



# STATISTICS IN FOCUS

## Population and social conditions

1998  11

ISSN 1024-4352

### Analysis of income distribution in 13 EU Member States

*This report aims to update the general outline of income distribution and poverty in the European Union (EU). It is based on wave 2 of the European Community Household Panel (ECHP), carried out in 1995, with 1994 as the reference year for income.*

*Throughout, the results are presented for the 13 EU Member States, which participated in this wave, namely the EU as a whole with the exception of Finland, which began the survey in 1996, and Sweden where the survey has not been conducted.*

*The mean equivalised net annual total income is around 11-14,000 PPS in a majority of the countries, reflecting a considerable degree of uniformity between them. There is a wide range nevertheless, with at the one end Greece and Portugal, and at the other Luxembourg.*

*The distribution of total income according to its sources shows that over 70% of the income of households arise from work (employment and self-employment), around 25% from pensions and other social transfers, and the remaining (under 5%) from capital and other private sources.*

*Overall, there is a relationship between the level of income and the degree of inequality in the income distribution. The richer countries tend to have a less unequal distribution. The main exceptions to this pattern are the higher levels of inequality reported in Ireland and the United Kingdom, and the markedly low level of inequality in Denmark and the Netherlands.*

#### Level and composition of income

The income measure refers to the mean equivalised net total monetary income of households for the reference year (1994). Income amounts reported in national currencies are converted to a common unit (PPS) using purchasing power parities. Differences in household size and composition are taken into account by considering 'equivalised incomes', computed using the modified OECD equivalence scale. Table 1 presents the income distribution for all 13 participating countries, hereafter referred to as "EU-13".

The mean equivalised net annual income is around 11-14,000 PPS in a majority of the countries, reflecting

a considerable degree of uniformity between them. There is a wide range nevertheless, with Luxembourg at the one end, and Greece and Portugal at the other.

The table also shows the distribution of income according to its sources. In most countries over 60% of the income arises from employment and under 5% from capital and other private sources. As is well known, self-employment income forms a smaller share in Northern countries, but much larger in Southern countries. In Greece, self-employment accounts for 25% of the total, and capital and other private sources 10%. Correspondingly, the share of employment income is only 45%, and that of social transfers other than pensions 2%.

Manuscript completed on : 07.08.1998

For further information please contact: ECHP team  
Eurostat, L-2920 Luxembourg, tel. 4301-34169 Fax: 4301-34415

Price (excl. VAT) in Luxembourg: Subscription 'Statistics in focus' of all themes: ECU 348  
Subscription 'Statistics in focus' of Theme 3 'Population and social conditions': ECU 85  
Single copy: ECU 6

Catalogue number: CA-NK-98-011-EN-C

## Income distribution

Table 2 shows how, within each country, the total income is shared among different strata of the population formed according to the level of equivalised income. The income distribution for EU-13 has been computed by weighting the country data in proportion to their population size. At EU-13 level, the bottom (poorest) 10% of the population receive only 2.6% of the total income, while

the top (richest) 10% receive 24% of the total income, i.e. ten times more. These figures are summarised by the share ratio, S80/S20, i.e. the share of the top 20% to that of the bottom 20%. This ratio is generally lower (around 5) in the Northern countries (Ireland and the United Kingdom being somewhat of an exception), but higher (around 6) elsewhere - the higher figure reflecting greater inequality. The extremes are Denmark on the one hand, and Portugal on the other.

