Centre on Regulation in Europe
Improving network industries regulation

Affordability of utilities' services: extent, practice, policy

Research Paper 2: Utility Affordability in the EU, Based on Eurostat and ITU Data

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Executive Summary

This research paper provides an extensive overview of the affordability of energy, water, telecoms and transport services in the EU. The first half of the paper consists of four sections providing a pan-EU perspective for each of the four utility sectors above. The data is displayed in graphical form with separate graphs for the EU15 and new Member States. One group of charts includes individual Member States with notable results such as those where utilities appear most and least affordable. Another set of charts provides the average position across the EU15 and new Member States, split by household type, e.g. for single parent households and those on low incomes. An additional section reports total expenditure on all four utilities across the EU. Then six sections review the position in six specific Member States: Austria, France, the United Kingdom, the Republic of Ireland, Bulgaria and Greece. The first four countries have been chosen according to the interests' of the projects sponsors, while Bulgaria has some of the most severe affordability difficulties in the EU and Greece has faced the most extreme economic challenges since 2008.

Three sources of data have been used in this report: (i) expenditure shares from national household budget surveys collated by Eurostat; (ii) subjective perceptions of affordability difficulties from the European Union's Statistics on Income and Living Conditions (EU-SILC); and (iii) the percentage of Gross National Income (GNI) per capita to purchase specified packages of fixed line telephony, mobile telephony and broadband as recorded by the International Telecommunications Union (ITU).

Key findings of this research paper include:

- The total expenditure share devoted to utilities in the new Member States is much higher than that in the EU15. Only the expenditure share devoted to transport is consistently lower in the new Member States than in the EU15.
- In most Member States and sectors there are considerable variations in the level of affordability difficulties between household groups. Predictably, groups such as low income and unemployed households have the highest rates of affordability difficulties.
- There are considerable variations in virtually all the indicators through time; in many cases affordability difficulties have worsened since the onset of the Great Recession.
- While affordability difficulties have worsened in those Member States worst hit by the Great Recession, such as Greece, these Member States may still have lower rates of affordability difficulties than recorded in some new Member States.
- For specific Member State-sector combinations, the gaps between household groups have grown considerably over time.

1. Introduction

This document provides an overview of the affordability of utilities across the EU, using data available from Eurostat and the International Telecommunications Union (ITU). The in-depth analysis of affordability in France, the United Kingdom, Northern Ireland, Republic of Ireland and Estonia, which compares different affordability metrics and simulates a variety of targeted policies, is reported in Research Papers 4-8.

The data presented in this document come from three sources:

(i) Data from national household budget surveys collated by Eurostat;
(ii) The European Union Statistics on Income and Living Conditions (EU-SILC);
(iii) Tables in the ITU's annual 'Measuring the Information Society' reports.

Each of these sources represents a different type of data. The household budget survey data record the percentage of total expenditure spent on particular utilities. The EU-SILC data provide subjective measures of affordability relying on individual respondents to state whether or not they agree with statements that are 'proxies' for affordability difficulties. Lastly, the ITU data report the cost of a specified bundle of telecommunication services and express it as a percentage of average Gross National Income (GNI) per capita.

Each of these approaches has advantages and disadvantages which are discussed in more depth as each type of data is presented for the first time. The data sources cover different time periods and provide information at differing time intervals. In particular, the household budget survey data enable affordability to be considered over the long run from 1988 to 2010. The other two sources of data provide more recent information, including several years after the onset of the 'Financial Crisis'.

The document proceeds as follows: firstly, there are five sections, one relating to each of the utility sectors being considered (energy, water, telecoms and transport) and one presenting total expenditure on utility services. In each of these sections charts are provided detailing European averages, as well as selected countries from the EU15 and, separately, from Member States that have joined the EU since 2004. This split is useful because of the significant differences in the affordability issues between these two groups of countries. In general, the countries selected for charting represent the countries with 'most' and 'least' affordability issues within each group, along with countries where the affordability measures show large changes over the time period considered.

After these sector overviews, six countries are explored in added depth: France, Austria, the Republic of Ireland, the United Kingdom, Bulgaria and Greece. The first four countries have been selected for their relevance to the project's sponsors. Bulgaria has been selected as its utilities

consistently appear to be the least affordable in the EU. Greece has been selected as an interesting example given the dramatic reduction in the size of the economy since 2008 and the tough 'austerity' measures which it faces. Within each of these more detailed studies, the variation of the different affordability measures by household type and income group is considered.

Given the large quantity of data available, there is inevitable selectivity in the charts and comparisons included. The charts presented in this document provide an initial picture of utility affordability across the EU; in turn, they raise many further questions which could be investigated in the future. We comment on some anomalies and their potential link to policies.

2. Energy

All reference in this sub-section and the following sub-sections to 'expenditure shares' is based on Eurostat's collated household budget survey database[1], which is constructed from a multitude of different surveys undertaken by national statistical authorities. Eurostat has aimed to harmonise the methodologies and definitions used in these underlying household budget surveys, but Eurostat explicitly cautions that care is needed when making cross-national comparisons as some differences may be due to variations in definitions and methodologies. In particular, Eurostat notes that the UK, Czech Republic and Hungary do not include the imputed rent of those living in owner-occupied accommodation when calculating total expenditure, which suggests an overstatement of the expenditure shares devoted to the utilities in these countries relative to others. Eurostat also cautions that the stated reporting year (1988, 1994, 1999, 2005 or 2010) may not always correspond to the calendar year when the underlying national survey was undertaken.[2]

Eurostat's tables report only the central value for the expenditure shares. Since the data come from surveys there is an inevitable sampling error associated with the reported statistics, i.e. as the statistics are based on a sample of households there is uncertainty as to whether the reported expenditure shares match the true expenditure share in the entire population of households. Technically, a confidence interval should be included around each country's reported expenditure share. Unfortunately, Eurostat does not make this level of detail available in its online database. The practical importance of this is that we cannot identify where differences in expenditure shares between countries and years are statistically significant.

Lastly, it is worth describing how the averages for the EU15, EU28 and 'New Members' have been calculated for the expenditure share data. To calculate each average the expenditure share figures for each Member State have been used to construct a mean where the contribution of each Member State's expenditure share is weighted by the Member State's percentage of the total population of the relevant Member States in 2013[3], as reported on the Eurostat website[4]. The average is weighted by countries' populations to provide a more accurate picture of the expenditure shares spent by the total EU population[5]. The averages, e.g. for the EU15, are not based on all the Member States within the named group, but only on the subset of Member States

[1] The data used to construct the expenditure share charts can be downloaded from: http://ec.europa.eu/eurostat/web/household-budget-surveys/database
[2] Unfortunately data for 2015 is yet to be collected and/or disseminated.
[3] The averages contained within the Eurostat household expenditure tables have not been used as they often do not cover the entire time period or the sub-group of Member States being considered.
[4] The population figures used to construct the weights for Member States can be obtained from: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=en
[5] If we did not introduce population weights, it would mean the figures from Luxembourg and Germany would be treated equally despite their vastly different sizes.

where the expenditure shares are available for all years[6]. This is to avoid apparent changes in expenditure shares between years resulting simply from a different set of Member States being considered, rather than variations in consumer spending.

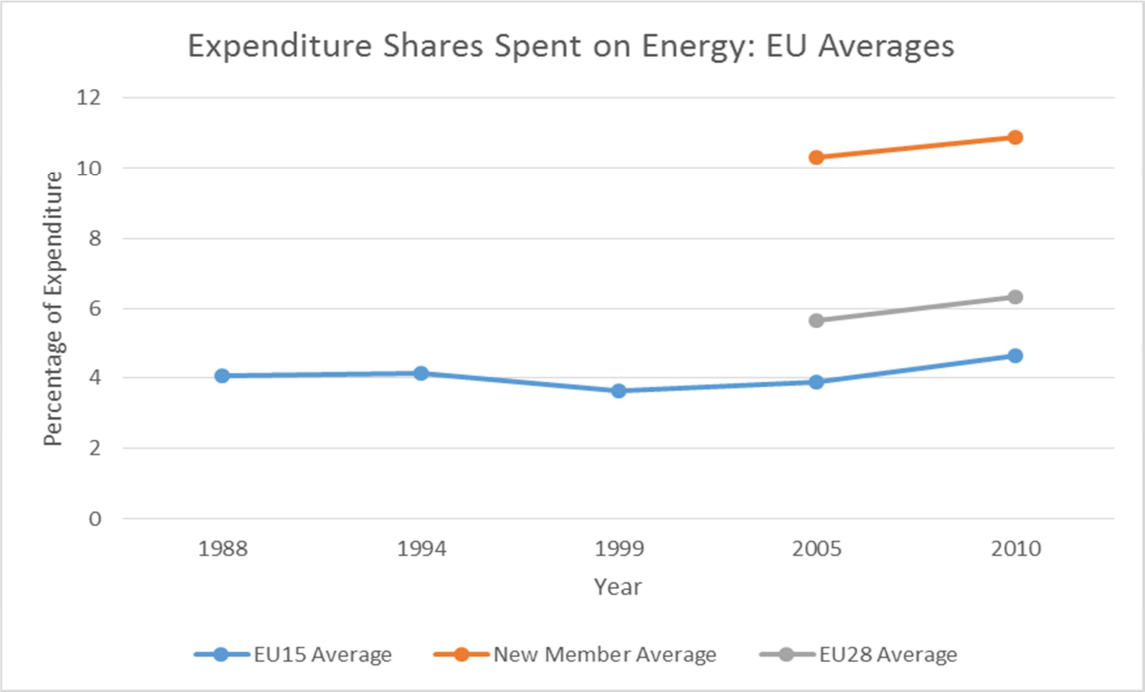
Beyond these methodological considerations, it is useful to review the information on affordability contained in expenditure shares. The expenditure shares reported below show the proportion of total household expenditure associated with a particular utility. Expenditure on a particular utility is the product of two factors: (i) the price of a service; and (ii) the quantity consumed. An observed increase in the expenditure share of a particular utility may not indicate that it has become more expensive or less affordable without further evidence. An increasing expenditure share could indicate a household purchasing a greater quantity of a particular utility; it would indicate a decrease in affordability if it resulted from an increase in price while quantity consumed remained constant or expenditure on a utility remained constant, but total household expenditure dropped.

It is more credible to claim that expenditure shares are a good measure of affordability when demand is inelastic to both prices and income. Demand is generally considered to be inelastic for necessities such as energy and water, explaining why common measures of fuel and water poverty often relate explicitly to the proportion of income of the relevant commodity.

In the charts below the definition of 'Energy' includes all fuel types used in the home: electricity, gas, liquid fuels, solid fuels and heat energy. Combining all forms of energy together overcomes issues relating to different countries being reliant to differing extents on different fuel sources.

[6] This means the set of Member States used to calculate the averages varies between the different sectors being considered.

Chart 1: Expenditure Shares Spent on Energy: EU Averages



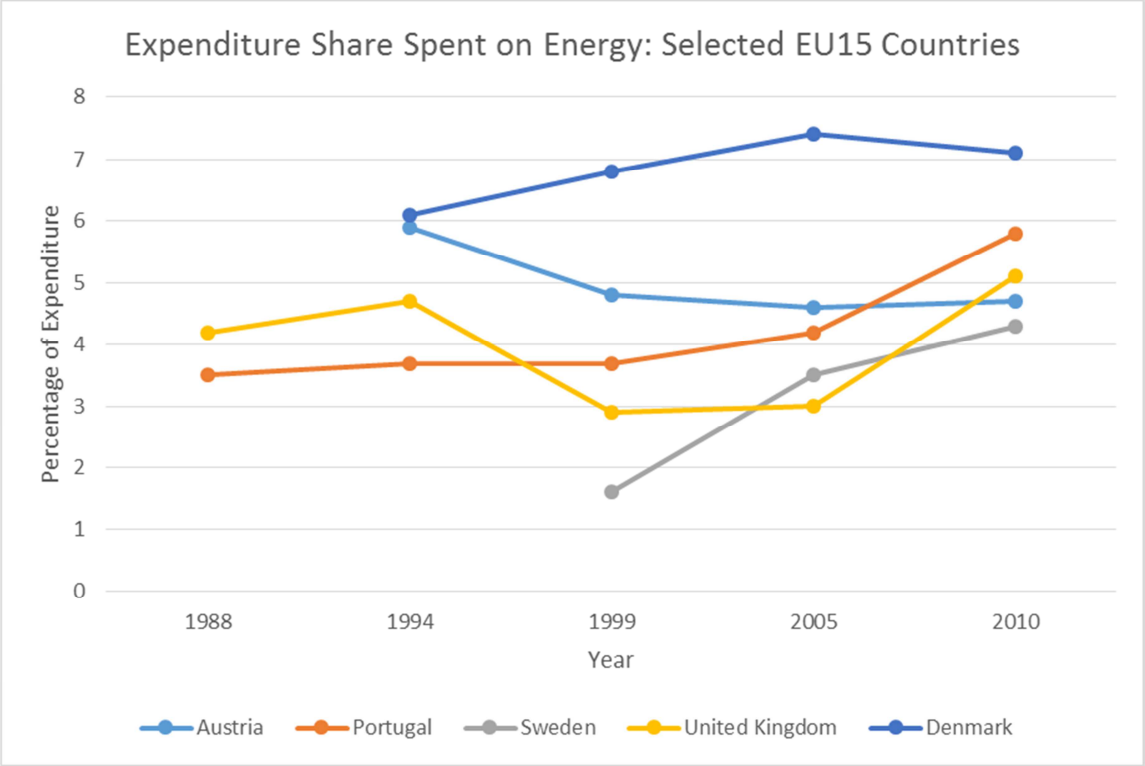
Source: Eurostat

Chart 1 above highlights a consistent finding that households in new Member States spend a much higher proportion of their expenditure on particular utilities than the older member states of the EU15. The energy expenditure share in the new Member States is more than double that in the EU15; in 2010, the figure for new Member States approached 11%, while in the EU15 the average expenditure share was less than 5%. This difference is most likely due to much lower income and total expenditure of households in the new Member States compared with the EU15, although it is probably also influenced by poorer quality housing stocks in new Member States.

The second thing apparent from the chart is that the difference in expenditure shares between the EU15 and new Member States is far greater than the variation of the EU15 average through time. However, Chart 2 shows that the EU15 average can be misleading, since it masks considerable variation between individual Member States. For example, while the average expenditure share of the EU15 remained approximately flat at around 4%, the expenditure share of energy in Sweden more than doubled between 1999 and 2010 (from roughly 1.5% to over 4%). Similarly, despite almost identical expenditure shares of approximately 6% in 1994, Denmark and Austria show considerable divergence in later years. By 2010 the expenditure share of energy had risen to over 7% in Denmark, while it had fallen to below 5% in Austria.

Lastly, the UK has an unusual U-shaped pattern which may relate to policies of privatisation, liberalisation and independent regulation. Between 1994 and 1999 the expenditure share of energy in the UK dropped by just under 2 percentage points, but increased by over 2 percentage points between 2005 and 2010. The increasing expenditure share of energy since 2005 coincides with increasing concerns about the effective functioning of the UK's residential energy market.

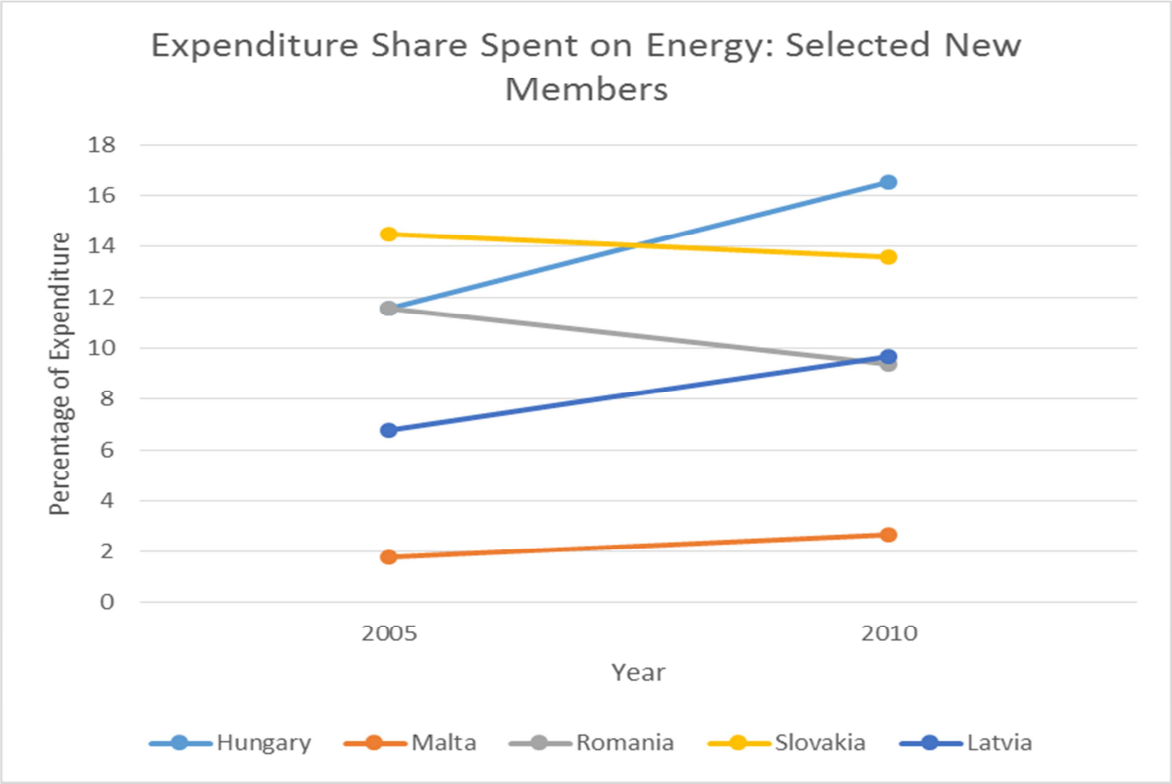
Chart 2: Expenditure Share Spent on Energy: Selected EU15 Countries



Source: Eurostat

Chart 3 below presents figures from selected new Member States which joined the EU from 2004 onwards. The chart shows that there is even more variation in the expenditure shares of energy in the new Member States than within the EU15. Among the new Member States, Malta (and Cyprus, not shown) consistently appear to be in the best position regarding affordability, perhaps because the structure of their economies and level of economic development has more in common with the EU15 than with the transition economies which form the bulk of the new Member States, or because of their small size. Of particular interest in Chart 3 is the divergence in the expenditure shares of energy in Hungary and Romania since 2005. Despite households in both countries spending around 11.5% of their expenditure on energy in 2005, by 2010 the expenditure share in Hungary had increased by around 5 percentage points, while it had dropped by around 3 percentage points in Romania.

