



Quality of life in Europe: an illustrative report

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Introduction

Though most people would have a common-sense notion of what constitutes quality of life, the task of formalising these interpretations and deciding which factors contribute to it is highly problematic. This was the task of a companion document to this report¹ that set out a conceptual framework for understanding the notion of living conditions and quality of life and identified a set of domains that were seen as crucial in contributing to it. That document also described the different types of monitoring programmes that could be undertaken and divided these into two broad types: descriptive and analytical.

A programme of descriptive monitoring requires that indicators are established of the domains that are seen as important and baseline figures are set for these that can be followed over time in order to provide a statement of improvement or deterioration. This type of descriptive monitoring does not set out to understand the processes or causal factors behind the indicators, but rather seeks to give an account of the salient dimensions. This approach may well provide a detailed picture of developments, but it cannot provide the explanations for changes in these indicators that are required if monitoring programmes are to make a contribution to social policy development and innovation. The conceptual report labelled this more indepth approach ‘analytical monitoring’ and argued that only by adopting this approach could one understand the relationships between domains and why indicators may change over time. It seems plain then that if individual and national quality of life is to be improved in the European Union through evidence-based social policy, this will entail both descriptive and analytical monitoring programmes.

This report begins the task of providing both a descriptive benchmark for the monitoring programme and an analytical understanding of the processes that shape these patterns. The relatively short chapters in this report demonstrate content, analysis and a possible reporting style, but they do not attempt to strongly relate data to the policy agenda: that will be an important element of future reporting.

As such, the first chapter undertakes purely descriptive monitoring, taking indicators from the Foundation’s database on living conditions and quality of life, and describes trends over time. Given unlimited space it would be useful to give a descriptive overview of all of the indicators in the database, but in reality this is not practical. The focus is on the specific theme of economic resources, itself the focus of one domain, but which also links all of the domains together. The conceptual framework identified economic resources as a central life domain alongside health status and family life. As well as allocating greater space to the first section on economic resources, subsequent sections will use an individual or household’s position in the income distribution, or their poverty status, as a prism through which to disaggregate the indicators of other domains.

The following chapters adopt a more analytical stance and illustrate the utility of more indepth analysis for understanding the relationship between different domains, how causal processes move over time and the importance of having measures of both subjective perceptions and objective conditions.

The second chapter presents an analysis of the correlation between income poverty, lifestyle deprivation and economic strain. This illustrates the importance of seeing current living standards as the result of a process of accumulation and erosion of resources over time and the relationship between objective and subjective measurements. Chapter 3 moves on to the relationship between subjective health status and health care experiences and their connection to the person’s characteristics and context. Chapter 4 examines cross-country measures of global subjective well-being and how these are structured, before turning to an analysis of time use and its implications for work–life balance and social participation in chapter 5.

The statistics used in this report are taken from the most recent surveys available through the Foundation’s own research and from Eurostat.

¹ Monitoring living conditions and quality of life in Europe: developing the conceptual framework

1 A descriptive account of the quality of life domains

This chapter provides benchmark figures for the descriptive monitoring process, using some of the indicators from the database that accompanies this report. Given the number of indicators in the database, it is not possible to present all. The focus therefore will be on a single theme that links all of the domains – the relationship of each domain to economic resources. Although a number of issues will be addressed when examining the indicators, the focus will be on the close connection between one's level of economic resources and important determinants of life chances like education and health. In future years other themes will be adopted, but the full range of indicators is available in the database.

Any monitoring process needs to establish the current situation vis-à-vis the indicators that it takes to be of importance so that subsequent developments can be tracked. Here, rather than providing statistics for a single recent year, an attempt has been made, where possible, to provide a time series that can be used to situate the current situation in its historical context.

Given the aim of providing a descriptive account of these domains, lengthy interpretations of the data are avoided though there is reference to different issues and debates and noteworthy results.

Economic resources

This section of the chapter examines a number of indicators from the database on the level and distribution of economic resources both across countries and different groups within countries. Given the focus on this theme, this section will be rather longer than subsequent sections, but should provide some background for the interpretation of the material presented in later sections.

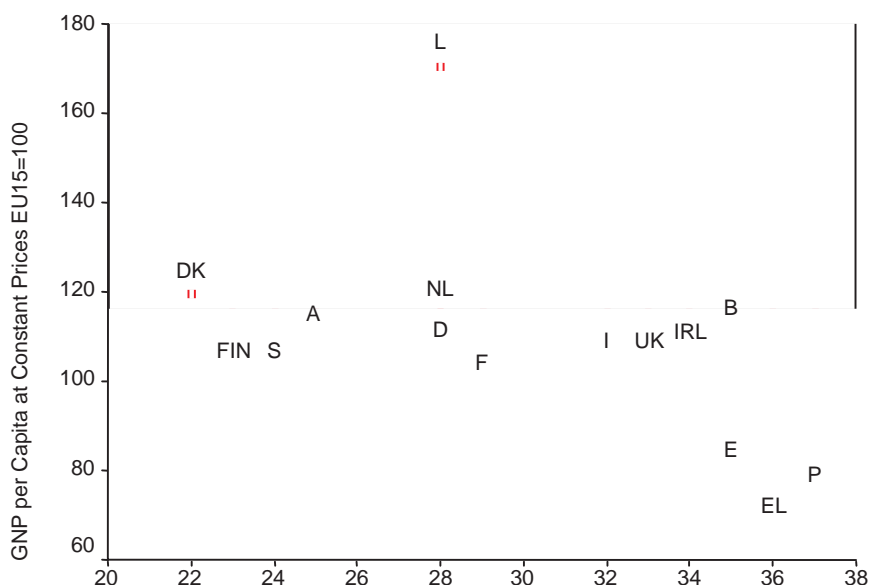
Although it is a wider concept, economic resources are often defined as money income and, indeed, this section will refer to income in several ways. However, it will also use measurements of lifestyle deprivation as another measure of resources, or rather the impact of a lack of resources. First, however, income has to be measured and, more specifically, the average level of income across different EU countries, and how this is distributed among the countries' citizens. EU states are now some of the most affluent in the world but, within the EU, the average income varies widely between countries. However, a high average income does not imply that all citizens within a country share the same standard of living so it is worth examining both the average level of income and the level of inequality in the distribution of that income.

Affluence and inequality

Figure 1 shows both these dimensions by plotting GNP per capita at constant values in 1998 against the GINI coefficient² for the country. Figure 1 shows that there is a significant inverse relationship between these dimensions, with the richer countries having both a higher standard of living and a lower level of inequality.

² The GINI coefficient expresses the degree of income inequality in a country on a scale from 0 to 1 with 0 indicating that all citizens have the same income, and 1 implying that one person has all the income.

Figure 1: GINI coefficient by GNP per capita



Source: *European Economy 2001*, p. 288 and *New Chronos Database*

The countries are also distributed in an interesting manner across the graph with the northern European countries tending to be both richer and more equal and the southern European countries having lower incomes and more inequality. Luxembourg, however, seems to be something of an exception with a high standard of living and moderate inequality. Denmark, Sweden, Finland and Austria are countries with low levels of inequality while Spain, Greece and Portugal have both high levels of inequality and low overall incomes per capita.

Income poverty

If relative income measures of poverty are used (i.e. poverty lines are set as some proportion of mean or median income) higher levels of income inequality also tend to be associated with higher levels of poverty, since the average income may well be higher up the income distribution. Can this relationship be seen in the poverty statistics across countries? Poverty is always a problematic concept to measure but, if one adopts the EU standard measure of poverty – 60% of median equivalent income, Table 1 shows that poverty rates vary quite considerably across countries and across years.

Equally, however, a very similar ordering of countries can be seen in terms of their relative income poverty rates as when using the GINI coefficient in Figure 1. The northern European countries of Denmark, the Netherlands and Austria tend to have relatively low rates of poverty, the UK and Ireland to have intermediate levels of poverty and the southern European countries to have relatively high rates of income poverty. Research shows that poverty rates rose in most European countries in the 1980s and early 1990s (Hagenaars, de Vos and Zaidi, 1994) but, as Table 1 shows, between 1994 and 1998, rates of relative income poverty have tended to fall across all these countries except the Netherlands, France and the UK.

Are some groups more likely to experience poverty than other groups? Past research has shown (Daly, 1992) that women tend to have a greater risk of poverty than men. Figure 2 confirms this, showing that the ‘odds’³ of women experiencing poverty compared to men is greater than one in all of the countries.

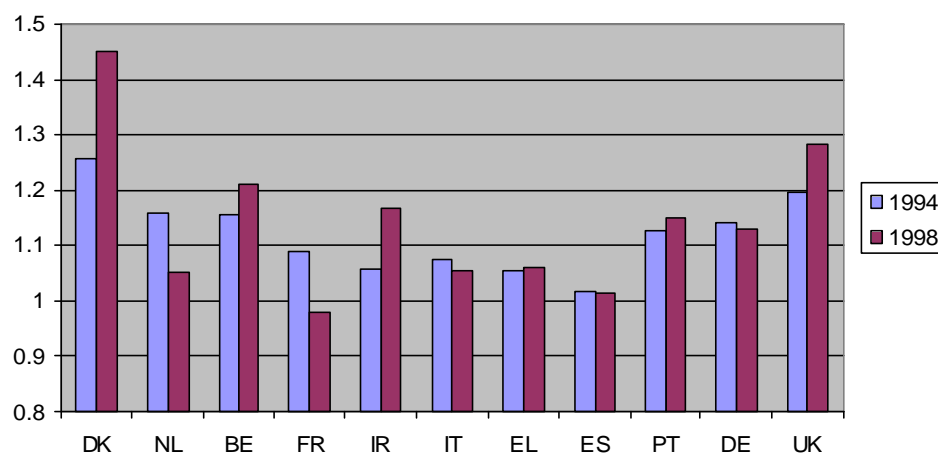
³ An odds ratio is simply the risk that one group faces of experiencing poverty divided by the risk of another. An odds greater than one shows that the first group's risk is higher than the second and vice versa.

Table 1: *Income poverty rates using 60% median income poverty*

	1994	1995	1996	1997	1998
DK	10.42	11.8	9.6	7.9	8.6
NL	10.14	11.4	12.2	10.8	11.6
BE	17.02	17.5	16.5	14.9	15.9
LU	16.29	11.9	11.8	-	-
FR	16.30	16.4	17.5	16.3	17.5
IR	18.18	19.2	19.3	19.6	17.0
IT	20.59	19.6	19.1	18.5	19.3
EL	23.03	21.9	20.6	22.7	21.1
ES	20.05	19.6	18.9	19.5	18.9
PT	22.77	23.5	21.9	23.8	20.5
AU		13.4	14.2	13.0	12.8
DE	16.82	17.3	15.5	14.6	15.4
UK	20.19	21.0	20.5	21.6	21.3

Source: *European Community Household Panel Survey (ECHP) UDB data for 1994 to 1998*

Figure 2: *Odds ratio of women's risk of poverty relative to men at 60% of median income*



Source: *ECHP UDB data for 1994 and 1998*

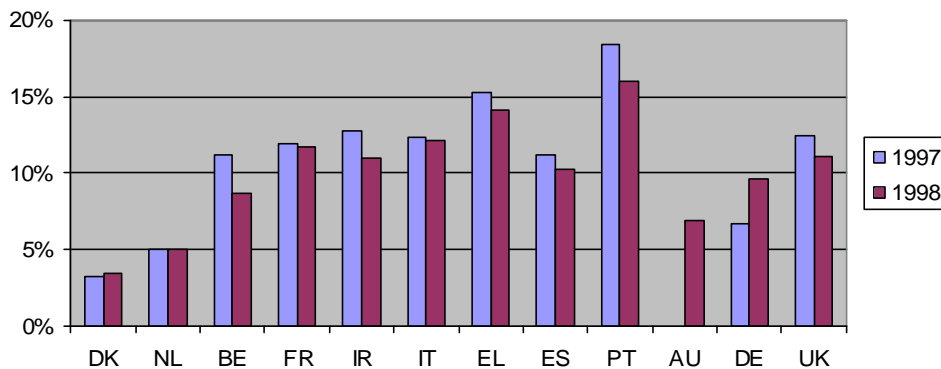
Trends between 1994 and 1998 in the inequality between men and women in terms of their poverty risk tend to vary across countries with the position of Danish women slipping relative to men (though the absolute risk to both men and women has decreased), while French women actually had a lower risk of poverty compared to men by 1998. Nonetheless, in all other countries, women still ran a higher risk of poverty than men in 1998.

Measuring persistent poverty

The impact of poverty on lifestyle and the person's risk of social exclusion depends to a certain extent on the length of time that they remain poor. This can be seen as a process of the erosion of resources. Though people may be able to maintain their standard of living in the face of poverty for a certain period, using savings and drawing on the help of friends and family, in the medium to long run, poverty will impact on their standard of living. Such 'persistent poverty' as it is termed, has become the subject of increasing research (Whelan, 2002). The European Commission has recently

adopted a measure whereby people are persistently poor if they are poor in the current year and were also poor in two or more of the previous three years. Figure 3 gives levels of persistent poverty using this measure for 60% of median income for 1997 and 1998 for a number of countries.

Figure 3: *Persistent poverty in 1997 and 1998*



Source: *ECHP UDB data for 1994 to 1998*

Figure 3 shows that, as with cross-sectional poverty measures, Denmark, Austria and the Netherlands have low rates, while Greece and Portugal have relatively high rates of persistent poverty. Ireland, the UK and France have intermediate levels. Again, as with the cross-sectional rates, levels of persistent poverty have tended to fall across these countries between 1997 and 1998, although rates have increased substantially in Germany.

Measuring deprivation

As suggested at the beginning of this section, economic resources, or rather the lack of them, can also be measured using so called 'deprivation' indicators. These ask respondents whether they have a range of general items (e.g. a television, video or telephone) and, if not, whether this is because they lack the resources to have them. If both criteria are met, the person is said to be deprived of that item. The measure used here combines questions on 13 items and has been 'weighted' within countries so that items which are more generally held in the country have more importance⁴. This 'weighting' means that the measure is to a certain extent specific and thus relative to each country, but it is still possible to compare average levels of deprivation between countries in a meaningful manner. Table 2 shows the mean level of deprivation across countries:

⁴ For a more detailed explanation of the methods used, see Whelan et al, 2003.

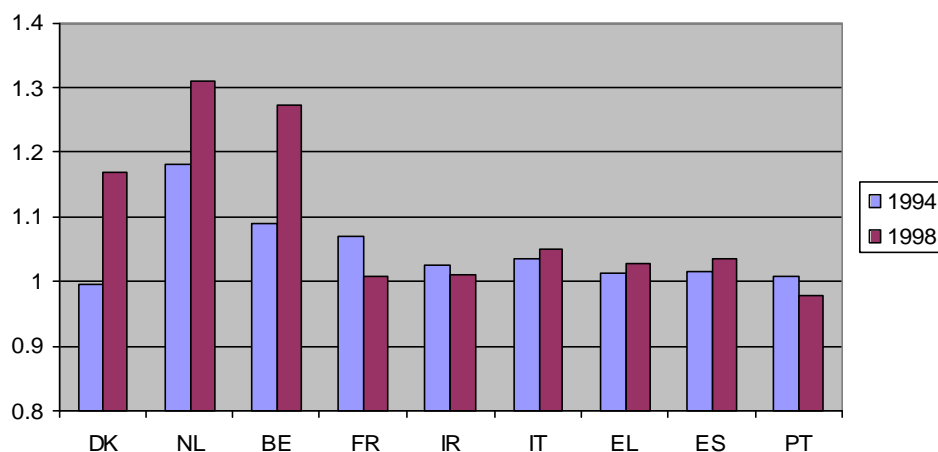
Table 2: Mean lifestyle deprivation by country and year

	1994	1995	1996	1997	1998
DK	0.98	0.77	0.80	0.62	0.66
NL	0.71	0.65	0.66	0.63	0.49
BE	0.95	1.06	0.89	0.87	0.91
LU	0.76	0.68	0.72	-	-
FR	1.23	1.13	1.20	1.09	1.20
IR	1.82	1.52	1.52	1.37	1.34
IT	1.55	1.54	1.44	1.42	1.42
EL	2.53	2.34	2.13	2.25	2.06
ES	1.80	1.78	1.72	1.70	1.58
PT	2.23	2.10	2.09	2.06	1.99
AU		1.07	1.02	1.02	0.96
DE	1.08	0.93	0.96	-	-
UK	1.41	1.27	1.16	-	-

Source: ECHP UDB data for 1994 to 1998

Table 2 shows that across countries, the level of deprivation tends to closely mirror the level of income poverty: the northern European countries have lower scores, the southern European higher scores, and Ireland and the UK moderate levels of deprivation (though Italy tends to be grouped with Ireland and the UK here). Interestingly, there has been a marked decrease in deprivation levels across all countries between 1994 and 1998, a similar pattern to that found using relative income poverty lines in Table 1.

Figure 4: Ratio of women's deprivation to that of men



Source: ECHP UDB data for 1994 and 1998

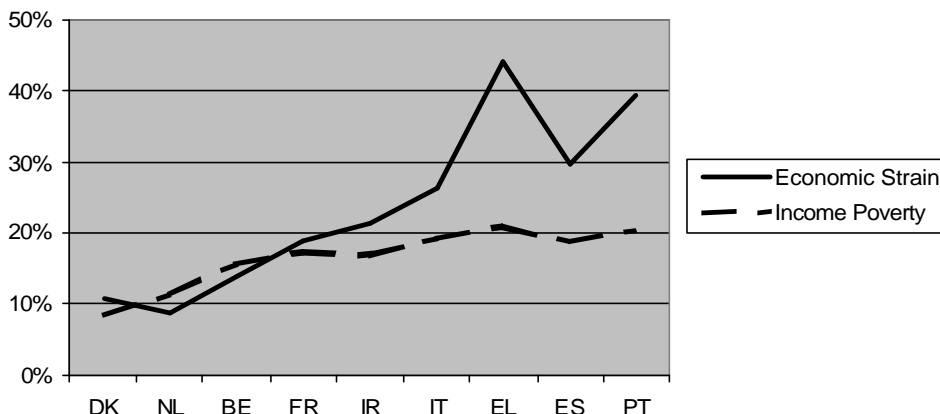
Note: Unfortunately deprivation data is not available for Germany, Luxembourg and the UK for 1998. These countries have therefore been excluded from the analysis.

As with the income poverty rates, Greece and Portugal have far higher levels of deprivation than the other countries, though deprivation here, as in the other countries, tends to have fallen between 1994 and 1998. Differences in the level of deprivation between men and women in Figure 4 show that the inequality is not so pronounced, except in Denmark, the Netherlands and Belgium where high inequalities between men and women have increased between 1994 and 1998.

Subjective assessment

The final part of this section turns to an indicator of people's subjective assessment of their level of economic resources. This takes the form of a question which asks respondents whether they are having trouble making ends meet. If they agree that this is the case, they are defined as being under economic strain. By plotting the level of economic strain alongside that of income poverty, Figure 5 shows that those countries with a higher poverty rate also tend to have higher levels of economic strain.

Figure 5: Proportions experiencing economic strain and income poverty in 1998



Source: ECHP UDB data for 1998

Note: Unfortunately deprivation data is not available for Germany, Luxembourg and the UK for 1998. These countries have therefore been excluded from the analysis.

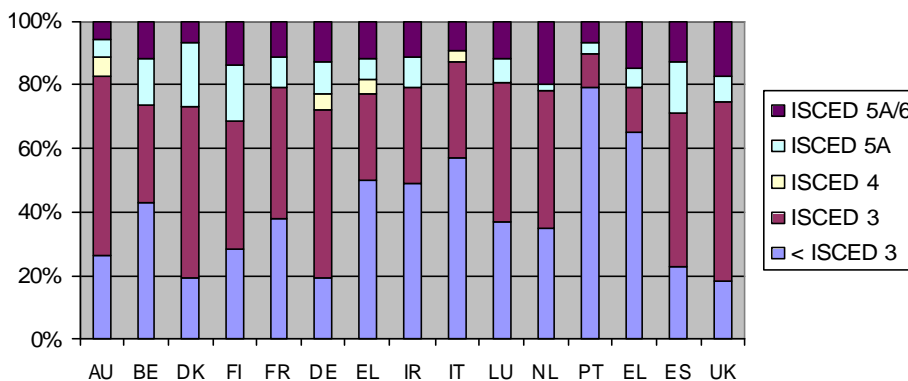
Knowledge, education and training

Research on social and economic disadvantage has shown that, alongside employment status and occupational level, education is a major determinant of one's economic well-being and social status. Low levels of education and skills tend to be associated with higher levels of unemployment, insecure employment and low pay, and so contribute negatively to quality of life (Layte et al, 2000; Layte and Whelan, 2002). Education plays a key role in providing individuals with the knowledge, skills and competencies to participate effectively in society. This section of the chapter examines a number of indicators of educational status and outcomes.

Educational attainment

First it is useful to examine levels of educational attainment across countries.

Figure 6: Educational attainment by country 1999 (population aged 25-64 years)



Source: Table A2.1a - OECD Education at a glance, 2001

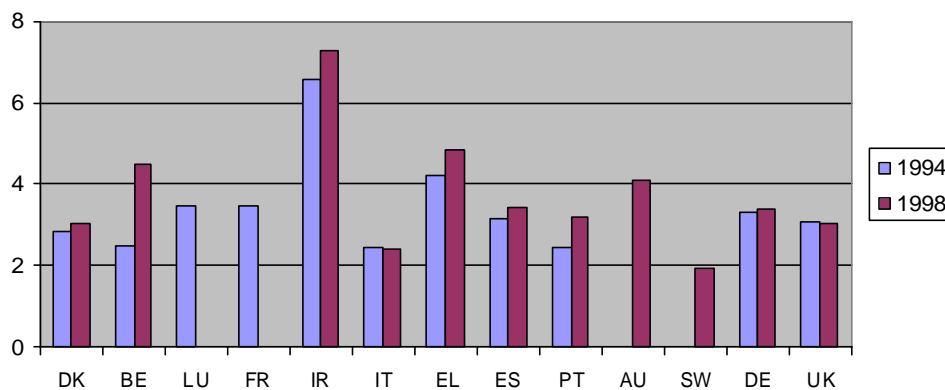
Figure 6 shows the distribution of different levels of educational attainment across EU countries using the International Standard Classification of Education (ISCED). This shows that the level of educational attainment varies considerably across countries with approximately 80% of the populations of Denmark, Germany, Sweden and the UK having educational levels of higher secondary or above (ISCED 3+), while the figure falls to just over 20% in Portugal and 35% in Spain.

Educational attainment and income inequality

Though the distribution of education differs widely between states, the differentials within states are just as large, if not greater. Educational attainment differs along a number of different dimensions within countries such as by gender, ethnic origin and age group. But here the focus is on the theme of this first chapter – the extent to which educational attainment differs by the economic resources of the person or the household in which they live.

There is sample research evidence (Shavit and Blossfeld, 1993; Shavit and Müller, 1998) that the socio-economic background of parents has a large bearing on the educational attainment of their sons and daughters. In turn, the children’s educational attainment is one of the main determinants of their own occupational success and financial security. The link between low education and income is shown clearly in Figure 7. This gives the odds of those in the lowest income decile having less than the ISCED level three education (i.e. having less than upper secondary education) compared to those in the top income decile in 1994 and 1998.

Figure 7: Odds of the lowest to highest income quartile having < ISCED level three education in 1994 and 1998 (aged 25-64)



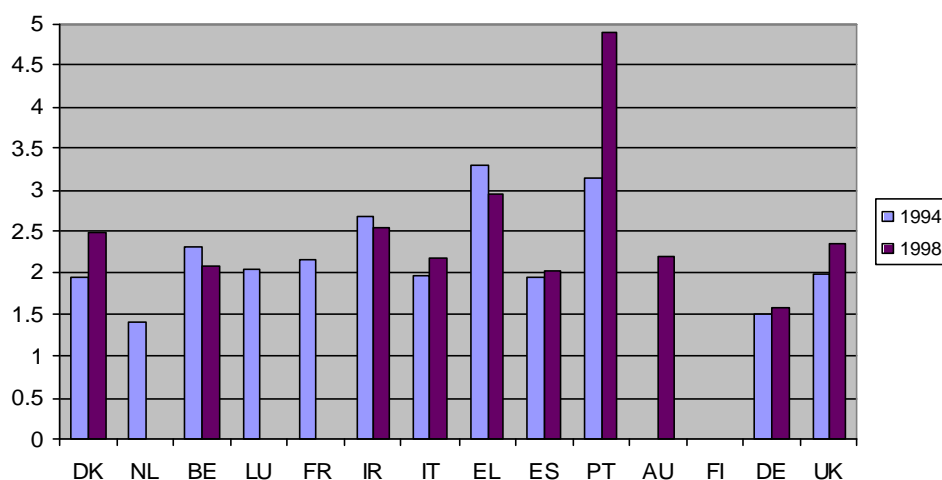
Source: ECHP UDB data for 1994 and 1998

Note: Data for Luxembourg, Austria and Sweden were not available for 1998. Due to problems with Dutch and French educational data, no figures are shown for the Netherlands in both years and only 1994 figures are shown for France.

Figure 7 shows that those in the lowest income quartile are more likely to have a lower educational attainment than those in the top quartile across all countries (the ‘odds’ being greater than one), but differs substantially between countries. Ireland has the largest inequality with an odds of over 6.5 in 1994 followed by Greece with an odds of just over four. Interestingly, the pattern of educational inequalities does not match that of income inequalities with Portugal and Italy having the lowest odds in 1994. Again, unlike the poverty figures seen earlier, educational inequalities have increased between 1994 and 1998 in the countries shown, except Italy and the UK.

It has been shown that those with lower incomes are more likely to have a lower educational level, but does this also mean that people with a low education are also more likely to experience poverty?

Figure 8: Odds ratio of poor to non-poor of having < ISCED level three of education



Source: ECHP UDB data for 1994 and 1998

Figure 8 gives the ‘odds ratio’ of the risk of poverty (being under a poverty line set at 60% of equivalent median income within the country in question) for those with an educational attainment of less than ISCED level three compared to all other educational groups (i.e. those with less than upper secondary education to everyone else). If the odds ratio is greater than one, this indicates that those with less than lower secondary education have a greater risk of poverty than those with upper secondary or tertiary education. Figure 8 shows that, across all the countries shown, those with the lower educational attainment have a greater risk of poverty with the inequality being largest in Portugal, Greece and Ireland and lowest in Germany and the Netherlands. Worryingly, the inequality between groups also seems to have increased over the latter part of the 1990s in the UK, Austria, Portugal, Luxembourg and Denmark.

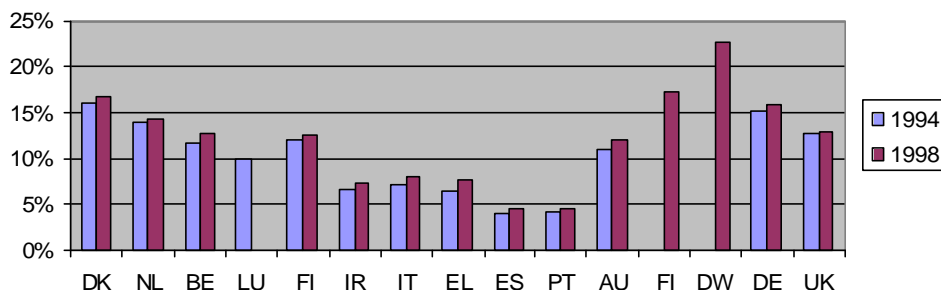
Families and households

Though the household⁵ remains the primary unit of social integration in most societies, in Europe a number of different developments have led to a proliferation of different household types and family arrangements as well as changing levels of fertility and thus household size. The explanation for these developments is complex, but changing labour markets, the rise in divorce and non-marital childbearing across countries as well as the changing relationship of women to paid employment have all led to significant changes in household and family structure. This section looks at some indicators of basic developments among households and families across states and examines some of the implications that these changes have for factors such as caring for other members of the household.

⁵ Though the definition of ‘households’ has changed substantially through history, in modern usage it refers to a group of people who may, or may not, be related who nonetheless interact daily and would tend to eat together. This is the understanding of households used in much social survey research as used here.

Single person households

Figure 9: Proportion of single person households by year



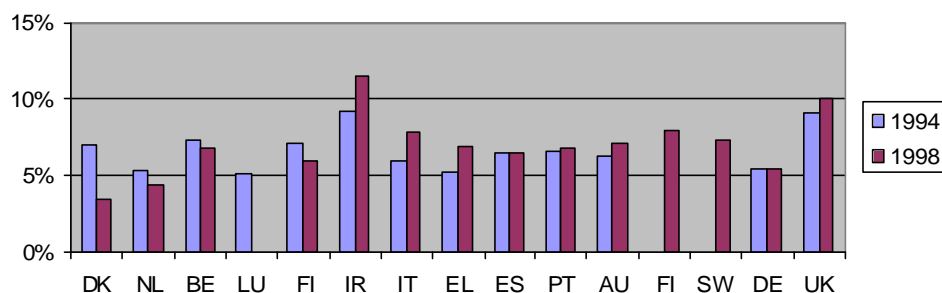
Source: ECHP UDB data for 1994 and 1998

Note: Austrian figures are for 1995 and 1998 and Finnish figure relates to 1997.

Figure 9 shows the proportion of single person households in EU states during the late 1990s and indicates a steady increase across most of the countries over this relatively short period. What stands out very clearly from Figure 9 is the distinct north-south pattern with northern European countries such as Denmark, Sweden, Finland, the Netherlands and Germany having very high levels of single person households and all the southern European countries and, interestingly, Ireland having very low, though increasing rates.

Single parent households

Figure 10: Proportion of single parent households by year

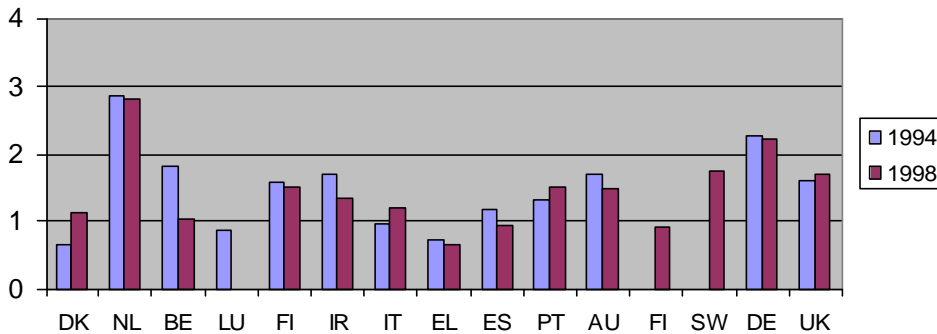


Source: ECHP UDB data for 1994 and 1998

Note: Austrian figures are for 1995 and 1998 and Finnish figure relates to 1997.

The increase in single person households has also been accompanied by a rise in single parent households across a number of countries, as shown in Figure 10. Countries such as the UK, Austria, Italy and, particularly, Ireland have seen large increases in single parent households since the mid-1970s. But, as the figure shows, this has carried on through the 1990s. Unfortunately, single parenthood is also a risk factor for poverty since being a single parent can restrict participation in the labour market.

Figure 11: Odds ratio of risk of poverty (60% median) for single parent compared to non-single parent households by year



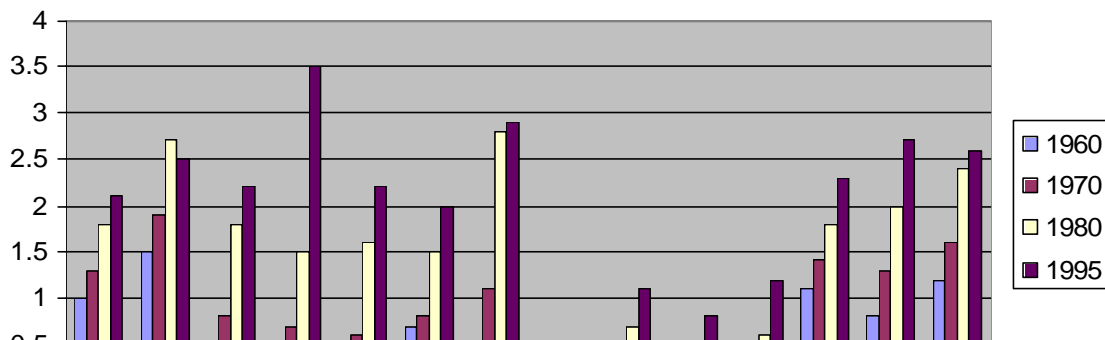
Source: ECHP UDB data for 1994 and 1998

Note: Austrian figures for 1994 actually refer to 1995; Finnish figures relate to 1997.

Figure 11 shows that in all countries, except Italy and Greece, single parents have a higher risk of poverty (an odds ratio greater than one) than non-single parents, a risk that increased between 1994 and 1998 in the UK and Portugal.

Part of the reason for this increase in single parenthood is the increase that has occurred in divorce across all European countries in recent decades. Figure 12 gives crude divorce rates by country from 1960 through to 1995. Figure 12 shows that, though rates have increased in all countries, divorce rates still vary considerably across countries with the southern European countries indicating particularly low rates and the UK, Denmark and Finland showing high rates.

Figure 12: Crude divorce rates by year and country

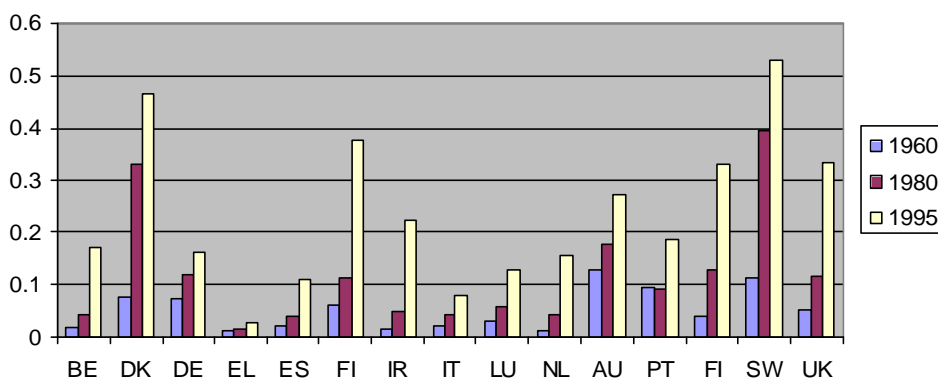


Source: New Chronos Database

Belgium has gone from having one of the lowest divorce rates in the 1960s and 1970s to having one of the highest rates by 1995.

Another reason for the rise in single parent households is the increase in the proportion of births to women who are not living with their partner. This is a difficult statistic to gather since it is not routinely collected, but Figure 13 highlights non-marital fertility rates, which give some indication of the tendency toward single parenthood, but can be misleading in states such as Sweden and Denmark where cohabitation is widespread.

Figure 13: Rate of births outside marriage by country and year



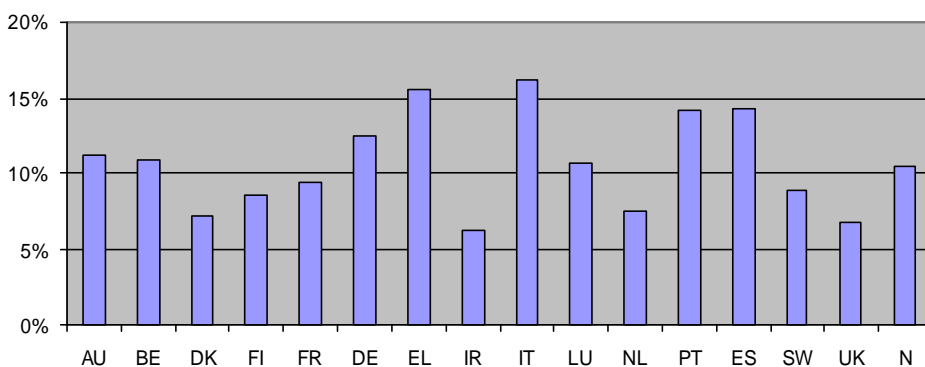
Source: *New Chronos Database*

This shows a large increase in non-marital fertility from the 1960s through to the 1990s with Denmark, France and Sweden seeing particularly large increases. As in previous figures in this section, the southern European countries are marked by their lower rates of non-marital fertility.

Unpaid caring in the household

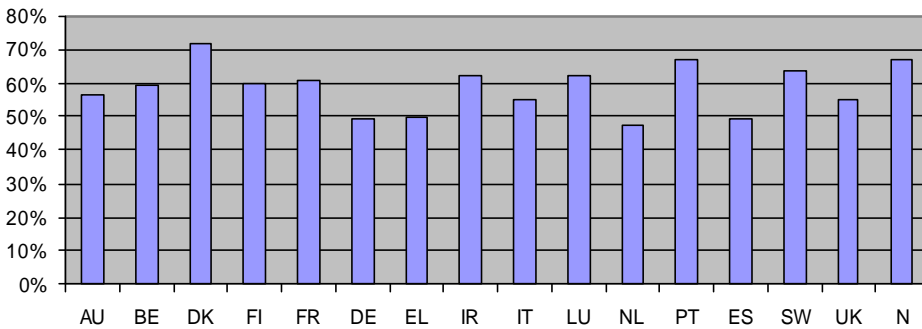
Lastly, this section turns to the subject of unpaid caring for other adults carried out within the household. There are no internationally comparable statistics on the number requiring care in the home and their characteristics, but Figure 14 shows that in 1997 the proportion of individuals aged between 16 and 64 caring for other adults in the household ran from just over 6% in Ireland and 7% in Denmark and the Netherlands to over 16% in Italy and Greece. Interestingly, caring for adults was more frequent in the southern European countries, all countries without well developed home care services.

Figure 14: Proportion aged 16 to 64 caring for another adult in own home



Source: *European Foundation for the Improvement of Living and Working Conditions Work Options for the Future Survey 1997*

Figure 15: Proportion of carers who are female



Source: Foundation Work Options for the Future Survey 1997

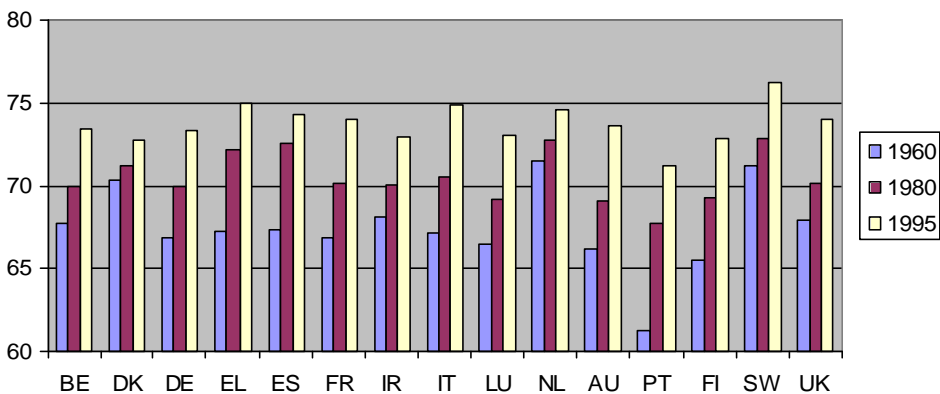
Figure 15 shows that the majority of these carers were female in every country except Germany, Greece, the Netherlands and Spain where the sex balance was roughly equal.

Health and health care

Health is a central component of quality of life impacting on a person's physical and social functioning and their subjective experience of life. This section seeks to illustrate some of the descriptive indicators of health across countries. The first analyses attempt to give a descriptive overview of life expectancy, infant mortality and levels of disability as these are recognised as basic indicators of population well-being. The section then returns to the theme of differentials between groups with different levels of economic resources.

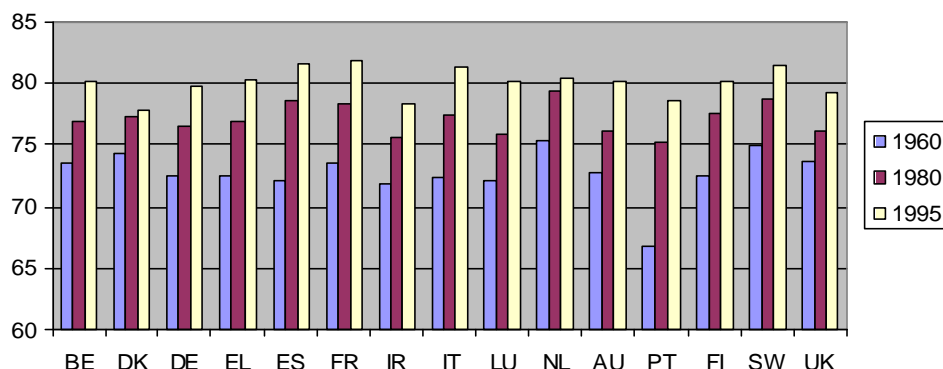
Life expectancy

Figure 16: Life expectancy of men at birth



Source: New Chronos Database

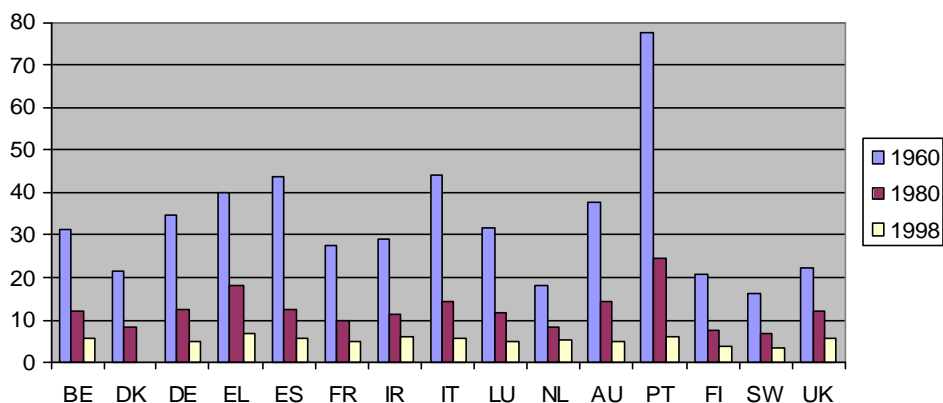
Figure 17: *Life expectancy of women at birth*



Source: *New Chronos Database*

Research shows that life expectancy in Europe grew strongly throughout Europe in the twentieth century. Figures 16 and 17 show increasing life expectancy from birth for both men and women. Life expectancy has climbed ever higher with countries such as Portugal registering particularly large increases after 1960. By 1995 men across Europe could expect to live to around age 73 and women up to around age 80.

Figure 18: *Infant mortality rates*

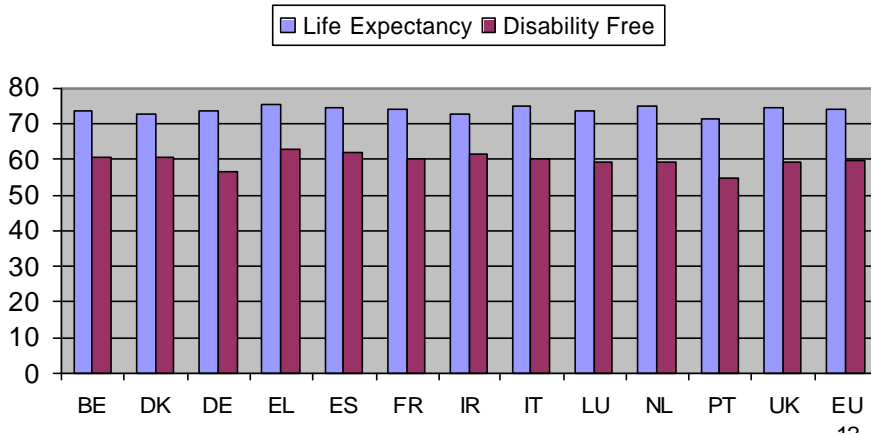


Source: *New Chronos Database*

Part of the reason for this increase in life expectancy was the decrease in infant mortality experienced across Europe over the same period. Figure 18 shows clearly how rates have fallen dramatically, particularly after 1960 with the Portuguese rate dropping from 76 to six per thousand over the period (the Portuguese column has been truncated at 45). By 1998, Ireland and Greece were the only countries with rates over six per thousand and Sweden had a rate almost half that of Ireland.

