Consortium of Household Panels for European Socio-Economic Research

CHER

Exploring Relations Between Non-Monetary Deprivation and Income Position Using the CHER Data

by Kimberly Fisher

Document n° 5   2003

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Readers wishing to cite this document are asked to use the following form and words:

Fisher, K. (2003) - "**Exploring Relations Between Non-Monetary Deprivation and Income Position Using the CHER Data",** CHER Working paper 5, CEPS/INSTEAD, Differdange, G.-D. Luxembourg,.

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Exploring Relations Between Non-Monetary Deprivation and Income Position Using the CHER Data

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Understanding poverty and the low social status often ascribed to living on a low income requires consideration of more than the financial resources available to individuals and their households. European institutions from EUROSTAT to the European Foundation for the Improvement of Living and Working Conditions have commissioned recent research to explore the relationship between the possession of goods and financial resources. Researchers in the USA have identified consumer spending on household goods over time as one dimension of understanding the dynamics of poverty (National Research Council 1996). Access to goods and facilities has been shown to have a significant association with levels of poverty over time in European countries (Betti and Cheli 2001, Gordon et. al. 2000). Nevertheless, this association is complex, and the dynamics of lacking basic items are not restricted to households struggling to make financial ends meet (Whelan, Layte and Maître 2001).

This paper explores these dynamics using the CHER data set. In some respects, CHER covers less ground than the ECHP and specialised non-monetary poverty, as the CHER data do not include information about whether households which do not have a particular item or do have a housing quality problem because they cannot afford to purchase the item or repair the problem, or if other reasons account for the absence or the item or presence of the problem. At the same time, the CHER data set offers a unique opportunity to directly compare access to goods as well as to general housing quality in 17 countries[1] over time, and includes the particular benefit of allowing comparison of experiences in two Eastern European countries with European Union member states and Switzerland. This paper takes advantage of the CHER potential by exploring the relationship between the degree of non-monetary deprivation, here defined as not possessing certain household goods and living in a house that lacks basic facilities or required significant repairs, and income position, controlling for household level backgrounds factors.

1. The Construction of the Non-Monetary Deprivation Scales

The CHER data set includes eighteen items which can be used to calculate an index of non-monetary deprivation. These items include:

one question relating to financial difficulties:

- HA09 Are housing costs a burden

four questions relating to basic household facilities:

- HA10 Does the household have an indoor toilet
- HA11 Does the household have indoor running water

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[1] At the time of writing, CHER covered data from 18 countries, but the data for Sweden are cross-sectional only, and therefore not suited to the longitudinal analysis used in this paper. At a future point, CHER will also include data from the United States, but the converted PSID were only available in beta format, and thus also excluded from this analysis.

- HA12 Does the household have a shortage of space
- HA14 Does the household have adequate heating

six questions relating to housing problems:
- HA13 Is the household too dark
- HA15 Does the household have a leaky roof
- HA16 Does the household have problems with damp
- HA17 Does the household have problems with rot
- HA18 Does the household have problems with noise
- HA19 Does the household have problems with pollution

three questions relating to possession of household goods that facilitate access to other goods and services, as well as access to employment and social contact with others:
- HG01 Does the household have access to a car
- HG02 Does the household have a phone
- HG03 Does the household have a home computer

two questions relating to possession of home entertainment goods:
- HG04 Does the household have a colour TV
- HG05 Does the household have a VCR

and two questions relating to possession of labour-saving kitchen appliances:
- HG06 Does the household have a microwave oven
- HG07 Does the household have a dishwasher.

As the elements of this list were selected after the design and collection of the original surveys, this list does not reflect any theoretical design or policy requirement. These items simply represent the maximum set which could be included in the cross-nationally harmonised CHER database.

In some cases, the questions may have been included in one country's national panel to allow comparability with other national panels and not for a particular research reason in that country. An example on this list is HG07 – does the household have a dishwasher. In some countries, including Switzerland and Luxembourg, the majority of households have a dishwasher (see Appendix 1). In the United Kingdom, in contrast, possess or with to possess a dishwasher. A 1999 survey asked British households to rate over 50 household and personal items as necessary or as not necessary for a normal quality of life (Gordon et. al. 2000). British households rated the dishwasher in the bottom five items on the list, with only 7% of households rating the dishwasher as necessary and 57% reporting that they both did not have a dishwasher and did not want to own one (Gordon et al 2000). Nevertheless, the percentage of British households possessing a dishwasher increased from 15% in 1991 to 27% in 2000. In consequence, including the dishwasher question in the BHPS allows both comparison with other European countries and analysis of which household acquire a dishwasher and which do not.

The Hungarian Household Panel Survey and the Polish Household Panel, in contrast, both include the question of whether the household possesses a dishwasher, and yet the data (see Appendix 1) reveal that across the years included in CHER, less than 1% of households in these two countries had a dishwasher – a possession rate too small for meaningful analysis. For this reason, the dishwasher question was not included in the scale of non-monetary deprivation for these two countries.

Data quality issues necessitated the exclusion of two other items on the list for some countries. Suspiciously high numbers of households in Greece are recorded as lacking indoor running water, thus item was not included in the scale for Greece. More than half the interviewed households in nine countries - Austria, Belgium, Finland, France, Greece, Ireland, Italy, Portugal and Spain – answered that their found paying for housing costs burdensome – with the curious exception that the number of French households reporting problems paying housing costs drops remarkably in 1997. This variable was likewise excluded for these nine countries.

The original variables were recoded into a 0 and 1 format, with 0 representing answers that do not suggest deprivation and 1 representing answers that do represent potential deprivation. "Yes" answers are coded as being the deprived answer to eight questions: is the home too dark; and does the household have problems: paying for the home; with a leaky roof; with damp; with rot; with pollution; with noise; or with a shortage of space. "No" answers to ten questions, does the household have adequate heating, an indoor toilet, an indoor running water, a car, a home computer, a phone, a microwave oven, a colour TV, a VCR, a dishwasher, are coded as the deprived answers. The 0 1 variables were then summed, producing a scale of non-monetary deprivation scoring from 0 (not deprived), up to between 6 and 13 (depending on year) for Germany, between 7 and 17 (depending on year) for the United Kingdom, 9 for Poland and Switzerland, 14 for Hungary, between 15 and 16 (depending on year) for Luxembourg, 16 for France and Greece, 17 for Austria, Belgium, Finland, Ireland, Italy, Portugal, and Spain, and 18 for Denmark and the Netherlands. When fewer than 50 households reported a 0 score, the households scoring 0 were grouped with the households scoring 1. Likewise, when fewer than 50 households reported a high score, these cases were amalgamated with the households with the next lowest score. No adjustments were made to scores in the middle range of the scale for each country, and in some cases, no adjustments were required.

1.1. Associations Between the Non-Monetary Deprivation Items

One might expect that households which score as deprived on one item in a set – say no indoor running water – might also lack the related items, in this case, no indoor toilet. The possibility of such associations was tested for three years, 1994, 1997, and 2000, using dedrograms drawn following the simple matching model in binary hierarchical clustering. Results for this analysis for each country are shown in Table 1. Indeed, lacking indoor running water is associated with lacking an indoor toilet in all countries in which both questions were asked. The BHPS and SHPS did not include a question about having access to indoor running water as most households in these countries have this facility.

Some other items cluster, but not necessarily in the way that one might expect. Lacking an indoor toilet is also associated with lacking a colour TV in 14 countries. The clustering of lacking an indoor toilet and lacking a colour TV did not emerge in only three countries: Finland, Hungary and Switzerland. Having a leaky roof is associated with having other related housing problems like damp, rot, darkness, and inadequate heating in most countries, but having a leaky roof is also associated with not having a phone at home in at least one year for ten countries (Austria, Belgium, Denmark, Finland, France, Greece, Luxembourg, the Netherlands, Spain, and the UK). Switzerland did not include the phone question. Households in Greece, Hungary, Poland, Portugal, Spain and the UK which did not have a VCR also tended to not have a car. In most countries, not having a dishwasher is also associated with not having a home computer.

As a very general rule, with many exceptions and variations by country, the lacking housing facilities variables cluster and the lacking household goods (except the colour TV) variables cluster. The clustering of the housing quality variables generally follows a stepwise

pattern for most countries, with the strongest association being between lacking an indoor running water, an indoor toilet, and a colour TV, and the various housing quality problems following. Seven countries, Austria, Greece, Hungary, Italy, Luxembourg, Poland, and Portugal have distinctive clusters rather than step-wise clustering patterns. In general, the associations between lacking the household goods (except for the colour TV) are weaker than the associations between lacking other items. The exceptions are Greece, where the association between lacking a home computer and a microwave oven, Portugal, where lacking a computer, a microwave and a dishwasher, and Poland, where lacking a microwave and a computer, are strongly associated.

Most countries with data for two or all three years show remarkably consistent clusters across time. In Denmark, Ireland and Spain, the number of deprivation clusters increased over time. In Portugal, Luxembourg and the UK, some restructuring occurred within clusters, but the same general trends (clustering of housing quality problems, and associations between the absence of appliances – with the exception of lacking a colour TV and a phone) emerge.

Table 1 – Clusters of Variables Where Households Scoring as Deprived on One Item in the Cluster are also Likely to Score as Deprived on the Other Items in the Cluster by Country in 1994, 1997, and 2000

Country	1994	1997	2000
Austria		1st cluster – no indoor running water, leaky roof, problem with rot, no colour TV, no indoor toilet, no phone, inadequate heating, home too dark, problem with damp, problem with pollution 2nd cluster – no microwave, no dishwasher, no VCR 3rd cluster – problem with noise, household does not have a car	
Belgium	1st cluster – no indoor running water, no indoor toilet, no colour TV, no phone, leaky roof 2nd cluster – no home computer, no dishwasher	1st cluster – no indoor running water, no indoor toilet, no colour TV, no phone, leaky roof 2nd cluster – no VCR, no microwave 3rd cluster – no home computer, no dishwasher	
Denmark	1st cluster – no indoor toilet, no indoor running water, no phone, no colour TV, home too dark, inadequate heating, leaky roof, problem with rot 2nd cluster – no microwave, no dishwasher	1st cluster – no indoor toilet, no indoor running water, no phone, no colour TV, home too dark, inadequate heating, leaky roof 2nd cluster – problem with rot, problem with damp, problem with pollution 3rd cluster – no microwave, no dishwasher, no home computer 4th cluster – problem with noise, shortage of space	

Table 1 – Clusters of Variables Where Households Scoring as Deprived on One Item in the Cluster are also Likely to Score as Deprived on the Other Items in the Cluster by Country in 1994, 1997, and 2000 (continued)

Country	1994	1997	2000
Finland		1st cluster – no indoor toilet, no indoor running water, no phone, inadequate heating, problem with damp, problem with rot, leaky roof, no colour TV 2nd cluster – no home computer, no dishwasher	
France	1st cluster – no indoor running water, no indoor toilet, no phone, leaky roof, no colour TV 2nd cluster– no microwave, no dishwasher	1st cluster – no indoor running water, no indoor toilet, no phone, leaky roof, no colour TV 2nd cluster – no VCR, no microwave	
Germany	1st cluster – no indoor toilet, no indoor running water 2nd cluster – problems with noise, problems with pollution	1 cluster – no indoor toilet, no indoor running water	1 cluster – no indoor toilet, no indoor running water, no phone, no colour TV
Greece	1st cluster – no indoor toilet, no colour TV, no phone, problem with rot, leaky roof, problem with damp 2nd cluster – problem with noise, problem with pollution 3rd cluster – no microwave, no dishwasher	1st cluster – no indoor toilet, no colour TV, no phone, problem with rot, home too dark, leaky roof, problem with damp 2nd cluster – problem with noise, problem with pollution 3rd cluster – no home computer, no microwave, no dishwasher 4th cluster – no car, no VCR	
Hungary	1st cluster – problem with rot, problem with pollution, home too dark, problem with noise, no indoor running water, problem with damp 2nd cluster – no home computer, no microwave	1st cluster – problem with rot, problem with pollution, home too dark, problem with noise, no indoor running water, problem with damp, no indoor toilet 2nd cluster – no home computer, no microwave, no car, no VCR	
Ireland	1st cluster – no indoor toilet, no running water, no colour TV, home too dark, leaky roof 2nd cluster – no VCR, no microwave	1st cluster – no indoor toilet, no indoor running water, no colour TV, home too dark, leaky roof 2nd cluster – problem with noise, problem with pollution, no phone 3rd cluster – no home computer, no dishwasher	

Table 1 – Clusters of Variables Where Households Scoring as Deprived on One Item in the Cluster are also Likely to Score as Deprived on the Other Items in the Cluster by Country in 1994, 1997, and 2000 (continued)

Country	1994	1997	2000
Italy	1st cluster – no indoor toilet, no indoor running water, no colour TV, problem with rot, problem with damp, leaky roof 2nd cluster – no microwave, no dishwasher	1st cluster – no indoor toilet, no indoor running water, no colour TV, problem with rot, problems paying for home, problem with damp, leaky roof 2nd cluster – no phone, home too dark 3rd cluster – no home computer, no microwave, no dishwasher	
Luxembourg		1st cluster – problems paying for home, no colour TV, home too dark, problem with pollution 2nd cluster – no indoor running water, shortage of space, inadequate heating, problem with noise 3rd cluster – no home computer, no microwave	1st cluster – problems paying for home, no colour TV, home too dark, problems with pollution, no indoor toilet, leaky roof, no indoor running water, inadequate heating, no phone
The Netherlands	1st cluster – no phone, no indoor toilet, no indoor running water, no home computer, no colour TV, leaky roof, home too dark, inadequate heating 2nd cluster – no microwave, no dishwasher	1st cluster – no phone, no indoor toilet, no indoor running water, no colour TV, leaky roof, inadequate heating 2nd cluster – no home computer, no dishwasher	
Poland	1st cluster – no home computer, no microwave 2nd cluster – no indoor toilet, no indoor running water, no colour TV	1st cluster – no indoor toilet, no indoor running water, no colour TV 2nd cluster – no home computer, no microwave 3rd cluster – no car, no VCR	1st cluster – no indoor toilet, no indoor running water, no colour TV 2nd cluster – no home computer, no microwave
Portugal	1st cluster – no microwave, no dishwasher 2nd cluster – problem with noise, problem with pollution 3rd cluster – no indoor toilet, no indoor running water, no colour TV, no phone 4th cluster – leaky roof, problem with rot, problem with damp, home too dark	1st cluster – no indoor toilet, no indoor running water, no colour TV, home too dark 2nd cluster – problem with damp, problem with rot 3rd cluster – problem with noise, problem with pollution 4th cluster – no home computer, no microwave, no dishwasher 5th cluster – no car, no VCR	
Switzerland			1st cluster – problems paying for home, no colour TV, inadequate heating

Table 1 – Clusters of Variables Where Households Scoring as Deprived on One Item in the Cluster are also Likely to Score as Deprived on the Other Items in the Cluster by Country in 1994, 1997, and 2000 (continued)

Country	1994	1997	2000
Spain	1st cluster – no indoor toilet, no indoor running water, no colour TV, inadequate heating, problem with rot 2nd cluster – no car, no VCR 3rd cluster - no microwave, no dishwasher	1st cluster – no indoor running water, no indoor toilet, no colour TV, inadequate heating, problem with rot 2nd cluster – no phone, leaky roof, problem with pollution, problem paying for home 3rd cluster – no car, no VCR 4th cluster – no home computer, no dishwasher, no microwave	
United Kingdom	1st cluster – problems paying for home, no colour TV 2nd cluster – no car, no VCR 3rd cluster – no home computer, no dishwasher	1st cluster – no indoor toilet, no colour TV, leaky roof, no phone, inadequate heating, home too dark 2nd cluster – problems paying for home, problem with damp 3rd cluster – problem with rot, problem with pollution 4th cluster – no microwave, no car 5th cluster – no home computer, no dishwasher	1st cluster – no indoor toilet, no colour TV, leaky roof, no phone, inadequate heating 2nd cluster – home too dark, problem with damp, problem with rot, problem paying for home, problem with pollution

Nevertheless, even though some clear clusters emerge, with households which lack certain items more likely to lack other specific items, many households report missing only one item, and missing one particular item does not guarantee that a household is more likely to not possess other items. All the clustering really shows is what households deprived on multiple items are likely to lack, not the overall degree of relative non-monetary deprivation. Selecting one item in a cluster to represent the cluster drastically simplifies the picture of which households face some degree of deprivation (as will be shown in Section 2). Further, the distribution of the items across each year for each country is patchy. Only three of the eighteen questions (does the household have access to a private car, does the household have a phone, and does the household have a dishwasher) are asked by all countries in at least one year. Seven items are not included in the questionnaire from one country,[2] three questions were not asked by two countries,[3] two questions were not asked by three countries,[4] and three

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[2] The seven questions not asked by one country are: does the household have an indoor toilet; does the household have noise problems; does the household have a pollution problem; does the household have a phone; does the household have a home computer; does the household have a VCR; does the household have a microwave oven.

[3] The three questions not asked by two countries are: are housing costs a burden; does the household have indoor running water; does the household have a shortage of space.

[4] The two questions not asked by three countries are: is the household too dark; does the household have adequate heating.

questions were not asked in four countries.[5] Indeed, as is shown in the blank cells in the tables in Appendix 1, a number of countries asked some items on alternate or occasional years, but not in all years. As a result, choosing an optimal set of functional equivalents for the different clusters across the countries is a difficult task. Further, similar research using the BHPS (Betti and Cheli 2001), using specially designed survey data in the UK (Gordon et. al. 2000), and the ECHP (Whelan, Layte and Maître 2001) has used all or the majority of available items. For these reasons, all of the 18 items that are relevant to each country have been used in analysis, and for most analysis each country is assessed separately.

1.2.   The Distribution of Each Item on the Scale Across Europe and Amendments to the Scale These Distributions Require

Appendix 1 shows the distribution of the proportion of deprived answers across each country for each year. Clear trends emerge in the seven items relating to goods for most countries, with each trend pointing to more households possessing each of the items each successive year. There are a few exceptions. The proportion of households not owning a car increased slightly in Hungary. Phone and colour television ownership plateaued for a number of countries. These exceptions aside, most increases in appliance ownership are gradual, though some increases are dramatic. A significant number of households in Belgium and Ireland acquired a home computer and a microwave oven, while numerous Dutch and Spanish households acquired microwaves. Many Italian households obtained VCRs, while Polish households were likely to acquire home phones. High proportions of British and Danish households acquired both home computers and VCRs. Danes also were likely to purchase dishwashers, while the British were drawn to obtain microwaves. The clear trend for the increase in the possession of these seven items is summarised in Appendix 2, which shows a steady downward trend in the absence of these items across all countries in CHER (though there are a few discrepancies when some countries enter the CHER data between 1992 and 1994). Also, there is a general decrease in the remaining proportion of households across Europe which does not have an indoor toilet or indoor running water. These trends indicate that Europeans generally have access to more facilities each year, which makes the absence of each item of greater consequence in the consideration of non-monetary poverty in each successive year for the countries in CHER. This same trend occurs both for the two Eastern European countries and the Western European countries, though the total ownership rate for many items starts at a smaller base in Poland and Hungary than in the other countries.

Nevertheless, while important trends emerge in the household goods items, the level of households which do not possess some items, especially a dishwasher, microwave oven, and a home computer, are often high. For this reason, the scale calculated for each country for each year includes only those items where no more than 40% of the households hold a deprived score for that item.

The picture is less clear for household and financial problems. Some problems decline slightly across most of the countries over time, though many problems remain relatively constant for many countries across time. Relatively high numbers (between 12% and 40%) of households in all countries experience problems with noise, a shortage of space, and problems with pollution. Generally, smaller proportions of households experience problems with rot, a leaky roof, and dark. Very few households lack an indoor toilet and indoor running water.

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[5] The three questions that were not asked by four countries are: does the household have a leaky roof; does the household have a problem with damp; does the household have a problem with rot.

There are some exceptions. Households in Luxembourg report very few problems paying for their home. Households in Hungary and Poland have higher proportions of households without indoor running water (between 5 and 9%, compared to less than 4%) than most of the Western European countries, but Portugal has by far the highest proportion of households without indoor running water (still at 14% in 1999). The lack of an indoor toilet is particularly high in Greece, Hungary, Poland and Portugal. A number of countries, including all Southern European countries, have relatively high levels of a shortage of space, between 18% and 30%. Southern European countries also are likely to have relatively high levels of other housing problems. The Spanish and Portuguese are most likely to have a dark home. The Greeks and Portuguese are most likely to have inadequate home heating and a leaky roof. The Portuguese and Spanish have the highest levels of problem with damp. The Portuguese experience the highest problems with rot. Hungarians have the fewest problems with noise. The Danes, Irish, Hungarians, and Luxembourgish have the least problems with pollution. The curious result of examining the trends in the housing quality variables is that the Eastern European countries generally fair well in comparison with Western Europe.

1.3.   Item Non-Response in the Non-Monetary Deprivation Scale

Households which did not answer all items in their respective questionnaires used in the non-monetary deprivation scale pose a problem, as their scores will not reflect the same base as other cases and as it is not possible to say with certainty what answer they should have given to the items that were not answered. Fortunately the overall level of non-response for most years was low, less than 0.5% for most items across the countries in each year. A few individual items attracted levels of non-response greater than 2% of case but less than 5% of cases.[6] More item non-response occurred in 1993 than in any other year. Two questions, does the household have access to a private car and does the home have adequate heating, attracted higher levels of non-response than other variables. Otherwise, non-response varies by year and by country.

The conventional wisdom holds that cases with item non-response should be excluded from analysis or that values for the missing items should be imputed before other analysis. This paper departs from the standard approaches by including households with one item missing among households with no items missing without imputing for the missing values. This section now explains the reasons for this choice.

The overall level of item non-response is low in most countries (more detail of item non-response by country is displayed in Appendix 3). In four countries, Finland, Greece, Poland and Portugal, and also for the Netherlands for all but one year and Italy for four of six years, all households or virtually all households (<0.3% of the sample size) answered all questions. In a further three countries, Austria, Denmark, and Spain, 99% of the sampled households answered all items, and nearly all of the remaining households had only one item missing. For these eight countries, the effect of including the cases with item non-response is negligible.

In a further four countries, Germany, Ireland, Switzerland and the United Kingdom, 94% or more of the sample answered all items used in the non-monetary deprivation scale. The sum of households with no item non-responses and households which did not answer one

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[6] In 1991, 3.1% of households in CHER did not answer the have a phone question. In 1993, 4.9% of households did not answer the have a car question, 2.8% did not answer the have a shortage of space question, 2.5% did not indicate if their home was too dark or if their home had a problem with pollution or noise, 2.4% did not indicate if they had a problem with damp, 2.2% did not say if their home had adequate heating, and 2.0% did not say if they had a dishwasher, a microwave oven, or a VCR. In 1994, 2.7% did not indicate whether their household had a car. In 2000, 4.3% of households did not report whether they had adequate home heating.

item but which did answer all other questions accounts for 96% to 100% of cases for these countries. The effect of including the cases with one missing variable for these countries again is minimal.

The problematic cases come from four countries: Belgium, France, Hungary, and Luxembourg (and also Italy in 1994 only). In three of these countries, concern arises only for a minority of years. Item non-response is low in Belgium for five of the seven years of available data (1992, 1995-98), for five of six years for France (1994, 1996-99), and for four of six years for Hungary (1992-95). Item non-response is only low in 1995 for Luxembourg. The percentage of households which answered all non-monetary deprivation items in the problematic years for Belgium (1993, 1994), France (1995), Hungary (1996, 1997), and Italy (1994), and for Luxembourg (1996-2000), ranges from a high of 88% for France and Italy to a low of 54% for Belgium for 1994. When households which answered all but one item are included, the percentage of included households rises to 89% to 99% for Belgium, to 94% to 99% for France, to 90% to 100% for Hungary, and from 99% to 100% for Luxembourg. Consequently, including cases with no more than one missing item ensures that most households from all countries – particularly Luxembourg and Belgium, are included in the analysis. Only the very small percentage of households with two or more items missing were removed.

Table 2 – Percentage of Households Reporting a Deprived Response on 1-2 or 3 or More Items by the Number of Items Not Answered, and the Mean Number of Deprived Answers Given by Level of Non-Response

	90	91	92	93	94	95	96	97	98	99	00
Mean score on the deprivation scale including all items											
No items missing	.97	3.52	3.08	2.69	5.10	4.69	5.27	4.72	4.96	4.87	2.98
1 to 2 items missing	.40	3.38	2.85	3.96	3.31	4.07	5.49	6.41	2.84	3.34	2.32
3+ items missing	.13	1.05	1.44	1.02	1.19	0.78	2.31	2.50	1.60	1.36	0.11
Percentage reporting the deprived answer on no items											
No items missing	98.8	86.6	91.8	60.1	97.8	94.4	89.1	83.3	95.8	96.1	88.4
1 to 2 items missing	1.1	8.4	3.8	1.6	0.5	1.1	0.6	0.2	0.5	0.4	2.1
3+ items missing	0.1	5.0	4.4	38.3	1.7	4.5	10.3	16.5	3.7	3.5	9.5
Percentage reporting the deprived answer on 1 to 2 items											
No items missing	99.6	93.8	97.3	95.7	99.8	99.6	98.2	90.5	99.6	99.4	99.7
1 to 2 items missing	0.3	5.8	2.3	2.4	0.1	0.3	0.3	0.2	0.2	0.1	0.2
3+ items missing	0.1	0.4	0.4	1.9	0.1	0.1	1.5	9.3	0.2	0.5	0.1
Percentage reporting the deprived answer on 3+ items											
No items missing	100	94.5	97.8	89.1	99.9	99.8	99.4	95.9	99.9	99.9	99.6
1 to 2 items missing	0	5.4	2.0	8.3	0.05	0.2	0.3	1.5	0.1	0.0	0.3
3+ items missing	0	0.1	0.2	2.6	0.05	0.0	0.3	2.6	0.0	0.1	0.1
Chi Squared for the Full Table, and Gamma for the 3 by 3 and the 2 by 3 Tables (excluding the 3+ missing items)											
Chi squared significance	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Gamma	-.605	-.189	-.276	-.266	-.720	-.683	-.649	-.462	-.826	-.840	-.804
Gamma exclude 3+missing	-.587	-.098	-.140	.542	-.557	-.463	-.034	.767	-.710	-.499	-.376

Table 2 displays a second rationale for keeping cases where the household questionnaire respondent completed all but one item – a large percentage of these households report a high level of deprivation, and excluding these cases excludes more highly deprived than minimally deprived households from analysis. With the exception of data from two years - 1990 (covering Germany only), and 2000 - more than half of households which did not answer one or two items but which did answer all other deprivation items accumulated a deprivation score of 3 or more. In three years (1993, 1996, 1997), households which did not answer one or two items have a higher mean score than households which answered all items,

and in four other years (1991, 1992, 1995, 2000) the mean deprivation score of these two groups of households is close. The pattern for households which did not answer three or more items differs from the rest of the sample markedly. For all years, the mean deprivation score for households with 3 or more unanswered items is considerably lower than the scores for the other household groups.

The chi squared score from the relationship between the level of missing data and the level of non-monetary deprivation for the 3 by 3 cross tab included in Table 2 is statistically significant at the $p<.000$ level for all years. The Gamma score shows the direction and the intensity of the relationship between these two ordinal variables. For the 3 by 3 table, the Gamma score is consistently negative (meaning that as the number of missing cases goes up, the score on the deprivation scale goes down). The closer the Gamma score is to 0, the weaker the relationship, and the closer the score is to 1 or to -1, the stronger the relationship. For eight of the eleven years, the Gamma score is very strong, though the score is weak for the other three years. When the households which did not answer three or more items are excluded from this table, the relationship between the deprivation score of households which answered all items and those which did not answer one or two items remains statistically significant, but in all cases the Gamma score is significantly weaker, becoming nearly negligible in two years. Further, the sign of the relationship reverses to positive for 1993 and 1997, meaning that households with one or two missing items scored higher on the deprivation scale than households with no missing items. While the response patterns of households with no missing data and a small amount of missing data are not identical, the magnitude of the scores of the households missing only one or two items justifies considering keeping these cases in the analysis. This analysis errs on the side of prudence, and only keeps households with one missing item.

The third rationale for keeping the households with a single missing item in the scale is that the scores on the scale are relative rather than absolute. As will be shown in the analysis later in this paper, scoring one place higher or lower on the scale makes relatively little difference when compared to sets of cases which have larger distances between their deprivation scores.

2. The Cross-Sectional Distribution of Non-Monetary Deprivation Across the Countries

The first thing one notices when looking at the distributions of deprivation levels across time is the significant difference the addition or removal of an item makes. Figure 1 shows the distribution of households scoring 0 - meaning that the households did not give a deprived answer on any of the items, for three countries which asked the nearly the same set of questions each year. The percentage scoring 0 changes within a 10% range for each of these countries.

Figure 1 contrasts sharply with Figure 2, which displays the percentage of households scoring 0 on the scales for countries which greatly changed their set of questions, Germany, Luxembourg, Poland, and the United Kingdom. For these countries, there are no trends, and the swings between years jump by more than 55%. In 1998, the year of the huge drop in the percentage scoring 0 for Germany, three questions not asked in other years were asked for this year only (have a dishwasher, have a microwave, have a VCR), and some questions asked only some years also were asked. The jump in the percentage scoring 0 for the UK between 1992 and 1995 corresponds with changes in the BHPS questionnaire. Many questions asked at wave 1 (1991) that the research team did not deem to have yielded substantial information, including many housing quality variables, were dropped at wave 2 (1992), only to be largely reintroduced in wave 6 (1996) to allow the BHPS to be more easily

converted into ECHP format for the UK contribution to that panel data set. Variables were added to the PSEL II after wave 1 (1995) for more consistency with the ECHP. Figure 2 suggests that the number of questions asked has a significant effect on the score, even when the questions relate to items that the majority of the population has. The more deprivation items the household has to answer, it seems, the more likely the interviewer will cover at least one item that the household does not have.

Figure 1 – The Percentage of Households Scoring 0 on the Deprivation Scale for Austria, France, and Spain
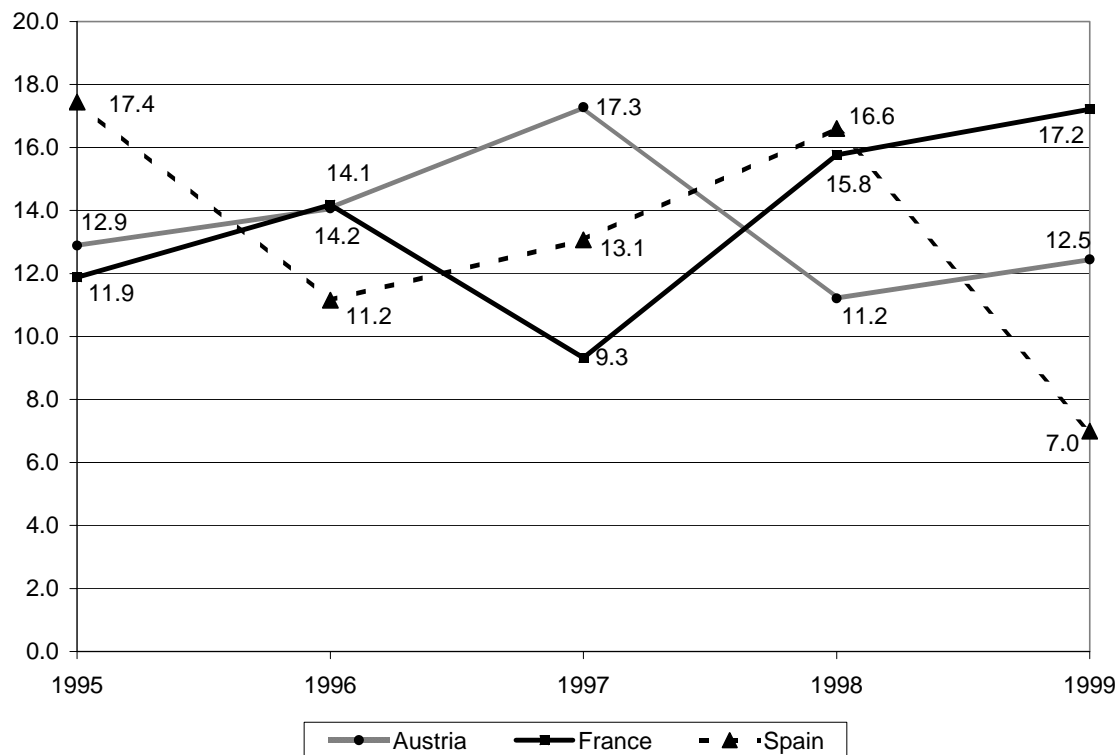
Due to the significant variations in scores for some countries across years, I decided not to trace non-monetary deprivation scores as time series data. Instead, this paper examines the non-monetary deprivation status for each country separately for each year after the first year for which data is available for each country. This means that I examine ten years for Germany (1991 to 2000), which contributes data to every year in CHER, and one year for Switzerland (2000), which has contributed two years of data to CHER. The analysis retains a longitudinal component, as explanatory variables include data collected in the same year for each deprivation score and also information about changes in households' conditions from the previous year.

Figure 3 displays the weighted distribution of deprivation scores across the years for each country. For most countries, there is a concentration of households scoring 0 to 4 with a sharp drop off to higher scores. Five countries have particularly high concentrations of 0 scores (not deprived on any item): Germany, Hungary, Ireland, Italy, Luxembourg, Switzerland, and the United Kingdom. The concentration of 0 scores is highest for Germany and the UK for years when the fewest non-monetary deprivation items were included with the questionnaire, but even in years when more items were asked, the proportion of 0 scores remains relatively high in these countries.