Chart 3: Expenditure Share Spent on Energy: Selected New Members



Source: Eurostat

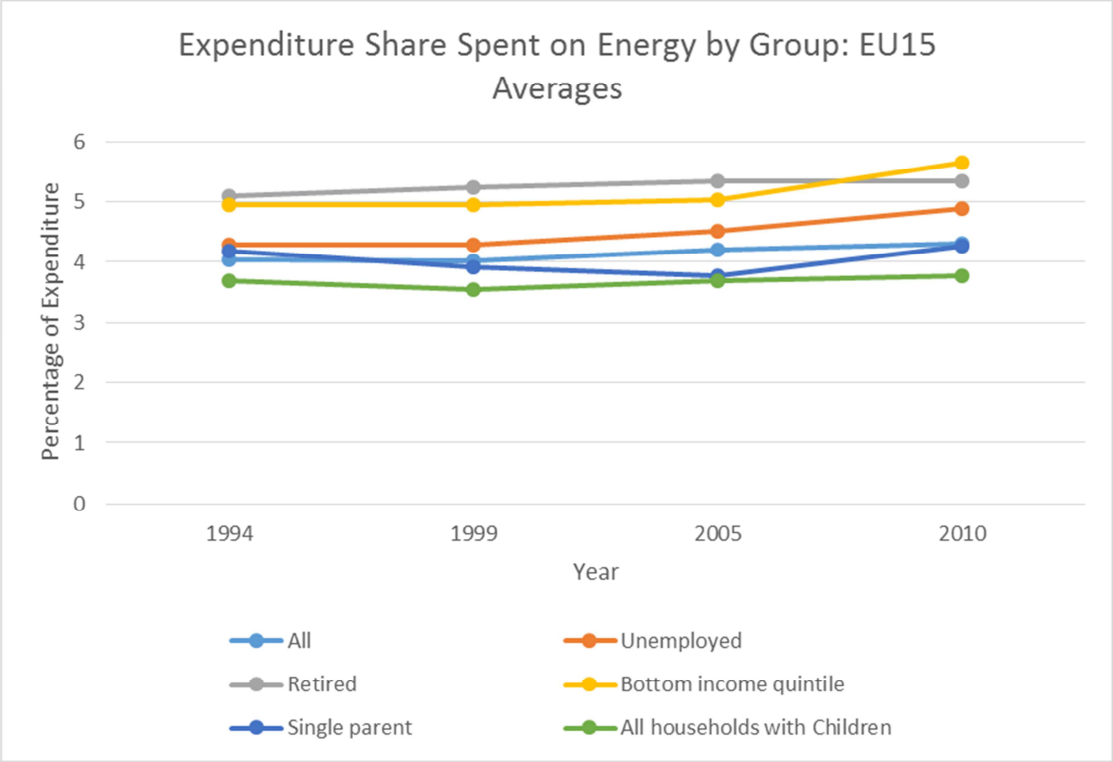
Charts 6, 7 and 8 show how the average expenditure shares of energy vary across different groups, namely: all households, households in the retired category, households in the unemployed category, households in the bottom income quintile (lowest 20% of incomes), households where a single adult supports dependent children, and all households with dependent children. These groups are reported as they may be considered to be at greater risk of affordability difficulties, and more likely to be subject to changing policy interventions.

When calculating the EU15, EU28 and New Member averages, only Member States that reported data for all the categories of households in all of the years were included. In particular, the EU15 averages are based on only 7 or 8 Member States. Moreover each chart utilises a different set of Member States. More information on which Member States are included is available on request.

A feature which is immediately apparent from Charts 4 and 5 below is that the relative ordering of expenditure across different groups is the same in both the EU15 and the new Member States. In both sets of Member States the greatest proportion of expenditure devoted to energy is by the retired and households with the lowest 20% of incomes (bottom income quintile), while the lowest

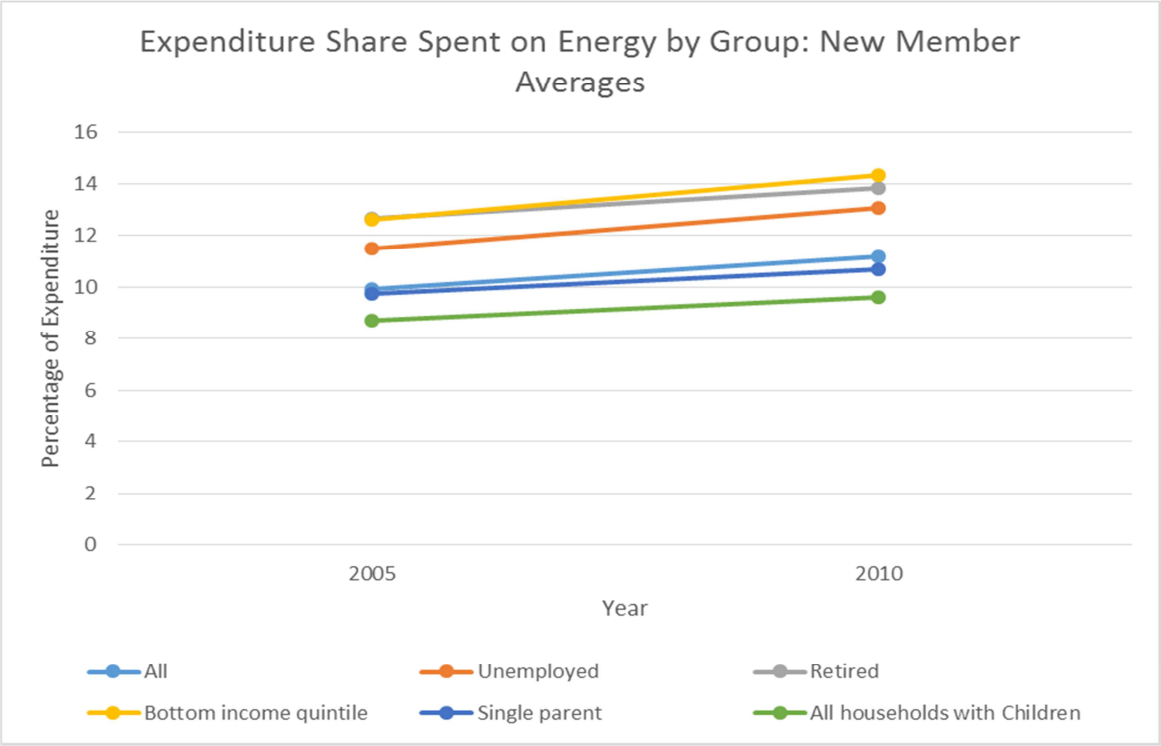
proportion on expenditure of energy is by all households with children. However, the divergence in expenditure shares between different groups is much greater in the new Member States than in the EU15; in the EU15 in 2010 the difference between the highest and lowest expenditure shares devoted to energy was around 2 percentage points, while in the new Member States it was almost 5 percentage points.

Chart 4: Expenditure Share Spent on Energy by Group: EU15 Averages



Source: Eurostat

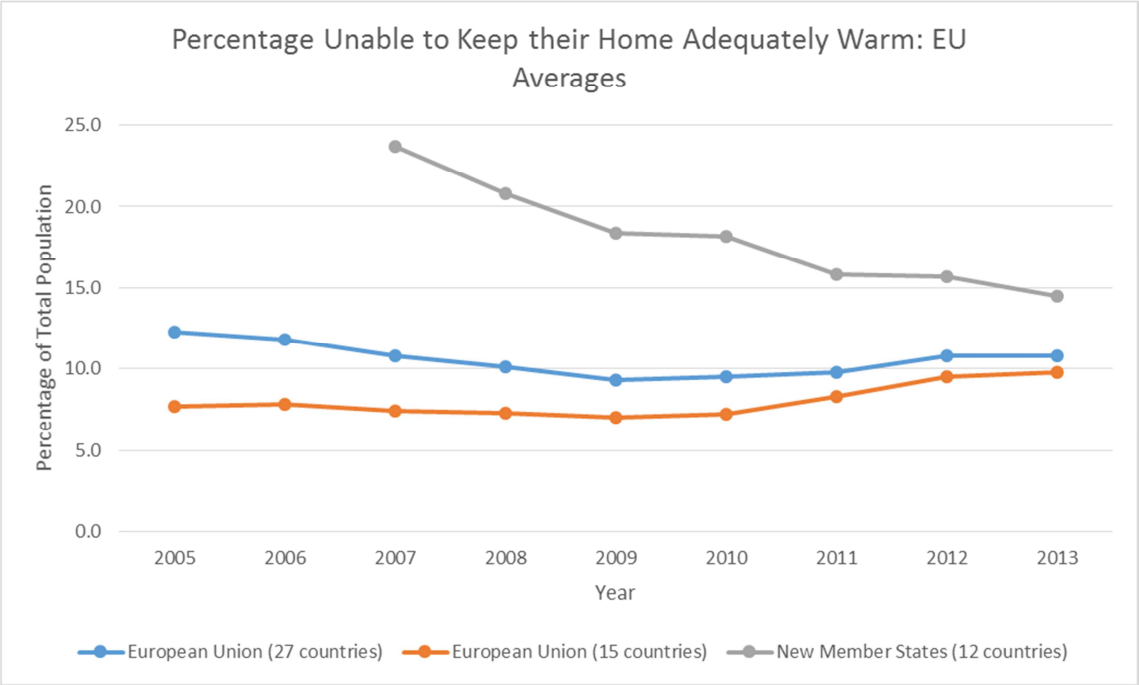
Chart 5: Expenditure Share Spent on Energy by Group: New Member Averages



Source: Eurostat

The following 5 charts utilise data from the European Union Statistics on Income and Living Conditions (EU-SILC). These data provide a more recent picture of affordability compared to the household budget survey data. However it is important to note that these data are 'subjective' rather than 'objective', reflecting respondents' agreement (or not) with particular statements. 'Perception' of utilities' affordability may be influenced by social factors or debates in the media or by politicians, as well as by changes in prices and incomes. Nevertheless, the EU-SILC data provide a valuable complement to the expenditure share data.

Chart 6: Percentage Unable to Keep their Home Adequately Warm: EU Averages



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

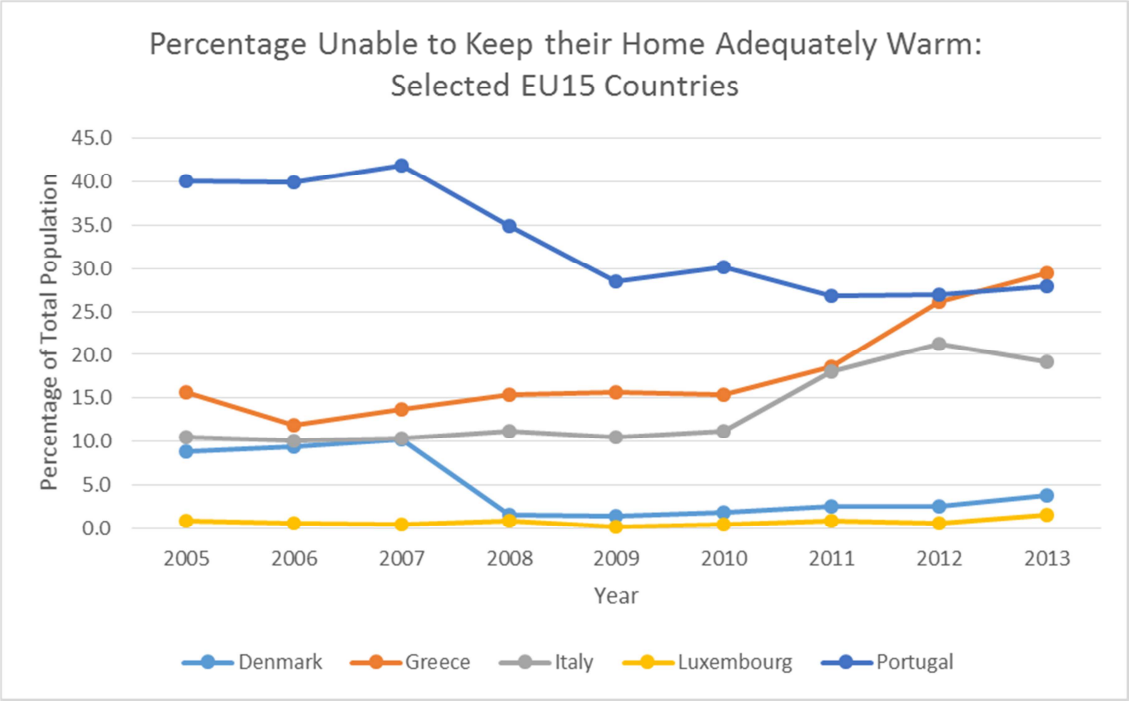
Chart 6 shows clear convergence between the percentage of individuals in new Member States who feel unable to keep their home adequately warm and those in the EU15. Encouragingly, the average percentage of individuals reporting an inability to keep their home adequately warm in new Member States fell by almost 10 percentage points between 2007 and 2013. With the onset of the Great Recession the percentage of individuals in the EU15 feeling unable to keep adequately warm rose by almost 3 percentage points between 2009 and 2013.

Chart 7 shows that even among those Member States most seriously affected by the Great Recession the impact on the percentage of people feeling unable to keep their home warm has not been uniform. In Greece there has been a very large increase in the percentage of people experiencing this deprivation measure, doubling from around 15% in 2010 to approximately 30% in 2013.[7] In contrast, in Portugal the percentage of people reporting being unable to heat their home adequately in 2013 is approximately 15 percentage points lower than in 2007. It is also clear that Portugal was a rather extreme outlier in 2005, with the percentage of Portuguese respondents reporting an inability to heat their home adequately being around 25 percentage points higher than

[7] Note that the percentage of people reporting an inability to keep their home adequately warm in Greece was virtually constant between 2008 and 2010 suggesting that the impact of the Financial Crisis and austerity took some time to impinge significantly on people's perceived living standards.

the equivalent figure for Greek respondents. An even more striking comparison is provided by Luxembourg where throughout the period only 1-2% of the respondents report an inability to heat their homes adequately.

Chart 7: Percentage Unable to Keep their Home Adequately Warm: Selected EU15 Countries

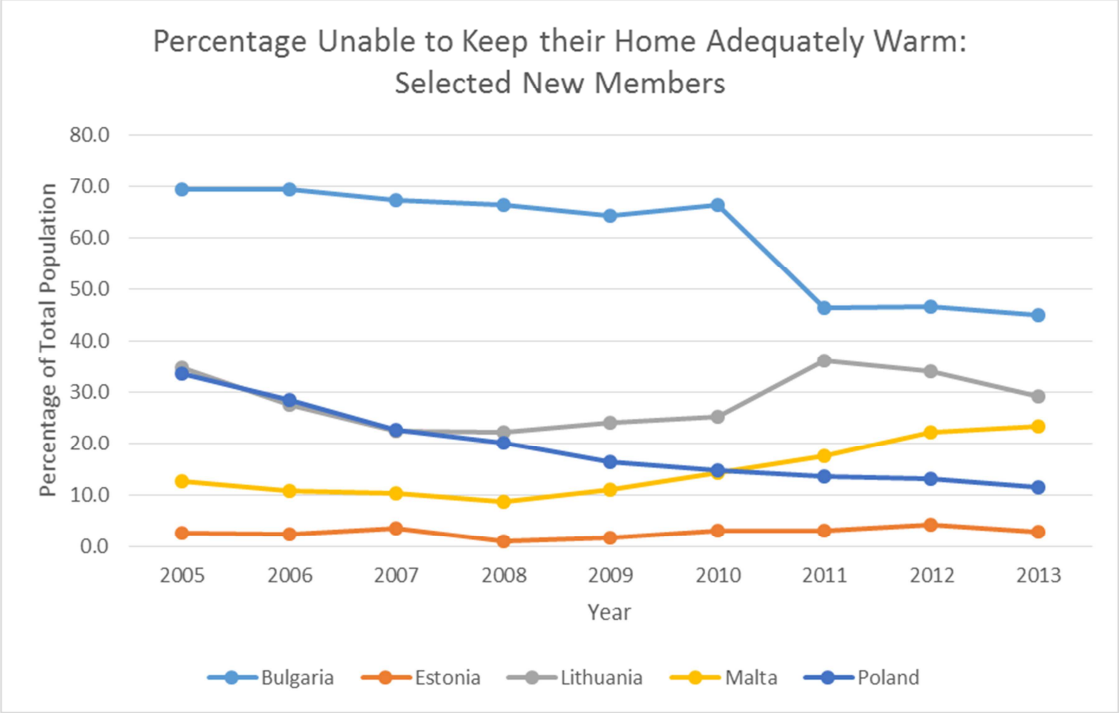


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

While the Portuguese population appears to have major difficulties keeping warm compared to other EU15 countries, its position is more moderate when compared to the new Member States. Chart 8 shows that between 2005 and 2010 the percentage of respondents in Bulgaria expressing an inability to keep their home warm was consistently 65-70%. For Bulgaria it may be valuable to investigate if any major policy changes[8] occurred around 2010, given that the percentage of respondents unable to heat their home adequately fell by around 20 percentage points between 2010 and 2011. This sudden drop of affordability difficulties in Bulgaria contrasts with the case of Poland where a similar percentage point drop occurred, but gradually over the entire period 2005 to 2013.

[8] Assuming there is no issue regarding a change in survey methodology.

Chart 8: Percentage Unable to Keep their Home Adequately Warm: Selected New Members



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Charts 9 and 10 break down the European averages of the EU-SILC data by household type. The charts focus on four groups:

(i) Those with an income below 60% of median income in a Member State.

(ii) Households where at least one person is over the age of 65.

(iii) Households where a single adult looks after dependent children.

