65 240	259 363	118
Unemployment	614	9,9	9 925	9 830	1 236	3 000	6 680	11 284	18 137	28 181	71 604	153 643	84

Source : Authors' computation from SHARE wave 2, EL 2006 and SILC 2006.

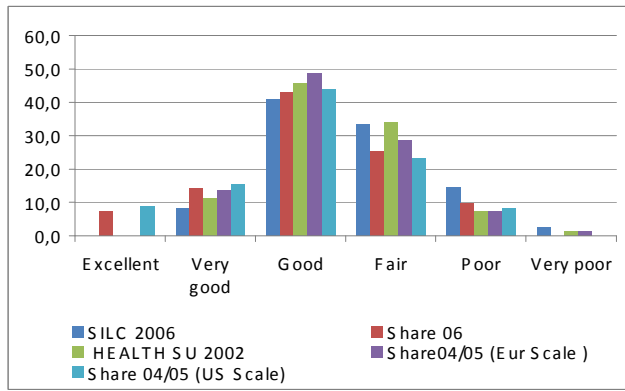
Notes: Self-employment: Self-employment income. Unemployment= Unemployment benefit.

(1) At least one 50 + individual gets the corresponding type of income



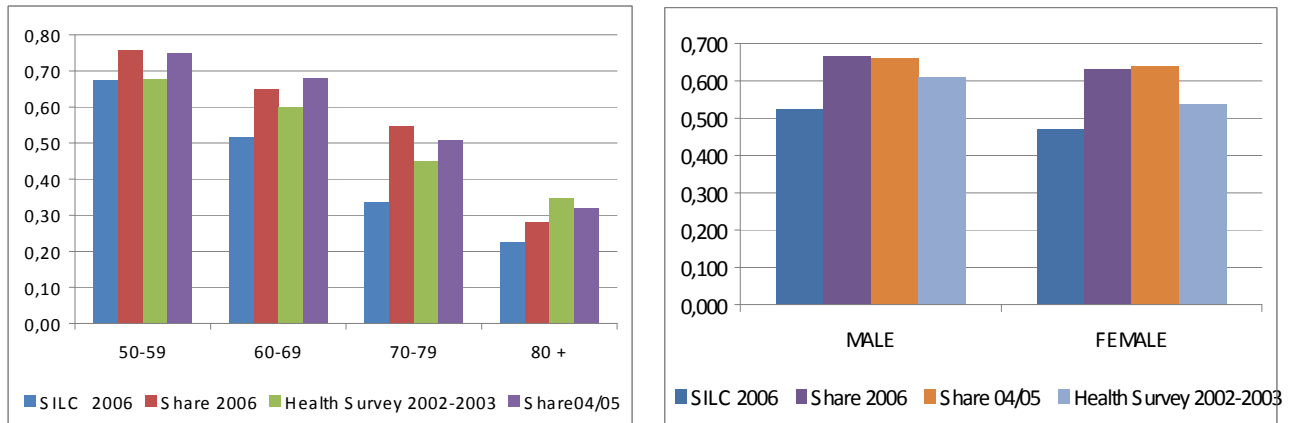
### A3. Figures

**Figure 1: distribution of self-reported health in SHARE 06, SILC 2006 and Health Survey 02**



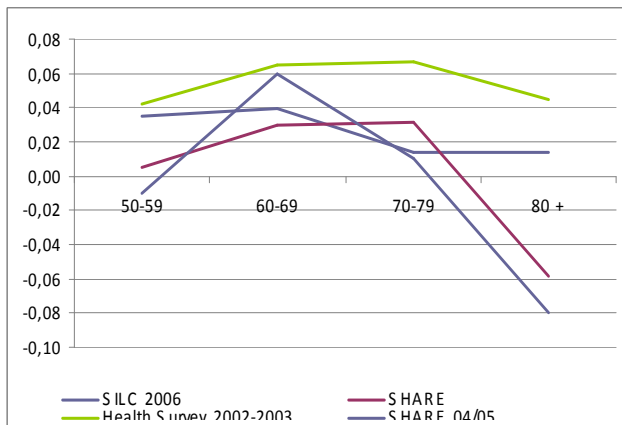
Source : Authors' computation from SHARE wave 1, wave 2, INSEE health Survey 2002 and SILC 2006.