Figure 2 – The Percentage of Households Scoring 0 on the Shortened Deprivation Scale for Germany, Luxembourg, Poland and the United Kingdom
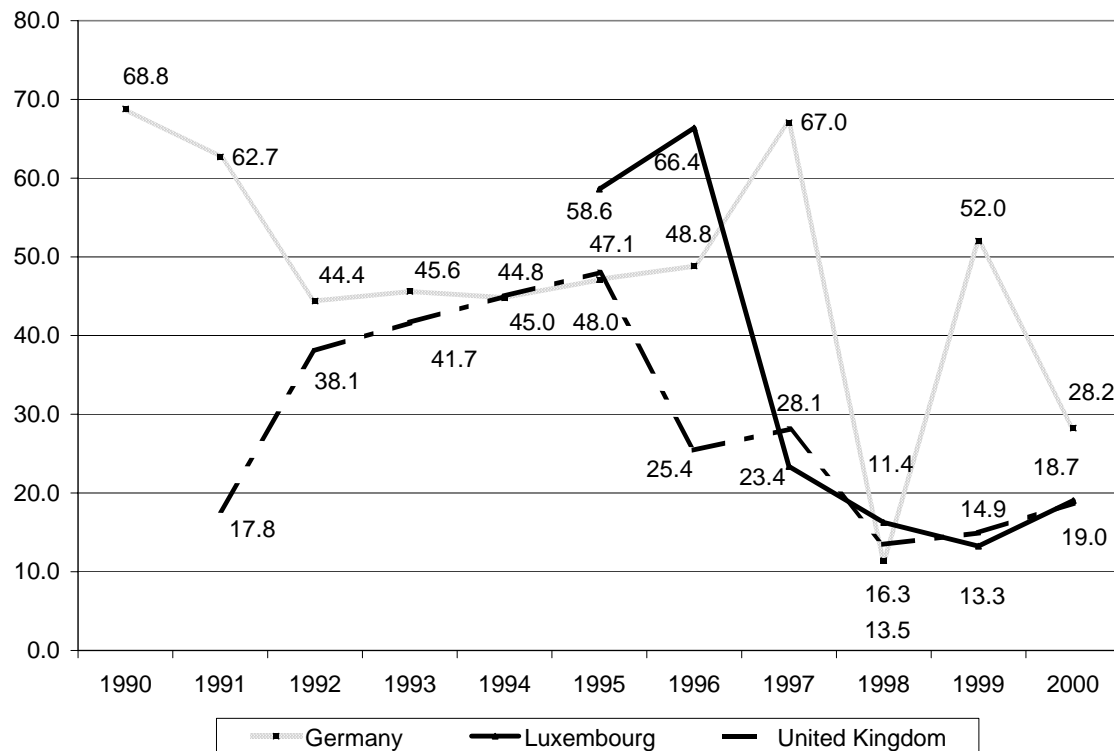
Figure 3 - Weighted Distribution of the Deprivation Scale for Each Country (the bottom bar represents the 0 score, each subsequent bar represents an increase of 1 in the score)

Deprivation scores for Austria
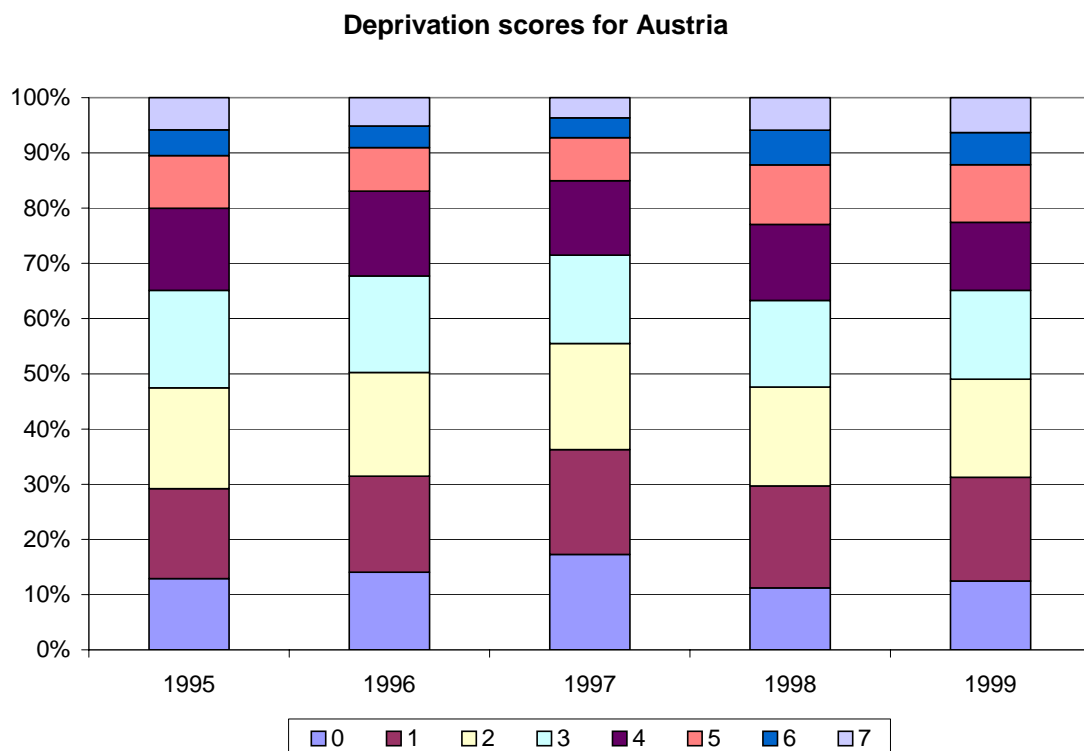
Deprivation scores for Belgium

Legend: 0, 1, 2, 3, 4, 5, 6, 7, 8
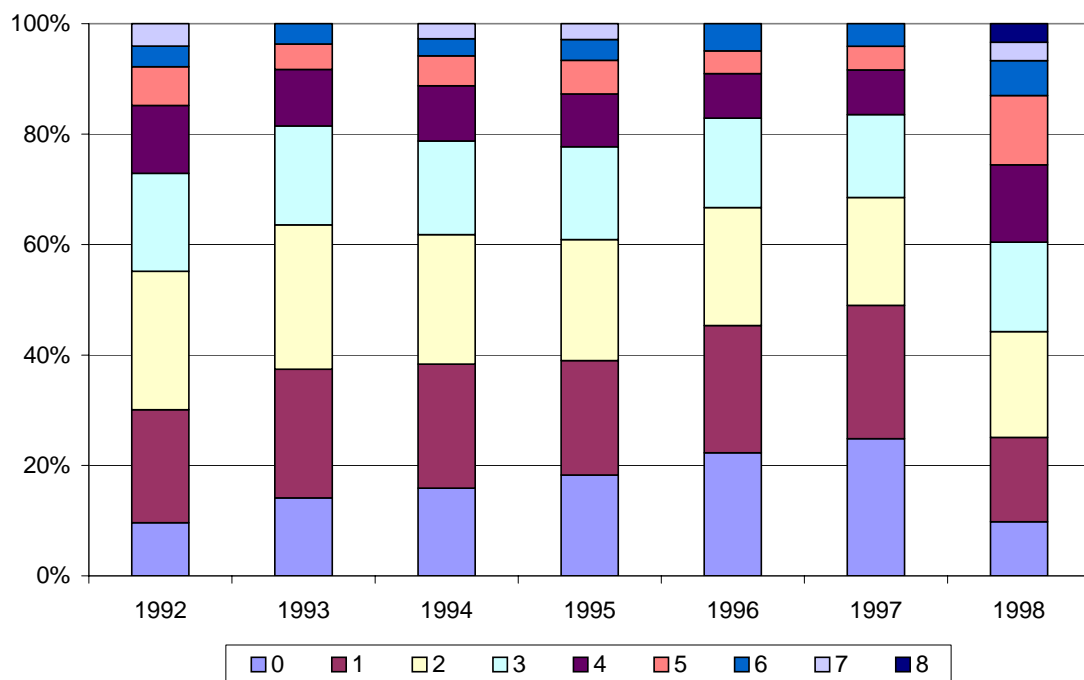
Deprivation scores for Denmark

Legend: 0, 1, 2, 3, 4, 5, 6, 7, 8
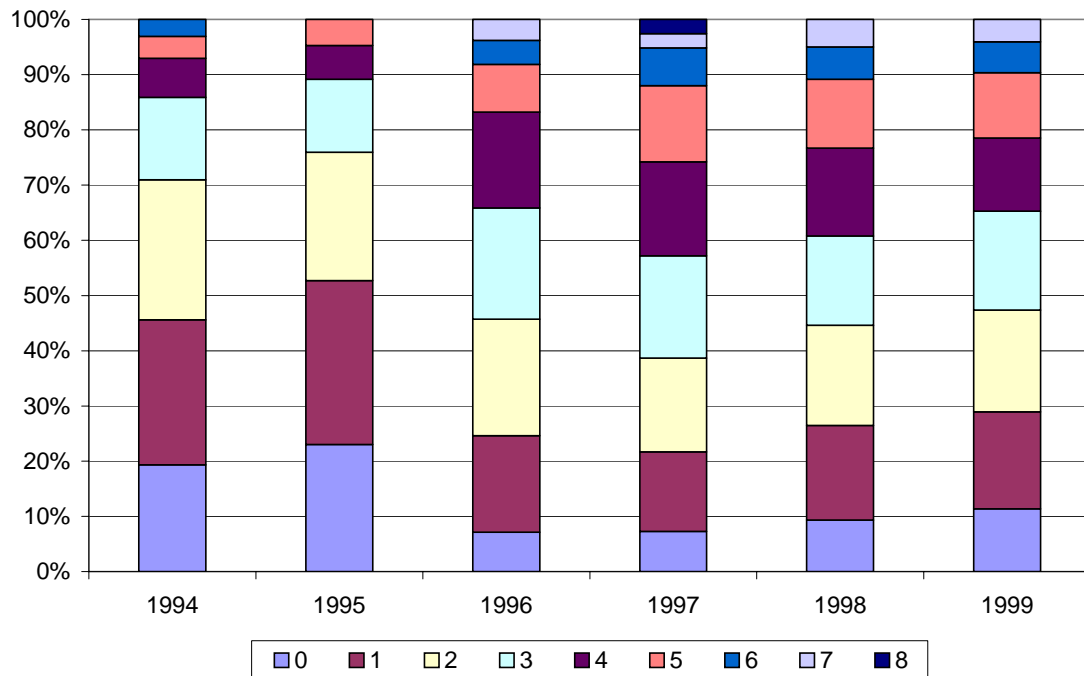
Deprivation scores for Finland
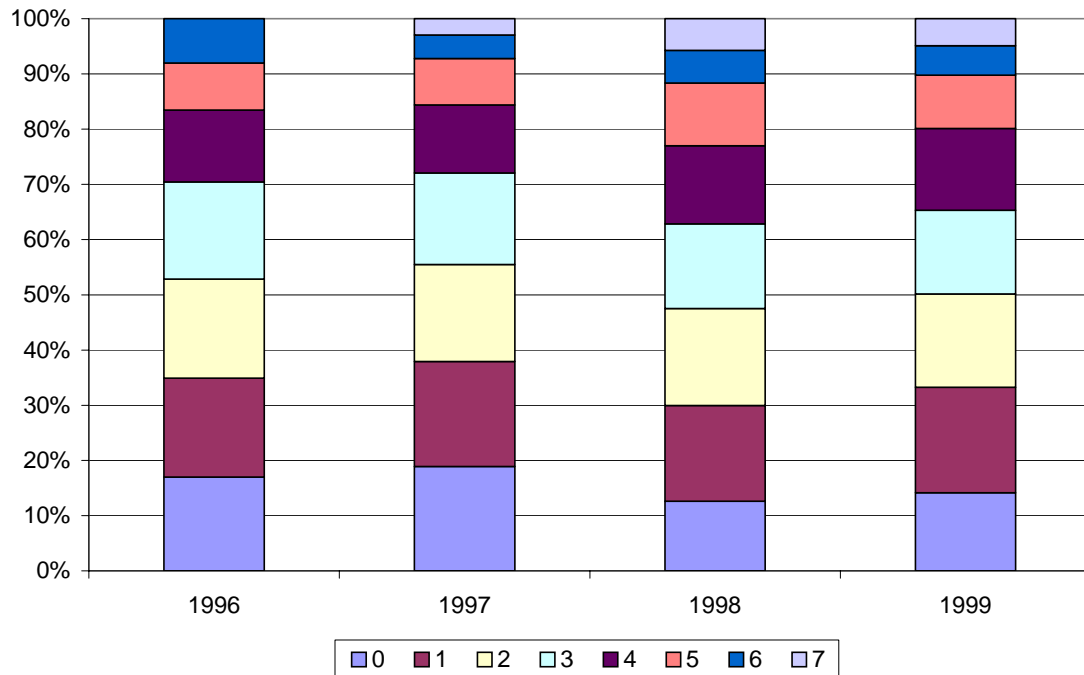
Deprivation scores for France
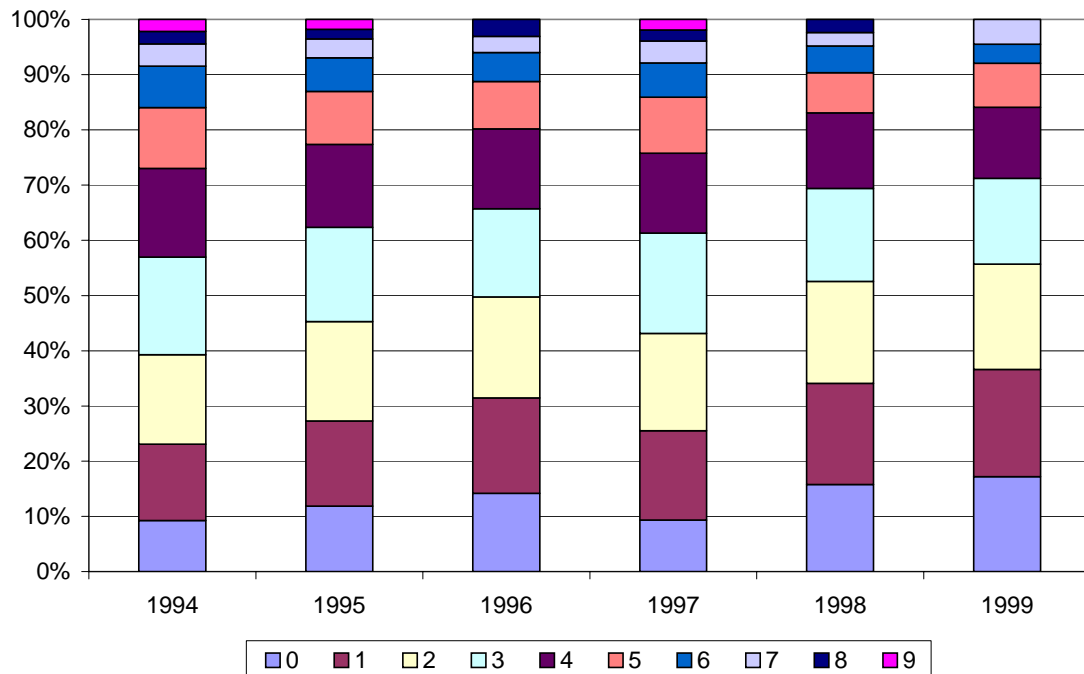
Deprivation scores for Germany

Legend: 0, 1, 2, 3, 4, 5, 6, 7
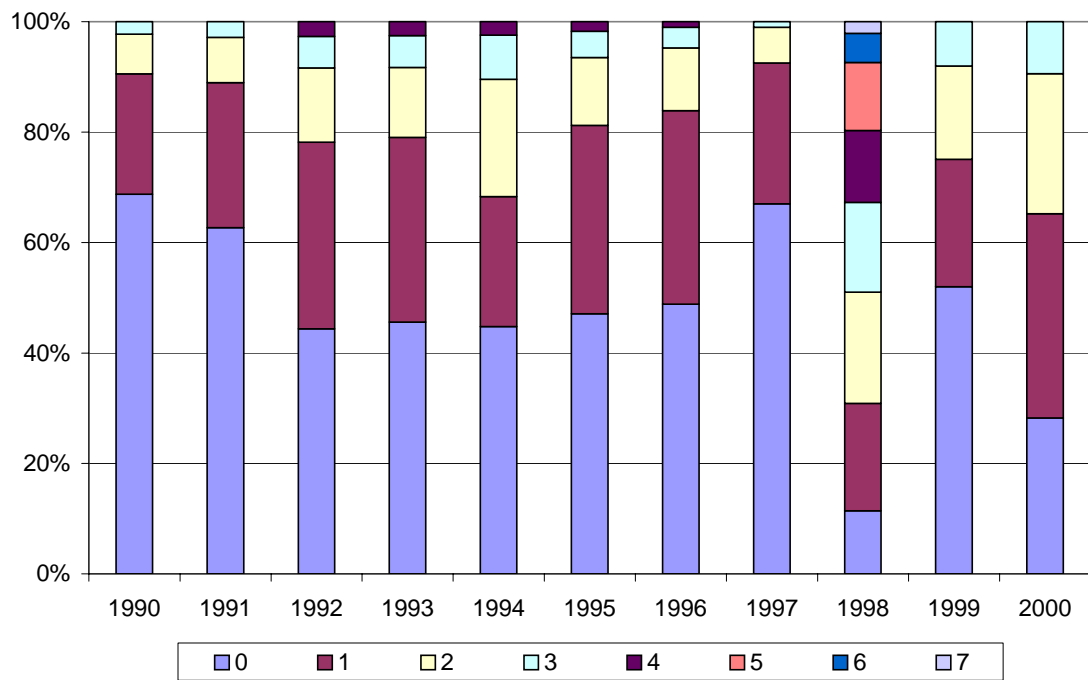
Deprivation scores for Greece

Legend: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
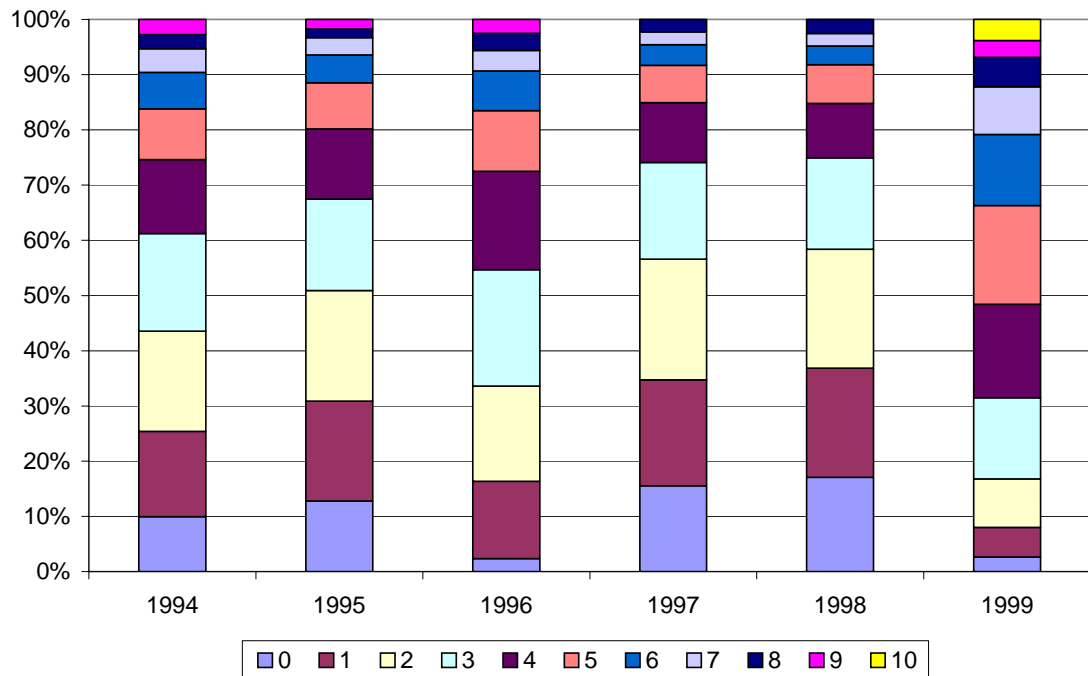
Deprivation scores for Hungary

Legend: 0, 1, 2, 3, 4
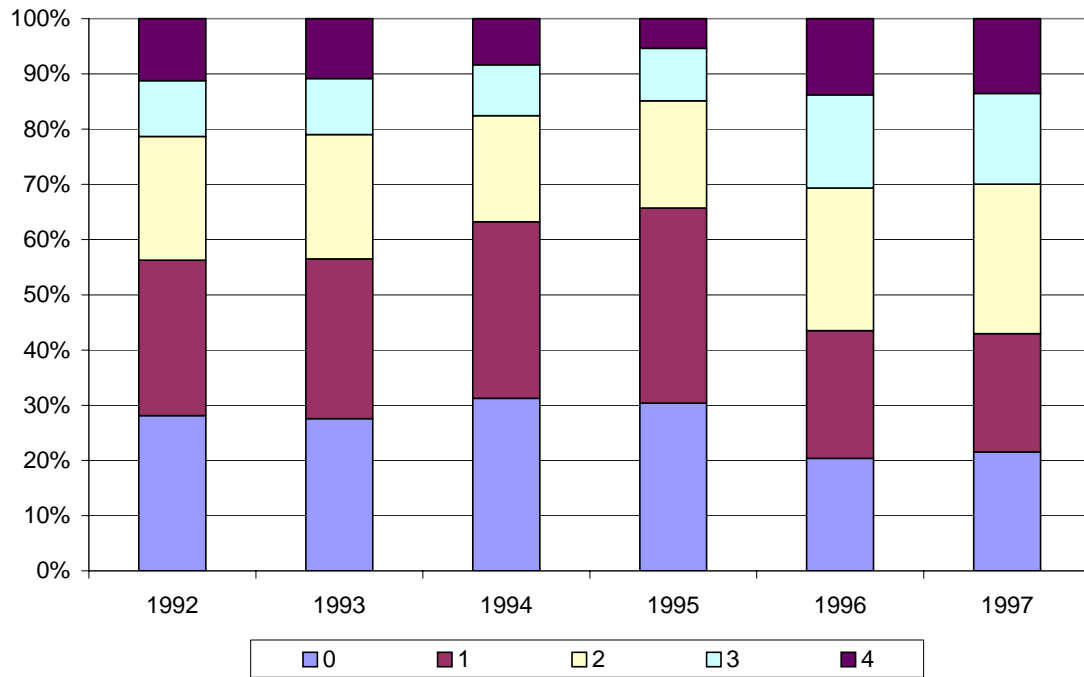
Deprivation scores for Ireland

Legend: 0, 1, 2, 3, 4, 5, 6, 7, 8
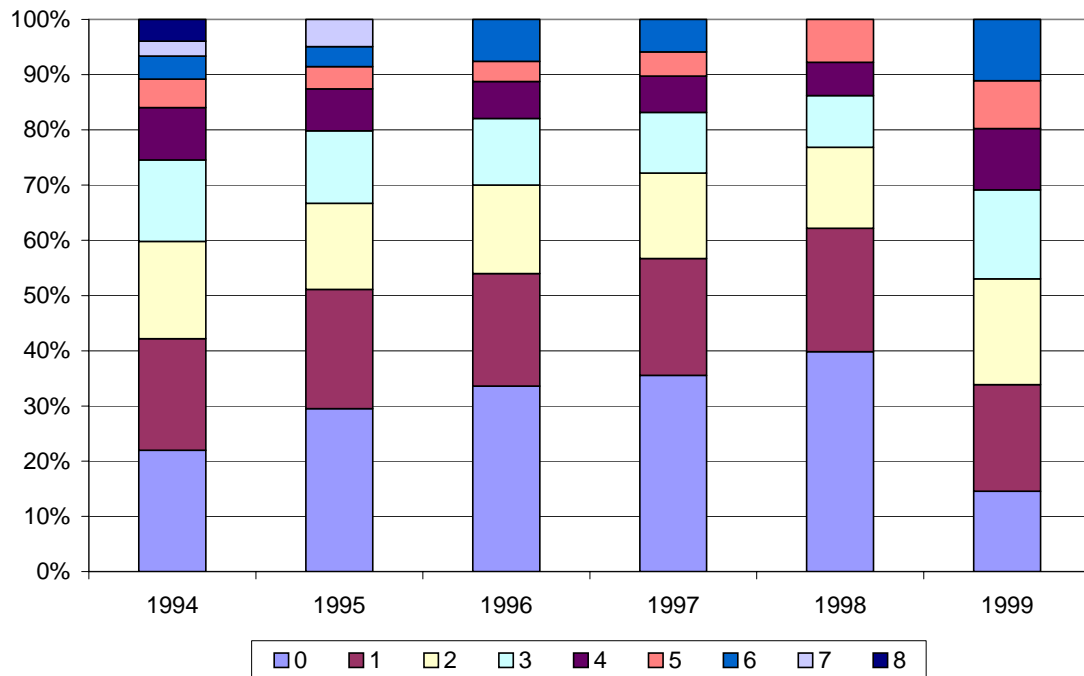
Deprivation scores for Italy

Legend: 0, 1, 2, 3, 4, 5, 6, 7, 8
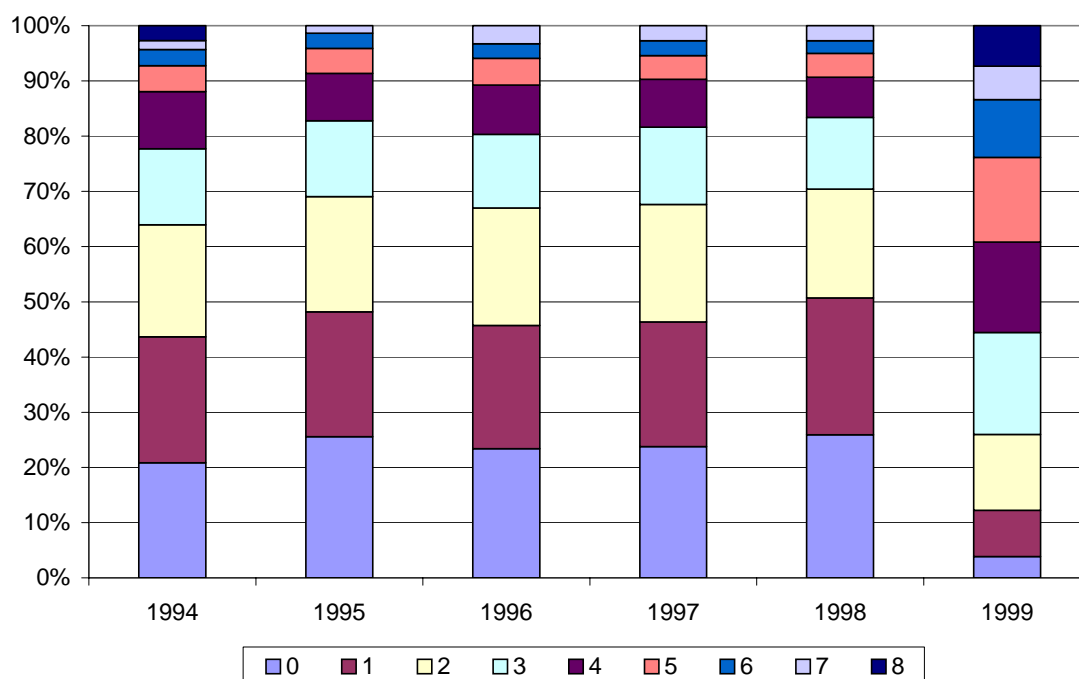
Deprivation scores for Luxembourg

Legend: 0, 1, 2, 3, 4, 5, 6
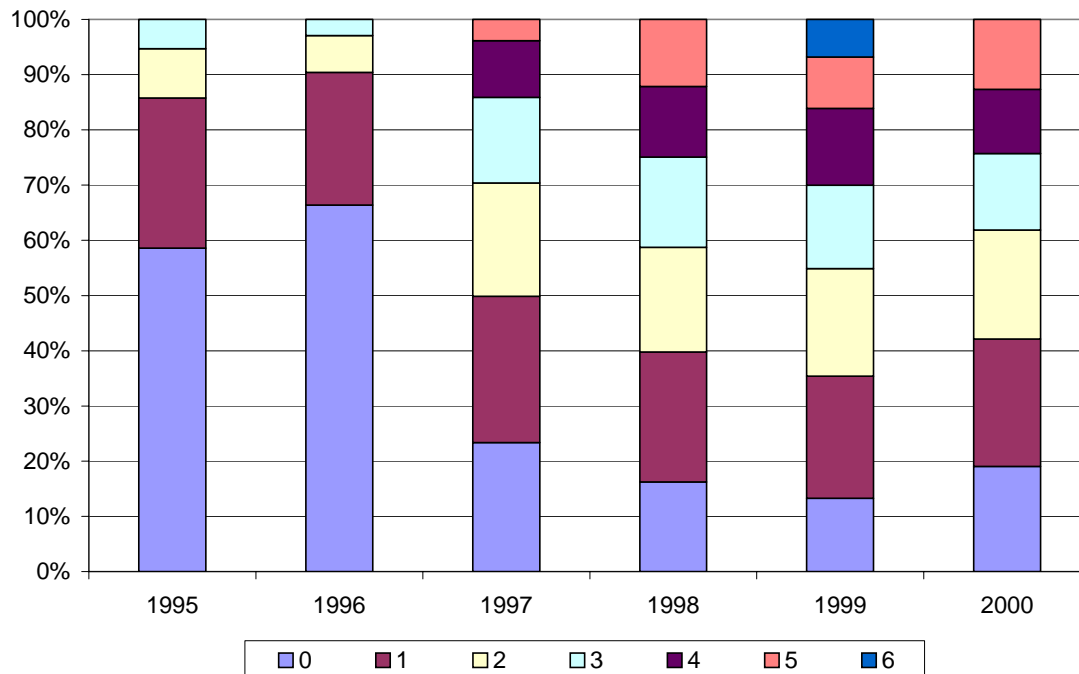
Deprivation scores for the Netherlands

Legend: ☐ 0 ■ 1 ☐ 2 ☐ 3 ■ 4 ■ 5 ■ 6 ☐ 7 ■ 8
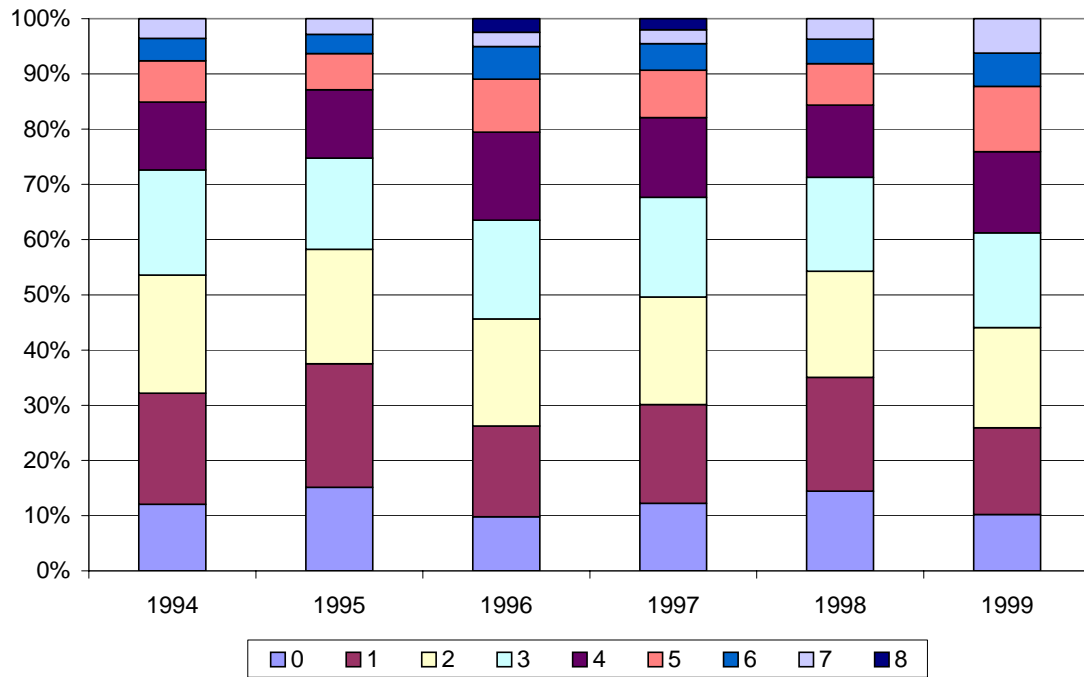
Deprivation scores for Poland

Legend: ☐ 0 ■ 1 ☐ 2 ☐ 3 ■ 4 ■ 5 ■ 6 ☐ 7
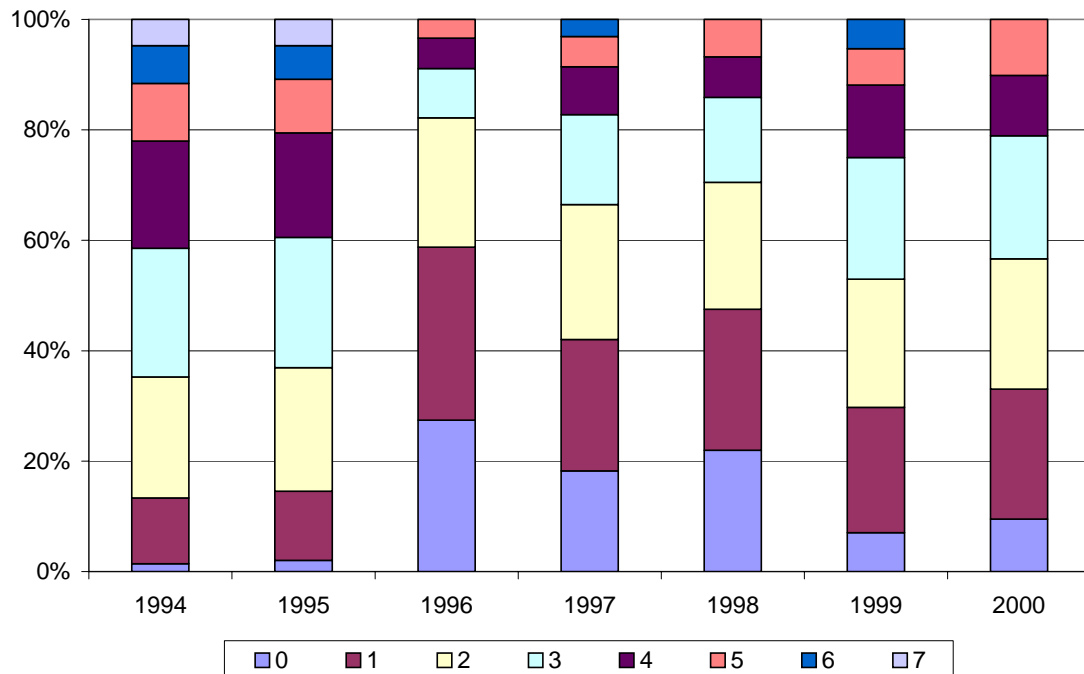
Deprivation scores for Portugal