Table 1: Income components



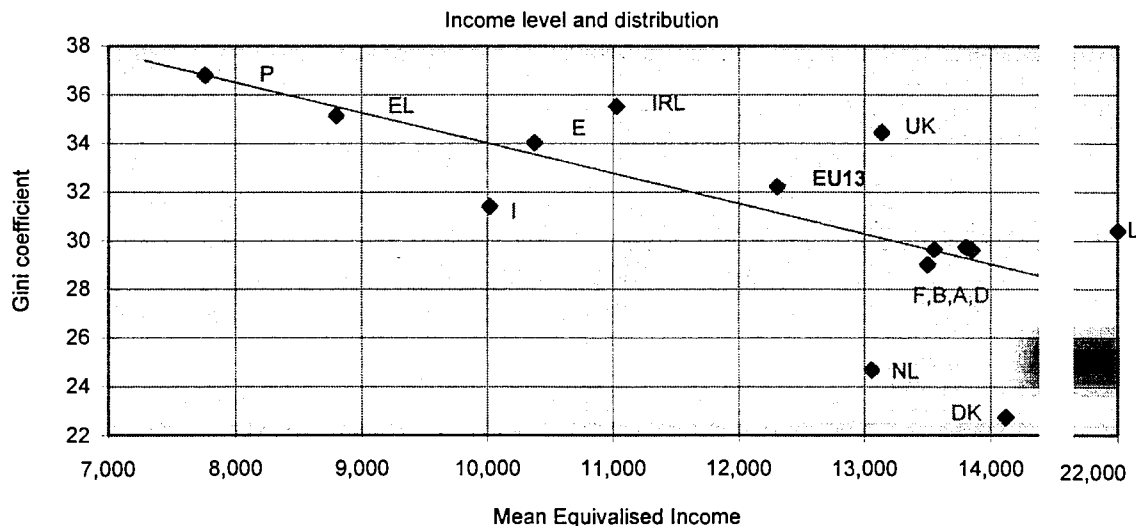
|                             | B    | DK   | D    | EL  | E    | F    | IRL  | I    | L    | NL   | A    | P   | UK   | EU-13 |
|-----------------------------|------|------|------|-----|------|------|------|------|------|------|------|-----|------|-------|
| mean/ equivalised (000)     | 13,6 | 14,1 | 13,9 | 8,8 | 10,4 | 13,5 | 11,0 | 10,0 | 22,1 | 13,1 | 13,8 | 7,8 | 13,1 | 12,3  |
| TOTAL (%)                   | 100  | 100  | 100  | 100 | 100  |      | 100  | 100  | 100  |      | 100  | 100 | 100  |       |
| Income from work (%)        | 60   | 73   | 72   | 70  | 79   |      | 72   | 73   | 71   |      | 66   | 78  | 70   |       |
| employment (%)              | 55   | 66   | 66   | 45  | 67   |      | 57   | 60   | 64   |      | 60   | 68  | 62   |       |
| self-employment (%)         | 6    | 7    | 5    | 25  | 12   |      | 15   | 13   | 7    |      | 7    | 11  | 8    |       |
| Non-work private income (%) | 6    | 4    | 5    | 10  | 4    |      | 2    | 3    | 4    |      | 3    | 3   | 4    |       |
| Social transfers (%)        | 34   | 23   | 23   | 20  | 18   |      | 26   | 24   | 24   |      | 31   | 19  | 26   |       |
| pensions (%)                | 18   | 9    | 16   | 18  | 11   |      | 13   | 21   | 16   |      | 22   | 14  | 10   |       |
| other transfers (%)         | 16   | 14   | 7    | 2   | 6    |      | 13   | 3    | 8    |      | 9    | 5   | 16   |       |