**Figure 2. Self-reported 'good' health status by age, by gender: SILC and SHARE and Health SU**



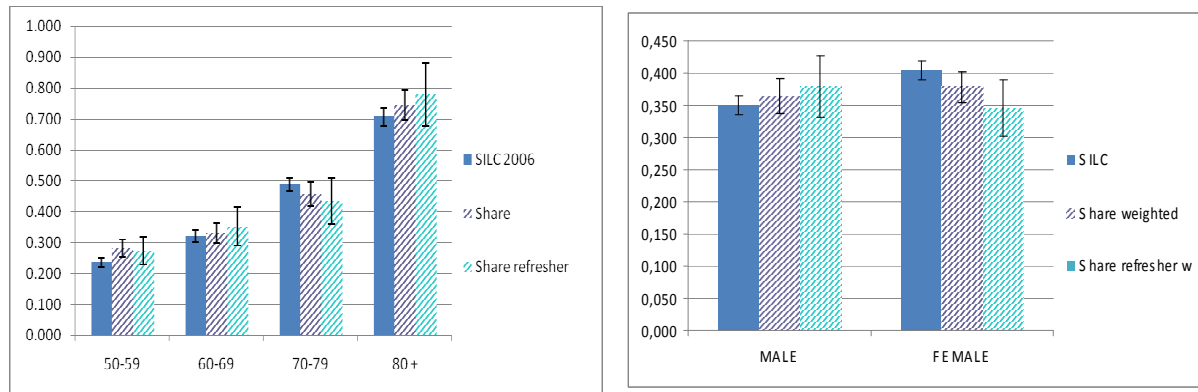
Source : Authors' computation from SHARE wave 1, wave 2, INSEE health Survey 2002 and SILC 2006.

**Figure 3: Self-reported health gender gap by age**



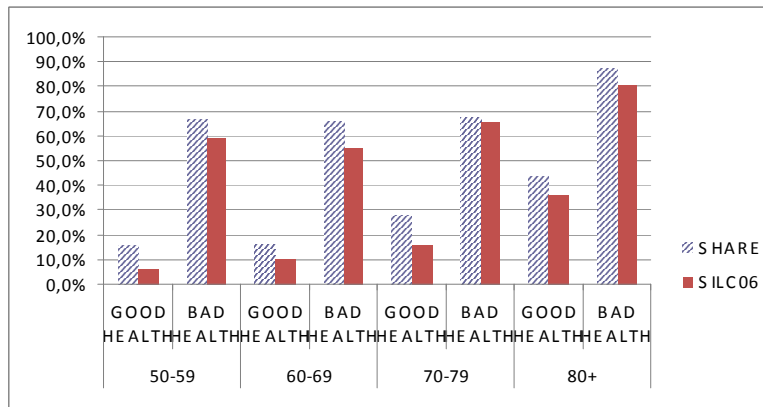
Source : Authors' computation from SHARE wave 1, wave 2, INSEE health Survey 2002 and SILC 2006.