Legend: 0 1 2 3 4 5 6 7 8 9 10 11 12 13
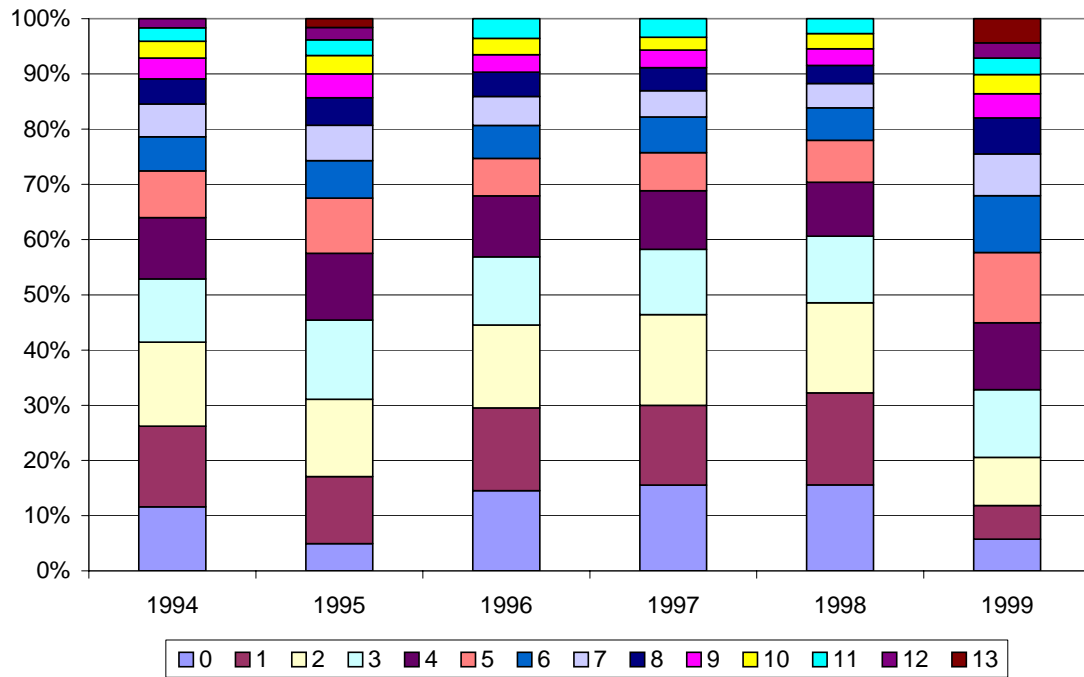
Deprivation scores for Spain

Legend: 0 1 2 3 4 5 6 7 8 9
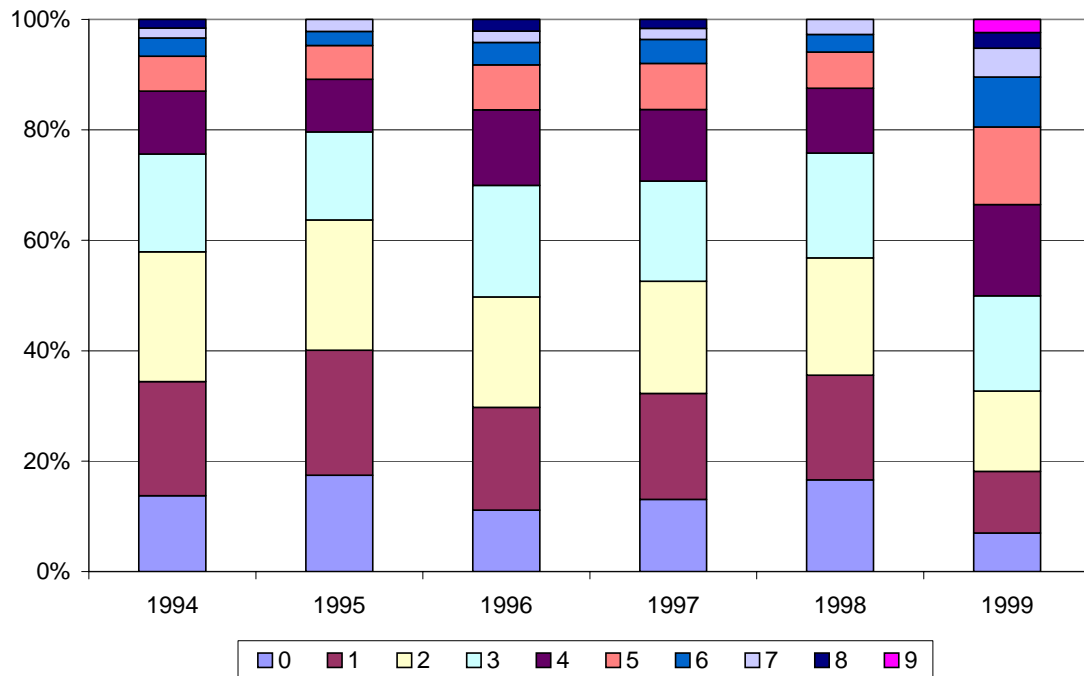
Deprivation scores for Switzerland

| | 0 | 1 | 2 | 3 | 4 | 5 |
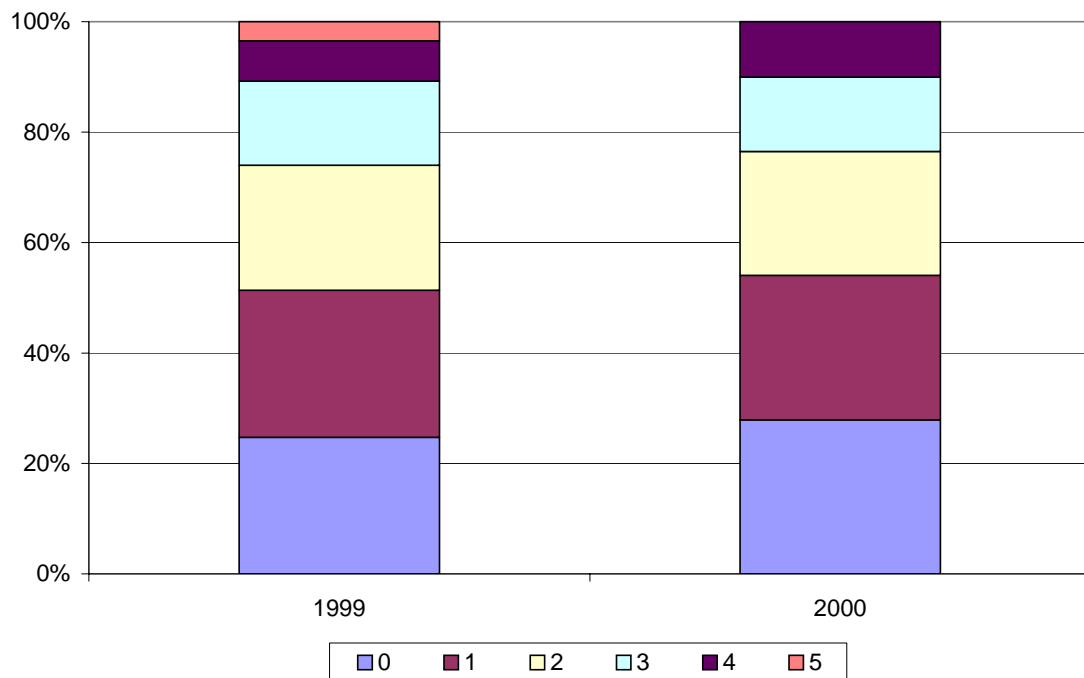
Deprivation scores for the United Kingdom

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
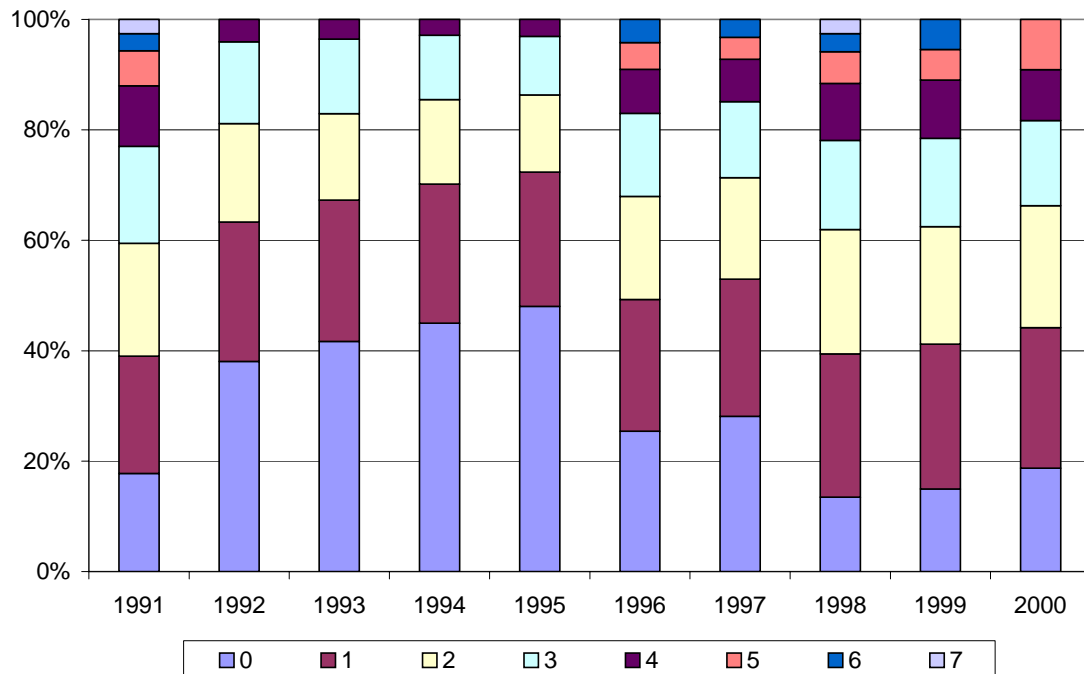
Ireland, Italy and Switzerland have step-down distributions, with scores of 0 or 1 being the modal case and subsequently higher scores stepping down to lower numbers of households. For all years in Germany, except 1998 and 2000 (when the SOEP questionnaire included more deprivation items than in other years), 0 predominates over other scores, with

scores of 1 appearing next most often. The UK follows a similar pattern to Germany for 1992 to 1995, with a more muted variation of this pattern in 1996 and 1997. For 1991 and 1998 to 2000 in the UK and 1998 and 2000 for Germany, as in all other countries, scores of 1 to 4 are the modal case, with the next most frequently occurring cases falling between 0 and 5, and small proportions of households expressing higher scores. In 1999, scores in Greece, Italy and Spain spread out over a wider range of scores, and Portugal shows the widest distribution across higher scores for all years than for the other countries. Hungary has a particularly low percentage of scores above 2.

3. The Relationship Between Non-Monetary Poverty and Income Position

At face value, we might expect that there is an association between income poverty and non-monetary poverty, as we might speculate that people who face financial challenges also have difficulty obtaining and retaining the goods that comprise elements of basic quality of life in developed countries or paying for basic repairs to their homes. Nevertheless, recent work based on analysis of the ECHP commissioned by the European Foundation for the Improvement of Living and Working Conditions has found that the relationship between income poverty and non-monetary poverty is neither simple nor straightforward, and that monetary poverty is generally a poor predictor of non-monetary deprivation (Fahey et. al. 2003; Whelan, Layte, and Maître 2001).

Such findings have logical possible explanations. The questions relating to non-monetary poverty in the ECHP and the other surveys included in the CHER database are blunt instruments – binary (yes/the household has the good or no/the household does not have the good) or simple scale questions (such as when trying to make ends meet, does your household experience a great deal of difficulty, some difficulty, or no difficulty). Knowing whether or not a household possesses an appliance or capacity to purchase goods does not give an indication of the quality of the goods possessed or the labour intensity of the acquisition of those goods. Two respondents may come from entirely different household circumstances, a first near the income poverty threshold and a second from the highest 10 percent of the income scale. The members of the first household may replace worn out clothes with new clothes by watching for failing stores offering closing down sales and searching for new items that have past their fashionable stage sent to charity shops, while the second household may periodically send clothes that are no longer immediately fashionable to charity shops and replace these clothes with the new items available in shops of the household members choosing at a time when the members choose to shop. The two households may possess a similar range of appliances; but the first household may possess often repaired older appliances while the second household possesses the latest, most energy efficient appliances with the widest range of available features. When asked such questions as "is your household able to replace worn out clothes with new clothes" or "does your household possess the following appliances on this show card", the respondents in each of these two households may answer yes.

The ECHP questionnaire format included a follow-on question for households that answered that they did not possess a particular household appliance asking if the household did not possess this item because the household could not afford the item or for another reason. Even when the non-monetary deprivation scale has been constructed using only the follow-on question, adding up cases only where households reported that they do not possess and item because they could not afford it, the association between non-monetary poverty and income poverty remains loose (Fahey et. al. 2003; Whelan, Layte, and Maître 2001).

The reason why this relationship remains weak may be that even the follow-on question remains a blunt instrument. There is a difference between an absolute incapacity to be able to

afford to purchase something, an inability to be able to afford to purchase something because of other choices that the household has made, and an inability to purchase the quality of item that the household members would like to own if they were to decide to purchase the item.

With the exception of a few variables (particularly can your household afford to eat meat most days), the majority of ECHP responding households which answered that they did not possess a good or purchasing capacity also reported that their households could not afford this good or capacity, and the overall affect across the variables is not large (Fahey et. al. 2003). As the follow-on question was not asked in most of the studies included in CHER, this additional information is not available for discussion with this analysis.

Nevertheless, a relationship between non-monetary poverty and income remains. To find this relationship, we first need to consider the meaning of the scale of non-monetary deprivation and its relationship to income. At best, the scale is ordinal. None of the studies included in CHER can be said to include an exhaustive list of all potentially relevant purchasing abilities and goods. Further, there is no clear way to determine the exact value of every item in the scale in relation to the other items. Does lack of a car have the same value or more value than the absence of a microwave oven? If the car has more value than the microwave oven, exactly how much more value does the car have? This question is difficult to answer precisely. Thus the scale only reveals the relative position rather than the exact position of any given household.

Table 3 - Gamma Scores and Level of Significance From Cross-tabs of Income Position and the Non-Monetary Deprivation Scale for Each Country and Each Year

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Austria	-	-	-	-	-	-.408 .000	-.409 .000	-.421 .000	-.440 .000	-.447 .000	-
Belgium	-	-	-.326 .000	-.318 .000	-.285 .000	-.325 .000	-.345 .000	-.356 .000	-.436 .000	-	-
Denmark	-	-	-	-	-.396 .000	-.393 .000	-.472 .000	-.537 .000	-.566 .000	-.536 .000	-
Finland	-	-	-	-	-	-	-.493 .000	-.510 .000	-.555 .000	-.547 .000	-
France	-	-	-	-	-.458 .000	-.469 .000	-.497 .000	-.475 .000	-.461 .000	-.461 .000	-
Germany	-.081 .001	-.099 .000	-.457 .000	-.403 .000	-.064 .000	-.413 .000	-.390 .000	-.153 .000	-.468 .000	-.106 .000	-.466 .000
Greece	-	-	-	-	-.413 .000	-.432 .000	-.433 .000	-.423 .000	-.446 .000	-.494 .000	-
Hungary	-	-	-.515 .000	-.541 .000	-.508 .000	-.513 .000	-.549 .000	-.531 .000	-	-	-
Ireland	-	-	-	-	-.465 .000	-.487 .000	-.481 .000	-.466 .000	-.484 .000	-.558 .000	-
Italy	-	-	-	-	-.346 .000	-.363 .000	-.379 .000	-.359 .000	-.357 .000	-.460 .000	-
Luxembourg	-	-	-	-	-	-.309 .000	-.387 .000	-.460 .000	-.505 .000	-.443 .000	-.502 .000
Netherlands	-	-	-	-	-.458 .000	-.464 .000	-.517 .000	-.529 .000	-.498 .000	-.522 .000	-
Poland	-	-	-	-	-.511 .000	-.465 .000	-.523 .000	-.465 .000	-.518 .000	-.526 .000	-.525 .000
Portugal	-	-	-	-	-.427 .000	-.454 .000	-.440 .000	-.433 .000	-.440 .000	-.505 .000	-
Switzerland	-	-	-	-	-	-	-	-	-	-.456 .000	-.478 .000
Spain	-	-	-	-	-.325 .000	-.312 .000	-.391 .000	-.383 .000	-.394 .000	-.462 .000	-
United Kingdom	-	-.463 .000	-.597 .000	-.608 .000	-.597 .000	-.602 .000	-.399 .000	-.395 .000	-.459 .000	-.441 .000	-.439 .000

Table 3 shows the Gamma scores and levels of statistical significance from cross-tabs of the income position variable with the non-monetary deprivation scale for each country and each year. Scores of zero on the non-monetary deprivation scale represent no deprivation on any item, and higher scores represent more deprivation. Scores of 1 on the income position variable represent households falling in the lowest 20 percentile of household income, while scores of 5 represent households in the highest 20 percentile of household income. Gamma scores range from -1 to 1. The closer the Gamma score approaches zero, the weaker a statistically significant relationship between two ordinal variables. The closer the Gamma score is to 1 or to –1, the stronger the relationship. A score closer to –1 represents an inverse relationship – that is as one score rises the other declines, while a score closer to 1 indicates that as one variable score increases, the score on the other variable tends to increase.

Table 3 shows that highly significant negative relationships between income position and non-monetary deprivation in all years for all countries, at a level of .001 for Germany in 1990, and at a level of .000 in all other cases. In Denmark, Finland, Hungary, Luxembourg, the Netherlands, Poland, and the United Kingdom, these relationships are often particularly strong. The relationship is weak only in five years for Germany. These results suggest that there is a strong association between income position and non-monetary deprivation. Households across the income spectrum experience non-monetary deprivation, but the proportion of households facing such conditions decreases as relative income position increases.

Nevertheless, some caution should be exercised interpreting non-monetary deprivation scores between one and three. Not having one or a small number of items may mark a low level of deprivation, but a low score might also mark an individual choice or local circumstance. Members of a household may feel that there is nothing worth watching on television that they do not already enjoy from the radio and the internet, and thus chose not to possess a television. Having no land line phone or mobile phone in the house may give a busy professional a welcome respite from the fast pace of life at work by putting the professional beyond the easy reach of other people at work, and the members of the household may perceive the absence of the phones as a blessing rather than as a mark of deprivation. Likewise, a household in a particularly warm or sheltered area of a country may not have central heating because central heating is not required in this part of the country, though central heating may be required for a reasonable standard of living in most parts of the country. In theory, then, there is no clear meaning to a low score on this scale. For this reason, the analysis in Section 4 of this paper will consider the relationship between a series of independent variables and two binary variables: scoring 0 and scoring at the high end of the scale.

4. Reconsidering Income Position When Controlling for Other Variables

As bivariate relationships can be misleading, this paper now assesses the effects of income position on two dimensions of non-monetary poverty in binary logistics regression models. The first model uses a dependent variable marking whether households score 0 on the non-monetary deprivation score – that is possess all goods asked in the questionnaire of that country and experience none of the housing problems. The second model uses a dependent variable marking whether households score at the high end of the non-monetary deprivation scale for each country – that is lack most of the goods and experiences most of the housing quality problems asked in the questionnaire for that country.

4.1. Explanatory variables

The models use the same set of explanatory variables. To improve the analysis of income position, the models include four dummy variables marking households falling into

the lowest 20 percentiles, the 20 to 40 percentiles, the 60 to 80 percentiles, and the highest 20 percentiles. The middle 20 percentiles are held constant. The models also include dummy variables marking households which have moved up from a lower income band in the previous year to a higher income band in the survey year, and another marking households which have moved to a lower income band in the survey year compared to the previous year. Households remaining in the same income position are held constant. The expectations for these variables are that people with higher income resources and moving up to higher income resources will be more likely to possess goods and not experience housing quality problems, while those on lower incomes and losing ground relative to other households will be less likely to possess all goods and avoid housing quality problems. These six variables are available for all countries.

The models include four variables relating to the employment status of working age adults in the household, starting with the proportion of working age adults who are working. The models also include dummy variables marking whether any member is employed in a professional occupation, whether any household member lost a job since last year, and whether any household member who was not working in the previous survey year had gained a job. Households where members have not changed employment status and where no member is employed in a professional job are held constant. Three of these variables are available for all countries for all years, while the professional worker question is available in most countries for most years. The expectation is that households with a stronger attachment to the labour market and a household member in a professional occupation will be more likely to possess all goods and avoid most housing quality problems.

The models account for two dimensions of education: whether any household member holds a university degree, and whether all members who answered the questionnaire have a low level of education. Households where no member holds a university degree but at least one member has completed secondary or post-secondary education are held constant. These two variables are available for all countries for all years. The expectation is that households with university-educated members are more likely to avoid non-monetary deprivation, while households where all members have a low level of education are more likely to experience non-monetary deprivation.

Three dummy variables mark households which live rent free, households which receive housing cost subsidies or other housing-related welfare benefits, and households with more members than rooms (excluding the kitchen). Households which rent or own their home and which have fewer members than rooms are held constant. The housing benefits question was not available for some countries for some years. The expectation is that households which rely on others for help paying for housing and crowded households are more likely to experience non-monetary deprivation.

The models account for a number of demographic variables. Dummy variables mark households where all members aged 16 or more are women or are men, whether the household includes any child aged four or younger, and whether the household includes a young person aged between 10 and 25. Households with adult members of both sexes, with no young children and with no young people are held constant. The expectation is that the presence of young people may increase the pressure to acquire goods and thus decrease the risk of non-monetary poverty. Additional dummy variables mark whether any household member has a serious health problem, whether the household has only one member, whether the household is a single parent household, whether any member has married or gained a cohabiting partner since the previous survey year, and whether any member has lost a partner through death, divorce, or separation. Households with more than one adult member, where no member has a health problem, and no member has gained or lost a partner since last year

are held constant. The expectation is that households with a member with a serious health problem will be more likely to experience non-monetary deprivation. The majority of background variables are available for all countries for all years.

A number of countries, though not all, asked respondents about their satisfaction with life in general and with their housing situation. The model includes four dummy variables, marking whether all respondents in the household are satisfied with life in general, whether all respondents are not satisfied with life in general, whether all respondents are satisfied with their housing situation, and whether all respondents are not satisfied with their housing situation. Households where members have differing opinions are held constant. The expectation is that households where all members are satisfied with life and with their housing are less likely to experience non-monetary deprivation, while those where no members are satisfied with life or with their housing situation are more likely to experience such deprivation.

Finally, the models include a dummy variable marking whether the household is in a rural location. This variable is only available for a limited range of countries. As not all independent variables are available for all countries and as some variables are available for some countries in some years but not in others[7], the next analysis considers each year for each country (where there is also data available for the previous year for that country) separately.

4.2. Results by Country

Summary results for each country of the direction of the relationship for variables where the exponential β scores are statistically significant appear in Table 5, covering the model predicting whether households possessed all goods and did not have any of the housing problems asked in their national questionnaire, and in Table 6, covering the model predicting whether households lacked most goods and had most housing quality problems covered in the national questionnaire. Households in a low or high income position, where all adult members have a low level of formal education, which have more members than rooms, living rent free, with a member in poor health, or located in a rural area strongly differ from other households in terms of propensity to experience non-monetary deprivation. In the case of each of these variables except the rural location variable, most countries show similar effects. Rural households in East and West Europe show divergent patterns.

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[7] Austria does not have the professional worker, rural location, or the satisfaction with life in general variables in all available years. Belgium does not have the professional worker or whether the household received housing benefits questions in 1993. The data from Belgium do not include the satisfaction with life in general variable in from 1994 to 1998. Denmark does not have the rural location or the satisfaction with life in general variables in all years. Finland does not have the professional worker, rural location, or satisfaction with life in general variables in all years. France does not have the rural location or satisfaction with life in general variables for all years. Germany does not have the professional worker or the rural location variables in all years. Germany also excluded the any member in poor health in 1993. Greece does not have the professional worker, rural location, or satisfaction with life in general variables in all years. Hungary does not have the whether the household received housing benefits question in all years, and also excluded the single parent household question in 1994. Ireland does not have the rural location or the satisfaction with life in general variables for all years. Italy does not have the professional worker, rural location, or satisfaction with life in general variables for all years. Luxembourg does not have the whether the household received housing benefits question in 1996, and does not have either satisfaction variable in all years. The Netherlands does not have the professional worker, rural location, or satisfaction with life in general variables in all years. Poland does not have either satisfaction variable until 2000. Poland also excluded the whether the household received housing benefits question in 1995, the professional worker question in 1995 and 1996, and the household member in poor health question from 1995 to 1998. Portugal does not have the rural location or satisfaction with life in general variables for all years. Spain does not have the professional worker, rural location, or satisfaction with life in general variables for all years. The United Kingdom does not have the housing satisfaction variables from 1992 through 1995.

Income position remains highly significant within the multivariate models, though the coefficients are larger and results more consistent for being in the bottom 20% or being in the highest 20% than for being between the 20 to 40 percentiles and being between the 60 to 80 percentiles. Having a household income in the lower 40% of the household income range is associated with being less likely to possess all goods and have no housing quality problems, and more likely to lack most goods and live with most housing quality problems, but with six exceptions. For households in Belgium, Hungary, and Ireland, being in the lowest 20% of household incomes is not significantly associated with possessing most goods. For households in Finland, Hungary, and Spain, being in the 20 percentile to 40 percentile of household incomes in not significantly associated with possessing most goods, while being in this same percentile in Switzerland is not significantly associated with lacking items and having housing problems. Similarly, having a household income in the top 40% of the income range is associated with being more likely to possess all goods and have no housing quality problems, and less likely to lack most goods and experience most housing problems, but with two exceptions. In Belgium and Switzerland, being in the 60 percentile to 80 percentile of the household income range is neither significantly associated with possessing most goods and having no housing quality problems nor with lacking most goods and having most housing quality problems.

Change in income position relative to the previous year produces an opposite effect to the one expected. Households which rise to a higher position are less likely to possess all goods and more likely to face most problems, while households which move down in income position are more likely to possess all goods and less likely to face most problems. Significant results are more sparse for the moving up an income band question, and no significant results emerge in Austria, Belgium and Luxembourg for the have all goods and no problems question, or in Finland, Greece, Ireland, Luxembourg, Spain and Switzerland for the lack most goods and face most problems question. There are only two instances when the expected effect emerges – German households which moved up an income band in 1992 were less likely to lack all goods, and Belgian households which moved down an income band in 1994 were more likely lack all goods. Nevertheless, the reverse effects emerged in the same model in Germany in 1993, 1998 and 1999, and in Belgium in 1993 and 1998. These results suggest that households experiencing a change in income position over a year are more likely to retain the housing quality and goods possession position of their previous income position, and that changes in non-monetary deprivation may not take place until a longer period after income position change.

A mixed picture emerges from the employment variables used in the model of possessing all goods and having no housing problems, though generally these variables produced significant effects only in odd years in most countries. The results of household employment conditions are consistent for the model of lacking all goods and facing most housing problems, but significant results are even more intermittent. Households where fewer than half of all working age adults are employed are less likely to have all goods and no problems in Austria, France, Hungary, Luxembourg, and Spain, but better off in Germany and the UK. If fewer than half of working age adult members hold jobs, households across Europe are at greater risk of lacking basic goods and having housing problems. If a household member gained a job since last year, the household is more likely to possess all goods in Austria and Poland but less likely to possess all goods in Belgium, Denmark, Greece, Italy, Portugal, Spain, and the UK. If a working age household member left the labour market or became unemployed from one year to the next, the household was more likely to possess all items in Austria, Ireland, Poland, and the UK (in 1998), but less likely to possess all goods in Belgium, France, Germany, Italy, Portugal, and the UK (in 1992). Having a working age member gain or lose a job had the effect of making the household more likely to lack most

goods and experience most problems. Perhaps having a household with a more tenuous connection to the labour market increases the household's vulnerability to non-monetary deprivation, but as the effect is significant intermittently, this conclusion cannot be confirmed from this data. The only consistent finding across the countries is that households where a member works in a professional position are more likely to possess all goods and less likely to lack most goods and face most problems. With the exception of Portugal, where the effect of having a professional member is significant in most years, the same result emerges only in odd years in other countries.

In most countries, households where all adults have a low level of education are less likely to have no housing problems and possess all goods (results are not significant in Denmark, Finland, and Switzerland), and more likely to experience most housing problems and to lack basic goods (results are not significant in Hungary, the Netherlands, and Switzerland). Households which include a member who has earned a university degree, however, face uneven conditions across Europe. In Austria, Finland, Greece, Hungary, Luxembourg, the Netherlands, Poland, Portugal and Spain, as well as in Germany in 2000 and Ireland in 1999, having a university degree improves the household's chance of possessing all goods and avoiding housing quality problems. For Danes and the British, the Irish in 1995, and Germans for 1992 to 1995 and again in 1998, having a university degree produced the opposite effect. While households with a university educated member in Greece, Italy, Poland and Spain (and Germany in 1992) were less likely to experience most housing problems and lack most goods, though equivalent households in Finland, France, and the UK (and Germany in 1998) were more likely to experience this form of deprivation. Thus while low education increases the risk of non-monetary deprivation across Europe, high education produces mixed results for this dimension of quality of life.

Highly consistent trends across time and across countries for two variables: living rent free and living in a household where there are more household members than rooms. With four exceptions, both these circumstances are strongly associated with being less likely to possess all goods and have no housing problems, and more likely to lack most goods and have most housing quality problems. Having more household members than rooms in Belgium and Luxembourg is not significantly associated with having most goods. Living rent free is only significantly associated with missing most goods for one year in Hungary. Poles living rent free show the reverse pattern from the rest of the countries in CHER, as these Poles are less likely to live with most housing problems or lack most goods. A related variable, a flag marker for whether the household relies on rent subsidies or housing benefits as a component of household income, generally produced no statistically significant result, but where results are significant, the sign of the effect follows the effect for living rent free – receiving housing benefit makes a household less likely to possess all goods, and more likely to experience most housing problems and less likely to possess most goods. The significant effect of receiving housing benefits on possessing all goods emerges consistently across the years only in the UK, and in odd years in Denmark, Germany, Italy, and Poland, and the effect on possessing few goods and having most housing quality problems emerging consistently across years in Ireland, and in odd years in Denmark, Finland, Italy, the Netherlands, and the UK. With the exception of Poland, relying on others for help with housing costs and living in a crowded home are not associated with higher quality of living in material terms.

One demographic variable produced highly significant and consistent results across most countries. Households which have an adult member in poor health are more likely to experience non-monetary deprivation on both measures. The exceptions are Denmark, Luxembourg, and Switzerland, where this variable is not significant in all years for both

models, and Poland and the UK, where results are significant only for one or two years in the possess all items model.

The constant likewise proved significant for most years for most countries. The constant group was less likely to possess all goods, but also less likely to lack most goods. Exceptions occur for four countries for the model of possessing all goods and having no housing problems. The constant group is not significant in Switzerland. In the UK, the constant group has a positive exponential β from 1992 to 1995, then a negative exponential β from 1996 to 2000. Luxembourg has negative exponential β scores for all years except 1996, when the score is positive. The constant group in Germany mostly has positive exponential β scores, though the exponential β scores are negative in two years. The size of the exponential β for the constant is generally quite small in all countries for all years.

Other demographic characteristics produced minimal effects. Living in a household where all adults are men matters only in Ireland, while living in a household where all members are women matters in Belgium, Denmark, Hungary, Ireland, and the UK. These households are less likely to possess all goods and to avoid all housing problems. Otherwise, results by the sex of household members are limited to a handful of years and inconsistent across and within countries. Age of household members matters more, but again only for a limited number of countries. When households in Hungary and Denmark include a child aged less than five, the household is less likely to possess all goods. Households with a child aged under five in Belgium, Hungary, the Netherlands, and Portugal are more likely to lack most items and face most problems. Households from Austria, Finland, Greece and Italy are more likely to possess all items and face no problems (as are households from Germany, Luxembourg, and Spain), and also less likely to lack most goods and face most problems (along with comparable households in Denmark and Poland). In contrast with the inconsistent results for the presence of very young children, the presence of young people aged 10 to 25 has a consistent impact of increasing the possession of all goods (except in Denmark, Portugal and Switzerland, where results are not significant) and decreasing the absence of most goods and presence of most problems, though only for Austria, Finland, France, Greece, Italy, Poland, Spain, and the UK.