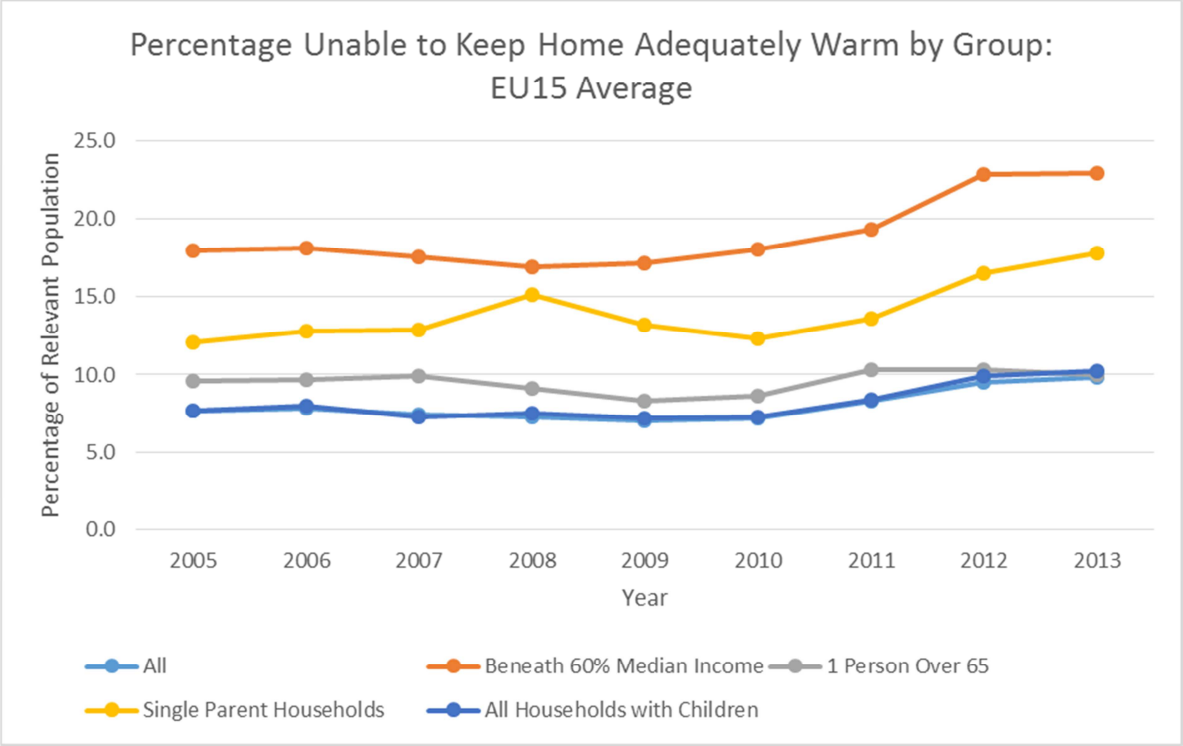
(iv) All households with dependent children.

Each chart records the percentage of the total population falling in a particular household type/income group which reports the deprivation indicator.

The most obvious difference in these charts is that while new Member States (Chart 10) have seen a continuous fall in the average percentages of people reporting being unable to heat their homes since 2007, within the EU15 (Chart 9) there has been an increase in the percentages reporting an inability to keep warm since 2010. As a result there has been convergence between the two types of Member States. Another difference between the EU15 and the new Member States is the changing relative positions of single parents and the retired. In the new Member States around 5 percentage points more of those in older households reported an inability to keep warm compared to those in single parent households in 2007, but this difference had effectively disappeared by

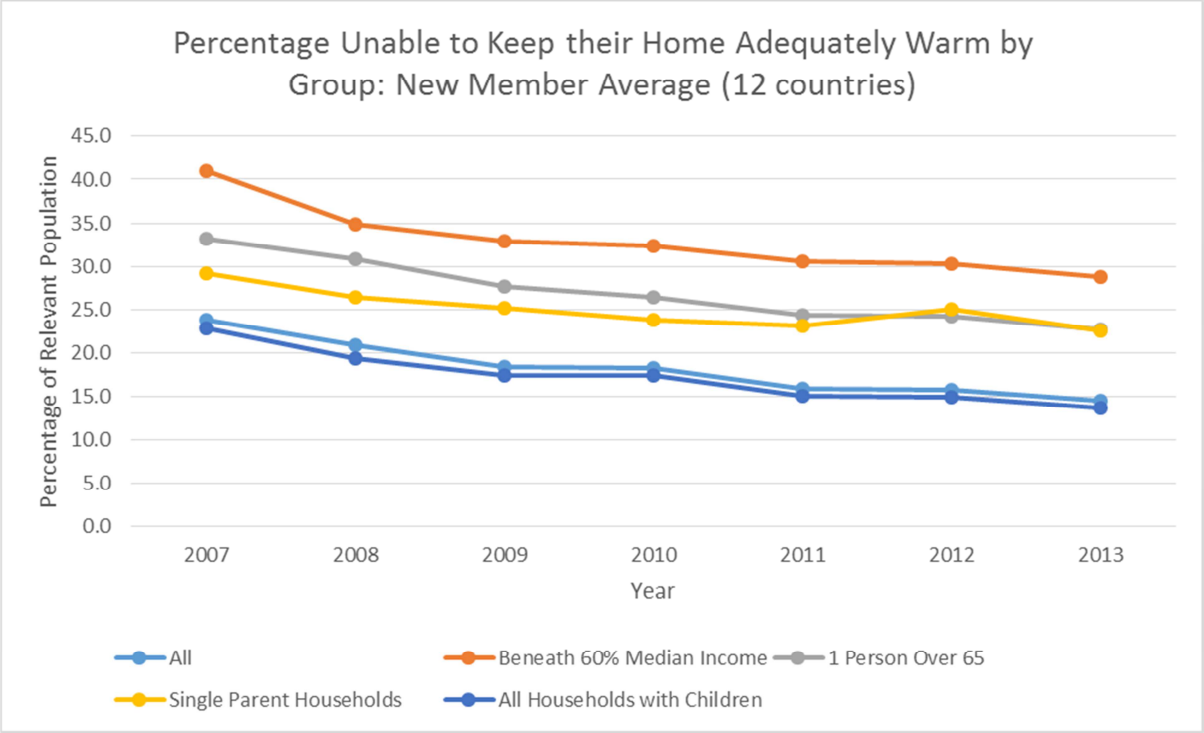
2012. In contrast, across the EU15 in 2005 around 2.5 percentage points more of those in single parent households reported an inability to keep their home warm than those in retired households. By 2013 this difference had increased to 7.5 percentage points. Investigating how the position of different groups evolves through time is particularly interesting as it may shed light on the particular distributional outcomes of different policy interventions.

Chart 9: Percentage Unable to Keep Home Adequately Warm by Group: EU15 Average



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 10: Percentage Unable to Keep their Home Adequately Warm by Group: New Member Average (12 countries) [9]



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

[9] The country excluded from these averages is the most recent new member, Croatia.

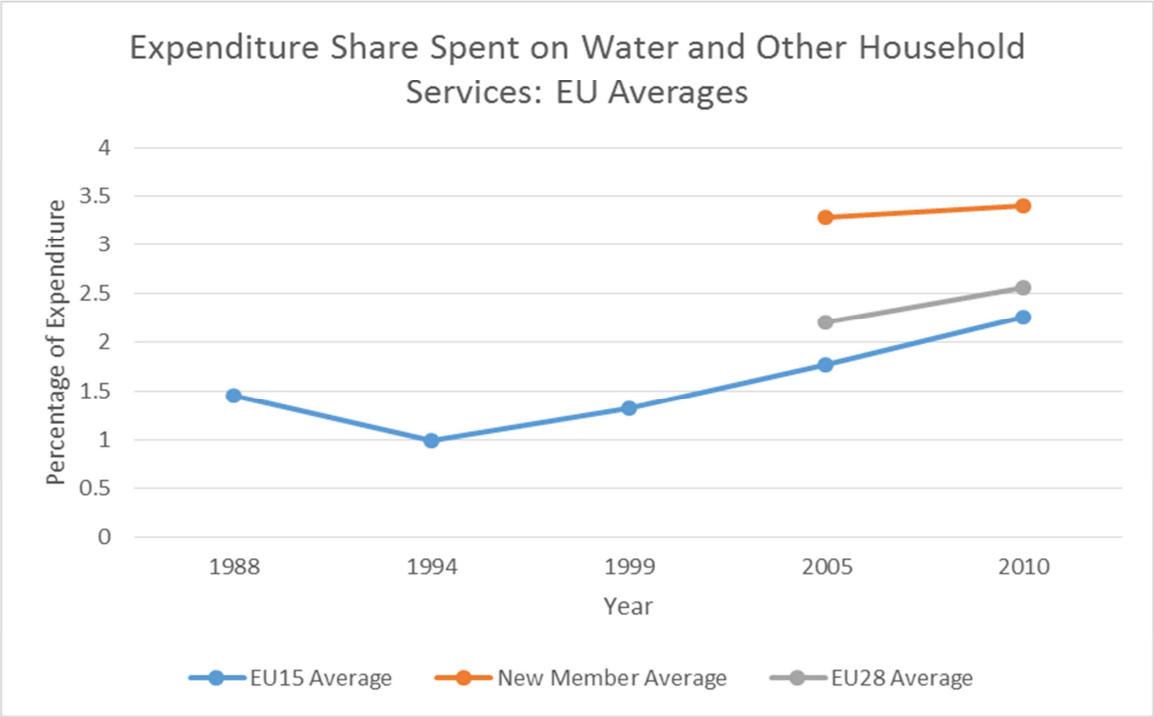
3. Water

The next utility to consider is water. It is not possible to obtain figures from the Eurostat website for 'Water' as a distinct expenditure category. Instead the data reported relates to the combined expenditure category 'Water supply and miscellaneous services relating to the dwelling'. The other services which have named subcategories feeding into this expenditure category are: Sewerage Collection and Refuse Collection.[10]

Chart 11 shows that in the EU15 there has been a consistent increase in the expenditure share of water and other household services since 1994, more than doubling from 1% in 1994 to around 2.2% in 2010. One explanation for this increasing expenditure share might be the costs of increasing environmental regulations along with moves to full cost recovery over the time period. Nevertheless, in 2010 the average expenditure share of water and household services remained 1.2 percentage points lower in the EU15 than in the new Member States.

[10] There is also an expenditure sub-category entitled 'Other Services'.

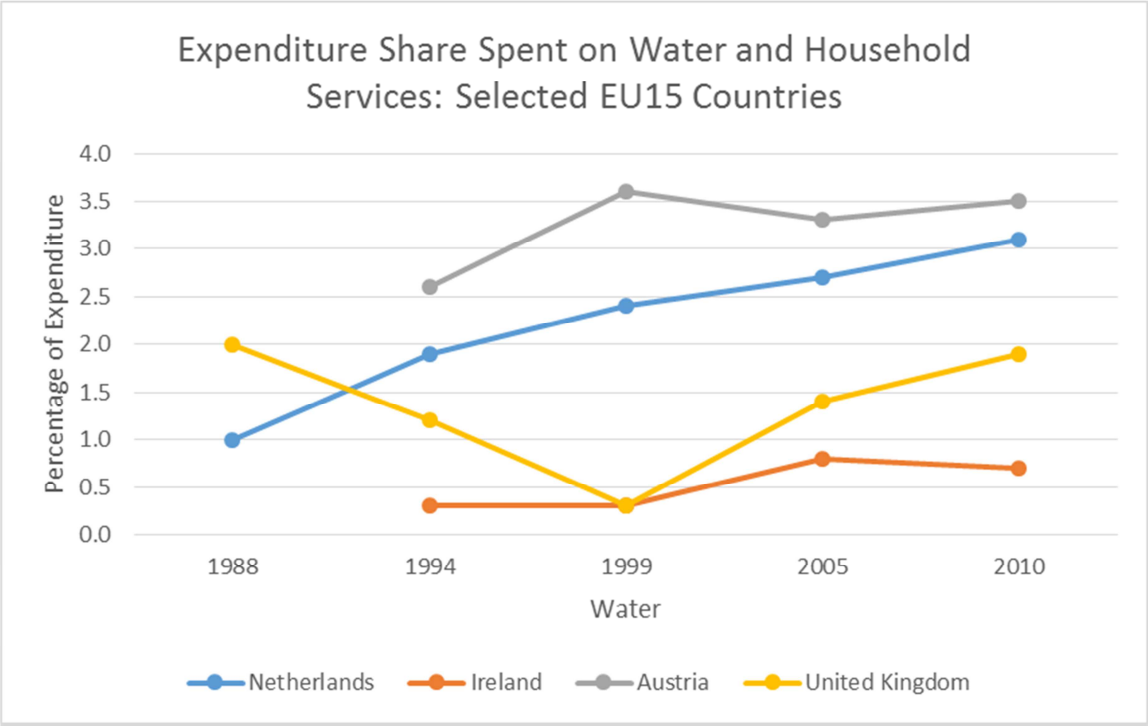
Chart 11: Expenditure Share Spent on Water and Other Household Services: EU Averages



Source: Eurostat

Within the EU15 countries, the UK shows an unusual fluctuation in the expenditure shares of water and household services through time. Between 1988 and 1999 the average expenditure share in the UK drops by more than three-quarters, but by 2010 this drop is almost fully reversed with the expenditure share approaching its original 1988 level of around 2%. This pattern is likely to reflect the different regulatory settlements at 5 year intervals, after privatisation in 1990. The picture in the Netherlands is also striking with the expenditure share of water and household services trebling over the twenty years between 1988 and 2010.

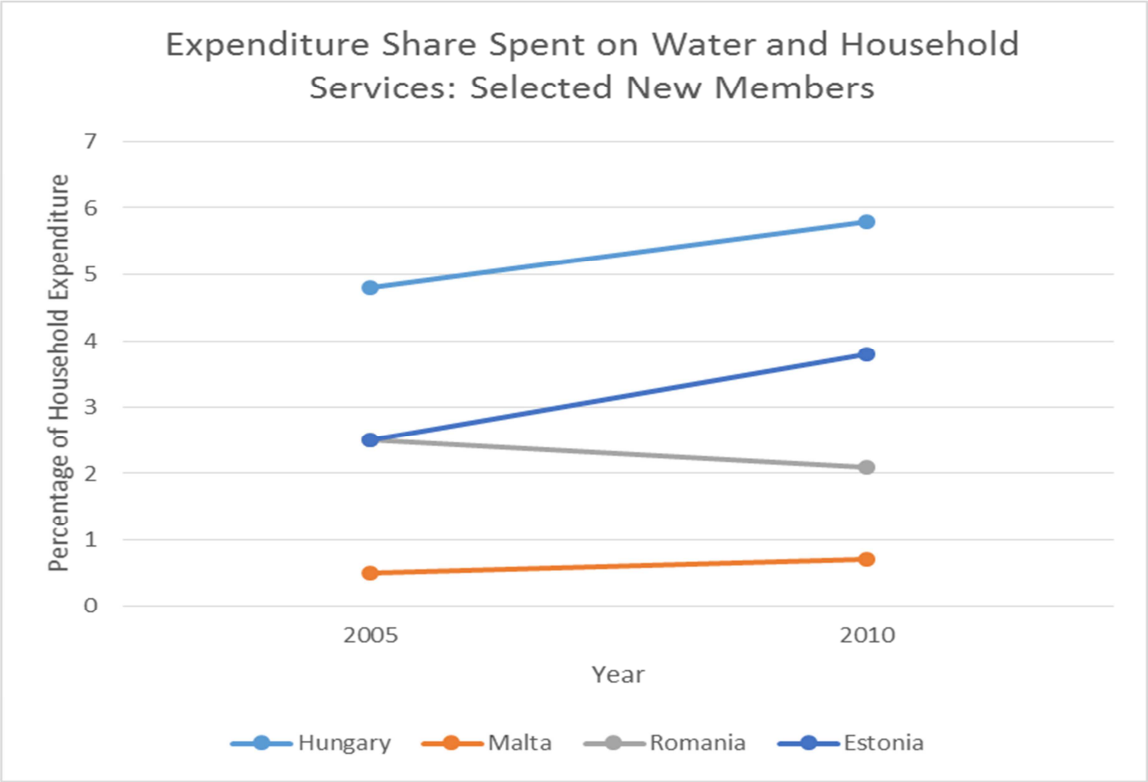
Chart 12: Expenditure Share Spent on Water and Household Services: Selected EU15 Countries



Source: Eurostat

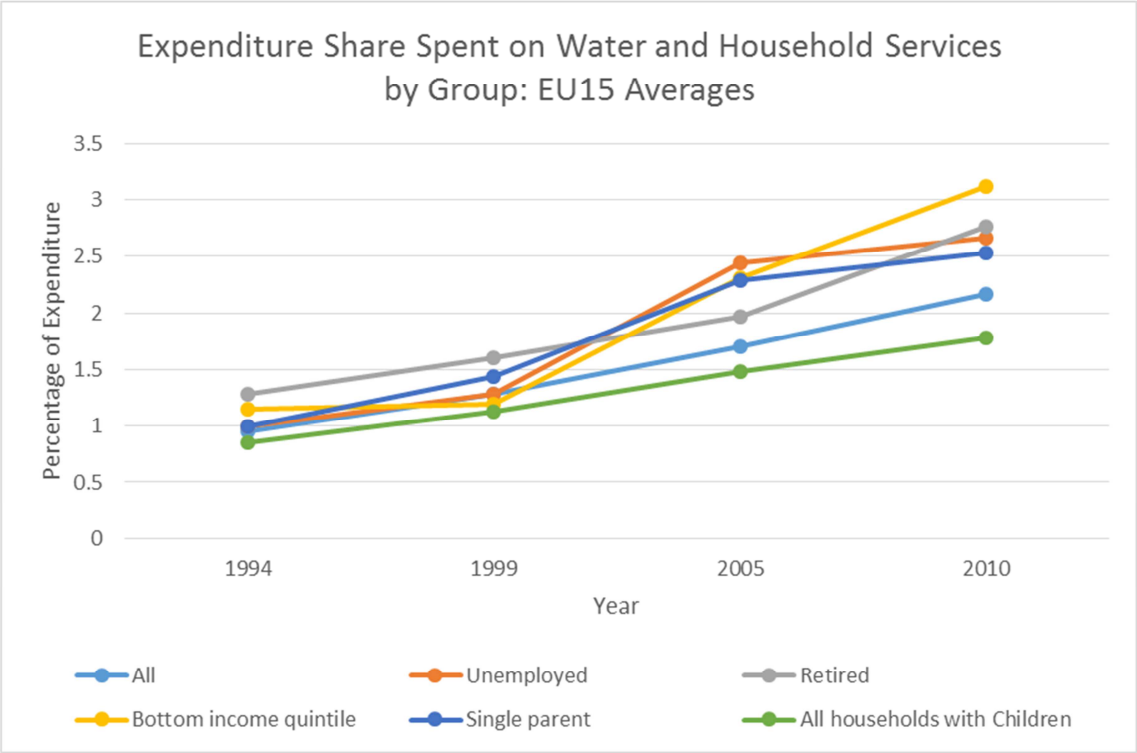
As with the EU15, many new Member States have seen an increasing proportion of expenditure being devoted to water and household services; indeed, the rate of increase is particularly high for Estonia with the expenditure share rising by around 1.3 percentage points between 2005 and 2010.