**Figure 4: Disability by age, by gender**



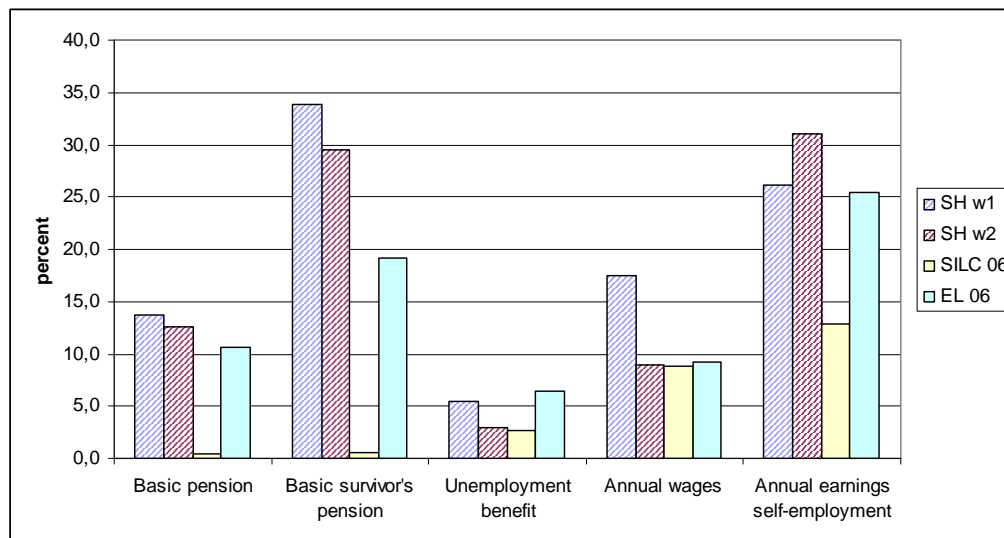
Source : Authors' computation from SHARE wave 2 and SILC 2006.

**Figure 5: Disability level by Self-reported health and age groups**



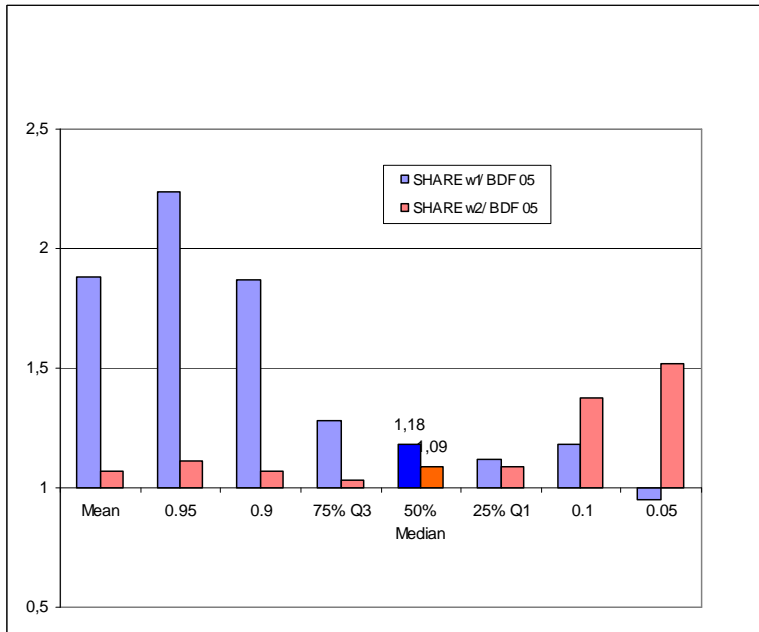
Source : Authors' computation from SHARE wave 2 and SILC 2006.

**Figure 6. Item non response conditional on reception (individual income, weighted data)**



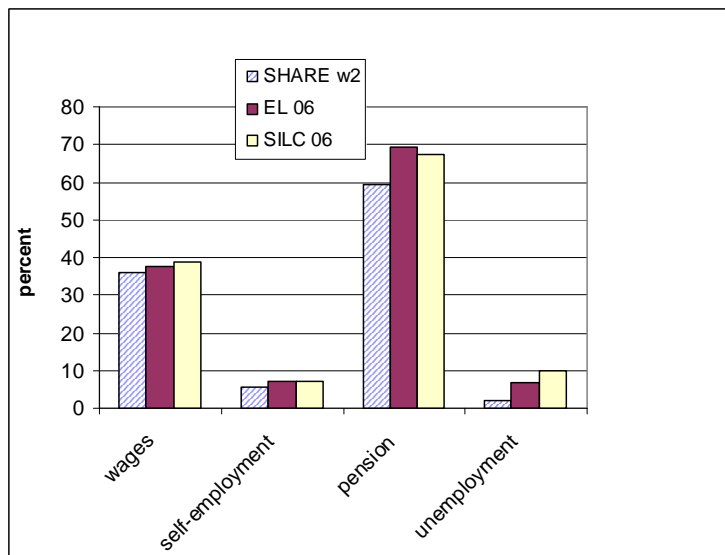
Source : Authors' computation from SHARE wave 1, wave 2, EL 2006 and SILC 2006.  
Table 11, col.6-9, % item non response conditional on receiving the income. SILC is unweighted data.