Generally, for the occasional years in most countries where a significant result emerged, single parent households and single person households were less likely to possess all items and have no housing problems, and more likely to lack most items and face most housing problems. Significant results are also highly intermittent for households where someone has gained a partner or has lost a partner through death, separation or divorce. For the odd years where significant results are present, the direction of the effects are mixed. Gaining a partner improves the chance of having all items and no problems in Finland, Greece, Ireland, and the UK; reduces the chance of having all items in France, Germany, the Netherlands, and Poland, and produces mixed effects in Portugal. Gaining a partner reduces the chance of missing most goods and facing most housing problems in Greece, Poland, and Portugal, but increases the chance of this form of deprivation in France, Germany, and Hungary. Losing a partner improves the chance of having all goods for odd years in Germany, Italy, Poland, and Switzerland, but has the reverse effect in Hungary. Losing a partner reduces the likelihood of missing most items in odd years for Belgium, Finland, France, Italy, and the Netherlands, but increases these odds in Germany, Greece, Hungary, Poland, Portugal, and Spain.

Table 5: Logistic Regression Results for Whether Households Possess All Goods and Have No Housing Problems

	Austria				Belgium						Denmark					Finland		
	96	97	98	99	93	94	95	96	97	98	95	96	97	98	99	97	98	99
household income in bottom 20 percentile	ns	-	-	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	-	ns	-
household income between 20 & 40 percentiles	-	-	-	ns	ns	ns	ns	ns	-	ns	ns	-	ns	-	-	ns	ns	ns
household income between 60 & 80 percentiles	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	+	ns	+	ns	ns	+	ns	ns
household income in highest 20 percentile	+	ns	+	+	+	+	ns	+	ns	+	+	+	+	+	+	+	+	+
moved up an income band since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	-
moved down an income band since last year	ns	ns	ns	ns	+	ns	+	ns	ns	ns	ns	+	+	ns	ns	+	ns	+
<half working age household members work	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a member is a professional worker						ns	ns	+	ns	+	ns	ns	ns	+	ns			
a household member lost a job since last year	ns	+	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member gained work since last year	ns	ns	ns	+	ns	ns	ns	-	ns	ns	ns	ns	-	ns	ns	ns	ns	ns
receives rent subsidy or housing benefits	ns	ns	ns	ns		ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns
the household rents home or lives rent free	-	-	-	-	-	-	-	-	-	-	-	ns	-	-	-	-	-	-
all household adults are women	ns	ns	ns	ns	-	-	ns	ns	ns	-	-	ns	-	ns	-	ns	-	ns
all household adults are men	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member aged 10 to 25	ns	+	+	+	ns	+	ns	+	ns	+	ns	ns	ns	ns	ns	+	+	+
a household member has a university degree	ns	+	+	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	+	+
all adult members have low level of education	-	-	ns	-	ns	-	-	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns
an adult member is in poor health	-	-	-	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns	-	-	-
single parent household	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns
a member is divorced, widowed or separated	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
single person household	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	-
a member gained a partner since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns
a child aged less than 5 in the household	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	-	ns	ns	ns	+	+	ns
more than one person per room in household	-	-	-	-	-	ns	ns	ns	ns	ns	-	ns	-	ns	-	-	-	-
the household is in a rural location					ns	+	+	+	+	ns								
all adults satisfied with life in general					ns													
all adults not satisfied with life in general					ns													
all adults satisfied with housing	ns	+	ns	ns	ns	+	+	+	+	ns	+	ns	+	ns	ns	+	ns	ns
all adults not satisfied with housing	ns	ns	ns	ns	ns	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns	ns
constant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5: Logistic Regression Results for Whether Households Possess All Goods and Have No Housing Problems

	France					Germany										Greece				
	95	96	97	98	99	91	92	93	94	95	96	97	98	99	00	95	96	97	98	99
household income in bottom 20 percentile	-	ns	ns	ns	-	-	-	-	ns	-	-	-	ns	ns	-	-	ns	-	-	ns
household income between 20 & 40 percentiles	-	-	-	-	-	ns	-	-	ns	-	-	-	ns	ns	ns	-	ns	-	-	ns
household income between 60 & 80 percentiles	+	+	+	+	+	ns	+	+	ns	+	+	ns	ns	ns	+	+	ns	ns	+	+
household income in highest 20 percentile	+	+	+	+	+	ns	+	+	+	+	+	ns	+	ns	+	+	+	+	+	+
moved up an income band since last year	-	-	-	ns	-	-	+	-	-	-	ns	ns	-	ns	ns	ns	-	-	-	ns
moved down an income band since last year	ns	ns	ns	+	ns	ns	+	+	ns	+	+	ns	ns	ns	ns	+	+	ns	+	ns
<half working age household members work	ns	ns	ns	-	ns	ns	+	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a member is a professional worker	ns	ns	+	ns	ns															
a household member lost a job since last year	ns	-	-	ns	ns	ns	-	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member gained work since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns
receives rent subsidy or housing benefits	ns	ns	ns	ns	ns	ns	-	-	ns	-	ns	ns	ns	ns	-	ns	ns	ns	ns	ns
the household rents home or lives rent free	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ns	-	-	ns
all household adults are women	-	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
all household adults are men	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	+	ns	+	ns	ns	ns	ns	ns
a household member aged 10 to 25	+	+	+	ns	+	ns	ns	ns	+	ns	ns	ns	+	ns	+	ns	+	+	+	+
a household member has a university degree	ns	ns	ns	ns	ns	ns	-	-	-	-	ns	-	ns	ns	+	ns	ns	+	ns	+
all adult members have low level of education	ns	ns	-	ns	ns	-	-	-	ns	-	ns	ns	-	ns	-	-	ns	-	-	ns
an adult member is in poor health	-	-	ns	-	-	ns	ns		ns	ns	-	ns	-	-	-	-	ns	-	-	ns
single parent household	ns	ns	ns	ns	ns	+	ns	+	ns	ns	-	ns	ns	ns	ns	-	ns	-	-	ns
a member is divorced, widowed or separated	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns
single person household	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	-	ns	ns	ns	ns	ns
a member gained a partner since last year	ns	ns	ns	ns	-	ns	-	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	+
a child aged less than 5 in the household	ns	ns	ns	ns	ns	ns	ns	+	+	ns	ns	ns	ns	ns	ns	+	+	ns	ns	+
more than one person per room in household	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
the household is in a rural location																				
all adults satisfied with life in general						ns	ns	ns	ns	ns	ns	ns	ns	ns	-					
all adults not satisfied with life in general						ns	ns	ns	-	ns	ns	ns	ns	ns	ns					
all adults satisfied with housing	ns	+	+	+	+	+	+	+	+	+	+	+	ns	+	+	ns	ns	ns	ns	ns
all adults not satisfied with housing	ns	ns	ns	ns	ns	-	-	-	-	-	-	-	-	-	-	-	ns	-	ns	ns
constant	-	-	-	-	-	+	+	+	ns	+	+	+	-	+	-	-	-	-	-	-

Table 5: Logistic Regression Results for Whether Households Possess All Goods and Have No Housing Problems

	Hungary					Ireland					Italy					Luxembourg				
	93	94	95	96	97	95	96	97	98	99	95	96	97	98	99	96	97	98	99	00
household income in bottom 20 percentile	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	-	-	-	-	-	-	-	-	-
household income between 20 & 40 percentiles	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	-	-	-	-	-	-	ns	ns	-	-
household income between 60 & 80 percentiles	+	+	+	+	ns	+	ns	ns	ns	+	+	+	+	+	ns	ns	+	ns	ns	ns
household income in highest 20 percentile	+	+	+	+	+	+	+	+	+	+	+	+	+	ns	+	ns	+	+	ns	+
moved up an income band since last year	-	ns	ns	ns	-	ns	ns	ns	ns	-	ns	ns	ns	-	ns	ns	ns	ns	ns	ns
moved down an income band since last year	ns	+	ns	+	+	+	+	ns	ns	ns	+	ns	ns	ns	+	+	ns	ns	ns	ns
<half working age household members work	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns
a member is a professional worker	ns	ns	ns	ns	ns	+	+	+	+	+						ns	ns	+	+	+
a household member lost a job since last year	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	-	ns	-	ns	ns	ns	ns	ns
a household member gained work since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns
receives rent subsidy or housing benefits						ns	ns	ns	ns	ns	ns	-	ns	ns	ns		ns	ns	ns	ns
the household rents home or lives rent free	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
all household adults are women	-	-	-	ns	ns	-	-	-	ns	-	ns	ns	ns	-	ns	ns	+	ns	ns	ns
all household adults are men	ns	ns	ns	ns	ns	-	-	-	-	-	ns	ns	ns	-	ns	ns	ns	ns	ns	ns
a household member aged 10 to 25	+	ns	ns	+	ns	ns	ns	ns	+	+	+	+	+	+	+	ns	ns	+	+	+
a household member has a university degree	ns	ns	+	ns	ns	-	ns	ns	ns	+	ns	ns	ns	ns	+	+	ns	+	ns	+
all adult members have low level of education	ns	-	-	ns	-	-	-	-	-	ns	ns	-	-	-	ns	ns	ns	-	ns	-
an adult member is in poor health	ns	-	ns	-	ns	-	-	-	-	ns	-	-	-	-	-	ns	ns	ns	ns	ns
single parent household	-		-	ns	ns	-	-	-	-	ns	-	-	-	-	ns	-	-	ns	ns	ns
a member is divorced, widowed or separated	ns	-	ns	-	-	ns	ns	ns	ns	ns	ns	+	+	+	ns	ns	ns	ns	ns	ns
single person household	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	-	ns	ns	ns	ns	-	ns	ns	ns
a member gained a partner since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a child aged less than 5 in the household	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	+	+	ns	+	+	ns	+	+	ns	ns
more than one person per room in household	-	-	-	ns	ns	-	-	-	-	-	-	-	-	-	-	ns	-	ns	ns	ns
the household is in a rural location	ns	ns	ns	ns	ns											+	ns	ns	+	+
all adults satisfied with life in general	ns	ns	ns	ns	ns															
all adults not satisfied with life in general	-	ns	-	ns	ns															
all adults satisfied with housing	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	+	+	ns	ns	+					
all adults not satisfied with housing	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	-	-	-	ns					
constant	-	ns	ns	-	-	-	ns	ns	ns	-	-	-	-	-	-	+	-	-	-	-

Table 5: Logistic Regression Results for Whether Households Possess All Goods and Have No Housing Problems

	The Netherlands					Poland					Portugal					Spain				
	95	96	97	98	99	95	96	98	99	00	95	96	97	98	99	95	96	97	98	99
household income in bottom 20 percentile	ns	ns	ns	ns	-	ns	-	-	ns	ns	-	-	-	-	ns	ns	ns	ns	-	ns
household income between 20 & 40 percentiles	-	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	-	-	-	ns	ns	ns	ns	ns	ns
household income between 60 & 80 percentiles	+	ns	+	+	+	ns	+	+	ns	ns	+	+	+	+	+	ns	+	+	+	+
household income in highest 20 percentile	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
moved up an income band since last year	-	ns	ns	-	ns	ns	-	ns	ns	ns	-	-	ns	ns	ns	ns	ns	ns	-	-
moved down an income band since last year	+	ns	ns	ns	+	ns	+	+	+	+	+	ns	ns	+	+	+	+	+	+	+
<half working age household members work	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns
a member is a professional worker								+	+	+	+	+	+	+	+					
a household member lost a job since last year	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns
a household member gained work since last year	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	-	-	ns	ns	ns	ns	ns	ns	-	ns
receives rent subsidy or housing benefits	ns	ns	ns	ns	ns		-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
the household rents home or lives rent free	-	-	-	-	-	ns	ns	ns	ns	ns	-	-	-	-	-	-	-	-	-	-
all household adults are women	ns	ns	ns	ns	ns	ns	-	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns
all household adults are men	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member aged 10 to 25	ns	+	+	+	+	+	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	+	+
a household member has a university degree	ns	+	+	ns	ns	+	+	+	ns	ns	ns	ns	ns	ns	+	+	+	+	ns	+
all adult members have low level of education	ns	ns	ns	-	ns	ns	-	-	-	-	-	-	-	-	-	-	ns	-	-	-
an adult member is in poor health	-	-	-	-	-				ns	-	-	-	-	-	-	-	-	-	-	-
single parent household	ns	ns	-	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns
a member is divorced, widowed or separated	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
single person household	-	ns	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns
a member gained a partner since last year	ns	ns	ns	-	ns	ns	-	ns	ns	ns	-	+	ns	-	ns	ns	ns	ns	ns	ns
a child aged less than 5 in the household	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns
more than one person per room in household	-	ns	ns	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
the household is in a rural location						-	-	-	-	-										
all adults satisfied with life in general																				
all adults not satisfied with life in general																				
all adults satisfied with housing	+	+	+	+	ns						+	+	+	+	+	+	+	+	+	ns
all adults not satisfied with housing	ns	ns	ns	ns	ns						ns	ns	ns	ns	ns	-	ns	ns	ns	ns
constant	-	-	-	-	-	-	ns	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5: Logistic Regression Results for Whether Households Possess All Goods and Have No Housing Problems

	Switzerland		United Kingdom								
	00		92	93	94	95	96	97	98	99	00
household income in bottom 20 percentile	-		-	-	-	-	-	ns	ns	ns	ns
household income between 20 & 40 percentiles	-		-	-	-	-	ns	ns	ns	ns	ns
household income between 60 & 80 percentiles	ns		+	+	+	+	+	+	+	ns	ns
household income in highest 20 percentile	+		+	+	+	+	+	+	+	+	+
moved up an income band since last year	-		ns	-	ns	ns	-	-	ns	ns	-
moved down an income band since last year	ns		ns	ns	ns	ns	+	ns	ns	ns	ns
<half working age household members work	ns		ns	ns	ns	ns	ns	ns	ns	+	ns
a member is a professional worker	ns		ns	ns	ns	ns	ns	ns	+	+	+
a household member lost a job since last year	ns		-	ns	ns	ns	ns	ns	+	ns	ns
a household member gained work since last year	ns		-	-	ns	ns	ns	ns	ns	ns	ns
receives rent subsidy or housing benefits	ns		-	ns	-	-	-	-	-	ns	ns
the household rents home or lives rent free	-		-	-	-	-	-	-	-	-	-
all household adults are women	ns		ns	-	ns	-	-	-	-	ns	ns
all household adults are men	ns		ns	-	ns	-	ns	ns	ns	ns	ns
a household member aged 10 to 25	ns		ns	ns	+	+	+	+	+	+	+
a household member has a university degree	ns		ns	-	ns	ns	ns	-	ns	ns	ns
all adult members have low level of education	ns		ns	ns	ns	ns	ns	ns	-	-	-
an adult member is in poor health	ns		ns	ns	ns	ns	ns	-	+	ns	ns
single parent household	ns		ns	-	-	ns	ns	ns	ns	ns	ns
a member is divorced, widowed or separated	+		ns	ns	ns	ns	ns	ns	ns	ns	ns
single person household	ns		-	ns	ns	ns	ns	ns	ns	ns	ns
a member gained a partner since last year	ns		ns	ns	ns	+	ns	ns	ns	ns	ns
a child aged less than 5 in the household	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
more than one person per room in household	-		ns	ns	ns	-	-	-	-	-	-
the household is in a rural location	+		+	+	+	+	+	+	ns	ns	+
all adults satisfied with life in general	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
all adults not satisfied with life in general	ns		-	ns	ns	ns	ns	ns	ns	ns	ns
all adults satisfied with housing	ns						+	+	+	+	ns
all adults not satisfied with housing	ns						-	-	ns	ns	-
constant	ns		+	+	+	+	-	-	-	-	-

Table 6: Logistic Regression Results for Whether Households Lack Most Goods and Have Most Housing Problems

	Austria				Belgium						Denmark					Finland		
	96	97	98	99	93	94	95	96	97	98	95	96	97	98	99	97	98	99
household income in bottom 20 percentile	+	+	+	+	+	ns	ns	+	ns	+	+	ns	ns	+	+	+	ns	ns
household income between 20 & 40 percentiles	ns	+	+	ns	+	ns	ns	ns	ns	ns	+	ns	ns	+	+	ns	ns	+
household income between 60 & 80 percentiles	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	-	-	-	-	-	-
household income in highest 20 percentile	-	-	-	-	ns	ns	ns	-	-	ns	-	-	-	-	-	-	-	-
moved up an income band since last year	+	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	+	ns	ns	ns
moved down an income band since last year	ns	-	-	ns	-	+	ns	ns	ns	-	-	ns	ns	ns	ns	-	ns	ns
<half working age household members work	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a member is a professional worker						ns	ns	ns	ns	-	ns	ns	ns	ns	ns			
a household member lost a job since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns
a household member gained work since last year	ns	ns	ns	ns	+	+	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns
receives rent subsidy or housing benefits	ns	ns	ns	ns		ns	ns	ns	ns	ns	ns	+	ns	+	ns	+	ns	ns
the household rents home or lives rent free	+	+	+	+	+	+	+	+	+	+	ns	+	+	+	+	+	+	+
all household adults are women	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns
all household adults are men	ns	ns	+	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member aged 10 to 25	ns	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	-	-
a household member has a university degree	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns
all adult members have low level of education	+	+	+	+	+	ns	ns	ns	ns	ns	+	ns	ns	ns	+	ns	+	ns
an adult member is in poor health	ns	ns	ns	+	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	+	ns	+
single parent household	ns	ns	ns	+	+	+	+	ns	ns	ns	ns	ns	+	ns	ns	+	+	+
a member is divorced, widowed or separated	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns
single person household	ns	ns	ns	ns	ns	+	+	ns	ns	ns	ns	+	+	ns	ns	+	+	+
a member gained a partner since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a child aged less than 5 in the household	ns	ns	ns	-	ns	+	+	ns	ns	ns	ns	ns	ns	-	ns	-	-	-
more than one person per room in household	+	+	+	+	+	ns	+	ns	ns	ns	ns	+	+	+	+	+	+	+
the household is in a rural location					ns	-	-	ns	ns	ns								
all adults satisfied with life in general					ns													
all adults not satisfied with life in general					ns													
all adults satisfied with housing	-	-	-	-	ns	-	ns	-	ns	-	-	-	-	-	-	-	-	-
all adults not satisfied with housing	+	+	+	+	ns	+	+	+	+	+	ns	+	+	ns	+	+	+	+
constant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6: Logistic Regression Results for Whether Households Lack Most Goods and Have Most Housing Problems

	France					Germany										Greece				
	95	96	97	98	99	91	92	93	94	95	96	97	98	99	00	95	96	97	98	99
household income in bottom 20 percentile	+	+	+	+	+	+	+	+	ns	+	+	ns	+	ns	ns	+	+	+	+	+
household income between 20 & 40 percentiles	+	ns	ns	+	ns	+	+	+	ns	+	+	ns	ns	ns	ns	ns	+	+	+	+
household income between 60 & 80 percentiles	ns	-	ns	-	-	ns	ns	-	ns	ns	ns	-	-	ns	-	ns	ns	ns	-	-
household income in highest 20 percentile	-	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	-	ns	-	-	-	ns	ns	-
moved up an income band since last year	ns	ns	ns	ns	+	ns	-	+	ns	ns	ns	ns	+	+	ns	ns	ns	ns	ns	ns
moved down an income band since last year	ns	ns	-	ns	ns	ns	-	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	-	-	ns
<half working age household members work	ns	+	+	+	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	ns
a member is a professional worker	ns	-	ns	ns	ns															
a household member lost a job since last year	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns
a household member gained work since last year	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	-	ns	ns	ns	ns	ns	ns
receives rent subsidy or housing benefits	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
the household rents home or lives rent free	+	+	+	+	+	+	+	+	+	+	ns	ns	+	+	+	ns	+	ns	+	+
all household adults are women	-	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	ns
all household adults are men	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	ns
a household member aged 10 to 25	ns	-	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-
a household member has a university degree	ns	+	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	+	ns	ns	-	-	ns	ns	-
all adult members have low level of education	+	ns	+	ns	+	+	+	ns	ns	ns	ns	+	+	ns	+	ns	ns	+	ns	+
an adult member is in poor health	+	ns	+	ns	+	+	ns		ns	ns	ns	ns	ns	ns	ns	+	+	+	+	+
single parent household	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+
a member is divorced, widowed or separated	ns	ns	ns	ns	-	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns
single person household	+	+	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	ns
a member gained a partner since last year	+	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a child aged less than 5 in the household	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-
more than one person per room in household	+	+	+	+	+	+	+	+	+	ns	ns	+	+	+	+	+	+	+	+	+
the household is in a rural location																				
all adults satisfied with life in general						ns	ns	ns	ns	ns	ns	ns	ns	ns	ns					
all adults not satisfied with life in general						ns	ns	ns	ns	ns	ns	ns	+	ns	ns					
all adults satisfied with housing	-	-	-	-	-	-	-	ns	-	-	ns	ns	ns	-	-	ns	-	-	-	ns
all adults not satisfied with housing	+	+	+	+	+	+	ns	ns	+	ns	+	+	+	+	+	+	+	+	+	+
constant	-	-	-	-	-	-	-	-	-	-	ns	ns	-	-	-	-	-	-	-	-

Table 6: Logistic Regression Results for Whether Households Lack Most Goods and Have Most Housing Problems

	Hungary					Ireland					Italy					Luxembourg				
	93	94	95	96	97	95	96	97	98	99	95	96	97	98	99	96	97	98	99	00
household income in bottom 20 percentile	+	ns	+	ns	ns	+	+	+	+	+	+	+	+	+	+	ns	ns	ns	+	+
household income between 20 & 40 percentiles	ns	ns	+	ns	ns	ns	ns	+	ns	+	+	+	ns	ns	+	ns	ns	ns	+	+
household income between 60 & 80 percentiles	ns	-	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	-	ns	-	ns	ns	-	-	ns
household income in highest 20 percentile	-	-	ns	-	-	-	ns	ns	ns	ns	-	-	-	-	-	ns	ns	-	ns	ns
moved up an income band since last year	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	+	ns	ns	ns	ns	ns
moved down an income band since last year	ns	ns	-	-	-	ns	ns	-	ns	ns	ns	ns	ns	ns	-	ns	ns	-	-	ns
<half working age household members work	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a member is a professional worker	ns	ns	ns	ns	-	-	ns	ns	ns	ns						ns	ns	ns	-	ns
a household member lost a job since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member gained work since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
receives rent subsidy or housing benefits						+	+	ns	+	ns	ns	ns	ns	+	ns		ns	ns	ns	ns
the household rents home or lives rent free	ns	ns	ns	+	ns	+	ns	+	+	+	+	+	+	+	+	+	ns	+	+	+
all household adults are women	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns
all household adults are men	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member aged 10 to 25	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	-	ns	-	ns	ns	ns	ns	ns
a household member has a university degree	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns
all adult members have low level of education	ns	ns	ns	ns	ns	ns	+	+	+	ns	ns	ns	ns	+	ns	ns	ns	ns	+	+
an adult member is in poor health	ns	ns	ns	+	ns	+	+	ns	ns	+	+	+	+	+	+	ns	ns	ns	ns	ns
single parent household	+		ns	ns	ns	ns	+	ns	ns	ns	ns	ns	+	ns	+	ns	+	ns	ns	ns
a member is divorced, widowed or separated	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns
single person household	ns	ns	ns	+	ns	ns	+	ns	ns	ns	ns	+	ns	+	ns	ns	ns	ns	ns	ns
a member gained a partner since last year	ns	+	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a child aged less than 5 in the household	+	ns	+	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns
more than one person per room in household	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	ns	+	ns	+	ns
the household is in a rural location	+	+	ns	+	ns											ns	-	ns	-	ns
all adults satisfied with life in general	ns	ns	ns	ns	+															
all adults not satisfied with life in general	ns	ns	ns	ns	ns															
all adults satisfied with housing	ns	ns	ns	-	ns	-	-	ns	-	-	ns	-	-	-	-					
all adults not satisfied with housing	+	+	+	+	+	+	ns	+	+	ns	+	+	+	+	+					
constant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6: Logistic Regression Results for Whether Households Lack Most Goods and Have Most Housing Problems

	The Netherlands					Poland					Portugal					Spain				
	95	96	97	98	99	95	96	98	99	00	95	96	97	98	99	95	96	97	98	99
household income in bottom 20 percentile	+	+	+	+	+	+	ns	+	+	+	+	+	+	+	+	+	+	+	+	+
household income between 20 & 40 percentiles	ns	ns	+	ns	ns	+	ns	+	+	+	+	+	+	+	ns	+	ns	ns	ns	ns
household income between 60 & 80 percentiles	ns	ns	ns	-	-	-	-	ns	ns	-	-	-	ns	-	-	ns	ns	-	ns	ns
household income in highest 20 percentile	-	-	ns	-	-	-	-	-	-	-	-	-	-	-	-	-	ns	ns	-	-
moved up an income band since last year	ns	ns	+	+	ns	+	ns	ns	ns	+	ns	ns	+	ns	+	ns	ns	ns	ns	ns
moved down an income band since last year	ns	ns	ns	ns	-	-	ns	-	ns	-	-	-	-	-	ns	-	-	ns	ns	-
<half working age household members work	ns	ns	+	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a member is a professional worker								ns	ns	-	-	-	ns	-	-					
a household member lost a job since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	+	ns
a household member gained work since last year	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	+	+
receives rent subsidy or housing benefits	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
the household rents home or lives rent free	+	+	+	+	+	-	-	-	-	ns	+	+	+	+	+	+	+	+	+	+
all household adults are women	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns
all household adults are men	ns	ns	+	ns	ns	+	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member aged 10 to 25	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	-	-	ns	ns
a household member has a university degree	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	-
all adult members have low level of education	ns	ns	ns	ns	ns	+	ns	+	+	+	ns	ns	ns	+	+	+	+	+	+	+
an adult member is in poor health	ns	ns	+	ns	+				ns	ns	ns	+	+	+	+	+	+	+	+	+
single parent household	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns
a member is divorced, widowed or separated	ns	ns	-	ns	ns	+	+	ns	ns	+	+	ns	ns	ns	ns	ns	ns	+	+	ns
single person household	ns	ns	ns	+	+	ns	ns	ns	ns	ns	ns	ns	ns	+	+	ns	ns	ns	ns	ns
a member gained a partner since last year	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	ns
a child aged less than 5 in the household	ns	ns	+	ns	ns	ns	-	ns	ns	ns	ns	ns	ns	+	ns	ns	ns	ns	ns	ns
more than one person per room in household	+	ns	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
the household is in a rural location						+	+	+	+	+										
all adults satisfied with life in general																				
all adults not satisfied with life in general																				
all adults satisfied with housing	-	-	-	-	-						-	ns	ns	ns	ns	-	-	-	-	-
all adults not satisfied with housing	ns	+	ns	+	ns						+	+	+	+	+	+	+	+	+	+
constant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6: Logistic Regression Results for Whether Households Lack Most Goods and Have Most Housing Problems

	Switzerland		United Kingdom								
	00		92	93	94	95	96	97	98	99	00
household income in bottom 20 percentile	+		+	+	ns	ns	+	+	ns	ns	ns
household income between 20 & 40 percentiles	ns		ns	+	ns	ns	ns	ns	ns	ns	ns
household income between 60 & 80 percentiles	ns		ns	ns	ns	ns	ns	ns	-	-	-
household income in highest 20 percentile	-		ns	ns	ns	ns	-	ns	ns	ns	-
moved up an income band since last year	ns		ns	ns	ns	ns	ns	ns	+	ns	ns
moved down an income band since last year	ns		ns	ns	-	ns	ns	ns	ns	ns	ns
<half working age household members work	+		+	ns	ns	ns	ns	ns	ns	ns	ns
a member is a professional worker	ns		ns	ns	ns	ns	ns	ns	ns	-	ns
a household member lost a job since last year	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
a household member gained work since last year	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
receives rent subsidy or housing benefits	ns		ns	ns	+	+	ns	ns	ns	ns	ns
the household rents home or lives rent free	+		+	+	+	+	+	+	+	+	+
all household adults are women	ns		ns	ns	ns	ns	+	ns	ns	ns	ns
all household adults are men	ns		ns	ns	ns	ns	+	ns	ns	ns	ns
a household member aged 10 to 25	ns		-	ns	ns	ns	ns	ns	ns	ns	ns
a household member has a university degree	ns		ns	ns	ns	ns	+	ns	ns	ns	ns
all adult members have low level of education	ns		ns	ns	ns	ns	ns	ns	+	ns	ns
an adult member is in poor health	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
single parent household	ns		ns	ns	ns	ns	ns	ns	ns	ns	+
a member is divorced, widowed or separated	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
single person household	ns		ns	ns	ns	ns	-	ns	ns	ns	ns
a member gained a partner since last year	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
a child aged less than 5 in the household	ns		ns	ns	ns	ns	ns	ns	ns	ns	ns
more than one person per room in household	+		ns	+	ns	ns	ns	+	+	+	ns
the household is in a rural location	-		ns	ns	ns	ns	ns	ns	ns	ns	ns
all adults satisfied with life in general	ns		ns	ns	ns	ns	ns	ns	ns	+	ns
all adults not satisfied with life in general	ns		ns	ns	+	ns	ns	ns	ns	ns	ns
all adults satisfied with housing	ns						ns	ns	-	-	ns
all adults not satisfied with housing	+						ns	+	+	+	+
constant	-		-	-	ns	-	-	-	-	-	-

The four satisfaction variables produce mixed effects, with high levels of non-significance, especially for the life satisfaction variables. Satisfaction with housing produces a predictable effect. When all adult members report satisfaction with housing, the household is more likely to possess all goods (except in Greece and Ireland where there are no significant effects) and not to face housing quality problems (except in Switzerland). Likewise, when all adult members report that they are not satisfied with their housing, the household is less likely to escape housing quality problems and more likely not to have access to common goods. No significant results emerge for all adults being dissatisfied in Belgium, Germany, Greece, Italy, Spain, and the UK for the possess all goods model, though significant results do emerge in odd years for these countries for the lack most goods model.

For most variables, the effect is similar for most or all countries, or different for varying clusters of countries, but these clusters do not reflect obvious relations between the countries. In one case, however, differences between East and West Europe emerge among effects arising from living in a rural location. Rural households in Belgium, Luxembourg, and Switzerland, are more likely to possess all goods and avoid housing problems and less likely to lack most goods and face most housing quality problems. In the UK, rural households are more likely to possess all goods and avoid all problems, but no effect emerges for the lack most items and face most problems question. Rural households face opposite circumstances in the Eastern European countries. Rural Polish households are less likely to possess all items and have no housing quality problems, and more likely lack most items and face most problems. Rural households in Hungary also are more likely to face housing quality problems and to lack basic goods, but no significant effects emerge from the possess all goods model.

4.3.   Results Across the Countries

Both models were rerun on pooled data for all countries and all years using only those independent variables available for all countries in all years, and with five new independent dummy variables marking: survey years 1991 to 1994 (when only four countries contributed data); survey years 1997 to 1999; survey year 2000 (1995 and 1996 are held constant); Southern European countries (Greece, Italy, Portugal, and Spain); and Eastern European countries (Hungary and Poland). Table 4 shows the results.

In the pooled data analysis, most independent variables produce significant effects, and most results are similar to those which emerge in the by country and by year analysis. Income position remains significant, but the effect is strongest for households in the bottom 20% of the income range, which are more likely to lack most goods and facing most housing quality problems, and for households in the top 20% of the income range, which are more likely to possess all goods and to face no housing quality problems. The effect of moving up an income band continues to be associated with a decreased change of having all goods and an increased change of lacking most items, with the reverse situation remaining true for moving down an income band.

The effects of the three employment status of household members emerge strongly only for the model of lacking most goods and facing most housing problems. The more tenuous the household's working age members attachment to the labour market, the more likely the household is to lack goods and experience housing problems. Living rent free, living in a household with more members than rooms, and living in a household where all members have a low level of education decreases the likelihood of possessing all goods and having no housing problems, and increases the likelihood of lacking most goods and having most housing problems. Households with a member holding a university degree, in contrast to the mixed results by country, emerge as less likely to experience non-monetary deprivation.

Table 4 - Logistic Regression Results for Both for Whether Households Possess All Goods and Have No Housing Problems and Whether Households Lack Most Goods and Have Most Housing Problems Across All Countries and All Years

	Have all goods and no housing quality problems		Lack most goods and have most housing problems	
	Exp β	Significance	Exp β	Significance
household income in bottom 20 percentile	0.50	0.000	2.89	0.000
household income between 20 & 40 percentiles	0.67	0.000	1.68	0.000
household income between 60 & 80 percentiles	1.43	0.000	0.58	0.000
household income in highest 20 percentile	2.13	0.000	0.35	0.000
moved up an income band since last year	0.78	0.000	1.41	0.000
moved down an income band since last year	1.23	0.000	0.71	0.000
<half working age household members work	0.94	0.001	1.20	0.000
a household member lost a job since last year	0.97	0.068	1.15	0.000
a household member gained work since last year	0.99	0.310	1.19	0.000
the household rents home or lives rent free	0.57	0.000	2.16	0.000
all household adults are women	0.79	0.000	1.16	0.000
all household adults are men	0.93	0.008	1.11	0.024
a household member aged 10 to 25	1.13	0.000	0.85	0.000
a household member has a university degree	1.02	0.042	0.96	0.111
all adult members have low level of education	0.67	0.000	1.56	0.000
a member is divorced, widowed or separated	0.83	0.000	1.31	0.000
single person household	0.96	0.186	1.32	0.000
a member gained a partner since last year	1.00	0.936	1.05	0.266
a child aged less than 5 in the household	0.97	0.031	0.99	0.828
more than one person per room in household	0.51	0.000	2.63	0.000
survey year between 1991 and 1994	2.02	0.000	0.44	0.000
survey year between 1997 and 1999	0.72	0.000	1.36	0.000
survey year 2000	0.92	0.000	1.19	0.000
Southern European country	0.66	0.000	0.96	0.076
Eastern European country	0.92	0.000	0.66	0.000
constant	0.51	0.000	0.03	0.000

Some demographic variables have more clear effects than suggested by the by country and year analysis. Households where all adult members are men, all adult members are women, or a member has lost a partner to death, divorce, or separation, are more likely to experience non-monetary deprivation, while households including members aged 10 to 25 are less likely to experience non-monetary deprivation. The value of the exponential β for the constant is small and negative for both models. Countries in Eastern Europe and Western Europe are less likely to own all goods and have no housing problems, but also less likely to lack most goods and to face most housing problems.