Chart 13: Expenditure Share Spent on Water and Household Services: Selected New Members



Source: Eurostat

Chart 14: Expenditure Share Spent on Water and Household Services by Group: EU15 Averages

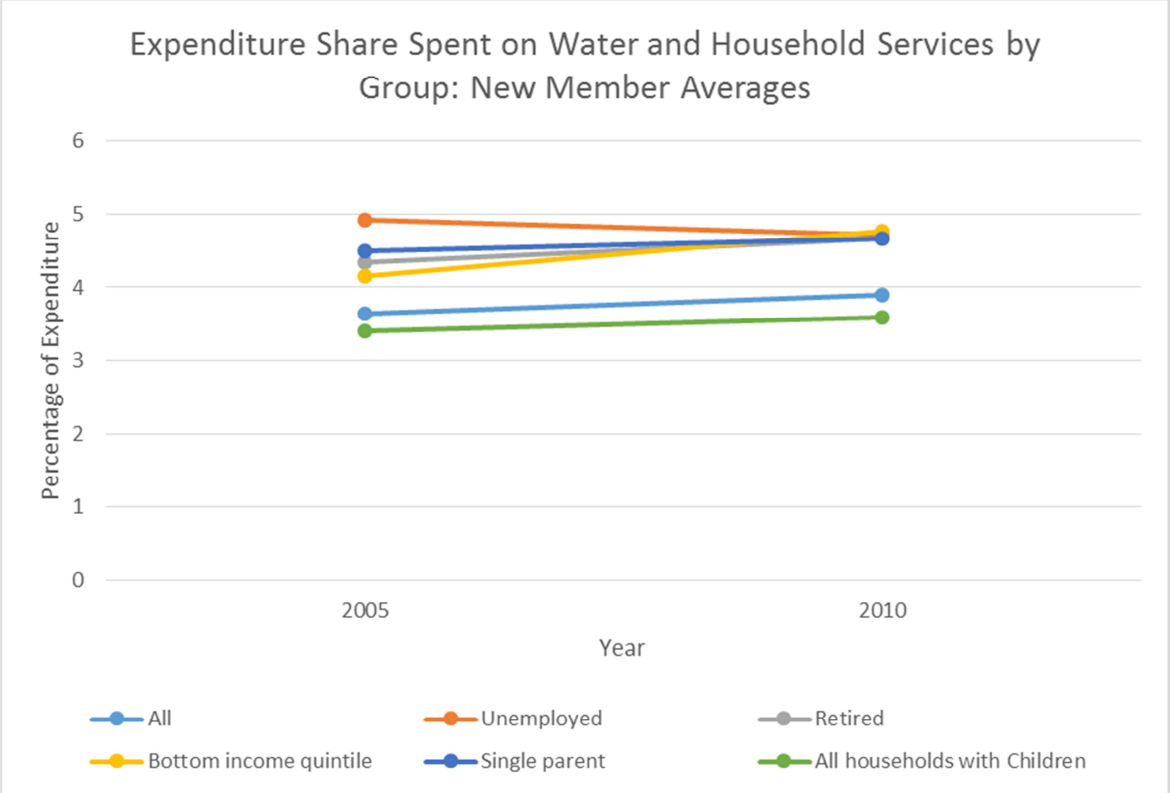


Source: Eurostat

Chart 14 shows increasing dispersion of expenditure shares between different groups of consumers between 1999 and 2010. In 1999 there is a difference of roughly 0.5 percentage points between the highest and lowest expenditure shares. However, by 2010 this difference had approximately trebled to around 1.5 percentage points. This degree of dispersion in 2010 is approximately the same as that displayed between the different groups in the new Member States shown in Chart 15. Chart 14 also shows there has been a particularly large increase in the expenditure share of households in the bottom income quartile, with the average expenditure share of this group in the EU15 rising 2 percentage points between 1999 and 2010. Relative to other household groups, the lowest income quintile has moved from having the second lowest expenditure share in 1999 to having the highest expenditure share in 2010.

In contrast to the increased dispersion between groups in the EU15, Chart 15 shows some convergence in the expenditure shares of water and household services in the new Member States between 2005 and 2010. By 2010 the expenditure shares of retired, single parent and unemployed households along with households in the bottom income quintile were virtually identical.

Chart 15: Expenditure Share Spent on Water and Household Services by Group: New Member Averages



Source: Eurostat

4. Telecoms

When assessing the affordability of telecom services a comprehensive source of information is provided by the International Telecommunication Union (ITU). Charts 16 to 28 are based on data transcribed from tables included in the ITU's publication 'Measuring the Information Society' for the years 2009-2014[11]. The ITU affordability measure considers the cost of a specified bundle of telecoms services in a particular country and reports this cost as a percentage of average GNI per capita of the relevant country. The advantage of considering the cost of a fixed bundle of services as a percentage of average income per capita is that the driver of the indicator for changing affordability is immediately clear (either price or income), in contrast to Eurostat expenditure share data, where changes may be due to changing quantities rather than changing prices or income. The downsides of the ITU data are twofold: (i) the usage bundles may not reflect actual consumption in each country very accurately; and (ii) average GNI per capita will mask issues relating to the distribution of income within particular countries.

One advantage of the ITU data is its availability for almost all countries in the world. A set of comparator countries has been selected to provide an external benchmark to affordability within the EU. The comparator countries are: Australia, Canada, Japan, Norway, South Korea, Switzerland and the United States. The affordability figures for these individual countries have been used to form a population weighted 'comparator country average'. The population weights for this comparator country average are 2013 figures from the CIA World Factbook[12]. The weighted averages for Europe use the Eurostat population data described in Section 2.[13] Unlike the expenditure share data, the ITU data suffers from very few missing observations and so the averages reported are almost always based on the full range of countries within a particular group.

The ITU splits telecoms services into 3 components: fixed line telephony, mobile telephony and fixed broadband[14]. The cost data which the ITU collect are for the service provided by the telecoms provider with the largest market share in the relevant country.[15] The aim is to identify the cheapest service which satisfies the usage requirements specified by the ITU. At least in 2013, it appears that the cheapest services for fixed broadband in Europe significantly exceeded the minimum required

[11] These publications can be downloaded from: http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2013.aspx
[12] The relevant information can be obtained from the following webpage: https://www.cia.gov/library/publications/the-world-factbook/rankorder/2119rank.html
[13] The 'Europe' averages contained within 'Measuring the Information Society' consider a broader set of countries than just the EU's Member States.
[14] The ITU has experimented with how to report/record the affordability of mobile broadband. While tables for the affordability of mobile broadband are included in the ITU's 'Measuring the Information Society' in more recent years they are not included here due to the lack of consistent definitions.
[15] This introduces a measurement issue that between year variations in affordability measures might reflect changes in the company for whom cost data is collected rather than a change in the charge for an individual service.

broadband service specified by the ITU (in terms of speed and data usage). Also, the definition of the mobile telecoms bundle changed between 2009 and 2010 with an increase in the amount of usage. Nevertheless, the ITU recognises that the mobile telephony basket represents below average usage for most OECD countries.

The consumption baskets are defined as follows:

Fixed Telephony Basket: The monthly price charged for subscribing to the public switched telephone network (PSTN), plus the cost of 30 three-minute local calls to the same (fixed) network (15 peak and 15 off-peak).

Mobile Telephony Basket: The price of a standard prepaid basket of mobile monthly usage for **30** outgoing calls per month (on-net, off-net to a fixed line and for peak and off-peak times in predetermined ratios) plus **100** SMS messages

Prior to 2010 this basket involved only **25** outgoing calls and **30** SMS messages.

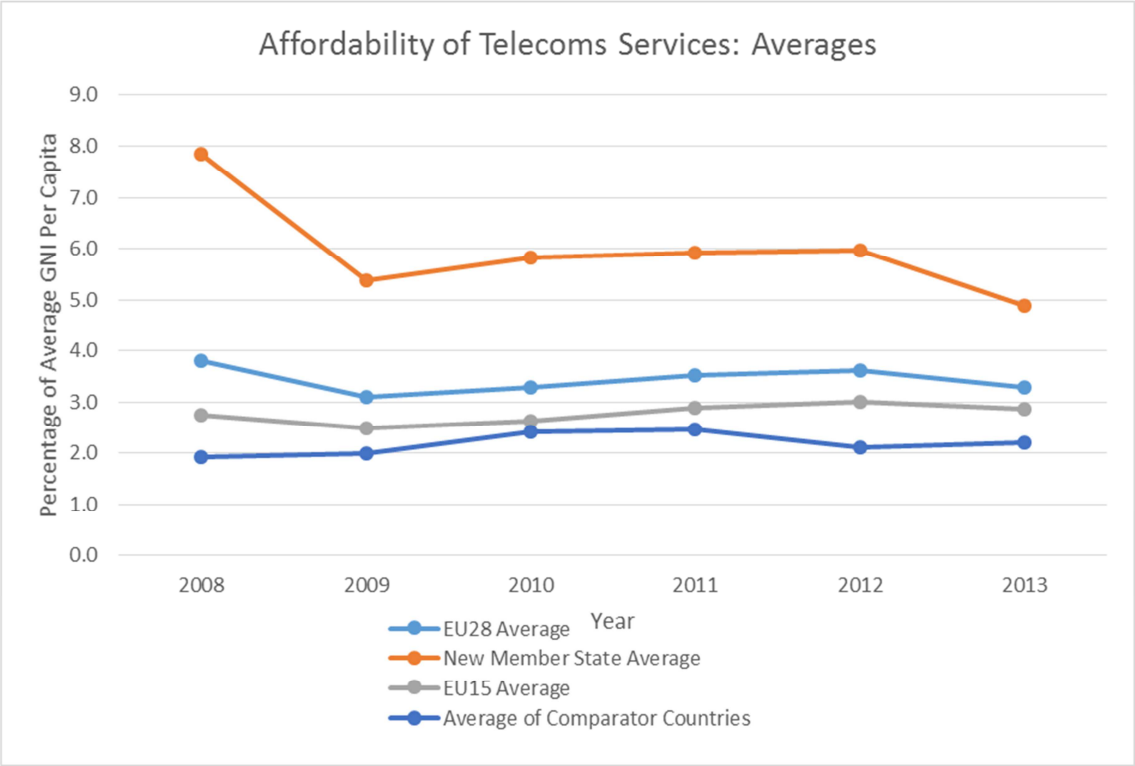
Fixed Broadband Basket: The price of a monthly subscription to an entry-level fixed broadband plan involving a minimum of 1GB of data usage. Where the plan limit is <1 GB the cost of the additional bytes is added. The minimum speed is 256 KB/ps[16].

Charts 16 to 18 report the total cost of all three sub-baskets combined. It is immediately apparent from Chart 16 that the total telecoms services in the EU's new Member States are far less affordable than in either the EU15 or in the global comparator countries. Although the cost of telecoms services in new Member States has become considerably more affordable over the period 2008 to 2013, the average share in the new Member States was still almost 2 percentage points higher than the average in the EU15 in 2013. While the average cost of telecom services in the new Member States has fallen by around 3 percentage points between 2008 and 2013 the total cost of telecoms services in the EU15 and comparator countries has remained fairly stable over the same time period.

In each year the total cost of telecoms services has been less affordable on average in the EU15 than in the set of global comparator countries. Since 2010 the gap between the EU15 average share and that of the global comparator countries has widened to around 0.7 percentage points. It may be interesting to investigate further whether this difference in the affordability of telecoms services in the EU has had any detrimental impact on the performance of the IT sectors in the EU, compared to its international competitors.

[16] This broadband speed seems a low threshold for the definition of broadband.

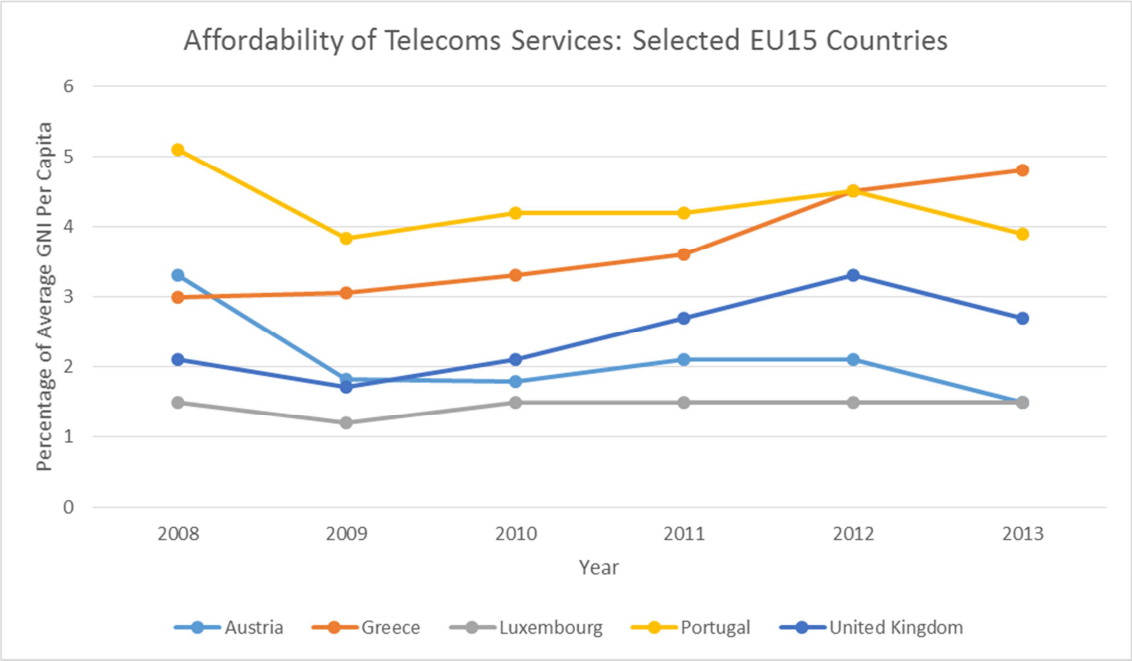
Chart 16: Affordability of Telecoms Services: Averages



Source: ITU's publication 'Measuring the Information Society', 2009-2014

Among the EU15 there is a fairly consistent gap between the Member State where telecoms services have been least affordable (Portugal) and where they have been most affordable (Luxembourg). Austria experienced a dramatic drop in the cost of telecoms services between 2008 and 2009, equivalent to around 1.5 percentage points of average GNI per capita. Given that Austria is a relatively prosperous country this would reflect a particularly large drop in price.

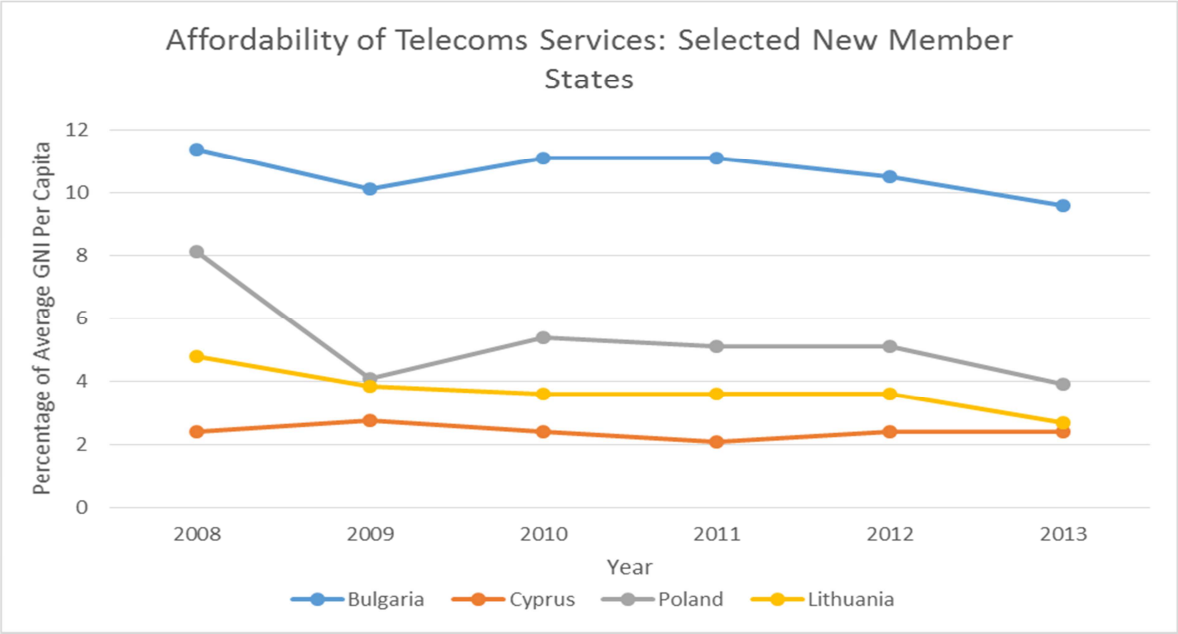
Chart 17: Affordability of Telecoms Services: Selected EU15 Countries



Source: ITU's publication 'Measuring the Information Society', 2009-2014

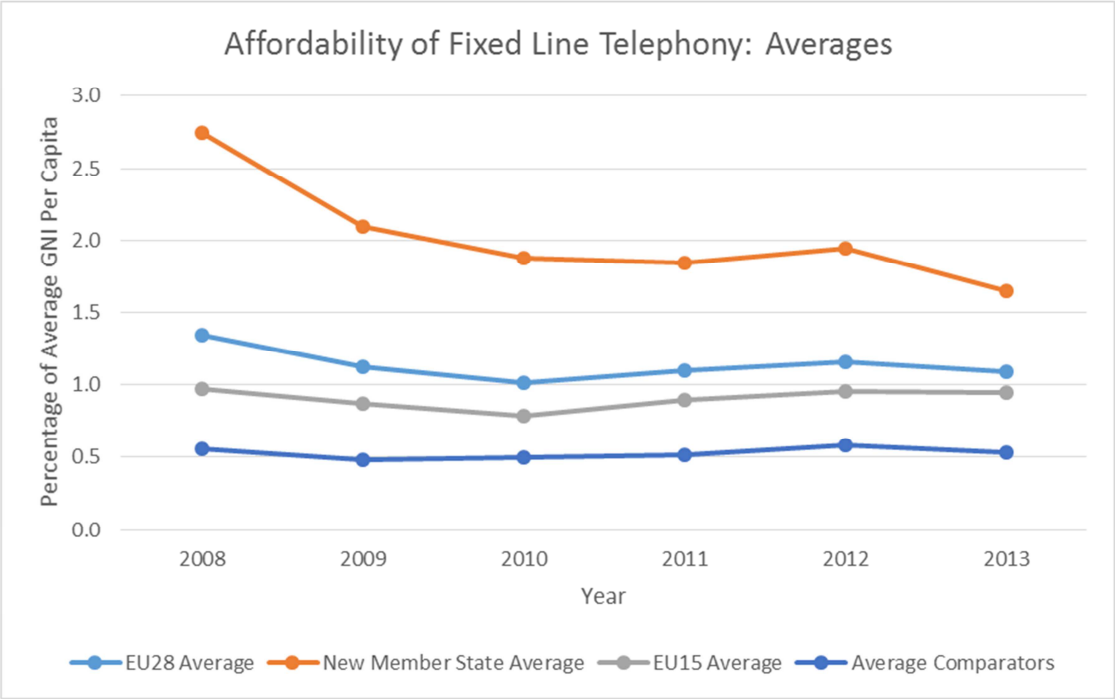
However the increase in telecoms affordability in Austria between 2008 and 2009 is dwarfed by the change in Poland where the equivalent figure was almost 4 percentage points. Comparing Charts 17 and 18 also makes clear the extreme differences in affordability (and economic development) across the EU. The percentage of average GNI per capita required to purchase the specified bundle of telecom services in Bulgaria is consistently around 7 times the equivalent figure for Luxembourg.