**Figure 7: Ratio of employment incomes quantiles in SHARE wave 1 and wave 2 to INSEE BDF 2005**



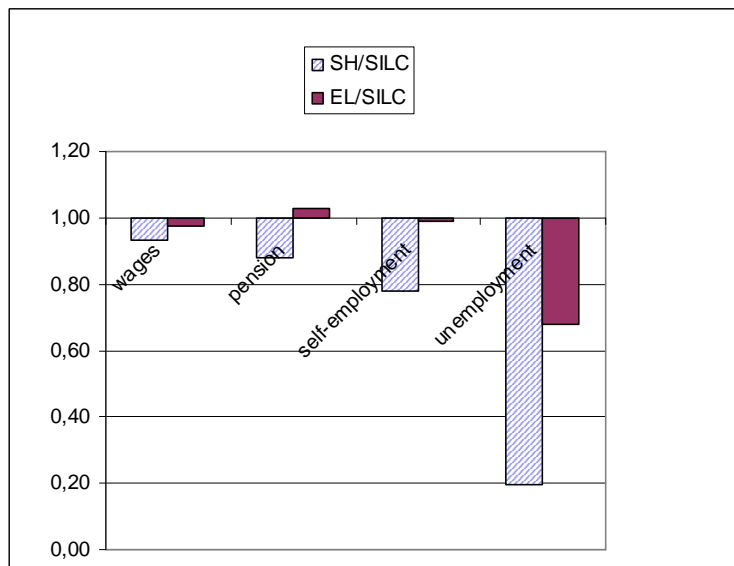
Source : Authors' computation from SHARE wave 1, wave 2 and INSEE Family Budget Survey 2005.