5. Conclusions

This paper demonstrates that many dimensions of non-monetary deprivation manifest similarly across European countries. With the exception of the effect of living in rural households, which are at greater risk of non-monetary deprivation in Eastern Europe and at lower risk in Western European countries, this analysis does not yield significant differences between Eastern and Western European countries. In many respects, non-monetary deprivation issues in the East are similar to conditions in Southern Europe. Households in both the East and the South are more likely to have housing problems and less likely to have household facilities and goods than households in the rest of Europe. Households in the Eastern European countries are less likely than households in the Southern European countries to score zero on the non-monetary deprivation scale, but households in the Southern

European countries are more likely than households in the Eastern European countries to score at the high end of the non-monetary deprivation scale. Other variations in national differences do not reflect clear or consistent groupings of countries.

One dimension of non-monetary deprivation, possession of household goods, has decreased over the survey period in most countries. Possession of household facilities, including an indoor toilet and indoor running water, and household goods (with the exception of a private car) has steadily increased across all countries, and plateaued when between 0.1 percent and 2 percent of the households in each country lacked each item. There are few consistent trends in the housing quality variables.

There is a strong bivariate association between income position in fifths and the non-monetary deprivation score for all countries. Gamma scores are statistically significant at the $p<.000$ level for all countries for all years (with one exception), and the Gamma scores are negative in all countries for all years (meaning that higher income positions are associated with lower deprivation scores). While the Gamma scores alternate between a weak and a moderate level for Germany, the Gamma scores for all other countries are consistently moderate to strong. Scores for each year are above -.450 for Denmark, Finland, France, Hungary, Ireland, Luxembourg, the Netherlands, Poland, Switzerland, and the United Kingdom. The significant associations remain for all countries for all years when income position markers are added to the binary logistic regression models.

A number of other factors are also consistently associated with high non-monetary deprivation scores and a low likelihood of a zero score across Europe. These include: fewer than 50 percent of household members aged 20 to 64 hold jobs; households living rent free; all adults in the household have a low level of education; households with more members than rooms. Across Europe, households including members aged 10 to 25 are less like to score highly on the non-monetary deprivation scale and more likely to score zero. Curiously, households that drop to a lower income fifth from one year to the next year are more likely to score zero and less likely to score highly on the non-monetary deprivation scale; while households that move up to a higher income fifth from one year to the next are less likely to score zero and more likely to score highly. Changes in income position may take longer than a year to have an effect on the risk of experiencing non-monetary deprivation.

Ordinal analysis of non-monetary deprivation works best for countries which asked the same series of questions each year. The ordinal scales are more problematic for countries which asked questions intermittently or asked different questions each year, as has occurred in the studies incorporated into CHER. In consequence, analysis of two binary variables, scoring as not at all deprived and as highly deprived, yields more meaningful analysis using this dataset.

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Appendix 1 - Variables That Are Available for Each Country for Each Year and the Weighted Percentage of Households Which Lack Each Item or Which Face Each Problem (blank cells mean that the variable is not available for that country in that year)

	Item 1 - HxxA09: housing costs a burden												Item 2 - HxxA10: household has no indoor toilet										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	na	na	na	na	na	-		-	-	-	-	-	6	5	5	4	4	-
Belgium	-	-	na	na	na	na	na	na	na	-	-		-	-	5	5	4	4	3	3	3	-	-
Denmark	-	-	-	-	32	30	32	32	32	33	-		-	-	-	-	2	1	1	1	1	1	-
Finland	-	-	-	-	-	-	na	na	na	na	-		-	-	-	-	-	-	2	2	2	2	-
France	-	-	-	-	na	na	na	43	na	na	-		-	-	-	-	3	3	3	3	2	2	-
Germany	2	8	10	12	11	12	11	12	13	14	13		1	5	4	4	4	4	3	2	2	2	2
Greece	-	-	-	-	na	na	na	na	na	na	-		-	-	-	-	10	6	5	4	5	7	-
Hungary	-	-	na	na	na	na	na	na	-	-	-		-	-	21	21	17	11	11	11	-	-	-
Ireland	-	-	-	-	na	na	na	na	na	na	-		-	-	-	-	4	3	3	3	3	2	-
Italy	-	-	-	-	na	na	na	na	na	na	-		-	-	-	-	1	1	1	1	1	1	-
Luxembourg	-	-	-	-	-	1	1	2	1	1	1		-	-	-	-	-	<1	<1	<1	<1	<1	<1
Netherlands	-	-	-	-	31	30	31	29	26	24	-		-	-	-	-	1	1	1	1	1	1	-
Poland	-	-	-	-	na	na	na	na	na	na	na		-	-	-	-	20	19	17	18	17	16	14
Portugal	-	-	-	-	na	na	na	na	na	na	-		-	-	-	-	15	13	12	11	10	9	-
Switzerland	-	-	-	-	-	-	-	-	-	3	2		-	-	-	-	-	-	-	-	-	na	na
Spain	-	-	-	-	na	na	na	na	na	na	-		-	-	-	-	2	1	1	1	1	<1	-
UK	-	14	12	10	9	8	7	7	6	5	6		-	na	na	na	na	na	1	<1	<1	1	1

	Item 3 - HxxA11: household has no indoor running water												Item 4 -HxxA12: household has shortage of space										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	3	2	2	2	2	-		-	-	-	-	-	17	16	14	13	12	-
Belgium	-	-	1	1	1	1	1	1	1	-	-		-	-	12	11	14	13	14	13	13	-	-
Denmark	-	-	-	-	1	1	1	<1	1	1	-		-	-	-	-	16	16	15	14	14	14	-
Finland	-	-	-	-	-	-	3	2	3	2	-		-	-	-	-	-	-	16	16	14	14	-
France	-	-	-	-	2	2	2	2	2	2	-		-	-	-	-	16	14	12	13	12	12	-
Germany	8	3	5	4	4	4	3	3	2	2	1		29	18	18	18	18	18	18	18	18	18	18
Greece	-	-	-	-	na	na	na	na	na	na	-		-	-	-	-	31	26	23	23	22	22	-
Hungary	-	-	8	9	8	7	7	7	-	-	-		-	-	na	na	na	na	na	na	-	-	-
Ireland	-	-	-	-	6	6	6	4	4	3	-		-	-	-	-	16	12	12	10	10	11	-
Italy	-	-	-	-	3	3	3	3	2	1	-		-	-	-	-	21	19	18	18	18	17	-
Luxembourg	-	-	-	-	-	1	1	4	4	4	3		-	-	-	-	-	6	4	4	3	11	9
Netherlands	-	-	-	-	1	1	1	<1	<1	<1	-		-	-	-	-	10	10	11	10	10	11	-
Poland	-	-	-	-	9	9	7	8	7	6	5		-	-	-	-	na	na	na	na	na	na	na
Portugal	-	-	-	-	23	22	20	17	16	14	-		-	-	-	-	35	32	30	29	28	25	-
Switzerland	-	-	-	-	-	-	-	-	-	na	na		-	-	-	-	-	-	-	-	-	13	11
Spain	-	-	-	-	4	3	3	3	2	2	-		-	-	-	-	23	23	22	21	19	18	-
UK	-	na	na	na	na	na	na	na	na	na	na		-	21	na	na	na	na	19	19	18	20	19

- data not available for this country for this year   na question not asked in the survey for that year

Variables That Are Available for Each Country for Each Year and the Weighted Percentage of Households Which Lack Each Item or Which Face Each Problem (blank cells mean that the variable is not available for that country in that year)

	Item 5 - HxxA13: household is too dark												Item 6 - HxxA14: household lacks adequate heating										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	7	7	6	5	6	-		-	-	-	-	-	8	7	5	5	5	-
Belgium	-	-	12	11	10	11	10	9	8	-	-		-	-	16	13	9	7	8	8	7	-	-
Denmark	-	-	-	-	4	4	4	3	5	5	-		-	-	-	-	5	4	4	3	3	3	-
Finland	-	-	-	-	-	-	5	5	6	5	-		-	-	-	-	-	-	4	4	4	3	-
France	-	-	-	-	11	10	9	9	10	9	-		-	-	-	-	13	11	10	10	10	10	-
Germany	na	na	na	na	na	na	na	na	na	na	na		na	na	na	na	na	na	na	na	na	na	na
Greece	-	-	-	-	12	10	9	9	9	7	-		-	-	-	-	39	34	29	28	27	24	-
Hungary	-	-	4	4	4	5	4	4	-	-	-		-	-	na	na	na	na	na	na	-	-	-
Ireland	-	-	-	-	6	4	4	4	3	3	-		-	-	-	-	11	9	9	8	6	6	-
Italy	-	-	-	-	11	11	11	11	13	11	-		-	-	-	-	19	17	16	15	15	14	-
Luxembourg	-	-	-	-	-	3	2	2	1	1	1		-	-	-	-	-	7	6	5	4	3	3
Netherlands	-	-	-	-	6	6	6	6	7	6	-		-	-	-	-	7	7	8	7	6	6	-
Poland	-	-	-	na	na	na	na	na	na	na	na		-	-	-	-	na	na	na	na	na	na	na
Portugal	-	-	-	-	17	19	18	18	17	15	-		-	-	-	-	41	41	40	40	41	39	-
Switzerland	-	-	-	-	-	-	-	-	-	na	na		-	-	-	-	-	-	-	-	-	9	8
Spain	-	-	-	-	21	18	19	17	14	16	-		-	-	-	-	5	1	1	2	3	2	-
UK	-	na	na	na	na	na	7	7	6	6	6		-	24	na	na	na	na	7	5	4	5	5

	Item 7 - HxxA15: household has a leaky roof												Item 8 - HxxA16: household has damp problem										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	5	3	3	3	3	-		-	-	-	-	-	10	8	8	7	9	-
Belgium	-	-	9	na	6	7	5	5	5	-	-		-	-	21	18	15	16	11	11	12	-	-
Denmark	-	-	-	-	4	4	4	3	4	4	-		-	-	-	-	7	6	6	5	6	5	-
Finland	-	-	-	-	-	-	2	3	2	1	-		-	-	-	-	-	-	4	4	3	3	-
France	-	-	-	-	6	6	5	5	5	6	-		-	-	-	-	19	17	14	14	15	14	-
Germany	na	na	na	na	na	na	na	na	na	na	na		na	na	na	na	na	na	na	na	na	na	na
Greece	-	-	-	-	18	16	15	14	14	13	-		-	-	-	-	20	17	17	17	14	14	-
Hungary	-	-	na	na	na	na	na	na	-	-	-		-	-	4	10	10	10	9	10	-	-	-
Ireland	-	-	-	-	5	4	4	4	3	3	-		-	-	-	-	11	10	10	10	8	7	-
Italy	-	-	-	-	8	6	6	5	4	4	-		-	-	-	-	7	6	5	4	9	9	-
Luxembourg	-	-	-	-	-	5	3	2	1	1	1		-	-	-	-	-	na	na	na	na	na	na
Netherlands	-	-	-	-	6	5	4	4	4	4	-		-	-	-	-	12	12	10	10	10	11	-
Poland	-	-	-	na	na	na	na	na	na	na	na		-	-	-	na	na	na	na	na	na	na	na
Portugal	-	-	-	-	19	17	18	19	16	14	-		-	-	-	-	36	35	36	38	35	32	-
Switzerland	-	-	-	-	-	-	-	-	-	na	na		-	-	-	-	-	-	-	-	-	na	na
Spain	-	-	-	-	13	10	12	12	9	9	-		-	-	-	-	25	19	20	21	18	16	-
UK	-	7	na	na	na	na	4	3	4	3	4		-	14	na	na	na	na	9	8	8	8	7

| - data not available for this country for this year | na question not asked in the survey for that year |

Variables That Are Available for Each Country for Each Year and the Weighted Percentage of Households Which Lack Each Item or Which Face Each Problem (blank cells mean that the variable is not available for that country in that year)

	Item 9 - HxxA17: household has rot problem												Item 10 - HxxA18: household has noise problems										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	6	5	4	4	5	-		-	-	-	-	-	21	28	25	23	23	-
Belgium	-	-	14	na	9	10	9	8	8	-	-		-	-	13	12	24	20	13	13	13	-	-
Denmark	-	-	-	-	6	5	6	5	5	5	-		-	-	-	-	15	13	17	16	15	16	-
Finland	-	-	-	-	-	-	3	2	3	2	-		-	-	-	-	-	-	26	26	23	25	-
France	-	-	-	-	11	11	10	10	10	10	-		-	-	-	-	27	25	24	24	23	24	-
Germany	na	na	na	na	na	na	na	na	na	na	na		na	na	na	na	31	na	na	na	na	24	na
Greece	-	-	-	-	12	9	8	7	9	7	-		-	-	-	-	26	20	21	22	28	24	-
Hungary	-	-	11	3	4	4	4	4	-	-	-		-	-	6	6	4	4	5	4	-	-	-
Ireland	-	-	-	-	10	7	8	7	6	5	-		-	-	-	-	11	10	13	14	12	11	-
Italy	-	-	-	-	8	7	6	5	6	5	-		-	-	-	-	31	28	37	38	34	35	-
Luxembourg	-	-	-	-	-	na	na	na	na	na	na		-	-	-	-	-	15	9	6	4	29	16
Netherlands	-	-	-	-	10	11	10	10	8	8	-		-	-	-	-	25	25	35	34	35	31	-
Poland	-	-	-	-	na	na	na	na	na	na	na		-	-	-	-	na	na	na	na	na	na	na
Portugal	-	-	-	-	28	30	30	29	28	25	-		-	-	-	-	18	17	25	27	28	26	-
Switzerland	-	-	-	-	-	-	-	-	-	na	na		-	-	-	-	-	-	-	-	-	23	23
Spain	-	-	-	-	9	8	6	6	5	4	-		-	-	-	-	34	31	35	34	31	30	-
UK	-	21	na	na	na	na	12	10	8	9	7		-	na	na	na	na	na	28	26	24	25	23

	Item 11 - HxxA19: household has pollution problem												Item 12 - HxxG01: household has no car										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	11	11	8	7	6	-		-	-	-	-	-	28	27	26	24	24	-
Belgium	-	-	17	15	14	14	13	13	15	-	-		-	-	12	11	12	25	24	24	22	-	-
Denmark	-	-	-	-	7	7	7	7	6	5	-		-	-	-	-	40	36	34	32	30	29	-
Finland	-	-	-	-	-	-	21	20	15	15	-		-	-	-	-	-	-	34	33	33	32	-
France	-	-	-	-	16	16	15	17	18	18	-		-	-	-	-	22	21	19	18	17	16	-
Germany	na	na	na	na	32	na	na	na	na	23	na		36	na	31	30	na	30	28	na	28	na	23
Greece	-	-	-	-	21	22	22	19	18	17	-		-	-	-	-	44	44	43	41	39	38	-
Hungary	-	-	3	2	1	1	1	1	-	-	-		-	-	60	61	61	62	64	64	-	-	-
Ireland	-	-	-	-	10	7	9	9	8	6	-		-	-	-	-	35	33	30	28	27	26	-
Italy	-	-	-	-	25	25	24	25	16	16	-		-	-	-	-	24	25	23	22	22	21	-
Luxembourg	-	-	-	-	-	8	5	3	2	8	5		-	-	-	-	-	17	17	17	17	15	15
Netherlands	-	-	-	-	16	13	13	12	11	11	-		-	-	-	-	35	33	34	33	32	31	-
Poland	-	-	-	-	na	na	na	na	na	na	na		-	-	-	-	61	61	58	60	58	56	54
Portugal	-	-	-	-	20	20	18	20	20	19	-		-	-	-	-	44	42	39	37	35	33	-
Switzerland	-	-	-	-	-	-	-	-	-	16	17		-	-	-	-	-	-	-	-	-	17	17
Spain	-	-	-	-	20	19	13	14	13	11	-		-	-	-	-	32	31	30	30	29	28	-
UK	-	na	na	na	na	na	10	10	9	10	8		-	33	33	33	32	32	31	30	29	29	28

- data not available for this country for this year	na question not asked in the survey for that year

Variables That Are Available for Each Country for Each Year and the Weighted Percentage of Households Which Lack Each Item or Which Face Each Problem (blank cells mean that the variable is not available for that country in that year)

	Item 13 - HxxG02: household has no phone												Item 14-HxxG03: household has no home computer										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	6	5	4	3	4	-		-	-	-	-	-	na	75	72	67	63	-
Belgium	-	-	10	7	8	7	6	5	6	-	-		-	-	81	81	79	76	73	69	64	-	-
Denmark	-	-	-	-	4	2	2	1	1	1	-		-	-	-	-	na	na	61	54	45	39	-
Finland	-	-	-	-	-	-	6	4	3	2	-		-	-	-	-	-	-	76	72	65	61	-
France	-	-	-	-	4	4	3	3	3	3	-		-	-	-	-	na	na	na	na	na	na	-
Germany	na	18	15	15	na	10	6	7	5	2	1		na	na	na	85	na	81	78	na	65	na	57
Greece	-	-	-	-	13	9	7	6	4	4	-		-	-	-	-	na	na	92	90	86	84	-
Hungary	-	-	78	78	68	69	70	71	-	-	-		-	-	92	92	91	91	90	88	-	-	-
Ireland	-	-	-	-	23	19	17	13	11	9	-		-	-	-	-	na	na	84	79	76	69	-
Italy	-	-	-	-	10	9	9	9	8	9	-		-	-	-	-	na	na	83	80	77	74	-
Luxembourg	-	-	-	-	-	na	na	na	na	5	6		-	-	-	-	-	na	69	67	64	58	52
Netherlands	-	-	-	-	2	2	2	2	1	1	-		-	-	-	-	na	na	56	51	44	41	-
Poland	-	-	-	-	69	66	63	53	45	37	29		-	-	-	-	93	93	93	93	92	90	87
Portugal	-	-	-	-	25	24	22	19	18	18	-		-	-	-	-	na	na	84	82	79	78	-
Switzerland	-	-	-	-	-	-	-	-	-	na	na		-	-	-	-	-	-	-	-	-	42	37
Spain	-	-	-	-	16	15	12	10	9	9	-		-	-	-	-	na	na	80	76	74	70	-
UK	-	12	na	na	na	na	6	5	4	4	3		-	79	78	76	75	74	74	70	67	63	56

	Item 15 - HxxG04: household has no colour TV												Item 16 - HxxG05: household has no VCR										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	4	4	3	3	3	-		-	-	-	-	-	43	40	38	35	33	-
Belgium	-	-	6	5	4	4	4	3	3	-	-		-	-	49	45	40	37	35	33	30	-	-
Denmark	-	-	-	-	5	3	3	2	2	2	-		-	-	-	-	42	36	31	26	24	22	-
Finland	-	-	-	-	-	-	7	6	5	5	-		-	-	-	-	-	-	38	37	35	32	-
France	-	-	-	-	8	6	6	5	5	4	-		-	-	-	-	46	41	37	34	32	28	-
Germany	22	na	6	4	na	4	3	na	3	na	4		na	na	na	na	na	na	na	na	35	na	na
Greece	-	-	-	-	13	10	7	6	4	3	-		-	-	-	-	60	61	58	56	53	52	-
Hungary	-	-	39	39	28	24	22	22	-	-	-		-	-	74	73	69	65	61	59	-	-	-
Ireland	-	-	-	-	5	4	3	3	2	2	-		-	-	-	-	36	31	27	26	22	20	-
Italy	-	-	-	-	5	5	4	3	3	2	-		-	-	-	-	50	48	44	42	38	35	-
Luxembourg	-	-	-	-	-	na	na	2	2	1	2		-	-	-	-	-	na	na	34	33	28	27
Netherlands	-	-	-	-	3	3	2	2	2	2	-		-	-	-	-	36	32	30	28	26	25	-
Poland	-	-	-	-	19	17	12	11	7	5	5		-	-	-	-	55	54	49	52	50	46	47
Portugal	-	-	-	-	16	12	10	7	6	5	-		-	-	-	-	54	54	48	45	43	40	-
Switzerland	-	-	-	-	-	-	-	-	-	6	6		-	-	-	-	-	-	-	-	-	na	na
Spain	-	-	-	-	3	2	2	1	1	1	-		-	-	-	-	40	37	34	33	31	28	-
UK	-	6	5	4	4	4	3	2	2	3	2		-	32	30	27	25	23	21	19	17	16	14

-   data not available for this country for this year   na   question not asked in the survey for that year

Variables That Are Available for Each Country for Each Year and the Weighted Percentage of Households Which Lack Each Item or Which Face Each Problem (blank cells mean that the variable is not available for that country in that year)

	Item 17 - HxxG06: household has no microwave												Item 18 - HxxG07: household has no dishwasher										
	90	91	92	93	94	95	96	97	98	99	00		90	91	92	93	94	95	96	97	98	99	00
Austria	-	-	-	-	-	57	51	46	43	41	-		-	-	-	-	-	59	55	52	49	48	-
Belgium	-	-	68	63	58	54	48	44	39	-	-		-	-	73	71	70	69	66	67	65	-	-
Denmark	-	-	-	-	72	66	62	59	55	52	-		-	-	-	-	71	66	63	58	54	52	-
Finland	-	-	-	-	-	-	29	25	22	19	-		-	-	-	-	-	-	58	56	54	52	-
France	-	-	-	-	59	55	50	47	43	39	-		-	-	-	-	66	63	62	61	59	57	-
Germany	na	na	na	na	na	na	na	na	48	na	na		na	na	na	na	na	na	na	na	52	na	na
Greece	-	-	-	-	95	95	93	91	88	85	-		-	-	-	-	83	81	80	79	77	75	-
Hungary	-	-	90	91	84	79	76	75	-	-	-		-	-	99	99	99	99	99	99	-	-	-
Ireland	-	-	-	-	54	46	40	37	31	28	-		-	-	-	-	82	79	77	73	70	67	-
Italy	-	-	-	-	87	87	86	84	81	80	-		-	-	-	-	75	77	74	73	73	72	-
Luxembourg	-	-	-	-	-	na	na	57	53	50	46		-	-	-	-	-	na	na	41	39	37	35
Netherlands	-	-	-	-	57	48	44	38	32	28	-		-	-	-	-	84	81	79	75	71	68	-
Poland	-	-	-	-	97	96	94	93	91	88	84		-	-	-	-	99	99	99	99	99	99	99
Portugal	-	-	-	-	89	86	83	80	74	72	-		-	-	-	-	83	83	82	80	78	76	-
Switzerland	-	-	-	-	-	-	-	-	-	na	na		-	-	-	-	-	-	-	-	-	38	36
Spain	-	-	-	-	73	68	62	58	53	48	-		-	-	-	-	84	83	81	80	77	75	-
UK	-	46	42	37	33	30	27	24	23	20	17		-	85	84	82	80	80	78	77	76	74	73

-   data not available for this country for this year   na   question not asked in the survey for that year

Appendix 2 - The number (unweighted) and percentage of valid cases giving the deprived answer (across all countries in the CHER but excluding cases which did not answer the item)

Original CHER variable	Deprived answer	1990 – number and % valid cases		1991 – number and % valid cases		1992 – number and % valid cases		1993 – number and % valid cases		1994 – number and % valid cases	
HxxA09 – housing costs a burden	yes	418	6.5%	1264	10.7%	1495	12.9%	1513	13.1%	4084	20.2%
HxxA10 – household has an indoor toilet	no	171	2.6%	359	5.6%	973	7.2%	863	6.9%	3879	6.3%
HxxA11 – household has running water	no	182	2.8%	294	4.6%	555	4.1%	499	4.0%	3023	5.4%
HxxA12 – household has shortage of space	yes	1316	20.3%	2583	21.8%	1976	18.4%	1786	17.6%	11308	20.7%
HxxA13 – household is too dark	yes	-	-	-	-	674	9.5%	482	7.7%	5594	11.1%
HxxA14 – household has adequate heating	no	-	-	1304	23.7%	794	17.9%	484	12.6%	8015	16.6%
HxxA15 – household has a leaky roof	yes	-	-	388	7.0%	385	8.7%	-	-	4773	9.9%
HxxA16 – household has damp problem	yes	-	-	741	13.4%	1042	14.7%	892	14.2%	8592	17.0%
HxxA17 – household has rot problem	yes	-	-	1169	21.2%	917	12.9%	78	3.2%	5402	10.7%
HxxA18 – household has noise problems	yes	-	-	-	-	776	10.9%	579	9.2%	13599	23.9%
HxxA19 – household has pollution problem	yes	-	-	-	-	775	10.9%	559	8.9%	10125	17.8%
HxxG01 – household has access to a car	no	853	13.2%	1682	30.5%	5073	27.2%	4699	26.4%	20060	33.1%
HxxG02 – household has a phone	no	-	-	2260	19.0%	3709	27.6%	3281	26.1%	10190	15.2%
HxxG03 – household has a home computer	no	-	-	4300	78.0%	10008	81.1%	14272	80.1%	12853	81.7%
HxxG04 – household has a colour TV	no	521	8.1%	289	5.2%	1736	9.3%	1456	8.2%	4828	8.0%
HxxG05 – household has a VCR	no	-	-	1682	30.5%	5449	44.2%	4507	39.1%	26523	43.8%
HxxG06 – household has a microwave	no	-	-	2451	44.5%	7461	60.5%	6170	53.6%	42298	69.9%
HxxG07 – household has a dishwasher	no	-	-	4674	84.8%	10143	82.2%	9017	78.3%	47838	79.0%

* Note that the considerable differences between years between 1990 and 1994 largely reflect the entry of new studies into the CHER data set.

Appendix 2 - The number (unweighted) and percentage of valid cases giving the deprived answer (across all countries in the CHER but excluding cases which did not answer the item)

Original CHER variable	1995 – number and % valid cases		1996 – number and % valid cases		1997 – number and % valid cases		1998 – number and % valid cases		1999 – number and % valid cases		2000 – number and % valid cases	
HxxA09 – housing costs a burden	3823	17.0%	3820	17.1%	6267	22.4%	3439	15.4%	3314	12.4%	1270	6.8%
HxxA10 – household has an indoor toilet	3301	5.1%	3020	4.2%	2416	3.6%	2094	3.2%	1897	3.2%	574	3.3%
HxxA11 – household has running water	2835	4.7%	2606	4.2%	2204	3.8%	1784	3.2%	1566	3.1%	297	2.4%
HxxA12 – household has shortage or space	10545	18.1%	11347	17.2%	10616	16.8%	9934	15.9%	9871	15.9%	2892	15.5%
HxxA13 – household is too dark	5062	9.4%	5402	8.8%	4970	8.6%	4849	8.8%	4157	8.3%	322	4.4%
HxxA14 – household has adequate heating	7225	14.0%	7198	12.1%	6781	12.0%	6361	11.5%	6091	11.1%	624	5.3%
HxxA15 – household has a leaky roof	4284	8.3%	4127	6.9%	3886	6.9%	3452	6.2%	3013	6.0%	206	2.8%
HxxA16 – household has damp problem	7534	14.7%	7522	12.9%	7108	12.8%	6668	12.6%	5776	12.2%	349	7.1%
HxxA17 – household has rot problem	4977	9.7%	5132	8.8%	4716	8.5%	4375	8.3%	3607	7.6%	345	7.0%
HxxA18 – household has noise problems	10830	20.2%	14532	23.8%	13743	23.7%	12742	23.1%	15115	24.4%	2553	21.5%
HxxA19 – household has pollution problem	7734	14.4%	8068	13.2%	7488	12.9%	6407	11.6%	7869	12.7%	1217	10.2%
HxxG01 – household has access to a car	21599	30.8%	21241	29.3%	17216	28.2%	16981	25.9%	14753	25.5%	4864	22.3%
HxxG02 – household has a phone	10070	14.4%	9215	13.2%	6919	10.6%	5236	8.3%	4455	7.4%	1269	7.4%
HxxG03 – household has a home computer	17529	80.2%	51062	77.4%	40537	73.8%	41021	68.7%	33274	51.2%	11742	53.9%
HxxG04 – household has a colour TV	4190	6.2%	3438	4.9%	2547	4.2%	2030	3.1%	1821	3.1%	673	3.1%
HxxG05 – household has a VCR	25078	41.1%	23693	32.7%	21239	34.7%	20844	31.8%	16010	24.6%	2480	11.4%
HxxG06 – household has a microwave	40646	66.6%	38091	52.5%	34039	55.7%	33394	50.9%	26130	40.2%	4387	20.2%
HxxG07 – household has a dishwasher	47237	77.4%	46770	64.5%	42920	70.2%	43401	66.2%	37165	64.1%	8839	59.2%

Appendix 3 - Percentage of Households (Unweighted) With No Missing Scale Items and With One Missing Scale Item

Country	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item	% No missing	% 1 missing item
Austria	-	-	-	-	-	-	-	-	-	-	99	1	99	1	99	1	99	1	99	1	-	-
Belgium	-	-	-	-	97	2	75	14	54	45	99	1	99	1	99	1	99	1	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	99	1	99	1	99	1	99	1	99	1	99	1	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-	-	100	0	100	0	100	0	100	0	-	-
France	-	-	-	-	-	-	-	-	99	1	88	11	98	1	96	1	95	0	94	0	-	-
Germany	98	2	95	4	95	4	96	3	95	3	96	2	96	2	96	2	97	3	94	4	97	2
Greece	-	-	-	-	-	-	-	-	100	0	100	0	100	0	100	0	100	0	100	0	-	-
Hungary	-	-	-	-	98	0	96	1	98	2	92	7	87	7	84	6	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	97	2	96	2	97	2	94	2	96	2	96	2	-	-
Italy	-	-	-	-	-	-	-	-	88	4	100	0	100	0	100	0	100	0	99	1	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	97	3	80	20	81	19	75	25	75	25	70	29
The Netherlands	-	-	-	-	-	-	-	-	100	0	98	2	100	0	100	0	100	0	100	0	-	-
Poland	-	-	-	-	-	-	-	-	100	0	100	0	100	0	100	0	100	0	100	0	100	0
Portugal	-	-	-	-	-	-	-	-	100	0	100	0	100	0	100	0	100	0	100	0	-	-
Switzerland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99	1	96	2
Spain	-	-	-	-	-	-	-	-	100	0	100	0	99	1	99	1	99	1	99	1	-	-
United Kingdom	-	-	94	6	98	2	94	2	97	1	96	2	96	3	96	3	96	3	97	1	97	1