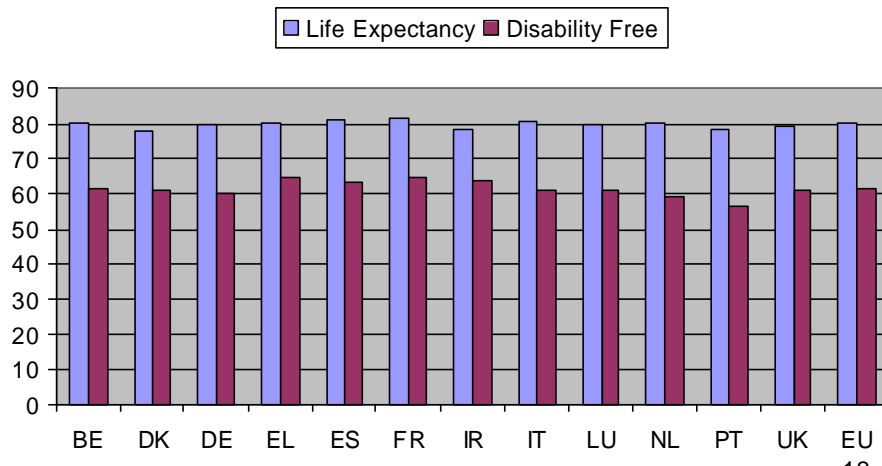
Disability and chronic illness

Figure 19: Life expectancy at birth and disability free life expectancy for males 1994



Source: *New Chronos Database*

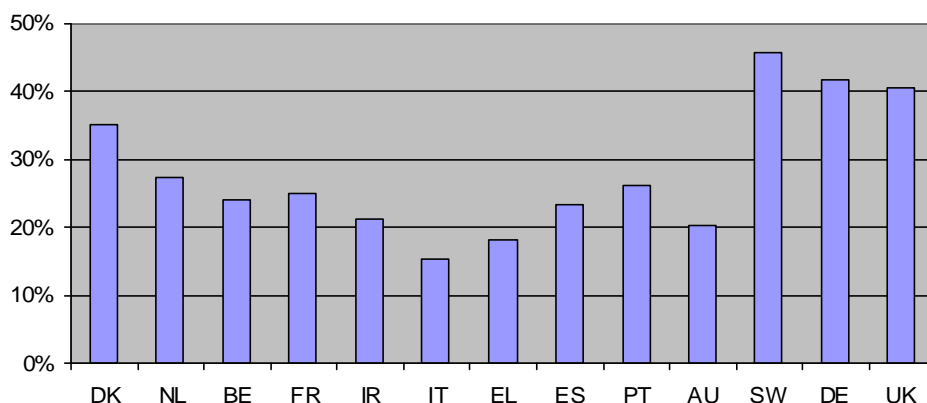
Figure 20: Life expectancy at birth and disability free life expectancy for females 1994



Source: *New Chronos Database*

Such increases in life expectancy do not mean however that ill health is not a problem throughout these societies. Figures 19 and 20 show that disability free life expectancy is far lower than life expectancy in all these countries for both men and women. Figure 19 shows that men can expect to live for almost 14 years on average with a chronic disability, a figure that rises above 16 years in the Netherlands, Portugal and Germany. Figure 20 shows that on average European women live for over 18 years with a chronic disability, a figure that varies from 15 years in Ireland to 22 years in the Netherlands and Portugal.

Figure 21: Proportion with a chronic physical or mental health problem by country 1998



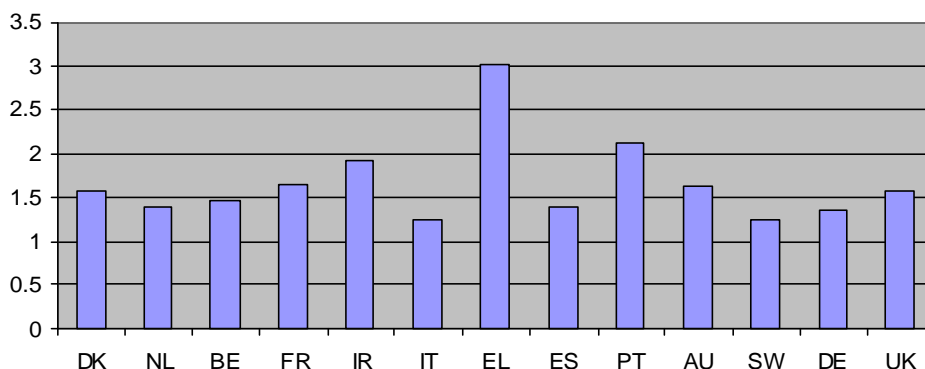
Source: ECHP UDB data 1998

Note: Data for Luxembourg and Finland were not available.

The varying extent of chronic illness across countries can be seen in Figure 21 which shows the proportions that had a long standing chronic physical or mental health problem in 1998. Over 45% of Swedes and 41% of Germans in the ECHP survey in 1998 reported that they had a chronic physical or mental health problem, but only 15% of Italians. Such national differences in reported chronic illness may reflect actual differences in health status, but may also reflect national cultural differences in the way that people answer these types of questions across countries (see Chapter 3 of this report). Given this, comparisons across countries become difficult⁶, but within countries self-reported health can be compared across time, or across groups. Continuing the theme of comparing groups with different levels of economic resources, Figure 22 shows the odds ratio of those in the lowest income decile having a chronic condition compared to those in the highest income decile.

Figure 22 shows that across all countries, those in the lowest income quintile are more likely to have a chronic illness than those in the highest quintile. This inequality ranges from a 24% greater risk in Sweden and Italy to a 212% greater risk in Portugal and a 300% greater risk in Greece.

Figure 22: Odds ratio of lowest to highest income quintile having a chronic illness



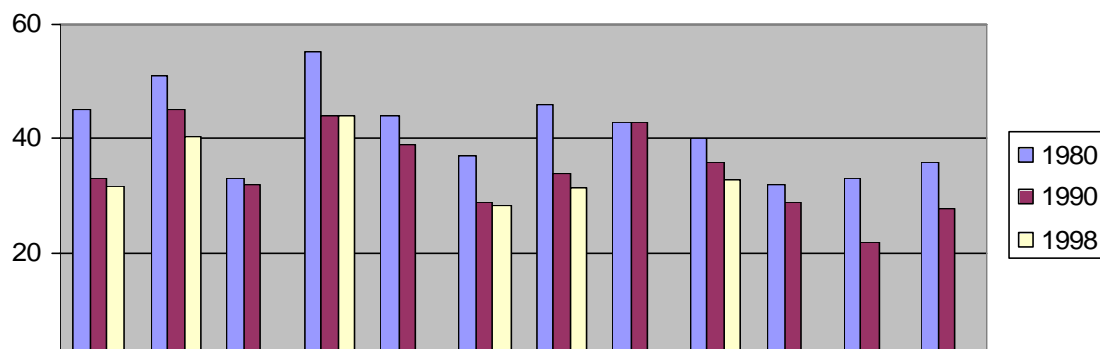
Source: ECHP UDB data 1998

Note: Data for Luxembourg and Finland were not available.

⁶ Though some research (van Doorslaer and Koolman, 2000) has suggested ways in which this may be achieved.

Smoking and health

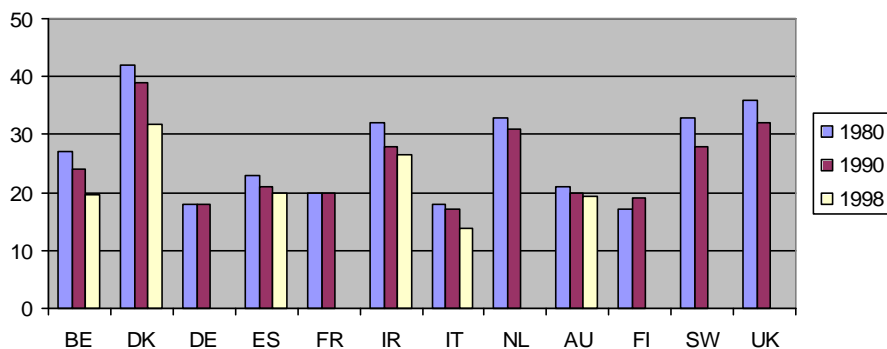
Figure 23: *Proportion of men smoking daily*



Sources: *Figures from 1980 and 1990 from New Chronos database; 1998 from ECHP UDB data (where available)*

One primary contributor to premature mortality and chronic ill health is smoking. Smoking has been known to be injurious to health at least since the 1950s and a great deal of public health expenditure has been aimed at raising awareness of the risks of smoking and decreasing smoking prevalence. Despite this, a large minority still smoke daily in most European countries. Figure 23 shows the proportion of men smoking in 1980, 1990 and 1998. This shows a decrease in the proportion of men smoking across all countries, though the fall is larger in some countries relative to others and the proportion still smoking in most countries remained around 30% in 1990. At that point Sweden had the lowest rate at 22%.

Figure 24: *Proportion of women smoking daily*



Among women a similar pattern has been observed (see Figure 24), though from a lower base, although smoking has actually increased marginally in Finland. Across European countries, the pattern of smoking varies widely with Spanish, French and Italian women less likely to smoke and Danish, Irish, Swedish and Dutch women more likely to take up the habit. However, across all these countries there were falls between 1980 and 1990, albeit of a smaller nature than among men.

Employment and working conditions

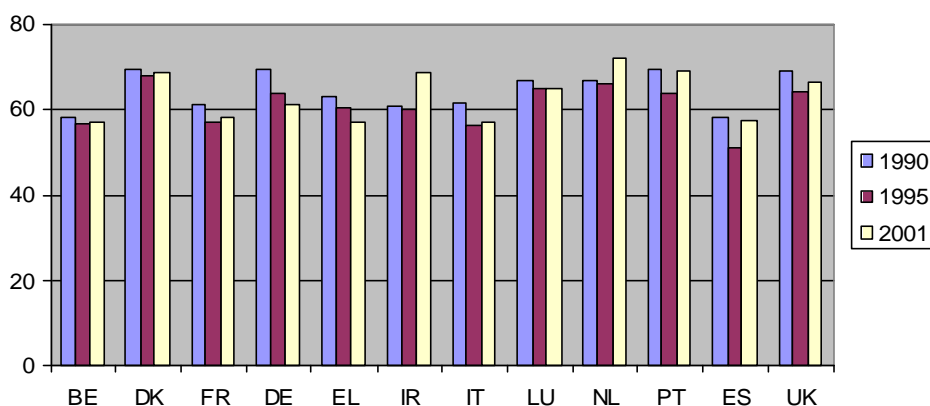
Like education, employment status is a major determinant of the level of economic resources that an individual has at their disposal in western European societies. Through this mechanism, it impacts clearly on the risk of poverty and

disadvantage and thus quality of life. But employment also impacts on quality of life in other ways. Unemployment has been shown to impact extremely negatively on an individual's well-being, and long-term unemployment has been linked to psychiatric illness and chronic physical ill health (Bartley, 1994). Employment can also impact on quality of life through its impact on other domains, if, for example, it encroaches on family life or leisure time. Here a number of basic indicators on employment status and work time are examined.

Employment rates

Figure 25 gives the employment rates for men for 1990, 1995 and 2001 (the proportion employed of the male population of working age) and shows that across all countries except Ireland and the Netherlands, male employment has been falling during the 1990s. In fact the contrast between countries such as Germany where employment rates fell from 63% to 57% and Ireland, where male employment went from 61% to 68% during the same period, is stark. By 2001 Ireland ranked joint third with Denmark behind the Netherlands and Portugal.

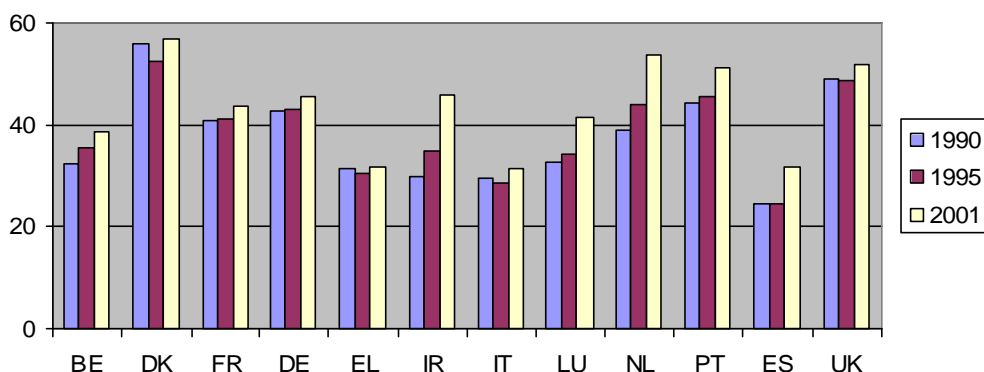
Figure 25: Male employment rates



Source: *European labour force surveys*

Among women, Figure 26 shows that employment rates are substantially lower, but increasing in most countries between 1990 and 2001.

Figure 26: Female employment rates



Source: *European labour force surveys*

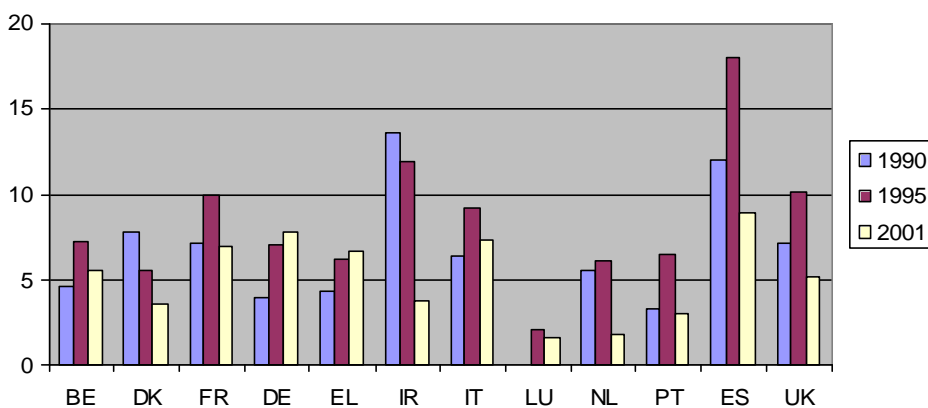
Once again, employment growth was particularly strong in Ireland and the Netherlands with Irish rates among women increasing from 30% to 46% over the 11 years. Employment rates remain relatively low in three of the southern

European countries, Italy, Spain and Greece. Nonetheless, all three have seen employment growth among women over the period, albeit limited in Greece.

The growth in total employment for men and women over this period has been accompanied by increases in part-time working (not shown) which has increased across almost all countries in the EU except Greece, Denmark and Sweden. The proportion of part-time work (less than 30 hours) as a proportion of total employment among women almost doubled in Ireland from 17% to over 31% and grew from 60% to over 70% in the Netherlands. The proportions among men also rose across all countries except Denmark and Austria, but from a much lower base. Increases were, however, significant with the proportion in Ireland doubling between 1990 and 2001 and the Swedish proportion increasing from 7% to over 13%.

Unemployment rates

Figure 27: *Male unemployment rates*

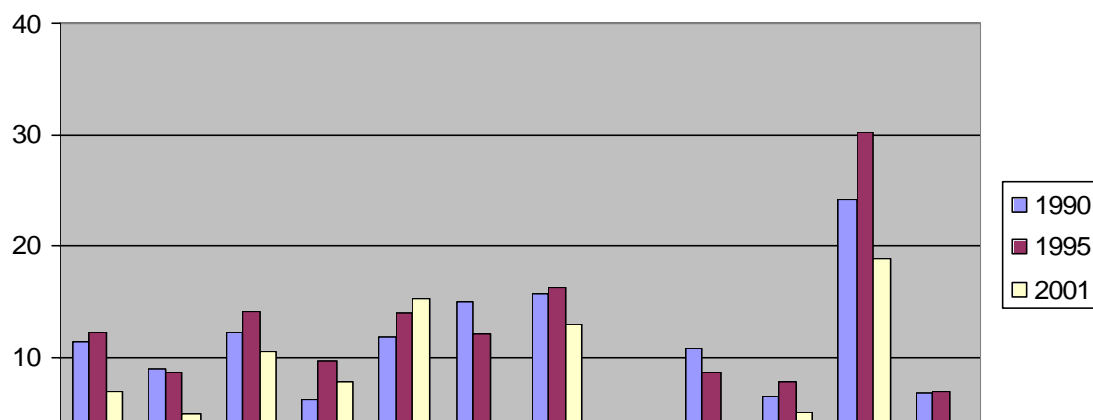


Source: *European labour force surveys*

Figure 27 gives the unemployment rates for men across countries from 1990 to 2001 and shows falling unemployment in almost all countries over the period except Belgium, Germany and Greece. Previous figures have shown large increases in employment rates among men in Ireland and the Netherlands and the corollary of this development can be seen here with unemployment in both these countries falling strongly. Though remaining high, Spanish unemployment among men has fallen dramatically since 1995 from 18% to 9% in 2001.

Figure 28 shows that this fall in unemployment was not confined to men as rates of female unemployment fell across all of the countries shown between 1990 and 2001. Once again, the Netherlands and Ireland experienced large falls in unemployment. Unemployment among people under 25 was seen as a major problem in the late 1980s and early 1990s, but the increase in total employment and increasing educational participation among this group has meant that unemployment among younger people has also fallen in the late 1990s across all countries.

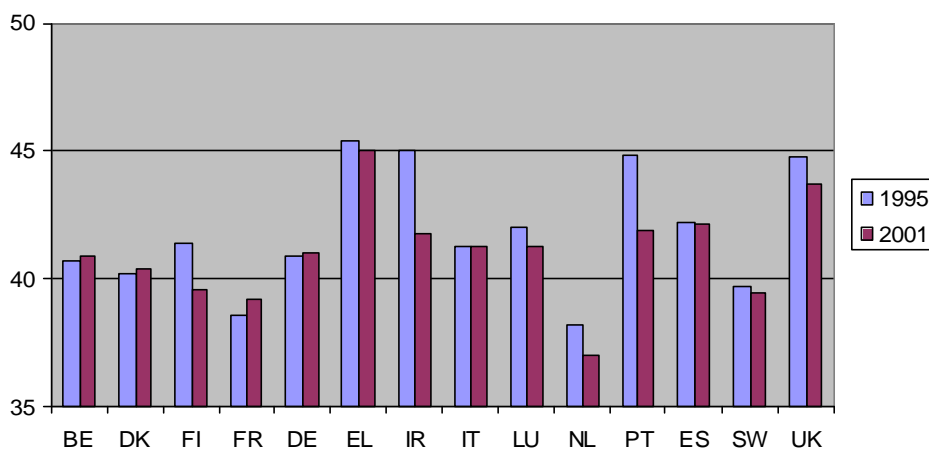
Figure 28: Female unemployment rates



Source: European labour force surveys

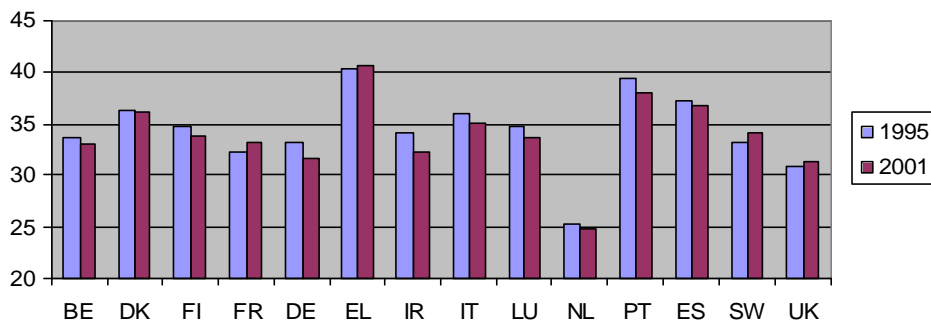
Working hours

Figure 29: Average male working hours



Source: European labour force surveys

Figure 30: Average female working hours



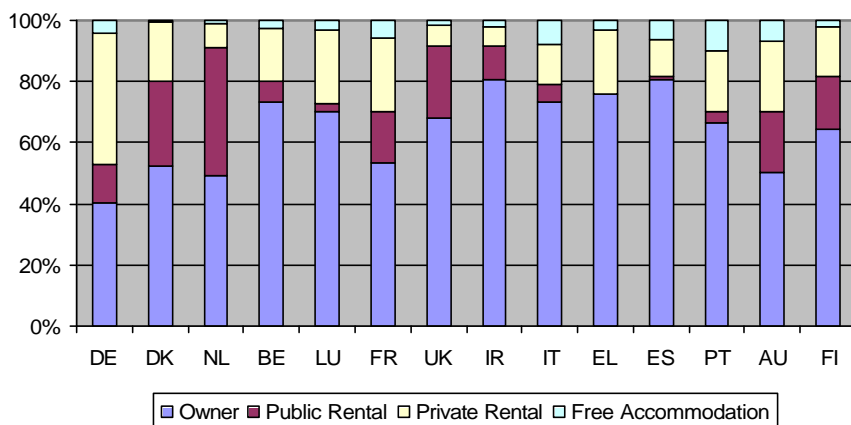
Source: European labour force surveys

These increases in employment among men and women are welcome, but concern has been expressed that individuals and families are finding it increasingly difficult to allocate adequate time for their private lives. Excess time spent at work has been seen as the most important reason for this lack of work–life balance but, as Figures 29 and 30 show, across most countries and for both men and women, average working time has fallen between 1995 and 2001. The only exceptions to this are in Denmark among men where working hours have increased marginally. Also in France, Sweden and the UK working hours for women have increased by around one hour over the period. Of course, the labour force surveys, and also the Foundation’s working conditions surveys offer opportunities for much more extensive analyses in this domain.

Housing

This section examines a range of indicators that summarise housing type and conditions across countries in the EU. The type and quality of housing has major implications for the individual’s quality of life. The built environment forms the context within which individuals experience life and influences their health through housing conditions. Countries differ widely in their housing policies and the regulations around housing and this has led to very different housing profiles across countries.

Figure 31: *Tenure type by country 1996*



Source: ECHP UDB data 1996

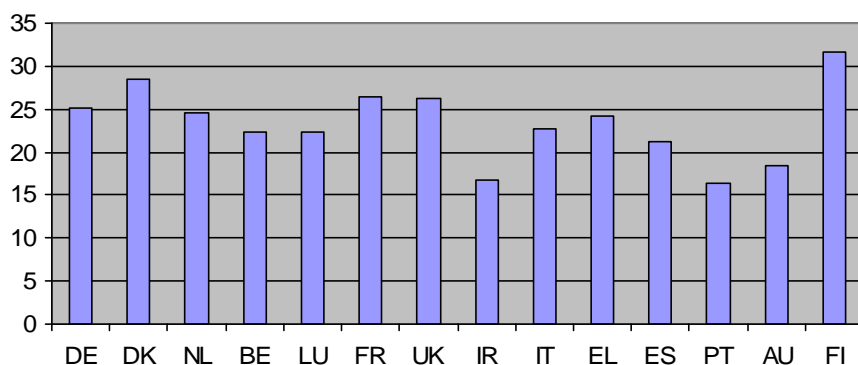
Note: Data for Sweden and Finland were not available.

For example, Figure 31 shows that the proportions with different types of tenure for their accommodation differ markedly across countries. Whereas in Ireland and Spain over 80% of households would own their accommodation, this falls to 49% in the Netherlands and 40% in Germany.

Housing costs

Continuing with the theme of the influence of economic resources available to households and individuals, Figure 32 shows that the relative burden of housing costs also varies considerably. Households in Finland spend almost a third of their net income on housing costs whereas those in Portugal and Ireland spend just over 16%. High housing costs means that a lower proportion of net income is available for other necessities and can lead to higher levels of deprivation, even though net incomes themselves may not leave people at risk of poverty.

Figure 32: Mean housing costs as a proportion of net income (excluding those without housing costs)



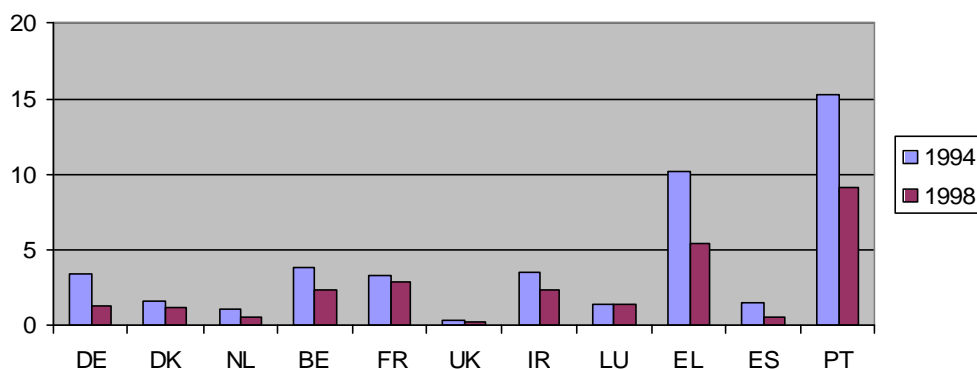
Source: ECHP UDB data 1996

Note: Data for Sweden and Finland were not available.

Housing quality

Obviously poor housing quality can impact negatively on quality of life, thus it is important to have indicators that can measure housing problems. Figure 33 shows the proportion of households who lack an inside toilet in their accommodation.

Figure 33: Proportion of households lacking an inside toilet by country and year

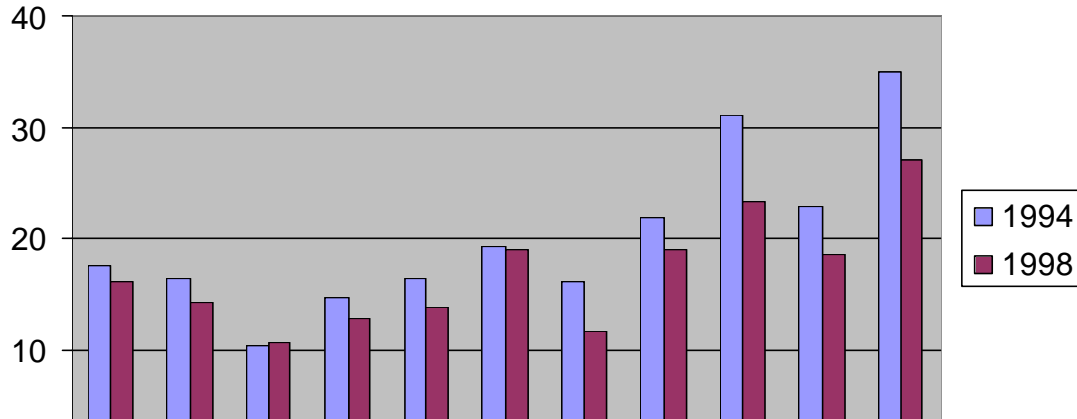


Source: ECHP UDB data 1994 and 1998

Note: Data for Luxembourg, Sweden, Austria and Finland were not available.

This shows that on average under 5% of households in each country lack an inside toilet, down to around 0.4% in the UK, with the proportion falling in all countries between 1994 and 1998. On the other hand, the proportions in Greece and Portugal remain at 6% and 9% even in 1998. Another indicator of household problems is a household reporting a lack of space: cross-national figures on this can be seen in Figure 34.

Figure 34: Proportion of households lacking space by country and year

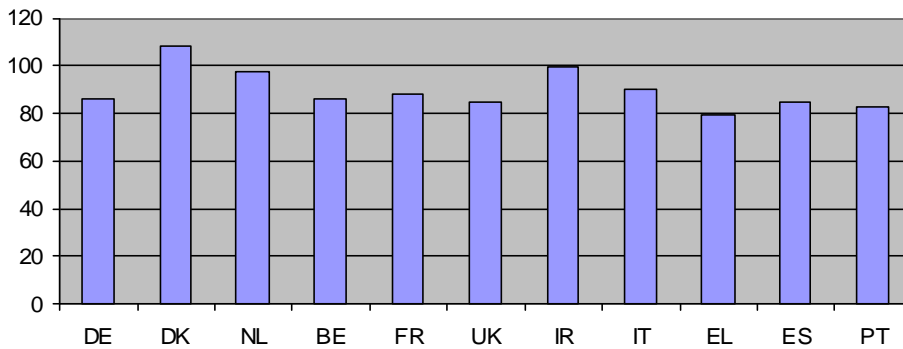


Source: ECHP UDB data 1994 and 1998

Note: Data for Luxembourg, Sweden, Austria and Finland were not available.

Figure 34 shows that a lack of space is a significant problem in all of the states shown, but varies considerably across the countries. As in many of the indicators, there is a distinct north/south pattern to the statistics (except for the UK) with the northern countries having proportions of households with space problems of between 10% and 16% while levels in the southern countries range between 19% and 27%. However, the situation seems to be improving, with proportions falling in all countries between 1994 and 1998.

Figure 35: Average useful floor area per dwelling (metres squared years between 1991 and 2000)



Source: Housing Statistics in the EU 2001; Finnish Ministry of the Environment with the assistance of the Netherlands Ministry of Housing, Spatial Planning and the Environment

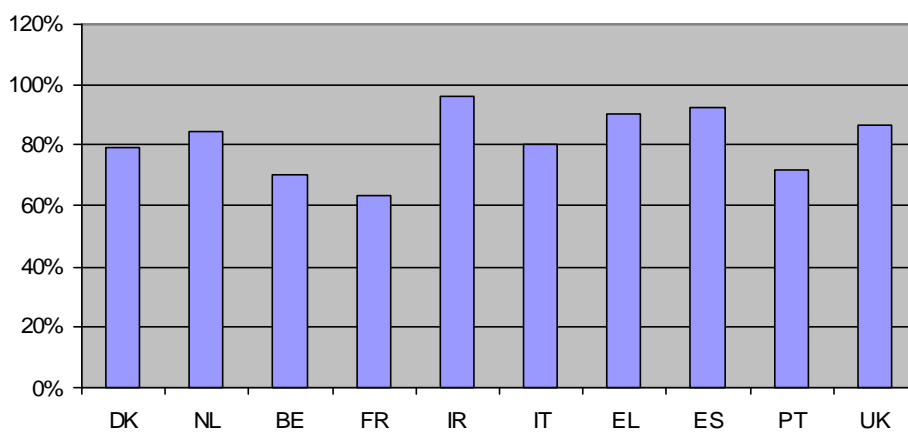
These cross-country patterns in the subjective assessment of a lack of space in the household give an inverse match to the north/south patterns found in Figure 35 which gives the actual average useful floor area per dwelling in metres squared across the same countries. It is clear that the lower overall useful floor space available in Figure 35 is paralleled by the subjective assessment of cramped conditions in the previous figure.

Community life and social participation

Contact with friends and family

The rise of the concept of social exclusion has brought to the fore the issue of social integration as a dimension of disadvantage and the extent to which groups with particular social and economic problems may find themselves detached from the mainstream of society. This section reviews several measures of attachment and participation in society, using answers to questions in social surveys. Figure 36 gives the proportions across countries of those who, in response to a survey, said they met friends and relatives more than once a week in 1998.

Figure 36: *Proportion meeting friends and relatives more than once a week*

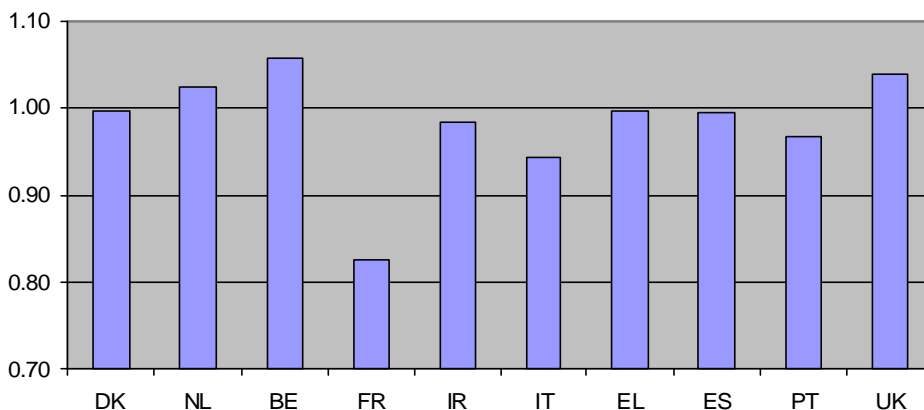


Source: *ECHP UDB data 1998*

Note: *Data for Sweden, Austria, Luxembourg and Finland were not available.*

This shows that the average level of contact does vary but, in all countries, over 60% of respondents would see friends and relatives more than once a week, this being true of over 95% of cases in Ireland. Contact with friends varies with the age of the individual (analyses not shown) with younger people meeting friends more often than older people and particularly the 45-64 year olds, but frequency increases again after age 65. The question is, however, do more disadvantaged groups have lower levels of contact?

Figure 37: *Odds ratio of proportion of the poor meeting friends and relatives more than once a week by non-poor (60% median)*



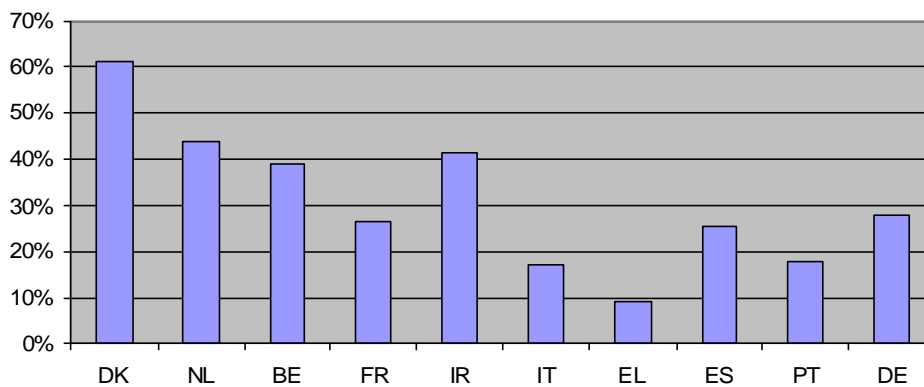
Source: *ECHP UDB data 1998*

Note: *Data for Sweden, Austria, Luxembourg and Finland were not available.*

Figure 37 shows an odds ratio of the proportion of those in a household below 60% of median income poverty who meet friends or relatives more than once a week to those above the poverty line. If the odds ratio is less than one this means that the poor are in contact less often than the non-poor and could indicate detachment. In fact, Figure 37 gives a rather mixed picture with France, Ireland and Portugal having ratios of less than one, while the Netherlands, Belgium, Greece, Spain and the UK have ratios greater than one suggesting that the poor actually socialise more. In fact, only in France could it be suggested that the poor are at risk of becoming ‘detached’ from society in general.

Membership of clubs and organisations

Figure 38: *Proportion who are a member of an organisation*

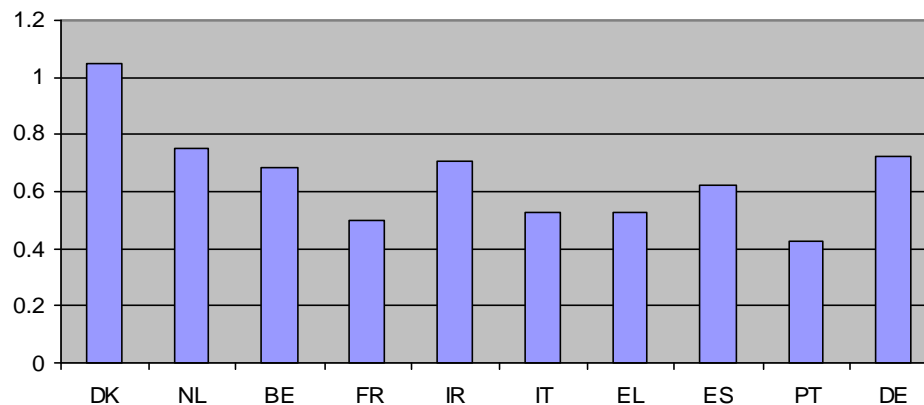


Source: ECHP UDB data 1998

Note: Data for Sweden, Austria, Luxembourg and Finland were not available.

Figure 38 shows overall country statistics for the proportion who are members of an organisation such as a sports or social club. The results vary greatly across countries from Greece where barely 10% of the population interviewed claimed membership of any such club, to over 60% in Denmark. Interestingly, however, Figure 39 shows that the poor are less likely than the non-poor to be a member of such a club in all countries except Denmark. The differences in the odds of being a member vary from being almost 60% less likely for the poor to be members than the non-poor in Portugal and Greece to around 30% less likely in the Netherlands.

Figure 39: *Odds ratio of proportion of poor being a member of an organisation by non-poor (60% median)*



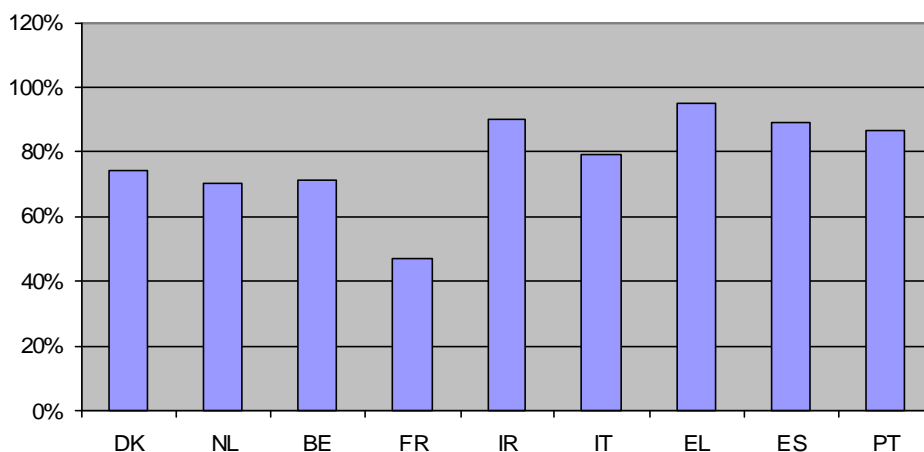
Source: ECHP UDB data 1998

Note: Data for Sweden, Austria, Luxembourg and Finland were not available.

Talking to neighbours

Figure 40 provides an analysis of the probability of talking to neighbours at least once a week. An interesting pattern of differences across nations emerges with the southern European countries and Ireland being more sociable on this issue. In these countries, over 80% of respondents would talk to neighbours almost every day (95% in Greece) while in Denmark, Belgium and the Netherlands this proportion drops to between 65% and 75%. In France this proportion drops to around 45%, though this may be due to the use of a different wording in the French questionnaire.

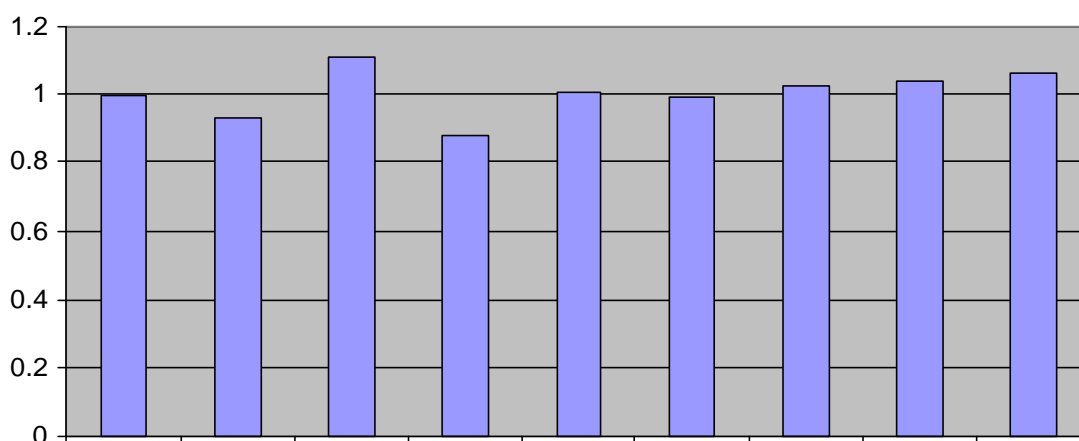
Figure 40: *Contact with neighbours at least once a week*



Source: *ECHP UDB data 1998*

Note: *Data for Sweden, Austria, Luxembourg and Finland were not available.*

Figure 41: *Odds ratio of proportion of poor talking to neighbours at least once a week by non-poor (60% median)*



Finally, Figure 41 shows an odds ratio between the poor and non-poor for the proportion talking to neighbours at least once a week. In all of the countries except France, the poor appear to be more sociable than the non-poor, though the difference is marginal.

Transport

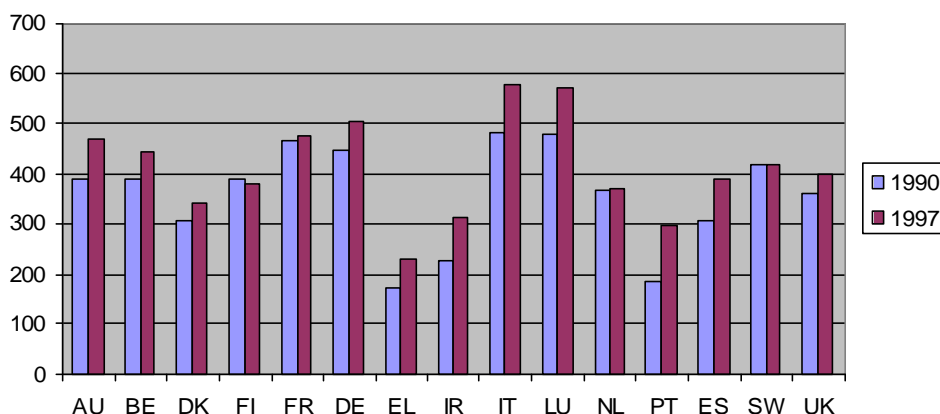
The general area of transport has been identified in the quality of life literature as an important dimension both for its positive and negative impact. On the positive side, transport is seen as a contributor to social inclusion as well as giving personal freedom and autonomy. Because of this, researchers are interested in access to both personal and public transport. On the negative side, some forms of transport such as road traffic have been shown to harm health and well-being through environmental pollution, road congestion and traffic accidents.

Within this life domain only direct measures of transport will be considered. Its influence on the local environment in the form of noise or air pollution will be covered within other life domains. On an individual level there are two approaches when evaluating the effects of transport on the quality of life. The first is to measure the extent and availability of different types of transport. The second is to look at some of the negative impacts that transport can have, such as injury through road traffic accidents.

Ownership of cars and vans

This first analysis seeks to examine the extent to which transport is available, first in the form of access to cars and vans. The car now has a huge influence on the shape and structure of societies and their infrastructure, as in the case of out-of-town shopping facilities which are barely accessible without access to a car.