Table 2: Income inequality measures



|                      | B    | DK   | D    | EL   | E    | F    | IRL  | I    | L    | NL   | A    | P    | UK   | EU-13 |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Share of income (%)  |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| Deciles              |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| 1                    | 2.9  | 4.4  | 2.7  | 2.2  | 2.5  | 3.3  | 3.0  | 2.4  | 3.1  | 4.1  | 2.7  | 2.2  | 3.0  | 2.6   |
| 1 - 2                | 7.8  | 10.7 | 7.7  | 6.4  | 6.7  | 8.4  | 7.2  | 7.1  | 8.1  | 9.0  | 7.7  | 6.1  | 7.4  | 7.1   |
| 1 - 3                | 13.9 | 17.9 | 14.0 | 11.8 | 12.2 | 14.6 | 12.2 | 13.0 | 14.2 | 16.7 | 13.9 | 11.3 | 12.6 | 12.9  |
| 1 - 4                | 21.1 | 26.0 | 21.5 | 18.5 | 18.7 | 21.9 | 18.2 | 20.0 | 21.4 | 24.3 | 21.3 | 17.7 | 18.9 | 19.8  |
| 1 - 5                | 29.5 | 34.8 | 29.9 | 26.3 | 26.4 | 30.2 | 25.3 | 28.2 | 29.3 | 32.8 | 29.8 | 25.3 | 26.3 | 27.9  |
| 6 - 10               | 70.5 | 65.2 | 70.1 | 73.7 | 73.6 | 69.8 | 74.7 | 71.8 | 70.7 | 67.2 | 70.2 | 74.7 | 73.7 | 72.1  |
| 7 - 10               | 60.8 | 55.7 | 60.6 | 64.7 | 64.4 | 60.4 | 65.9 | 62.3 | 61.5 | 57.7 | 60.8 | 65.9 | 64.8 | 62.7  |
| 8 - 10               | 49.9 | 45.2 | 49.9 | 54.1 | 53.6 | 49.8 | 55.3 | 51.2 | 51.2 | 46.9 | 50.0 | 55.7 | 54.2 | 51.9  |
| 9 - 10               | 37.4 | 33.6 | 37.6 | 41.7 | 40.7 | 37.5 | 42.6 | 38.3 | 38.8 | 34.5 | 37.5 | 43.5 | 41.7 | 39.3  |
| 10                   | 22.5 | 20.2 | 22.7 | 26.3 | 24.9 | 22.8 | 26.6 | 22.9 | 23.6 | 20.0 | 22.8 | 27.7 | 26.1 | 24.0  |
| Measures             |      |      |      |      |      |      |      |      |      |      |      |      |      |       |
| S80/S20              | 4.8  | 3.1  | 4.9  | 6.6  | 6.0  | 4.5  | 5.9  | 5.4  | 4.8  | 3.5  | 4.9  | 7.1  | 5.6  | 5.5   |
| Gini coefficient (%) | 30   | 23   | 30   | 35   | 34   | 29   | 36   | 31   | 30   | 25   | 30   | 37   | 34   | 32    |

Figure 1: Relationship between level of income and degree of inequality



The Gini coefficient varies from 0% (no inequality) to 100% (total inequality) and provides an overall indicator of the income distribution. It averages 32% over the countries, with significantly higher values (34-37%, reflecting greater inequality) in Greece, Spain, Ireland, Portugal and the United Kingdom. Again Denmark (together with the Netherlands) is outstanding at the other end with 23%.

Overall, there is a relationship between the level of income and the degree of inequality in the income distribution. The richer countries tend to have a less unequal distribution. For instance, the Gini coefficient falls on the average by 1% for each 1,000 PPS increase in mean equivalised income (Figure 1).

The main exceptions to this pattern are the higher levels of inequality reported in Ireland and the United Kingdom, and the markedly low level of inequality in Denmark and the Netherlands. Luxembourg is an outlier because of its exceptionally high income levels.

### Extent of poverty

The extent of relative poverty is measured in terms of the proportion of the population with equivalised income below a certain percentage of the national mean or median equivalised income (Table 3). As emphasised in the publication of ECHP wave 1 results on income distribution (see *Statistics in Focus* 1997/6), the 'poverty line' is a matter of definition. Furthermore, low income is not necessarily identical with poverty, deprivation or social exclusion, albeit it generally provides a reasonable surrogate for these states.

In terms of the proportion of the population below 60% of the national median equivalised income, the poverty rate is relatively high (21-23%) in Greece, Spain, Ireland, Portugal and the United Kingdom, and at its lowest in Denmark and the Netherlands (10%). Very similar figures are found by taking the cut-off point at 50% of the national mean equivalised income, and the pattern is similar to that observed above for other statistical measures of inequality.