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Austria	1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	1.128	.664	.503	.024	.299	.007	.767	.419
household income between 20 & 40 percentiles	.609	.050	.531	.003	.516	.022	.578	.061
household income between 60 & 80 percentiles	1.131	.462	1.023	.880	1.171	.392	1.500	.029
household income in highest 20 percentile	1.763	.001	1.149	.385	1.573	.017	1.944	.001
moved up an income band since last year	.802	.125	.968	.819	.812	.214	1.080	.642
moved down an income band since last year	.912	.587	1.293	.092	.947	.788	1.389	.092
<half working age household members work	1.013	.959	.538	.021	.856	.611	.838	.559
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.831	.379	1.552	.033	.895	.663	.829	.475
a household member gained work since last year	1.117	.522	.905	.587	1.106	.652	1.459	.042
receives rent subsidy or housing benefits	1.118	.632	.934	.750	1.198	.455	1.250	.337
the household rents home or lives rent free	.455	.000	.530	.000	.625	.002	.489	.000
all household adults are women	1.156	.692	1.054	.873	1.030	.946	.863	.749
all household adults are men	.819	.613	.892	.752	.761	.578	.906	.845
a household member aged 10 to 25	1.207	.138	1.402	.005	1.898	.000	1.713	.000
a household member has a university degree	1.094	.601	1.388	.047	1.970	.000	1.983	.000
all adult members have low level of education	.344	.014	.507	.055	.516	.169	.429	.056
an adult member is in poor health	.728	.022	.708	.008	.648	.008	.575	.001
single parent household	.593	.076	.657	.118	.837	.618	.694	.291
a member is divorced, widowed or separated	.996	.984	1.134	.489	.686	.118	.897	.631
single person household	.633	.275	.582	.159	.960	.937	.804	.679
a member gained a partner since last year	.746	.193	.964	.881	.992	.979	.843	.627
a child aged less than 5 in the household	1.543	.008	1.288	.115	1.033	.870	1.034	.862
more than one person per room in household	.514	.000	.644	.011	.650	.043	.640	.033
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	1.089	.534	1.287	.050	1.003	.984	.967	.817
all adults not satisfied with housing	.023	.378	.015	.333	.009	.531	.025	.508
constant	.314	.000	.379	.000	.183	.000	.186	.000
-2 log likelihood	1947.2		2124.3		1585.1		1616.1	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Belgium	1993		1994		1995		1996		1997	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.882	.644	.973	.904	.868	.529	1.411	.116	.864	.520
household income between 20 & 40 percentiles	.956	.853	1.149	.564	.977	.924	.893	.642	.564	.016
household income between 60 & 80 percentiles	1.356	.095	1.355	.086	.983	.921	1.277	.149	1.000	.999
household income in highest 20 percentile	1.832	.002	1.609	.012	1.355	.098	1.513	.021	1.142	.428
moved up an income band since last year	.923	.573	.763	.067	.874	.317	1.041	.754	.872	.290
moved down an income band since last year	1.391	.050	1.338	.081	1.428	.022	1.033	.836	1.122	.447
<half working age household members work	1.196	.396	.980	.926	.947	.801	.943	.792	.973	.906
a member is a professional worker	NA	NA	1.132	.337	1.001	.993	1.361	.012	1.205	.127
a household member lost a job since last year	.586	.278	.810	.321	1.117	.634	.575	.058	1.210	.431
a household member gained work since last year	.750	.526	.904	.544	.907	.628	.619	.014	.848	.364
receives rent subsidy or housing benefits	NA	NA	.631	.675	1.353	.798	.701	.673	1.545	.560
the household rents home or lives rent free	.363	.000	.404	.000	.351	.000	.400	.000	.424	.000
all household adults are women	.345	.021	.407	.024	.486	.060	.743	.374	.573	.087
all household adults are men	.967	.933	1.377	.363	1.449	.264	1.590	.159	1.314	.409
a household member aged 10 to 25	1.209	.163	1.364	.019	1.122	.378	1.447	.003	1.225	.092
a household member has a university degree	1.044	.732	.786	.062	1.163	.264	.897	.389	.826	.126
all adult members have low level of education	.811	.467	.598	.046	.611	.054	.788	.305	.765	.243
an adult member is in poor health	.358	.019	.769	.055	.619	.004	.771	.105	.910	.486
single parent household	.747	.411	.700	.348	1.148	.706	.813	.547	1.463	.251
a member is divorced, widowed or separated	.976	.929	.883	.639	.712	.233	.994	.981	.606	.065
single person household	.959	.927	1.285	.524	.598	.188	.611	.192	.586	.144
a member gained a partner since last year	1.147	.903	.821	.427	.781	.343	1.125	.706	1.350	.358
a child aged less than 5 in the household	1.094	.596	1.298	.096	1.056	.726	1.262	.118	1.205	.207
more than one person per room in household	.442	.035	.916	.915	.543	.579	2.098	.554	.558	.636
the household is in a rural location	1.017	.888	1.526	.000	1.304	.019	1.346	.006	1.296	.017
all adults satisfied with life in general	1.184	.427	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	.687	.622	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.996	.980	1.491	.008	1.497	.006	1.315	.053	1.389	.016
all adults not satisfied with housing	.009	.275	.204	.008	.347	.050	.142	.007	.257	.012
constant	.197	.000	.218	.000	.323	.000	.309	.000	.565	.003
-2 log likelihood	2006.9		2000.3		2072.8		2181.0		2189.9	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Belgium	1998	
	Exp β	sig
household income in bottom 20 percentile	1.029	.938
household income between 20 & 40 percentiles	.576	.153
household income between 60 & 80 percentiles	.858	.542
household income in highest 20 percentile	2.268	.001
moved up an income band since last year	.797	.211
moved down an income band since last year	1.302	.236
<half working age household members work	.901	.728
a member is a professional worker	1.651	.005
a household member lost a job since last year	1.053	.878
a household member gained work since last year	1.040	.881
receives rent subsidy or housing benefits	2.682	.258
the household rents home or lives rent free	.287	.000
all household adults are women	.309	.032
all household adults are men	1.166	.760
a household member aged 10 to 25	1.394	.046
a household member has a university degree	1.204	.289
all adult members have low level of education	.310	.029
an adult member is in poor health	1.020	.902
single parent household	.976	.962
a member is divorced, widowed or separated	1.167	.702
single person household	.884	.833
a member gained a partner since last year	1.181	.741
a child aged less than 5 in the household	.999	.995
more than one person per room in household	.005	.615
the household is in a rural location	1.043	.775
all adults satisfied with life in general	NA	NA
all adults not satisfied with life in general	NA	NA
all adults satisfied with housing	1.198	.335
all adults not satisfied with housing	.216	.140
constant	.105	.000
-2 log likelihood	1324.6	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Denmark	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.432	.031	.340	.107	.901	.885	.206	.156	.218	.157
household income between 20 & 40 percentiles	.892	.619	.269	.013	.358	.093	.191	.012	.309	.028
household income between 60 & 80 percentiles	1.472	.020	1.357	.251	2.204	.008	1.276	.353	1.387	.196
household income in highest 20 percentile	1.956	.001	2.533	.001	5.416	.000	2.667	.001	2.542	.001
moved up an income band since last year	.791	.165	.806	.360	.698	.128	.766	.254	.539	.007
moved down an income band since last year	1.228	.145	1.925	.006	1.710	.041	1.392	.186	.974	.915
<half working age household members work	1.414	.605	1.946	.353	.704	.604	.001	.808	.001	.831
a member is a professional worker	.978	.865	1.426	.080	1.239	.289	1.582	.025	1.227	.317
a household member lost a job since last year	1.027	.909	1.082	.805	1.756	.080	.890	.739	1.286	.460
a household member gained work since last year	1.249	.214	1.234	.470	.451	.024	1.401	.173	.877	.652
receives rent subsidy or housing benefits	.344	.030	.004	.567	.015	.514	2.446	.284	.005	.610
the household rents home or lives rent free	.704	.021	.598	.069	.526	.041	.311	.002	.421	.007
all household adults are women	.456	.045	.796	.705	.167	.036	.162	.108	.114	.030
all household adults are men	.749	.436	1.244	.704	.680	.503	.125	.072	.203	.060
a household member aged 10 to 25	.990	.935	1.256	.238	1.324	.169	1.228	.311	1.073	.718
a household member has a university degree	.855	.220	1.005	.978	.729	.096	.519	.001	1.078	.683
all adult members have low level of education	.878	.564	.676	.363	.585	.223	.882	.810	.600	.419
an adult member is in poor health	.906	.457	.748	.164	1.023	.909	.903	.597	.989	.951
single parent household	.275	.002	.404	.197	.807	.762	.281	.170	.804	.791
a member is divorced, widowed or separated	1.557	.101	1.792	.245	1.731	.303	1.543	.468	1.196	.755
single person household	.614	.243	.505	.304	1.266	.740	2.683	.411	1.781	.551
a member gained a partner since last year	1.095	.787	.917	.868	1.233	.623	.287	.101	1.736	.375
a child aged less than 5 in the household	.601	.003	.477	.010	.847	.552	.605	.062	.692	.148
more than one person per room in household	.324	.001	.373	.106	.183	.021	.625	.277	.197	.008
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	2.025	.000	1.376	.105	1.655	.018	1.254	.286	1.399	.104
all adults not satisfied with housing	.023	.416	.002	.745	.897	.919	.024	.730	.005	.777
constant	.369	.000	.073	.000	.052	.000	.129	.000	.153	.000
-2 log likelihood	2127.0		1066.8		945.4		956.7		1002.5	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Finland	1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.357	.012	.728	.505	.381	.053
household income between 20 & 40 percentiles	.672	.091	.586	.101	.788	.387
household income between 60 & 80 percentiles	1.341	.042	1.198	.312	1.314	.100
household income in highest 20 percentile	1.909	.000	1.788	.002	1.921	.000
moved up an income band since last year	.795	.104	1.029	.849	.733	.048
moved down an income band since last year	1.486	.003	1.324	.091	1.362	.056
<half working age household members work	.826	.445	.849	.636	.819	.594
a member is a professional worker	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	1.104	.557	.799	.282	.680	.077
a household member gained work since last year	1.014	.918	.979	.886	.745	.080
receives rent subsidy or housing benefits	.748	.078	1.250	.272	1.055	.787
the household rents home or lives rent free	.315	.000	.258	.000	.266	.000
all household adults are women	.703	.264	.369	.013	.629	.221
all household adults are men	.971	.918	.664	.248	1.217	.560
a household member aged 10 to 25	1.446	.000	1.800	.000	1.661	.000
a household member has a university degree	.913	.344	2.031	.000	1.693	.000
all adult members have low level of education	1.277	.183	.651	.125	.720	.209
an adult member is in poor health	.729	.001	.800	.046	.632	.000
single parent household	.622	.103	.493	.068	.845	.650
a member is divorced, widowed or separated	1.211	.419	1.351	.318	.741	.325
single person household	.264	.000	.630	.272	.347	.008
a member gained a partner since last year	2.023	.004	1.091	.754	1.108	.712
a child aged less than 5 in the household	1.503	.002	1.398	.025	1.231	.154
more than one person per room in household	.379	.000	.354	.000	.349	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	1.301	.025	1.086	.559	1.008	.952
all adults not satisfied with housing	.020	.281	.012	.464	.592	.632
constant	.492	.000	.177	.000	.292	.000
-2 log likelihood	3114.5		2362.5		2378.0	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

France	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.454	.043	.683	.203	.662	.246	.703	.223	.538	.043
household income between 20 & 40 percentiles	.548	.009	.656	.042	.508	.024	.678	.047	.641	.022
household income between 60 & 80 percentiles	1.822	.000	1.789	.000	1.755	.002	1.526	.003	1.588	.001
household income in highest 20 percentile	3.027	.000	3.347	.000	3.510	.000	2.511	.000	2.239	.000
moved up an income band since last year	.712	.008	.735	.012	.425	.000	.810	.112	.542	.000
moved down an income band since last year	1.282	.066	1.144	.335	1.124	.516	1.457	.008	1.107	.484
<half working age household members work	.839	.413	.764	.181	.936	.780	.617	.028	.716	.121
a member is a professional worker	1.057	.622	1.215	.067	1.322	.037	1.089	.455	1.095	.440
a household member lost a job since last year	.819	.379	.682	.046	.649	.034	.829	.339	.957	.824
a household member gained work since last year	.906	.426	.871	.396	.810	.326	.959	.770	.788	.164
receives rent subsidy or housing benefits	.874	.390	.947	.702	.753	.176	.930	.633	.931	.667
the household rents home or lives rent free	.440	.000	.379	.000	.469	.000	.282	.000	.325	.000
all household adults are women	.391	.017	.876	.673	.659	.327	.772	.394	.414	.011
all household adults are men	.745	.439	.800	.541	.817	.657	.580	.132	.742	.430
a household member aged 10 to 25	1.223	.056	1.269	.020	1.361	.017	1.196	.102	1.299	.022
a household member has a university degree	1.009	.932	.904	.347	.798	.079	.933	.524	.876	.272
all adult members have low level of education	.640	.060	.766	.202	.504	.028	.716	.109	.817	.195
an adult member is in poor health	.726	.004	.703	.001	.844	.194	.758	.011	.647	.000
single parent household	.584	.096	.681	.188	.881	.736	.643	.132	.910	.736
a member is divorced, widowed or separated	1.106	.692	1.149	.554	.904	.723	1.240	.367	1.426	.132
single person household	.595	.230	.388	.015	.911	.847	.507	.066	.670	.326
a member gained a partner since last year	1.209	.556	.526	.122	.879	.796	.957	.891	.462	.004
a child aged less than 5 in the household	1.083	.544	1.204	.157	1.108	.549	1.109	.468	1.107	.478
more than one person per room in household	.510	.000	.446	.000	.412	.001	.612	.013	.490	.001
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	1.055	.633	1.230	.052	1.377	.014	1.556	.000	1.265	.053
all adults not satisfied with housing	.021	.376	.371	.333	.035	.560	.017	.449	.023	.494
constant	.180	.000	.205	.000	.106	.000	.247	.000	.341	.000
-2 log likelihood	3213.6		3375.1		2330.3		3018.1		2947.6	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Germany	1991		1992		1993		1994		1995	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.505	.001	.537	.001	.641	.012	.709	.080	.415	.000
household income between 20 & 40 percentiles	.801	.138	.476	.000	.715	.010	.847	.207	.702	.006
household income between 60 & 80 percentiles	1.167	.201	1.628	.000	1.781	.000	1.025	.806	1.248	.024
household income in highest 20 percentile	1.072	.608	2.938	.000	2.950	.000	1.237	.046	1.851	.000
moved up an income band since last year	.791	.035	1.622	.000	.527	.000	.806	.015	.787	.009
moved down an income band since last year	1.124	.345	2.101	.000	1.624	.000	1.055	.605	1.305	.007
<half working age household members work	1.101	.666	1.555	.010	1.344	.085	1.018	.916	1.602	.007
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.890	.490	.773	.019	.613	.000	.950	.653	.916	.468
a household member gained work since last year	.883	.303	.976	.820	.881	.216	.840	.087	.938	.498
receives rent subsidy or housing benefits	1.075	.712	.574	.000	.644	.002	.759	.083	.374	.000
the household rents home or lives rent free	.230	.000	.335	.000	.329	.000	.333	.000	.318	.000
all household adults are women	.791	.328	1.000	.998	.836	.368	1.362	.109	.816	.307
all household adults are men	.662	.097	1.120	.588	.772	.229	1.335	.154	.729	.136
a household member aged 10 to 25	1.094	.363	.919	.284	1.042	.600	1.185	.027	.981	.807
a household member has a university degree	1.029	.785	.863	.055	.812	.007	.747	.000	.799	.003
all adult members have low level of education	.731	.032	.645	.001	.698	.008	1.117	.431	.714	.015
an adult member is in poor health	1.177	.252	1.050	.640	NA	NA	.896	.290	.882	.079
single parent household	1.814	.018	1.291	.204	1.488	.047	1.087	.683	.866	.480
a member is divorced, widowed or separated	.766	.112	.924	.580	1.070	.633	.979	.880	.834	.214
single person household	1.087	.745	.796	.287	1.081	.722	1.029	.894	.914	.684
a member gained a partner since last year	1.193	.400	.598	.005	.845	.338	1.028	.875	.983	.927
a child aged less than 5 in the household	.974	.840	.921	.445	1.292	.019	1.241	.051	1.194	.111
more than one person per room in household	.292	.000	.324	.000	.314	.000	.415	.000	.313	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	.924	.550	1.062	.563	1.078	.489	1.037	.713	.923	.432
all adults not satisfied with life in general	.758	.421	.976	.934	.668	.145	.323	.000	1.384	.235
all adults satisfied with housing	2.607	.000	1.901	.000	2.169	.000	1.634	.000	2.158	.000
all adults not satisfied with housing	.186	.000	.339	.000	.391	.000	.225	.000	.335	.000
constant	5.358	.000	1.293	.034	1.328	.021	1.225	.105	2.599	.000
-2 log likelihood	3360.6		5027.8		4983.6		5125.9		5116.5	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Germany	1996		1997		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.483	.000	.602	.003	.602	.163	.829	.216	.706	.053
household income between 20 & 40 percentiles	.655	.001	.723	.011	.660	.116	.896	.354	.896	.426
household income between 60 & 80 percentiles	1.208	.051	.922	.415	1.275	.118	.871	.136	1.247	.024
household income in highest 20 percentile	1.400	.002	1.008	.945	2.209	.000	1.050	.632	1.932	.000
moved up an income band since last year	.877	.146	.929	.400	.758	.030	.996	.967	.983	.858
moved down an income band since last year	1.305	.006	.908	.332	1.018	.911	1.071	.444	1.152	.165
<half working age household members work	1.401	.068	1.170	.400	.892	.649	.900	.540	.893	.505
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.942	.601	.947	.645	.801	.156	1.006	.955	.986	.908
a household member gained work since last year	1.169	.088	.966	.716	.900	.412	1.000	.999	.946	.575
receives rent subsidy or housing benefits	.814	.206	.848	.310	.918	.793	.751	.082	.591	.024
the household rents home or lives rent free	.250	.000	.283	.000	.390	.000	.333	.000	.421	.000
all household adults are women	.732	.103	.918	.656	.863	.664	.794	.184	1.004	.982
all household adults are men	.600	.011	.705	.067	1.989	.023	.960	.822	1.579	.022
a household member aged 10 to 25	1.054	.492	1.069	.388	1.545	.000	1.045	.545	1.570	.000
a household member has a university degree	.919	.261	.842	.024	1.106	.292	.888	.086	1.325	.000
all adult members have low level of education	.840	.212	.969	.825	.263	.002	.889	.387	.316	.000
an adult member is in poor health	.762	.000	.963	.596	.748	.002	.719	.000	.717	.000
single parent household	.674	.049	.769	.196	.558	.070	1.070	.711	.732	.132
a member is divorced, widowed or separated	1.183	.249	1.612	.001	.949	.819	.865	.278	.927	.623
single person household	.852	.447	.745	.155	.494	.044	.965	.854	.661	.051
a member gained a partner since last year	1.275	.186	.674	.023	.965	.895	.857	.346	1.100	.590
a child aged less than 5 in the household	1.072	.528	1.081	.473	1.288	.094	1.002	.986	1.006	.959
more than one person per room in household	.329	.000	.335	.000	.297	.000	.460	.000	.305	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	.983	.864	1.068	.516	.844	.224	.905	.282	.813	.040
all adults not satisfied with life in general	.809	.410	.749	.209	1.203	.675	1.106	.687	.741	.306
all adults satisfied with housing	2.209	.000	2.114	.000	1.129	.377	1.910	.000	1.330	.005
all adults not satisfied with housing	.338	.000	.321	.000	.114	.025	.288	.000	.431	.003
constant	3.121	.000	4.111	.000	.235	.000	2.288	.000	.780	.048
-2 log likelihood	5275.2		5215.3		3217.8		6016.6		5443.4	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Greece	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.372	.001	.589	.422	.500	.010	.180	.000	.002	.823
household income between 20 & 40 percentiles	.439	.000	.733	.517	.558	.002	.526	.000	.001	.738
household income between 60 & 80 percentiles	1.499	.005	1.671	.150	1.233	.130	1.353	.028	4.540	.019
household income in highest 20 percentile	2.736	.000	4.395	.000	1.831	.000	2.214	.000	14.660	.000
moved up an income band since last year	.841	.148	.570	.058	.705	.003	.623	.000	1.144	.670
moved down an income band since last year	1.856	.000	1.840	.051	1.047	.744	1.342	.027	2.331	.096
<half working age household members work	1.205	.261	.834	.624	1.051	.762	.868	.437	.926	.871
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.742	.096	.776	.563	.798	.251	.901	.636	.374	.189
a household member gained work since last year	.945	.685	1.124	.710	.685	.019	1.040	.778	.308	.117
receives rent subsidy or housing benefits	1.454	.364	.003	.746	1.195	.726	2.688	.151	1.619	.667
the household rents home or lives rent free	.571	.000	.615	.083	.602	.000	.602	.000	.727	.343
all household adults are women	.706	.323	1.540	.445	1.029	.925	.857	.662	1.118	.886
all household adults are men	.933	.843	2.740	.085	.911	.793	1.538	.271	.315	.362
a household member aged 10 to 25	1.104	.378	1.613	.038	1.398	.002	1.368	.007	2.100	.011
a household member has a university degree	.986	.897	1.360	.165	1.304	.015	.984	.890	3.329	.000
all adult members have low level of education	.495	.001	.508	.173	.522	.000	.433	.000	.001	.745
an adult member is in poor health	.538	.000	.873	.663	.596	.000	.493	.000	.433	.095
single parent household	.467	.016	.406	.119	.292	.000	.368	.001	.350	.166
a member is divorced, widowed or separated	.932	.693	1.387	.305	1.043	.798	.843	.346	1.706	.195
single person household	.753	.480	.348	.179	.623	.201	.504	.111	1.302	.842
a member gained a partner since last year	1.142	.614	1.228	.619	1.248	.434	.863	.655	3.413	.024
a child aged less than 5 in the household	1.732	.000	1.753	.049	1.232	.130	1.262	.098	2.470	.006
more than one person per room in household	.499	.000	.375	.000	.415	.000	.454	.000	.275	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	1.295	.063	1.420	.203	1.213	.203	1.140	.388	1.025	.945
all adults not satisfied with housing	.149	.008	.007	.581	.344	.042	.472	.166	.001	.866
constant	.230	.000	.017	.000	.398	.000	.449	.000	.003	.000
-2 log likelihood	2754.2		854.7		2770.3		2571.4		518.9	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Hungary	1993		1994		1995		1996		1997	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.848	.688	.737	.374	1.142	.721	1.028	.948	.804	.666
household income between 20 & 40 percentiles	.953	.856	.737	.197	.801	.397	.774	.421	.594	.141
household income between 60 & 80 percentiles	1.865	.001	1.667	.005	1.517	.042	1.679	.040	.978	.937
household income in highest 20 percentile	3.234	.000	3.515	.000	2.796	.000	4.700	.000	3.069	.000
moved up an income band since last year	.677	.014	.820	.245	.897	.522	.942	.766	.418	.001
moved down an income band since last year	1.268	.187	1.921	.000	1.299	.183	1.654	.026	1.830	.021
<half working age household members work	.720	.207	.811	.432	.546	.043	1.036	.909	1.080	.792
a member is a professional worker	1.244	.133	1.006	.972	1.189	.324	1.099	.620	1.191	.423
a household member lost a job since last year	.995	.976	.927	.701	1.234	.289	.930	.773	.872	.533
a household member gained work since last year	1.046	.770	1.048	.738	.798	.158	.820	.249	.702	.113
receives rent subsidy or housing benefits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
the household rents home or lives rent free	.530	.000	.414	.000	.508	.001	.339	.000	.482	.014
all household adults are women	.359	.003	.486	.021	.345	.003	.582	.260	.385	.122
all household adults are men	1.064	.881	.792	.539	1.062	.884	1.605	.353	1.861	.354
a household member aged 10 to 25	1.517	.004	1.147	.333	1.160	.344	1.763	.002	1.155	.491
a household member has a university degree	1.210	.248	1.279	.179	1.520	.032	1.216	.338	1.258	.342
all adult members have low level of education	.715	.085	.521	.001	.596	.015	.765	.302	.516	.031
an adult member is in poor health	.867	.491	.673	.051	.847	.447	.597	.037	.988	.965
single parent household	.343	.000	NA	NA	.394	.004	.490	.086	.793	.616
a member is divorced, widowed or separated	1.049	.790	.561	.000	.793	.229	.653	.048	.536	.011
single person household	.482	.117	.602	.212	.474	.096	1.097	.877	.457	.323
a member gained a partner since last year	1.048	.898	.532	.075	.538	.096	.581	.245	1.034	.947
a child aged less than 5 in the household	.842	.373	.710	.064	.699	.073	1.120	.633	.565	.036
more than one person per room in household	.541	.000	.590	.000	.422	.000	.798	.193	1.046	.823
the household is in a rural location	.855	.280	.976	.859	1.028	.859	1.104	.570	1.176	.417
all adults satisfied with life in general	.745	.226	.702	.136	1.037	.881	.936	.826	.793	.519
all adults not satisfied with life in general	.290	.032	.650	.504	.276	.030	.377	.389	.214	.148
all adults satisfied with housing	1.301	.166	1.518	.024	.998	.994	.954	.837	.670	.178
all adults not satisfied with housing	1.115	.799	.551	.321	1.554	.364	.006	.487	.596	.566
constant	.562	.020	.829	.441	1.066	.811	.204	.000	.473	.026
-2 log likelihood	1601.7		1550.3		1316.8		1066.0		768.6	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Ireland	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.702	.256	.550	.067	.967	.917	.549	.084	.393	.229
household income between 20 & 40 percentiles	.626	.025	.712	.070	.889	.518	.915	.649	.810	.541
household income between 60 & 80 percentiles	1.426	.007	.992	.956	1.082	.564	1.298	.073	1.626	.019
household income in highest 20 percentile	1.880	.000	1.716	.000	1.590	.002	1.681	.001	2.383	.000
moved up an income band since last year	.944	.651	.928	.568	.927	.544	.884	.363	.655	.031
moved down an income band since last year	1.360	.019	1.521	.002	1.091	.515	1.180	.264	1.380	.109
<half working age household members work	.897	.508	.944	.736	1.101	.595	.917	.672	.814	.490
a member is a professional worker	1.900	.000	1.769	.000	1.478	.001	1.603	.000	2.517	.000
a household member lost a job since last year	1.393	.049	1.003	.988	1.328	.165	.771	.212	.841	.532
a household member gained work since last year	.815	.106	1.159	.279	.939	.620	.842	.242	.891	.556
receives rent subsidy or housing benefits	.012	.382	1.451	.559	.440	.216	.035	.424	.822	.876
the household rents home or lives rent free	.361	.000	.348	.000	.373	.000	.211	.000	.406	.018
all household adults are women	.455	.008	.370	.001	.539	.021	.573	.061	.119	.009
all household adults are men	.514	.023	.447	.009	.569	.044	.458	.011	.120	.005
a household member aged 10 to 25	.994	.959	1.146	.237	1.181	.158	1.358	.014	1.718	.001
a household member has a university degree	.787	.045	.999	.992	.973	.833	.848	.228	1.530	.010
all adult members have low level of education	.396	.000	.411	.000	.352	.000	.450	.000	.686	.354
an adult member is in poor health	.654	.000	.613	.000	.598	.000	.544	.000	.715	.066
single parent household	.555	.038	.519	.025	.556	.035	.498	.019	.354	.067
a member is divorced, widowed or separated	.871	.518	1.167	.497	1.292	.266	1.100	.705	.838	.677
single person household	.984	.960	1.618	.156	1.382	.317	1.592	.178	4.848	.050
a member gained a partner since last year	1.040	.875	1.063	.829	1.297	.332	1.241	.541	2.755	.054
a child aged less than 5 in the household	1.124	.346	1.265	.073	1.128	.380	1.146	.359	.973	.890
more than one person per room in household	.470	.000	.367	.000	.488	.000	.444	.000	.522	.004
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.993	.956	1.087	.555	1.097	.522	1.160	.328	1.030	.885
all adults not satisfied with housing	.013	.379	.608	.529	.400	.249	.264	.210	.058	.789
constant	.660	.008	.742	.064	.847	.301	1.175	.336	.095	.000
-2 log likelihood	2822.0		2569.2		2503.2		2189.0		1353.1	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Italy	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.511	.000	.687	.018	.578	.001	.555	.000	.426	.045
household income between 20 & 40 percentiles	.649	.000	.722	.007	.726	.006	.727	.005	.351	.001
household income between 60 & 80 percentiles	1.320	.002	1.329	.002	1.389	.001	1.252	.019	1.021	.925
household income in highest 20 percentile	1.490	.000	1.564	.000	1.356	.003	1.117	.285	2.329	.000
moved up an income band since last year	.952	.519	.863	.067	.855	.067	.845	.052	.957	.816
moved down an income band since last year	1.332	.001	1.036	.700	1.087	.360	.885	.177	2.467	.000
<half working age household members work	.973	.780	.952	.614	1.004	.966	.969	.761	.773	.265
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.821	.137	1.029	.824	.765	.051	.948	.693	.358	.017
a household member gained work since last year	1.037	.724	1.042	.696	.893	.298	.715	.001	.955	.848
receives rent subsidy or housing benefits	.877	.727	.430	.042	.834	.663	.708	.359	.005	.617
the household rents home or lives rent free	.665	.000	.585	.000	.617	.000	.639	.000	.493	.001
all household adults are women	.738	.139	.816	.294	.702	.086	.541	.002	1.160	.733
all household adults are men	1.086	.699	.937	.756	.994	.978	.607	.020	.832	.713
a household member aged 10 to 25	1.473	.000	1.235	.004	1.257	.003	1.348	.000	1.992	.000
a household member has a university degree	1.048	.609	.975	.789	1.146	.151	1.179	.077	2.726	.000
all adult members have low level of education	.874	.206	.643	.000	.736	.005	.784	.024	.570	.088
an adult member is in poor health	.496	.000	.497	.000	.617	.000	.587	.000	.558	.016
single parent household	.702	.051	.564	.001	.627	.011	.584	.003	.953	.908
a member is divorced, widowed or separated	1.093	.513	1.481	.003	1.298	.056	1.448	.007	.857	.637
single person household	.809	.370	.563	.015	.764	.261	1.164	.510	.709	.549
a member gained a partner since last year	1.232	.310	1.244	.276	.785	.224	1.202	.306	1.268	.529
a child aged less than 5 in the household	1.525	.000	1.297	.010	1.089	.408	1.274	.020	1.829	.004
more than one person per room in household	.480	.000	.516	.000	.463	.000	.494	.000	.456	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	1.321	.001	1.193	.034	1.060	.497	1.088	.325	1.476	.024
all adults not satisfied with housing	.139	.000	.056	.000	.211	.000	.163	.000	.021	.483
constant	.561	.000	.628	.000	.649	.000	.760	.011	.032	.000
-2 log likelihood	5728.7		5648.6		5360.9		5241.7		1587.2	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Luxembourg	1996		1997		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.416	.001	.512	.044	.328	.045	.178	.006	.163	.000
household income between 20 & 40 percentiles	.687	.059	.661	.079	.853	.546	.478	.016	.552	.020
household income between 60 & 80 percentiles	1.272	.185	1.679	.002	1.379	.111	.924	.711	.981	.920
household income in highest 20 percentile	1.216	.311	2.037	.000	1.910	.003	1.340	.199	1.639	.017
moved up an income band since last year	.961	.808	.938	.685	.809	.251	.723	.097	.802	.252
moved down an income band since last year	1.583	.008	1.106	.572	1.717	.452	1.084	.730	1.232	.270
<half working age household members work	.928	.742	.901	.609	.884	.604	.532	.038	1.012	.964
a member is a professional worker	1.105	.501	.964	.803	1.504	.017	1.755	.003	1.411	.043
a household member lost a job since last year	1.050	.855	1.241	.398	.756	.327	.578	.140	1.155	.561
a household member gained work since last year	1.136	.531	.753	.160	.948	.826	.924	.746	.914	.676
receives rent subsidy or housing benefits	NA	NA	.054	.617	.062	.743	5.206	.175	.018	.799
the household rents home or lives rent free	.481	.000	.434	.000	.415	.000	.502	.000	.479	.000
all household adults are women	1.461	.134	1.758	.026	1.159	.645	.760	.463	1.287	.438
all household adults are men	1.696	.067	1.425	.212	1.064	.871	.853	.703	1.803	.077
a household member aged 10 to 25	1.159	.256	1.246	.083	1.591	.001	1.859	.000	1.920	.000
a household member has a university degree	1.545	.017	1.123	.458	1.434	.030	1.246	.223	1.393	.047
all adult members have low level of education	1.113	.552	.871	.503	.386	.006	.523	.081	.552	.055
an adult member is in poor health	1.040	.910	.784	.729	.446	.300	.269	.211	.412	.410
single parent household	.486	.002	.538	.022	.578	.095	1.012	.972	.877	.683
a member is divorced, widowed or separated	.881	.452	1.011	.949	1.020	.922	1.013	.954	.953	.820
single person household	.793	.438	.489	.023	.526	.114	1.135	.775	.816	.576
a member gained a partner since last year	1.449	.290	.931	.804	1.093	.813	.824	.683	.967	.934
a child aged less than 5 in the household	.971	.865	2.068	.000	1.497	.015	1.132	.497	1.280	.135
more than one person per room in household	1.666	.552	.387	.000	.521	.240	.652	.500	.917	.859
the household is in a rural location	1.412	.008	1.113	.366	1.270	.069	1.631	.001	1.427	.006
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
constant	2.481	.000	.323	.000	.163	.000	.126	.000	.177	.000
-2 log likelihood	1777.8		1898.0		1530.0		1327.9		1548.4	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Netherlands	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.828	.520	.591	.189	.939	.867	.515	.071	.199	.030
household income between 20 & 40 percentiles	.644	.058	.584	.072	.790	.366	.763	.232	.807	.457
household income between 60 & 80 percentiles	1.720	.000	1.269	.143	1.599	.002	1.315	.049	1.507	.016
household income in highest 20 percentile	1.996	.000	1.710	.001	2.322	.000	1.982	.000	2.876	.000
moved up an income band since last year	.637	.001	.893	.424	.858	.232	.763	.051	.866	.314
moved down an income band since last year	1.447	.012	.950	.784	.826	.271	1.215	.181	1.652	.005
<half working age household members work	.885	.600	.988	.963	.964	.876	1.191	.457	.718	.224
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.911	.627	.863	.555	1.139	.550	1.320	.161	.877	.587
a household member gained work since last year	.822	.200	.665	.067	1.044	.799	.855	.306	.954	.810
receives rent subsidy or housing benefits	1.150	.583	1.213	.534	1.029	.935	.565	.204	.589	.393
the household rents home or lives rent free	.487	.000	.409	.000	.413	.000	.393	.000	.166	.000
all household adults are women	.686	.187	.753	.562	1.084	.820	1.246	.518	1.611	.230
all household adults are men	.823	.500	1.018	.968	1.843	.069	1.284	.458	1.676	.188
a household member aged 10 to 25	1.054	.642	1.356	.017	1.562	.000	1.356	.013	1.323	.038
a household member has a university degree	.965	.737	1.347	.012	1.362	.005	.544	.297	.897	.453
all adult members have low level of education	1.125	.677	.794	.466	.797	.395	.641	.011	.817	.247
an adult member is in poor health	.734	.005	.702	.005	.701	.003	.784	.026	.695	.004
single parent household	.944	.890	.425	.139	.377	.059	.397	.058	1.437	.483
a member is divorced, widowed or separated	1.198	.598	1.042	.924	1.075	.849	1.157	.674	.543	.172
single person household	.476	.029	.470	.134	.342	.006	.450	.037	.369	.026
a member gained a partner since last year	.881	.374	.729	.397	1.069	.826	.487	.039	.786	.533
a child aged less than 5 in the household	1.194	.229	1.145	.406	1.027	.868	.920	.604	1.231	.206
more than one person per room in household	.340	.025	.474	.166	.862	.700	.434	.033	.221	.042
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	1.720	.000	1.526	.002	1.470	.001	1.432	.030	1.168	.326
all adults not satisfied with housing	.506	.358	.021	.483	.400	.388	.044	.412	.059	.662
constant	.244	.000	.158	.000	.145	.000	.303	.000	.164	.000
-2 log likelihood	2942.4		2380.6		2696.0		2872.8		2264.7	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Poland	1995		1996		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.003	.553	.359	.000	.541	.052	.002	.403	.489	.194
household income between 20 & 40 percentiles	.362	.116	.571	.000	.699	.108	.542	.080	.683	.223
household income between 60 & 80 percentiles	1.184	.634	1.598	.000	1.883	.000	1.358	.200	1.239	.350
household income in highest 20 percentile	2.223	.035	3.103	.000	3.062	.000	2.066	.004	3.126	.000
moved up an income band since last year	.717	.256	.737	.003	.948	.674	.953	.805	.784	.180
moved down an income band since last year	1.263	.494	1.390	.002	1.389	.032	1.728	.019	1.522	.047
<half working age household members work	.622	.382	.851	.301	.940	.766	.651	.198	1.053	.854
a member is a professional worker	NA	NA	NA	NA	1.729	.000	1.933	.000	1.455	.029
a household member lost a job since last year	.581	.307	1.234	.134	.970	.871	1.624	.043	.992	.973
a household member gained work since last year	1.020	.953	.948	.638	1.316	.059	1.417	.125	1.067	.756
receives rent subsidy or housing benefits	NA	NA	.405	.010	.739	.388	.941	.911	.567	.293
the household rents home or lives rent free	.932	.799	.821	.062	.782	.066	.709	.067	.790	.164
all household adults are women	.274	.241	.435	.006	.333	.007	.323	.087	.441	.151
all household adults are men	3.552	.202	.683	.407	.665	.523	.002	.680	.884	.910
a household member aged 10 to 25	1.789	.031	1.354	.002	1.171	.205	1.058	.757	1.065	.703
a household member has a university degree	3.484	.000	1.431	.004	1.491	.026	1.228	.346	1.078	.712
all adult members have low level of education	.814	.657	.512	.000	.386	.000	.312	.003	.263	.000
an adult member is in poor health	NA	NA	NA	NA	NA	NA	.692	.073	.688	.045
single parent household	.650	.607	.795	.348	.504	.066	.978	.966	.810	.667
a member is divorced, widowed or separated	.706	.406	.548	.000	.786	.124	.864	.542	.747	.202
single person household	.401	.502	.491	.122	.511	.320	1.427	.772	.005	.516
a member gained a partner since last year	2.111	.342	.434	.033	.994	.990	2.354	.083	.647	.573
a child aged less than 5 in the household	1.020	.950	1.030	.787	1.015	.916	.970	.887	1.019	.926
more than one person per room in household	.515	.007	.490	.000	.529	.000	.621	.007	.634	.005
the household is in a rural location	.425	.012	.707	.001	.378	.000	.584	.006	.415	.000
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
constant	.025	.000	.897	.507	.565	.005	.128	.000	.215	.000
-2 log likelihood	712.3		3696.8		2183.2		1164.4		1351.5	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Portugal	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.344	.021	.230	.000	.393	.000	.354	.000	.440	.295
household income between 20 & 40 percentiles	.754	.370	.518	.000	.635	.005	.503	.000	.706	.504
household income between 60 & 80 percentiles	1.760	.020	1.501	.003	1.564	.001	1.690	.000	2.998	.003
household income in highest 20 percentile	2.593	.000	1.646	.002	1.637	.002	1.930	.000	7.447	.000
moved up an income band since last year	.624	.043	.770	.049	.882	.339	.923	.541	.601	.073
moved down an income band since last year	1.861	.005	1.089	.556	1.194	.208	1.477	.007	2.066	.025
<half working age household members work	.632	.167	1.141	.510	1.089	.663	1.132	.533	1.484	.279
a member is a professional worker	2.538	.000	1.430	.004	1.746	.000	1.407	.011	2.050	.004
a household member lost a job since last year	.728	.360	.614	.023	.853	.448	1.002	.994	.843	.707
a household member gained work since last year	.451	.006	.708	.034	.979	.886	.892	.472	1.103	.744
receives rent subsidy or housing benefits	.008	.811	.005	.732	.536	.568	.007	.576	.544	.574
the household rents home or lives rent free	.319	.000	.434	.000	.403	.000	.354	.000	.433	.003
all household adults are women	1.314	.544	.755	.311	.845	.570	.837	.561	.683	.498
all household adults are men	1.597	.463	.636	.171	.953	.899	1.483	.286	1.651	.468
a household member aged 10 to 25	1.140	.454	.987	.909	1.058	.612	1.183	.139	1.473	.063
a household member has a university degree	1.067	.763	.925	.651	.839	.301	.876	.416	1.896	.005
all adult members have low level of education	.496	.003	.484	.000	.580	.000	.526	.000	.243	.002
an adult member is in poor health	.599	.010	.618	.000	.580	.000	.532	.000	.607	.041
single parent household	.491	.098	1.066	.802	.845	.506	.600	.053	1.514	.409
a member is divorced, widowed or separated	1.245	.392	.828	.277	.865	.383	1.090	.587	.772	.436
single person household	.685	.567	1.490	.315	1.220	.617	.867	.728	1.411	.667
a member gained a partner since last year	.232	.014	1.636	.033	.707	.264	.574	.039	.534	.267
a child aged less than 5 in the household	1.071	.759	.974	.866	1.058	.705	1.120	.441	1.422	.173
more than one person per room in household	.537	.005	.411	.000	.376	.000	.363	.000	.312	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	2.136	.000	1.930	.000	1.600	.002	2.287	.000	1.794	.017
all adults not satisfied with housing	.888	.913	.014	.294	.269	.073	.178	.088	.007	.586
constant	.064	.000	.471	.000	.400	.000	.383	.000	.015	.000
-2 log likelihood	1289.6		2611.6		2694.7		2590.0		899.1	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Spain	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.875	.449	.719	.192	.720	.146	.540	.005	.399	.092
household income between 20 & 40 percentiles	1.074	.594	.872	.473	.734	.086	.813	.192	.577	.103
household income between 60 & 80 percentiles	1.173	.162	1.732	.000	1.402	.015	1.350	.022	1.600	.039
household income in highest 20 percentile	1.598	.000	2.992	.000	2.248	.000	2.498	.000	4.869	.000
moved up an income band since last year	.982	.858	.889	.351	.937	.593	.774	.025	.632	.016
moved down an income band since last year	1.258	.028	1.437	.009	1.504	.002	1.369	.014	1.865	.004
<half working age household members work	.811	.082	.912	.530	.640	.003	.775	.075	.989	.958
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.941	.675	.830	.307	1.018	.921	.809	.232	.788	.371
a household member gained work since last year	.822	.068	1.066	.641	.914	.484	.708	.006	.738	.144
receives rent subsidy or housing benefits	.626	.474	.869	.782	2.072	.200	.657	.460	.007	.734
the household rents home or lives rent free	.470	.000	.376	.000	.657	.004	.553	.000	.551	.021
all household adults are women	.718	.189	1.043	.877	.559	.038	.765	.337	.823	.678
all household adults are men	.866	.602	1.496	.186	.838	.595	1.235	.491	1.125	.811
a household member aged 10 to 25	1.145	.143	1.185	.135	1.274	.025	1.304	.010	2.228	.000
a household member has a university degree	1.196	.049	1.244	.053	1.319	.011	1.028	.794	2.273	.000
all adult members have low level of education	.560	.000	.854	.354	.719	.041	.679	.015	.445	.051
an adult member is in poor health	.703	.001	.483	.000	.620	.000	.545	.000	.608	.018
single parent household	.726	.137	.730	.219	.808	.394	.831	.459	1.188	.680
a member is divorced, widowed or separated	.771	.094	1.042	.824	1.105	.583	.802	.220	.594	.091
single person household	.613	.112	.466	.040	.698	.347	.541	.076	.873	.819
a member gained a partner since last year	.962	.884	.900	.675	1.387	.156	.900	.704	.822	.624
a child aged less than 5 in the household	.987	.907	1.112	.475	1.459	.007	1.194	.199	1.255	.310
more than one person per room in household	.472	.000	.487	.000	.520	.000	.468	.000	.539	.003
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	1.466	.000	1.274	.045	1.914	.000	1.524	.000	1.269	.144
all adults not satisfied with housing	.176	.016	.007	.290	.007	.288	.203	.108	.018	.656
constant	.348	.000	.122	.000	.136	.000	.259	.000	.024	.000
-2 log likelihood	4140.4		2867.3		2992.4		3213.2		1520.0	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