Chart 18: Affordability of Telecoms Services: Selected New Member States



Source: ITU's publication 'Measuring the Information Society', 2009-2014

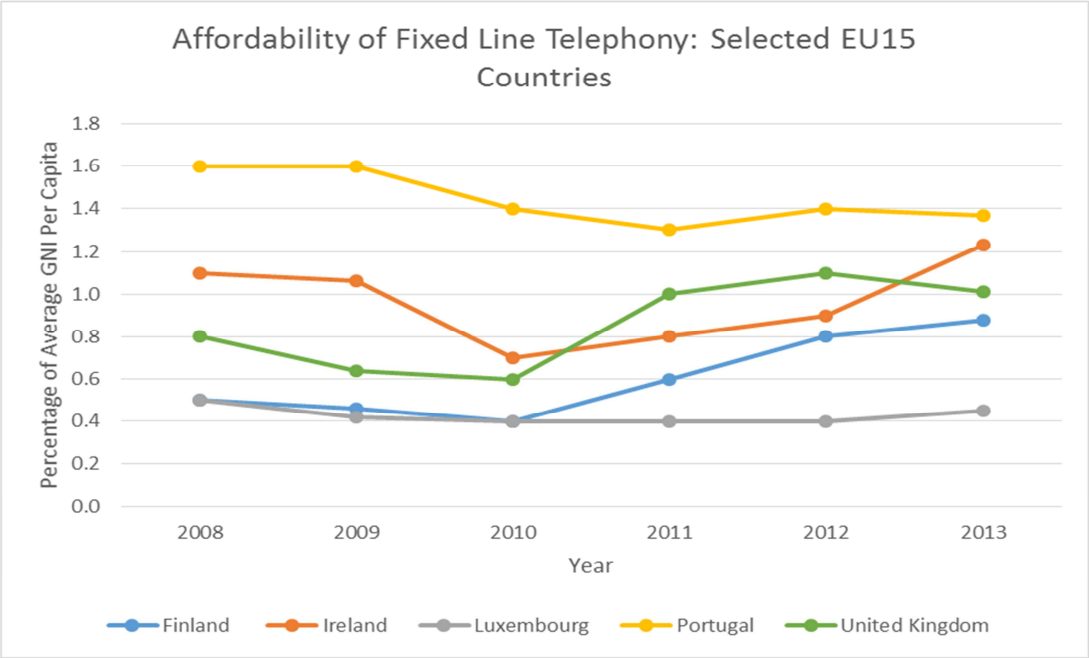
Chart 19: Affordability of Fixed Line Telephony: Averages



Source: ITU's publication 'Measuring the Information Society', 2009-2014

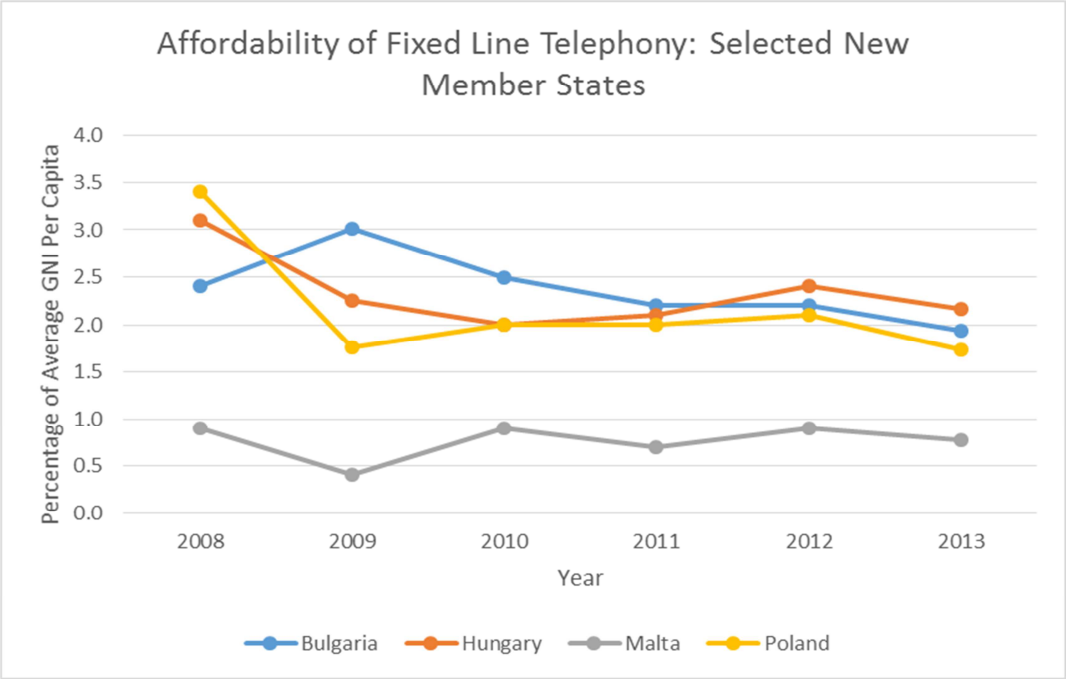
Chart 19 shows that the affordability of fixed line telephony is particularly poor in the EU. The percentage of average GNI per capita required to purchase the ITU's fixed line telephony bundle in the EU15 in 2013 is almost double the equivalent average figure for the group of comparator countries. While average affordability of fixed line telephony in the EU's new Member States is considerably worse than in the EU15, there has been significant convergence between 2008 and 2013. Looking at individual Member States within the EU15 it is interesting to note that the affordability of fixed telephony has worsened significantly in both Finland and the UK. In Finland the cost of the ITU's consumption bundle as a percentage of average GNI per capita has more than doubled between 2010 and 2013.

Chart 20: Affordability of Fixed Line Telephony: Selected EU15 Countries



Source: ITU's publication 'Measuring the Information Society', 2009-2014

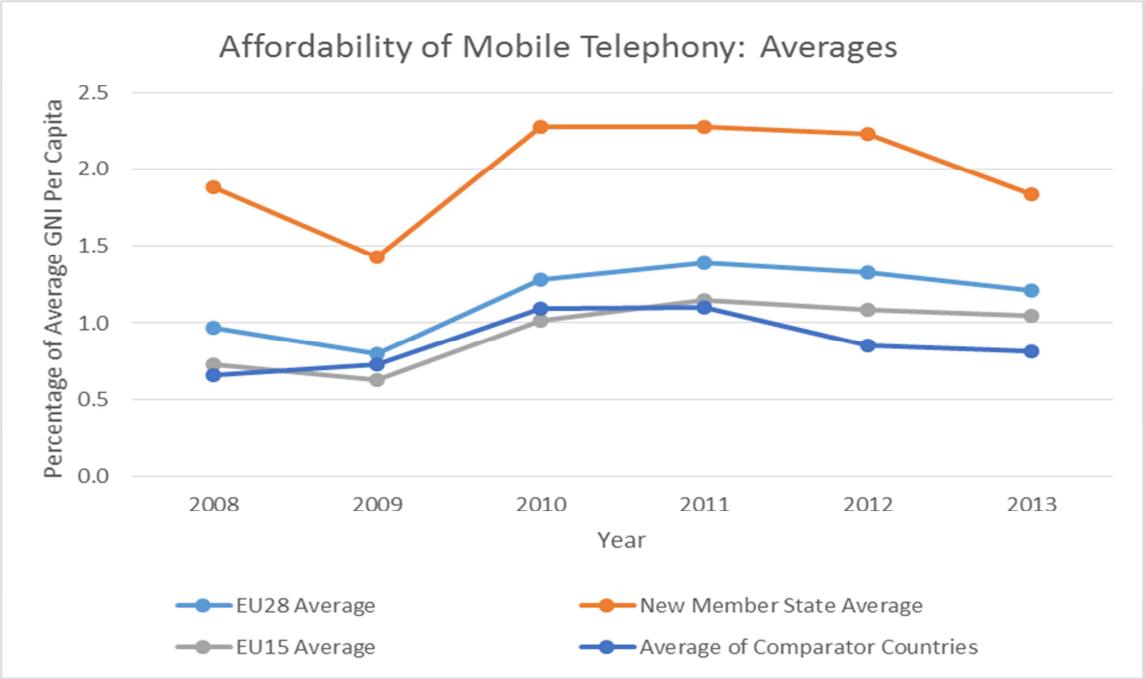
Chart 21: Affordability of Fixed Line Telephony: Selected New Member States



Source: ITU's publication 'Measuring the Information Society', 2009-2014

While the affordability of fixed telephony in the EU compares poorly against the average of global comparator countries, at least until 2011, the affordability of the ITU's mobile telephony basket in the EU15 was similar to the average of the comparator countries. However, since 2011 the affordability of telecoms services in the comparator countries has improved somewhat compared to the EU15. It might be worth investigating the extent to which this divergence is due to the differing rates of economic growth seen in the EU15 and comparator countries, especially the USA, since 2011. When interpreting Charts 22 to 24 it is important to remember that the worsening of the affordability of mobile telephony between 2009 and 2010 results at least in part from the increased usage level in the ITU's mobile telephony basket between these two years.

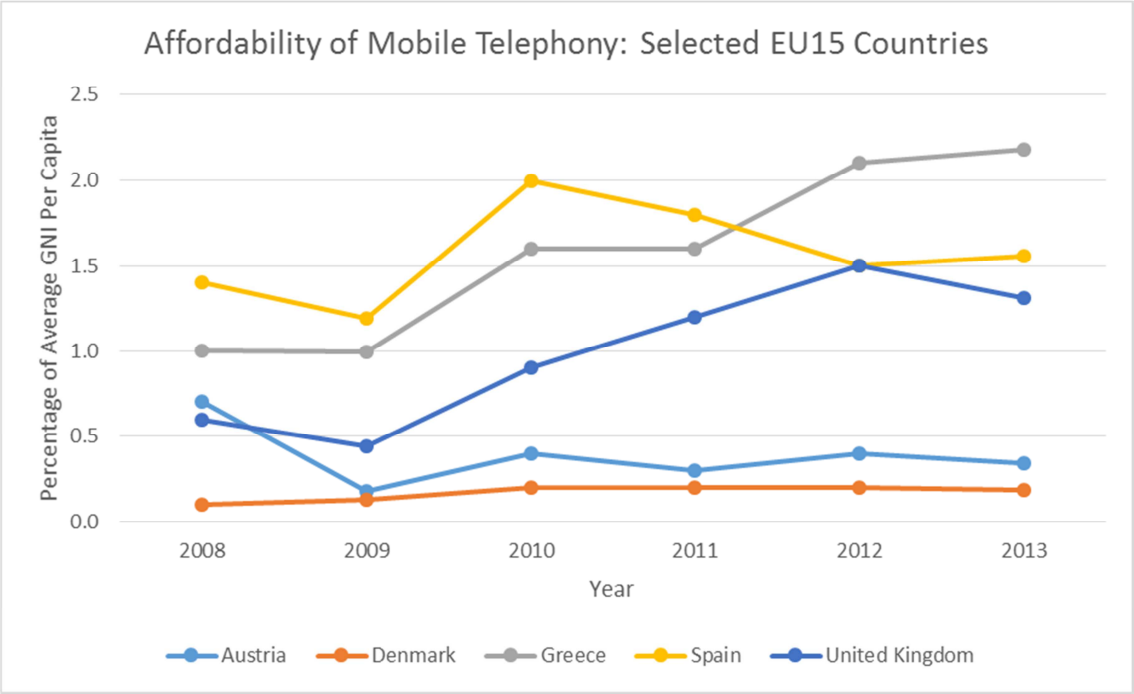
Chart 22: Affordability of Mobile Telephony: Averages



Source: ITU's publication 'Measuring the Information Society', 2009-2014

Looking at individual EU15 Member States it is noticeable that the affordability of the ITU's mobile telephony basket dropped by around the same amount for both the UK and Greece between 2009 and 2012 (1 percentage point) despite the greater economic turmoil in Greece. The performance of the UK between 2009 and 2012 also contrasts with Denmark and Austria, where the affordability of mobile telephony remained constant between these years.

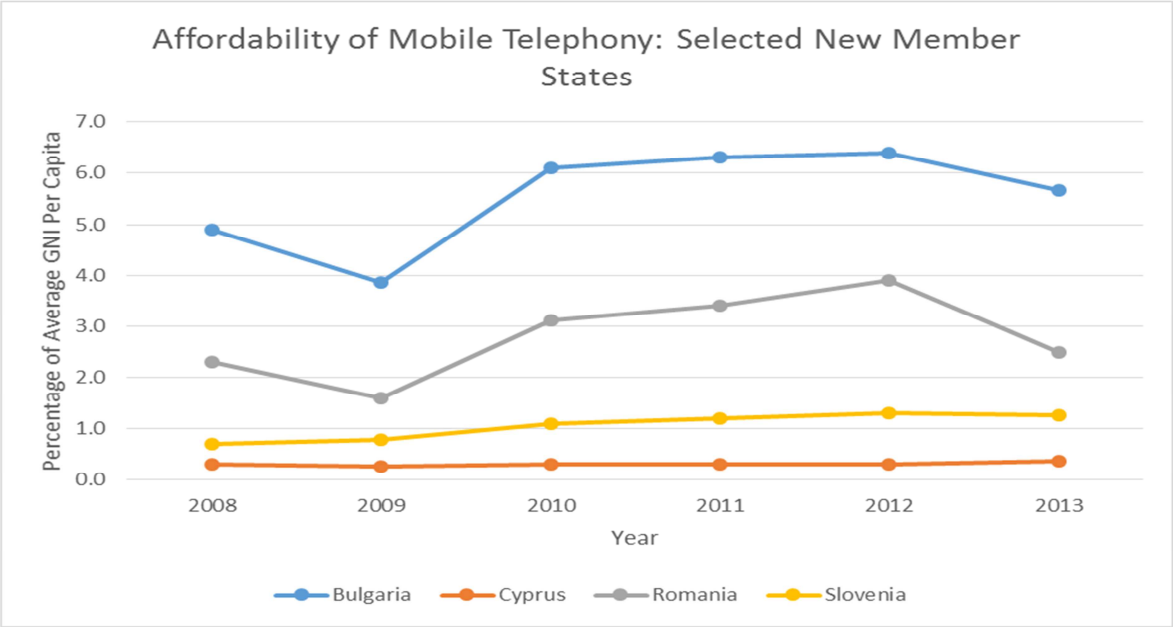
Chart 23: Affordability of Mobile Telephony: Selected EU15 Countries



Source: ITU's publication 'Measuring the Information Society', 2009-2014

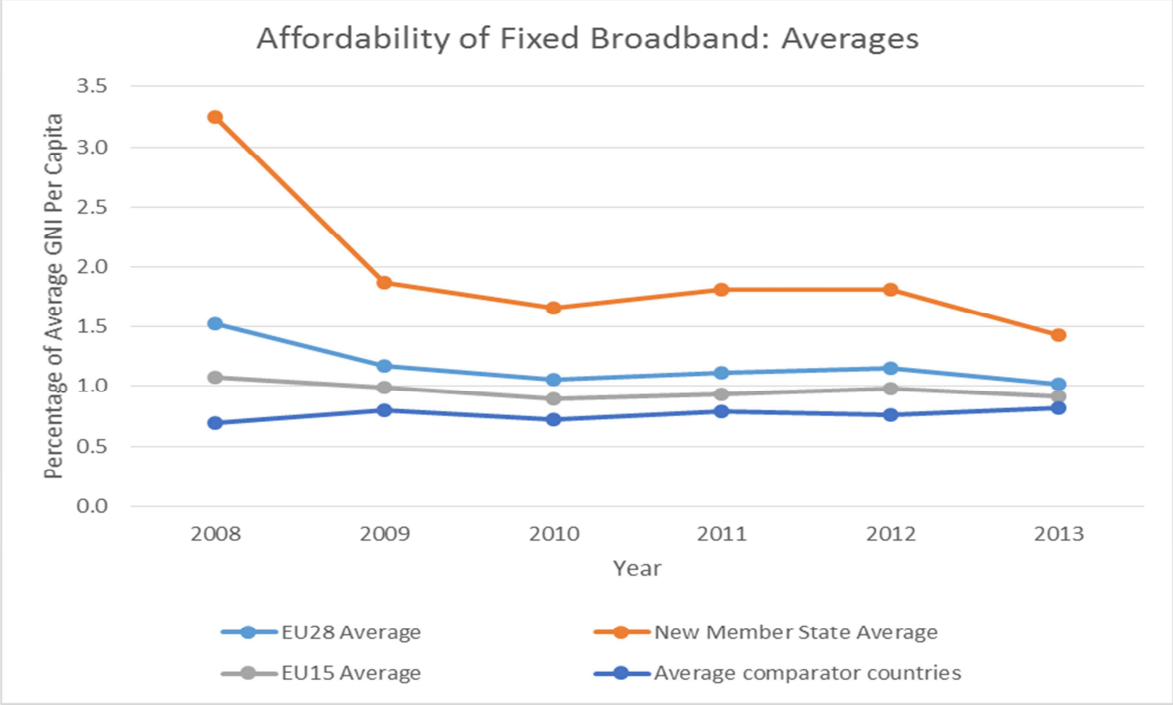
While most new Member States have worse affordability indicators than the EU15, Slovenia's mobile telephony affordability throughout the period remains broadly comparable to that of many EU15 Member States. This picture is also true for Poland, Lithuania and Latvia although they are not shown in Chart 27.

