

# Appendix 5

## Pan-European comparisons using HBAI data

### Background

At the Lisbon European Council held in March 2000, the European Union set itself the

*“strategic goal for the next decade: to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”.*

Progress in achieving this goal was to be assessed regularly on the basis of commonly agreed structural indicators. These structural indicators are included in the European Commission’s Synthesis Reports, submitted each year to the Spring European Council, which acts as the focal point for discussion of progress on the economic reform agenda agreed at Lisbon.

These indicators cover general economic background, employment, innovation and research, economic reform, environment and social cohesion. The specific social cohesion indicators being: distribution of income, risk of poverty, persistent risk of poverty, regional cohesion, early school-leavers, long term unemployment, and jobless households<sup>1</sup>.

As part of the wider reform package, the Lisbon Council called for a decisive impact on the eradication of poverty throughout the Union by 2010. This was to be carried forward by, amongst other things:

- National Action Plans setting out strategies for combating poverty and social exclusion;
- development of commonly agreed EU-wide indicators;
- a Community Action Programme to promote networking, exchanges of best practice and other activities to foster co-operation in the fight against exclusion.

This work on exclusion culminated at the Laeken European Council in December 2001. This endorsed:

- the first ever Joint Inclusion Report - based on a synthesis of all fifteen National Action Plans supplemented by some EU-wide analysis; and
- agreed indicators, aimed at objectively capturing the complex and multidimensional reality of poverty and exclusion at the European level.

With the increasing prominence given to these statistical indicators across Europe there has been a rising interest in possible comparisons between the findings of HBAI and those of its European equivalents.

At present, such direct comparisons are not possible. It has been suggested, however, that HBAI consistently differs in its estimates of poverty in relation to these studies, especially for children.

One of the underlying reasons for this may be the use of different equivalence scales and it is this issue which the following analysis seeks to investigate.

### Equivalence Scales

Income based analysis, such as HBAI, uses equivalised household income as a measure of poverty and living standards.

Equivalisation, the process of adjusting household income to account for variations in household size and composition, can be carried out on a number of different scales each of which can lead to slightly differing results. (For more information regarding equivalisation see **Appendix 2**.)

HBAI results are adjusted using the McClement’s equivalisation scale, while analysis carried out by Eurostat for the European Union uses the Modified OECD scale.

The McClement’s scale takes a couple with no children to be its base with an equivalence value of one, while on the OECD a single adult is equal to one. To assess the (theoretical) differences between the two scales the OECD weights were converted to the same base as McClement’s.

**Table 5.1** shows a comparison of the different scales.

The Modified OECD scale gives more weight to the first adult and less to second and subsequent adults than does the McClement’s. This has the effect of giving single adult households a smaller equivalised income relative to couples. Analysis has shown that the use of OECD has a broadly neutral effect on the low-income thresholds.

<sup>1</sup> These indicators may be subject to change at the Spring Council held on 15<sup>th</sup> March 2002.

**Table 5.1 (BHC): Comparison of different equivalence scales**

Equivalence scales (BHC)			
	Modified OECD	Modified OECD rescaled to couple without children=1	McClement's
First Adult	1	0.67	0.61
Spouse	0.5	0.33	0.39
Other Second Adult	0.5	0.33	0.46
Third Adult	0.5	0.33	0.42
Subsequent Adults	0.5	0.33	0.36
Children aged under 14yrs <sup>1</sup>	0.3	0.2	0.2
Children aged 14yrs and over <sup>1</sup>	0.5	0.33	0.3

**Notes**

1. The McClement's scale varies by age within these groups; appropriate average values are shown in the table.

Therefore, the effect of replacing the McClement's scale with the Modified OECD scale is:

- A slight increase in the number of individuals below low-income thresholds.
- A slightly greater risk for children, driven by the lower equivalised incomes assigned to lone parents who are predominately clustered around the low-income thresholds.
- A broadly neutral effect for those of working-age with high incomes.
- An increase in the number of single pensioners below thresholds.

The Modified OECD scale is on a Before Housing Costs basis only, unlike the McClement's that has a different BHC and AHC measure.

**Findings**

In order to assess the impact of these different scales on HBAI estimates of income poverty, figures were calculated from the FRS using both the McClement's and OECD scales.

**Table 5.2** shows the percentage of individuals below various thresholds of income for both the Modified OECD and McClement's scales. There is little difference between the two estimates, though OECD estimates appear consistently slightly higher than those produced on the McClement's scale.