Switzerland	2000	
	Exp β	sig
household income in bottom 20 percentile	.233	.000
household income between 20 & 40 percentiles	.614	.002
household income between 60 & 80 percentiles	1.085	.535
household income in highest 20 percentile	1.640	.000
moved up an income band since last year	.635	.000
moved down an income band since last year	1.059	.657
<half working age household members work	.679	.287
a member is a professional worker	1.215	.064
a household member lost a job since last year	.872	.454
a household member gained work since last year	.863	.289
receives rent subsidy or housing benefits	.788	.430
the household rents home or lives rent free	.389	.000
all household adults are women	.722	.283
all household adults are men	.952	.874
a household member aged 10 to 25	1.229	.066
a household member has a university degree	1.059	.579
all adult members have low level of education	.645	.383
an adult member is in poor health	.822	.109
single parent household	.598	.079
a member is divorced, widowed or separated	1.622	.027
single person household	.589	.112
a member gained a partner since last year	1.031	.937
a child aged less than 5 in the household	1.215	.265
more than one person per room in household	.512	.002
the household is in a rural location	1.566	.000
all adults satisfied with life in general	.762	.196
all adults not satisfied with life in general	.603	.349
all adults satisfied with housing	1.076	.734
all adults not satisfied with housing	.413	.125
constant	.935	.644
-2 log likelihood	2858.2	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

United Kingdom	1992		1993		1994		1995		1996	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.436	.002	.457	.002	.540	.016	.470	.003	.384	.005
household income between 20 & 40 percentiles	.633	.004	.546	.000	.510	.000	.739	.048	.883	.499
household income between 60 & 80 percentiles	1.470	.001	1.443	.002	1.702	.000	1.589	.000	1.529	.001
household income in highest 20 percentile	1.956	.000	2.056	.000	1.772	.000	1.793	.000	2.200	.000
moved up an income band since last year	.952	.655	.747	.013	.821	.084	.984	.893	.666	.002
moved down an income band since last year	1.081	.527	1.080	.536	1.111	.420	1.090	.498	1.311	.042
<half working age household members work	2.195	.140	1.338	.594	1.178	.686	1.269	.592	.834	.713
a member is a professional worker	1.001	.994	1.152	.159	1.069	.515	1.202	.081	1.123	.250
a household member lost a job since last year	.731	.055	1.277	.203	.983	.928	.990	.959	1.001	.997
a household member gained work since last year	.763	.020	.770	.045	.822	.147	.981	.892	.858	.300
receives rent subsidy or housing benefits	.515	.000	.803	.206	.634	.007	.733	.054	.605	.028
the household rents home or lives rent free	.456	.000	.414	.000	.416	.000	.431	.000	.361	.000
all household adults are women	.744	.152	.601	.018	.712	.106	.360	.000	.589	.025
all household adults are men	.714	.112	.576	.012	.728	.131	.432	.000	.740	.212
a household member aged 10 to 25	.915	.366	1.095	.380	1.228	.053	1.330	.008	1.268	.022
a household member has a university degree	.952	.649	.801	.052	1.011	.922	1.097	.435	.850	.150
all adult members have low level of education	.930	.580	.858	.270	.966	.810	1.024	.870	1.101	.515
an adult member is in poor health	.918	.394	.954	.647	1.007	.946	.919	.438	.850	.117
single parent household	.780	.275	.602	.029	.616	.037	.730	.173	.779	.312
a member is divorced, widowed or separated	.927	.674	1.129	.490	.962	.824	1.065	.716	1.328	.146
single person household	.579	.017	.826	.425	.704	.129	.989	.963	.951	.850
a member gained a partner since last year	1.133	.647	1.325	.299	1.098	.725	1.807	.038	1.394	.227
a child aged less than 5 in the household	.815	.135	1.151	.332	.971	.838	1.085	.582	1.241	.123
more than one person per room in household	.798	.224	.759	.149	.806	.268	.642	.022	.356	.000
the household is in a rural location	1.216	.052	1.271	.024	1.489	.000	1.266	.036	1.263	.028
all adults satisfied with life in general	.838	.112	.890	.315	.854	.189	.850	.184	.868	.231
all adults not satisfied with life in general	.528	.008	.887	.611	.718	.155	1.048	.844	1.256	.459
all adults satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	1.743	.000
all adults not satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	.373	.004
constant	1.888	.000	1.869	.000	1.960	.000	2.033	.000	.357	.000
-2 log likelihood	3454.8		3214.1		3136.1		3032.7		3167.1	

Appendix 4 - Logistic Regression Output: Whether the Household Possesses All Goods and Have No Housing Problems (yes=1, no=0)

United Kingdom	1997		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	.641	.111	.696	.400	.517	.080	.592	.137
household income between 20 & 40 percentiles	1.120	.512	.851	.563	.697	.162	.720	.148
household income between 60 & 80 percentiles	1.468	.002	1.564	.008	1.217	.203	1.104	.500
household income in highest 20 percentile	1.906	.000	2.662	.000	1.942	.000	2.119	.000
moved up an income band since last year	.731	.008	.800	.111	.844	.187	.743	.024
moved down an income band since last year	1.020	.874	1.121	.505	.954	.774	1.044	.772
<half working age household members work	.797	.618	.834	.741	2.630	.021	1.323	.532
a member is a professional worker	1.145	.171	1.543	.000	1.535	.000	1.551	.000
a household member lost a job since last year	.936	.727	1.529	.053	.740	.167	1.129	.549
a household member gained work since last year	1.068	.641	.847	.354	1.109	.519	.993	.966
receives rent subsidy or housing benefits	.631	.026	.522	.044	.747	.244	.941	.791
the household rents home or lives rent free	.337	.000	.429	.000	.439	.000	.322	.000
all household adults are women	.614	.033	.361	.004	.619	.105	.592	.060
all household adults are men	.801	.333	.627	.132	.933	.810	.986	.961
a household member aged 10 to 25	1.235	.036	1.994	.000	1.395	.003	1.561	.000
a household member has a university degree	.797	.040	1.063	.658	1.058	.660	1.009	.946
all adult members have low level of education	.927	.602	.608	.023	.557	.008	.521	.003
an adult member is in poor health	.776	.013	1.388	.006	.998	.985	.980	.862
single parent household	.948	.828	.708	.312	.718	.283	.906	.729
a member is divorced, widowed or separated	1.063	.745	1.295	.338	1.117	.651	.885	.583
single person household	.798	.378	1.432	.333	.767	.421	1.299	.381
a member gained a partner since last year	.789	.390	1.002	.995	.753	.439	1.111	.765
a child aged less than 5 in the household	.999	.997	.985	.926	.791	.137	.933	.643
more than one person per room in household	.396	.000	.279	.000	.275	.001	.230	.000
the household is in a rural location	1.373	.002	1.223	.112	1.257	.060	1.463	.001
all adults satisfied with life in general	.945	.624	.901	.429	.797	.074	1.103	.414
all adults not satisfied with life in general	.980	.952	.493	.215	.820	.654	.455	.154
all adults satisfied with housing	1.908	.000	1.515	.004	1.395	.013	1.153	.276
all adults not satisfied with housing	.370	.007	.569	.295	.449	.097	.232	.006
constant	.456	.000	.090	.000	.197	.000	.212	.000
-2 log likelihood	3306.0		2356.4		2586.1		2730.6	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Austria	1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	2.648	.001	3.558	.000	3.415	.000	1.967	.032
household income between 20 & 40 percentiles	1.588	.060	2.304	.002	2.033	.004	1.483	.134
household income between 60 & 80 percentiles	.766	.263	.494	.022	.759	.265	.607	.070
household income in highest 20 percentile	.472	.006	.553	.054	.582	.050	.547	.044
moved up an income band since last year	1.459	.059	1.354	.211	.919	.702	1.242	.355
moved down an income band since last year	.678	.079	.424	.001	.557	.010	.701	.166
<half working age household members work	.861	.727	1.213	.686	1.028	.951	1.401	.462
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	1.350	.321	.732	.502	.560	.156	.941	.884
a household member gained work since last year	.869	.559	.851	.616	1.487	.118	1.145	.641
receives rent subsidy or housing benefits	.618	.252	.693	.418	.687	.305	.710	.341
the household rents home or lives rent free	1.971	.000	2.453	.000	2.061	.000	1.685	.007
all household adults are women	1.102	.797	.908	.840	1.478	.295	1.353	.458
all household adults are men	2.037	.082	1.276	.635	2.370	.035	2.362	.056
a household member aged 10 to 25	.755	.129	.572	.008	.564	.002	.376	.000
a household member has a university degree	1.399	.179	.893	.717	.612	.121	.589	.142
all adult members have low level of education	3.522	.000	3.438	.000	3.212	.000	2.120	.020
an adult member is in poor health	1.171	.427	1.471	.083	1.352	.122	1.597	.032
single parent household	1.570	.202	1.043	.922	1.341	.389	2.497	.012
a member is divorced, widowed or separated	.867	.603	.832	.543	.985	.952	.885	.646
single person household	1.386	.445	1.433	.501	.827	.665	1.513	.397
a member gained a partner since last year	1.403	.271	1.457	.420	.959	.915	.436	.195
a child aged less than 5 in the household	1.222	.366	.858	.553	.640	.074	.568	.044
more than one person per room in household	3.521	.000	3.567	.000	2.690	.000	3.495	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.406	.000	.299	.000	.304	.000	.294	.000
all adults not satisfied with housing	3.162	.012	5.068	.001	7.050	.000	9.566	.001
constant	.057	.000	.062	.000	.114	.000	.121	.000
-2 log likelihood	1091.6		862.4		1059.0		901.6	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Belgium	1993		1994		1995		1996		1997	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	3.943	.053	.786	.480	1.638	.119	2.562	.040	1.205	.752
household income between 20 & 40 percentiles	3.537	.028	1.075	.797	1.572	.127	2.030	.104	1.614	.298
household income between 60 & 80 percentiles	1.107	.860	.875	.595	1.059	.831	.542	.165	.577	.277
household income in highest 20 percentile	.267	.078	.611	.114	.679	.205	.144	.004	.256	.051
moved up an income band since last year	2.254	.066	1.183	.451	1.236	.330	2.699	.009	.891	.798
moved down an income band since last year	.139	.006	1.654	.039	.783	.307	.839	.643	.609	.260
<half working age household members work	.001	.690	1.197	.672	1.118	.799	1.481	.622	1.796	.471
a member is a professional worker	NA	NA	.694	.084	1.256	.305	1.005	.989	.801	.606
a household member lost a job since last year	.001	.845	1.340	.377	1.252	.596	.662	.702	.704	.742
a household member gained work since last year	4.315	.031	1.589	.058	1.568	.106	.967	.944	1.725	.262
receives rent subsidy or housing benefits	NA	NA	.005	.658	4.704	.189	1.473	.769	.030	.863
the household rents home or lives rent free	5.856	.000	4.218	.000	3.057	.000	3.304	.000	3.746	.002
all household adults are women	.075	.040	1.003	.995	.522	.159	.378	.209	1.161	.852
all household adults are men	.103	.102	.556	.184	.400	.076	.669	.617	1.063	.943
a household member aged 10 to 25	.903	.826	.738	.168	.752	.202	.597	.178	.815	.635
a household member has a university degree	1.703	.245	.830	.388	.941	.794	.761	.456	1.043	.923
all adult members have low level of education	5.914	.010	1.477	.217	1.243	.512	.857	.780	1.599	.376
an adult member is in poor health	1.140	.905	1.057	.808	1.537	.080	1.416	.441	1.013	.977
single parent household	5.366	.018	2.515	.028	2.510	.035	1.531	.529	1.319	.719
a member is divorced, widowed or separated	.488	.298	.500	.048	.730	.362	1.092	.864	1.140	.811
single person household	4.810	.260	2.990	.020	4.060	.008	2.254	.356	1.020	.983
a member gained a partner since last year	.003	.954	1.037	.914	1.351	.403	1.424	.641	.611	.635
a child aged less than 5 in the household	2.254	.146	1.799	.018	1.917	.008	2.100	.065	1.281	.626
more than one person per room in household	3.648	.044	2.589	.209	10.572	.003	.004	.866	.040	.926
the household is in a rural location	.862	.741	.615	.025	.558	.008	.672	.267	1.047	.909
all adults satisfied with life in general	.455	.480	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	1.547	.666	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.433	.251	.516	.027	.614	.086	.213	.017	.334	.067
all adults not satisfied with housing	2.936	.205	4.239	.000	3.405	.000	3.303	.008	3.572	.013
constant	.003	.000	.047	.000	.039	.000	.020	.000	.016	.000
-2 log likelihood	245.9		908.7		934.6		386.9		309.7	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Belgium	1998	
	Exp β	sig
household income in bottom 20 percentile	2.263	.046
household income between 20 & 40 percentiles	1.599	.164
household income between 60 & 80 percentiles	.841	.597
household income in highest 20 percentile	.642	.244
moved up an income band since last year	1.350	.275
moved down an income band since last year	.542	.044
<half working age household members work	1.368	.584
a member is a professional worker	.601	.053
a household member lost a job since last year	.003	.602
a household member gained work since last year	2.325	.006
receives rent subsidy or housing benefits	5.677	.190
the household rents home or lives rent free	4.110	.000
all household adults are women	1.302	.611
all household adults are men	1.189	.749
a household member aged 10 to 25	.827	.492
a household member has a university degree	.792	.393
all adult members have low level of education	1.574	.211
an adult member is in poor health	1.837	.017
single parent household	2.055	.152
a member is divorced, widowed or separated	.576	.133
single person household	2.881	.069
a member gained a partner since last year	.722	.635
a child aged less than 5 in the household	.823	.584
more than one person per room in household	.006	.908
the household is in a rural location	.698	.173
all adults satisfied with life in general	NA	NA
all adults not satisfied with life in general	NA	NA
all adults satisfied with housing	.179	.000
all adults not satisfied with housing	1.961	.060
constant	.043	.000
-2 log likelihood	607.0	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Denmark	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	3.639	.025	1.186	.612	1.806	.155	4.516	.000	2.320	.020
household income between 20 & 40 percentiles	2.551	.034	.695	.154	.993	.982	2.140	.003	2.839	.000
household income between 60 & 80 percentiles	.968	.942	.535	.024	.471	.031	.453	.008	.498	.018
household income in highest 20 percentile	.117	.009	.350	.002	.423	.036	.337	.002	.215	.000
moved up an income band since last year	1.106	.811	1.036	.877	1.533	.132	1.488	.091	1.592	.051
moved down an income band since last year	.433	.010	.914	.665	1.079	.761	.982	.930	.820	.361
<half working age household members work	.030	.846	.010	.643	.017	.601	.026	.737	1.713	.647
a member is a professional worker	1.043	.893	.808	.290	.896	.668	.933	.735	.903	.623
a household member lost a job since last year	.515	.524	1.581	.251	.701	.583	1.874	.110	.774	.628
a household member gained work since last year	1.774	.077	1.251	.346	1.484	.130	1.183	.486	1.158	.556
receives rent subsidy or housing benefits	1.563	.311	1.923	.026	1.265	.475	2.286	.010	1.725	.092
the household rents home or lives rent free	1.567	.168	2.033	.000	2.331	.000	2.191	.000	1.517	.035
all household adults are women	1.518	.526	3.669	.000	1.285	.531	1.608	.194	1.714	.157
all household adults are men	1.013	.985	1.536	.256	.570	.197	1.463	.305	1.256	.563
a household member aged 10 to 25	.905	.748	1.145	.480	.896	.653	.941	.769	.808	.329
a household member has a university degree	.821	.554	1.163	.465	.699	.131	1.037	.865	1.436	.093
all adult members have low level of education	2.339	.049	.913	.747	1.018	.958	.911	.772	1.860	.047
an adult member is in poor health	.995	.989	1.325	.193	1.132	.628	1.315	.197	1.315	.191
single parent household	.753	.668	1.370	.434	3.023	.005	1.463	.311	1.036	.930
a member is divorced, widowed or separated	1.159	.723	.882	.621	1.205	.521	1.002	.994	1.235	.400
single person household	1.210	.794	3.236	.006	3.918	.003	1.781	.144	.966	.934
a member gained a partner since last year	1.030	.971	1.172	.722	1.253	.568	.827	.647	1.514	.279
a child aged less than 5 in the household	.472	.121	1.086	.759	.765	.437	.410	.006	1.172	.581
more than one person per room in household	1.738	.313	3.283	.000	3.392	.001	3.310	.001	2.938	.001
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.106	.000	.240	.000	.255	.000	.300	.000	.550	.007
all adults not satisfied with housing	1.485	.499	3.319	.021	2.833	.014	2.572	.063	3.715	.007
constant	.050	.000	.083	.000	.060	.000	.104	.000	.089	.000
-2 log likelihood	450.4		1025.9		718.2		937.8		927.4	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Finland	1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	2.336	.027	1.256	.480	1.807	.081
household income between 20 & 40 percentiles	.900	.720	1.089	.718	1.712	.030
household income between 60 & 80 percentiles	.564	.042	.439	.002	.442	.004
household income in highest 20 percentile	.277	.000	.281	.000	.406	.005
moved up an income band since last year	.800	.474	1.036	.885	1.258	.340
moved down an income band since last year	.373	.000	1.167	.460	.700	.130
<half working age household members work	2.537	.084	1.472	.614	.860	.885
a member is a professional worker	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	2.284	.041	.818	.682	.837	.718
a household member gained work since last year	1.161	.584	1.272	.285	1.162	.559
receives rent subsidy or housing benefits	1.798	.031	1.182	.502	.755	.273
the household rents home or lives rent free	2.493	.000	2.560	.000	3.294	.000
all household adults are women	1.557	.334	1.521	.306	1.130	.767
all household adults are men	1.198	.699	.511	.119	.562	.184
a household member aged 10 to 25	.383	.000	.380	.000	.474	.001
a household member has a university degree	1.704	.014	.958	.825	1.199	.351
all adult members have low level of education	.918	.785	1.786	.018	1.209	.505
an adult member is in poor health	2.311	.000	1.395	.079	1.590	.016
single parent household	4.512	.001	2.902	.006	2.908	.010
a member is divorced, widowed or separated	.701	.242	.515	.009	1.015	.957
single person household	3.882	.007	5.902	.000	4.014	.002
a member gained a partner since last year	2.253	.087	.861	.714	1.113	.826
a child aged less than 5 in the household	.340	.007	.371	.005	.483	.034
more than one person per room in household	3.317	.000	3.262	.000	3.912	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.530	.010	.455	.000	.663	.057
all adults not satisfied with housing	4.154	.001	4.110	.001	3.794	.012
constant	.026	.000	.064	.000	.039	.000
-2 log likelihood	844.3		1041.7		986.3	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