Figure 42: Number of cars per 1000 inhabitants



Source: *European Environment Agency (1999)*

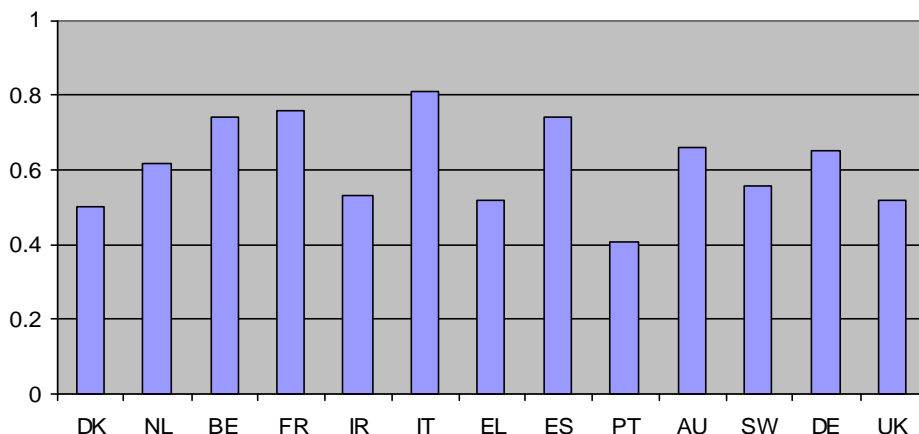
Because of this, some commentators have seen access to a car as a major contributor to social inclusion and it has been added to empirical measures of deprivation. Figure 42 shows the number of passenger cars per 1000 of the population in different countries.

Figure 42 shows that ownership of cars is related to the affluence of societies to a certain extent, but some of the richer countries such as Denmark and Sweden do not have high rates of ownership. The level of cars varies widely across societies, though it is interesting that the number of cars has increased in all of the societies shown here except Finland and Sweden between 1990 and 1997. The range between the countries runs from Greece with 229 cars per 1000 inhabitants in 1997, to Italy with 577, more than twice the number. France, Germany and Austria also have large numbers of cars for their populations.

Ownership of a car or van within societies varies quite considerably and, as with many of the other indicators in this report, also varies with the economic resources available to individuals. Although in the past the car may have been seen

as a luxury item, the development of out-of-town shopping centres in many urban areas across EU countries has meant that it is now considered a necessity by many people (Callan et al, 1999). Figure 43 shows the odds ratio of car ownership for the lowest income quintile in each country compared to the highest quintile.

Figure 43: Odds ratio comparing car ownership between the lowest and highest income quintiles



Source: ECHP UDB data 1998

Figure 43 shows that across the countries shown, those in the lowest income quintile are between 19% (in Italy) and 59% (in Portugal) less likely to own a car than those in the highest income quintile.

Accidents and fatalities

This section looks at two negative aspects of car transport, the number of road accidents and number of fatalities. Figure 44 shows the number of road accidents per billion passenger kilometres for different countries and shows large differences between countries. Although Greece had a relatively low number of cars compared to other countries, the accident rate was the highest in 1990 at 123, a figure that subsequently dropped to 93 by 1998. The Netherlands on the other hand, has a very low rate of traffic accidents at around 10 per billion kilometres travelled in 1990, falling to eight in 1998.

Figure 44: Road accidents per billion passenger-kms

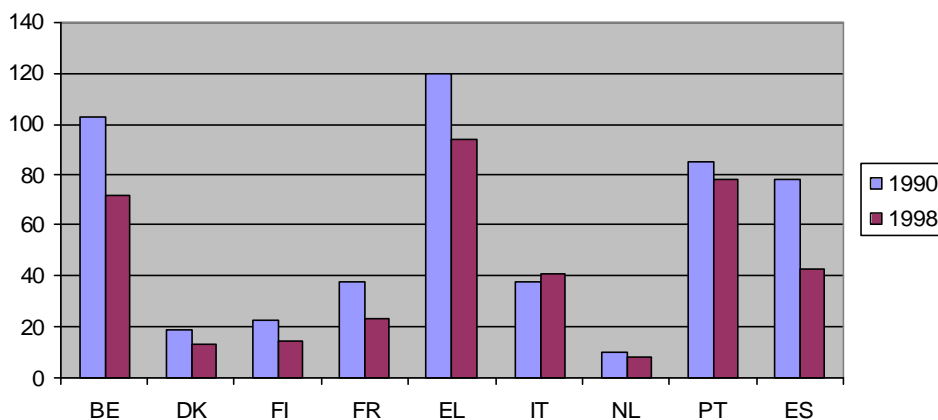


Figure 45: Accident fatalities per billion passenger-kms for road transport

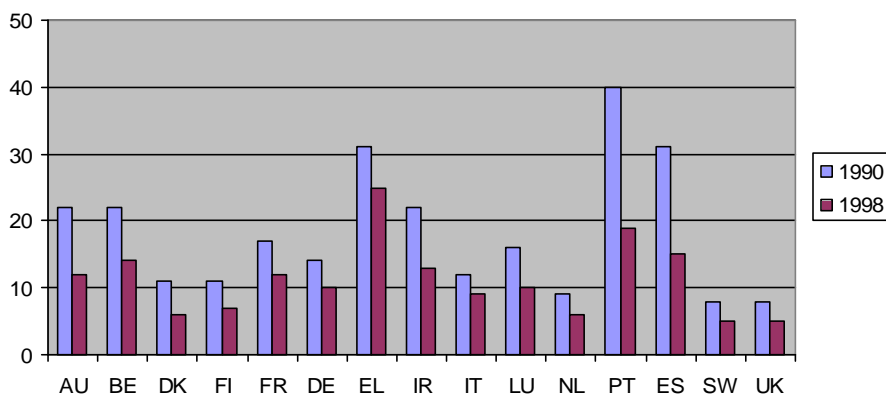


Figure 45 shows the number of fatalities per billion passenger kilometres. A similar picture emerges with Portugal, Greece and Spain once again having the highest number of fatalities, though the number falls by 1998, quite considerably in the case of Spain and Portugal. The Netherlands and Denmark once again stand out as countries with very low fatality rates.

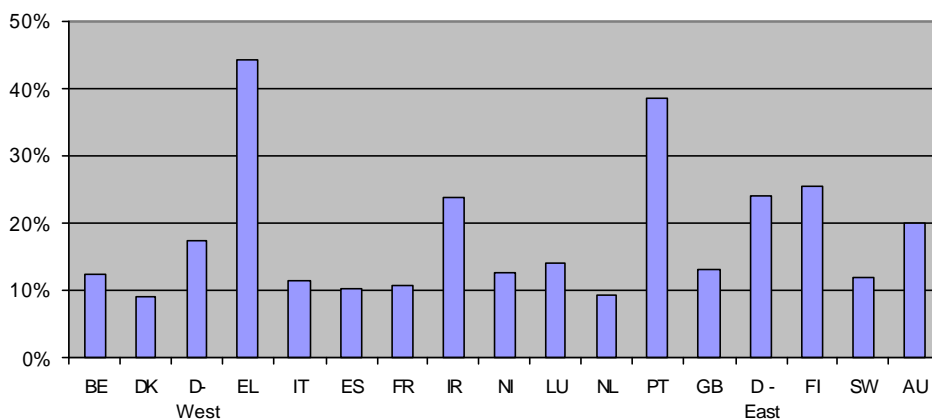
Local environment and amenities

Although personal health, economic resources and family life have been identified as central elements of quality of life, the general experience of life occurs within a particular area and context that must influence the overall conception of quality of life. This domain illustrates some of the dimensions of this context in the form of indicators of the local environment and amenities. The first section will examine the extent to which some important amenities such as health care, shops and public transport are close by across different countries. The second section will examine some indicators of the local environment and, continuing the theme of how differences in economic resources influence other domains, will consider how the local environment differs for those in different income groups.

Quality of and access to local amenities

The type and quality of amenities available and the ease by which they can be reached is an important influence on quality of life. Though some may want to move away from congested urban centres into rural areas for better quality of life, most people would still like to have local amenities such as health care and shopping facilities within practical reach. Though the quality of services are not assessed here, the ease with which particular amenities can be reached is examined by looking at the proportions in each country who are more than 20 minutes from each service. Twenty minutes was deemed a reasonable period to travel for these amenities.

Figure 46: Proportion living more than 20 minutes from GP or health centre services

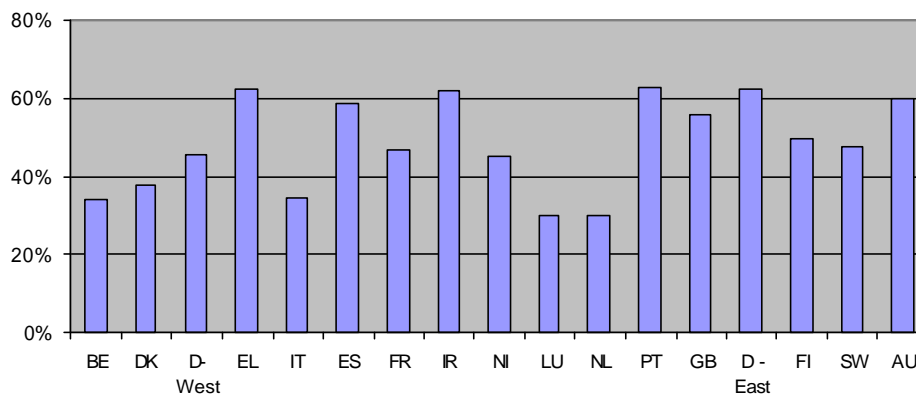


Source: Eurobarometer 52.1, Autumn 1999

Figure 46 shows the proportion living more than 20 minutes from general practitioner or health centre services.

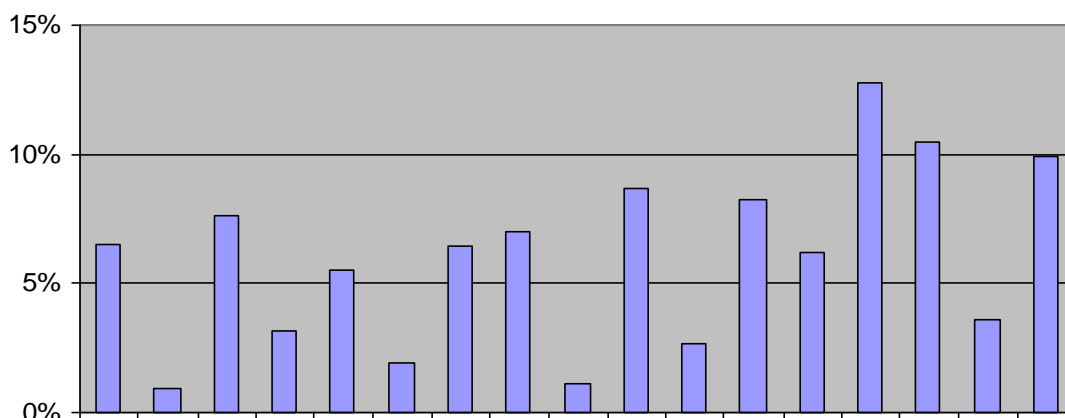
The time distance to local amenities can be influenced by many factors other than the physical distance such as good road or public transport links, physical geography and degree of urbanisation. These factors may have something to do with the results in Figure 46 where Greece, Ireland, Finland and Portugal have large proportions of the population more than 20 minutes from healthcare services. In Greece 44% of the population live more than 20 minutes away. East Germany and Austria also have longer travel times.

Figure 47: Proportion living more than 20 minutes from a hospital



Source: Eurobarometer 52.1, Autumn 1999

Figure 48: Proportion living more than 20 minutes from a shop or supermarket

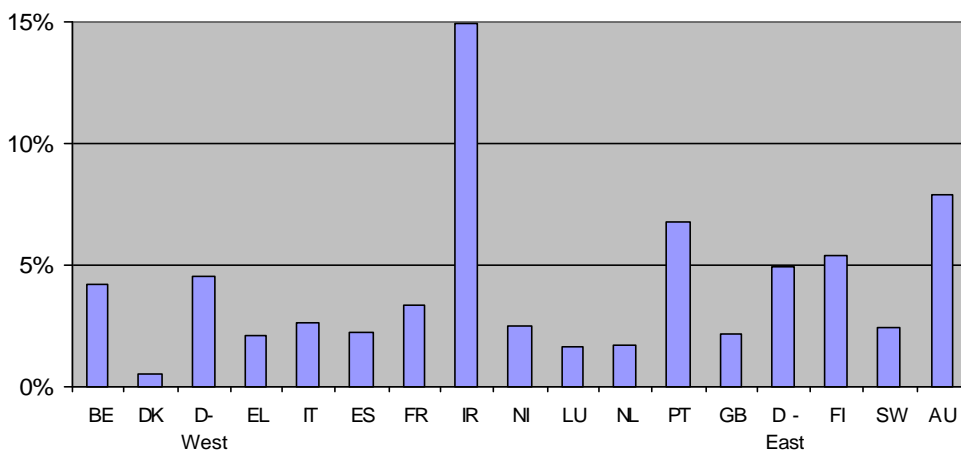


Source: Eurobarometer 52.1, Autumn 1999

Figure 47 shows the same information in relation to hospitals. Here the differences between the countries are less pronounced, but Greece, Ireland and Portugal once again have large proportions with travel times longer than 20 minutes – over 60% in the case of Ireland and Portugal. In emergency circumstances this could have a large bearing on health outcomes.

In terms of shopping facilities, Figure 48 shows that the country patterns are very different, with Greek people more likely to have easy access, though East Germany and Finland once again have high proportions.

Figure 49: Proportion living more than 20 minutes from a public transport stop



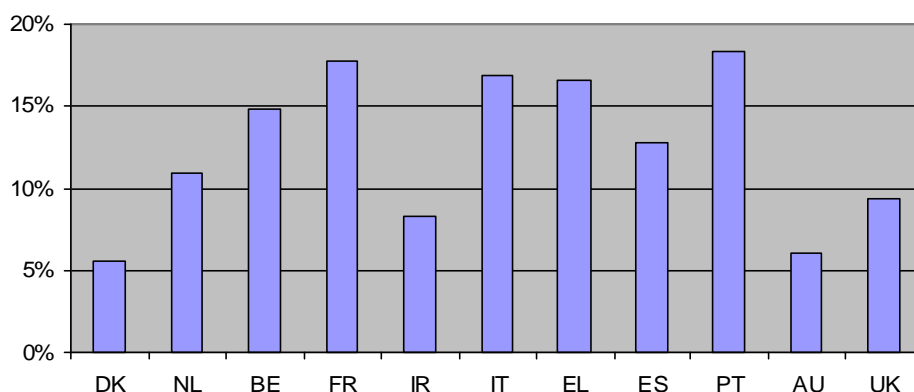
Source: Eurobarometer 52.1, Autumn 1999

Figure 49 moves on to the availability of public transport and shows that variability across the countries is very small with less than 5% of individuals saying they live more than 20 minutes from public transport in most countries. However, Ireland stands out with 15%. It is interesting to compare this figure with that of Northern Ireland where only 2.5% of individuals live more than 20 minutes from this amenity.

Quality of local environment

This section examines peoples' perception of two aspects of their local environment: whether there is pollution from traffic or industry and whether there is crime and vandalism in the area. Figure 50 shows the proportions reporting that their local area was polluted by industry or traffic.

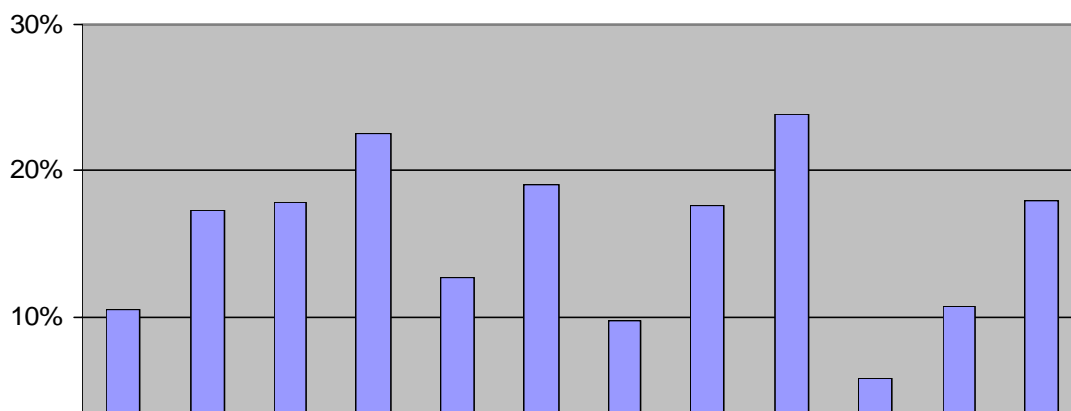
Figure 50: *Proportion with pollution from traffic or industry in their local area*



Source: *ECHP UDB 1998*

This shows quite wide variation between countries with around 6% experiencing pollution in Austria compared to 18% in France and Portugal.

Figure 51: *Proportion where there is crime or vandalism in their local area*



Source: *ECHP UDB 1998*

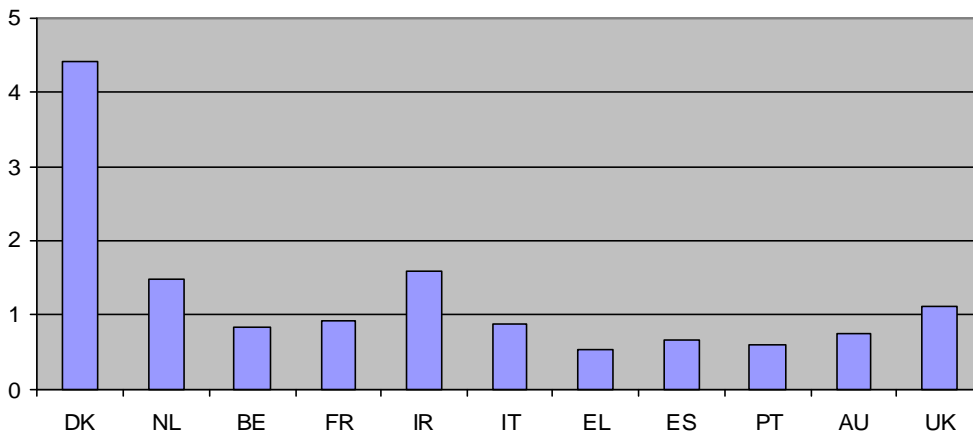
Figure 51 gives the proportions who perceive that there is crime or vandalism in the local area and the country ordering is quite similar to that found in Figure 50. France and Portugal have the highest proportions, followed by Italy, with Austria and Denmark once again having low proportions.

In interpreting these patterns it is wise to bear in mind that these proportions express peoples' perceptions of local pollution and crime and so may be influenced by national sensitivities to these phenomena. However, as with indicators based on perceptions in the health domain, differences in responses by various groups in these countries give an

interesting picture of conditions that can be compared cross-nationally. Again, as in the health domain, different income groups are compared to get a picture of inequalities between groups with different levels of economic resources.

Pollution and crime are often associated with more deprived areas within countries and thus there may well be a strong relationship between experiencing these conditions and having a low income. Figure 52 examines this by showing the odds of those in the lowest income quintile experiencing pollution in the local environment compared to those in the highest quintile.

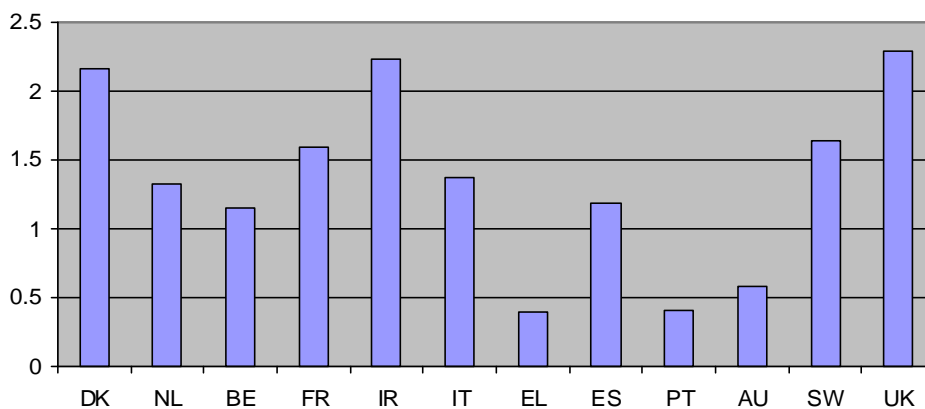
Figure 52: Odds ratio of lowest to highest income quintile of having pollution from traffic or industry in the local area



Source: ECHP UDB 1998

This shows that against expectations, only in four of the 11 countries shown are those in the lowest income quintile more likely to experience pollution than those in the highest quintile (i.e. the odds being greater than one). Is the same true of the experience of crime?

Figure 53: Odds ratio of lowest to highest income quintile of having crime or vandalism in the local area



Source: ECHP UDB 1998

Figure 53 gives a very different picture with the lowest income groups having a larger chance of experiencing crime in nine of 12 countries – the inequality being particularly high in the UK, Ireland and Denmark. In Greece, Portugal and Austria on the other hand, the lower income groups have a lesser risk of experiencing these conditions. These results tally more with expectations, though the pattern is not a simple one and is worthy of greater exploration.

Recreation and leisure activities

This section presents indicators on patterns of leisure time and recreation across countries. Leisure is an important component of life, allowing personal expression and/or relaxation from both paid and unpaid work.

Nature of leisure activities

What do people do with their leisure time, and does this vary across states? There is very little comparable 'time budget' data, i.e. where people are asked to keep a diary of their activities with detailed information on leisure activities. Here use is made of survey evidence which asked people to choose three activities from a list on which they spent most of their free time. The results of these questions are shown in Table 3 which gives the proportions choosing each activity across countries. Given the large amount of information available, it is useful to look first at what activities were chosen most frequently across countries. Across the 17 countries shown here, four activities made up the majority of choices: family, social, relaxing and household chores. 'Family activities' were by far the most frequently chosen, followed closely by 'social activities' and then 'relaxing'.⁷ Across the bulk of countries, family, social and relaxing were chosen together, but household chore based activities figured prominently in East German, Finnish and Dutch responses.

Satisfaction with leisure time

These findings show us that, for most people, the family and socialising are central to patterns of recreation, but doing nothing and relaxing also plays a role. Are people satisfied with the amount of time they have to spend on these leisure activities? Figure 54 shows mean satisfaction with the amount of leisure time across countries on a scale of one to six.

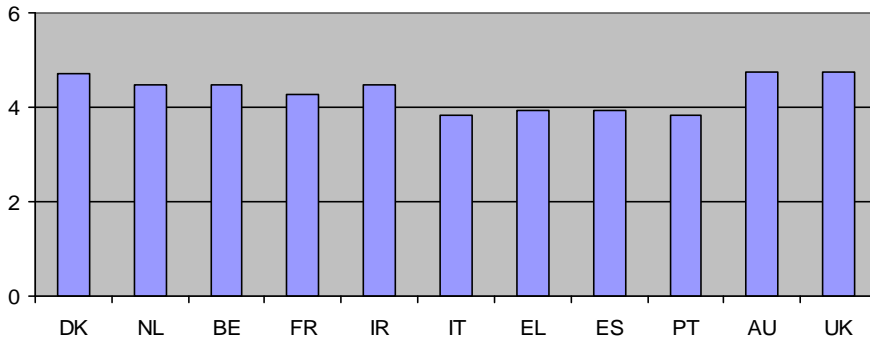
Table 3: *Proportions choosing particular activities on which they spend most of their free time*

	BE	DK	D- W	EL	IT	ES	FR	IR	NI	LU	NL	PT	GB	D- E	FI	SW	AU
Family	49	58	47	51	55	61	62	52	50	59	43	51	55	51	28	60	57
Sports	20	29	23	11	21	21	23	22	23	29	24	15	25	18	37	39	28
Social	39	41	48	60	38	57	44	56	52	40	42	38	50	36	44	62	41
Cultural	15	15	13	6	10	17	20	5	4	17	10	13	5	15	14	17	14
Educational	6	16	10	5	4	4	10	10	6	8	15	6	7	10	17	11	7
Charitable	2	3	4	3	5	1	3	6	6	6	14	2	4	3	5	2	5
Political	2	2	1	3	2	1	1	1	2	3	1	1	1	2	2	3	4
Religious	3	3	6	9	11	6	3	7	18	2	5	9	4	3	6	6	3
Relaxing	54	42	44	59	34	42	51	52	51	34	54	52	50	47	54	19	32
Work related	11	12	15	16	11	9	10	17	8	14	10	10	11	13	12	15	16
Household	42	48	40	32	34	29	36	35	41	30	48	33	49	51	47	42	40
Other	5	3	6	4	6	5	6	5	7	8	3	6	5	4	4	3	4

Source: *Eurobarometer 52.1 Autumn 1999*

⁷ i.e. family was chosen first most often.

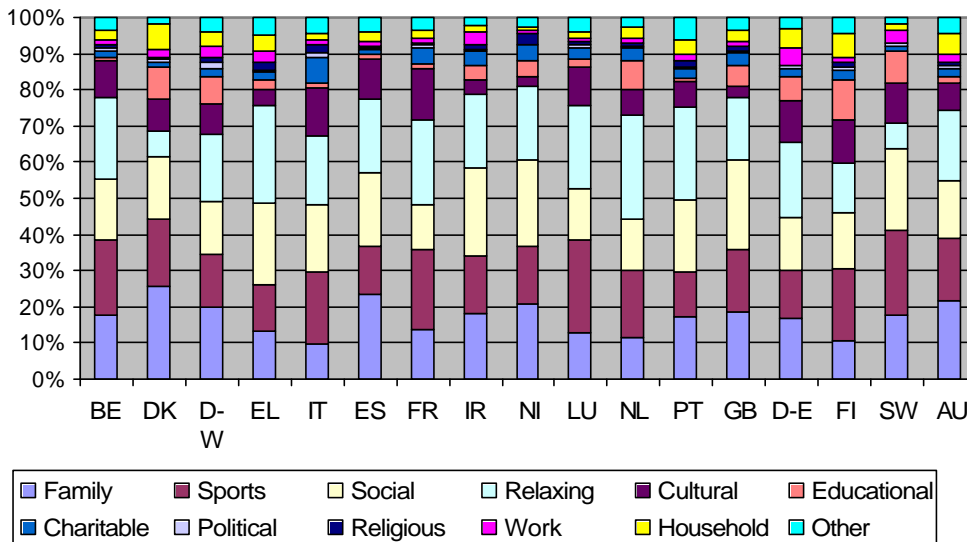
Figure 54: Mean satisfaction with amount of leisure time on a scale from one to six (totally satisfied)



Source: ECHP UDB Data 1998

This shows that, on average, people tend to be more satisfied than not with their leisure time, but the level of satisfaction varies widely between countries. Such country differences are fairly stable (see chapter four) and mostly reflect different national cultures and language styles with northern European countries tending to be more positive than southern European countries as is indicated in Figure 54. However, within countries, those in what could be called young middle age (30 to 45) tend to be less satisfied across all of the countries (analyses not shown), probably because work and child rearing pressures are at their greatest for these groups. Those aged 65+ tend to be most satisfied.

Figure 55: Activities chosen if had more free time



Source: Eurobarometer 52.1 Autumn 1999

If given more time, what then would people do? Would they choose other activities? The Eurobarometer survey, from which the information on choice of leisure activity was drawn, also asked: ‘if you had an extra four or five hours of free time in a week, which one of these activities would you choose to do or to do more of?’. Responses to this question across the states are shown in Figure 55.

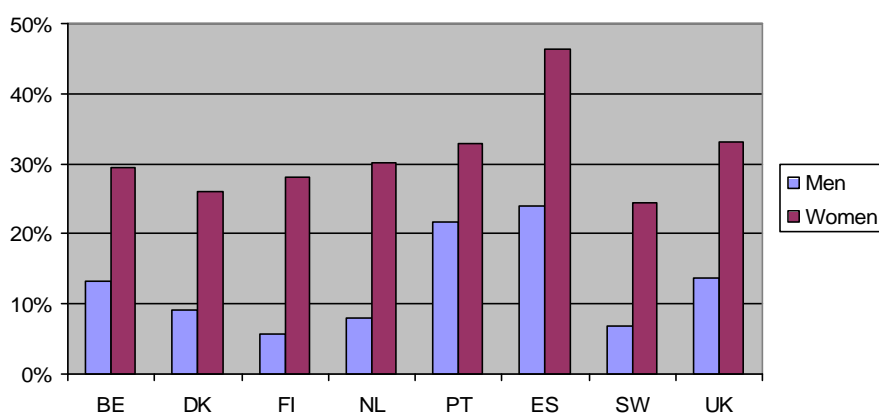
This shows that people tend to spend more time doing the activities that are already most popular, such as activities with family, social activities or relaxing, but a substantial minority in each country would also like to spend more time playing sport or, less commonly, doing more cultural activities.

Public safety and crime

This section of the chapter examines several indicators from the domain of public safety and crime. Data on official levels of crime are difficult to obtain and, where available, tend to vary considerably in their methodologies and extent of coverage. This makes comparisons across countries extremely difficult. In these circumstances it is often sensible to rely on the self-reported information that is contained in surveys, such as the International Crime Victim's Survey, that also ask for respondent's subjective concerns about crime.

Concerns about crime

Figure 56: Proportion 16+ who feel unsafe walking alone in their area



Source: *International Crime Victim's Survey 2000*

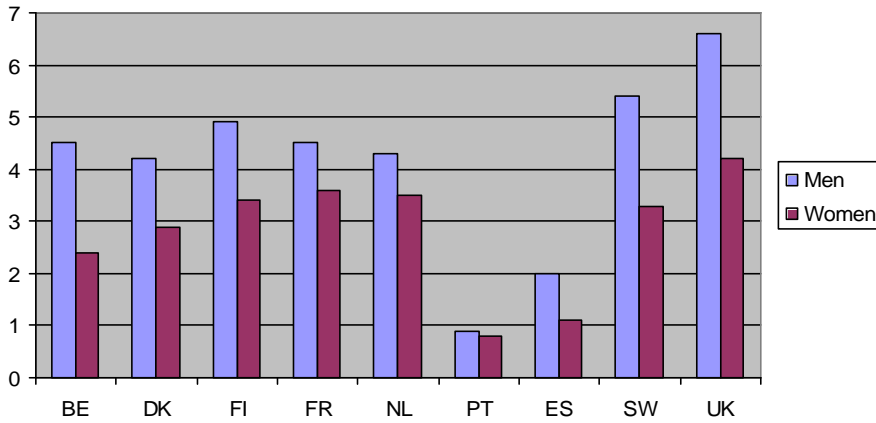
Note: Spanish data refer only to Catalonia; UK data refer to England and Wales.

Figure 56 shows the proportion of men and women who feel unsafe or very unsafe when walking alone in the area in which they live. This shows that across all of the (admittedly few) countries, women are far more concerned about the risk of attack or assault than men, with concerns being highest in Spain for both men and women. The difference in perceived risk between men and women is highest in Finland where women are nearly five times more likely to feel concerned.

Experience of crime

The question is, are these perceived risks a good indication of the real risk? Although crime figures are problematic, the International Crime Victim's Survey also asked men and women whether they had been personally assaulted or threatened and the results of this question are shown in Figure 57.

Figure 57: Proportion 16+ who have been personally attacked or threatened



Source: *International Crime Victims Survey 1999*

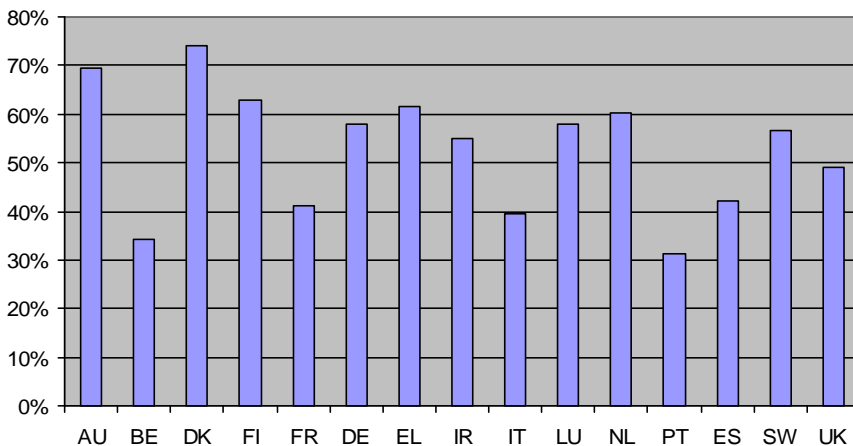
Note: Spanish data refer only to Catalonia; UK data refer to England and Wales.

This shows that across all countries, men are more likely to report having been assaulted or threatened. The UK has the highest proportion reporting assault or threat of assault and, interestingly, Spain has the second lowest proportion after Portugal.

Confidence in the justice system

Do people have confidence in the justice system in their country? Figure 58 shows that the perceived fairness of the justice system varies widely across Europe with just over 30% of Portuguese trusting the system compared to over 70% of Danes.

Figure 58: Proportion 15+ who have confidence in the justice system



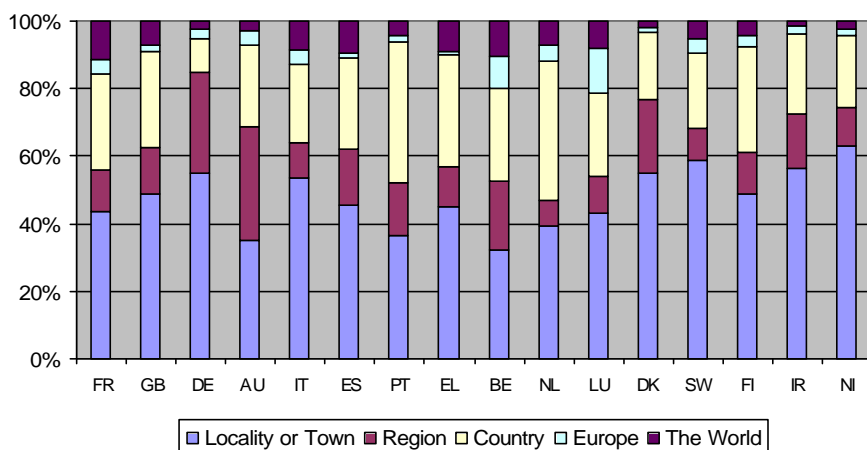
Source: *Eurobarometer 55.1 2001*

Culture, identity, political resources and human rights

Personal and cultural identity are dimensions of social inclusion which are not frequently researched or described, but which are, nonetheless, important. This section briefly considers two indicators of personal and cultural identity before examining the extent to which people across different countries think human rights are respected in their own country.

A sense of belonging

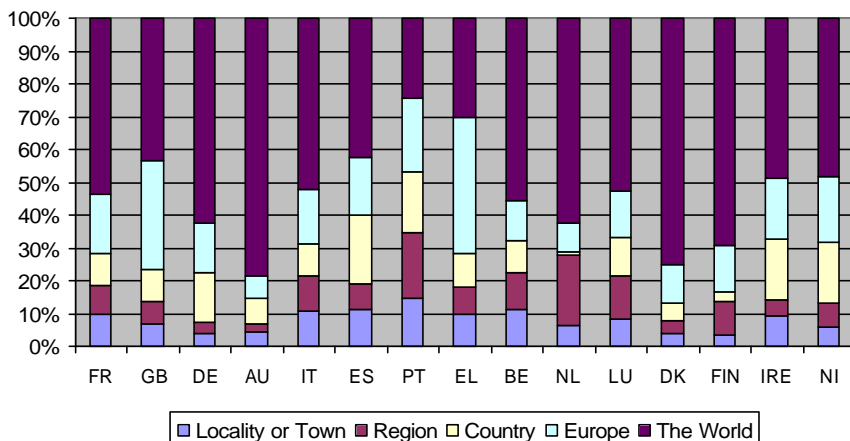
Figure 59: Answer to: 'Which of these geographical groups would you say you belong to first of all?'



Source: European Values Survey 1999

This section begins by examining the extent to which people feel they belong to particular geographical entities. The question used comes from the European Values Survey in 1999 and asks respondents 'which of these geographical groups would you say you belong to first of all?' The responses to this question are shown in Figure 59. They reveal that, across all the countries, most people's first attachment is to a locality or town ranging from 63% in the Netherlands to 32% in Belgium. The low attachment to local area in Belgium and Luxembourg is interesting since these two countries have relatively large proportions who answer that their primary attachment is to 'Europe'. As well as having relatively high proportions stating that they primarily belong to their locality, German respondents also have a high attachment to their region, but a low attachment to Germany overall.

Figure 60: Answer to: 'Which of these geographical groups would you say you belong to least of all?'

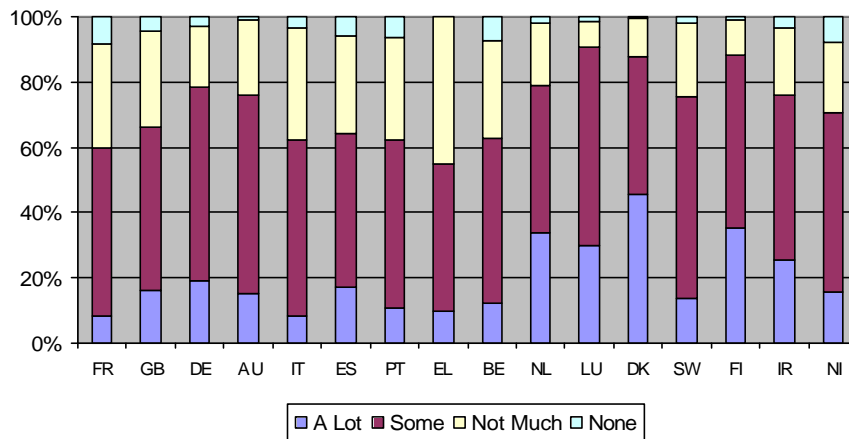


Source: European Values Survey 1999

If the question is reversed, which geographical areas do people feel they belong to least? As one would expect from the last figure, Figure 60 produces large proportions rejecting the ‘world’ as their primary attachment, and also relatively large proportions against the concept of belonging to ‘Europe’. This is particularly strong in Greece (42%) and Great Britain⁸ (33%) and lowest in the Netherlands, Austria and Belgium.

Human rights

Figure 61: Answer to: ‘How much respect is there for individual human rights nowadays in our country?’



Source: *European Values Survey 1999*

Lastly this section turns to views of whether different states respect the human rights of their citizens. Figure 61 shows that respondents in Luxembourg and Finland are most positive about the human rights record of their country with the southern European states responding least positively.

⁸ It should be noted that in the European Values Survey, the United Kingdom was divided into Great Britain and Northern Ireland and Germany was divided into East and West Germany.

2

The impact of income poverty and deprivation over time

The conceptual framework on quality of life highlighted the central importance of economic resources in determining living conditions and thus quality of life. Having low levels of economic resources can impact on an individual's ability to attain the kind of living standard seen as normal in the society in which they live. This can lead to exclusion from full participation in the life of that society. However, identifying those at risk of social exclusion is complicated by the fact that measures of an individual's income and particularly their current income are not necessarily a good guide to their real living standard. Research (Ringen 1987, 1988) has shown that those who are income poor are not necessarily experiencing lifestyle deprivation.

Given this, the extent to which income alone can be used to measure social exclusion is a critical issue. In what follows, the argument will be developed that identifying those at risk of social exclusion is complicated by the fact that measures of income at a particular point in time are not necessarily a good guide to standard of living or levels of deprivation. Moreover, income measures alone provide an even poorer guide to individuals' evaluations of their economic situation. Indeed, as with many other areas in the study of quality of life, there appears to be a perplexing incongruity between the objective and subjective dimensions of what had been taken to be the same phenomenon.

This chapter seeks to show that, despite this initially unpromising situation, considerable progress can be made in resolving this conundrum by adopting a dynamic and multi-dimensional perspective that is theoretically informed. In so doing, one achieves not just a more sophisticated measurement procedure but a better understanding of how poverty is produced and experienced that avoids the need for an artificial dichotomy between objective and subjective perspectives on poverty. In particular, it is shown that, even where the focus remains on income, considerable progress can be made by shifting from a static/point in time perspective to a dynamic/longitudinal perspective.

Furthermore, the combination of income and measures of actual living standards pays considerable dividends in enabling one to understand how individuals experience their objective circumstances. Quality of life measures must be measured over time and be seen as snapshots of ongoing social and economic processes rather than pictures of a stable reality. Following individuals over time can build up a much better understanding of how inadequate resources impact on living standards and thus the individual's subjective quality of life. This issue is not simply of academic interest: income measures alone at a single point in time tend to identify groups such as the self-employed whose incomes are temporarily low, but who are not at risk of social exclusion. Anti-poverty policies based on this understanding would be ineffective at tackling social exclusion.

This better understanding forms the basis of more efficient social policy interventions and effective remedies to social problems. One of the conclusions that is particularly interesting in this regard is that the processes linking income, deprivation and economic strain through time show a remarkable degree of uniformity across the EU countries included in this analysis. The implication of these findings is that, though different states should tailor their anti-poverty strategies to the particular circumstances and conditions of their countries, the underlying processes that drive certain groups into social exclusion are remarkably similar across states.

Income poverty as a measure of economic resources

To begin, two basic questions are asked. First, what does it mean to be poor in the 'rich' countries of the European Union? Second, how does the way in which poverty is defined and measured shape an understanding of the extent and causes of poverty and ultimately notions of the appropriate policy responses?

In everyday use, poverty in rich countries is often seen as the inability to attain a decent standard of living. The notion of relative poverty involves a recognition that what is considered adequate, and what are generally perceived as needs, will change over time and differ across societies. Sen (1983) concludes that it is in the notion of 'shame' that the core of the concept of poverty is to be found: the absence of resources puts people in a situation where they cannot live with dignity in their society.

The view that poverty has to be seen in terms of the standard of living of the society in question at a particular point in time led, in the European Union, to poverty lines being framed explicitly, and purely, in terms of relative income. Customarily, this involved setting the poverty line at a particular percentage of mean or median income. The general rationale is that those falling more than a certain 'distance' below the average or normal income level in the society are unlikely to participate fully in the life of the community. The OECD, the EU Commission and Eurostat have all adopted the relative income line approach in a number of studies. Thus the Second Poverty Programme, which ran from 1985 to 1989, took as a starting point the following definition of poverty:

The poor shall be taken to mean persons, families and groups of persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the Member State in which they live.

The problem that must be confronted though is that a range of research shows that low income turns out to be a quite unreliable indicator of poverty in this sense, because it fails to identify households experiencing distinctive levels of deprivation and economic strain (Ringen, 1987; Ringen, 1988; Layte et al, 2001). Thus the breadth of vision contained in the definition is not reflected in the indicator employed. Policy that is based solely on such a relative income indicator is likely to seriously misrepresent both the scale of poverty and its key determinants and to provide an inappropriate basis for the development of policy responses.

The impact of low income on living standards depends on the length of time it persists and the availability of other resources (such as savings or help from family and friends) to supplement current income. Furthermore, one would expect current life-style and deprivation to be influenced by many factors other than current income. A range of social and economic processes will influence levels of deprivation. Households at similar levels of current income will have arrived at that position from a variety of different trajectories. For example, one would not expect those who have been unemployed for six months, but who are now employed, to have the same lifestyle as someone employed for the whole period, though both may now have the same income.

This suggests that there is a need to understand economic resources and their relationship to quality of life as one of accumulation and erosion over time. This conclusion has important implications for national poverty monitoring programmes such as the National Anti-Poverty Plans (NAPS/Incl) that, in many countries, will be based solely on income. The combination of both income and deprivation measures is better able to measure the outcome of the processes of accumulation and erosion described above.

The analysis that follows will:

- Outline the conceptual background underlying the measurement of deprivation.
- Illustrate the problem of how the relatively poor fit between cross-sectional income poverty and deprivation.
- Examine the extent of persistent income poverty.
- Show how taking the persistence of income poverty into account improves ability to identify the currently deprived.