**Table 5.3** shows the percentage of children below various thresholds of income for both equivalence scales. McClement's estimates show a lower proportion of children living in households with low incomes than on the OECD measure. This feature is constant over time.

**Table 5.4** shows the percentage of working-age adults below various thresholds of income for both the Modified OECD and McClement's scales. There appears to be little difference between the two scales across the time period.

**Table 5.5** shows the percentage of pensioners below various thresholds of income. The Modified OECD scale consistently shows more pensioners below these thresholds in comparison to McClement's estimates.

**Family Type and Economic Status**

**Tables 5.6 and 5.7** show the risk for individuals in 2000/01 of falling into various low-income groups according to their family type and the economic status of their family. The following observations are based on individuals living in households with below 60 per cent of median income:

- When individuals are categorised according to their family type, the use of differing equivalence scales results in no change for most groups. The groups that are affected, however, are male and female single pensioners and those in lone-parents families. Whilst all these have a significantly greater risk of falling below these low-income thresholds when calculated using the OECD scale, the biggest discrepancy occurs for lone parents with an increase of almost ten percentage points.
- As with family type, the use of different equivalence scales when looking at economic status of the family affects some categories but not others. Those which differ depending on the scale used are all forms of workless families. Again the risk of low incomes is higher on the OECD scale, though the differences are less than for family type.

## Conclusion

In general, replacing the McClement's scale with the Modified OECD scale resulted in the following:

- A slight increase in the number of individuals below low-income thresholds
- A greater risk of low-income for children and single pensioners.
- Little effect for those of working-age.

It also had an impact on lone parents, single pensioners and those in workless families.

It should be noted that results for children and pensioners are known to be particularly sensitive to the choice of equivalence scale because of the high concentration of these groups around the 60 per cent of median threshold.

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**Table 5.2: (BHC) Percentage of individuals below various thresholds of contemporary income, including the self-employed**

Percentage of individuals	Source: FRS						
	1994/5	1995/6	1996/7	1997/8	1998/9	1999/00	2000/01
<b>OECD Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	8	8	9	9	10	9	10
50 per cent	19	18	20	20	21	20	20
60 per cent	30	30	30	30	31	31	30
<b>Thresholds of median</b>							
50 per cent	10	9	10	11	10	10	10
60 per cent	19	18	19	19	19	19	18
70 per cent	28	27	28	28	28	28	27
<b>McClement's Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	8	8	8	9	9	9	9
50 per cent	18	17	19	19	19	19	19
60 per cent	29	28	29	29	30	30	30
<b>Thresholds of median</b>							
50 per cent	9	9	10	10	10	9	10
60 per cent	18	17	18	18	18	18	17
70 per cent	27	26	27	27	27	27	26

**Table 5.3: (BHC) Percentage of children below various thresholds of contemporary income, including the self-employed**

Percentage of children	Source: FRS						
	1994/5	1995/6	1996/7	1997/8	1998/9	1999/00	2000/01
<b>OECD Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	10	10	11	12	12	11	11
50 per cent	26	24	28	28	28	27	25
60 per cent	38	38	39	40	41	40	38
<b>Thresholds of median</b>							
50 per cent	12	11	14	14	14	12	12
60 per cent	25	24	27	27	26	26	24
70 per cent	35	35	37	37	37	37	35
<b>McClement's Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	9	9	11	11	12	11	10
50 per cent	23	22	26	26	26	25	23
60 per cent	36	36	38	39	40	39	37
<b>Thresholds of median</b>							
50 per cent	11	11	13	13	12	11	11
60 per cent	23	21	26	25	24	23	21
70 per cent	34	33	36	36	35	36	33

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**Table 5.4: (BHC) Percentage of working-age adults below various thresholds of contemporary income, including the self-employed**

Percentage of working-age adults							Source: FRS
	1994/5	1995/6	1996/7	1997/8	1998/9	1999/00	2000/01
<b>OECD Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	7	7	8	8	8	8	9
50 per cent	15	14	15	16	16	16	16
60 per cent	23	22	23	23	24	24	24
<b>Thresholds of median</b>							
50 per cent	8	8	9	9	8	9	9
60 per cent	15	14	15	15	15	15	15
70 per cent	21	21	22	21	21	22	22
<b>McClement's Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	7	7	7	8	8	8	8
50 per cent	15	14	15	15	15	15	15
60 per cent	23	22	23	23	24	24	24
<b>Thresholds of median</b>							
50 per cent	8	8	8	8	8	8	9
60 per cent	15	14	15	15	14	15	14
70 per cent	21	21	22	21	21	21	21