Chart 24: Affordability of Mobile Telephony: Selected New Member States



Source: ITU's publication 'Measuring the Information Society', 2009-2014

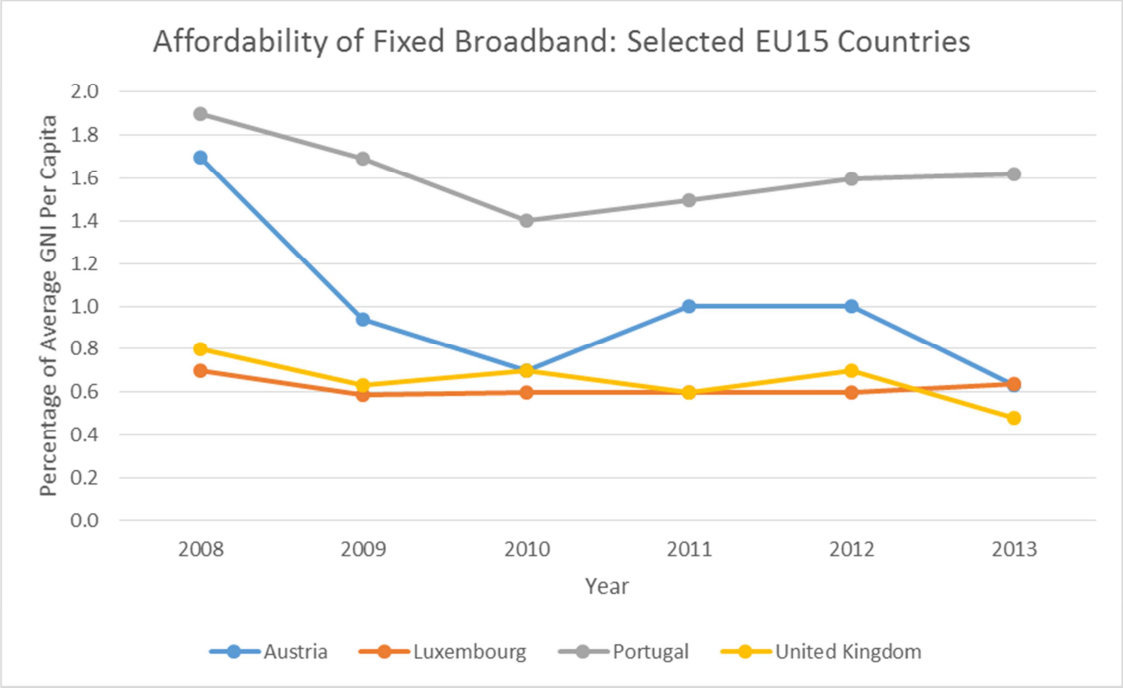
Chart 25: Affordability of Fixed Broadband: Averages



Source: ITU's publication 'Measuring the Information Society', 2009-2014

Turning to the fixed broadband sub-basket (Chart 25) there has been considerable convergence in the affordability of fixed broadband services not only between the EU15 and new Member States, but also between the EU15 and the comparator countries. The improved affordability of fixed broadband in the EU's new Member States is particularly striking, with the value of the ITU's affordability metric more than halving in the period 2008-2013.

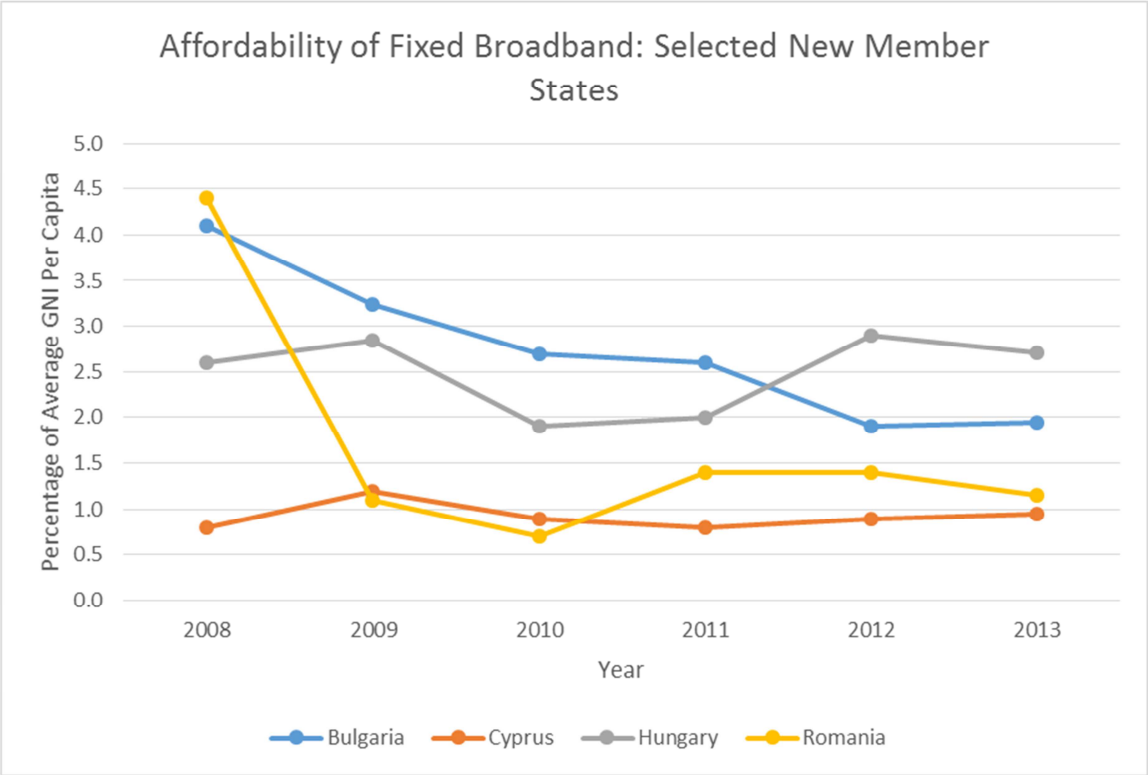
Chart 26: Affordability of Fixed Broadband: Selected EU15 Countries



Source: ITU's publication 'Measuring the Information Society', 2009-2014

Considering individual countries within the EU15, the improved affordability of fixed broadband within Austria is particularly striking. The percentage of average GNI per capita accounted for by the fixed broadband sub-basket in Austria in 2013 is approaching a third of what it was in 2008. The other interesting country in Chart 26 is the UK. For both fixed and mobile telephony the affordability of services over the period of the ITU's statistics worsened (Charts 20 and 23) in the UK. However, Chart 26 shows that the affordability of broadband improved sufficiently that by 2013 the UK had the most affordable broadband in the EU according to the ITU's measure. One question is whether public policies and company strategies have led to mobile and fixed telephony services in the UK cross-subsidising fixed broadband. A possible alternative explanation could be that the UK's broadband market is more competitive than the other UK telecoms markets.

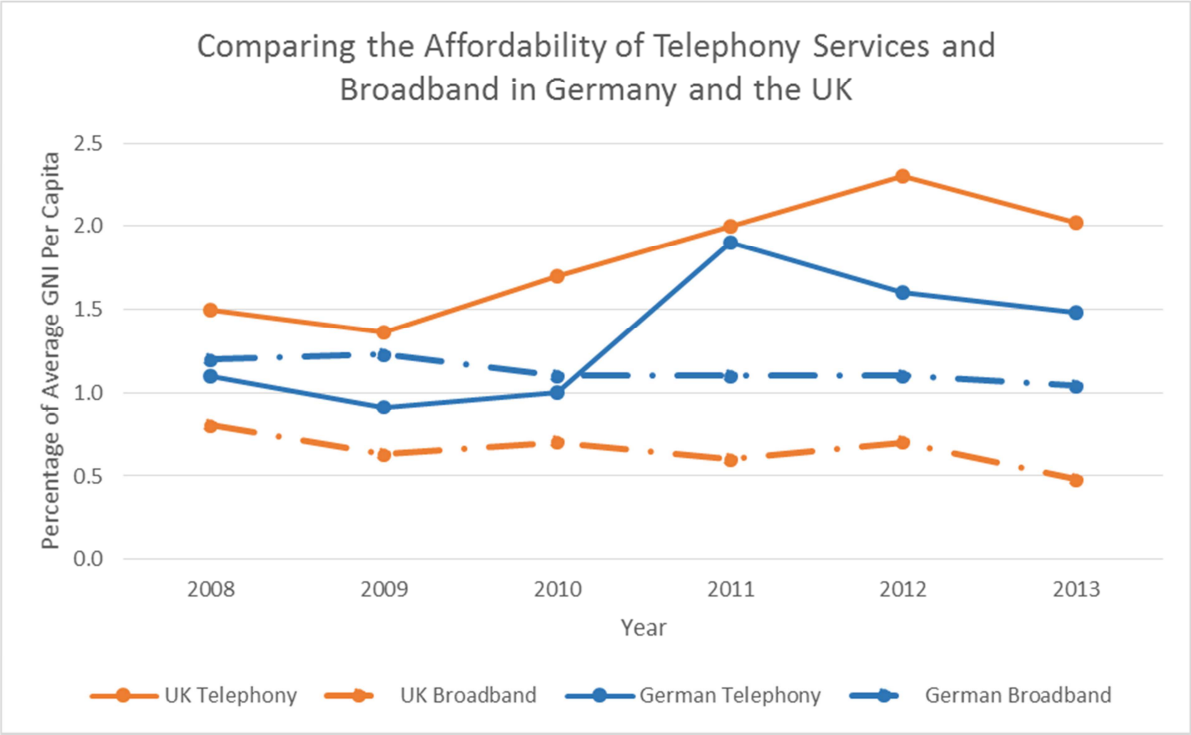
Chart 27: Affordability of Fixed Broadband: Selected New Member States



Source: ITU's publication 'Measuring the Information Society', 2009-2014

Chart 27 shows a remarkable change in the affordability of fixed broadband in Romania between 2008 and 2009, raising some questions about data reliability.

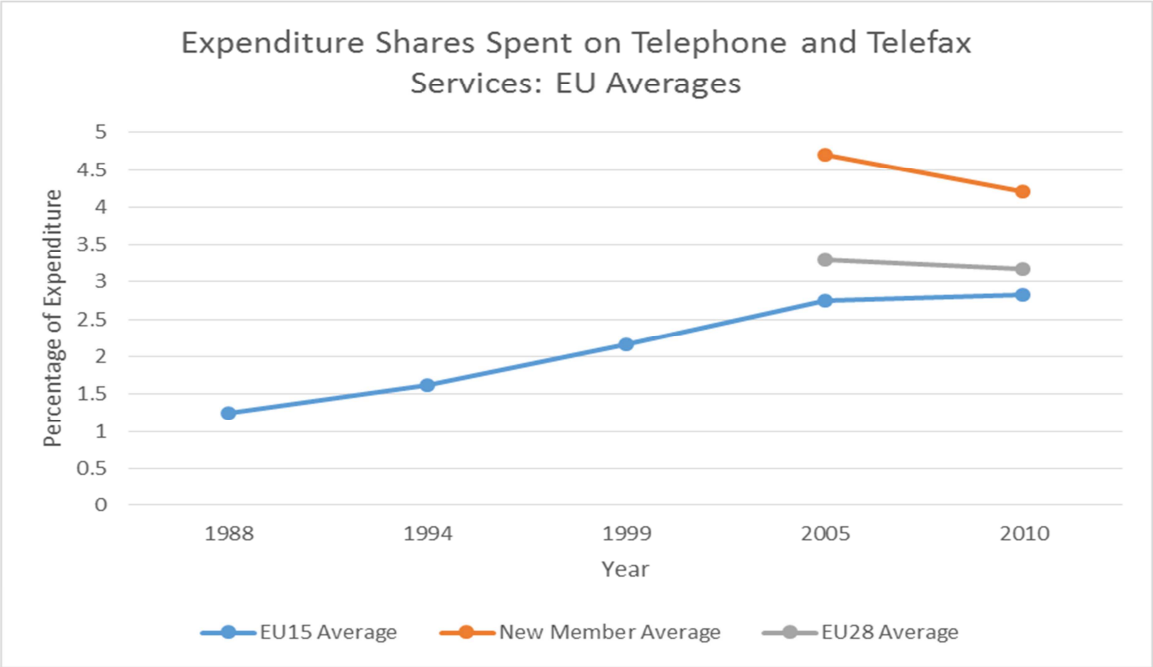
Chart 28: Comparing the Affordability of Telephony Services and Broadband in Germany and the UK



Source: ITU's publication 'Measuring the Information Society', 2009-2014

Chart 28 explores further the affordability of the UK and Germany's fixed broadband services when compared to the affordability of telephony services (fixed and mobile combined). Chart 28 shows that in every year fixed broadband was more affordable in the UK than in Germany, while in every year (except 2011) combined telephony was considerably more affordable in Germany than the UK. This demonstrates that while the affordability of all telecoms services combined in the UK and Germany were broadly comparable throughout the period, there was a different breakdown in the affordability of the different subcategories of telecoms services. This may reflect a difference in allocation of infrastructure costs in the two Member States.

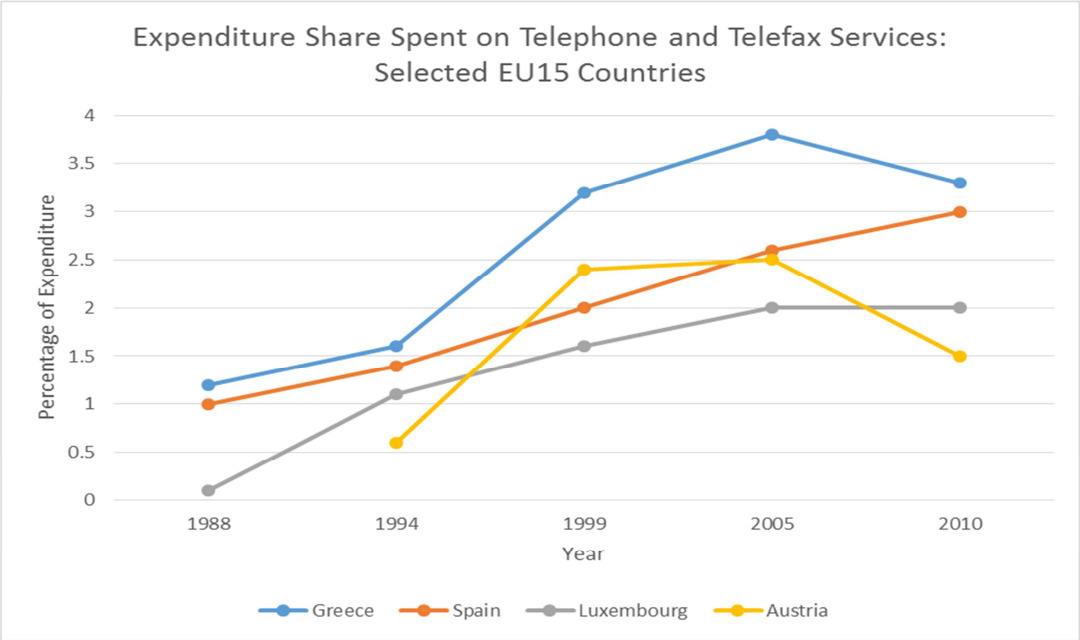
Chart 29: Expenditure Shares Spent on Telephone and Telefax Services: EU Averages



Source: Eurostat

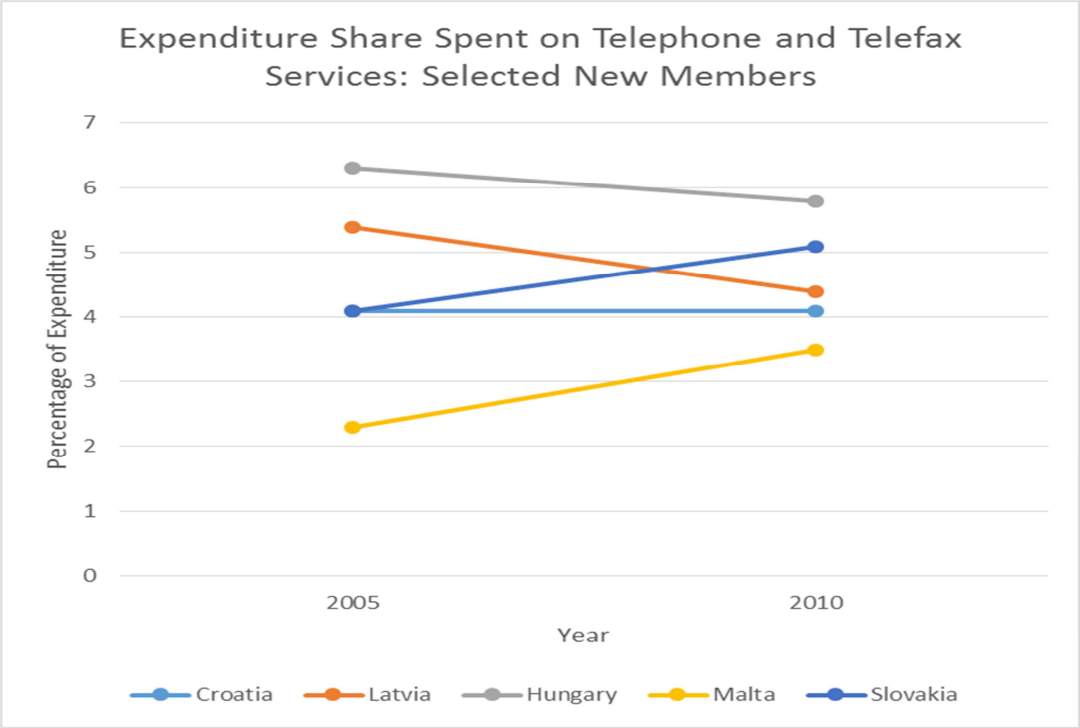
Eurostat's collated expenditure share data adds another dimension to the ITU data by presenting a long-term view of the proportion of expenditure on telecoms services (technically termed by Eurostat as 'Telephone and Telefax Services') for the EU15. Chart 29 shows that on average in the EU15, expenditure on telephone and telefax services more than doubled between 1988 and 2005. Given that the 1990s saw the explosion of mobile telephone and Internet services it seems plausible that this increasing expenditure share represents increased usage of telecoms services rather than a decrease in affordability resulting from cost increases. Amongst EU15 Member States, Spain seems unusual in the consistency of the increase in the expenditure share of telephone and telefax services, roughly 0.5 percentage points every five years. In contrast, Austria shows considerable variability in its average expenditure share with an increase of over 1.5 percentage points between 1994 and 1999, followed by a fall of 1 percentage point between 2005 and 2010.