**Figure 8: Reception of income by income type in 2006 (household level reception rates)**



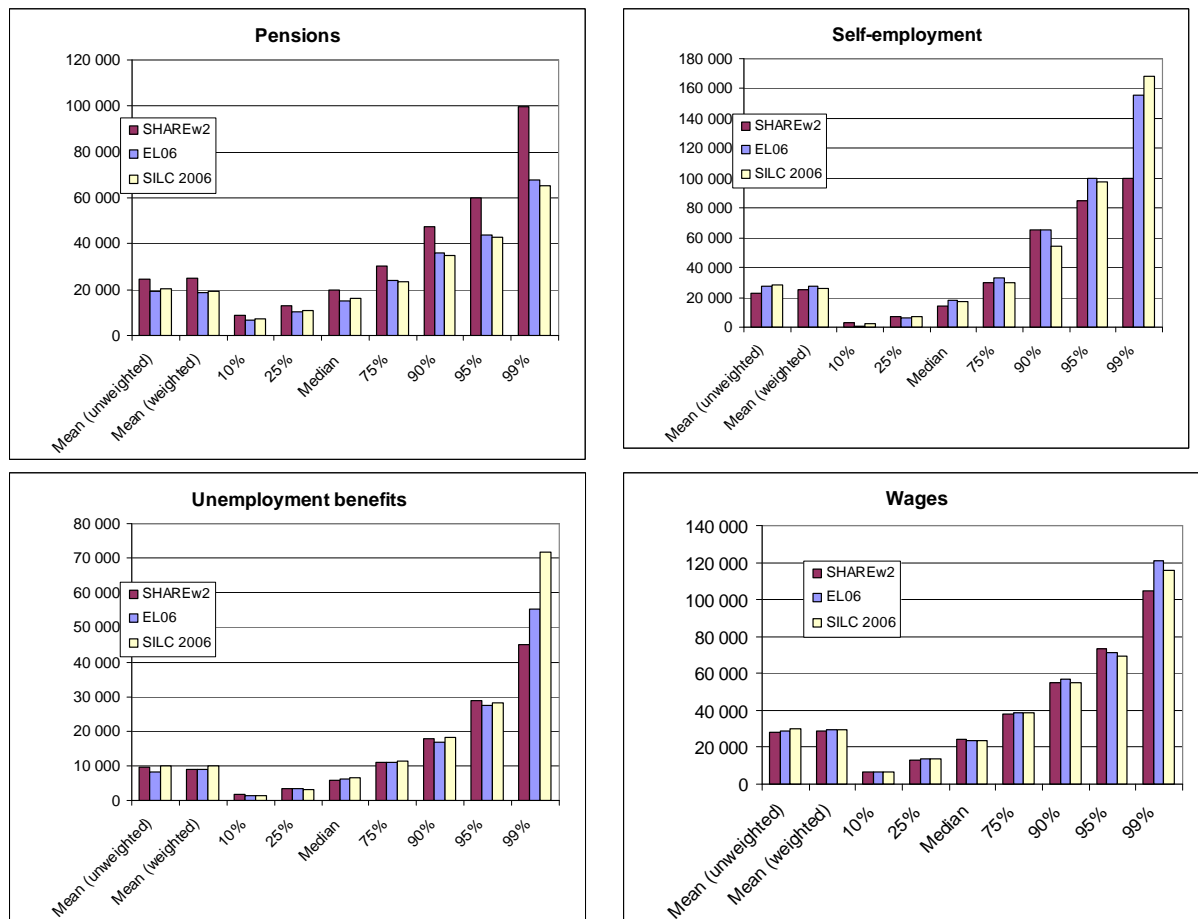
Source : Authors' computation from SHARE wave 2, EL 2006 and SILC 2006. Table 12, col.3, % reception.

**Figure 9: Scale of underreporting of income in SHARE 06 and EL 2006 compared to SILC 2006 (household level reception rates)**



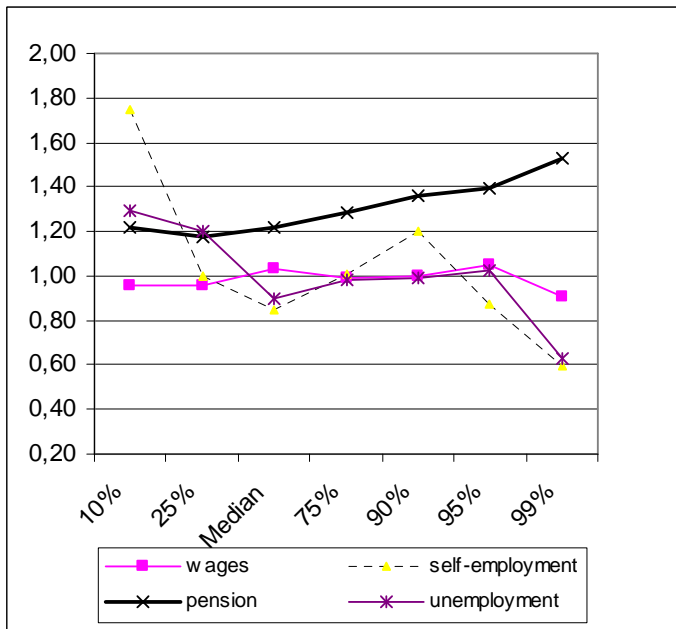
Source : Authors' computation from table 12, col.3, % reception.

**Figure 10: Household distributions (by type of income)**



Source : Authors' computation from SHARE wave 2, EL 2006 and SILC 2006. See table 12.

Figure 11: Ratio of SHARE quantiles to SILC



Source : Authors' computation from table 12.