- Examine the relationship between persistent poverty and persistent deprivation.
- Look at the relative role of income poverty and deprivation in accounting for the manner in which people experience economic strain.

Measuring income and deprivation

This chapter makes use of the data available in the European Community Household Panel Survey (ECHP), a large (over 130,000 individuals) comparative data-set covering 15 countries that tracked the same individuals from 1994 until 2002. Three waves of this data are used here – 1994, 1995 and 1996 for 11 countries. This enables the construction of income poverty lines based on median income⁹ and a measure of ‘deprivation’. However, the income information in the ECHP is for the previous calendar year so income information refers to the years 1993, 1994 and 1995.

In recent work by Eurostat, the possibility of using measures of persistent income poverty as a complement to, or an alternative to, conventional income poverty measures has been explored. This chapter will consider the extent to which such a focus transcends the difficulties which have been identified with cross-sectional measures. However, an assessment of the relative value of these approaches requires that more systematic attention be paid to the measurement of life-style deprivation. Furthermore, while the analysis of persistent income poverty involves a significant advance, failure to address the extent to which deprivation is persistent or transitory constitutes a significant limitation.

The deprivation measure is calculated from responses to 13 questions in each year’s survey which asked respondents whether they have access to certain items in their household and, if not, whether this is because they cannot afford them. The following six items took this form:

- A car or van.
- A colour television.
- A video recorder.
- A microwave.
- A dishwasher.
- A telephone.

For some items the absence and affordability elements were incorporated into one question, as follows: ‘There are some things many people cannot afford even if they would like them. Can I just check whether your household can afford these if you want them?’. The following six items were administered in this fashion:

- Keeping your home adequately warm.
- Paying for a week’s annual holiday away from home.
- Replacing any worn-out furniture.

⁹ 50%, 60% and 70% of median equivalised household income are attributed to each individual in the household, equivalised using the ‘modified OECD’ equivalence scale (1 for the first adult 14+, 0.5 for each additional adult and 0.3 for each child) calculated over individuals.

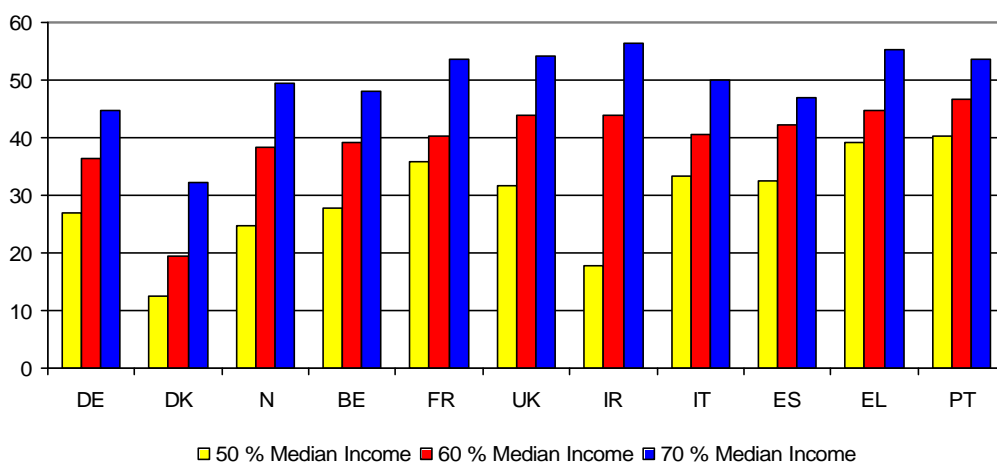
- Buying new, rather than second-hand, clothes.
- Eating meat chicken or fish every second day, if you wanted to.
- Having friends or family for a drink or meal at least once a month.

A final item used relates to arrears: a household is considered as experiencing deprivation in terms of this item if it was unable to pay scheduled mortgage payments, utility bills or hire purchase instalments during the past 12 months.

Each deprivation of an item adds one to an index that can run between zero (not deprived of any items) and 13 (deprived of all items). For the purposes of cross-national comparison the index is weighted by the proportion of households possessing that item in each country, so deprivation of an item in one country may count for more than in another. Also, to make analysis easier, a 'deprivation line' has been created by choosing a value above which individuals are said to be deprived. This is done by using the income poverty line in each country. The deprivation line is set at that point above which the same proportion of the population would be seen as deprived as are seen as poor. Thus if 10% of the population in a country are below the 50% income poverty line, the deprivation line is set so that 10% of the population are also below this. In principle, this allows for the mismatch between income poverty and deprivation to vary from zero to 100%.

Income deprivation and relative income poverty

Figure 62: Percentage of persons above corresponding deprivation threshold in 1996 by median income line poverty in 1995

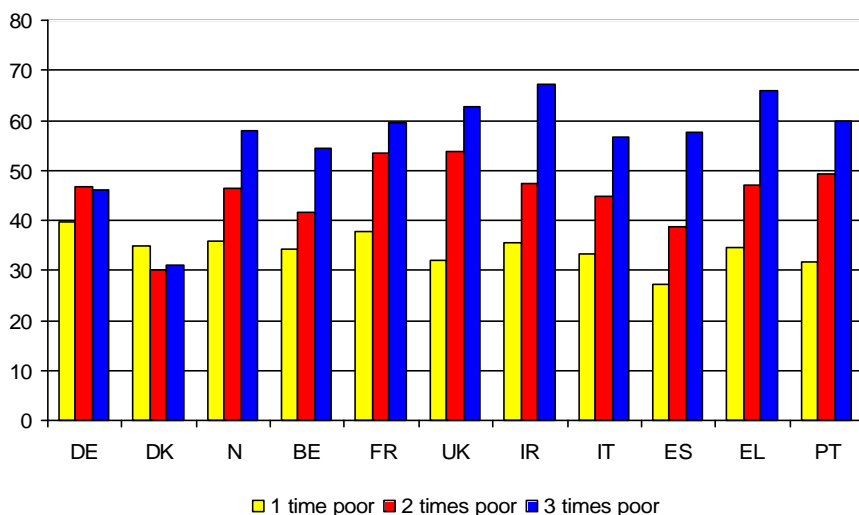


Source: ECHP UDB data for 1996

In Figure 62, the degree of consistency is between below 50%, 60% and 70% of median income in 1995 and above the corresponding deprivation threshold. The degree of consistency is far from perfect and deteriorates the more stringently income poverty is defined. For all three lines, Denmark displays low levels of consistency. For the remaining countries, the extent of overlap at 50% of median income ranges from a low of 18% in Ireland to 40% in Portugal. At the 60% line, the level of agreement runs from 37% in Germany to 47% in Portugal. Finally, at the 70% line, there is a further rise in consistency with the figure running from a low of 45% in Germany to a high of 56% in Ireland. Thus the level of consistency is dependent on the point at which the poverty line is pitched and at best reaches approximately one in two. Even this degree of consistency is therefore bought at the price of relatively high poverty rates. Attempting to narrow the focus to those in the lower income ranges undermines the rationale of relative income lines in terms of the identification of those excluded from the minimum acceptable way of life.

Persistent income poverty

Figure 63: Percentage of individuals below the 70% median income line found above the corresponding deprivation threshold in 1996 by number of years income poor 1993-95

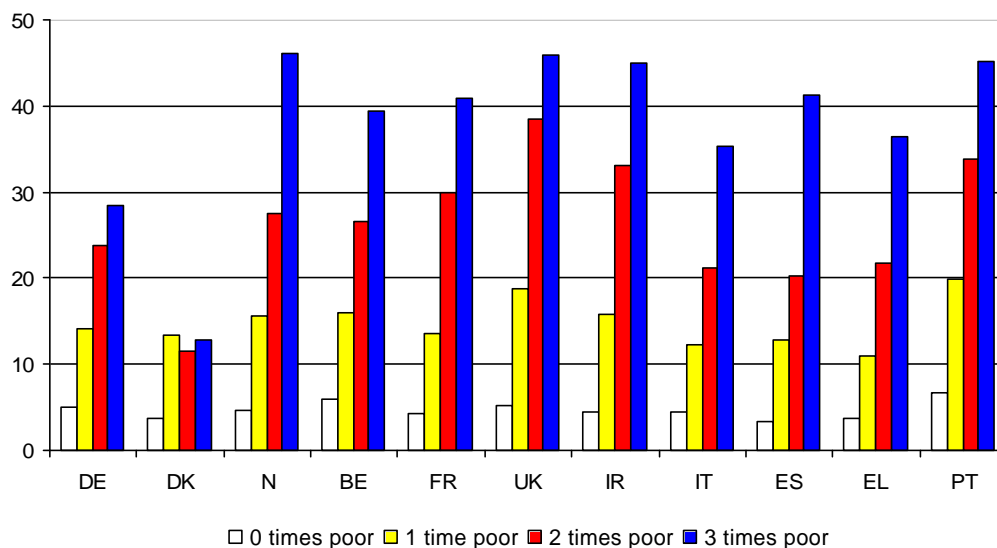


Source: ECHP UDB data for 1994, 1995 & 1996

Does shifting the focus from cross-sectional income poverty to persistent poverty over time provide some resolution of these difficulties? Figure 63 explores this issue by examining variations in the proportions deprived at different thresholds by the number of years poor 1993-95, for those poor at the end of the period in 1995. As can be seen, with the exception of Denmark and, to a lesser extent, Germany, consistency increases with exposure to income poverty. Thus, leaving Denmark aside for the moment, among those poor in only one year the rate of agreement ranges from 27% in Spain to 40% in Germany. For those poor in two out of the three years the range runs from 39% in Spain to 54% in the UK. Finally, for the persistently poor group, the figure runs from 46% in Germany to 67% in Ireland. Thus, by taking a dynamic perspective on income poverty, the ability to predict deprivation at the 70% threshold is significantly improved. Figure 63 also shows that levels of deprivation rise significantly with the number of years poor, but that countries differ quite markedly in the extent to which relative income poverty impacts on deprivation.

Persistent income poverty and persistent deprivation

Figure 64: Percentage persistently deprived 1994-96 at 70% corresponding threshold by persistent income poverty 1993-95 at 70% of median income



Source: ECHP UDB data for 1996

So far the question has been whether the proportion deprived in 1995 increases as the number of years under the income poverty line increases. A clear logical relationship emerges. However, does the degree of persistent deprivation also increase in such a logical fashion with persistent income poverty?

Figure 64 examines the probability of being above the deprivation threshold corresponding to 70% of median income throughout the period running from 1994-96 by degree of exposure to income poverty between 1993 and 1995. With the exception of Denmark, there is in every case a clear and substantial relationship. In the Danish case, the major contrast is between those individuals who entirely succeed in avoiding poverty and all others. For the former, the persistent deprivation rate is 4% whereas, for the latter, it is of the order of three times higher. In the following discussion of Figure 64, Denmark is set to one side.

Among those not experiencing income poverty in any of the three years, the percentage exposed to persistent deprivation is extremely low, ranging from 3% in Spain to 7% in Portugal. For those below the income threshold in one of the three years the figure runs from 11% in Greece to 20% in Portugal. For those poor in two out of three years the lowest value of 20% is observed in Spain and the highest of 39% in the UK. Finally, for those persistently exposed to income poverty between 1993 and 1995 the number above the deprivation threshold between 1994 and 1996 ranges from 28% in Germany to 46% in the UK.

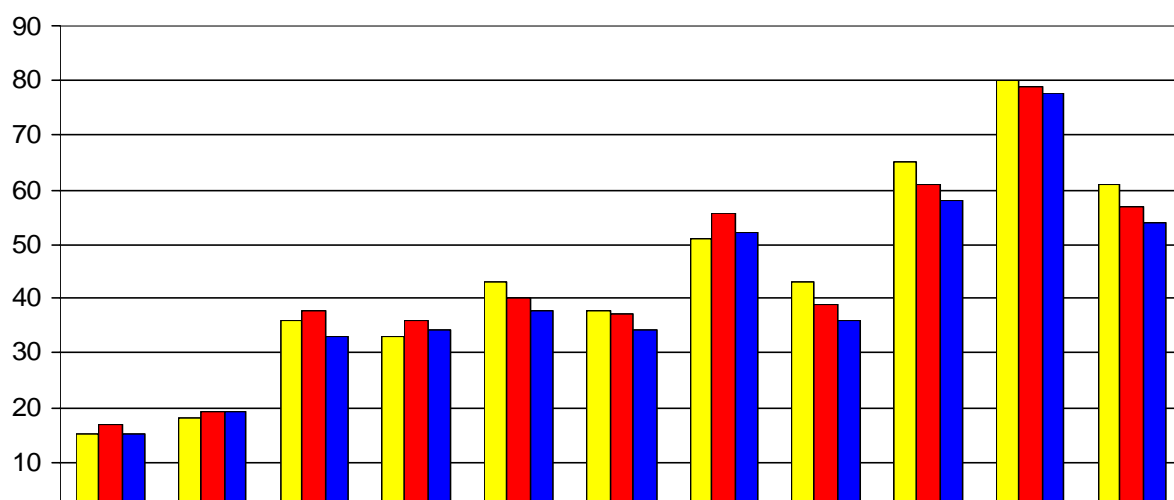
The risk of persistent deprivation thus rises systematically with exposure to income deprivation. However, as is clear, the overlap between both types of persistence is far from perfect and for nine of the 11 countries the degree of

consistency ranges between just over one third and just less than one half. For the remaining two countries it is somewhat lower. Reconsidering the findings so far, it is clear that:

- The degree of overlap between being below an income poverty line and being above a corresponding deprivation threshold is modest for the lower income lines but increases significantly in the move to more generously defined lines.
- Taking into account income poverty persistence significantly enhances ability to identify those who are above a specified deprivation threshold at a point in time. Thus the persistent poverty measure conforms a great deal more closely to expectations of how a poverty measure should behave than is the case for cross-sectional relative income lines.
- The degree of overlap between both types of persistence is far from perfect.

Income poverty, deprivation and economic strain

Figure 65: *Economic strain by median income poverty lines*



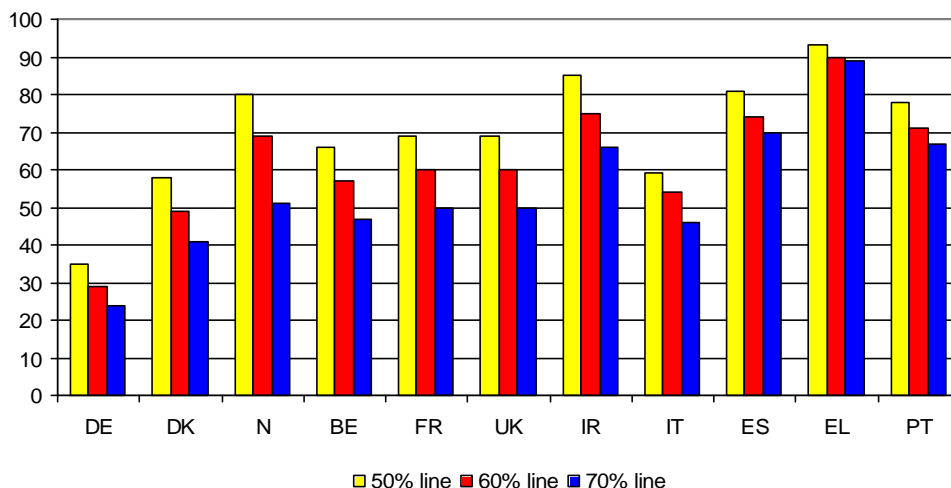
Source: *ECHP UDB data for 1996*

In order to enhance an understanding of the impact of income poverty and life-style deprivation on quality of life, this section examines subjective responses to economic circumstances. The treatment of these issues is necessarily brief and non-technical and readers are referred to Layte et al (2001b) and Whelan et al (2002 and 2003) for more comprehensive analyses. The indicator of economic strain relates to whether the respondent's household was reported to be experiencing difficulty in 'making ends meet'. Given the interest in the consequences of the extremes of income poverty and deprivation, a distinction is made between those experiencing extreme difficulty and all others. Economic strain is measured on the basis of the information given in the third wave of the ECHP relating to the situation in 1996.

Figure 65 shows the extent to which the experience of such economic strain varies as one moves from being below 50% of median income to falling below the 60% and 70% lines. Consistent with earlier analysis of the relationship between income poverty and deprivation, there is very little tendency for the reported level of economic strain to increase as the income poverty line is defined more stringently. If a comparison is made between the percentage reporting extreme difficulty in making ends meet for those under the 50% line with the corresponding figure for those below the 70% line, the difference ranges across countries from +7% to -1%. In nine of the 11 countries it is 5% or less. Thus, lowering the

threshold for income poverty does not allow the identification of individuals experiencing extreme levels of economic strain.

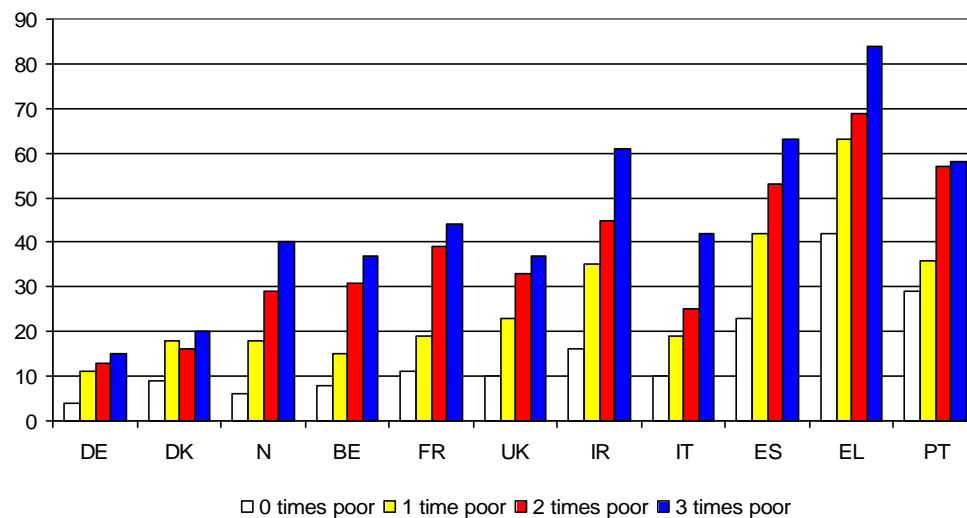
Figure 66: Economic strain by equivalent deprivation thresholds



Source: ECHP UDB data for 1996

Figure 66 looks at a comparable analysis but this time uses the life-style deprivation thresholds corresponding to the foregoing income poverty lines. Unlike the situation for the latter, when the focus is put on the deprivation lines, a systematic relationship emerges between increasing levels of objective disadvantage and higher levels of subjectively experienced economic strain. In every case, the reported level of economic strain increases from the 70% threshold to the 50% threshold. Greece and the Netherlands constitute the extreme cases. In the former, as a consequence of the distinctively high levels of economic strain, the observed difference is a modest 4%. In the Netherlands the degree of differentiation is particularly sharp and the observed difference reaches almost 30%. For the remaining countries the difference lies in the range between 11% and 19%. Viewed in ratio rather than percentage difference terms, the range runs from 1.05 in Greece to 1.56 in the Netherlands, with eight of the 11 countries lying in the range 1.28 to 1.56.

Figure 67: Percent experiencing economic strain by persistent poverty by country at the 70% line



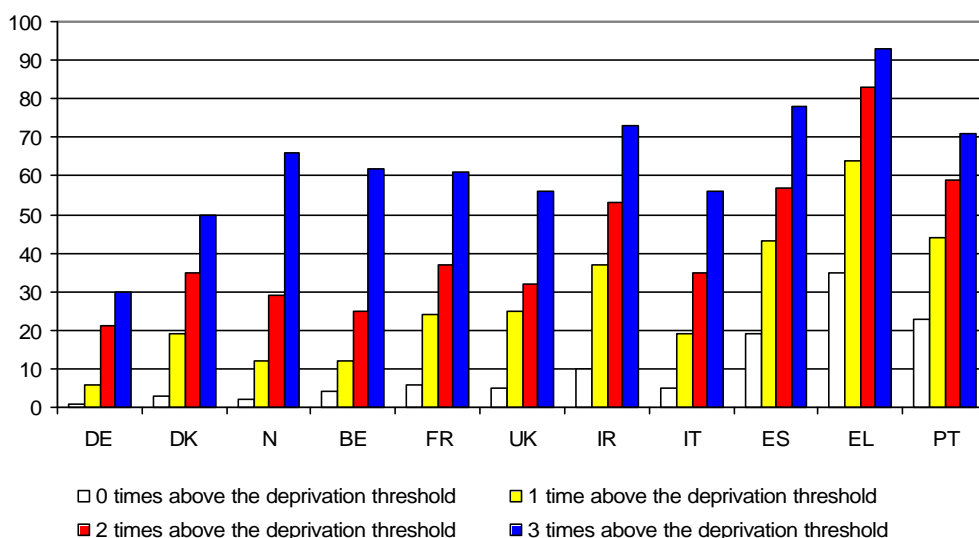
Source: ECHP UDB data for 1994, 1995 and 1996

Information about persistence of income poverty and deprivation increases understanding of respondents' reports of the extent to which they experience difficulty in making ends meet. Figure 67 shows the extent to which reported levels of economic strain rise as the degree of income poverty persistence at 70% of median income increases. In every case, the reported level of economic strain is positively associated with the degree of persistence. The general nature of the relationship is most easily summarised if, for the moment, Denmark, Germany and Greece are left on one side.

Among the remaining countries, for those who entirely avoid poverty across the three-year period, the level of economic strain ranges between 9% and 29% across countries. Where the respondents fell below the income line, this increased to between 18% and 36%. For those who were found below the poverty line on two occasions, the corresponding range was 25% to 57%. Finally, for those poor on all three occasions, the reported level of economic strain ranged between 37% and 63%.

Viewed in ratio terms in Greece, Portugal and Denmark, the persistently poor are twice as likely to report economic strain as those who entirely avoid poverty. At the other extreme is the Netherlands where the persistently poor are almost seven times more likely to report facing extreme difficulty in making ends meet. For the remaining seven countries the scale of the disadvantage suffered by the persistently poor lies between 2.7 and 4.6.

Figure 68: Percentage experiencing economic strain by persistent deprivation by country at the 70% line



Source: ECHP UDB data for 1994, 1995 & 1996

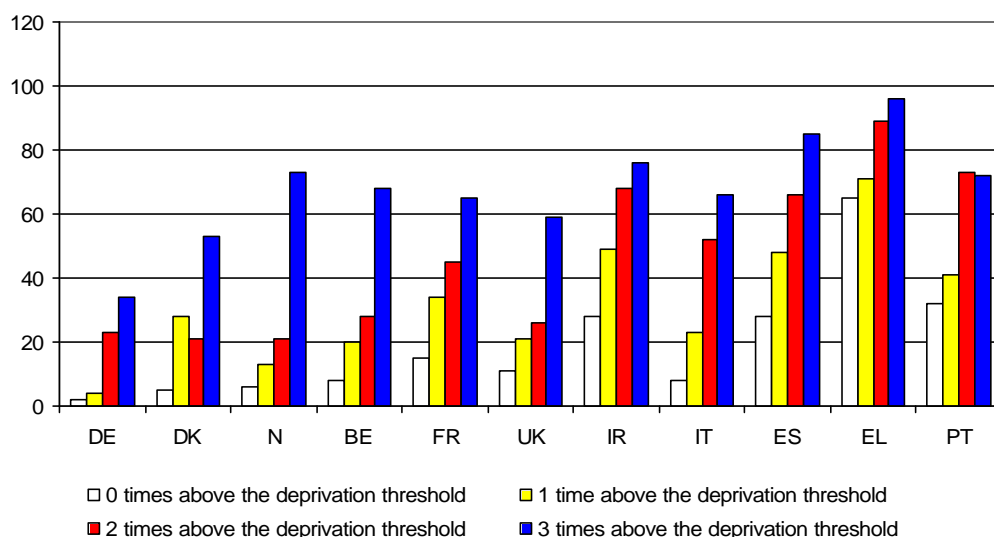
As the previous analysis has shown, the impact of persistent income poverty on economic strain is systematic and substantial. However, Figure 68 illustrates that this effect is extremely modest in comparison with the corresponding impact of persistent deprivation.

For those who remain below the deprivation threshold, economic strain is a rare phenomenon. Only in Ireland and the poorer southern European countries does it rise above 6% and only in the latter does it exceed 10%. In Spain, the figure rises to one in five, in Portugal to one in four and in Greece to one in three. In every country, the level of reported economic strain rises sharply as the extent of exposure to deprivation increases. For example, in Germany, while only 1% of those who remain below the deprivation report experience economic strain, this rises to 30% for those who go above the threshold three years in a row.

However, while the trend in Germany is similar to that in other countries, among those found above the deprivation threshold in all three years Germany constitutes an exception in that the absolute level of economic strain is substantially lower than in any other country. In every other country the level reaches at least 50%. In Greece it exceeds 90%. In Spain, Portugal and Ireland it exceeds 70%. For the remaining countries it ranges between 50% and 66%.

If the results are examined in terms of the ratios deriving from a comparison of those most and least exposed to deprivation, the disparities are substantially higher, barring those for Greece and Portugal which are similar to those observed in the case of persistent income poverty. While in the case of income poverty, the ratio did not exceed seven to one in any country, in this case, this figure is exceeded in all but the less affluent European countries, and in seven countries it exceeds 10 to one. Thus, while both persistent income poverty and persistent deprivation have a substantial impact on economic strain, the influence of the latter is considerably stronger.

Figure 69: *Extent of economic strain by persistent deprivation among those persistently income poor*



Source: ECHP UDB data for 1994, 1995 & 1996

This final point is brought out very clearly in Figure 69 which shows the impact of persistent deprivation among those below the income poverty line in all three years. Where they have also succeeded in remaining below the deprivation threshold the reported level of strain remains below 10% in five of the 11 countries and at 15% or below in seven out of the 11. In Ireland, Spain and Portugal it reaches approximately 30% before rising to a peak of in excess of 60% in Greece. As was the case for the overall sample, among those persistently poor the level of economic strain rises steadily with increasing exposure to deprivation. Although in most cases the gradient is somewhat less steep than for the overall sample the difference is very much a matter of degree rather than of kind.

Conclusions

This final section lays particular emphasis on those conclusions that apply in a fairly general fashion across the range of countries that are covered in the analysis and whose significance is heightened precisely by their general applicability.

Knowing an individual's level of economic resources is extremely important for understanding their living conditions and the ensuing implications for quality of life. Yet, as this chapter has shown, current income, which is the most widely used indicator of economic resources, has a problematic relationship with living conditions and is subject to economic strain. This has important policy implications both for poverty monitoring programmes such as the National Action Plans against poverty and social inclusion (NAPs/Incl), submitted for the first time in mid-2001, and for national welfare systems.

Level of resources can be measured in a number of different ways, but the standard yardstick that is used in the development of poverty lines in the EU tends to be income, with poverty lines set at some fraction of average household income. This produces a relative income line that represents the ability of the individual to participate in the society in question. However, ultimately it must provide empirical support for the assumption that those falling more than a certain distance below a particular level of income in the society are unlikely to be able to participate fully in the life of the community. The striking absence of such empirical support and, on the contrary, the accumulation of evidence of a rather poor fit between income and deprivation measures, particularly as poverty is defined more stringently, represents a fundamental challenge to the relative income line approach.

As awareness has grown that some of the difficulties associated with the income line approach arise from the fact that current income provides an extremely imperfect measure of permanent income or command over resources, increased attention has been directed to the use of persistent income poverty measures. This analysis shows that such measures do bear a significantly closer relationship to deprivation and come much closer to displaying the properties required of a poverty measure. This has implications for the NAPS/Incl process since many countries will be measuring poverty solely on the basis of income poverty.

With modest exceptions, the persistent income poverty approach succeeds in identifying a subset of poor individuals who not only face distinctive problems in escaping poverty but are also exposed to extreme levels of deprivation and subjective economic strain. Furthermore, although this chapter has not gone on to demonstrate this point, the socio-demographic profile of those who are persistently income poor tends to differ in important respects from those who are transiently poor. In general, such poverty is more easily predictable from knowledge of socio-demographic characteristics and is thus more likely to be amenable to social policy intervention (Whelan et al, 2003).

While a focus on persistent income poverty does constitute a significant advance, it is unfortunate that most of the concern with issues of dynamics has focused on income poverty and very little on direct measures of deprivation. This may to some extent be due to an implicit assumption that deprivation is more stable than low income. However, elsewhere, analysis shows that this is not the case and that over a three-year period, movement into and out of the higher ranges of the deprivation continuum was just as frequent as movement above and below the 70% median income poverty line. Furthermore, while there is a clear and systematic relationship between persistent poverty and deprivation, the degree of overlap is far from perfect (Whelan et al, 2003).

It is clear that, even where one adopts a longitudinal perspective, in attempting to understand poverty it would be unwise to rely solely on income based measures. It is important to recognise that a variety of resource related variables such as education, labour market experience and social class, and need related variables such as marital status and household structure, are significant predictors of persistent deprivation. Focusing solely on income not only fails to develop an adequate understanding of deprivation but leads to seriously underestimating the disadvantages associated with a range of social statuses and life events.

From a quality of life perspective, the most vivid illustration of the limitations of a focus solely on income is provided by the striking impact that persistent deprivation has on the extent to which households experience severe economic strain. Clearly, to understand how people experience their objective circumstances, then the measurement and explanation of deprivation must be taken more seriously than has been the case in the past.

Considerable progress can be made in moving beyond initially puzzling results involving weak relationships between variables that had been hypothesised to be significantly related. This can be done by moving beyond the snapshot picture provided by cross-sectional associations and instead focusing on the relationship between variables, be they objective or subjective, over time. Only in this way can a full picture emerge of the longer-term process of the accumulation and erosion of resources and the manner in which they shape individuals' experiences of their economic circumstances.

3

Health status and health care

Different conceptualisations of quality of life vary in the domains, but 'health' always commands a central position. This is understandable given the impact that poor health can have on one's sense of well-being. Unfortunately, conceptualising and measuring 'health' is difficult, yet individuals tend to have common-sense understandings of health. The individual's subjective assessment of their own health must be seen as a crucial determinant of their general quality of life.

Similarly, although the availability of healthcare services is often seen as an important contributor to quality of life, it could be argued that it is the subjective experience of healthcare services that should be seen as crucial. However, simply understanding subjective states is not enough; rather there must be understanding of the circumstances and contexts that lead to differential subjective outcomes. Without these, no policy interventions can be formed, which is the *raison d'être* of quality of life monitoring programmes.

The second section of this chapter outlines some of the problems involved in turning the concept of 'health' into a measure usable within a monitoring programme which takes the subjective assessment of individual health states seriously. The third, fourth and fifth sections relate these subjective health assessments to objective circumstances and causal factors.

Of central interest is the relationship between socio-economic disadvantage and health inequalities. Research has shown that those disadvantaged in terms of income, educational and occupational status are also more likely to experience poor health and die younger. Here both the cross-sectional and longitudinal relationships between income and health status are examined. This is followed by a discussion of some explanations that have been put forward for these patterns and their health and social policy implications.

The sixth section of the chapter draws on data from surveys of patients' experiences with hospital care across a number of countries to assess whether different systems lead to differential satisfaction with healthcare services, and the relationship this has to the level of funding of health care in the country in question.

Measuring subjective health

If asked to define health, most people tend to conceptualise it in a negative way as the absence of disease. This concept of health is rooted in the belief that it is an objective measurable state where pathological abnormalities are indicated by a set of signs and symptoms. 'Illness' on the other hand refers to a person's subjective experience of symptoms such as pain and discomfort or the perception of a change in usual functioning or feeling. Illnesses can be the result of pathological abnormality, but not necessarily so. People often feel ill without medical science being able to detect disease. Conversely, people can have a condition which many doctors would see as pathological and worthy of intervention, but not experience any pain or discomfort. From the standpoint of measuring quality of life, such problems mean that using so called 'objective' measures of health, such as the presence of specific illnesses or biochemical data, could be of little real use.

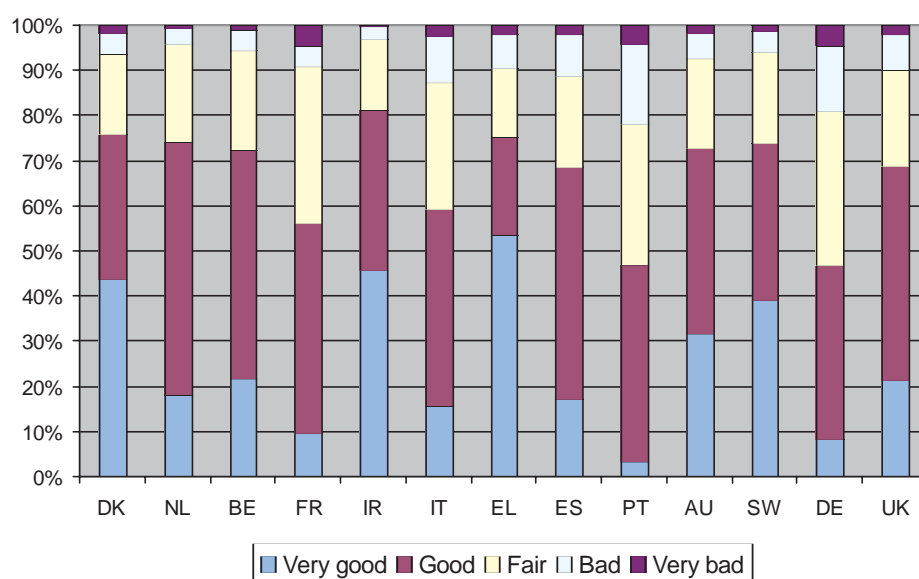
There is increasing interest in the use of subjective evaluations of health states by the individual or patient and a much more elaborated concept of health akin to the notion of health defined by the World Health Organisation as 'a state of complete physical, mental and social well-being and not merely the absence of disease' (WHO 1958). This brings out the importance of including measures of dimensions other than the bio-medical such as social, cultural and perceived well-being as well as health functioning and independent living. In a comparatively short period, this area has grown hugely and there is now a large literature around the many issues involved and a number of sophisticated instruments available (Bowling, 1991; Jenkinson & McGee, 1998).

However, rather than discussing these instruments, this chapter chooses instead to examine the use of one particular subjective health measure that is useful for the analysis of quality of life – the general health question which asks respondents ‘how is your health in general?’ and allows various response categories from very good or excellent to very bad or poor. This question is used here, not because there are not more sophisticated measures available, but because this measure has been used widely in survey research and has been shown to be a useful indicator of health status and risk of mortality. Though more sophisticated measures may be more sensitive, simple measures may still be useful if they can detect the differences between larger groups that are the mainstay of monitoring programmes.

The wide availability of the measure makes it valuable for monitoring purposes, but its simplicity brings its own problems. The general nature of the question tends to allow other processes to intervene so that it becomes difficult to compare the health of individuals who are widely separated. This tends to be particularly marked in cross-national studies where the same question leads to wide variations in health status.

The usefulness of this measure can be assessed in a cross-national context by using data from the European Community Household Panel Survey (ECHP) for the latest wave available – 1998, which has data on over 120,000 individuals. The ECHP began in 1994 and was intended as a truly comparative panel survey using harmonised sampling, questionnaires, coding and weighting procedures to create an immensely useful data source for studying a variety of processes. The questionnaires include several health indicators, including the general health question. The survey also contains a large amount of information on demographic and socio-economic subjects, some of which will also be used here.

Figure 70: *Self-assessed health by country*



Source: *ECHP UDB data for 1998*

Figure 70 shows the distribution of answers using the same question across 13 states of the European Union. The proportions answering that their health is very good ranges from just over 3% in Portugal to over half the sample in Greece with countries such as Ireland, Denmark and Sweden also having high levels of reported health. The picture at the other end of the scale is less variable with the proportions stating that they have very bad health varying from less than half a percent in Ireland to almost 5% in Germany.

What is first apparent is that most people are very positive about their health with over 50% answering good or very good in all countries except Germany and Portugal, but there are large differences in the distributions between states. It could be that these distributions reflect real differences in the health status of individuals from different countries, but it could also be that there are cultural differences in the ways that people answer these types of questions across countries. Certainly the larger difference at the top of the scale compared to the bottom could be evidence of this¹⁰.

The tendency to answer the general health question in a different manner means that direct comparisons of health status across countries are problematic at best¹¹ and are of no real use in terms of making comparisons across countries. However, it could be argued that comparisons across countries of absolute health status are not very useful anyway since the factors that influence health are unlikely to be distributed evenly across whole societies. Instead, the concentration should be on analysing variation in the health of individuals in the same society and the factors associated with this variation. This would have the advantage that individuals in the same society would tend to be affected by cultural factors in the same manner when answering questions and thus variation in answers should reflect real health differences. This approach would also enable comparing the differences, or inequalities in health status for different groups across societies since inequality measures will be relative to the society in question. The assumption of similar response patterns within countries does not seem unreasonable since the patterns are probably based in language and cultural differences and there tends to be more variation across countries on these factors than within countries.

However, to make these comparisons, first the answers to the general health question need to be dichotomised so that the proportions answering above a certain threshold can be compared between groups. This introduces an arbitrary factor into the analyses, that will be returned to shortly, but for the moment, if those who answer that they have bad or very bad health as in 'poor health' are defined, this allows a comparison of proportions across groups. This definition of 'bad health' is in a sense an empirical fiction that enables looking at differences in average levels of health for quite large groups.

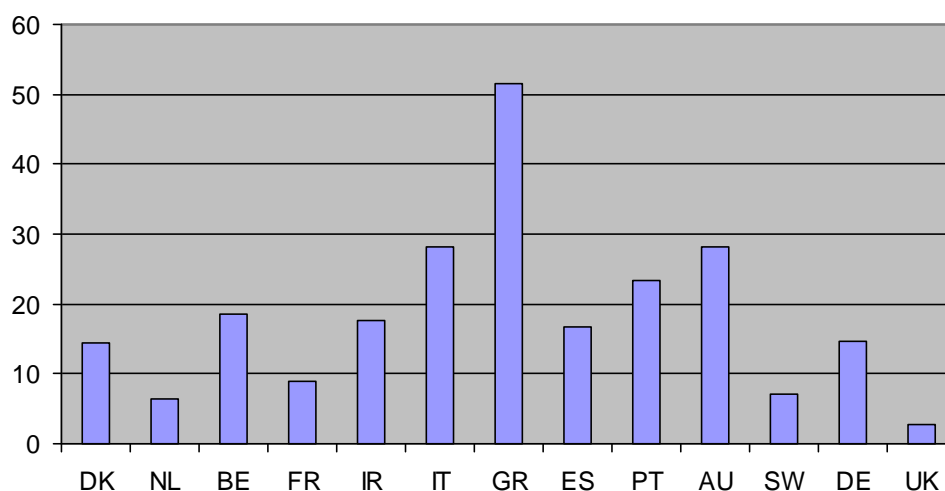
Inequalities in health

Before turning to any analysis it is useful to step back and examine which factors one would expect to be related to health status. Health status is a far wider concept than physical health status, but in using this simple measure one would expect to find worse health status among those who had health problems such as a chronic condition. The probability of having such a condition tends to increase with age, thus it would be expected that older age groups would have lower health status.

¹⁰ It could also be that countries differ widely in the characteristics that dictate health such as the age distribution, or that these characteristics interact with 'cultural' response categories.

¹¹ Van Doorslaer and Koolman 2000 have used a technique which matches answers to the general health question to a second, generic health measure to derive a 'score' for each level that can be used for cross-country comparisons.

Figure 71: Odds ratio of proportion experiencing poor health by age group (65+ v <25) by country

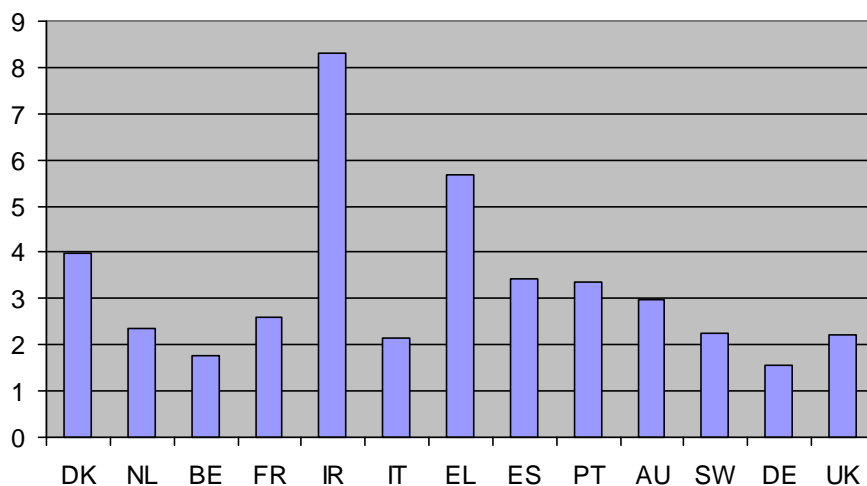


Source: ECHP UDB data for 1998

Figure 71 shows the 'odds ratio' of the risk of having poor health status by age. An odds ratio is simply the risk that one group runs of having a certain characteristic relative to another group. If the ratio is greater than one the disadvantaged group has a higher risk. Looking at Figure 71, it is clear that, across all 13 countries, the oldest age group (those aged 65+) have a much higher risk of reporting poor health with odds ratios ranging from just over three times the risk in the UK to over 50 times the risk in Greece.

A more interesting source of inequalities in health are those associated with economic and social disadvantage. Research has shown that those who are disadvantaged in terms of socio-economic factors such as income, education and social class also tend to live shorter lives. Research has explored a number of different causal routes through which these inequalities emerge (Kunst et al, 2000) and has shown that they exist in all societies studied. Given this, if a simple measure of health status is to be of any use it should find distinct differences in health across higher and lower socio-economic groups.

Figure 72: Odds ratio of proportion experiencing poor health by income quintile (bottom v top quintiles of 60% median equivalised income) by country



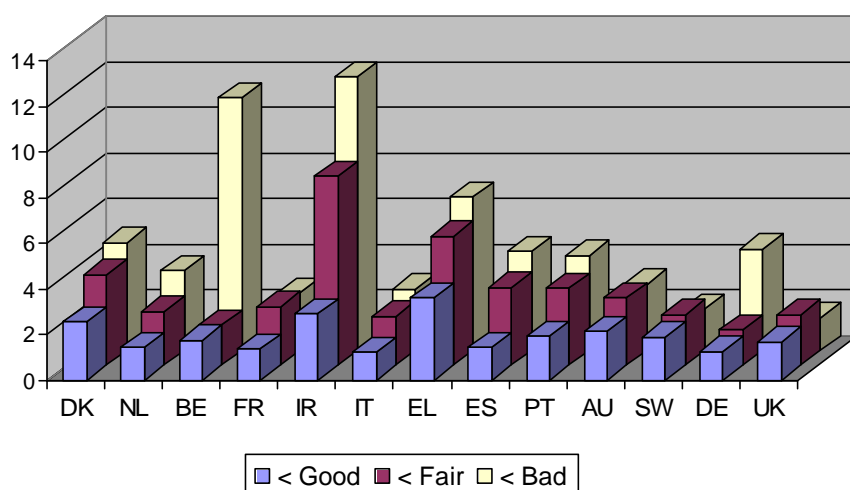
Source: ECHP UDB data for 1998

Taking the example of inequalities in income, Figure 72 shows that this is indeed true with odds ratios between the top and bottom quintiles of the income distribution ranging from under two in Germany and Belgium to over eight times in Ireland. These are very large differences in the risk of reporting poor health and the consistent nature of the inequality across all 13 countries suggests that very structured processes sustain the relationship.