**Table 3: Summary statistics (%)**



|                         | B         | DK        | D         | EL        | E         | F         | IRL       | I         | L         | NL        | A         | P         | UK        | EU-13     |
|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| mean/median ratio       | 111       | 109       | 112       | 120       | 119       | 113       | 127       | 114       | 118       | 111       | 111       | 123       | 123       | 115       |
| Below 50% median        | 11        | 4         | 11        | 15        | 15        | 10        | 9         | 12        | 9         | 5         | 12        | 16        | 12        | 14        |
| <b>Below 60% median</b> | <b>18</b> | <b>10</b> | <b>18</b> | <b>21</b> | <b>21</b> | <b>17</b> | <b>22</b> | <b>19</b> | <b>15</b> | <b>10</b> | <b>18</b> | <b>23</b> | <b>21</b> | <b>21</b> |
| Below 70% median        | 27        | 17        | 24        | 28        | 29        | 24        | 31        | 27        | 23        | 19        | 26        | 29        | 30        | 28        |
| Below 40% mean          | 8         | 3         | 9         | 14        | 13        | 7         | 10        | 10        | 7         | 4         | 9         | 15        | 11        | 11        |
| <b>Below 50% mean</b>   | <b>16</b> | <b>6</b>  | <b>15</b> | <b>21</b> | <b>21</b> | <b>14</b> | <b>25</b> | <b>17</b> | <b>15</b> | <b>8</b>  | <b>15</b> | <b>24</b> | <b>23</b> | <b>19</b> |
| Below 60% mean          | 24        | 13        | 22        | 29        | 30        | 23        | 36        | 26        | 23        | 16        | 23        | 31        | 33        | 27        |
| <b>Below mean</b>       | <b>58</b> | <b>60</b> | <b>60</b> | <b>61</b> | <b>61</b> | <b>60</b> | <b>62</b> | <b>58</b> | <b>62</b> | <b>59</b> | <b>59</b> | <b>64</b> | <b>62</b> | <b>60</b> |

### Technical Box

The **European Community Household Panel (ECHP)** is a survey that uses a harmonised questionnaire and involves annual interviewing of a representative panel of households and individuals in each country, covering a wide range of topics: demographics and employment characteristics, income, health, education, housing, etc. The longitudinal structure of the ECHP makes it possible to follow up and interview the same households and people over several consecutive years. The first wave of the ECHP was conducted in 1994, in the then twelve EU Member States. The sample totalled some 60 500 household (about 170 000 individuals). Austria (in 1995) and Finland (in 1996) have joined the project since then. For a detailed description of the ECHP methodology, see *"The European Community Household Panel (ECHP): Volume 1 - Survey methodology and Implementation"*, Theme 3, Series E, Eurostat, OPOCE, Luxembourg, 1996.

The statistical procedures used in the construction of household income variables in wave 2 have been, in certain respects, improved over those in wave 1. Nevertheless, some further refinements may be necessary when combined longitudinal data for waves 1 and 2 are issued by Eurostat in the near future. To that extent, the results presented in this report should be considered provisional.

#### Household income

The income measure used is the net monetary income received during the survey reference year (1994 for wave 2) by the household and its members at the time of the interview (1995). This includes all components enumerated in ECHP, namely income from work (employment and self-employment), private income (capital and rental income and private transfers to the household), pensions and other social transfers directly received. No account has been taken of indirect social transfers, receipts in kind, imputed rent for owner-occupied accommodation or housing costs.

The total household income is estimated from detailed reporting by individual component by each household member. Most income components as obtained in the ECHP are taken to be net of income tax and social insurance payments. The main exceptions are incomes from self-employment and property, for which the reported gross amounts have been converted to net amounts using a simple statistical procedure.

### Purchasing Power Parity (PPP)

PPPs convert every national monetary unit into a common reference unit - "purchasing power standard" (PPS) - of which every unit can buy the same amount of goods and services across the countries in a specific year.

### Equivalised income

In order to take into account differences in household size and composition in the comparison of income levels, the household's total income is divided by its 'equivalent size', computed using the modified OECD equivalence scale. This scale gives a weight of 1.0 to the first adult, 0.5 to the second and each subsequent person aged 14 and over, and 0.3 to each child aged under 14 in the household. The household composition is as defined at the time of the interview.

### Unit of distribution

The same equivalised income is assigned to each person in the household, and the income distribution statistics presented here refer to the distribution of persons arranged according to increasing level of their equivalised household income. Hence the mean, median and other quintiles of (equivalised) income distribution are defined in terms of numbers of persons rather than of households.