**Table 5.5: (BHC) Percentage of pensioners below various thresholds of contemporary income, including the self-employed**

Percentage of pensioners	Source: FRS						
	1994/5	1995/6	1996/7	1997/8	1998/9	1999/00	2000/01
<b>OECD Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	10	10	11	11	13	12	12
50 per cent	24	24	24	25	28	25	26
60 per cent	43	43	42	43	45	43	43
<b>Thresholds of median</b>							
50 per cent	12	11	12	13	13	12	13
60 per cent	23	23	24	24	26	24	24
70 per cent	40	39	39	40	40	39	39
<b>McClement's Equivalisation</b>							
<b>Thresholds of mean</b>							
40 per cent	8	8	9	10	11	10	10
50 per cent	21	22	22	23	25	23	24
60 per cent	39	39	38	40	42	40	40
<b>Thresholds of median</b>							
50 per cent	10	10	10	11	12	11	11
60 per cent	21	22	21	22	23	22	22
70 per cent	36	35	35	36	37	35	35

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**Table 5.6: (BHC) Risk of falling into low-income groups of individuals, including the self-employed**

Percentage of individuals							Source: FRS 2000/01
Family type and gender	Income Thresholds						All individuals (millions)
	Below mean			Below median			
	40%	50%	60%	50%	60%	70%	
<b>OECD Equivalisation</b>							
Pensioner couple	9	24	39	10	22	34	5.4
Single pensioner							
- male	11	25	46	11	23	41	1.0
- female	16	31	51	17	29	46	3.2
Couple with children	9	17	28	9	16	24	20.1
Couple without children	6	11	16	7	10	14	12.1
Single with children	15	44	63	17	41	59	4.8
Single without children							
- male	11	18	25	12	17	23	6.6
- female	10	18	26	11	17	24	3.8
<b>All Individuals</b>	<b>10</b>	<b>20</b>	<b>30</b>	<b>10</b>	<b>18</b>	<b>27</b>	<b>56.9</b>
<b>McClements Equivalisation</b>							
Pensioner couple	9	24	39	10	22	34	5.4
Single pensioner							
- male	8	19	37	8	17	31	1.0
- female	13	25	44	13	23	38	3.2
Couple with children	9	17	27	9	16	24	20.1
Couple without children	7	11	16	7	10	15	12.1
Single with children	13	36	59	14	32	52	4.8
Single without children							
- male	11	17	25	11	16	23	6.6
- female	10	18	27	11	16	24	3.8
<b>All Individuals</b>	<b>9</b>	<b>19</b>	<b>30</b>	<b>10</b>	<b>17</b>	<b>26</b>	<b>56.9</b>

Table 5.7: (BHC) Risk of falling into low-income groups of individuals, including the self-employed

Percentage of individuals							Source: FRS 2000/01
Economic status of adults in the family	Income Thresholds						All individuals (millions)
	Below mean			Below median			
	40%	50%	60%	50%	60%	70%	
<b>OECD Equivalisation</b>							
One or more full time self-employed	14	20	28	15	19	25	5.1
Single/couple all in full time work	1	3	5	2	3	4	14.2
Couple, one in full time work, one in part time work	1	3	11	1	3	8	8.2
Couple, one in full time work, one not working	6	15	29	6	14	25	6.8
No one in full time work, one or more in part time work	12	25	40	13	24	36	4.7
Workless, head or spouse aged 60 or over	13	29	47	14	27	42	9.8
Workless, head or spouse unemployed	42	70	81	45	67	78	1.8
Workless, other inactive	24	51	68	25	48	65	6.3
<b>All Individuals</b>	<b>10</b>	<b>20</b>	<b>30</b>	<b>10</b>	<b>18</b>	<b>27</b>	<b>56.9</b>
<b>McClements Equivalisation</b>							
One or more full time self-employed	14	20	28	14	19	25	5.1
Single/couple all in full time work	2	3	6	2	2	5	14.2
Couple, one in full time work, one in part time work	1	3	10	1	3	8	8.2
Couple, one in full time work, one not working	5	15	28	6	14	24	6.8
No one in full time work, one or more in part time work	12	24	39	13	22	35	4.7
Workless, head or spouse aged 60 or over	12	26	44	12	24	38	9.8
Workless, head or spouse unemployed	39	68	82	41	64	78	1.8
Workless, other inactive	23	46	67	23	42	61	6.3
<b>All Individuals</b>	<b>9</b>	<b>19</b>	<b>30</b>	<b>10</b>	<b>17</b>	<b>26</b>	<b>56.9</b>