Measuring health status

However, as noted earlier, to be able to use the general health question for comparisons of health status across groups, a rather arbitrary decision has to be made about where to put the cut off line below which the individual is said to be experiencing poor health. This can introduce problems since the degree of inequality then measured can vary depending on the line chosen and the manner in which it interacts with different patterns of response in different countries. Figure 73 illustrates this problem well by defining in three different ways the odds ratio between the top and bottom income quintiles for the risk of experiencing 'poor health'. Figure 73 shows that varying the definition in some countries makes very little difference to the level of inequalities observed (see France, Sweden and the UK). However, in other countries, the differences can be dramatic with the odds ratio for Ireland increasing from just under three times the risk to over 12 times the risk using different definitions.

Figure 73: Odds ratio of 'bad health' by income quintile (top v bottom) using different definitions of bad health



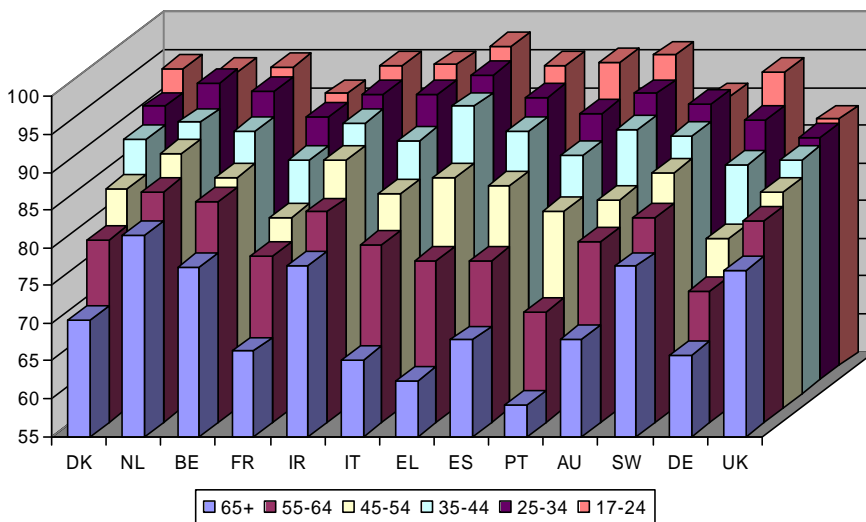
Source: ECHP UDB data for 1998

One way to avoid such problems is to convert the categorical measure into a continuous measure of health status. By doing this, the entire distribution of answers to the general health question can be used, rather than just those under some arbitrary threshold. This will give a more stable measure of health. A method for transforming the categories of the question into a health scale was put forward by Wagstaff and Van Doorslaer (1994). It entails making the assumption that, underlying the ordered categories of answers in each country, lies a continuous health scale that is normally distributed about a mean (i.e. most people's health is average and roughly equal proportions have worse and better health). Using this assumption, each individual is assigned a score which represents their 'rank' in the distribution of health in the country based on their answer to the general health question¹².

¹² To do this, all individuals within the country are ranked by their health status, from those with the worst health to those with the best. It can be seen at which proportions of the population the categories of the general health question occur. These form the 'scores' on the health scale.

However, the majority of individuals in all countries tend to answer the general health question positively, i.e. by choosing the good or very good categories. This means that the results are log-normally distributed rather than normally distributed (i.e. skewed to the right). The continuous scale needs to be adjusted appropriately by taking the log of the cumulative rank.

Figure 74: Mean health status by age group and country



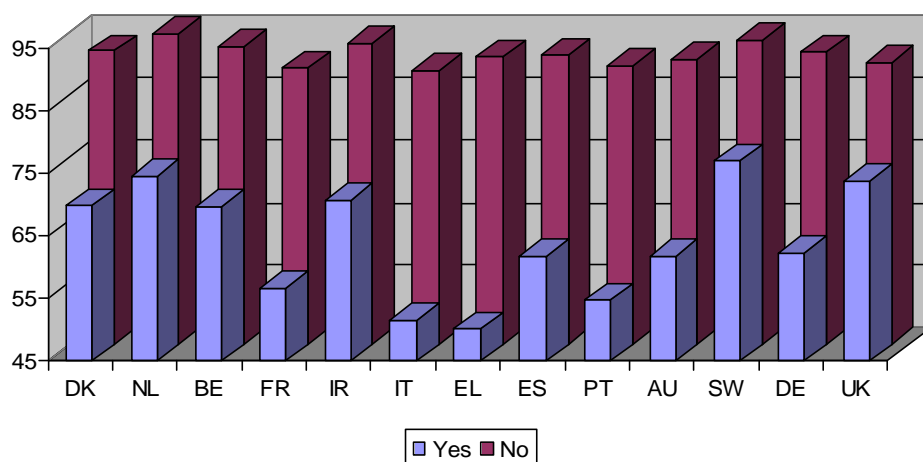
Source: ECHP UDB data for 1998

To make interpretation easier, the scales for each country have also been transformed to vary between zero and one hundred with higher values representing better health.

Figure 74 shows the mean values for this new measure for different age groups and across countries. It reveals the expected relationship with older age groups having a worse health status across countries, although the ‘slope’ by which health declines is much steeper in some countries compared to others. For example, Greece has both one of the highest health scores for the youngest age group and one of the lowest for the oldest age group, signifying a steep drop in health as age increases.

Does the expected relationship for those with and without a chronic illness emerge? Figure 75 shows that it does. Those with a chronic illness typically have a mean health status 30% lower than those without such a condition. The actual values range from just under 17% in Sweden to almost 45% in Greece.

Figure 75: Mean health status by presence of chronic illness and country



Source: ECHP UDB data for 1998

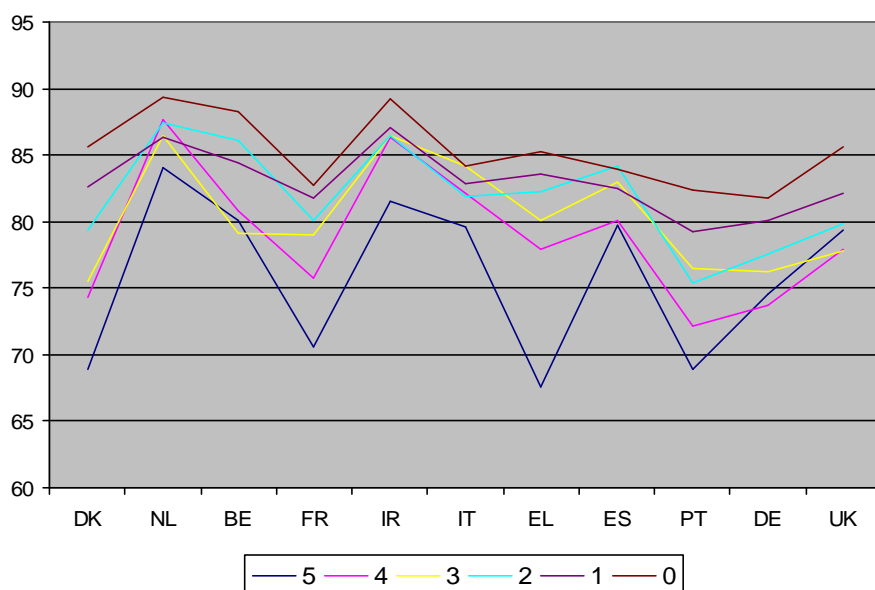
Socio-economic inequalities

The continuous measure seems to behave according to expectations, but is there a clear relationship between this measure of health and the types of socio-economic variables that were outlined earlier? Moreover, rather than just observing a cross-sectional correlation between the socio-economic variables and health, can a more process based account of the relationship be developed to establish a more causal picture?

So far, information for just one wave of the ECHP, 1998, has been used but data also exists on socio-economic subjects for the years 1994 to 1998. This enables tracking the status of households and individuals over a number of years. Using this data, the relationship between health and socio-economic status can be tracked to provide a more ‘processual’ picture.

Earlier it became clear that one’s level of income is extremely important in determining level of health status, but a better sense of the relationship between low income and health could be ascertained if one observes the relationship across time. To do so, the same individuals were tracked for five years between 1994 and 1998. It was noted by number of years when the individuals were in a household where the level of income available fell below the EU’s official poverty line – 60% of median equivalised income. This gives a count of number of years poor. If the theory about the relationship between socio-economic indicators and health is correct, this count should be inversely related to health status.

Figure 76: Mean health status by number of years poor (60% median equivalent income)



Source: ECHP UDB data for 1994 to 1998

Figure 76 shows a clear relationship between number of years poor between 1994 and 1998 and mean level of health. On average, those who have not experienced any years below the poverty line have a health status almost 10 points higher than those who have experienced five years. Moreover, if the mean level of health of those one year apart in their poverty experience is compared, successive steps can be seen in the relationship between zero and five years.

This suggests a very structured relationship where poverty and low income have a profound impact on health status across countries that grows steadily worse as the degree of exposure increases, though it is possible that the reverse is true, i.e. that poor health status led to a lower income. Although possible, this latter case is unlikely. Research from the UK has shown that, at least in terms of a person's social class position, which tends to be highly correlated with income, the causal path is from social class position to health status (Davey Smith et al, 1994).

This pattern of inequalities has led to a large amount of literature (see Blane, Brunner and Wilkinson, 1996; Mackenbach et al, 2002) as researchers have attempted to establish what influences these inequalities in health status and premature death. Though not unimportant, research has shown that health behaviour has a relatively small impact on overall health inequalities. Research is increasingly focusing on the impact of differential material circumstances (Davey Smith et al, 1994) and the psycho-somatic effects of high gradients in social and economic systems (Brunner, 1997). Using much of this evidence, an independent inquiry for the British Government completed in 1998 (Acheson et al, 1998) made a large number of recommendations such as:

- Maintaining low levels of unemployment
- Improving the living standards of those on social welfare benefits
- Reducing psychosocial work hazards such as low control and low variety through improved management
- Increasing the availability of affordable high quality social housing
- Providing affordable high quality day care and pre-school education.

Measuring healthcare services

So far, this chapter has examined how the subjective experience of health status can be assessed and tried to determine which factors might influence health status. However, there is also a strong interest in healthcare services since the equal availability of prompt and high quality services was put forward as one component of quality of life.

Measuring the availability and quality of health care across countries is complex, not least because healthcare services across different countries vary a great deal and, within countries, are large and complex organisations. Given this, producing summary measures that can be compared across countries presents considerable problems. Nonetheless, the World Health Organisation in its 'World Health Report 2000' put forward an index of national health systems' performance based on three overall goals: good health, responsiveness to the expectations of the population and, lastly, the fairness of financial contributions in the population. Progress towards these goals depends on how well systems carry out four vital functions: service provision, resource generation, financing and stewardship. The WHO World Health Report (2000) devotes a chapter to each of these functions and puts forward policy recommendations for improving each.

Although this report cannot hope to match the coverage and detail of the WHO report, it aims to pick up on one dimension that the report identifies as important and in need of attention. That is the organisational failings of healthcare services. Although it is clear from the WHO report that more affluent countries are able to offer better healthcare services, the report also argues that systems in richer countries often fail to deliver effective health care because of dysfunctional organisation. Thus, even where the needed inputs exist and financial support is adequate and fairly distributed, healthcare systems can fail to deliver because services are arranged inadequately.

This section attempts to examine this issue by using detailed information on service delivery gathered in five countries in the form of patient experiences of hospital health care. These data were gathered on behalf of the Picker Institute, a charitable organisation that has been carrying out surveys of patients' experiences since 1987 in hospitals in the United States and since 1997 in Germany, Sweden, Switzerland and the United Kingdom. The questions asked within the surveys were based on an initial qualitative study of patients' priorities and attempt to cover seven dimensions of care:

- Information and education – whether information was provided and explained clearly
- Coordination of care – the timing, efficiency and organisation of care
- Respect for patients' preferences – being treated with dignity and respect by doctors and nurses
- Emotional support – doctors and nurses discussing fears and anxieties
- Physical comfort – controlling pain and attending to personal needs
- Involvement of family and friends – whether family and friends are kept informed by doctors and nurses
- Continuity and transition – treatment, recovery and side effects explained.

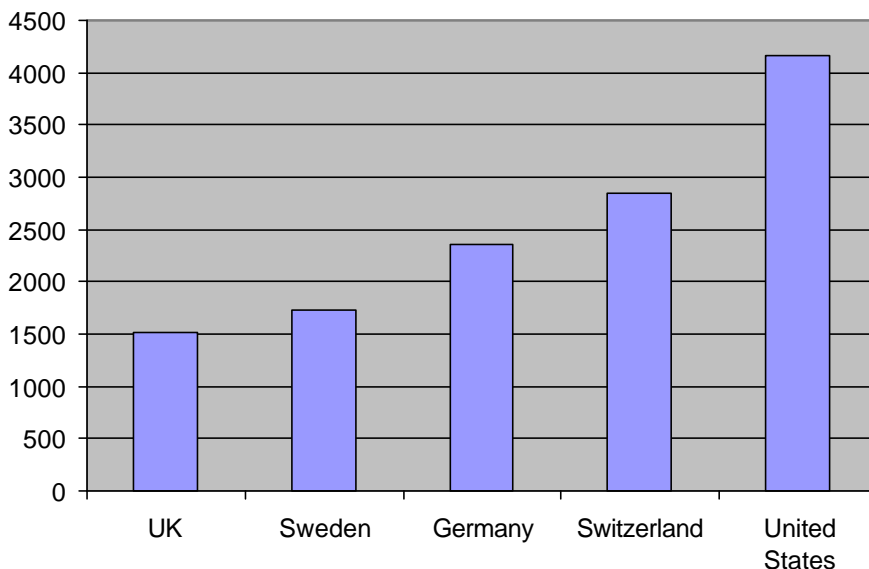
A total of 32 multiple response items make up these dimensions, with each item coded as a dichotomous 'problem score' indicating the presence or absence of a reported problem. The questions asked were very specific in nature so that the effects of different cultural settings would be minimised. For example, in the information and education domain, respondents were asked whether doctors' answers to questions were clear and whether test results were clearly explained. Each dimension is scored from nine (no reported problems) to 100 (all items coded as a problem).

The data from each country was collected from different hospitals over a 12-month period using mail questionnaires. The number of respondents varied from over 47,000 in the US, 7,163 in Switzerland, 3,274 in Sweden, 2,663 in Germany and 2,249 in the UK.

National differences

One would expect that patient experiences of health care on the dimensions just mentioned would be affected by a range of factors such as the training of staff and the effective management of hospitals. It may also be that there is a general and overall relationship with the level of funding available to the hospital care system. Larger budgets tend to mean that more medical staff are available, with more and newer equipment and more beds available for admission. These factors should have an impact on the subjective measures used in the Picker questionnaires. Although the distribution of resources across a country's health care systems may vary quite considerably, the national surveys used here should show some difference between countries.

Figure 77: Health expenditure per capita (US\$ economy-wide PPP) 1998

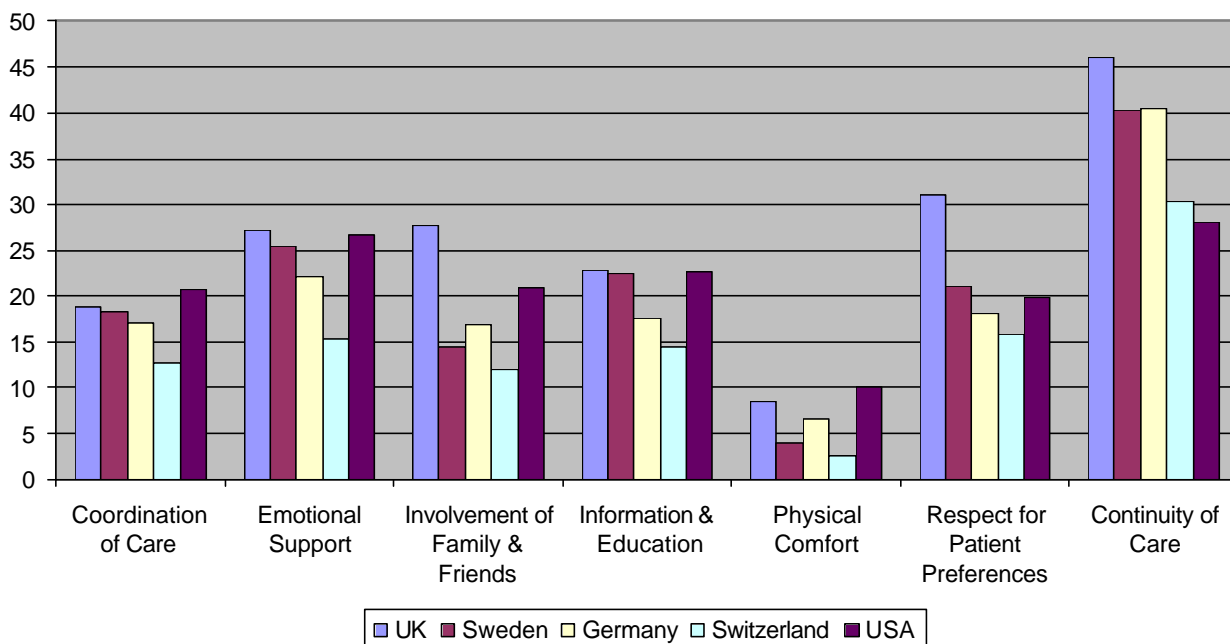


Source: *OECD Health at a Glance 2001*

Figure 77 shows that there are indeed large differences in expenditure on health care across the five countries, with the UK spending the least, followed by Sweden, Germany, Switzerland and finally the US (all expressed as US dollars adjusted for purchasing power parities). Expenditure in the US is 2.75 times greater than in the UK and almost 1.5 times that of Switzerland; thus one would expect to see quite large differences in patient experiences if the level of funding is an important factor (World Health Organisation, 2000).

Figure 78 gives the seven domain scores for the five countries and shows that there are significant levels of problems across all countries (a higher score implies more problems). Across the domains, the most problems were experienced with the continuity of care across all countries, though high levels of problems were also found with the amount of emotional support, respect for patient preferences, and information and education given.

Figure 78: Mean domain scores by country



The domain with the least problems across countries was that of physical comfort. Overall, these high levels of problems suggest that there is considerable room for improvement in a number of areas of care.

Can large differences be seen between countries in terms of problems identified, and are these as expected from the level of funding of health care in these countries? Figure 78 shows that the UK has the highest scores on all domains except the coordination of care and does particularly badly on the continuity of care (treatment, recovery rate and side effects explained) and respect for patient preferences. This seems to match expectations on the basis of funding alone. However, an examination of Figure 78 also shows that the Swedish, German and particularly the Swiss hospitals perform better than the US hospitals on five of the seven domains with the US having the lowest scores only in the domain of continuity of care.

This discrepancy between level of funding and performance in terms of patients' actual experiences of health care shows that a great many other factors may be contributing to the overall outcomes than just overall level of expenditure. For example, though a large amount may be spent on health care in a particular country, this may be because it is expensive in that country relative to other states. This is particularly true in the case of the US where cost effectiveness has been a substantial issue for some time. Performance in terms of patient satisfaction may in fact be far more responsive to organisational and managerial factors which make good use of the existing expenditure. Though more funding may improve outcomes for patients, it is still true that, as the Picker data analysed in this chapter shows, simple organisational changes could have a substantial effect.

Conclusions

Health status and access to healthcare services are regarded as central in almost all quality of life frameworks. In the past, judgements about health status tended to come from doctors and reported on bio-medical measures, symptoms and physical tests. However, there is increasing interest in the use of subjective assessments from individuals on their own health status and research has shown that these assessments are extremely useful for the analysis of the outcomes of medical interventions. This interest in subjective assessment is congruent with the need in quality of life research to

evaluate a person's subjective well-being as well as their objective circumstances. This chapter has examined the usefulness of one, extremely simple, measure of health status, the general health question which simply asks individuals to rate their health in general.

In practice, responses to this question vary hugely across countries for reasons other than variations in health status which means that it is not possible to use the measure for cross-country comparisons of health status. (Comparisons of mean health status across nations are useful in identifying the processes that lead to ill health since these tend not to be society wide.) Instead, the health status of different groups within the same society should be compared since these groups would share cultural responses to the general health question, but would differ in their responses due to real differences in their health status.

Nonetheless, the general health question still has a basic problem in application that limits its usefulness. Being made up of categories the measure needs to be dichotomised in use, throwing away valuable information. Creating a measure of the underlying health dimension facilitates making more use of the data. Analyses showed that health varied along a number of dimensions including the age of the person and whether they had a chronic illness. However, health status is also related to the person's socio-economic status in terms of their income. This relationship has all the hallmarks of a causal relationship occurring over time.

The relationship between health and socio-economic inequalities has been the subject of a great deal of research and literature. Drawing upon this, a number of reports have suggested policy responses, almost all of which fall outside of the provision of healthcare services. Reports like that chaired by Sir Donald Acheson in the UK have recommended changes rather to the social welfare system to increase the incomes of those on benefits and better management of employment and training so that unemployment is kept to a minimum. Acting on evidence that inequalities in health can be created in early life or even in the womb, the Acheson report also advocated improving services for pregnant mothers to increase their standard of living as well as a raft of services for children.

The last section of the chapter examined the relationship between the funding of healthcare services and the satisfaction of patients with these services across five countries. The basic hypothesis was that satisfaction should be related to the level of expenditure, but the results from the chapter showed that this is not necessarily so. Instead, the overall management and organisation of services and training of staff may be more effective at both increasing patient satisfaction and gaining improved clinical and quality of life outcomes. This has important policy implications since healthcare services are a major part of government expenditure in European countries. Rather than relentlessly increasing healthcare budgets, governments may in fact improve health care by examining the structure and organisation of the services.

The realisation that factors other than funding level and provision of services influence outcomes also highlights the importance of having standardised measures of dimensions such as patient satisfaction or clinical outcomes that can be compared between healthcare facilities, regions or even countries. Only by having effective measurement can service providers find out what problems are in their services and identify ways to improve them.

Overall, the chapter showed that analytical monitoring can make use of extremely simple measures to produce insights into processes that occur over time which produce wide variations in health outcomes and levels of satisfaction.

4 Subjective well-being and quality of life

While concepts of 'quality of life' vary greatly, one common thread they share is a concern for people's subjective states, that is, for how people feel about themselves and their situation in life. Economists in the past have tended to be sceptical of the reliability of psychological data on subjective well-being and traditionally resisted the inclusion of such data in measures of human welfare. However, interest in and appreciation of the scientific merit of this kind of information is rising, even among economists (Frey and Stutzer, 2002) who would traditionally have been highly sceptical. One reason for this development is that data on happiness and satisfaction point to different measures of value than those traditionally used in the social sciences. This in turn has implications for where economic and social policy should be directed and how its impact should be evaluated.

The subjective dimension is relevant to quality of life in many individual domains – one can speak of subjective evaluations of one's income, one's health, the neighbourhood, the quality of public services, and so on. In that sense subjective well-being is not a domain in itself but is an aspect of a range of different domains. In addition, global subjective well-being – one's overall sense of psychological wellness – is often regarded as an over-arching element of quality of life which transcends individual domains. It is often thought of as a joint or final outcome at the subjective level of all domains taken together. It thus constitutes something of a separate field and is widely examined as such, even though it is not a domain in the usual sense.

The present chapter deals with global subjective well-being defined in these terms. The purpose of the chapter is three-fold. The first is to provide some descriptive information on subjective well-being in European countries, focusing especially on recent data which includes most of the countries of eastern Europe along with EU member states. The second purpose is to consider some of the issues which arise in utilising data on global subjective well-being for the purpose of quality of life monitoring. These issues include the wide and apparently unchanging variations between countries on these indicators over time, and the limited relationship between indicators of subjective well-being and objective conditions at the individual level. The third purpose is to point to some of the possible policy implications which might arise if measures of global subjective well-being were accorded greater prominence in the measurement and evaluation of policy interventions.

Indicators and data sources

The measurement of global subjective well-being in large-scale surveys relies heavily on two standard questions. One of these asks respondents how happy they are and the other asks them how satisfied they are with life as a whole. These questions are normally regarded as tapping two different dimensions of subjective well-being. Happiness has to do primarily with mood or affect (how one feels), while satisfaction has to do primarily with cognitive evaluations (what one thinks about the adequacy of one's situation) (Diener et al, 1999, p. 279; Ryan and Deci, 2001). While it is clear that the affective and cognitive aspects are distinct dimensions of subjective well-being, present understanding in psychology about their underlying nature and how they are affected by surrounding circumstances is limited.

The present chapter will focus primarily on life satisfaction as an indicator of subjective well-being and will pay less attention to happiness. This is so partly because of limitations of space but also for data reasons. Time-series data on life satisfaction for European countries (which are derived from Eurobarometer surveys) are more extensive than the corresponding data on happiness. Available Eurobarometer data on life satisfaction in EU countries run from 1973 to 1999, while corresponding data on happiness run only from 1975 to 1986. In addition, the 1999-2000 European Values Study (EVS), the largest available recent cross-country source on subjective well-being in Europe, utilises a more refined measure of life satisfaction than of happiness (the former is based on a 10-point scale, whereas the latter is based on a four-point scale). The inclusion of this more refined measure of life satisfaction is particularly valuable as the data cover a wider than usual range of countries in Europe, including the former communist countries, and the 10-point scale it uses is more effective in capturing variance both within and between countries.

As much of the analysis presented here will be based on 1999-2000 EVS data, it should be noted that the societies included in this data-set do not exactly match the terms of reference for the present report. All the Member States of the EU are included (some being internally sub-divided in the data, as in the case of Great Britain and Northern Ireland and West and East Germany), but some candidate countries are excluded (Turkey and Cyprus) and some non-candidate countries are included (Ukraine, Belarus and Russia). In using these EVS data in the present chapter, the set of countries as given in the data-set are retained, including the non-candidate countries, as this maximises the number of country-cases available for analysis and increases the substantive interest of the findings.

Stability over time

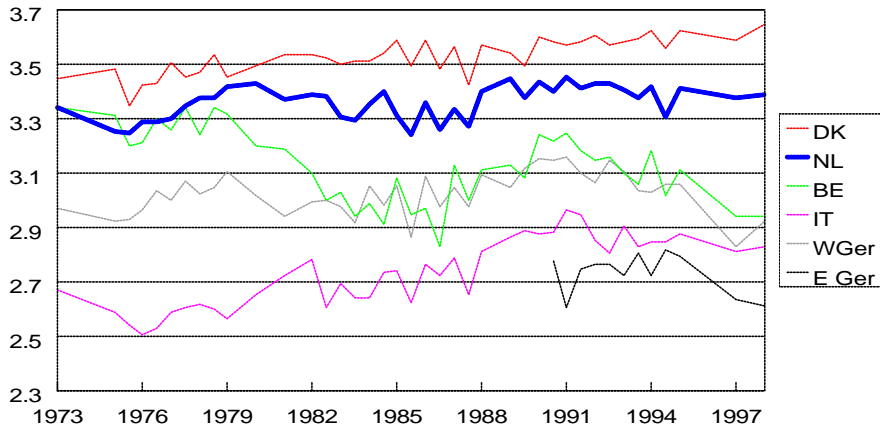
Although time-series data on subjective well-being are limited, previous analysis on such data as are available suggest that aggregate levels of subjective well-being at country level have remained remarkably stable over time and appear not to have been affected by changing socio-economic conditions. In the United States, the trend in survey-based measures of subjective well-being remained entirely flat over the period 1946 to 1990 (Diener et al, 1999, p. 288), and the same was true in Japan over the period 1958 to 1992 (Frey and Stutzer, 2002, p. 413). Living standards rose sharply over these periods in both countries (real GDP per capita increased two-and-a-half fold in the US and five-fold in Japan) and there were intermittent recessions, but these factors seem to have had no effect in making Americans or Japanese either more or less satisfied with life. Based on shorter data series, similarly flat trends have been suggested for a limited number of European countries (Inglehart, 1990, p.26; Oswald, 1997).

To explore this issue further, Figure 79 presents data from the 25-year time series on life satisfaction available for EU countries from the Eurobarometer surveys, based on a four-point life satisfaction scale. These data have been collected at 45 time points over the period 1973-1999. National means on the life satisfaction scale used in this source show that certain countries have had the degree of stability on this indicator over time which has been pointed to in previous research. Denmark and the Netherlands (Panel A in Figure 79) have fluctuated within a narrow range at the upper end of the scale over the period, though there is a small upward shift in the trends for Denmark in the late 1980s. Great Britain (Panel C) has also had an extremely flat trend for the period. Certain countries, however, have shown some change.

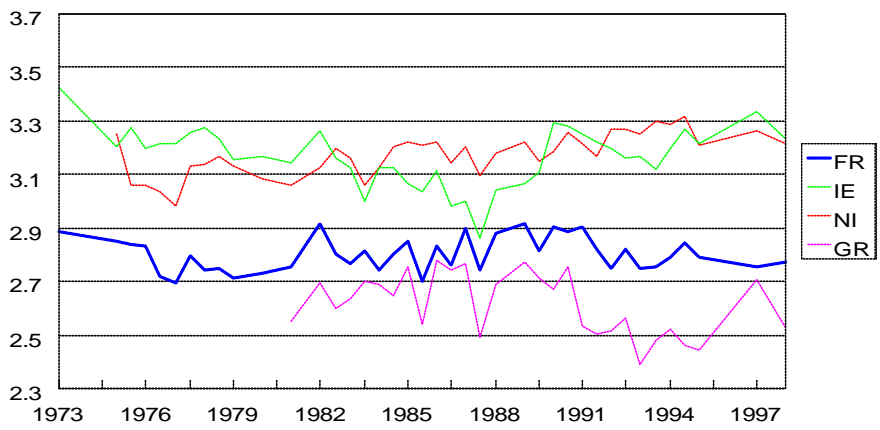
The main instance is Belgium (Panel A), where life satisfaction at the beginning of the period was up at the level of the Netherlands but dropped in the late 1970s and early 1980s. A recovery occurred in the late 1980s, but a decline to the level of the mid-1980s occurred again in the 1990s. Italy (Panel A) was the main mover in the opposite direction in that a significant upward movement in mean life satisfaction occurred between the mid-1970s and the early 1990s. Little research has been carried out which might account for the unusual element of instability in the trend on this indicator in these countries, so it is difficult to suggest what it might signify.

Figure 79: Mean life satisfaction scores* in EU countries, 1973-1998

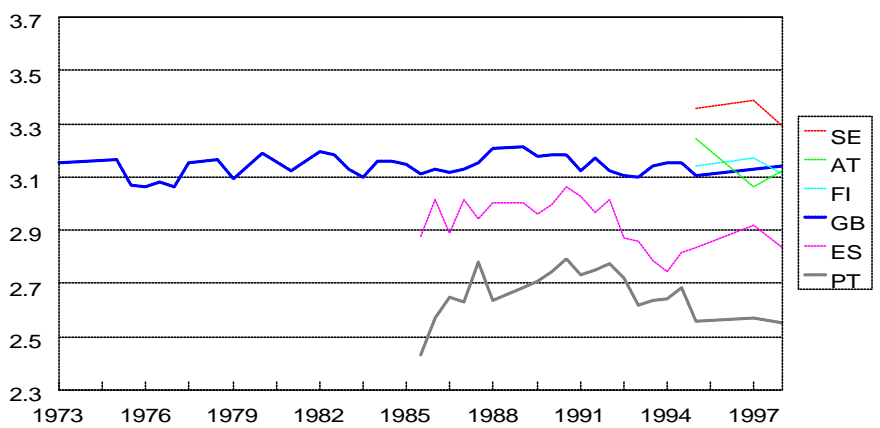
Panel A:



Panel B:



Panel C:



*Scale: 1=not at all satisfied, 4=very satisfied.

Source: Mannheim Eurobarometer Trend File 1970-1999

Variations between countries

Alongside the considerable, though not universal, stability in mean life satisfaction over time at country level, a second interesting aspect to the time-series data lies in what they suggest about cross-country differences. Here the broad patterns within the EU are, first, that cross-country differences are substantial. In 1998, as Figure 79 has shown, the bounds of cross-country variance were represented at the upper edge by Denmark (which had a mean of 3.65 on the four-point scale) and at the lower edge by Greece and Portugal (which had means of just over 2.5).

Secondly, cross-country differences are broadly though not completely, stable over time. Denmark and the Netherlands have remained consistently at the top, and most other countries have consistently ranked below them in a more or less stable order. The main exceptions, as already noted, are Belgium, which declined relative to other countries, and Italy, which rose.

Thirdly, these cross-country differences show an approximate north-south gradient within the EU. Northern European Member States generally have the highest mean life satisfaction. At the end of the period shown in Figure 79, Denmark, the Netherlands and Sweden were the only EU countries scoring over 3.3 on the scale (though Finland was well below this level). Ireland, Northern Ireland, Britain, West Germany and Belgium come roughly in the middle. Greece, Spain, Portugal, France and Italy cluster towards the lower end of the range, though they were joined by East Germany when it entered the data-set in 1989 (Panel A).

Country comparisons of life satisfaction

This pattern of more or less stable difference in cross-country patterns of life satisfaction within EU countries is difficult to account for in terms of objective material or institutional conditions. France and Italy are closer in aggregate life satisfaction levels to the poorer countries of the EU – Greece, Spain and Portugal – than to those countries with whom they share similar levels of socio-economic development. Ireland's relative standing in the EU in key socio-economic factors (particularly living standards, employment and unemployment rates) improved dramatically in the 1990s but its mean level of life satisfaction was no higher after this transformation than it had been in the 1970s and its relative position in the EU remained more or less unchanged (apart from a temporary decline in the late 1980s). Northern Ireland, with its distinctive history of civil strife, has remained consistently in the upper range of the EU distribution as far as life satisfaction is concerned and saw no change in either its relative or absolute position on this indicator as peace emerged in the late 1990s.

Given the weakness of this linkage between objective conditions and subjective well-being at the aggregate level in developed countries, questions have been asked in the past about what these indicators of subjective well-being actually mean. It has been suggested, for example, that they may be influenced by cultural factors (Inglehart, 1990; Diener et al, 1999). That is, inter-country variance in subjective well-being may reflect differences between cultures in the way people speak about their subjective condition rather than actual differences in their psychic states. Some nationalities may be culturally more disposed to voice complaint (or the opposite – to present a happy exterior) than others.

However, when comparisons are extended to include poor countries, the perspective on this question changes. Inter-country variations in subjective well-being widen and clearer linkages with objective conditions begin to emerge (Inglehart, 1990). Previous analyses on this issue suggest that, when under-developed countries are included in the picture, additional economic resources do seem to make a difference to aggregate satisfaction with life – but only up to a relatively low wealth threshold, above which their effect plateaus out (Ryan and Deci, 2001, p. 154; Oswald, 1997).

Europe-wide differences

It is in this context that European data from the 1999-2000 EVS data acquire a particular interest. The inclusion of former communist countries in this harmonised data-set broadens the range of comparative analysis which is possible for Europe and on that basis throws up some interesting results. It may be noted in passing here that these results, which apply to aggregate life satisfaction, apply equally to aggregate measures of happiness. In the 1999-2000 EVS data, country-level means for life satisfaction correlate so highly with corresponding means on the global happiness item (correlation = 0.92) that the two indicators behave almost as surrogates for each other. Separate analysis not shown here found that predictors of country-level life satisfaction worked equally well and produced similarly weighted coefficients when used to predict country-level happiness. This pattern is not replicated at the individual level in the EVS data. The correlation between the life satisfaction and happiness scales falls to between 0.5 and 0.6 at the individual level within nearly all countries, and the relationships with standard predictor variables differs considerably for the two scales at the individual level.

Table 4 presents means and standard deviations on the two global subjective well-being items in the 1999-2000 EVS (life satisfaction and happiness), along with GDP per capita for the countries concerned.¹³ Mean life satisfaction scores, which in this instance are based on a 10-point scale, show a much wider variance across the 33 European countries included in this table than that found within the EU by the previously outlined Eurobarometer data. Most of the EU countries in Table 4 have mean life satisfaction above or close to eight.

The southern European countries (France, Greece Italy, Spain and Portugal) which had clustered towards the lower end of the EU range in the Eurobarometer data still occupy more or less the same relative position compared to other EU countries – their means are around seven, with Greece falling to 6.67. These southern European countries overlap with a certain number of former communist countries in eastern Europe (Slovenia, East Germany, the Czech Republic and Croatia). However, most of the former communist countries fall well below the lower bound of life satisfaction for EU countries (i.e. having means on the life satisfaction scale below 6.5). For three of these (the non-candidate countries of Belarus, Russia and the Ukraine), mean life satisfaction falls below five.

These patterns suggest, in other words, that while the north-south gradient in life satisfaction within the EU can still be identified, its significance diminishes when it is placed in a broader European context. In that context, a much wider and steeper west-east gradient can be identified, with life satisfaction in some former communist countries in particular being extremely low.

¹³ The GDP data (as reported in UNDP 1999) are for 1997 and are expressed in US \$ at purchasing power parities. Separate GDP data are not available for Britain and Northern Ireland or for West and East Germany. UK data are used for Britain and Northern Ireland. German data are used for West Germany and East Germany is treated as missing.

Table 4: Indicators of subjective well-being and GDP per capita in 33 European societies

	Life satisfaction		Happiness		Sample size	GDP per capita (1997 \$)
	Mean	Standard deviation	Mean	Standard deviation		
Denmark (DK)	8.24	1.82	3.39	0.60	1015	23690
Malta (MT)	8.21	1.62	3.15	0.70	1001	13180
Ireland (IE)	8.20	1.83	3.38	0.58	1006	20710
Iceland (IS)	8.05	1.59	3.44	0.56	966	22497
Austria (AT)	8.03	1.92	3.26	0.65	1517	22070
N. Ireland (NI)	8.00	1.75	3.39	0.63	991	20730
Finland (FI)	7.87	1.65	3.14	0.60	1033	22150
Netherlands (NL)	7.85	1.34	3.40	0.60	1003	21110
Luxembourg (LU)	7.81	1.87	3.28	0.59	1201	30863
W Germany (WG)	7.64	1.74	3.01	0.62	1027	22030
Sweden (SE)	7.64	1.86	3.29	0.63	1012	19790
Belgium (BE)	7.43	2.13	3.31	0.68	1897	22750
Gt. Britain (GB)	7.40	1.94	na	na	990	20730
Slovenia (SL)	7.23	2.15	2.91	0.66	1004	11800
E Germany (EG)	7.18	2.13	2.93	0.71	995	n/a
Italy (IT)	7.17	2.11	2.95	0.69	1982	20290
Spain (ES)	7.09	2.01	3.06	0.59	1174	15930
Czech Rep (CZ)	7.06	1.97	2.95	0.54	1900	10510
Portugal (PT)	7.04	1.96	3.00	0.61	995	14270
France (FR)	7.01	1.99	3.24	0.62	1605	22030
Croatia (HR)	6.68	2.3	2.94	0.61	997	4895
Greece (GR)	6.67	2.19	2.91	0.72	1133	12769
Poland (PL)	6.20	2.53	2.85	0.72	1085	6520
Slovakia (SK)	6.03	2.22	2.74	0.67	1318	7910
Estonia (EE)	5.93	2.18	2.71	0.65	991	5240
Hungary (HU)	5.80	2.42	2.84	0.78	995	7200
Bulgaria (BG)	5.50	2.65	2.44	0.81	982	4010
Latvia (LV)	5.27	2.39	2.61	0.68	1010	3940
Romania (RO)	5.23	2.77	2.39	0.74	1119	4310
Lithuania (LT)	5.20	2.66	2.79	0.56	1000	4220
Belarus (BY)	4.81	2.21	2.69	0.65	966	4850
Russia (RU)	4.65	2.57	2.43	0.76	2480	4370
Ukraine (UA)	4.56	2.59	2.43	0.75	1157	2190

Note: Countries ordered by mean life satisfaction score

Sources: 1999-2000 European Values Study (life satisfaction, happiness); UNDP 1999 (GDP per cap.)

Furthermore, even within the former communist countries, country-level variance in life satisfaction is considerably wider than it is within the EU. The range in mean life satisfaction in Table 4 across the EU countries is just over 1.5 (that is, from an upper bound of 8.24 in the case of Denmark to a lower bound of 6.67 in the case of Greece). Across the former communist countries, it is 2.7 (from an upper bound of 7.23 in the case of Slovenia to a lower bound of 4.56 in the case of the Ukraine).

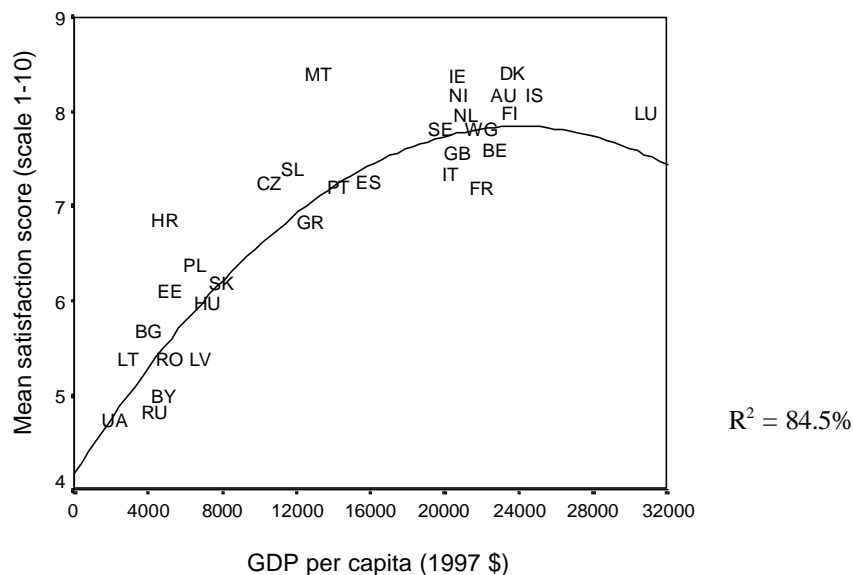
Links with economic development

While, as already mentioned, country-level variations in life satisfaction within the EU may be hard to explain by reference to objective national conditions, the same does not arise at the wider European level. Figure 80 presents a scatterplot of life satisfaction scores and level of economic development (as measured by GDP per capita) for the countries in Table 4. This shows an extremely tight relationship between the life satisfaction and level of economic development. A curvilinear regression of GDP per capita on mean life satisfaction accounts for almost 85% of the cross-country variance in the dependent variable.

Within the EU, these results suggest that the low mean life satisfaction scores of Greece, Portugal and Spain (relative to other EU countries) are accounted for almost entirely by their relative GDP per capita position. Variance in mean life satisfaction among the other EU members is much less adequately explained by GDP per capita. But then variance in life satisfaction across those countries is quite narrow when viewed in broader European terms and, within the same perspective, variance in GDP per capita among them becomes almost trivial.

Thus, if one were to focus narrowly on the group of EU countries which cluster closely together in Figure 80, Ireland and Denmark would appear to be anomalously high on life satisfaction and Italy and France would appear to be anomalously low. However, viewed within the larger picture presented by Figure 80, these anomalies seem less significant and seem hardly to be anomalies at all. Rather, it is the consistency of the patterns that these countries represent – specifically, their broad predictability in GDP per capita terms – which emerges as the more striking.