## EUROSTAT Directorate E: Social and regional statistics and geographical information system

For further information:

ECHP Team

Tel: (352) 4301 34169

Fax: (352) 4301 34415

ORIGINAL: ENGLISH

### Eurostat Data Shop

#### BELGIQUE/BELGIË

Eurostat Data Shop  
Bruxelles/Brussel  
Tel. (32-2) 299 66 66  
Fax (32-2) 295 01 25  
E-mail:  
datashop.brussels@eurostat.cec.be

#### DANMARK

Danmarks Statistik  
Bibliotek og Information  
Eurostat Data Shop  
Tel. (45) 39 17 30 30  
Fax (45) 39 17 30 03  
E-mail: bib@dst.dk

#### DEUTSCHLAND

STATISTISCHES BUNDESAMT -  
Berlin  
Information Service  
Eurostat Data Shop  
Tel. (49-30) 23 24 64 27/28  
Fax (49-30) 23 24 64 30  
E-mail:  
stba-berlin.datashop@t-online.de

#### ESPAÑA

INE  
Eurostat Data Shop  
Tel. (34-1) 583 91 67  
Fax (34-1) 579 71 20  
E-mail: datashop.eurostat@ine.es

#### FRANCE

INSEE Info Service  
Eurostat Data Shop  
Tel. (33-1) 53 17 88 44  
Fax (33-1) 53 17 88 22  
E-mail:  
datashop@dg75iisa.insee.atlas.fr

#### ITALIA — Milano

ISTAT  
Centro di informazione statistica —  
Sede di Milano  
Eurostat Data Shop  
Tel. (39-2) 65 95 133/134  
Fax (39-2) 65 30 75

#### ITALIA — Roma

ISTAT  
Centro di informazione statistica —  
Sede di Roma  
Eurostat Data Shop  
Tel. (39-6) 46 73 31 05/02  
Fax (39-6) 46 73 31 07/01  
E-mail: dipdiff@istat.it

#### LUXEMBOURG

Eurostat Data Shop Luxembourg  
BP 453 L - 2014 Luxembourg  
4, rue A. Weicker  
L - 2721 Luxembourg  
Tel. (352) 43 35 22 51  
Fax (352) 43 35 22 221  
E-mail: dslux@eurostat.datashop.lu

#### NEDERLAND

STATISTICS NETHERLANDS  
Eurostat Data Shop - Library  
Tel. (31-70) 337 49 00  
Fax (31-70) 337 59 84  
E-mail: datashop@cbs.nl

#### SVERIGE

STATISTICS SWEDEN  
Information service  
Eurostat Data Shop  
Tel. (46-8) 783 48 01  
Fax (46-8) 783 48 99  
E-mail: infoservice@scb.se

#### UNITED KINGDOM

ONS Sales Office  
Eurostat Data Shop  
Office for national statistics  
Tel. (44-171) 533 5676  
Fax (44-171) 533 5689  
E-mail: glonia.ryan@ons.gov.uk

#### USA

Haver analytics  
Eurostat Data Shop  
Tel. (1-212) 986 9300  
Fax (1-212) 986 5857  
E-mail: eurodata@haver.com

Eurostat homepage: <http://europa.eu.int/eurostat.html>

### Sales offices (EUR-OP)

BELGIQUE/BELGIË — DANMARK — DEUTSCHLAND — GREECE/ELLADA — FRANCE — IRELAND —  
ITALIA — GRAND-DUCHÉ DE LUXEMBOURG — NEDERLAND — ÖSTERREICH — PORTUGAL —  
SUOMI/FINLAND — SVERIGE — UNITED KINGDOM — ICELAND — NORWAY — SWITZERLAND —  
ČESKA REPUBLIKA — CYPRUS — MAGYARORSZÁG — MALTA — POLSKA — TÜRKIYE — BÄLGARIJA —  
HRVATSKA — ROMÂNIA — SLOVAKIA — SLOVENIA — ISRAEL — RUSSIA — AUSTRALIA — CANADA —  
EGYPT — JAPAN — SOUTH AFRICA — UNITED STATES OF AMERICA — MEXICO — KOREAN REPUBLIC

A worldwide list of our sales agents is available from the  
Office for Official Publications of the European Communities  
2 rue Mercier — L-2985 Luxembourg  
tel. (352) 2929-1 — fax. (352) 2929-42658  
Internet address:  
[http://eur-op.eu.int/\\_en/general/s-ad.htm](http://eur-op.eu.int/_en/general/s-ad.htm)