Chart 30: Expenditure Share Spent on Telephone and Telefax Services: Selected EU15 Countries



Source: Eurostat

Chart 31: Expenditure Share Spent on Telephone and Telefax Services: Selected New Members

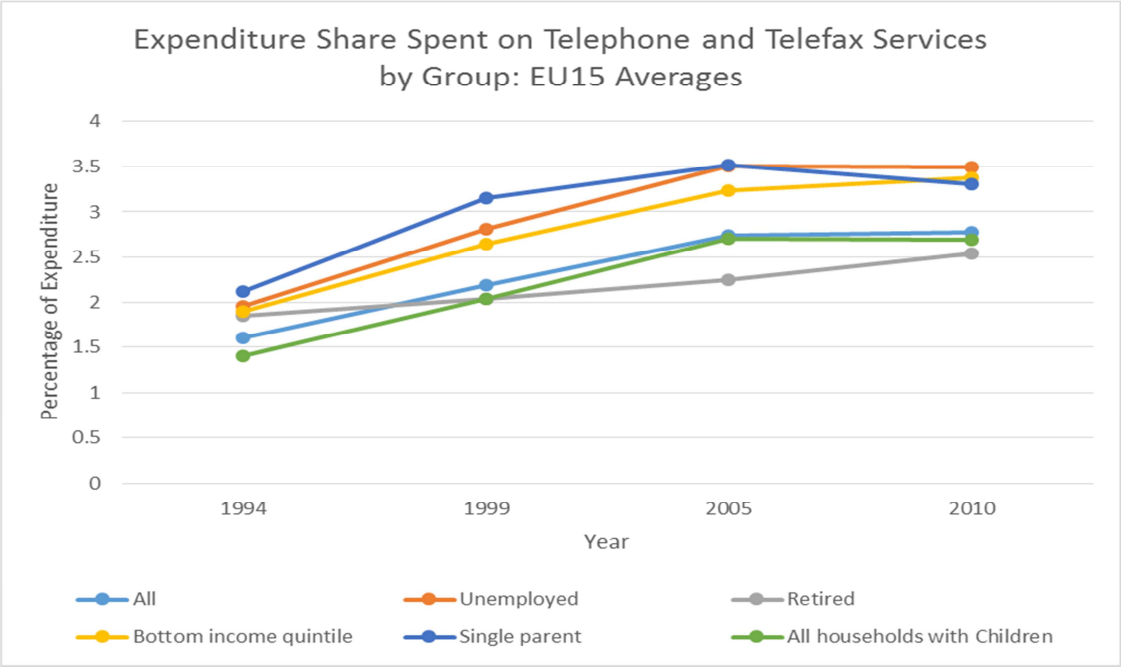


Source: Eurostat

For the EU's new Member States there is clear convergence with the difference between the new Member States with the highest and lowest expenditure shares dropping from roughly 4 percentage points in 2005 to less than 2.5 percentage points in 2010. Charts 32 and 33 show the difference in the household groups who spend the greatest proportion on telephone and telefax services. In both the EU15 and new Member States, single parents are among those who spend a high proportion of their expenditure on telecoms, probably reflecting a combination of single parents having relatively low incomes and a high demand for telecoms services from their children. However, while for the EU15 the unemployed and those in the bottom income quintile spend a greater proportion of their expenditure on telephone and telefax services compared to all households combined, in the new Member States the situation is reversed. This might reflect mobile telephones and the Internet being considered necessities by economically disadvantaged groups in the EU15, while they might be considered luxuries by similar groups in new Member States.

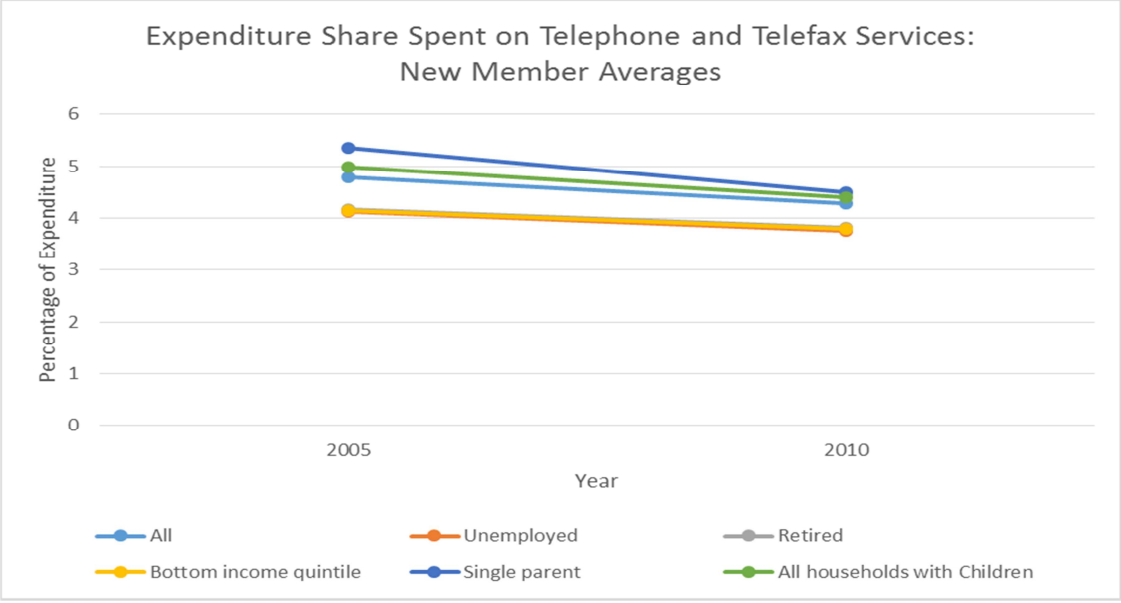
Unsurprisingly in both the EU15 and new Member States those who are retired are among those who spend the lowest proportion of their expenditure on telephone and telefax services; this raises questions about how far the virtual mobility of the Internet has been able to offset any physical immobility amongst this group.

Chart 32: Expenditure Share Spent on Telephone and Telefax Services by Group: EU15 Averages



Source: Eurostat

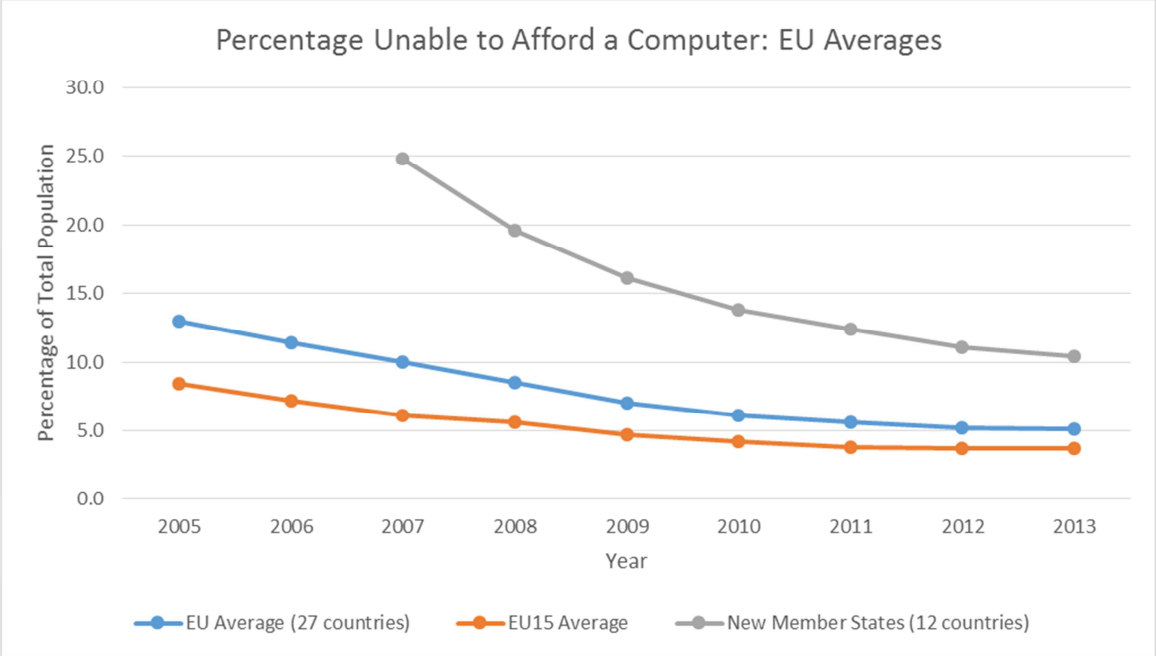
Chart 33: Expenditure Share Spent on Telephone and Telefax Services: New Member Averages



Source: Eurostat

The final set of charts for telecoms (Charts 34 to 38) provide an indicator of digital divisions within the EU. These charts use EU-SILC data to chart the percentage of the relevant population reporting that they are unable to afford a computer. While in the past couple of years there has been increasing use of smartphones to access the Internet, being able to afford a home computer has traditionally been a key condition to access the Internet and gain from the opportunities which it provides. Across the EU the percentage of individuals reporting being unable to afford a computer has been continuously falling over the period 2005 to 2013, and by 2013 the average percentage of people unable to afford a computer in the EU27 had more than halved to around 5%. The fall in the percentage of those unable to afford a computer in the new Member States has fallen even more dramatically, by three-fifths over the period 2007 to 2013. Nevertheless, the percentage of respondents unable to afford a computer in the new Member States in 2013, at 10%, was more than double the figure in the EU15. The obvious explanation for this increasing affordability is the continuous fall in the cost of computing power.

Chart 34: Percentage Unable to Afford a Computer: EU Averages

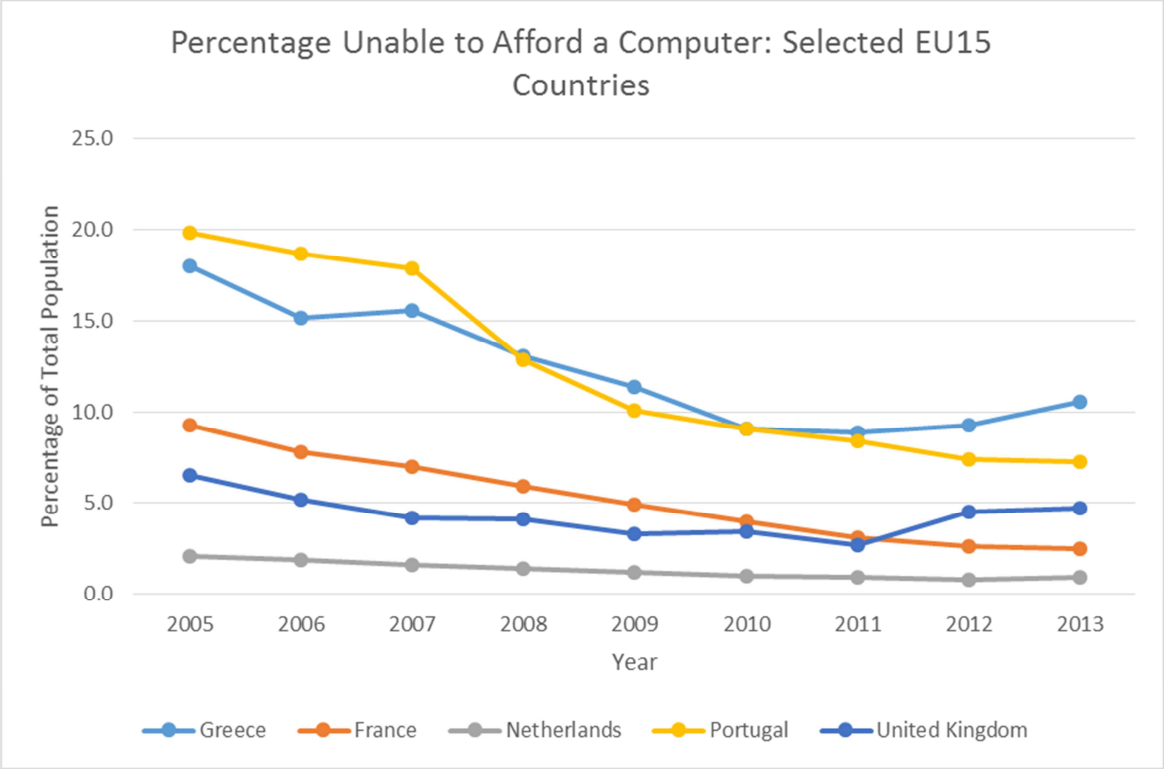


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Amongst the EU15 we note the differing performances of Greece, Portugal and the UK in the period 2011 to 2013. Greece shows a small increase in the percentage reporting being unable to afford a computer which is probably attributable to the Great Recession. The very small scale of this increase given the scale of the Great Recession emphasises the dominance of the falling price of computers in determining their affordability. In Portugal, despite also suffering economic difficulties, the percentage unable to afford a computer still fell by more than a third between 2008

and 2013. In contrast, in the UK, which suffered a much less severe economic downturn, the percentage reporting an inability to afford a computer roughly doubled between 2011 and 2013 (albeit from a low level). This raises the question of whether this increase in the UK reflects changes in affordability relating to falling real incomes[17] or rather changes in respondents' perceptions of their economic situation given the increasing visibility of the 'austerity' agenda within the UK since 2010.

Chart 35: Percentage Unable to Afford a Computer: Selected EU15 Countries

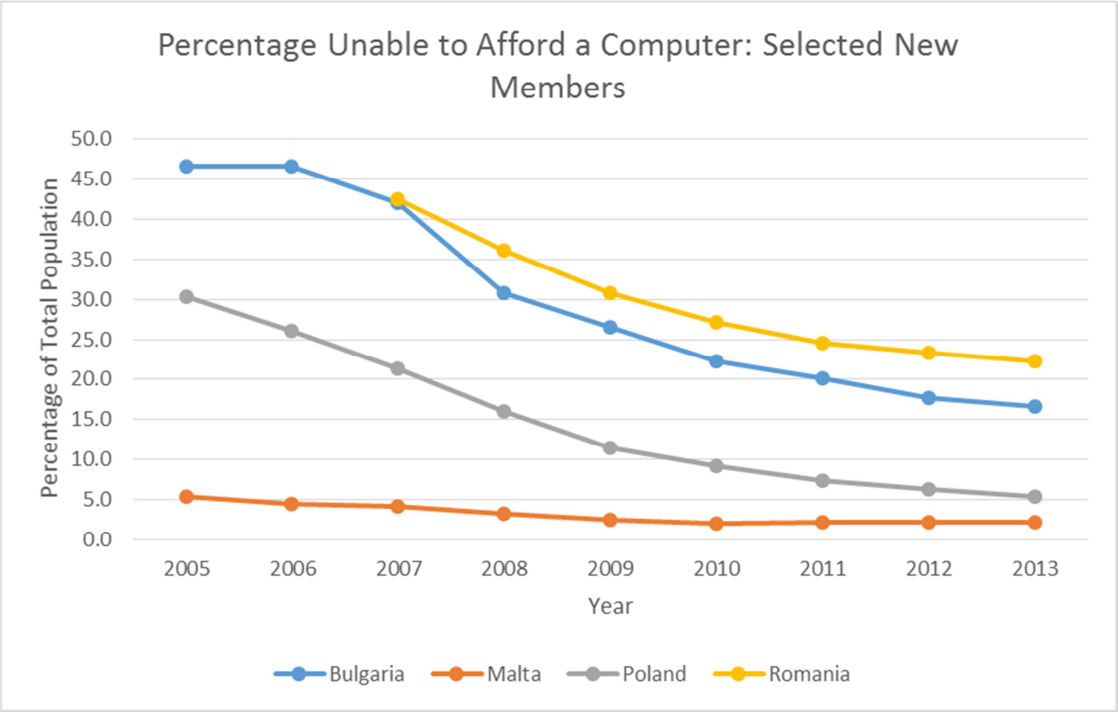


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The changing perceived affordability of computers in Poland in the period 2005-2013 is particularly remarkable with the percentage reporting an inability to afford a computer being only a sixth of the figure in 2005 (5%, down from 30%).

[17] Note that Greece's economy has contracted by a far greater extent than the UK's.

Chart 36: Percentage Unable to Afford a Computer: Selected New Members

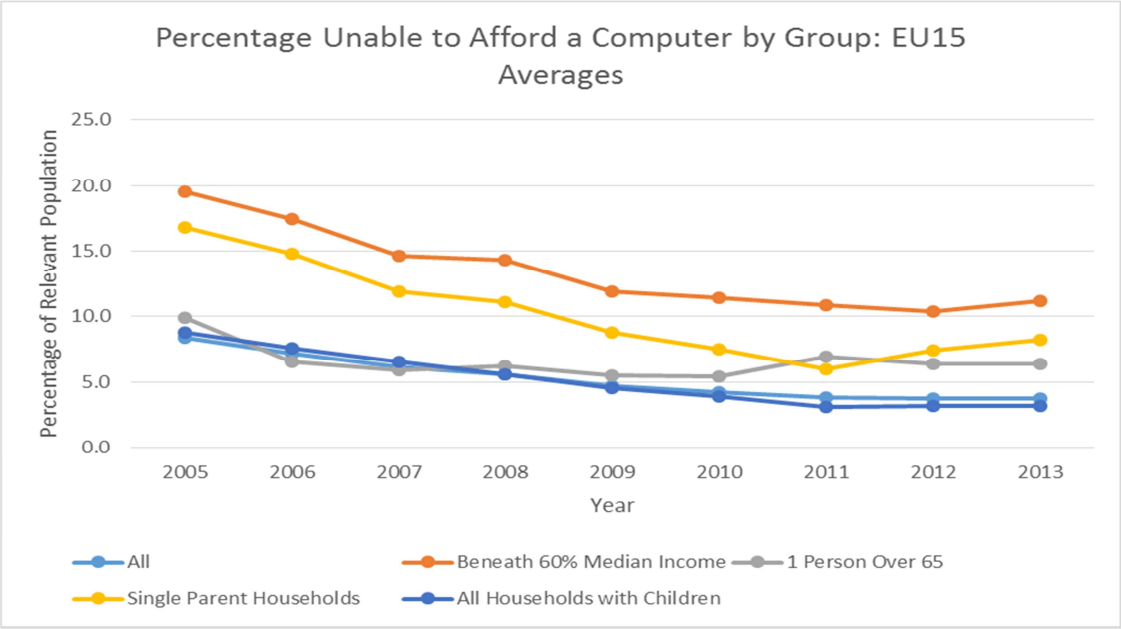


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Charts 37 and 38 show the changing position of households containing one person over the age of 65. In 2007, in both the EU15 and the new Member States, households where one person was aged over 65 had the lowest percentage of people who were unable to afford a computer.[18] However from 2008 onwards the average percentage unable to afford a computer across all households in the EU15 has fallen beneath the percentage for households containing a person aged over 65. The question here is whether as new cohorts of individuals enter the over-65 category the perceived need to possess a computer has increased amongst this group, raising the perception of unaffordability.

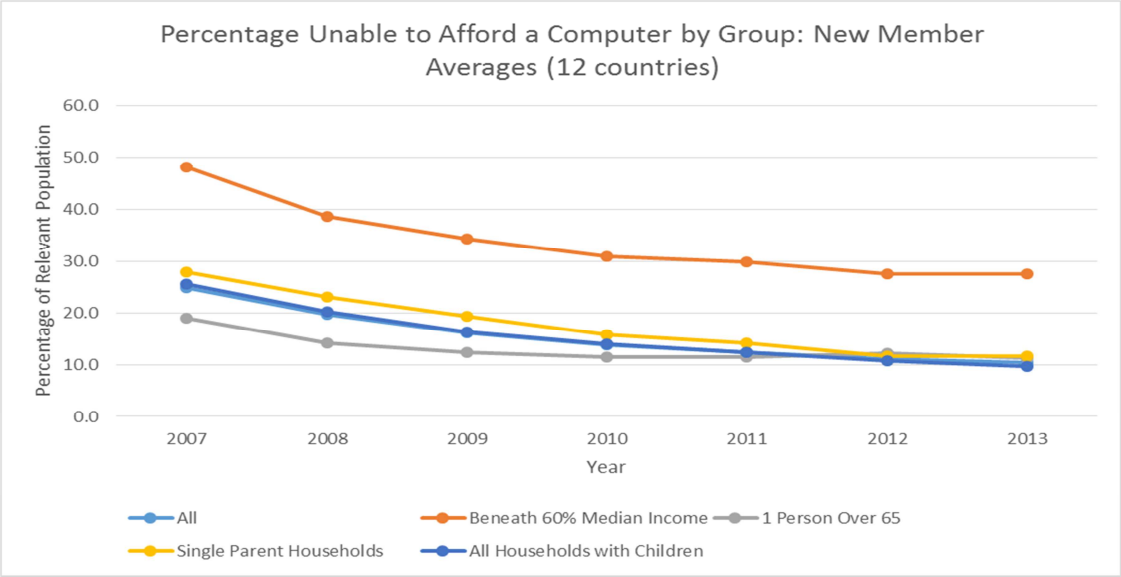
[18] The definition of the relevant population in the EU-SILC dataset only includes those who actively wanted to purchase a computer.