Figure 80. *Life satisfaction and economic development in 32 European societies*



This consistency extends across the former communist countries. The wide country-level variance in life satisfaction found across those countries correlates closely with their economic circumstances as measured by GDP per capita. Relatively high life satisfaction (by East European standards) in Slovenia and the Czech Republic, compared to low life satisfaction in the Ukraine, Russia and Belarus, is largely accounted for by differences in GDP per capita. Croatia (HR) is the closest to an outlier in this regard, in that its mean life satisfaction score is higher than its GDP per capita would warrant, though even in its case the deviation from expectations is not enormous. In western Europe, Malta is also an over-achiever as far as life satisfaction is concerned. It has one of the highest life satisfaction levels in Europe, even

though it is well down the scale in GDP per capita. Luxembourg is an outlier in GDP per capita, but it closely fits the regression line with life satisfaction, reflecting a levelling off of the impact of GDP per capita at high GDP levels.

These patterns are broadly consistent with the findings of previous research but differ in important details. For one thing, the relationship between life satisfaction and economic development found in the present instance is stronger than usually identified. In an analysis of 24 countries, for example, Inglehart found that GDP accounted for less than 50% of the inter-country variance in life satisfaction, compared to 85% in the present instance, and some of the studies he cites found an even weaker relationship between GDP and life satisfaction (Inglehart, 1990, p. 32).

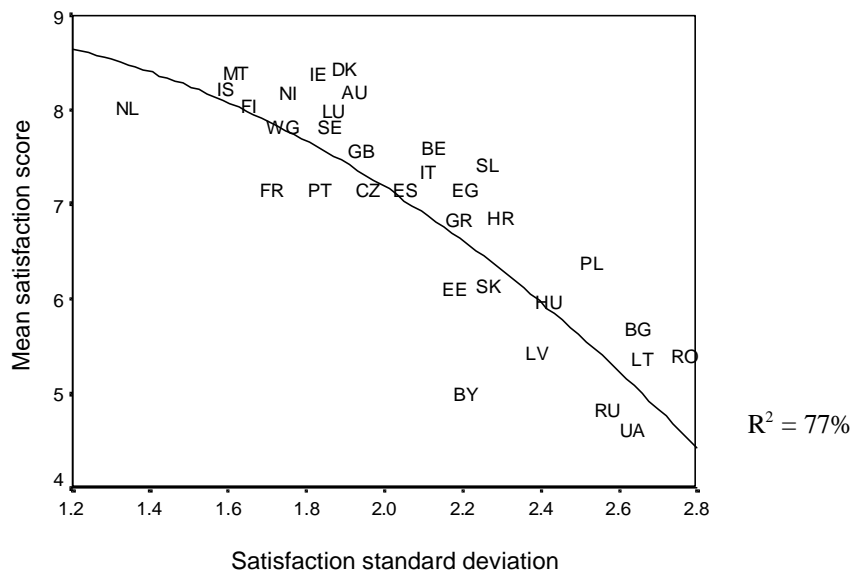
Furthermore, in the present data the levelling off of the GDP effect on life satisfaction occurs at quite a high level of GDP. The standard previous finding on this issue was that the transition from very low to moderate GDP levels had significant effects on life satisfaction but further rises in GDP mattered little. Ryan and Deci (2001, p. 154) summarise the research on this issue by saying that as far as national differences in levels of subjective well-being are concerned, 'there appear to be many risks to poverty but few benefits to wealth' and conclude that 'money does not appear to be a reliable route to either happiness or well-being'. For the European countries looked at here, however, wealth does seem to make a real difference in that the GDP effect is continuous right up to the levels found in the peripheral EU states and plateaus out off only after that high threshold.

The data available here do not allow exploring these country-level differences any further. It is quite possible that the GDP effect just examined may hide further complexities. GDP differences within Eastern Europe, for example, may themselves be the product of other factors, such as the broad quality of social and institutional infrastructure or a differential response to the collapse of communism. Countries formerly incorporated into the Soviet Union are generally worse off both in GDP and life satisfaction than the other Warsaw Pact countries. Thus, the GDP effect on national levels of life satisfaction may not be a straightforward wealth effect but a proxy for a broader set of influences that may be difficult to disentangle.

From aggregate to individual-level patterns

Moving from the country-level aggregates to the individual level data on life satisfaction for the 1999-2000 EVS countries, a further striking pattern emerges. This is that within-country individual-level variance in life satisfaction increases as aggregate (country-level) life satisfaction declines. In other words, countries with low overall levels of life satisfaction have greater internal diversity (or inequality) in life satisfaction than do countries with high overall levels of life satisfaction. This pattern is indicated by the range of standard deviations in life satisfaction shown in Table 4. The smallest standard deviation (for the Netherlands) is 1.34, while the largest (for the Ukraine) is almost double that, at 2.59.

Figure 81: Country-level life satisfaction and within-country individual-level variance in life satisfaction in 33 European societies



A more complete graphical illustration of this pattern is provided in Figure 81, which plots the means against the standard deviations on the life satisfaction scale for all the EVS countries. This plot shows a strong negative slope, and a curvilinear regression of the mean against the standard deviation produces a fit of 77%.

Table 5 gives examples to show what this difference in patterns of life satisfaction means in detail. It compares the full frequencies on the life satisfaction scale in three countries: Denmark, which has a high mean and low variance on this variable, Greece, which is medium on both mean and variance, and Belarus which has a low mean and high variance. In Denmark, the modal score on the scale is 10, and almost 77% score eight or higher. In Greece, the modal score is eight; 41% score eight or above but 27% score five or below. In Belarus, the modal score is five, only 14% score eight or above, while 30% score three or below.

Table 5: Levels and variance in life satisfaction within countries: the examples of Denmark, Greece and Belarus

	Denmark	Greece	Belarus
1 dissatisfied	0.9	2.9	7.0
2	0.5	2.3	8.6
3	1.2	4.5	14.7
4	1.9	7.8	14.0
5	5.4	9.4	22.3
6	4.6	12.3	9.2
7	8.8	19.2	10.5
8	24.5	20.9	8.4
9	23.5	14.2	3.4
10 satisfied	28.7	6.4	2.0
	100	100	100

Source: EVS 1999-2000

Thus there is little overlap in satisfaction scores between the two countries at the extremes in this table (Denmark and Belarus): only a small minority at the top of the scale in Belarus match the satisfaction levels of the vast majority of Danes, while the vast majority of Belarus citizens are less satisfied than all but the most dissatisfied of Danes. From a life satisfaction point of view, therefore, it is better to be below average in Denmark than above average in Belarus. This in turn suggests that while one's relative position in society does have a bearing on one's life satisfaction levels, the character of society as a whole can also have an influence, almost to the extent that it places limits on how far up or down the satisfaction scale one's own subjective well-being is likely to be placed.

Explaining individual level variations

While European countries taken in aggregate seem to be as satisfied with life as their material conditions dictate, the same is not nearly as true of individuals within each country. Research on the impact of objective conditions on individual life satisfaction has produced few robust findings, and it has proved difficult to identify consistently influential socio-economic factors. This in turn may be due to the large genetic element in the determination of people's levels of subjective well-being. Some psychologists have suggested that up to 80% of the variance between individuals in reported subjective well-being is due to personality factors, much of which is genetically determined. This would mean, as Diener and his colleagues comment, that 'it is as hard to change one's happiness as it is to change one's height' (Diener et al, 1999, p. 279). Furthermore, most people seem to have resilient adjustment mechanisms so that, even in the aftermath of severely distressing life-events or disturbances in societal conditions, they find ways to adjust and re-establish something close to their long-term underlying level of subjective well-being.

One of the few widely agreed findings concerning socio-economic influences on subjective well-being is that individual differences in income and other closely related aspects of material living conditions have at most only a slight effect on subjective well-being (Diener et al, 1997; Ryan and Deci, 2001; Oswald, 1997; though see Frey and Stutzer, 2002 for a more positive interpretation of the impact of income on individual happiness).

At the same time, certain other individual-level factors have been consistently found to exert some influence (Diener et al, 1999; Ryan and Deci, 2001). In most studies, unemployment emerges as the strongest of these (Frey and Stutzer, 2002, pp.419-21). The unemployed have considerably higher distress, lower life satisfaction and higher rates of suicide than employed persons (Oswald, 1997). Marital status is also usually found to be important. The married have generally been found to be happier (as well as being physically healthier) than those in any other marital status category. Other factors which are often found to have an impact include health status, age and gender, though findings on age and gender effects are of doubtful consistency and robustness.

However, there are grounds to be cautious about accepting at face value the limited impact of objective conditions on subjective well-being suggested by research to date. For one thing, the field is dominated by research on the United States, augmented to some extent by findings from a limited number of other highly developed western countries. It is not at all clear that sufficient research from other kinds of societies has accumulated to sustain generalisations about the underlying relationship – or lack of it – between socio-economic conditions and individual life satisfaction. The dangers of excessive narrowness in the range of countries examined has already been suggested in the present chapter, where it has become clear that a broad European view, incorporating the former communist countries of eastern Europe along with western Europe, gives quite a different perspective on patterns of subjective well-being than would be provided by, say, a focus on EU Member States alone.

The present analysis has also suggested that, in addition to inter-country differences in the mean level of subjective well-being, there are important differences in the within-country variations at the individual level. This latter diversity would raise doubts about the prevalence of personality factors in explaining individual subjective well-being – unless

personality could itself be regarded as a product of country conditions and so could be held to vary widely and systematically in its within-country distribution.

A further ground for caution about the status of existing findings in this field arises from data limitations. Much of the comparative research on subjective well-being has been based on data sources such as the European Values Study (or its broader international counterpart, the World Values Study) which have focused primarily on attitudes, values and subjective states and have been relatively limited and weak in their measurement of objective conditions. Data-sets which combine good quality measures of both subjective well-being and objective conditions are few and relate to the small number of highly developed countries. These countries, as already suggested, should possibly be regarded as extreme cases which provide an inadequate basis for generalisation. Outside of these countries, some analysis has been carried out on the effects of objective conditions on subjective well-being, but there are grounds for questioning the adequacy of the data on objective conditions in this body of work. Thus, one could argue that analysis of the link between subjective well-being and objective conditions needs to be extended a good deal and tested further against better data before reliable conclusions can be reached.

Influence of different variables

The EVS data used in the present chapter provide a useful illustration of these issues. The interest of these data arises from their juxtaposition of the less developed former communist countries with the highly developed countries of western Europe. This juxtaposition shows not just that mean satisfaction levels differ between these countries but also that within-country variances in satisfaction also differ. The former can largely be accounted for by differences in GDP per capita. The question now is whether factors can be identified that account for the wide variance at the individual level.

The present chapter does not have the scope to explore this issue fully and, in any event, as already indicated, EVS data lack the detailed coverage of likely predictor variables which would be needed to analyse possible socio-economic influences with the requisite completeness. Thus, for example, the income variable in the EVS data is crude and contains many missing cases, while factors such as health, housing and neighbourhood conditions are not covered at all. However, the data do contain adequate measures of some of the key predictor variables which have been identified in previous research. One of these – unemployment – is particularly important from a policy point of view.

To examine this issue here, a multi-level analytical approach is employed that looks at country-level and individual-level variations in life satisfaction side by side. Within this approach, four models are used, based on a total of 38,557 individuals within 32 countries. These models will be described here, but coefficients for each model can be found in Appendix 1. The base model (Model 1 in Appendix 1) found that a variance of 1.299 in life satisfaction arises at the country level and 4.583 at the individual level – that is, 22% of the variance in life satisfaction is attributable to the country level, while the balance of 78% is attributable to the individual level.

Model 2 explores the impact of a range of individual factors on life satisfaction. These factors include employment status, marital status, gender, age, and age at leaving education. As previous research would suggest, the unemployment and marital status effects are stronger than any others indicated in the table. The unemployed on average score one point lower on the 10-point life satisfaction scale than those who are not unemployed. Marital status is the only other variable which comes close to an effect of this size: the widowed and divorced score around 0.75 of a point lower than the married, while the single score just under 0.5 of a point lower than the married.

Compared to the dominant influence of these two variables, other variables play a modest or no role in determining life satisfaction levels. Gender has little effect: males have somewhat lower life satisfaction scores than females, although

the difference is not statistically significant. Older people have somewhat lower levels of life satisfaction, though the effect is relatively modest in size. Those with higher levels of education have higher levels of life satisfaction. Significantly lower levels of satisfaction are found among those who did not record their age at leaving education; this may reflect the under-reporting of lower levels of education.

Overall, however, the explanatory power of all these variables taken together is limited. Just under 5% of individual-level variation in life satisfaction is explained by gender, unemployment, marital status, age and education. Almost 6% of the country-level variation is explained by these factors; that is, 6% of country-level variation is, in fact, due to the population composition within countries (for example, differences in the proportion of unemployed and/or highly educated individuals).

In the case of the third model (Model 3 in Appendix 1), the focus expanded to include the impact of factors at a higher level (in this case, the country). For the purpose of this model, only one variable was included – GDP per capita. Trial-and-error indicated that it fitted best into the model if treated as a four-way categorical variable rather than a continuous variable. In the model, the reference category (GDP1) is made up of the bottom quartile of countries in GDP per capita terms. As expected from earlier analysis, level of GDP is found to be significantly associated with levels of life satisfaction. All else being equal, those in higher GDP countries tend to have higher satisfaction scores, although there is some plateauing in the effect for the highest GDP groups. GDP per capita is found to explain 88% of the variance between countries in levels of life satisfaction.

Model 4 explored whether GDP levels impact on the variability of life satisfaction scores rather than on mean scores alone. Low GDP countries not only have the lowest satisfaction levels but they also have the greatest variability in scores. Even with these variables, further analysis could be carried out to explore whether the impact of age at leaving education or age on life satisfaction differs by country or by the GDP level of countries, but that is beyond the scope of this chapter.

Policy implications

The brief illustrative analysis of global subjective well-being presented in this chapter is too limited to point to detailed policy implications but it does highlight certain themes which are significant for policy debate at European level.

One such theme is the impact of societal-level factors on individual well-being. The satisfaction level of individuals is significantly influenced by the kind of society they live in and much of this societal effect has been captured here by GDP per capita (though this GDP variable may itself be a proxy for broader institutional or historical factors). The GDP effect is present to some extent within the EU but is quite pronounced in broader European comparisons which include the former communist countries of eastern Europe.

The implication of this finding is to re-affirm the importance of raising living standards and promoting economic development both in the existing Member States which are lagging behind and in the candidate countries of eastern Europe. Improvement of conditions in these less developed countries would do more to enhance aggregate subjective well-being in Europe than further advancements in the economies that are already highly developed. This data thus reinforces the case for an emphasis on convergence and rapid development of the weaker regions as a policy goal for the European Union.

At the level of individuals within countries, the most striking finding from a policy point of view is the importance of unemployment as a negative influence on subjective well-being. Joblessness depresses the well-being of individuals more than any other identified factor. This effect does not seem to be eliminated by income supports (though it must be

admitted that income information in present data is insufficient to be conclusive on this question). Having a job, therefore, is not only about income, it is also about self-esteem and integration into society, and is one of the most important mechanisms in this area. The implication is that, as far as the well-being of populations is concerned, combatting unemployment should have top priority for policymakers. Furthermore, this implication applies even in developed welfare states which provide high levels of income support and social services for the unemployed.

However, it is also evident that further measurement and analysis is needed to establish the relative merits of unemployment and employment at the margins, that is, whether having any kind of job, no matter how menial or poorly paid, is more satisfying than being unemployed, or whether thresholds of job quality can be identified below which unemployment, accompanied by reasonable levels of income support, is the more satisfying option. Given that unemployment is one of the most pressing social and economic policy problems in the EU today, adequate answers to these questions could have a major bearing on how policy responses to this problem are designed.

Findings on the benefits of being married for subjective well-being have less immediate significance for EU policy since the promotion or protection of marriage is outside the EU policy remit (though it is important in some Member States). Nevertheless, it is of general and indirect interest, especially in view of concern in recent years on the effect of social capital – the extent and quality of one's social relationships – on many aspects of the day-to-day life. The positive impact of being married on subjective well-being suggests that the marital relationship is the most important of all social relationships in this regard. That in turn directs attention back to the family context as a core social context determining the quality of individuals' lives.

Conclusions

This chapter has pointed to the strong west–east gradient in Europe in levels of subjective well-being as a key substantive finding. It has also suggested that, while eastern European levels of subjective well-being are generally low by western European standards, there is also considerable diversity among eastern European countries. Some of them overlap with the lowest-scoring countries of the EU on this indicator, while at the other extreme those at the bottom have very low levels indeed. Those with below average satisfaction levels in most western European countries (particularly in the northern half of this broad region) generally have higher life satisfaction than those with above average satisfaction levels in the worst-off of eastern European countries. A further striking pattern is that internal variance (or inequality, as one might call it) in levels of subjective well-being is considerably greater in the less satisfied countries than in the more satisfied. Broadly speaking, eastern European countries have greater internal inequality in life satisfaction levels than do the EU Member States.

Another central finding of the chapter is that differences between European countries in life satisfaction can largely be explained by level of economic development. A simple regression of GDP per capita and its square on country-level mean satisfaction scores accounts for 85% of the cross-country variance in Europe. This is a strikingly close fit. Individual level variance is much more difficult to explain (and is much more extensive). A multi-level model drawing on the limited number of relevant predictor variables available in the 1999-2000 data-set for Europe could only account for less than 5% of the individual-level variance. However, of the variables examined, unemployment and marital status stood out as significant predictors of life satisfaction.

As far as monitoring of quality of life and related policy issues are concerned, some lessons can be drawn from the chapter. The first is that measures of global subjective well-being do have substantial meaning and are worth pursuing. The close fit of these measures with GDP per capita at the national level are a strong indication that this is so, even though it must be recognised that, in this context, GDP per capita should be regarded as a proxy for an indeterminate range of institutional and historical factors. The pronounced links between relative level of societal development and

aggregate subjective well-being points to the implication for EU policy that an emphasis on convergence and development of the economically weaker regions is strongly justified. Improving the relative position of the poorer countries is likely to yield a greater overall gain in subjective well-being than further advances in the already highly developed Member States.

A related implication applies to the approach to be used in monitoring quality of life. Measures of subjective well-being begin to show their full value only when the range of countries covered extends beyond the narrow circle of highly developed western states. In the present instance, a focus on the EU states alone produces what seem like puzzling and inconsistent findings. But when the focus is broadened to include the former communist countries of eastern Europe, coherent patterns begin to emerge and the situation of the existing EU Member States becomes more intelligible in the light of those patterns.

The findings on individual-level determinants of subjective well-being highlight unemployment as a major influence and therefore justify a strong focus on the reduction of unemployment as a goal of EU policy. However, these findings need to be explored in much greater detail in order for their full policy implications to become clear. It needs to be established, for example, whether there is a threshold of job quality below which the advantages of having a job over being unemployed disappear, or to what extent different national systems of support for the unemployed are more or less successful in mitigating the negative psychological effects of unemployment.

The search for reliable answers to these questions will require complex and careful analytical work. It will also impose requirements on data collection. Individual-level data on subjective well-being need to be complemented by detailed good quality data on objective socio-economic factors. This requirement has not been adequately met in data-sets available to date. Cross national data on subjective well-being (such as that collected by the European Values Study or the Eurobarometer) have tended to include only limited data on objective conditions, while data-sets which focus strongly on objective conditions (such as the European Community Household Panel survey or the Labour Force Survey) have paid only limited attention to subjective well-being. These two dimensions of human welfare need to be brought more closely together in monitoring instruments if understanding of overall quality of life is to be deepened.

5

Use of time and quality of life

The term 'work-life balance' appears widely in popular parlance. Stories of a threat to quality of life from increasingly pervasive demands of work hold resonance in many industrialised countries at the start of the twenty-first century. These stories share a common theme that paid work and routine chores have a place in the daily schedule, and that, if these activities expand beyond their proper place, they will poison other areas of life, thus creating an unhealthy imbalance. Curiously, popular mythology does not suggest that the contagion effect works to the same degree in reverse. Few fear free time spoiling their work. Equally curiously, while the balance of work and life is mythologised as a holy grail, the other elements that balance with work are not as clearly understood. The dynamics of the discourse of work-life balance revolve around issues of the timing of work and other activities in people's daily, weekly, and life course schedules. This chapter now turns to the question of how the elements of work-life balance might be measured, with a particular focus on the contributions time diary data can make to such research.

Work-life balance

Before discussing data, the main issues around work-life balance need to be addressed. Certain people, particularly some of the people who have succeeded in such professions as music or natural sciences, draw more life satisfaction from their work than from free time activities. Work can be a welcome relief for people experiencing difficulties at home or for people who find the routines of home life unstimulating. The workplace is the main place of social interaction for some people, and certain people draw a sense of self-worth from their work. Such people can become distressed by a forced reduction in their work hours or departure from the workforce when they retire, develop a disability, or are made redundant.

At the same time, some free time activities are evolving to resemble employment activities. Meeting up with friends for a casual drink increasingly relies on the coordination of schedules. People increasingly answer work-related calls on mobile phones while in restaurants or out shopping. Checking e-mail often entails a combination of answering work-related and personal messages, even when e-mail is accessed at home or on holiday. Consequently, it is important to remember that work and life do not always sit in opposition in people's lives, and the dividing line between work and free time is not distinct. Formally working fewer hours will not necessarily improve quality of life.

Academics and official statistical agencies have yet to develop common standards for measuring the quality of leisure (Gershuny and Fisher, 2000). While leisure industries maintain statistics of consumption (number of mountain bikes sold, number of people purchasing memberships for zoos or museums, etc.), purchase statistics do not reveal the extent to which people actually use the objects, tickets or membership privileges they possess. Mere possession can be a status symbol. People who feel that they may need a life-style change (like losing weight) may purchase a membership or object to feel that they have taken a positive step towards making such a change (such as signing up with a gym or buying an exercise bicycle), but not get around to making much use of their new possession (Gershuny and Fisher, 2000).

Researchers have also examined employment in leisure industries, which has been steadily increasing in industrialised countries (Gershuny and Fisher, 2000). Nevertheless, it is doubtful whether a rise in the number of security staff employed at football games to help reduce hooliganism among fans or a rise in the number of fast food outlets really represents an improvement in the quality of leisure experiences on offer in a society.

Social science questionnaires often include series of participation questions (in the last four weeks, have you seen a film in a cinema, attended a party, played tennis, and so forth). While the results of these questions provide a broad indication of relative engagement of groups with social and leisure events, they do not provide a straightforward measure of social activity or quality of life. A person can go to the cinema or a restaurant alone. Having done something does not necessarily mean that the participant enjoyed the activity. A person temporarily posted in a town whose inhabitants she

or he does not like may go to the cinema on a regular basis because this person perceives there is nothing else interesting to do with her or his free time, rather than because this person likes the cinema experience.

A person who is highly dedicated to a particular activity, whether playing a sport or pursuing a hobby, may devote such extensive time, energy and financial resources to the activity that other dimensions of their life suffer. In other words they may achieve an imbalance similar to the imbalance that can arise from working excessive hours. People with higher income may be able to afford to engage in a higher number of different free time activities, but this does not mean that more wealthy people get more from their free time activities than less wealthy people who spend more time performing a smaller number of activities. Consequently, participation rates do not reveal much about the degree to which people have achieved balanced lives.

Theoretical understandings of leisure likewise do not give a clear indication of how the balance of paid work, unpaid work and free time might be measured. At the end of the nineteenth century, John Stuart Mill, and later John Maynard Keynes, proposed that improvements in technology would increase the efficiency of production at a rate that would ultimately allow enough goods to satisfy people's wants to be produced in fewer hours, allowing people more time away from work to enjoy other pursuits.¹³

This argument was answered by Karl Marx, who suggested that the capitalist classes' powerful economic position required the continued exploitation of workers through (in part) long working hours. Marx suggested that one of the material and moral benefits of overthrowing the capitalist system would be the reduction of working hours.

Thorstein Veblen offered a third vision, that improvements in technology would increasingly provide workers with the means to emulate the leisure patterns of the superordinate classes, and that the desire to improve social standing would lead to a diffusion of patterns of leisure down through society.

In the 1960s, Bertrand Russell and Joffre Dumazedier proposed that the evolution toward post-industrial society would lead to an inevitable expansion of time for leisure.

All of these positions are summarised in Gershuny and Fisher, 2000. The key measures suggested by each of these theories are the total hours devoted to work and total hours over which people have discretionary control.

These theories of the rise of leisure have been challenged since the 1970s by theorists who speculate that people are losing control over their time. Joan Vanek researched the activities of middle class housewives in the United States, and concluded from her work that time-saving technologies were not living up to their name and were actually making women more busy (1974). The reason for this effect was that devices, like automatic washing machines and dryers, and technological improvements, like wrinkle free fabrics which need not be ironed, changed the economics of domestic chores. Vanek argued that new technologies made home production (washing and drying clothes with machines at home) more cost-effective than hiring domestic help or outside contractors to perform the same work. Nevertheless, these women spent more time using machines to accomplish domestic work than they had previously spent contracting out work – resulting in domestic work time increasing rather than decreasing.

Other scholars, like the economist Juliet Schor (1993), have contended that patterns of expanding hours of work have cut leisure opportunities for all Americans, and particularly for women, who have faced an increasing dual burden of performing more hours of work while retaining most of the responsibility for child care and domestic work.

This chapter now turns to discussion of the time taken by paid work, unpaid work, other necessary work, and free time.

¹³ Keynes also suggested that the working classes would need to be better educated so that they could make good use of their expanding leisure time.

Measuring hours of paid work, unpaid work and free time

Policymakers and academics have a long-standing interest in collecting statistics on contracted hours of paid employment and usual hours of work. Recent changes in employment legislation at both the European level and the national level of many EU Member States reflect a general concern among policymakers that long hours of work can have damaging social consequences (Lourie, 1996). Conventional questionnaire surveys, such as labour force surveys, have asked people such questions about how many hours they generally work (in main and second jobs), how many hours they worked in the last week, how many hours of paid and unpaid overtime they usually work, how many paid and unpaid hours are worked at home, and average times spent commuting. Hours of work have a relation to quality of life to the extent that the greater proportion of the day and week that is devoted to work, the less time remains for the enjoyment of the fruits of that labour. Nevertheless, there are shortcomings to the conventional 'hours of work' approach.

First, the accuracy of estimates of time at work is in doubt. Jonathan Gershuny and John Robinson have compared the actual hours of paid work recorded in time diaries and estimated hours worked made by the employed people who completed the diaries. They found that the estimated time is often inaccurate, for some types of work underestimated, and for others overestimated, with overestimation being far more prevalent (1994). The reasons for the inaccuracy arises as people do not have an in-built stop watch keeping track of time spent in each activity. Except in cases where working hours are rigidly controlled, people do not keep exact track of hours. Unless they carefully reconstruct their actions for a day, people have difficulty estimating actual time spent in an activity.

This phenomenon also arises for housework, other unpaid work (such as chauffeuring children to school and activities, or helping an elderly parent with medical care), time in vehicles, and time with other people (Gershuny, 2000). Further, time at the work place is not the same as time on the job, as people may attend to non-work-related matters while at work (Robinson and Godbey, 1997). The question of the overlap between work and other activities is considered in the next section.

At the same time, examining the influence of work on the balance of needs in people's lives requires a broader definition than hours worked. Time which is not paid, but which is taken up by a focus on work (such as time spent waiting for a work activity to begin, commuting, or engaged in unpaid preparation for a work event) precludes the possibility of a focus on other areas of life. Nevertheless, time spent in these activities is relevant to measuring work-life balance. Further, the concept of a balanced life must also take account of unpaid activities necessary to maintain quality of life (from arranging for repairs around the home, to paying bills, to buying supplies and goods for the household, to child care) but which in themselves are not conducive to relaxation, quality time with family and friends or intellectual challenge. Conventional measures of contracted hours or hours worked last week miss out on these dimensions of work-life balance.

Time diaries, in which people record what they do during the day (and usually also note where they are, how they travel from place to place, and who else is with them during activities), offer the advantage of collecting information on the spectrum of issues relevant to measuring balance of needs in life. Diaries collect information on actual hours worked, time spent at the workplace or in other contexts that make work the focus of those periods of the day, time in unpaid work activities, time in personal care, and time in varying types of free time engagements.

The best source of future information on time use in Europe will be the Harmonised European Time Use Studies project (HETUS), coordinated by Eurostat, but including participants which are European Union Member States, EU candidate countries, and also countries which are not candidate countries. This project has produced guidelines for time use data collection and coding, though these guidelines have been implemented to varying degrees across the participating countries. Harmonised basic tables are to be published on the Eurostat web site; the cross-national time use data file will

likely become available from the end of 2003. Most HETUS participating countries hope to conduct future time use studies at five to 10-year intervals, though funding for this aim is not guaranteed. Table 6 displays the current status of participation in the HETUS project.

In the meantime, the best source of harmonised cross-national time use data is the Multi-national Time Use Study (MTUS). The MTUS project, funded in part by the European Foundation for the Improvement of Living and Working Conditions in its early phase, has harmonised data from 44 studies conducted in 21 countries¹⁴ from the 1960s through the mid-1990s into a single data-set (Gershuny, 2000).

Table 6: *Participation in the harmonised European time use survey project*

Conducted a pilot survey – 20 countries
Albania, Bulgaria, Estonia, Finland, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Turkey, United Kingdom
Participation in the main stage HETUS survey – 22 countries confirmed
Completed field work – 14 countries
Belgium, Denmark, Estonia, Finland, France,* Germany, Hungary, the Netherlands,* Norway,* Portugal, Romania, Slovenia, Sweden, United Kingdom
In the field – two countries
Bulgaria, Italy
Fieldwork to transpire at a future date – six countries
Macedonia, Poland, Slovak Republic, Spain, Switzerland, Turkey

* did not generally follow the guidelines but cloned national data into HETUS format

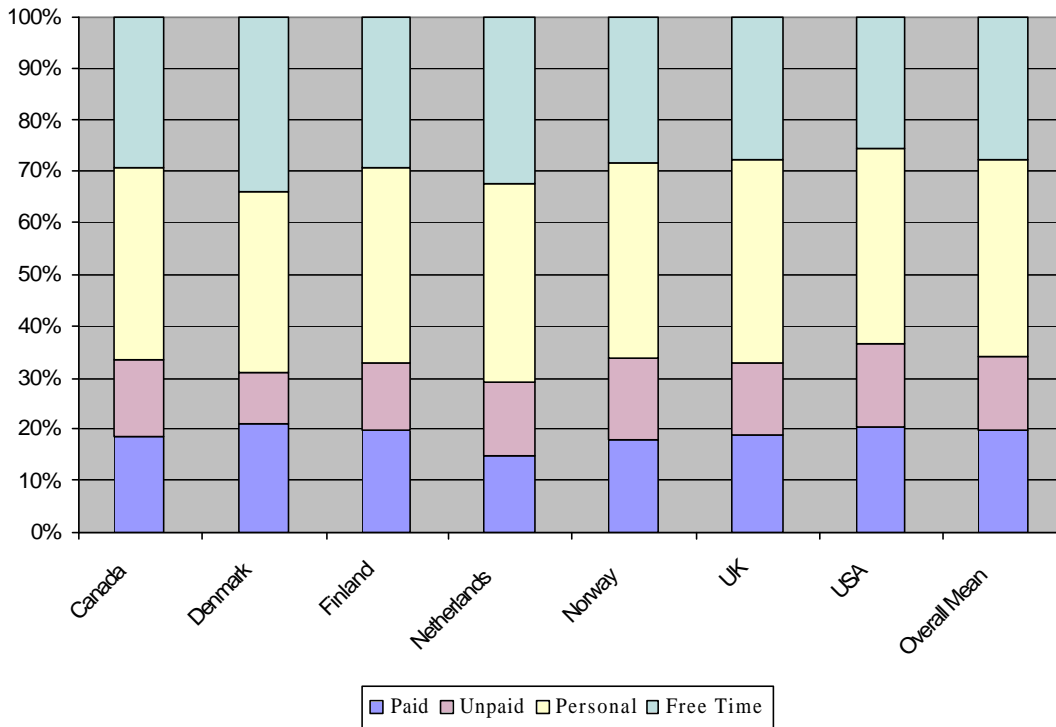
Source: *Compiled by Dr Kimberly Fisher in discussions with people participating in the collection of HETUS data during a project funded by Eurostat developing proposals for the data distribution phase of the HETUS project.*

The data is weighted so that each study is treated as having 2,000 diary days: so that larger studies do not overwhelm smaller samples in the results; so that the number of diaries produced by men and women reflect the sex balance in the national populations; and so that the distribution of diaries completed on each day of the week is balanced. Once weights are applied, the data-set covers around 150,000 diaries from 80,000 diarists.

At this time, the MTUS covers only aggregated main activity data (the sum of minutes spent in 40 activities), though, in future releases, more detail will be included (Gershuny, 2000). Given the nature of the data currently available, an overall sense of work life balance can be derived from comparing the total time in necessary activities (paid work + unpaid work + personal care time) with remaining free time. Figures 82 to 84 compare the grand mean (average time spent across all studies) in each of these four broadly-grouped activities with the data from a selection of countries, each time period, and basic demographic characteristics.

¹⁴ Details of all the studies are available in Fisher, 2002b.

Figure 82: Time use across countries

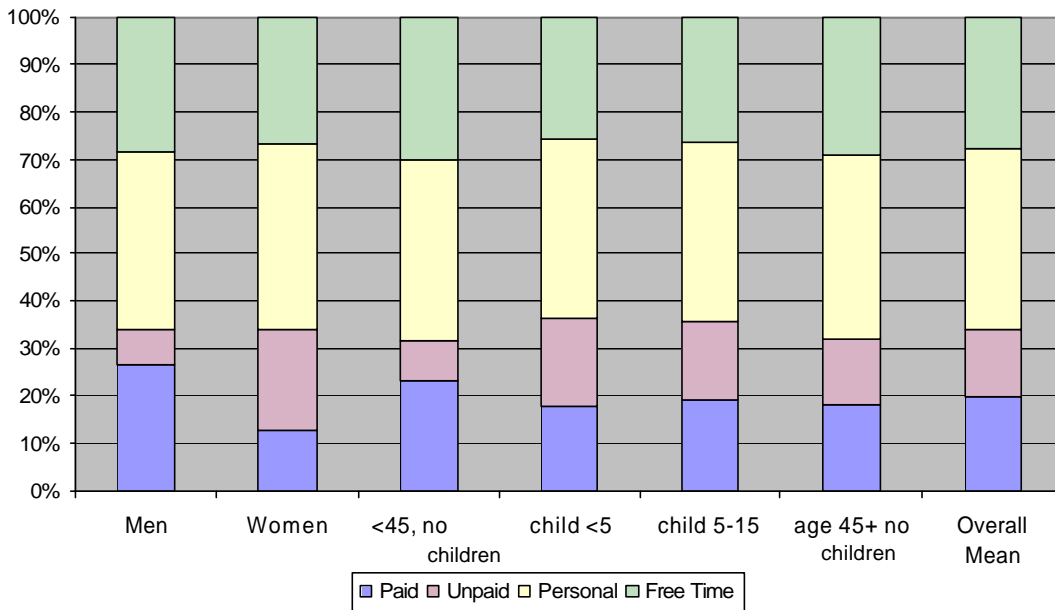


Source: *The Multi-national Time Use Study (MTUS) version 5.0.1*

Figure 82 shows that the Danes and the Dutch enjoyed relatively higher levels of free time than people in the other countries covered in the MTUS. These two countries also demonstrate that there are multiple means to the same end. Danes worked relatively long hours but performed less unpaid work while, in the Netherlands, people worked relatively shorter hours and performed more unpaid work.

Figure 83 considers the demographic details of diarists. Men and women enjoyed comparable levels of free time and performed similar levels of personal care. Men and women also perform similar levels of total work, though men primarily perform paid work and women primarily perform unpaid work. This distribution of activities creates unequal ability to make choices during free time, as men control more of the finances available for use during free time activities than women do. Having children decreases free time and increases total work time (paid + unpaid work), though paid work is lower when the diarist has a child aged less than five, and increases once all children are aged five to 15.

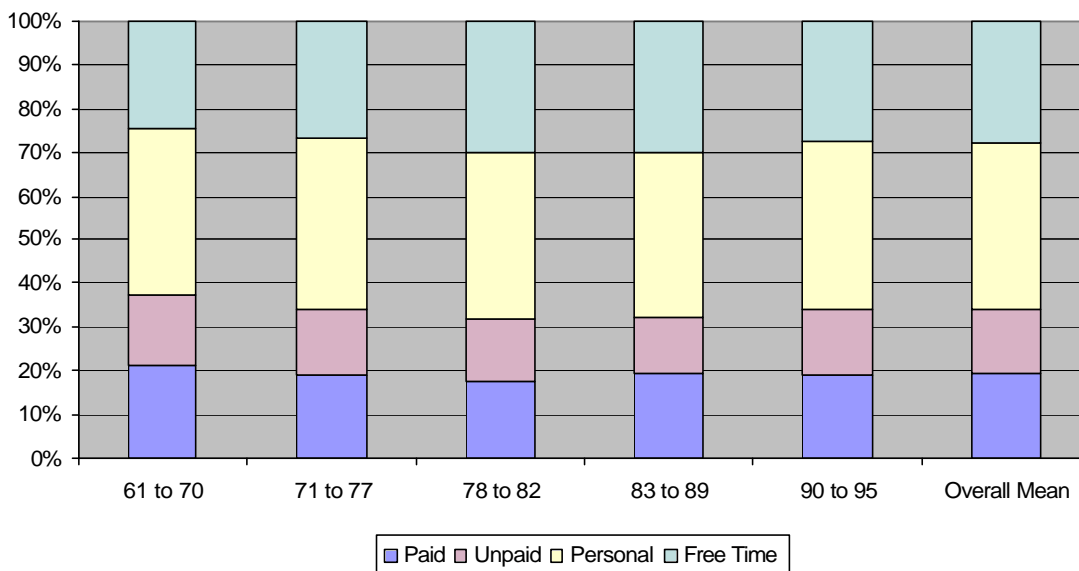
Figure 83: Time use by sex and family status



Source: *The Multi-national Time Use Study (MTUS) version 5.0.1*

Figure 84 shows that total work time declined across the countries between the 1960s and early 1980s, then began to rise again by the early 1990s. The proportion of free time expanded from the 1960s to the 1980s, then shrank slightly by the 1990s though, in the 1990s, people still enjoyed more free time than they enjoyed in the 1960s.

Figure 84: Time use by time period



Source: *The Multi-national Time Use Study (MTUS) version 5.0.1*

The reader should keep in mind that time use data does not, in and of itself, reveal the full range of processes involved in the dynamics of change in time use. Geographic, economic, social policy and social power factors impose varying constraints on people's daily schedules. Campaigns encouraging men to spend more time with their sons during the work/school week may well have less effect on men who live long distances from their workplace than on those who work near to home. Policies encouraging single mothers to spend more time improving their employment skills while their children are young will not be effective if affordable child care is not located near the homes or places of study of these mothers. Public policy must consider which groups will have the greatest and the least opportunity to change their behaviour in response to any given initiative. What time use data does provide is an indication of the effects the various key forces have on the way people allocate their time during the day.

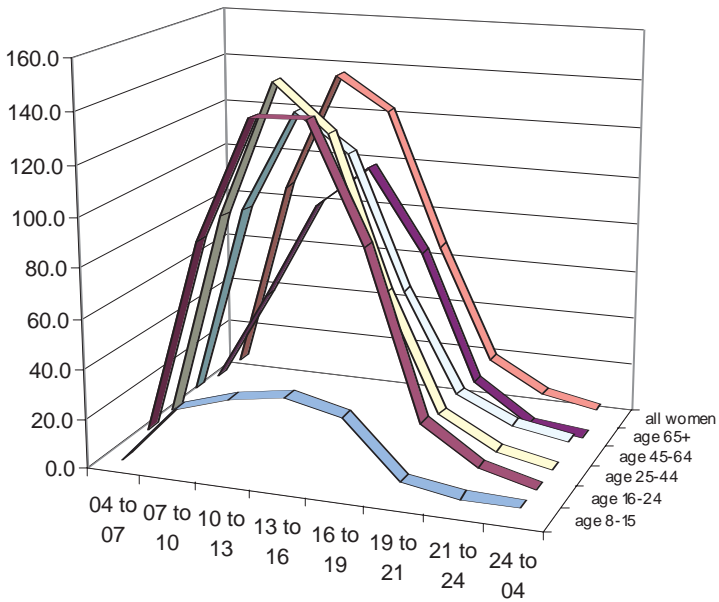
Time use data thus serves as one measure of the effectiveness of policy change; but time use data also best measures long-term, not short-term, change. People do not readily alter their habits, and consistent information and incentives must be applied over the long term to have significant effects on behaviour. For instance, in spite of pressure, first from feminist campaigners, and more recently from public agencies, to equalise the performance of both paid and unpaid work by men and women, women continue to perform the majority of unpaid domestic work (Gershuny, 2000). Men have increased the time they spend doing housework and child care, but by a small amount. By 2000, men in Finland performed an average of 12 more minutes per day of domestic work than they had performed in 1987 (Niemi and Pääkkönen, 2002, p. 95). Between 1961 and 1995, British men increased their average time performing household cleaning and child care by 47 minutes a day (Gershuny and Fisher, 2000).

The overlap of work and leisure

Aggregated time use information does not reveal the full story. People often perform more than one activity at the same time, and people who lead different lifestyles make different rates of transitions between activities. Relaxation and rest require time to let a person's mind and body shut down from other activities. Likewise, achieving a work-life balance can be defined by the ability to keep work in its place in the daily cycle and to prevent work from intruding into other activities. Time diaries are particularly suited to measuring both the timing of work and level of intrusion of work into other activities. As noted in the previous section, the study of work-life balance can include the analysis of both paid and unpaid work together. Nevertheless, as this area of research is relatively new, this section concentrates on the overlap of paid work and other activities, using data from the British National Time Use Study of 2000-01.¹⁵

¹⁵ The study, which is the UK element of the HETUS project, collected diaries from June 2000 to August 2001 from all people aged eight and older (11,700 people) in 6,500 households randomly selected for England, Wales, Scotland and Northern Ireland. The data include 21,000 diaries, roughly half collected on week days and the other half collected on weekend days. The net diary response rate (completed diaries for sampled households) was 45% (Fisher, 2002b). The data used are weighted. Missing values were not inputted. Diaries containing fewer than 22 hours and 30 minutes of valid information (approximately 8% of the collected diaries) were excluded.

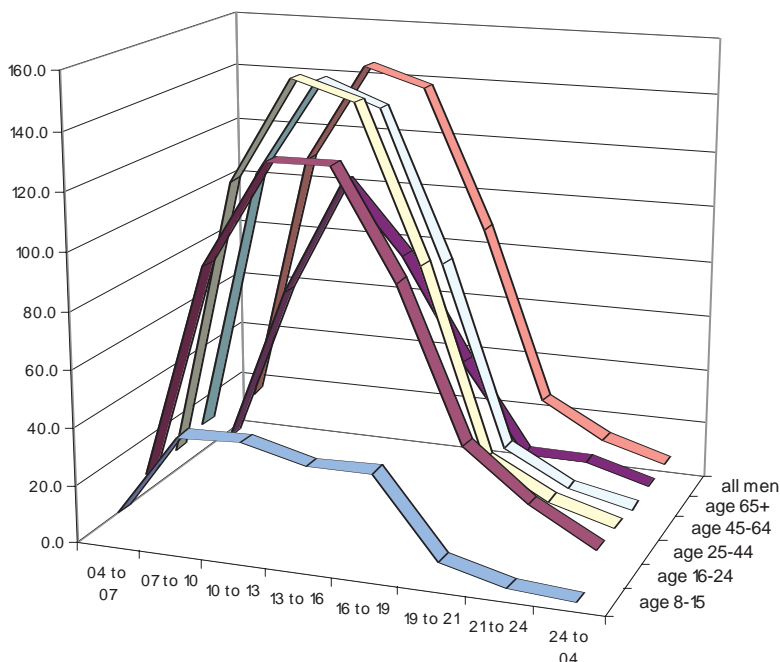
Figure 85: Women's working time by time slot in the UK (for work day diaries only)



Source: Office for National Statistics (London), National Time Use Study, 2000-01

One way of conceptualising the work–life balance is to think of work, social activity and family life, and personal needs having their place in the day. Figures 85 and 86 show that men and women in Britain follow similar patterns in their scheduling of working hours during the day. As a higher percentage of men than women work full-time, men's average hours are longer than women's average hours and women's highest density of work hours peaks before men's highest density of work hours. An exception arises for people aged 65+ who work. Older men start and end work earlier than older women.