France	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	3.043	.000	2.429	.000	2.306	.004	2.047	.004	1.747	.012
household income between 20 & 40 percentiles	1.896	.004	1.251	.232	1.412	.149	1.692	.006	1.376	.063
household income between 60 & 80 percentiles	.635	.078	.499	.001	.946	.817	.590	.023	.496	.000
household income in highest 20 percentile	.303	.001	.311	.000	.214	.000	.369	.001	.438	.001
moved up an income band since last year	1.303	.237	1.230	.253	1.083	.723	1.124	.548	2.021	.000
moved down an income band since last year	.840	.355	.778	.150	.462	.001	.847	.370	1.034	.838
<half working age household members work	1.445	.311	1.778	.057	2.257	.016	2.204	.012	1.166	.638
a member is a professional worker	1.060	.777	.714	.055	1.438	.068	.928	.665	.978	.887
a household member lost a job since last year	2.230	.006	.882	.698	1.222	.498	.913	.793	1.031	.907
a household member gained work since last year	1.177	.410	1.255	.237	1.791	.011	1.133	.498	1.379	.079
receives rent subsidy or housing benefits	.973	.883	.974	.866	.719	.097	.828	.261	1.113	.505
the household rents home or lives rent free	3.656	.000	1.984	.000	3.066	.000	3.213	.000	2.880	.000
all household adults are women	.454	.042	1.167	.654	1.332	.456	1.864	.039	1.256	.389
all household adults are men	.564	.164	1.284	.492	.631	.302	1.490	.217	1.430	.197
a household member aged 10 to 25	.971	.876	.592	.001	.771	.192	.782	.130	.702	.016
a household member has a university degree	1.226	.350	1.437	.042	.933	.744	1.107	.560	1.286	.156
all adult members have low level of education	1.796	.022	1.445	.094	2.011	.010	1.223	.390	1.585	.012
an adult member is in poor health	1.428	.051	1.347	.066	2.482	.000	1.154	.389	1.713	.000
single parent household	1.711	.126	1.141	.675	1.731	.118	.850	.616	1.341	.291
a member is divorced, widowed or separated	.891	.671	.878	.555	1.285	.327	.916	.720	.646	.054
single person household	2.997	.010	2.335	.026	2.120	.105	1.130	.713	1.446	.232
a member gained a partner since last year	2.530	.022	1.959	.083	1.668	.354	1.191	.580	1.169	.465
a child aged less than 5 in the household	.819	.404	.861	.459	1.053	.831	.918	.679	.962	.837
more than one person per room in household	2.445	.000	3.235	.000	3.061	.000	2.903	.000	1.943	.001
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.308	.000	.204	.000	.241	.000	.293	.000	.406	.000
all adults not satisfied with housing	6.387	.000	3.932	.000	5.985	.000	2.958	.002	8.910	.000
constant	.014	.000	.057	.000	.016	.000	.037	.000	.045	.000
-2 log likelihood	1287.2		1729.9		1168.4		1542.1		1893.0	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Germany	1991		1992		1993		1994		1995	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	5.626	.004	10.479	.000	6.412	.000	.307	.124	5.214	.002
household income between 20 & 40 percentiles	2.895	.018	4.443	.000	3.281	.000	1.341	.361	2.650	.030
household income between 60 & 80 percentiles	.698	.460	.746	.497	.210	.002	.785	.332	.503	.180
household income in highest 20 percentile	.427	.159	.494	.201	.000	.497	.662	.159	.316	.097
moved up an income band since last year	1.224	.642	.378	.049	2.885	.002	.899	.651	1.587	.289
moved down an income band since last year	1.031	.941	.268	.016	.962	.905	.521	.045	.602	.215
<half working age household members work	.482	.505	.279	.229	.001	.781	.790	.650	1.115	.889
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.875	.861	1.978	.065	1.817	.162	.834	.581	1.242	.731
a household member gained work since last year	1.034	.939	1.127	.737	.895	.747	1.257	.372	1.358	.410
receives rent subsidy or housing benefits	.001	.584	.975	.942	1.564	.175	1.402	.277	.755	.582
the household rents home or lives rent free	7.474	.008	5.121	.002	6.742	.009	16.512	.000	11.959	.015
all household adults are women	3.161	.138	.418	.142	.970	.958	.883	.835	.466	.414
all household adults are men	8.344	.009	.303	.074	1.473	.518	1.394	.593	1.392	.721
a household member aged 10 to 25	1.180	.650	.831	.508	1.094	.750	.809	.331	.978	.950
a household member has a university degree	.389	.151	.411	.020	.644	.252	1.061	.785	.825	.650
all adult members have low level of education	2.787	.022	3.587	.000	1.319	.489	1.234	.567	1.607	.299
an adult member is in poor health	3.488	.007	.926	.856	NA	NA	.860	.625	1.387	.320
single parent household	.143	.024	.555	.352	.850	.780	.742	.602	.952	.949
a member is divorced, widowed or separated	4.343	.001	1.798	.145	.643	.347	.921	.842	.887	.819
single person household	.149	.021	3.135	.083	.846	.784	.611	.443	2.968	.264
a member gained a partner since last year	.115	.072	2.797	.030	1.462	.439	.497	.204	1.302	.716
a child aged less than 5 in the household	1.344	.518	.770	.477	1.051	.893	.670	.134	1.017	.971
more than one person per room in household	3.025	.006	2.993	.001	2.011	.037	2.805	.000	1.888	.131
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	.481	.141	1.190	.627	.860	.716	.657	.186	.904	.826
all adults not satisfied with life in general	1.045	.954	1.952	.244	1.880	.277	.815	.717	.409	.419
all adults satisfied with housing	.297	.044	.243	.001	.608	.266	.273	.002	.237	.004
all adults not satisfied with housing	6.964	.000	1.591	.285	2.071	.124	5.514	.000	.897	.837
constant	.001	.000	.003	.000	.002	.000	.004	.000	.001	.000
-2 log likelihood	357.5		592.8		511.2		924.2		410.5	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Germany	1996		1997		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	10.748	.000	2.206	.158	2.272	.000	1.442	.143	1.566	.070
household income between 20 & 40 percentiles	4.325	.015	1.239	.662	1.236	.254	.933	.736	1.046	.823
household income between 60 & 80 percentiles	.873	.846	.318	.039	.573	.002	1.193	.277	.484	.000
household income in highest 20 percentile	.279	.259	.000	.642	.299	.000	1.148	.463	.407	.001
moved up an income band since last year	2.250	.128	2.199	.081	1.840	.000	1.380	.031	.985	.940
moved down an income band since last year	.840	.709	1.717	.185	.903	.535	.896	.512	.746	.119
<half working age household members work	.753	.800	.717	.763	2.545	.002	.836	.578	1.329	.445
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	.821	.808	.682	.620	.896	.677	1.333	.133	1.354	.257
a household member gained work since last year	1.252	.615	1.746	.161	1.415	.036	.663	.017	1.192	.337
receives rent subsidy or housing benefits	.809	.756	1.760	.225	.766	.305	1.252	.314	1.067	.809
the household rents home or lives rent free	1267.7	.663	1324.849	.639	4.884	.000	5.810	.000	10.897	.000
all household adults are women	.842	.875	.228	.147	2.262	.006	.582	.063	1.559	.193
all household adults are men	2.023	.523	.648	.654	2.176	.014	.605	.108	1.506	.263
a household member aged 10 to 25	1.021	.961	1.856	.119	.939	.667	.918	.516	.895	.497
a household member has a university degree	.260	.082	.584	.343	1.382	.029	1.082	.547	.810	.213
all adult members have low level of education	2.296	.072	3.608	.008	2.030	.000	1.200	.415	1.727	.033
an adult member is in poor health	1.068	.870	.465	.065	1.151	.299	1.239	.074	1.163	.313
single parent household	.403	.415	1.252	.777	1.245	.460	1.645	.097	1.676	.135
a member is divorced, widowed or separated	.923	.906	.885	.837	1.002	.990	1.198	.431	.854	.513
single person household	.357	.352	3.006	.292	1.060	.859	1.685	.119	1.328	.445
a member gained a partner since last year	.338	.350	1.567	.627	.588	.130	1.345	.267	.555	.160
a child aged less than 5 in the household	.916	.904	1.094	.867	1.310	.211	.812	.253	1.254	.308
more than one person per room in household	2.530	.084	3.122	.016	2.068	.000	2.187	.000	3.261	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	1.460	.454	.825	.717	1.029	.875	1.239	.206	1.417	.099
all adults not satisfied with life in general	1.335	.720	1.644	.456	1.806	.054	1.627	.166	1.478	.325
all adults satisfied with housing	.498	.292	.545	.332	.790	.199	.426	.000	.495	.001
all adults not satisfied with housing	8.778	.000	5.714	.002	3.426	.000	3.270	.000	2.161	.004
constant	.000	.433	.000	.424	.013	.000	.017	.000	.007	.000
-2 log likelihood	262.5		313.4		1881.2		2286.4		1582.4	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Greece	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	2.072	.039	4.141	.000	2.718	.001	3.507	.000	2.857	.000
household income between 20 & 40 percentiles	1.620	.090	2.144	.001	1.693	.040	1.905	.016	1.911	.003
household income between 60 & 80 percentiles	.716	.261	.774	.303	.727	.242	.536	.051	.588	.038
household income in highest 20 percentile	.341	.006	.562	.048	.552	.064	.757	.388	.560	.059
moved up an income band since last year	1.406	.160	1.455	.065	1.143	.544	1.080	.756	1.147	.533
moved down an income band since last year	.644	.109	.701	.075	.641	.056	.576	.021	.849	.420
<half working age household members work	1.249	.500	.986	.960	.736	.323	.571	.137	1.048	.862
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	1.146	.664	1.256	.375	2.093	.008	1.566	.239	1.166	.539
a household member gained work since last year	1.167	.540	1.197	.408	1.382	.166	.878	.611	1.029	.915
receives rent subsidy or housing benefits	.002	.795	.011	.491	1.067	.938	3.055	.146	.257	.257
the household rents home or lives rent free	1.205	.435	1.676	.006	1.487	.071	2.152	.001	2.120	.000
all household adults are women	1.123	.855	.376	.095	1.631	.267	1.088	.890	.701	.518
all household adults are men	1.901	.284	.357	.104	1.659	.317	.674	.583	.663	.486
a household member aged 10 to 25	1.003	.990	.894	.566	.866	.510	.660	.073	.679	.051
a household member has a university degree	.389	.006	.587	.022	.687	.168	.675	.195	.474	.014
all adult members have low level of education	1.417	.242	1.295	.255	2.102	.002	1.504	.135	2.048	.001
an adult member is in poor health	1.678	.022	1.579	.012	1.509	.045	2.328	.000	2.595	.000
single parent household	1.217	.682	.837	.654	.566	.164	.881	.771	2.920	.003
a member is divorced, widowed or separated	1.072	.814	1.398	.153	1.832	.016	1.443	.179	.966	.896
single person household	1.926	.319	3.351	.054	.670	.444	.842	.808	1.100	.884
a member gained a partner since last year	1.506	.372	1.340	.372	1.199	.728	.406	.389	.883	.831
a child aged less than 5 in the household	.741	.376	.886	.625	.774	.411	.592	.100	.373	.002
more than one person per room in household	4.273	.000	2.576	.000	1.820	.005	2.122	.001	2.256	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.002	.370	.257	.009	.264	.012	.143	.007	.001	.414
all adults not satisfied with housing	4.614	.000	5.303	.000	4.697	.000	4.915	.000	2.787	.001
constant	.012	.000	.028	.000	.027	.000	.032	.000	.048	.000
-2 log likelihood	794.6		1242.7		1016.1		897.6		1080.1	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Hungary	1993		1994		1995		1996		1997	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	3.267	.018	1.689	.368	5.377	.036	1.851	.225	.480	.381
household income between 20 & 40 percentiles	1.199	.642	1.402	.473	4.555	.013	1.176	.688	1.607	.364
household income between 60 & 80 percentiles	.564	.123	.365	.024	1.104	.879	.467	.068	.594	.297
household income in highest 20 percentile	.167	.002	.032	.002	.000	.785	.087	.000	.056	.000
moved up an income band since last year	.926	.844	2.795	.016	.978	.966	1.183	.669	1.130	.792
moved down an income band since last year	1.160	.654	.567	.188	.253	.031	.483	.052	.245	.010
<half working age household members work	2.171	.069	.766	.686	1.379	.667	.332	.101	.808	.737
a member is a professional worker	.650	.257	.547	.359	.639	.578	1.030	.951	.100	.006
a household member lost a job since last year	1.288	.479	.887	.838	.323	.173	1.117	.828	1.568	.334
a household member gained work since last year	.976	.939	.969	.932	.765	.567	1.464	.234	.787	.574
receives rent subsidy or housing benefits	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
the household rents home or lives rent free	1.189	.609	1.403	.419	2.165	.155	2.077	.054	1.828	.209
all household adults are women	.747	.630	1.211	.770	.278	.363	.825	.774	2.780	.236
all household adults are men	.276	.113	2.030	.362	.197	.285	.600	.503	3.202	.235
a household member aged 10 to 25	1.240	.524	1.462	.345	1.641	.348	1.244	.529	1.716	.225
a household member has a university degree	.389	.153	.002	.627	.001	.838	.546	.407	2.110	.389
all adult members have low level of education	1.338	.422	1.519	.339	2.183	.198	1.714	.167	.875	.799
an adult member is in poor health	1.644	.205	1.916	.125	2.010	.239	3.494	.000	1.732	.250
single parent household	2.821	.058	NA	NA	1.583	.605	1.802	.295	.437	.381
a member is divorced, widowed or separated	1.461	.324	3.115	.004	1.453	.572	1.762	.128	2.443	.082
single person household	4.368	.068	.547	.492	.683	.827	5.338	.037	1.244	.830
a member gained a partner since last year	.815	.803	3.707	.042	.563	.615	3.086	.054	1.681	.579
a child aged less than 5 in the household	2.197	.050	1.868	.204	3.004	.057	1.514	.327	4.802	.002
more than one person per room in household	2.466	.023	4.375	.003	3.815	.057	3.123	.002	13.108	.000
the household is in a rural location	2.883	.001	2.051	.044	2.497	.070	1.935	.041	1.712	.164
all adults satisfied with life in general	1.056	.948	.667	.604	2.327	.517	.883	.862	6.607	.010
all adults not satisfied with life in general	.683	.567	.610	.592	.624	.699	1.480	.543	4.881	.061
all adults satisfied with housing	.617	.367	.915	.867	.000	.835	.313	.053	1.072	.926
all adults not satisfied with housing	8.788	.000	8.268	.003	15.915	.012	6.042	.006	28.604	.000
constant	.012	.000	.006	.000	.003	.000	.014	.000	.005	.000
-2 log likelihood	416.2		288.7		167.9		357.5		224.8	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Ireland	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	2.153	.050	4.576	.008	6.426	.002	6.406	.001	5.373	.001
household income between 20 & 40 percentiles	1.572	.116	2.297	.080	2.567	.036	2.053	.091	2.458	.017
household income between 60 & 80 percentiles	.512	.022	1.037	.940	.874	.779	.614	.311	1.228	.570
household income in highest 20 percentile	.200	.000	.000	.611	.376	.130	.467	.179	.405	.087
moved up an income band since last year	1.218	.494	.660	.433	.664	.332	1.457	.332	1.505	.222
moved down an income band since last year	.797	.373	.630	.260	.280	.009	.599	.202	.667	.254
<half working age household members work	1.332	.441	.453	.342	1.025	.969	.865	.828	1.293	.598
a member is a professional worker	.408	.006	.469	.164	.576	.272	.558	.207	.594	.173
a household member lost a job since last year	1.248	.612	2.034	.256	1.115	.888	1.268	.720	1.093	.874
a household member gained work since last year	1.571	.062	.677	.389	.497	.106	1.082	.829	.836	.586
receives rent subsidy or housing benefits	4.544	.013	10.339	.002	2.412	.257	10.389	.005	2.769	.145
the household rents home or lives rent free	2.436	.000	1.918	.107	2.594	.010	2.454	.008	2.487	.002
all household adults are women	1.619	.309	.541	.453	1.238	.745	.915	.892	1.265	.654
all household adults are men	2.370	.074	1.230	.810	1.951	.273	1.890	.355	2.279	.127
a household member aged 10 to 25	.808	.414	1.002	.995	.840	.654	1.014	.970	.917	.789
a household member has a university degree	.941	.874	1.543	.503	1.124	.842	1.423	.453	.825	.630
all adult members have low level of education	1.772	.071	5.122	.001	2.605	.035	3.546	.006	1.300	.523
an adult member is in poor health	1.864	.009	2.260	.044	1.259	.525	1.555	.188	1.802	.040
single parent household	.925	.874	7.706	.009	.742	.650	.848	.799	2.021	.175
a member is divorced, widowed or separated	1.668	.210	.452	.271	2.206	.144	1.042	.939	1.403	.453
single person household	1.436	.482	8.298	.021	.949	.938	1.625	.517	1.617	.437
a member gained a partner since last year	.993	.990	1.683	.639	.251	.301	2.248	.304	1.254	.778
a child aged less than 5 in the household	.948	.857	1.835	.191	.821	.666	1.351	.463	.634	.233
more than one person per room in household	2.370	.001	4.068	.003	3.909	.001	2.283	.042	4.556	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.291	.001	.044	.000	.405	.078	.113	.000	.352	.012
all adults not satisfied with housing	3.704	.035	3.760	.089	4.997	.019	6.642	.008	4.708	.197
constant	.041	.000	.007	.000	.017	.000	.015	.000	.022	.000
-2 log likelihood	724.0		292.4		360.1		387.1		502.6	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Italy	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	2.915	.000	2.956	.000	2.065	.001	1.696	.028	3.381	.000
household income between 20 & 40 percentiles	1.588	.052	1.879	.001	1.400	.080	1.351	.129	1.755	.000
household income between 60 & 80 percentiles	.630	.069	.824	.310	.531	.003	.753	.187	.744	.037
household income in highest 20 percentile	.305	.000	.296	.000	.325	.000	.465	.005	.409	.000
moved up an income band since last year	1.097	.671	1.295	.121	1.342	.106	1.433	.058	1.466	.002
moved down an income band since last year	.733	.144	.787	.143	.956	.798	1.152	.417	.729	.011
<half working age household members work	.973	.909	1.229	.258	1.294	.178	.790	.312	.919	.565
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	1.182	.597	1.182	.492	1.032	.909	.959	.886	.964	.864
a household member gained work since last year	.868	.568	1.394	.065	1.094	.650	1.266	.222	.997	.983
receives rent subsidy or housing benefits	1.910	.540	.774	.807	1.872	.485	3.381	.036	1.289	.659
the household rents home or lives rent free	1.529	.016	1.536	.001	2.011	.000	2.103	.000	1.944	.000
all household adults are women	1.501	.391	.673	.291	1.258	.568	1.396	.340	1.680	.037
all household adults are men	1.936	.168	.792	.550	.525	.149	.828	.621	1.127	.656
a household member aged 10 to 25	.914	.669	.719	.036	.642	.009	.960	.816	.724	.004
a household member has a university degree	.947	.874	.886	.634	.864	.588	.599	.072	.528	.000
all adult members have low level of education	1.100	.703	.914	.646	1.110	.612	1.474	.046	1.140	.333
an adult member is in poor health	2.553	.000	1.813	.000	2.026	.000	2.195	.000	2.411	.000
single parent household	.683	.393	1.535	.168	2.529	.008	1.771	.075	1.909	.006
a member is divorced, widowed or separated	1.215	.515	1.251	.348	.499	.018	1.037	.887	.764	.152
single person household	1.015	.976	2.357	.036	2.137	.086	3.147	.003	1.377	.240
a member gained a partner since last year	.794	.659	1.417	.351	.866	.717	1.056	.878	1.210	.422
a child aged less than 5 in the household	1.005	.985	1.085	.673	.807	.316	1.263	.284	.725	.027
more than one person per room in household	2.474	.000	2.351	.000	2.387	.000	2.262	.000	2.049	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.654	.170	.361	.000	.413	.001	.329	.000	.384	.000
all adults not satisfied with housing	8.497	.000	7.952	.000	6.944	.000	5.284	.000	3.588	.000
constant	.016	.000	.033	.000	.037	.000	.021	.000	.115	.000
-2 log likelihood	1198.9		1829.2		1606.8		1517.9		2958.5	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Luxembourg	1996		1997		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	1.637	.414	1.858	.291	1.482	.373	2.946	.041	2.752	.025
household income between 20 & 40 percentiles	1.172	.769	.966	.948	.824	.613	2.424	.032	2.225	.043
household income between 60 & 80 percentiles	.935	.895	.400	.142	.256	.005	.171	.024	.871	.788
household income in highest 20 percentile	.899	.852	.153	.090	.285	.025	.439	.247	.502	.324
moved up an income band since last year	.727	.512	.831	.742	.888	.768	1.773	.149	1.070	.877
moved down an income band since last year	.716	.489	.759	.549	.404	.038	.327	.044	.981	.952
<half working age household members work	.881	.851	2.735	.165	1.245	.737	.871	.898	1.057	.958
a member is a professional worker	.724	.468	.888	.833	.563	.176	.268	.018	.481	.081
a household member lost a job since last year	2.791	.065	.352	.334	1.469	.463	.002	.668	1.372	.582
a household member gained work since last year	1.101	.853	1.869	.188	1.411	.410	.510	.289	.750	.564
receives rent subsidy or housing benefits	NA	NA	2.402	.494	1.002	.999	4.689	.163	.007	.846
the household rents home or lives rent free	4.260	.000	1.648	.237	2.910	.000	2.718	.002	4.218	.000
all household adults are women	.564	.482	.523	.370	1.337	.520	1.122	.839	.909	.870
all household adults are men	.000	.666	.468	.352	.606	.386	.599	.424	.634	.462
a household member aged 10 to 25	1.647	.163	.942	.879	.666	.180	.598	.133	.554	.065
a household member has a university degree	.737	.604	.469	.367	.525	.252	.969	.959	.611	.369
all adult members have low level of education	.518	.269	1.818	.182	1.350	.357	2.020	.047	3.334	.000
an adult member is in poor health	.000	.812	.005	.910	.779	.828	.003	.857	1.256	.805
single parent household	1.625	.380	7.419	.003	1.232	.651	1.096	.870	.831	.743
a member is divorced, widowed or separated	1.858	.138	.582	.321	1.724	.092	1.532	.254	1.441	.289
single person household	2.169	.469	3.579	.152	1.035	.951	1.194	.780	2.273	.195
a member gained a partner since last year	.001	.819	.006	.774	.821	.852	.865	.898	.928	.932
a child aged less than 5 in the household	1.960	.108	.823	.725	.480	.107	.825	.679	1.291	.533
more than one person per room in household	.000	.926	4.708	.004	.507	.528	4.105	.020	1.496	.630
the household is in a rural location	.763	.485	.354	.036	1.012	.966	.464	.034	.619	.112
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
constant	.012	.000	.017	.000	.058	.000	.036	.000	.021	.000
-2 log likelihood	317.7		285.9		471.9		370.2		453.9	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Netherlands	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	3.609	.000	2.919	.001	5.811	.000	1.886	.023	2.039	.003
household income between 20 & 40 percentiles	1.545	.080	1.519	.135	2.462	.005	1.310	.229	1.292	.180
household income between 60 & 80 percentiles	.848	.492	.653	.165	.952	.889	.324	.000	.613	.012
household income in highest 20 percentile	.363	.003	.304	.005	.520	.139	.326	.000	.328	.000
moved up an income band since last year	1.178	.485	1.153	.578	2.016	.009	1.531	.040	1.315	.100
moved down an income band since last year	.683	.082	.643	.110	1.010	.970	.836	.380	.637	.020
<half working age household members work	1.141	.770	.788	.702	2.573	.050	.293	.100	1.098	.796
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	1.329	.448	1.216	.694	.274	.205	.903	.821	1.511	.193
a household member gained work since last year	1.126	.591	1.426	.197	.849	.569	1.446	.071	.905	.643
receives rent subsidy or housing benefits	1.443	.334	.231	.050	.791	.654	.621	.179	.797	.465
the household rents home or lives rent free	2.877	.000	4.254	.000	2.403	.001	4.015	.000	4.445	.000
all household adults are women	1.567	.244	1.007	.991	5.352	.001	1.184	.670	1.436	.267
all household adults are men	1.135	.760	.737	.607	4.736	.005	.678	.371	1.122	.743
a household member aged 10 to 25	.910	.631	.900	.649	1.396	.184	1.028	.887	.916	.608
a household member has a university degree	.848	.445	1.356	.204	1.288	.344	.446	.336	1.554	.060
all adult members have low level of education	1.002	.995	1.479	.185	1.390	.278	1.042	.870	.886	.595
an adult member is in poor health	1.345	.106	1.285	.253	1.808	.012	1.189	.343	1.452	.012
single parent household	.842	.732	1.007	.991	1.661	.376	1.727	.226	1.400	.340
a member is divorced, widowed or separated	1.426	.251	1.556	.194	.478	.053	.584	.080	1.008	.973
single person household	1.825	.181	2.387	.158	1.171	.783	2.401	.053	2.856	.005
a member gained a partner since last year	1.218	.464	2.111	.194	.736	.604	1.476	.380	.915	.827
a child aged less than 5 in the household	.814	.451	.918	.795	1.990	.047	.707	.251	1.189	.444
more than one person per room in household	2.701	.019	2.041	.267	2.951	.031	4.146	.000	4.360	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.292	.000	.385	.000	.223	.000	.556	.004	.537	.000
all adults not satisfied with housing	1.371	.406	2.252	.041	1.800	.188	3.542	.004	2.043	.094
constant	.039	.000	.018	.000	.007	.000	.043	.000	.058	.000
-2 log likelihood	1170.3		883.8		785.3		1258.8		1645.6	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Poland	1995		1996		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	4.634	.000	2.031	.104	6.077	.000	3.820	.009	4.274	.000
household income between 20 & 40 percentiles	2.176	.000	1.749	.131	2.415	.034	3.202	.008	2.089	.019
household income between 60 & 80 percentiles	.615	.014	.286	.030	.431	.111	.350	.092	.278	.001
household income in highest 20 percentile	.400	.000	.399	.047	.234	.010	.089	.023	.204	.000
moved up an income band since last year	1.568	.003	1.356	.415	1.455	.322	1.857	.158	1.956	.019
moved down an income band since last year	.461	.000	.724	.307	.483	.033	.650	.289	.494	.015
<half working age household members work	1.574	.044	1.203	.739	1.177	.753	.555	.460	.848	.693
a member is a professional worker	NA	NA	NA	NA	.392	.370	.003	.701	.136	.053
a household member lost a job since last year	.735	.179	.158	.073	1.165	.721	1.914	.160	1.633	.163
a household member gained work since last year	1.189	.296	1.113	.772	.657	.242	1.272	.598	1.624	.083
receives rent subsidy or housing benefits	NA	NA	.016	.824	.001	.813	.001	.874	.472	.332
the household rents home or lives rent free	.449	.000	.130	.001	.270	.004	.180	.004	.662	.175
all household adults are women	.952	.891	1.019	.978	.940	.939	.000	.824	.478	.302
all household adults are men	2.688	.036	.736	.745	1.420	.675	.000	.836	1.264	.764
a household member aged 10 to 25	.731	.036	.547	.060	.661	.186	.632	.234	.737	.256
a household member has a university degree	.387	.021	.420	.410	.007	.748	.016	.840	.013	.628
all adult members have low level of education	2.494	.000	1.315	.413	4.936	.000	3.247	.004	2.401	.002
an adult member is in poor health	NA	NA	NA	NA	NA	NA	.639	.255	1.238	.400
single parent household	1.578	.144	1.040	.951	.603	.552	.494	.545	.636	.516
a member is divorced, widowed or separated	1.740	.000	2.092	.015	1.461	.262	1.826	.135	1.967	.018
single person household	1.395	.499	4.975	.085	2.045	.473	42967.7	.783	3.522	.135
a member gained a partner since last year	.431	.059	.003	.793	.000	.848	.000	.876	.000	.789
a child aged less than 5 in the household	.842	.318	.358	.024	1.395	.402	.820	.688	.786	.455
more than one person per room in household	4.341	.000	3.909	.000	6.269	.000	5.156	.001	7.915	.000
the household is in a rural location	3.315	.000	5.630	.003	4.559	.004	3.719	.030	3.069	.001
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
constant	.026	.000	.005	.000	.003	.000	.003	.000	.006	.000
-2 log likelihood	1751.8		461.6		399.8		289.6		586.7	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Portugal	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	5.407	.000	2.434	.000	4.919	.000	3.177	.000	2.797	.000
household income between 20 & 40 percentiles	2.207	.003	1.705	.011	2.541	.000	1.928	.007	1.090	.711
household income between 60 & 80 percentiles	.349	.005	.434	.003	.595	.094	.426	.010	.312	.000
household income in highest 20 percentile	.162	.015	.078	.001	.051	.004	.200	.011	.148	.001
moved up an income band since last year	1.119	.708	.990	.964	2.830	.000	1.411	.180	1.783	.016
moved down an income band since last year	.479	.003	.520	.004	.599	.044	.542	.018	.930	.748
<half working age household members work	.822	.641	.491	.099	.826	.601	1.348	.360	1.352	.324
a member is a professional worker	.255	.023	.249	.003	.503	.097	.202	.004	.418	.032
a household member lost a job since last year	1.663	.145	1.342	.317	.810	.570	1.305	.413	1.038	.913
a household member gained work since last year	1.166	.529	.943	.796	1.306	.276	.760	.317	.633	.091
receives rent subsidy or housing benefits	.002	.942	.000	.912	.000	.923	.001	.921	.001	.797
the household rents home or lives rent free	3.745	.000	3.001	.000	3.518	.000	2.238	.000	1.848	.001
all household adults are women	.733	.512	.693	.381	.580	.244	.293	.023	.469	.086
all household adults are men	1.827	.288	.852	.763	1.498	.427	.559	.369	.688	.441
a household member aged 10 to 25	1.434	.138	.915	.663	1.058	.802	1.426	.125	1.656	.023
a household member has a university degree	.022	.690	.761	.812	.004	.681	1.207	.813	.259	.214
all adult members have low level of education	1.502	.120	1.321	.208	1.368	.196	1.760	.029	2.134	.001
an adult member is in poor health	1.443	.073	1.878	.000	2.615	.000	1.907	.001	2.923	.000
single parent household	.880	.721	1.700	.087	1.806	.094	1.923	.063	2.657	.002
a member is divorced, widowed or separated	2.384	.001	1.220	.418	1.361	.251	1.390	.231	1.352	.202
single person household	.456	.219	1.840	.252	1.379	.572	3.528	.059	4.589	.005
a member gained a partner since last year	.518	.294	.490	.164	.242	.041	1.342	.525	1.152	.747
a child aged less than 5 in the household	.992	.978	.939	.807	.901	.719	1.910	.017	1.362	.239
more than one person per room in household	2.100	.001	3.073	.000	3.970	.000	3.208	.000	3.992	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.119	.037	.001	.408	.001	.606	.002	.432	.001	.387
all adults not satisfied with housing	2.653	.003	6.019	.000	7.689	.000	6.162	.000	5.641	.000
constant	.008	.000	.022	.000	.005	.000	.008	.000	.009	.000
-2 log likelihood	823.5		1082.5		901.5		881.6		991.5	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Spain	1995		1996		1997		1998		1999	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	1.946	.001	3.378	.000	2.397	.001	1.992	.002	1.816	.025
household income between 20 & 40 percentiles	1.509	.027	1.553	.062	1.330	.252	1.064	.763	1.373	.160
household income between 60 & 80 percentiles	.769	.156	.715	.169	.530	.021	.769	.195	1.019	.934
household income in highest 20 percentile	.300	.000	.611	.071	.582	.078	.552	.016	.455	.009
moved up an income band since last year	.954	.783	1.262	.239	1.324	.206	1.241	.208	1.102	.614
moved down an income band since last year	.646	.006	.592	.010	.938	.765	.786	.181	.586	.013
<half working age household members work	1.075	.704	1.159	.511	1.218	.409	.856	.491	1.016	.947
a member is a professional worker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
a household member lost a job since last year	1.407	.108	1.615	.040	1.049	.881	1.575	.053	1.457	.146
a household member gained work since last year	1.467	.009	1.149	.473	1.197	.359	1.515	.009	1.478	.033
receives rent subsidy or housing benefits	1.332	.631	1.120	.850	1.753	.427	.487	.496	2.790	.154
the household rents home or lives rent free	2.853	.000	2.852	.000	3.333	.000	2.796	.000	1.460	.046
all household adults are women	1.454	.263	1.239	.609	1.329	.510	1.225	.539	1.213	.637
all household adults are men	1.376	.406	1.041	.935	1.275	.643	.797	.583	.908	.839
a household member aged 10 to 25	.796	.147	.637	.018	.610	.014	.776	.124	.752	.132
a household member has a university degree	1.065	.712	.820	.359	.770	.280	.920	.637	.549	.005
all adult members have low level of education	1.667	.008	1.947	.002	1.554	.051	1.804	.002	1.720	.011
an adult member is in poor health	1.515	.006	1.814	.001	2.443	.000	2.033	.000	1.861	.000
single parent household	.888	.679	1.197	.615	.826	.594	1.436	.202	1.029	.936
a member is divorced, widowed or separated	1.446	.070	.956	.867	1.859	.016	1.525	.048	.955	.855
single person household	1.053	.901	.836	.741	.985	.979	1.885	.126	1.802	.219
a member gained a partner since last year	.780	.538	.790	.585	.850	.723	1.310	.481	.834	.706
a child aged less than 5 in the household	1.028	.881	.780	.304	1.027	.916	1.267	.248	.882	.608
more than one person per room in household	2.396	.000	2.827	.000	1.830	.003	2.048	.000	2.664	.000
the household is in a rural location	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults not satisfied with life in general	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
all adults satisfied with housing	.370	.000	.334	.000	.269	.000	.404	.000	.268	.000
all adults not satisfied with housing	2.789	.001	6.377	.000	3.904	.000	3.731	.000	4.688	.000
constant	.043	.000	.029	.000	.024	.000	.037	.000	.048	.000
-2 log likelihood	1832.1		1295.2		1114.2		1583.1		1277.1	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

Switzerland	2000	
	Exp β	sig
household income in bottom 20 percentile	3.568	.000
household income between 20 & 40 percentiles	1.539	.071
household income between 60 & 80 percentiles	.670	.149
household income in highest 20 percentile	.255	.001
moved up an income band since last year	1.123	.660
moved down an income band since last year	.743	.125
<half working age household members work	5.285	.008
a member is a professional worker	1.001	.996
a household member lost a job since last year	.482	.170
a household member gained work since last year	1.065	.790
receives rent subsidy or housing benefits	1.269	.443
the household rents home or lives rent free	2.103	.002
all household adults are women	1.671	.216
all household adults are men	1.638	.257
a household member aged 10 to 25	.903	.652
a household member has a university degree	1.200	.341
all adult members have low level of education	1.283	.528
an adult member is in poor health	1.181	.426
single parent household	1.068	.873
a member is divorced, widowed or separated	.967	.889
single person household	1.281	.584
a member gained a partner since last year	1.104	.869
a child aged less than 5 in the household	.893	.763
more than one person per room in household	2.417	.005
the household is in a rural location	.366	.004
all adults satisfied with life in general	1.199	.522
all adults not satisfied with life in general	1.902	.134
all adults satisfied with housing	.702	.252
all adults not satisfied with housing	3.427	.005
constant	.031	.000
-2 log likelihood	1145.7	

Appendix 5 - Logistic Regression Output: the Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

United Kingdom	1992		1993		1994		1995		1996	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	5.555	.021	13.632	.000	13653.4	.550	2.897	.191	3.793	.003
household income between 20 & 40 percentiles	2.657	.098	4.394	.009	5053.9	.592	.794	.755	1.897	.080
household income between 60 & 80 percentiles	.511	.434	.201	.149	959.7	.666	.000	.823	.610	.193
household income in highest 20 percentile	.578	.555	.001	.634	983.1	.665	.931	.955	.259	.009
moved up an income band since last year	1.724	.326	.945	.935	2.275	.146	1.119	.887	.867	.702
moved down an income band since last year	.313	.078	1.265	.546	.225	.033	.779	.686	.692	.255
<half working age household members work	39.352	.008	.000	.915	.001	.915	.001	.968	.012	.692
a member is a professional worker	.513	.252	.970	.946	.346	.080	.955	.946	.846	.580
a household member lost a job since last year	.002	.680	3.186	.177	1.647	.678	.002	.935	2.364	.076
a household member gained work since last year	.782	.650	1.834	.144	.600	.377	.414	.271	.457	.072
receives rent subsidy or housing benefits	1.424	.472	.465	.118	4.820	.000	3.246	.044	.683	.272
the household rents home or lives rent free	7.551	.000	5.010	.000	3.518	.020	21.376	.004	5.317	.000
all household adults are women	.722	.734	.957	.957	1.530	.629	3.918	.414	3.878	.004
all household adults are men	1.503	.669	.755	.741	1.258	.807	3.012	.511	2.685	.052
a household member aged 10 to 25	.312	.057	1.002	.996	2.825	.066	2.355	.272	.633	.128
a household member has a university degree	1.173	.793	1.484	.493	1.980	.336	1.543	.643	2.402	.013
all adult members have low level of education	.399	.139	.734	.611	.884	.873	1.633	.581	1.143	.753
an adult member is in poor health	1.063	.899	1.355	.439	.672	.442	.710	.575	1.172	.578
single parent household	1.788	.516	1.201	.828	1.350	.757	1.019	.992	.774	.646
a member is divorced, widowed or separated	.590	.291	1.344	.522	.814	.703	1.008	.989	1.274	.525
single person household	3.359	.218	1.763	.538	2.402	.362	7.068	.264	.300	.031
a member gained a partner since last year	1.150	.911	1.313	.827	2.417	.405	.000	.933	1.360	.625
a child aged less than 5 in the household	.151	.104	.281	.160	2.527	.351	.001	.876	.661	.320
more than one person per room in household	.839	.896	5.740	.042	1.526	.731	.002	.933	1.901	.182
the household is in a rural location	.262	.089	.723	.534	.438	.232	1.093	.900	.499	.099
all adults satisfied with life in general	.544	.325	1.929	.340	5.198	.097	.481	.490	.870	.688
all adults not satisfied with life in general	1.427	.644	3.747	.074	16.570	.015	1.959	.546	1.060	.907
all adults satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	.509	.061
all adults not satisfied with housing	NA	NA	NA	NA	NA	NA	NA	NA	1.436	.391
constant	.008	.000	.001	.000	.000	.337	.000	.000	.014	.000
-2 log likelihood	225.4		268.6		199.9		137.1		554.1	

Appendix 5 - Logistic Regression Output: Household Does Not Possess Most Items and Has Most Housing Problems (yes=1, no=0)

United Kingdom	1997		1998		1999		2000	
	Exp β	sig	Exp β	sig	Exp β	sig	Exp β	sig
household income in bottom 20 percentile	2.842	.016	1.439	.194	1.494	.281	1.075	.816
household income between 20 & 40 percentiles	1.018	.964	1.272	.270	1.433	.210	.740	.217
household income between 60 & 80 percentiles	.527	.155	.412	.001	.522	.052	.477	.004
household income in highest 20 percentile	.662	.415	.627	.072	.455	.066	.330	.001
moved up an income band since last year	1.821	.084	1.503	.032	1.145	.628	1.300	.232
moved down an income band since last year	.987	.969	.808	.304	1.065	.814	.835	.424
<half working age household members work	.002	.835	.931	.947	1.307	.812	1.471	.633
a member is a professional worker	.883	.709	.707	.065	.499	.008	.704	.087
a household member lost a job since last year	2.298	.111	.798	.593	1.282	.602	.482	.174
a household member gained work since last year	1.152	.679	1.348	.155	1.086	.793	1.142	.584
receives rent subsidy or housing benefits	1.452	.238	1.062	.778	1.025	.929	1.155	.522
the household rents home or lives rent free	4.137	.000	2.681	.000	4.014	.000	3.292	.000
all household adults are women	1.648	.342	1.627	.128	1.052	.907	1.703	.107
all household adults are men	1.855	.247	1.158	.667	1.082	.869	1.528	.243
a household member aged 10 to 25	1.201	.556	1.120	.521	.733	.221	1.168	.443
a household member has a university degree	1.231	.556	1.166	.453	1.572	.127	1.372	.169
all adult members have low level of education	1.311	.495	1.749	.021	1.784	.096	1.617	.102
an adult member is in poor health	1.604	.102	1.096	.603	.765	.297	1.044	.827
single parent household	1.475	.485	1.424	.284	2.053	.081	2.137	.024
a member is divorced, widowed or separated	.828	.626	.758	.245	.856	.600	.624	.061
single person household	.887	.832	1.469	.303	1.504	.418	1.324	.467
a member gained a partner since last year	.001	.609	1.222	.628	.772	.667	.399	.103
a child aged less than 5 in the household	1.008	.986	.988	.962	1.755	.103	1.417	.195
more than one person per room in household	2.599	.035	2.746	.000	3.279	.002	1.784	.079
the household is in a rural location	1.046	.902	.794	.300	.774	.414	.880	.602
all adults satisfied with life in general	1.374	.371	.975	.904	1.824	.033	1.228	.369
all adults not satisfied with life in general	1.243	.664	1.091	.803	1.630	.237	1.136	.717
all adults satisfied with housing	.663	.320	.548	.009	.467	.023	.614	.073
all adults not satisfied with housing	7.250	.000	2.645	.000	4.994	.000	3.432	.000
constant	.004	.000	.045	.000	.014	.000	.033	.000
-2 log likelihood	506.0		1292.5		729.3		1076.0	