Figure 86: Men's working time by time slot in the UK (for work day diaries only)



Source: Office for National Statistics (London), National Time Use Study, 2000-01

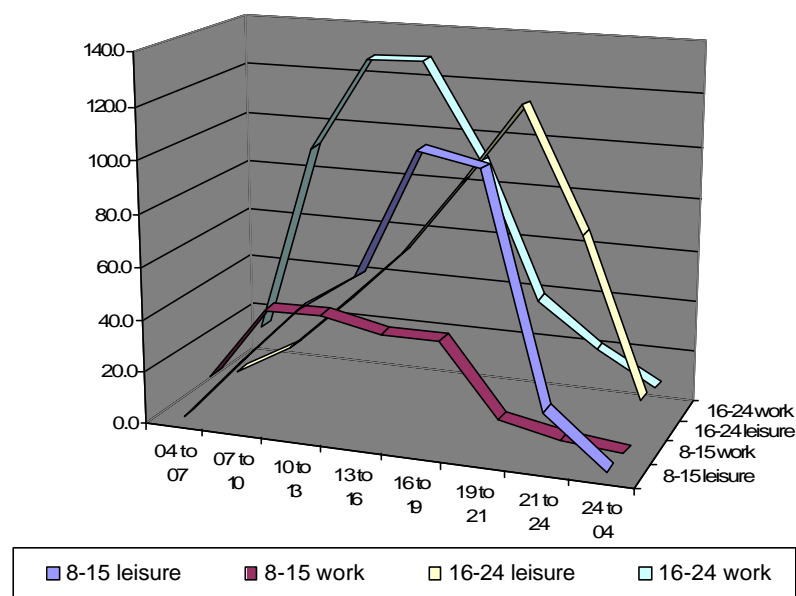
Data such as these can be used in three ways to measure work–life balance. Similar to the examination in the previous section, one can consider the total proportion of the day in which work takes place. The higher the percentage of the population which works during a high proportion of segments of the day, the less opportunity there is for a work–life balance.¹⁶ Over 32% of men worked during five or more three-hour segments on an average week-day work day. On Saturdays 22% of men and on Sundays 20% of men work during five or more segments of the day.

Roughly half the percentage of women as men work for pay during five or more three-hour segments of the day. As with men, more women (15.5%) work over a large proportion of week-days than weekend days. Nevertheless, the percentage of women who work during most segments of the day increases on Sundays (11%) compared to Saturdays (9%)¹⁷

Considering the proportion of the day touched by work, women in the UK have more potential opportunity to achieve a work–life balance than men, though this is primarily because women are more likely to work part-time than men. As a consequence of continued wage differentials between women and men, women have fewer financial resources to spend in their free time than men (Fisher, 2002a). A high percentage of both men and women devote a large proportion of their work days to work.

Not all people who worked over a large segment of the day necessarily failed to achieve a work–life balance. It is possible that some people live in households where work is concentrated in small numbers of days to allow for larger concentrations of other needs and pursuits to be accomplished on other days.

Figure 87: *Timing of young British men’s work and leisure*



Source: Office for National Statistics (London), *National Time Use Study, 2000-01*

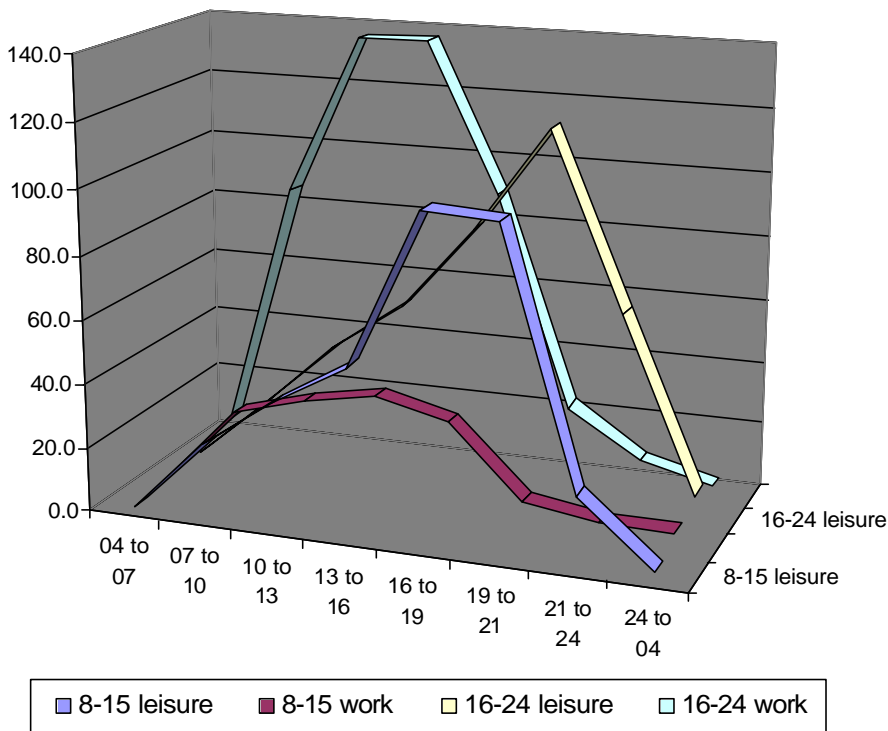
¹⁶ In this sample, three people worked during all eight three-hour periods, and 40 people worked during seven of the eight three-hour periods.

¹⁷ These differences are statistically significant, Pearson’s Chi-Squared 2-sided $p < .000$.

Nevertheless, the greater the concentration of work on any particular work day, the more constraints (such as restoring energy after the drain of working long hours, or coordinating the timing of days off with friends and family members) a person must overcome to achieve a work–life balance. Consequently, in aggregate, lower numbers of people in a country working over most or all segments of the day would suggest a relatively higher possibility for people to achieve a work–life balance.

An alternative way of measuring the same concept would be to determine if each dimension of life peaks for demographic groups at different times of the day.

Figure 88: *Timing of young British women’s work and leisure*

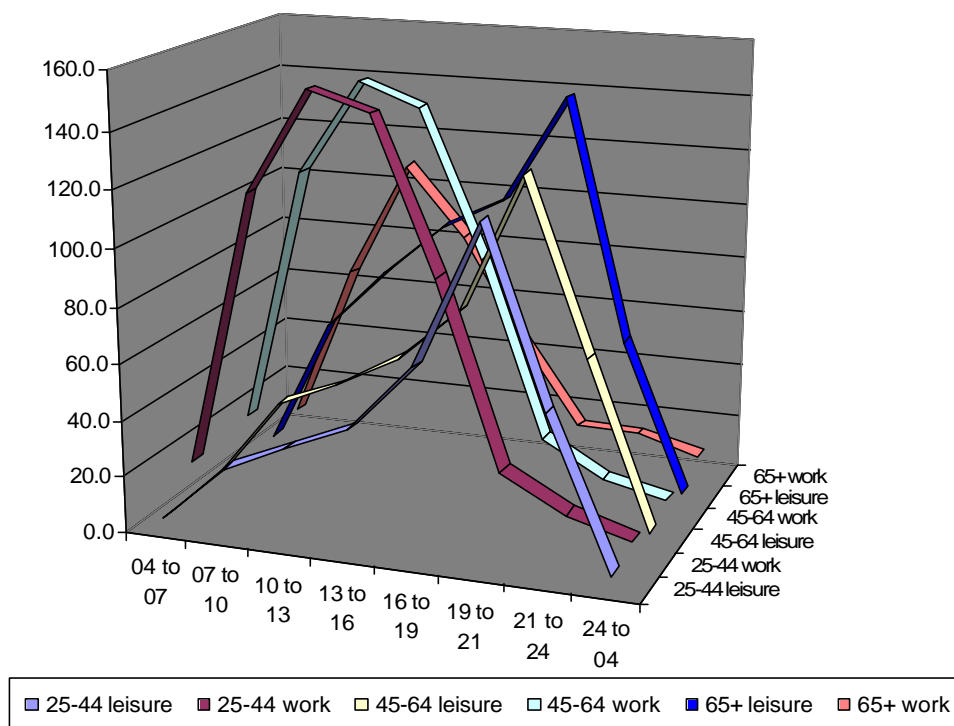


Source: *Office for National Statistics (London), National Time Use Study, 2000-01*

If people in a demographic group have similar general patterns of leisure, then they also have opportunities to socialise with other people in their peer group. Likewise, if periods of leisure peak at similar times for the different generations in families, then families are experiencing more opportunity to spend time together. Whether family members actually meet together during leisure time when they have the opportunity or whether they engage in separate activities is the subject of the next section.

Figures 87 to 90 compare the timing of activities related to paid employment and leisure activities (social time, participation in sports and other leisure-based physical exercise, playing games or engaging in hobbies, reading, watching television, videos and DVDs, listening to the radio, tapes, records and CDs) for men and women of different age groups in the UK. These figures show that leisure time peaks for women and men of all ages between four pm and nine pm, which indicates that most Britons enjoy opportunities to enjoy social time with both their families and their peer groups.

Figure 89: Timing of older British men's work and leisure

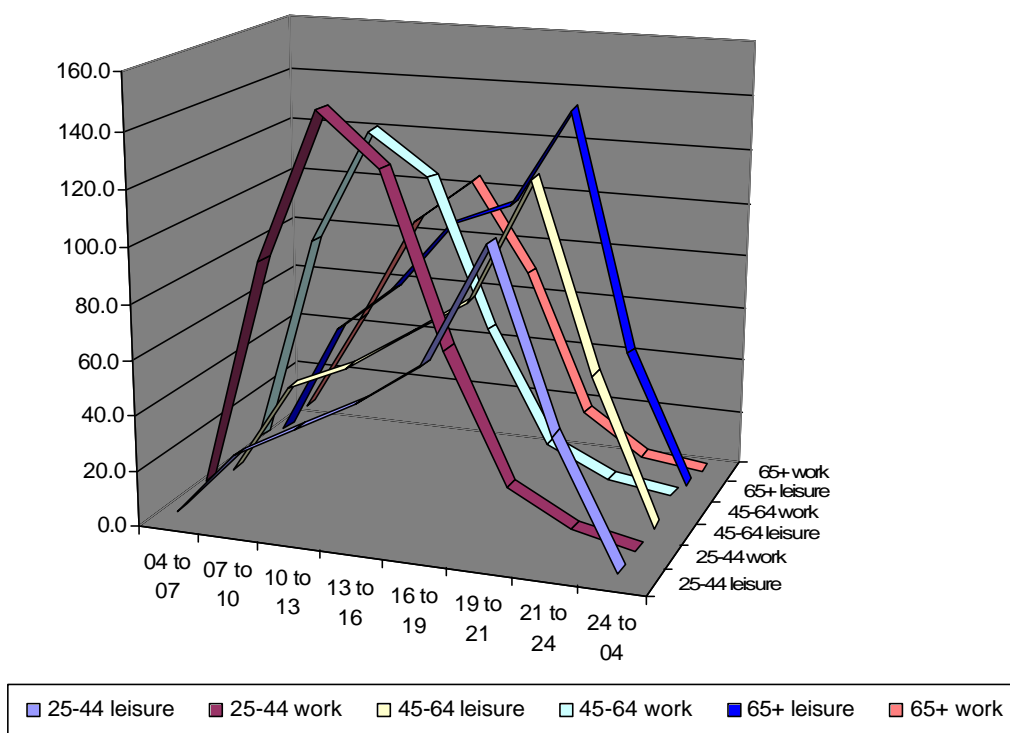


Source: Office for National Statistics (London), National Time Use Study, 2000-01

As would be expected, men and women aged eight to 15 and aged 65 and more engage in more leisure than employment activities, while men and women aged 16 to 64 engage in more work than leisure. Men's total time in employment is higher than women's time in employment (though women spend more time performing housework, child care and other unpaid domestic work than men, but the domestic work is not shown here). The peak work period for men and women aged eight to 24 plateaus over a longer period than for older workers, and young people's leisure time plateaus over a longer period than the peak leisure time of adults.

Overall, these figures suggest that most people in the United Kingdom have a reasonable opportunity to enjoy a work-life balance. Nevertheless, as this is a short illustrative report, these images are necessarily simplistic. Sleep and personal care time and necessary unpaid activity are not included to keep the images clear. More pronounced differences emerge when the figures are broken down by such factors as region, employment status and industry of work.

Figure 90: Timing of older British women's work and leisure



Source: Office for National Statistics (London), *National Time Use Study, 2000-01*

More significantly, there are qualifications on the quality of work and leisure time that do not emerge in figures displaying total time in activities. Some of these qualifications will now be discussed further.

A second method for measuring work–life balance might be by examining the timing of work during the day. The more times people have to shift into and back out of work mode during the day, the greater the drain work can make on each person, and the more restricted their time to interact with others becomes. This concept is measured in the UK time use data by identifying instances of split work periods. Split periods are defined here as work taking place during one three-hour time slot, not taking place during the next sequential time slot, but taking place again during a later three-hour time slot. 310 people (5% of the sample, 5.4% of men and 4.5% of women) worked in split periods during the day.¹⁸

Both men and women are more likely to work over split periods on weekend days than on week days.¹⁹ Men in routine and manual professions are more likely to work over split periods, and men in managerial and professional occupations are least likely to work over split periods. By contrast, women in both routine and managerial/professional occupations are equally likely to work over split periods, while women in intermediate professions are least likely to work over split periods.²⁰ For Britain, the percentage of split period workers is small.

¹⁸ Four people had two breaks of at least three hours between periods of work during the same 24-hour day.

¹⁹ 5% of men and 4% of women work during split periods on week days; 7% of men work over split periods on Saturdays; 8% of women work over split periods on both weekend days; and 10% of men work over split periods on Sundays. These differences have a Pearson Chi-Squared 2-sided significance of $p < .002$ for men and $p < .01$ for women.

²⁰ For men, 8% of routine and manual workers worked over split periods; as do 5% of men in intermediate occupations and 4% of men in managerial or professional occupations (Pearson Chi-Squared 2-sided significance $p < .000$). For women, 5% of routine and manual workers as well as professional and managerial professions work over split periods, while 2% of women in intermediate occupations work over split periods (Pearson Chi-Squared 2-sided significance $p < .001$).

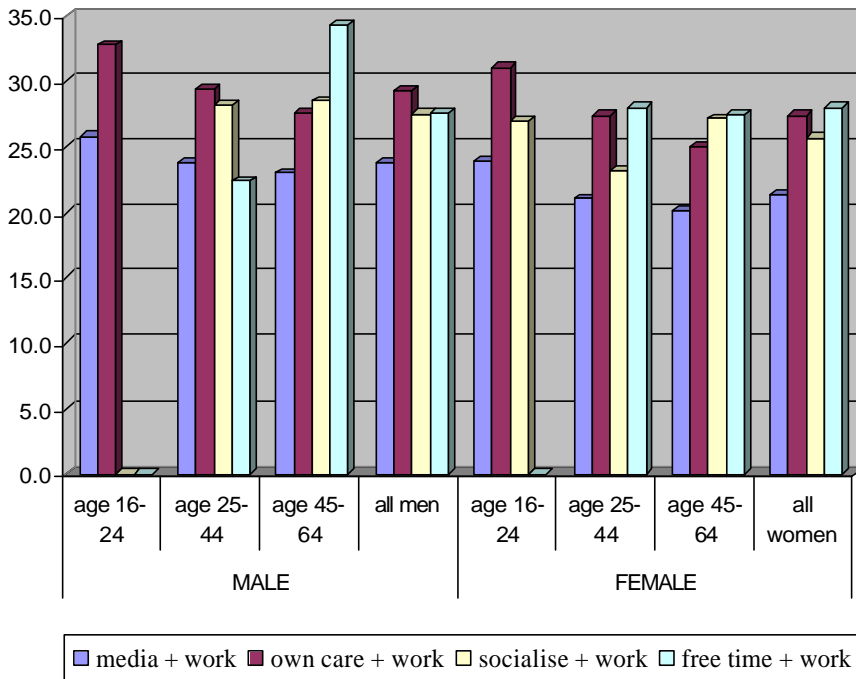
One must exercise some caution in defining all split period working as undesirable. In some households, people may find that they are better able to juggle the needs of their household (such as looking after a child with special needs) when one person works over split periods. The key issue for quality of life is whether the individual works over split periods out of personal choice or because they are compelled to work such patterns. Issues of concern for policymakers would be both the degree to which employers force employees to work split periods, and also the degree to which the marginally employed who rely on multiple part-time jobs to make ends meet are forced to work split shifts by a lack of alternative job opportunities.

The third way to measure work–life balance using time diary data is to consider the degree to which work overlaps with other aspects of the day. People periodically perform more than one activity at the same time. For instance, people may listen to the radio while driving or supervise the children doing their homework while cooking dinner. Most time diaries collect information about the main focus of people’s attention as well as activities they are doing at the same time. In this study, men who worked on their diary day spent an average of eight hours and 54 minutes in work related activities as their main activity.²¹ For an average of 14 minutes of this time, men did another activity at the same time as work, and for an additional 15 minutes, men performed a non-work activity as their primary focus while also doing something related to paid work. Women spent an average of seven hours and 20 minutes in work related activities, and in 11 of these minutes, women did something else in addition to work. For a further 14 minutes, women worked simultaneously while doing something else as the main focus of their activity. Figure 91 shows the average time that these joint activities take for those people who performed each joint activity.

There are four main categories of activity into which work intrudes, as shown in Figure 91. Media with work covers watching TV, reading, and listening to the radio or music while working (such as reading while commuting or arranging invoices while watching TV). Own care with work primarily consists of taking a business call on a mobile phone while using the toilet or eating lunch while continuing to work at one’s desk. Socialising plus work covers discussing business with others at a party or public event, or taking business calls on a mobile phone while eating out or visiting friends or family. Free time plus work covers the mixing of work with other free time activity (excluding media use and social activities). For all people, engagement with work while using the media or performing personal care decreases with age. For men, the intrusion of work into other free time increases with age.

²¹ Work related activities are defined as working for pay, waiting for a work event (meeting, building to be opened, etc.) to start, commuting, applying for a new job, interviewing for a new job.

Figure 91: Work time intruding on other activities for people who mixed work with other activities

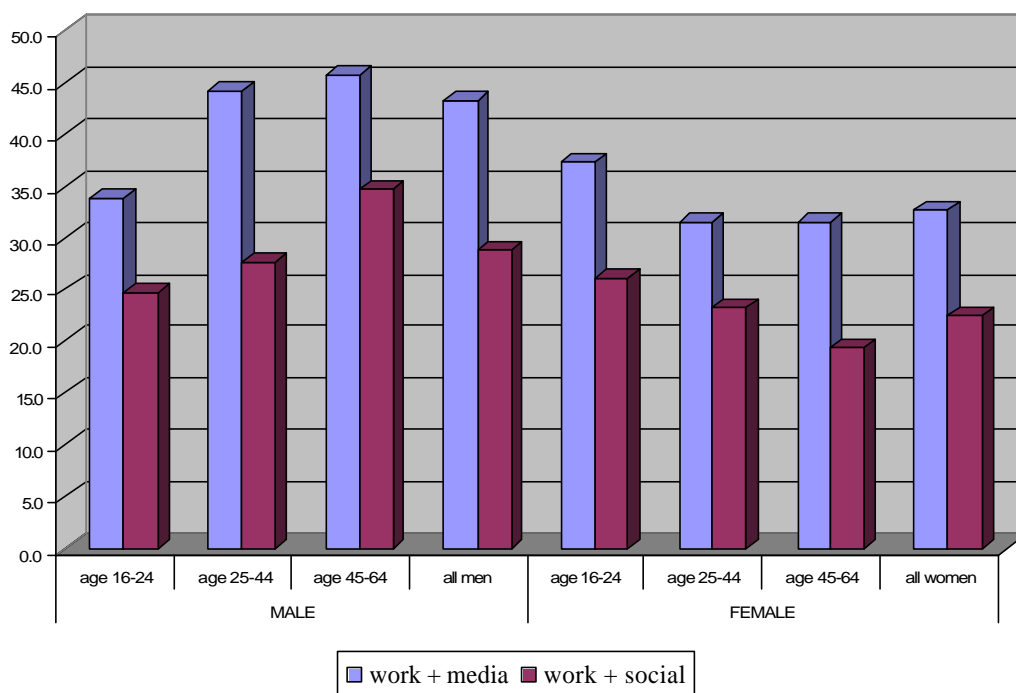


Source: Office for National Statistics (London), National Time Use Study, 2000-01

The degree to which work overlaps other activities has implications for quality of life and work–life balance. The nature of conversation can vary depending on the time available for the conversation. Some people may find it hard to express something they consider to be of pressing importance if they know that they likely have only a few minutes before the other person will take a business call. Some children in particular can feel less valued if they never attract the undivided attention of their parents. Conversations can lose their dynamic when interrupted. Further, there are qualitative differences between leisure experiences which are purely leisure (sitting back on a sofa with a glass of wine to listen to a new CD) and activities where work overlaps leisure (listening to a few minutes of the new CD on the train until the mobile phone rings).

As with the prevalence of split period working, one cannot simply define the intrusion of work into private life as always undesirable. The key issue, again, is whether a person experiences work intrusions by choice or against their wishes. Nevertheless, even though some people choose to allow their work and private life to routinely overlap, a general increase in work intrusion into private life across broad population groups would represent cause for concern.

Figure 92: Other activities intruding on work for people who mixed work with other activities



Source: Office for National Statistics (London), National Time Use Study, 2000-01

Intrusion works the other way as well, as many Britons also do some non-work activity while working, as shown in Figure 92. Two groups of activity principally occur during work: media use (listening to music or the radio while working) and socialising (joking or making social plans with colleagues at the office). For men, media use and socialising while working increases with age, while for women, secondary activity while working decreases with age. Half of the people who worked on their diary day combined work with another activity for at least part of their work day. The time of overlapped work reaches an average of 49 minutes for British workers. When work intrusion and overlapped work are taken together, working and non-working life overlap significantly for a large proportion of the British population.

The importance of social time

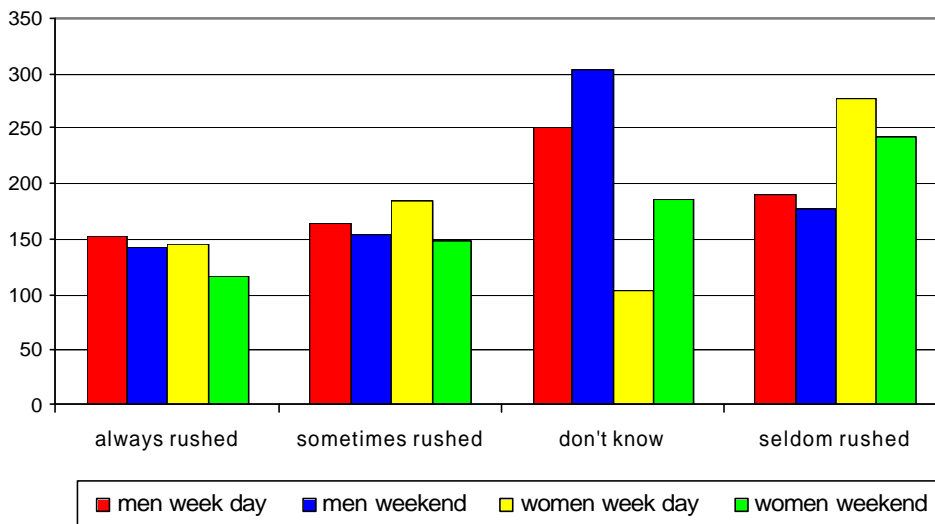
Social contact plays an important part in the concept of quality of life. In the United States, joining a social group has been associated with a drop in the risk of death in the next year (Putnam, 2000). In the United Kingdom, unemployed people with close social contacts are more likely to find a job than those who do not have such contacts (Hannan, 1999). The UK Office for National Statistics now considers time diary information an important component of measuring social capital (Office for National Statistics, 2002).²² This chapter now considers means by which social interaction might be measured to monitor quality of life.

²² The ONS plans to pursue future research into using time diaries to measure social capital, examining questions such as whether busy people have more or less social capital than people whose activities are less dense.

Social surveys regularly include batteries of questions about the frequency with which people see their friends and neighbours and also the frequency with which they perform social activities. Such surveys often ask respondents whether they are members of organisations, and how often they participate in the activities of organisations to which they affiliate. Chapter 1 showed some examples of how such data can be analysed to assess social capital. Social capital also has been measured by examination of membership lists and attendance data collected by voluntary and civic organisations – with one prominent example being voter registration lists and voter turnout.²³

Time diaries collect more detailed information about sociability than conventional methods. Diaries reveal who interacts with whom in households, how social encounters fit into the daily patterns of life, how long people are alone, and what people do with others compared to when they are alone (though there are some limitations in the HETUS design for these measurements which will be discussed later in this section).²⁴

Figure 93: Adults' time spent alone by whether people feel rushed



Source: Office for National Statistics (London), *National Time Use Study, 2000-01*

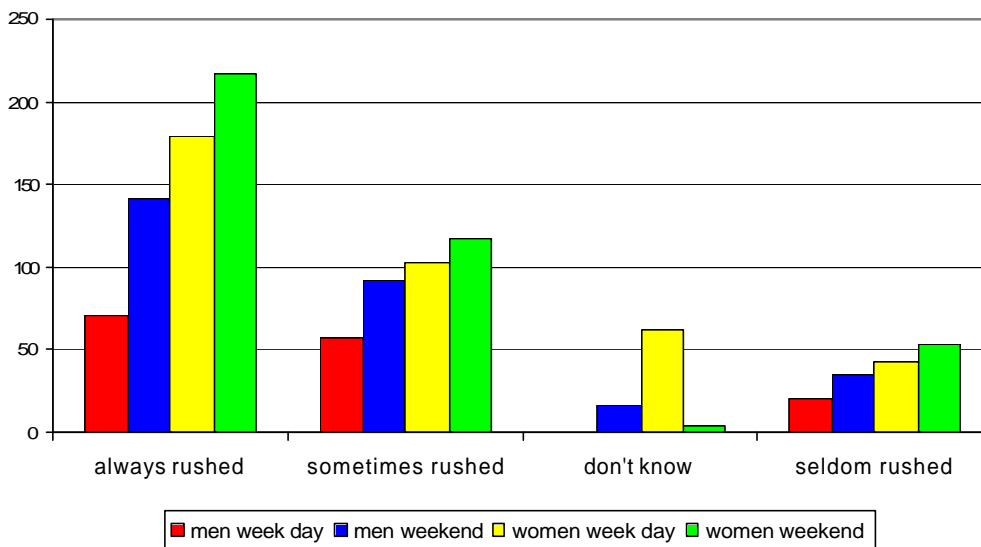
This data should be interpreted with some flexibility. Certain jobs, such as providing security in a building at night or working in an isolated lighthouse, entail few hours of interaction. Some people enjoy being alone, and spending more time alone does not necessarily mean a reduced quality of life. Likewise, spending less time alone does not necessarily improve quality of life either. Time with people that one likes and time with people one loathes do not hold equal value in the quality of life stakes.

²³ The UK Office for National Statistics is also investigating how perceptions of local areas and also the degree of trust people have in public officials, professionals, friends and other people might be included in the assessment of social capital (ONS 2002). Nevertheless, this potential element of the broad concept of social capital would be difficult to measure in a way that would allow valid cross-national and cross-time analysis. Consequently, this dimension of social capital is not the focus of this chapter.

²⁴ Time diaries can also measure social space – where social interactions take place – in addition to social circles (with whom people interact) (Ruston, 2002), though analysis of social space has not yet been linked with social capital.

Indeed, lacking enough time for one's self can reduce quality of life. The UK 2000-01 time use data reveal that men and women who always feel rushed spend less time alone, particularly on weekends, than people who sometimes feel rushed, are unsure if they are rushed, or seldom feel rushed (see Figure 93).²⁵ Figures 94²⁶ and 95²⁷ reveal that one key factor explaining this finding, especially for women, is that people who spend more time with children – particularly with children aged <10 – feel more rushed than people who spend little time with children. Too much time alone leads to isolation and a reduced ability to draw on social resources needed to deal with crises in life, but too little time alone also reduces the ability to enjoy life.

Figure 94: Adults' time spent with children aged 0-9 by whether people feel rushed



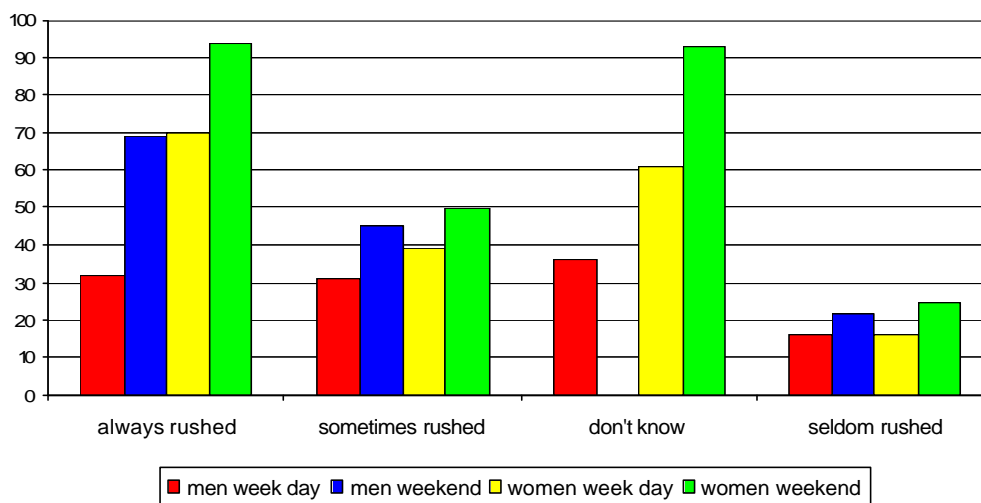
Source: Office for National Statistics (London), National Time Use Study, 2000-01

²⁵ One-way Anova F=30.577, p<.000.

²⁶ One way Anova F=288.220, p<.000.

²⁷ One way Anova F=53.043, p<.000.

Figure 95 - Adults' time spent with children aged 10-14 by whether people feel rushed



Source: *Office for National Statistics (London), National Time Use Study, 2000-01*

Alexander Szalai organised the first cross-national diary study which included columns marking who else was present during activities. This study found that, in 1965 and 1966, people in the 12 participating countries²⁸ spent between 40% and 70% of their days alone, with people in the United States spending more time alone than people in the other countries (Cesh-Szombathy, 1972, pp. 307-8). The study also found that people spent more time with friends and colleagues as the proportion of free time which they enjoyed increased (Schneider, 1972, p. 329).

Since the Szalai study, the 'who else is present' information has been collected in a high proportion of time diary studies, notably in the HETUS project, though degree of information collected varies considerably,²⁹ from simple alone/not alone dichotomies to complex series of columns where diarists name the people with whom they interact and also supply details about these individuals in another area of the study questionnaire.

The UK HETUS study reveals that most British people have regular contact with others. On an average weekday, British people spent an average of only three hours alone.³⁰ Time alone drops to an average of two hours and 50 minutes on Saturday, and drops further to two hours and 30 minutes on Sundays. Appendix 2 contains figures displaying the proportion of various activities which people perform alone, with household members, and with other people that they know.

²⁸ Studies following the Szalai format were conducted in Belgium, Bulgaria, Czechoslovakia, the Federal Republic of Germany, France, the German Democratic Republic, Hungary, Peru, Poland, the USA, the USSR and Yugoslavia.

²⁹ The 'who else is present' section has proven the column with the highest degree of variation between the HETUS studies.

³⁰ The HETUS guidelines only require diarists to note who else is present when their main activity is not study at school/university, sleeping, or working for pay. This means that the data may be available for 1/3 to 2/3 of the day, as the average Briton sleeps for eight hours and 41 minutes. Nevertheless, most British people (with the exception of people living in one-person households) do go to sleep while other people are in the house. Most schooling involves the presence of multiple people and, while increasing numbers of British people work alone, the majority of British workers still work in the presence of other individuals for at least part of the day. Consequently, the majority of time not covered by the social activity columns for the majority of people is social time, at least in a very nominal sense of social presence.

Putnam claims that Americans spend less time eating with their families and friends, but British time use data demonstrate that this is not true in the UK. While the overall time spent eating meals at home has declined since the 1960s, this time has shifted to eating outside the home (Gershuny, 2000, pp. 206-8). The UK HETUS data reveal that this trend may in fact contribute to increased sociability. In the years 2000-01, Britons ate around 20% of meals at home alone, while fewer than 5% ate meals elsewhere alone. Over 60% of meals at home and 25% of meals outside home are eaten with family members.

Not unexpectedly, over 90% of social time takes place in the presence of others (with phone calls accounting for much of the social time alone). As Appendix 2 shows, over 80% of voluntary work and exercise take place with others (though men aged 25-65 spend ¼ of their exercise time alone). Britons shared over 70% of their free time and even more time watching television with other people.

Britons spent more time alone (up to 40% of their waking time outside of study and paid work) doing housework, repairs and construction, gardening and personal care. That such activities are more likely to be performed alone raises no cause for concern in the measurement of quality of life. There are only two types of activity which many Britons mainly perform alone. The first of these activities, looking after pets, is not really solitary, as people are still interacting with others, even if the participants to the interaction are not people. Britons spent the most time alone travelling from place to place (up to 1/3 of travelling time not related to work, and over 60% of commuting time). The high level of solitary commuting has significant policy implications for traffic congestion and air quality related to car use.

When they were with other people, Britons spent most time eating at home, in personal care, housework, repairs and construction, gardening, watching TV, and free time with family members. Most collective voluntary work, social time and exercise time is spent in the company of people from other households.

People living in one-person households face the greatest risk of spending above average time alone. Women living alone spend an average of nine hours and 34 minutes by themselves, while men living alone spend an average of eight hours and nine minutes by themselves – three times the average time alone for all people in the UK. People in the poorest 12% of household incomes, aged 65+ (especially women), who are unemployed or otherwise not working, and whose households do not have a car also spend a greater than average proportion of their time alone. For women, working in a routine/manual occupation, being aged 45-64, and living in Scotland or Wales also increases the risk of spending more than average time alone. Many of the same factors associated with the risk of being alone are also associated with risks of other dimensions of lower quality of life, as explained in earlier chapters of this report.

It is worth noting, however, that some social contacts which have profound effects on people are renewed on an infrequent basis. People can maintain social contact through correspondence, e-mail, and web chat rooms, though the social dimensions of these activities are not always apparent in time diary data. For this reason, time diary data on sociability should be considered in conjunction with other social participation data. Even so, policymakers can use time diary data to reliably measure which groups are at the greatest risk of social isolation, as well as to monitor changes in commuting behaviour. In particular, diaries can reveal the proportion of green travel time – that is travel by self-powered means (foot, bicycle), by public transport, and in private motor vehicles when other people share the journey, in contrast to time using private motor vehicles alone.

Conclusions

Time diaries produce a picture of how people apportion activities over the day. From a policy perspective, diaries can track the degree to which long-term policy initiatives influence changes in behaviour. Diaries inform the work-life balance debate, not just by demonstrating the total volume of work more reliably than other existing measures, but also

by revealing the timing of work in relation to the timing of other activities, the proportion of the day influenced by work, and the degree to which work intrudes into other dimensions of life. Time diaries also reveal who is at risk of lacking enough time alone, as well as who is at risk of spending too much time alone. One key issue to bear in mind is that certain patterns of time use, such as working split periods or spending long hours alone, may not be damaging to quality of life if they result from the voluntary choice of individuals, but can be devastating if they are imposed on individuals by institutions, social structures or social attitudes.

Nevertheless, while diaries provide informative measures of activities on a daily or weekly basis, they do not cover longer-term cycles of activity. Consequently, diaries provide an important part of the picture of the work–life balance, but not the full picture. In the case of social capital and participation, time diary data works well in conjunction with social survey data.

There are, however, some drawbacks to using time diary data to measure change in quality of life across European countries. Though some countries, like France and the United Kingdom, have regularly collected time use data, national sample data have been collected infrequently or only once in most European countries, and not at all in a few. The most informative time diary studies, where people describe activities in their own words, are expensive to conduct and burdensome to respondents. Collecting such detail requires commitment from funding agencies and dedicated staff trained to persuade sampled diarists of the value of the research. Less detailed time use data (but still sufficiently detailed to complete the analysis conducted in this chapter) can be collected from a light diary format, where people tick slots in a diary whose activities are predefined. The level of commitment to time diary research varies widely across European countries.

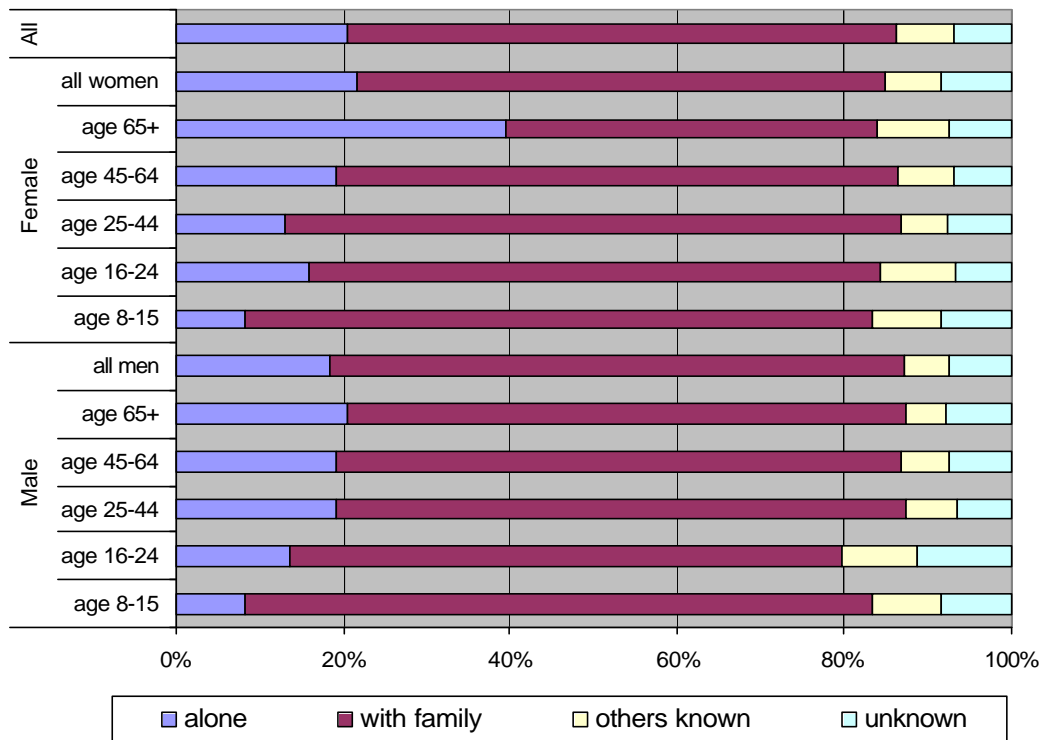
These drawbacks should not be overstated. There is now an unprecedented opportunity to use time use data from a range of European countries. The Multinational Time Use Study was developed in Europe and the expertise for post-harmonising time use data is particularly well-developed in some European countries. The Harmonised European Time Use Studies (HETUS) project is the largest scale harmonised time use study. Nevertheless, given the burdensome nature of time use instruments, a ‘light’ time diary is an element that future research could consider including in a standard social survey, particularly one interested in quality of life issues.

Appendix 1: Models of variable effects on life satisfaction

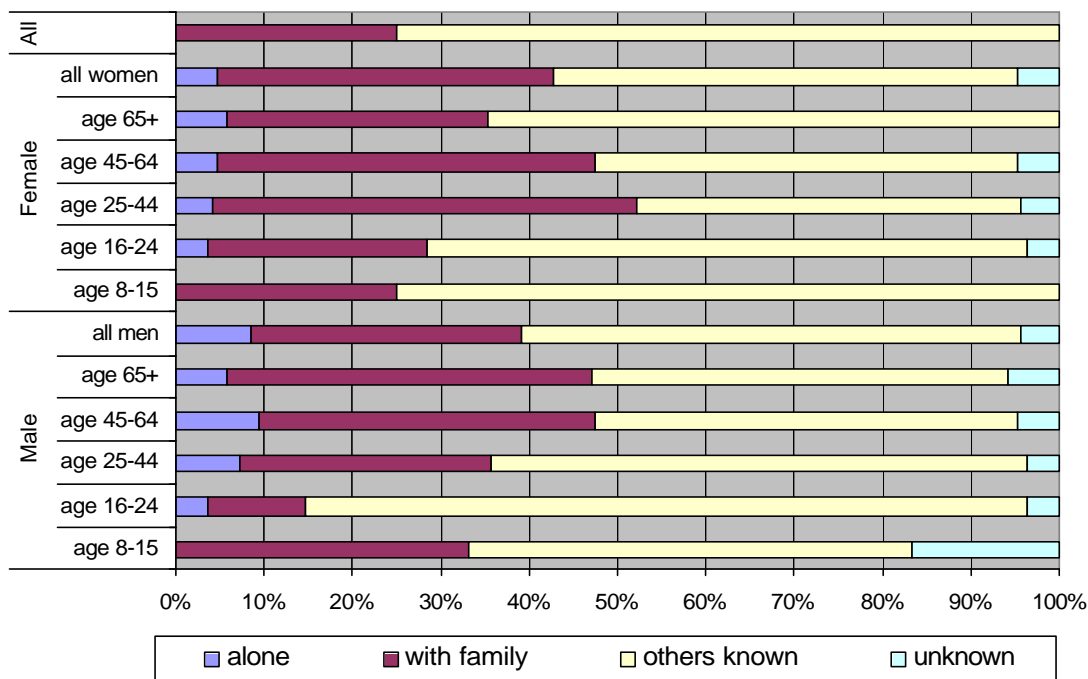
	Model 1	Model 2	Model 3	Model 4
Intercept	6.790	6.936	5.230	5.253
<i>Individual factors</i>				
Unemployed		-1.079*	-1.078*	-1.080*
Marital status:				
Widowed		-0.765*	-0.764*	-0.779*
Divorced		-0.739*	-0.739*	-0.744*
Single		-0.413*	-0.412*	-0.429*
Male		-0.035	-0.035	-0.377
Age (centered on mean)		-0.060*	-0.060*	-0.053*
Age squared		0.001*	0.001*	0.001*
Missing information on age		-0.104	-0.100	-0.146
Age at leaving education		0.029*	0.029*	0.026*
Missing information on education		-0.322*	-0.324*	-0.341*
<i>Country-level factors:</i>				
GDP1 (ref. category)				
GDP2			1.368*	1.372*
GDP3			2.529*	2.523*
GDP4			2.696*	2.703*
East Germany (missing GDP information)			2.330*	2.321*
<i>Country-level variance</i>	1.299*	1.224*	0.160*	0.159*
<i>Individual-level variance:</i>				
In GDP2 countries	4.583*	4.374*	4.374*	6.022*
In GDP3 countries				-0.657*
In GDP4 countries				-1.315*
				-1.312*
<i>% variance explained:</i>				
Country level	-	5.8	87.7	-
Individual level	-	4.6	4.6	-
Log likelihood	168303	166501	166437	165299

Appendix 2: Graphs illustrating various uses of time

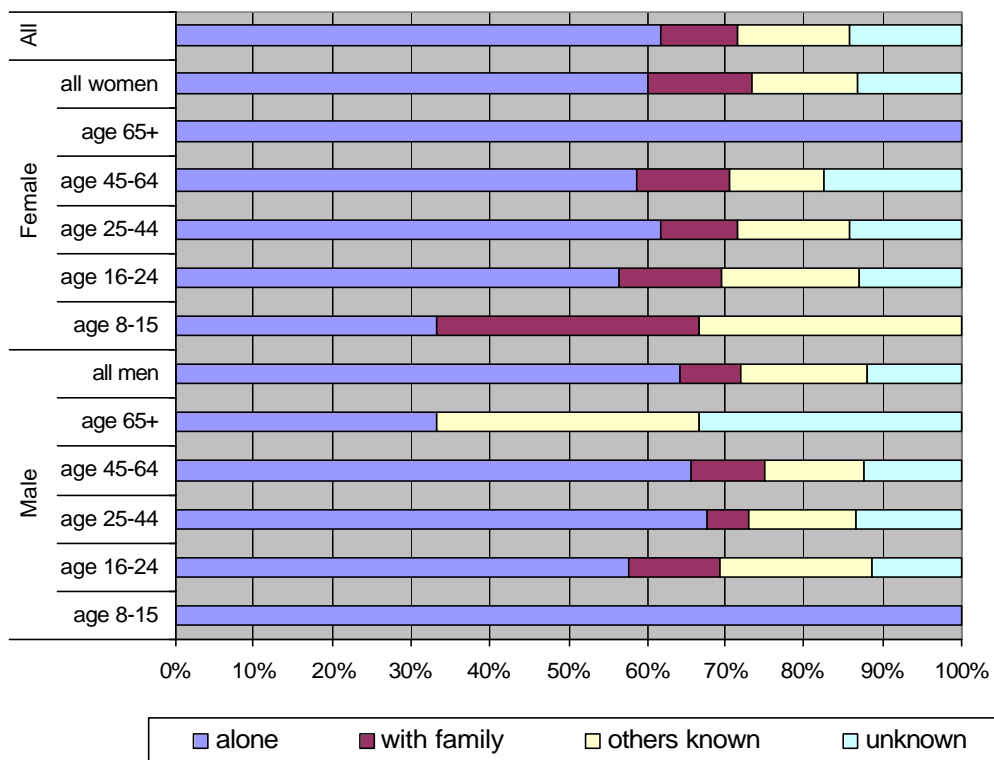
Time eating at home



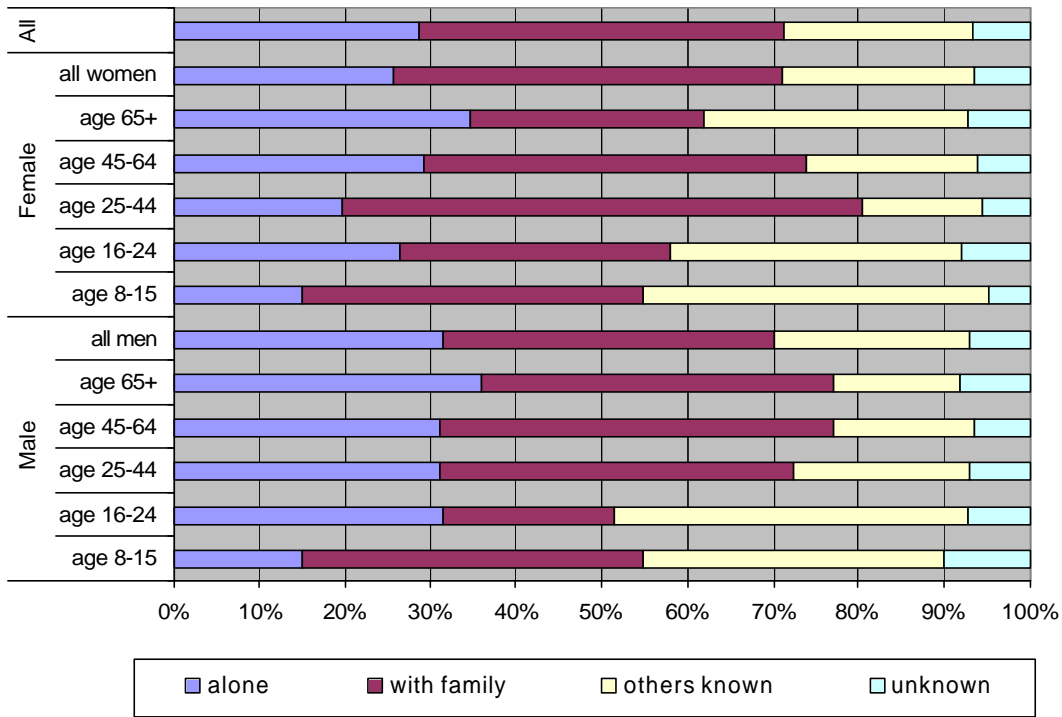
Time eating out



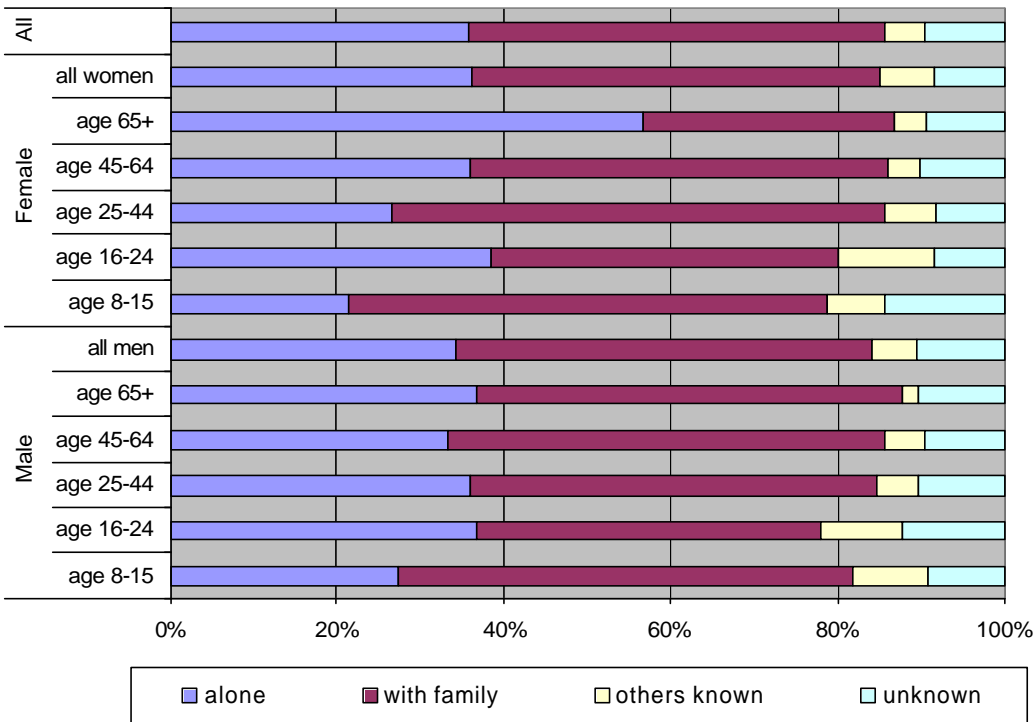
Commuting



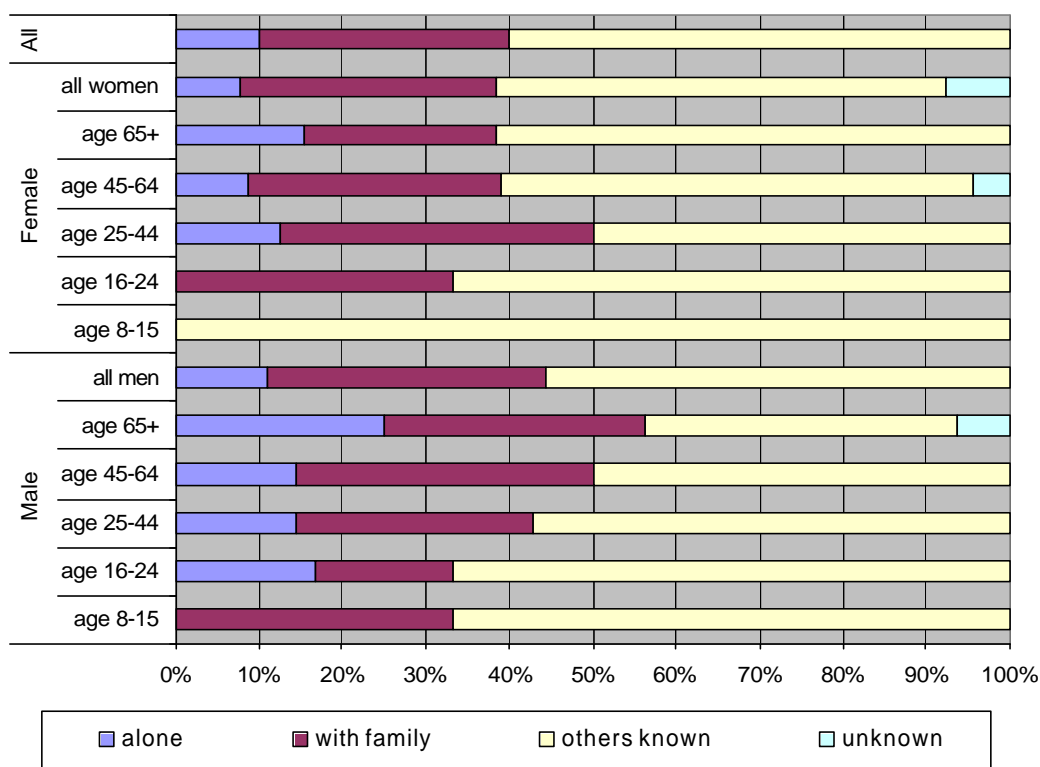
Time in travel (not commuting)



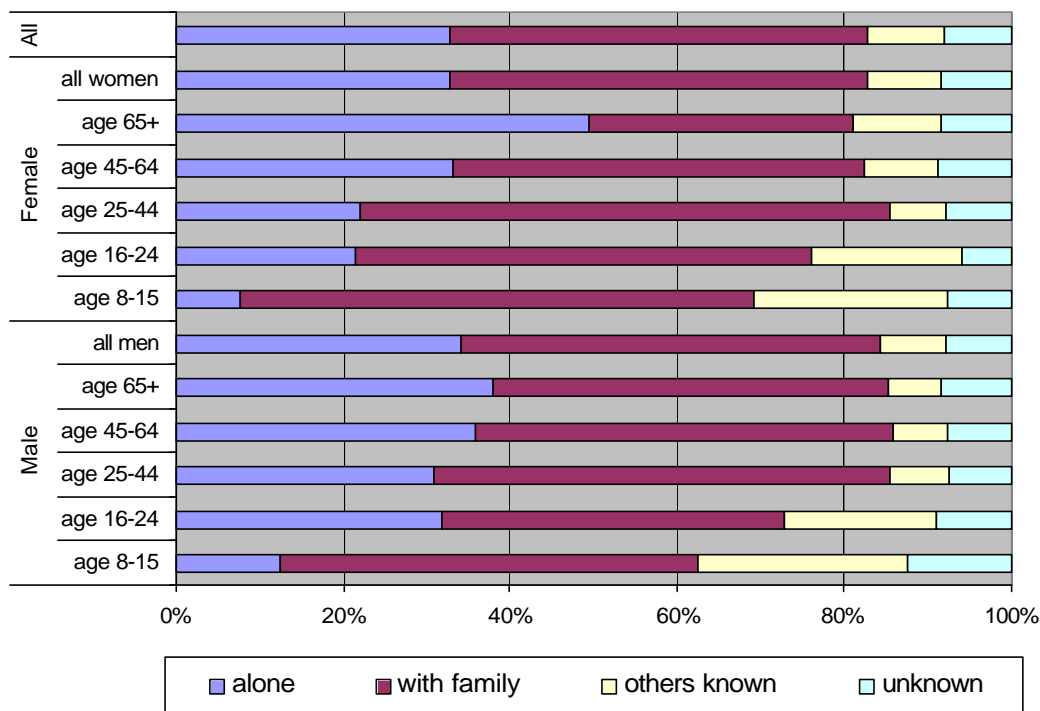
Personal care



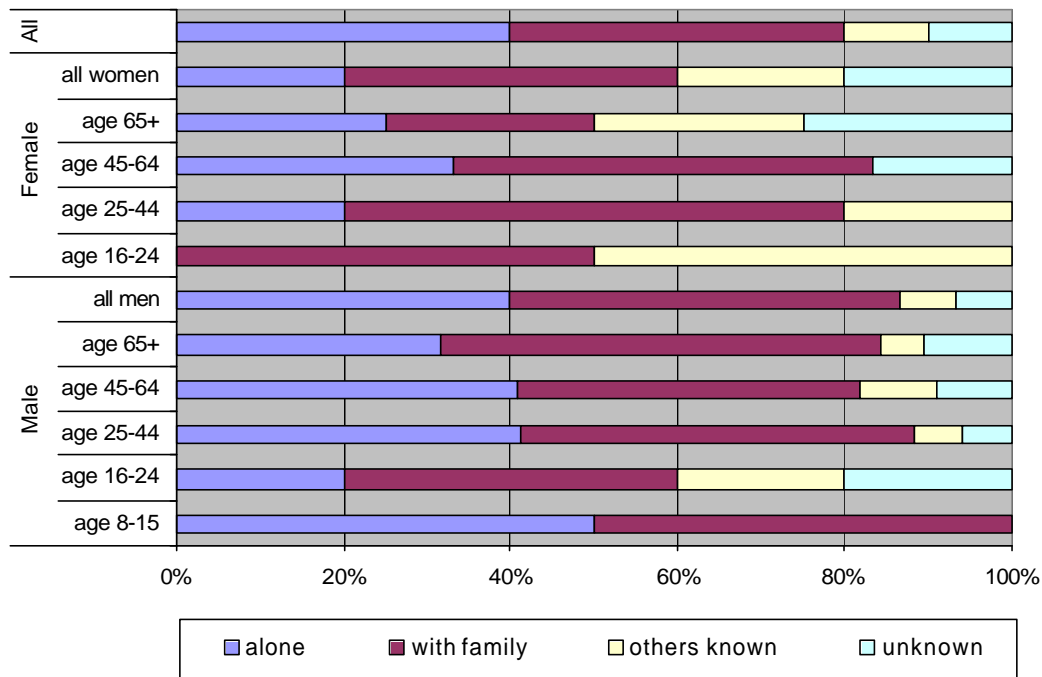
Time volunteering



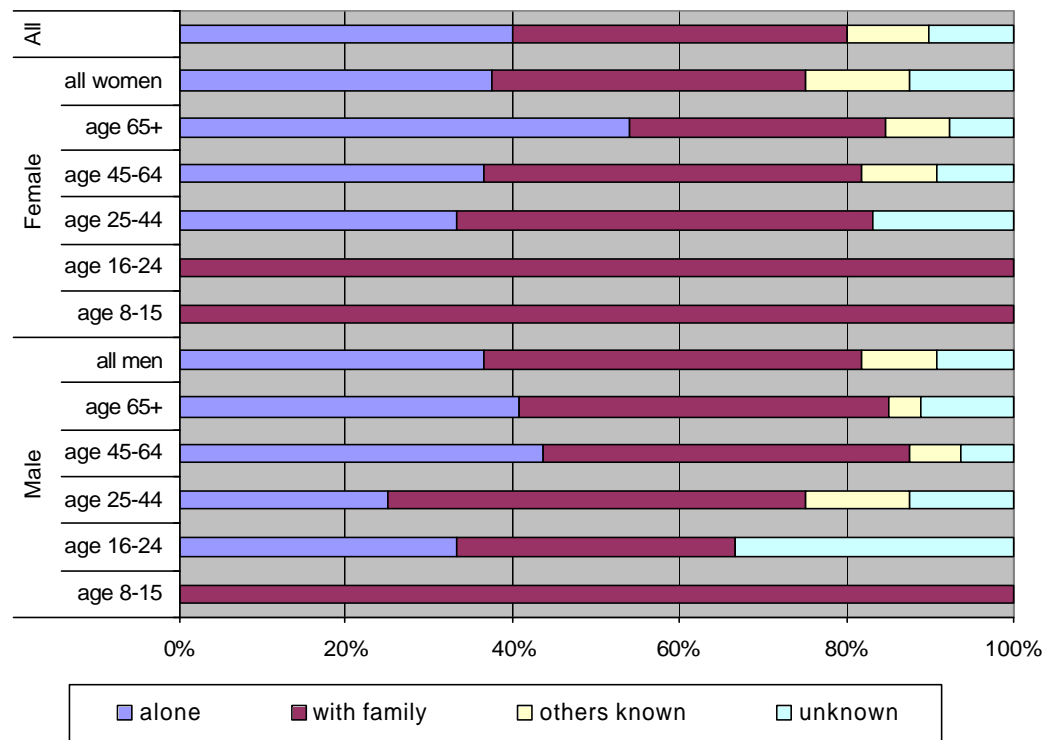
Housework



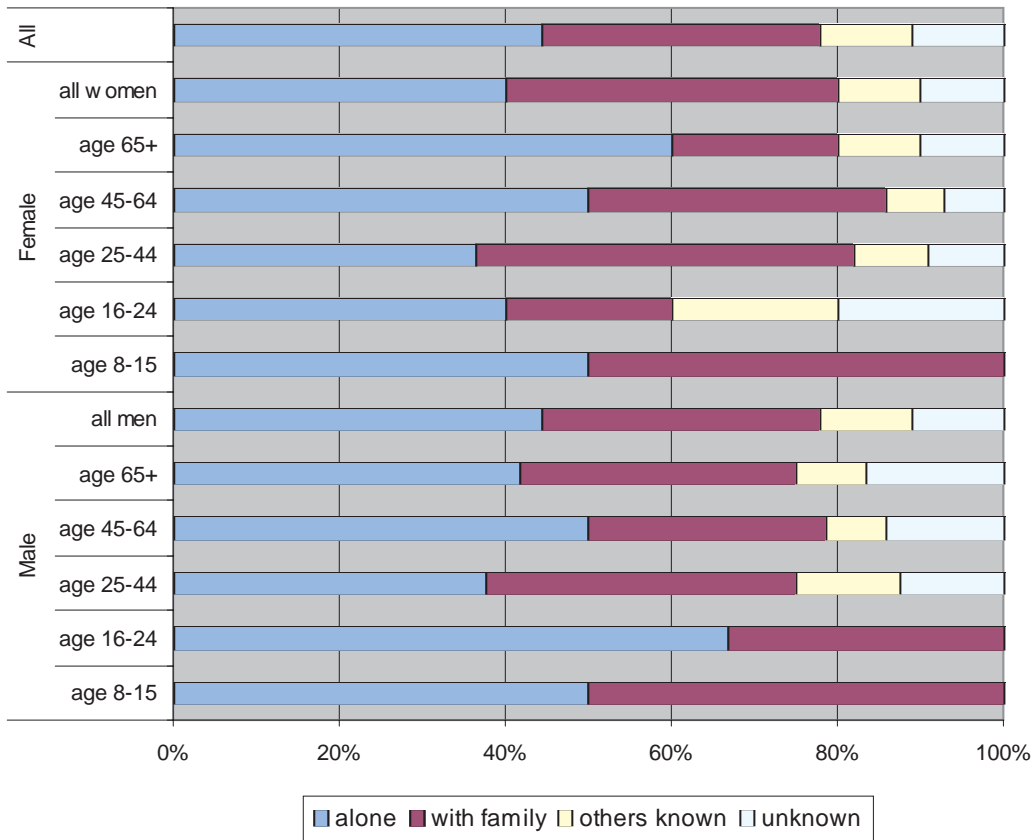
DIY/Repairs



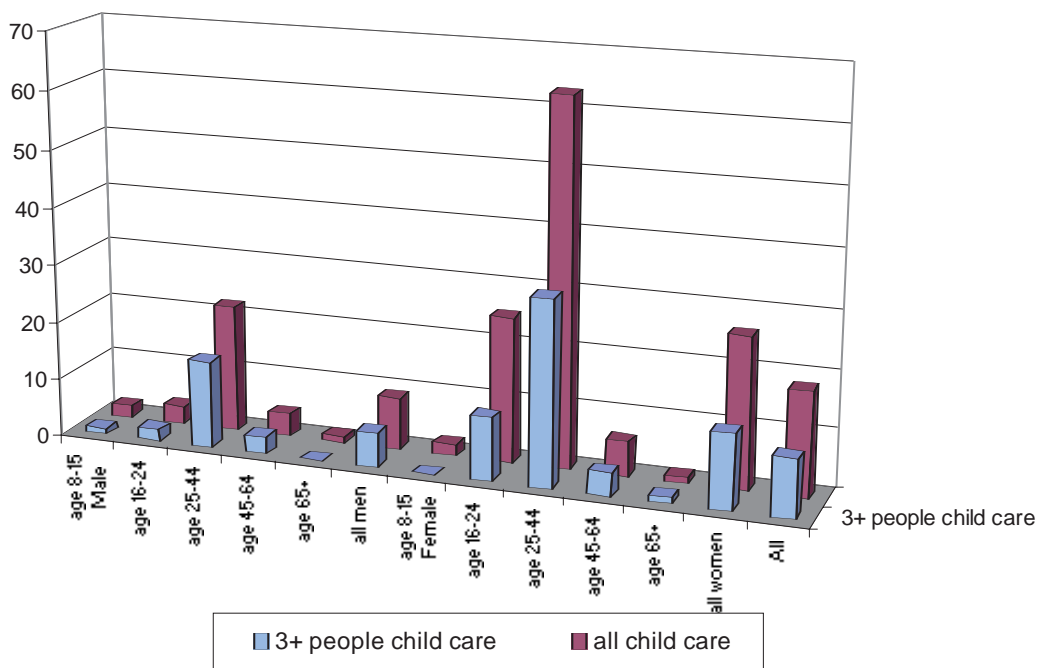
Gardening



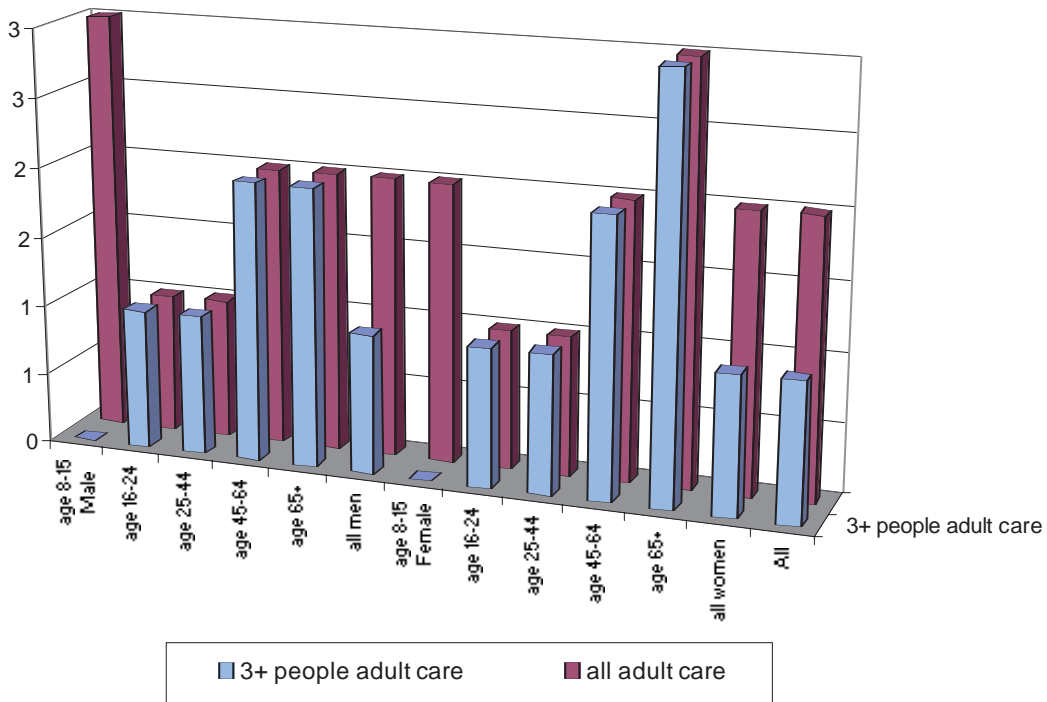
Pet care



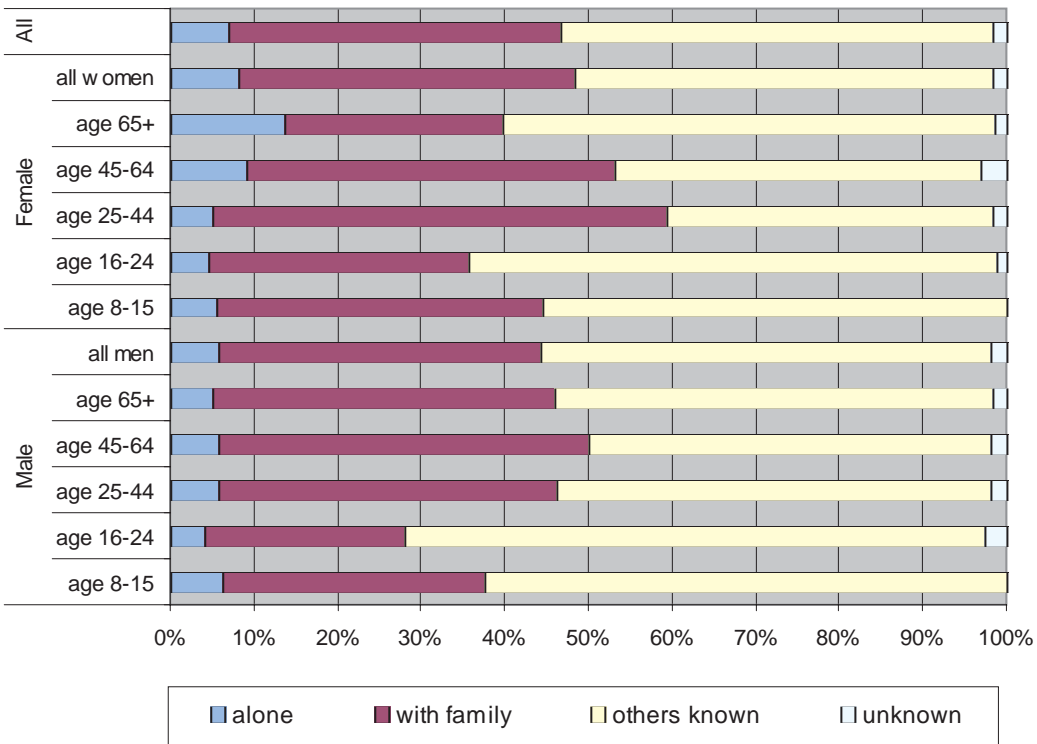
All childcare, proportion with carers, recipients of care + others



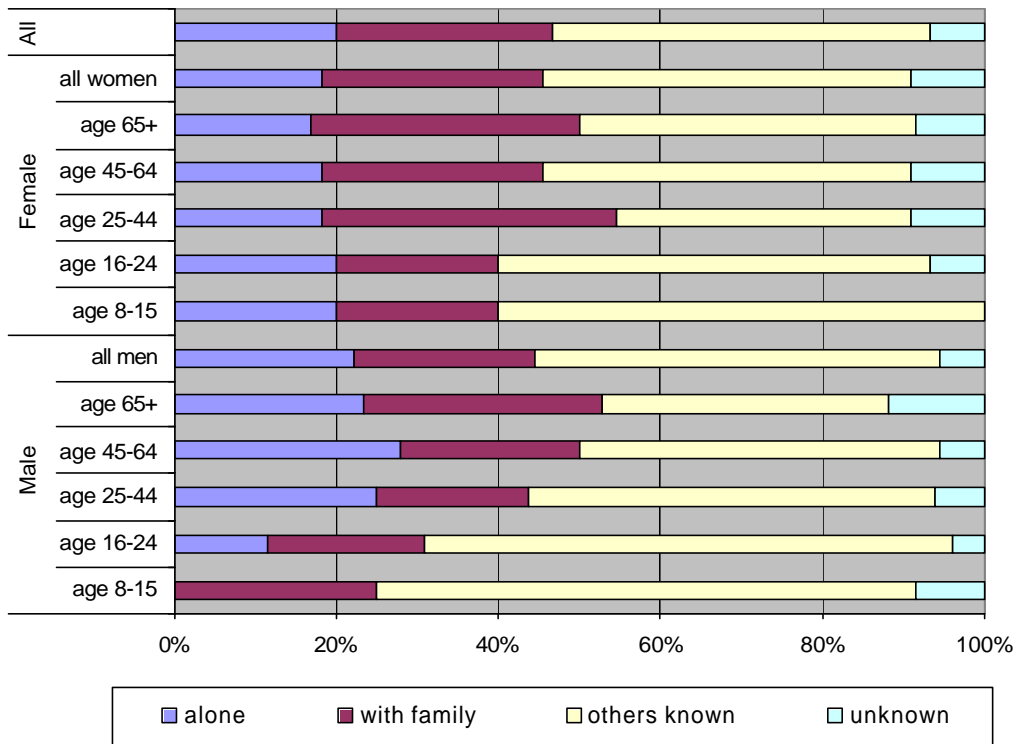
All adult care, proportion with carers, recipients of care + others



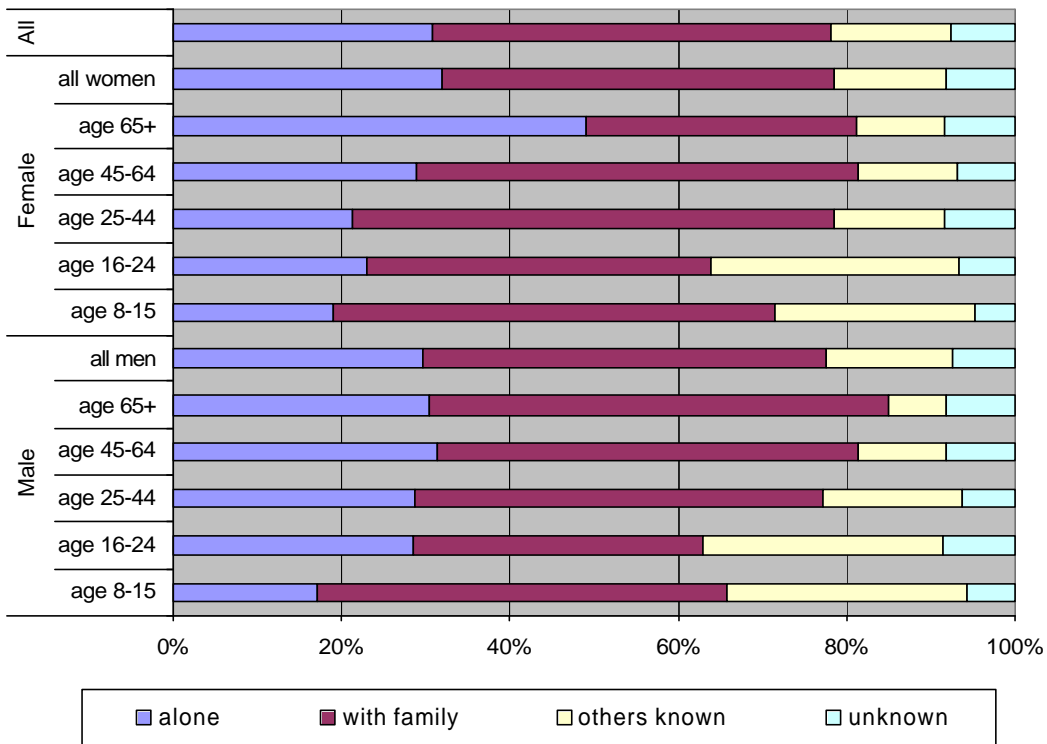
Social time



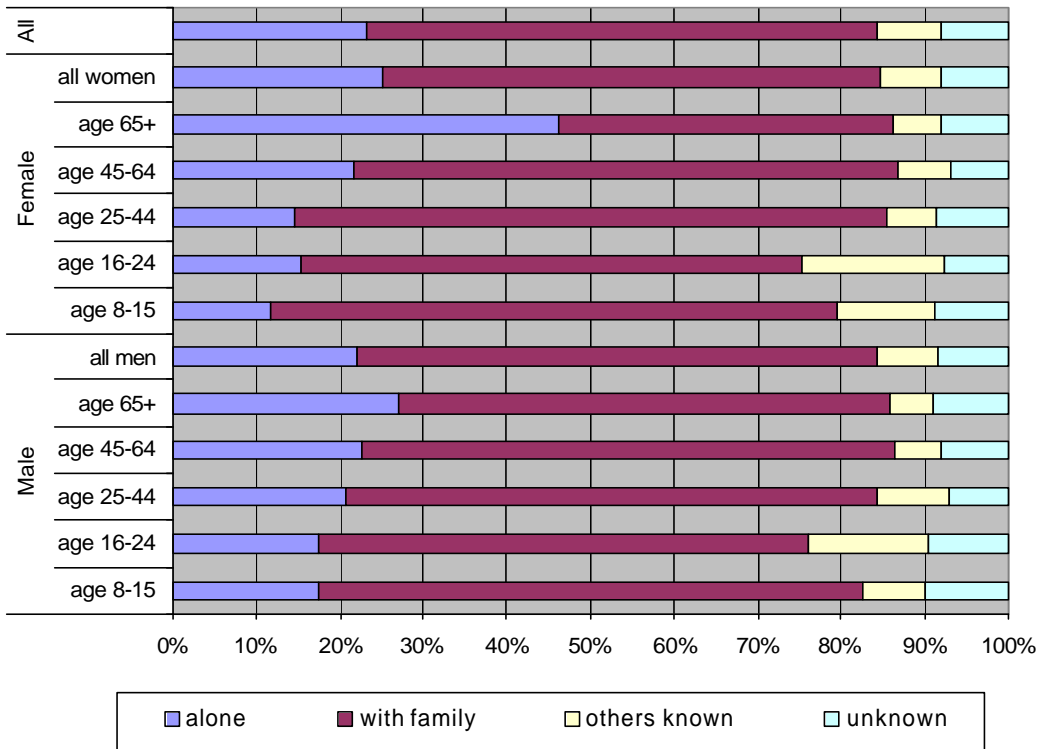
Time in exercise



Free time



Time watching TV



References

- Acheson, D., Barker, D., Chambers, J., Graham, H., Marmot, M. G., and Whitehead, M., *Independent inquiry into inequalities in health*, The Stationary Office, London, 1988.
- Bartley, M., 'Unemployment and ill health: understanding the relationship', in *Journal of Epidemiology and Community Health*, vol. 48, no. 333, p. 337, 1994.
- Blane, D., Brunner, E., and Wilkinson, R. G., 'The evolution of public health policy: an anglocentric view of the last 50 years', in *Health and social organisation: towards a health policy for the 21st century*, (ed. D. Blane, E. Brunner, and R. G. Wilkinson), Routledge, London, 1996.
- Bowling, A., *Measuring health. A review of quality of life measurement scales*, Open University Press, Milton Keynes, 1991.
- Brunner, E. J., 'Stress and the biology of inequality', in *British Medical Journal*, vol. 314, pp. 1472-1476, 1997.
- Callan, T., Layte, R., Nolan, B., Watson, D., Whelan, C. T., Williams, J., and Maître, B., *Monitoring poverty trends*, Stationary Office/Combat Poverty Agency, Dublin, 1999.
- Csech-Szombathy, L., 'International differences in the types and frequencies of social contacts', in *The use of time: daily activities of urban and suburban populations in 12 countries*, (ed. A. Szalai), Mouton, den Hague, pp. 307-315, 1972.
- Daly, M., 'Europe's poor women? Gender in research on poverty', in *European Sociological Review*, vol. 8, no. 1, pp. 1-12, 1992.
- Davey Smith, G., Blane, D., and Bartley, M., 'Explanations for socio-economic differentials in mortality: evidence from Britain and elsewhere', in *European Journal of Public Health*, vol. 4, pp. 132-144, 1994.
- Diener, E., Suh, E.M., Lucas, R.E., and Smith, H.L., 'Subjective well-being: three decades of progress', in *Psychological Bulletin* 125, 2, pp. 276-302, 1999.
- Esping-Andersen, G., *The three worlds of welfare capitalism*, Polity Press, Cambridge, 1990.
- Eurostat, *Guidelines on harmonised European time use surveys*, Eurostat, Luxembourg, September 2000.
- Fisher, K., 'An initial exploration of the employment conditions of full-time and part-time workers using the NS-SEC' in *A researcher's guide to the national statistics socio-economic classification*, (ed. D. Rose and D. Pevalin), Sage, London, October 2002a.
- Fisher, K., *Technical details of time use studies*, Release 3, Institute for Social and Economic Research, Colchester, 30 June 2002. <http://www.iser.essex.ac.uk/mtus>
- Frey, B.S. and Stutzer, A., 'What can economists learn from happiness research', *Journal of Economic Literature*, 40, pp. 402-435, 2002.
- Gershuny, J.I., *Changing times: work and leisure in post-industrial society*, Oxford University Press, 2000.

Gershuny, J. I. and Fisher, K., 'Leisure' in *Twentieth-century British social trends, 3rd edition*, (ed. A. H. Halsey with J. Webb), Macmillan, London, pp. 620-649, 2000.

Gershuny, J. I., and Robinson, J. P., 'Measuring hours of paid work: time-diary vs estimate questions', in *Bulletin of Labour Statistics*, pp. xi-xvii, 1994.

Hagenaars, A., de Vos, K., and Zaidi, M. A., *Patterns of poverty in Europe*, EU Commission, Brussels, 1994.

Hannan, C., *Beyond networks: 'social cohesion' and unemployment exit rates*, Working Paper 99-7, Institute for Social and Economic Research, Colchester, 1999.

Inglehart, R., *Culture shift in advanced industrial society*, Princeton University Press, 1990.

Jenkinson, C. and McGee, H., *Health status measurement: a brief but critical introduction*, Radcliffe Medical Press, Oxford, 1998.

Kunst, A. E., Bos, V. and Machenbach, J. P., *Monitoring socio-economic inequalities in health in the European Union: guidelines and illustrations*, Department of Public Health, Erasmus University, Rotterdam, 1, 2000.

Layte, R., Levin, H., Hendrickx, J., and Bison, I., 'Unemployment and cumulative disadvantage', in *Welfare regimes and the experience of unemployment*, (ed. D. Gallie and S. Paugam), Oxford University Press, 2000.

Layte, R., Maître, B., Nolan, B. and Whelan, C. T., 'Persistent and consistent poverty in the 1994 and 1995 waves of the European Community Household Panel', in *Review of Income and Wealth*, vol. 47, no. 4, pp. 427-449, 2001.

Layte, R., Maître, B., Nolan, B. and Whelan, C. T., 'Explaining deprivation in the European Union', in *Acta Sociologica*, vol. 44, no. 2, pp. 105-122, 2001a.

Layte, R. and Whelan, C. T., 'Cumulative disadvantage or individualisation? A comparative analysis of poverty risk and incidence', in *European Societies*, vol. 4, no. 2, pp. 209-233, 2002.

Lourie, J., *The working time directive*, Research Paper 96/10, House of Commons Library, London, 1996.

Machenback, J. and Bakker, M., *Reducing inequalities in health: a European perspective*, Routledge, London, 2002.

Niemi, I., and Pääkkönen, H., *Time use changes in Finland through the 1990s*, Statistics Finland, Culture and the Media 2002:2, Helsinki, 2002.

Nolan, B. and Whelan, C. T., *Resources, deprivation and poverty*, Clarendon Press, Oxford, 1996a.

Office for National Statistics, *Social capital, Workplan June 2002 - June 2003*, Social Analysis and Reporting Division, Office for National Statistics, London, 2002. http://www.statistics.gov.uk/themes/social_finances/downloads/Soc_cap_workplan.pdf

Office for National Statistics, *Social capital, a review of the literature*, Social Analysis and Reporting Division, Office for National Statistics, London, 2002. http://www.statistics.gov.uk/themes/social_finances/downloads/soccaplitreview.pdf

- Oswald, A., 'Happiness and economic performance', in *Economic Journal* 107: pp. 1815-1831, 1997.
- Putnam, R. D., *Bowling alone: the collapse and revival of American community*, Simon Schuster, New York, 2000.
- Ringen, S., *The possibility of politics*, Clarendon Press, Oxford, 1987.
- Ringen, S., Direct and indirect measures of poverty, in *Journal of Social Policy*, vol. 17, pp. 351-366, 1988.
- Robinson, J. P., and Godbey, G., *Time for life: the surprising ways Americans use their time*, Pennsylvania State Press, 1997.
- Ruston, D., 'Social capital and time use: draft research questions', Office for National Statistics, Unpublished Discussion Paper, London, 2002.
- Ryan, M.R. and Deci, A. L., 'On happiness and human potentials: a review of research on hedonic and eudaimonic well-being' in *Annual Review of Psychology* 52, pp. 141-66, 2001.
- Schneider, A., Patterns of social interaction, in *The use of time: daily activities of urban and suburban populations in 12 countries*, (ed. A. Szalai), Mouton, den Hague, pp. 317-333, 1972.
- Schor, J., *The overworked American: the unexpected decline of leisure*, Basic Books, New York, 1993.
- Shavit, Y. and Blossfeld, H. P., *Persistent inequality: changing educational attainment in 13 countries*, Westview Press, Boulder, Colorado, 1993.
- Shavit, Y. and Müller, W., *From school to work*, Oxford University Press, 1998.
- UNDP, *Human development report 1999*, Oxford University Press for the United Nations Development Programme, New York, 1999.
- van Doorslaer, E. and Koolman, X., *Income related inequalities in health in Europe: evidence from the European Community Household Panel Survey*, Erasmus University, Rotterdam, 1, 2000.
- Vanek, J. 'Time spent in housework', in *Scientific American*, vol. 11, pp. 116-120, 1974.
- Wagstaff, A. and van Doorslaer, E., Measuring inequalities in health in the presence of multiple category morbidity indicators, in *Health Economics*, vol. 3, pp. 281-291, 1994.
- Whelan, C. T., Layte, R., Maitre, B., and Nolan, B., 'Income, deprivation and economic strain: an analysis of the European Community Household Panel', in *European Sociological Review*, vol. 17, no, 4, pp. 357-372, 2001.
- Whelan, C. T., Layte, R., and Maître, B., 'Persistent deprivation in the European Union', in *Schmollers Jahrbuch: Journal of Applied Social Science Studies*, 122, 1, pp. 31-54, 2002.

Whelan, C. T., Layte, R., Maître, B., and Nolan, B., Persistent income poverty and deprivation in the European Union: an analysis of the first three waves of the European Community Household Panel, *Journal of Social Policy*, vol. 32, no. 1, pp. 1-32, 2003.

World Health Organisation, *The first ten years. the Health Organisation*, World Health Organisation, Geneva, 1958.

World Health Organisation, *The World Health Report 2000 - Health systems: improving performance*, World Health Organisation, Geneva, 2000.

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