Chart 37: Percentage Unable to Afford a Computer by Group: EU15 Averages



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 38: Percentage Unable to Afford a Computer by Group: New Member Averages (12 countries)



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

5. Transport

The analysis of transport affordability utilises the Eurostat expenditure share data, and in this sector interpretation of changing expenditure shares presents the greatest challenge. Firstly, transport can be broken down into two key components, private transport and public transport, which are substitutes for each other. This raises the possibility that changing expenditure shares for each of these categories individually may reflect individuals switching between differing modes of transport rather than changes in the affordability of transport.[19] Secondly, increasing expenditure on transport as a whole may reflect new opportunities; increased spending on air travel reflecting the purchase of more adventurous holidays is an example of an improved standard of living rather than decreasing affordability. Lastly, particular modes of transport may play a particularly important role in the lives of particular groups of people e.g. cars for rural people and trains for commuters. These groups may experience large shifts in the expenditure share of transport, when petrol or ticket prices change, but since they are relatively small groups in the total population these expenditure shifts may be masked when looking at national averages. Substitutability of housing and transport costs is also difficult to take into account.

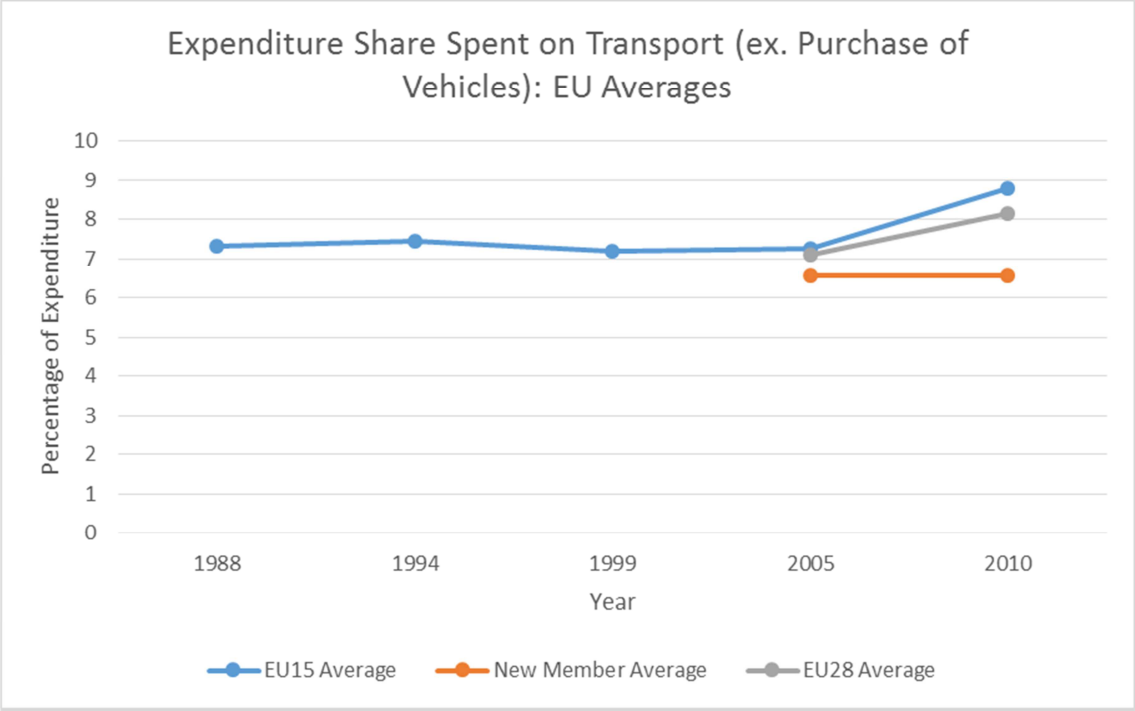
In principal these issues can be addressed if data of sufficient detail are readily available. Unfortunately, the Eurostat data only provide a limited breakdown of transport expenditure. At a high level the Eurostat data split transport expenditures into three groups: Purchase of Vehicles, Operation of Personal Transport Equipment (the running costs of cars etc. including fuel) and Transport Services (trains, buses, ferries, air travel etc.). Technically, the focus on utilities would imply we are only interested in public transport (buses and trains) which represent a subset of Transport Services. It might also be relevant to consider the changing cost/affordability of only those journeys deemed essential e.g. travelling to work, taking children to school and weekly food shopping etc. As this type of breakdown is unavailable we report data on both the 'Operation of Personal Transport Equipment' and 'Transport Services' combined and separately. Ultimately, an individual's standard of living is influenced by the total proportion of income they have to devote to essential travel rather than the breakdown of this travel across different transport modes.[20]

Chart 39 shows remarkable stability in the average EU15 share of expenditure devoted to transport between 1988 and 2005 with it consistently being in the 7-7.5% range. Similarly, the average of the new Member States shows virtually no change between 2005 and 2010. However, between 2005 and 2010 there is a sharp increase in the expenditure share of transport on average across the EU15 with the expenditure share rising by 1.5 percentage points. The other feature of Chart 39

[19] Of course the changing cost of a particular mode of transport may explain people switching to alternative transport modes.
[20] Assuming away non-price differences between different modes of transport.

which is distinctive compared to the other utility sectors is that on average the expenditure share of transport is lower in the new Member States than in the EU15. This supports the notion that demand for transport is income elastic and that those with higher incomes/total expenditure devote a greater proportion of their income/expenditure to travel.

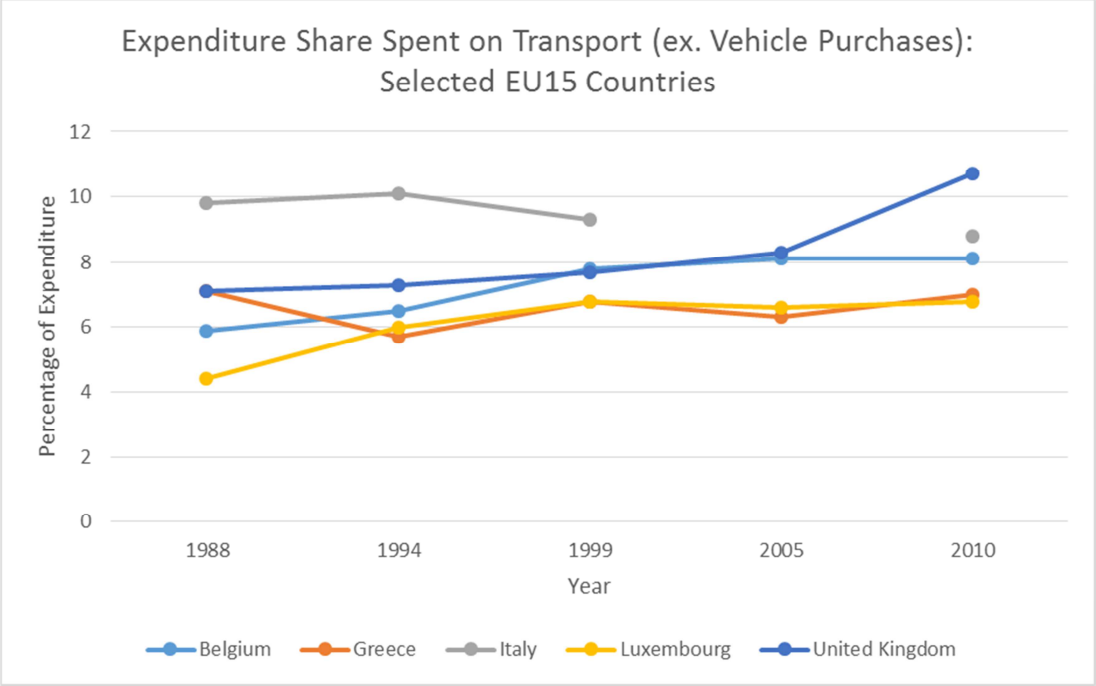
Chart 39: Expenditure Share Spent on Transport (ex. Purchase of Vehicles): EU Averages



Source: Eurostat

Despite Chart 39 indicating stability in the proportion of expenditure devoted to transport in the EU15, Chart 40 shows considerable variation over time in different countries. For example, over the period 1988 to 2010 the expenditure share of transport in the UK rose by around 4 percentage points with almost three-quarters of this change occurring between 2005 and 2010. In contrast, the expenditure share of transport in Belgium between 2005 and 2010 shows no change. Also, while Italy is something of an outlier in 1994 with 10% of expenditure being devoted to transport, the expenditure share of transport falls by roughly 1.5 percentage points by 2010. Lastly, Luxembourg and Greece exhibit very similar expenditure shares of transport after 1994, despite their very different economies and geographies.

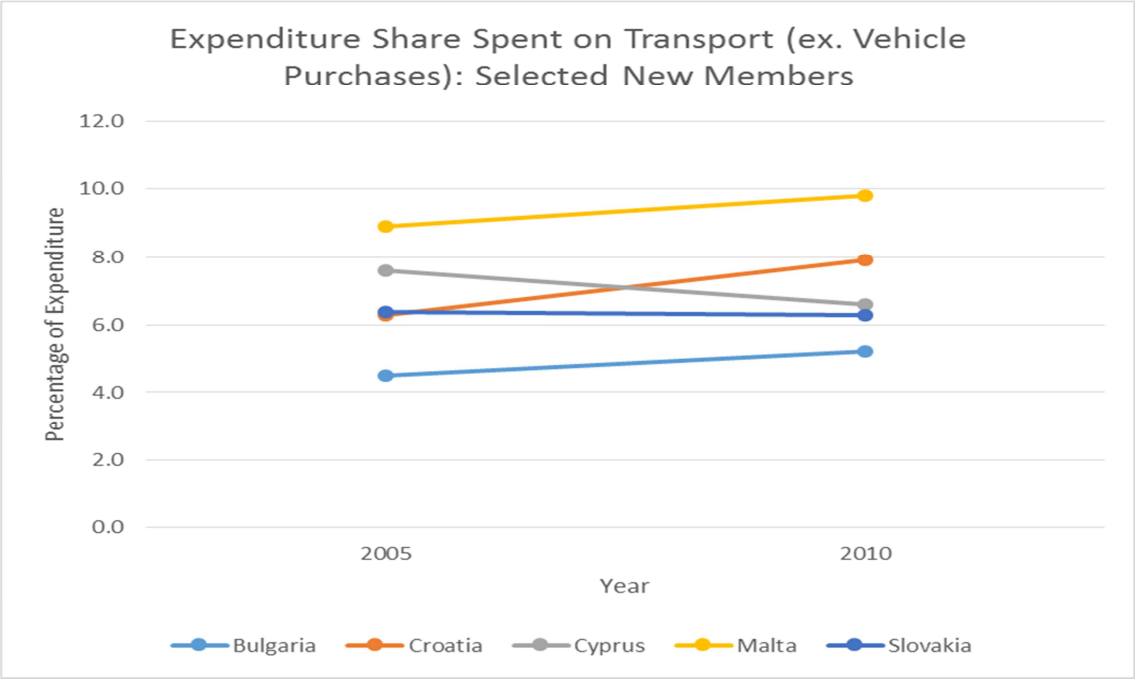
Chart 40: Expenditure Share Spent on Transport (ex. Vehicle Purchases): Selected EU15 Countries



Source: Eurostat

In Chart 41 the high expenditure share of transport in Malta is probably due to it being an island economy. However, it is interesting to note the divergence in the expenditure shares of Malta and Cyprus (both island economies) between 2005 and 2010. The difference in the transport expenditure shares between these two countries rises from roughly 1.5 percentage points to around 3 percentage points.

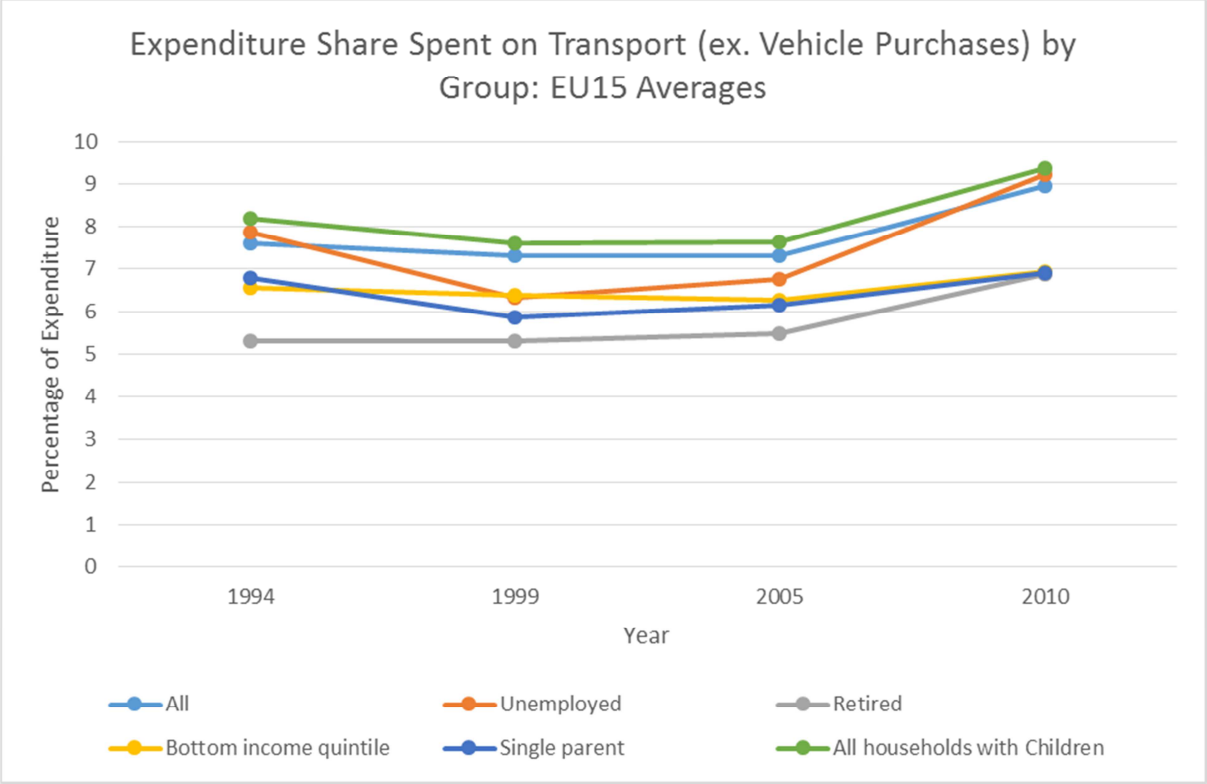
Chart 41: Expenditure Share Spent on Transport (ex. Vehicle Purchases): Selected New Members



Source: Eurostat

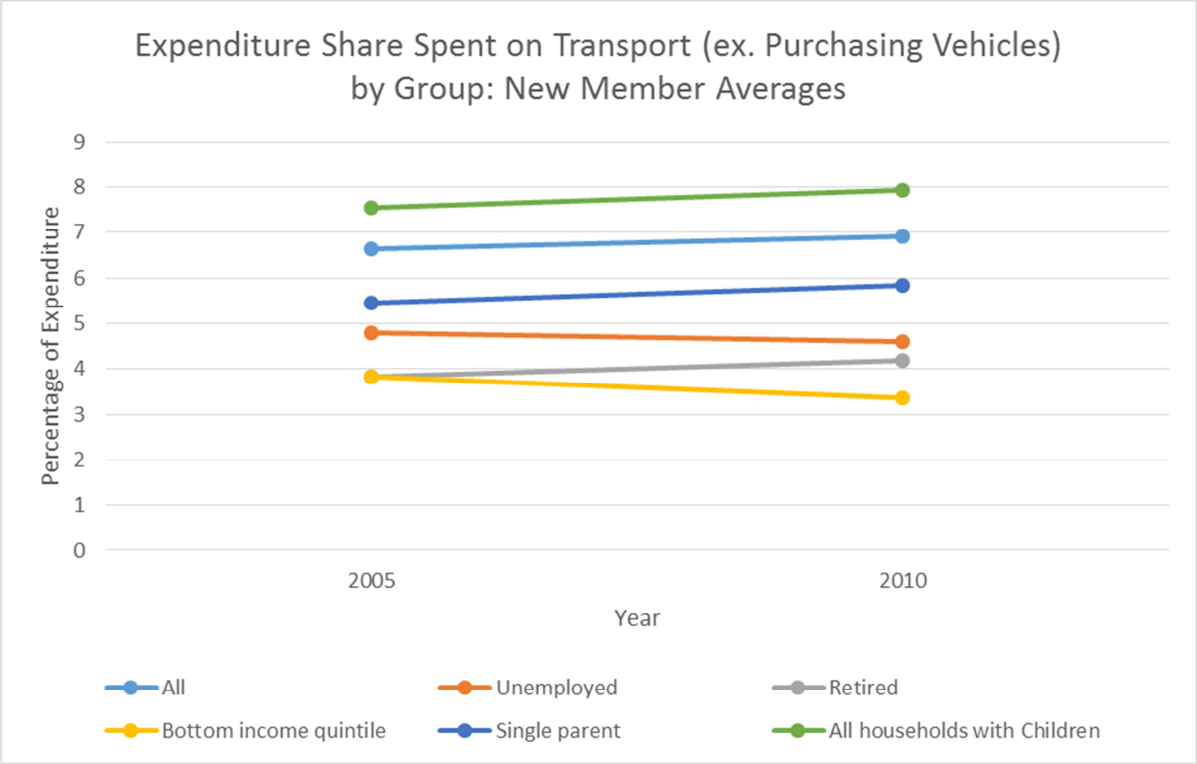
Considering the expenditure shares broken down by group it is unsurprising that retired households generally have one of the lowest expenditure shares on transport. The retired have less need of transport for work, and those who are less mobile may also demand less for leisure. In Charts 42 and 43 there is a marked difference in the transport expenditure shares between the average of all households with children and those of single parents. In the EU15, while the average of all households with children is consistently the highest expenditure share among all groups, single parent households consistently have one of the lowest expenditure shares. One possibility in explaining this result is that single parents may be looking after children at home rather than travelling to work. However a policy issue may arise if travel by children is associated with opportunities and experiences and due to limited resources single parent households are having to prioritise other forms of expenditure over travel to enriching activities.

Chart 42: Expenditure Share Spent on Transport (ex. Vehicle Purchases) by Group: EU15 Averages



Source: Eurostat

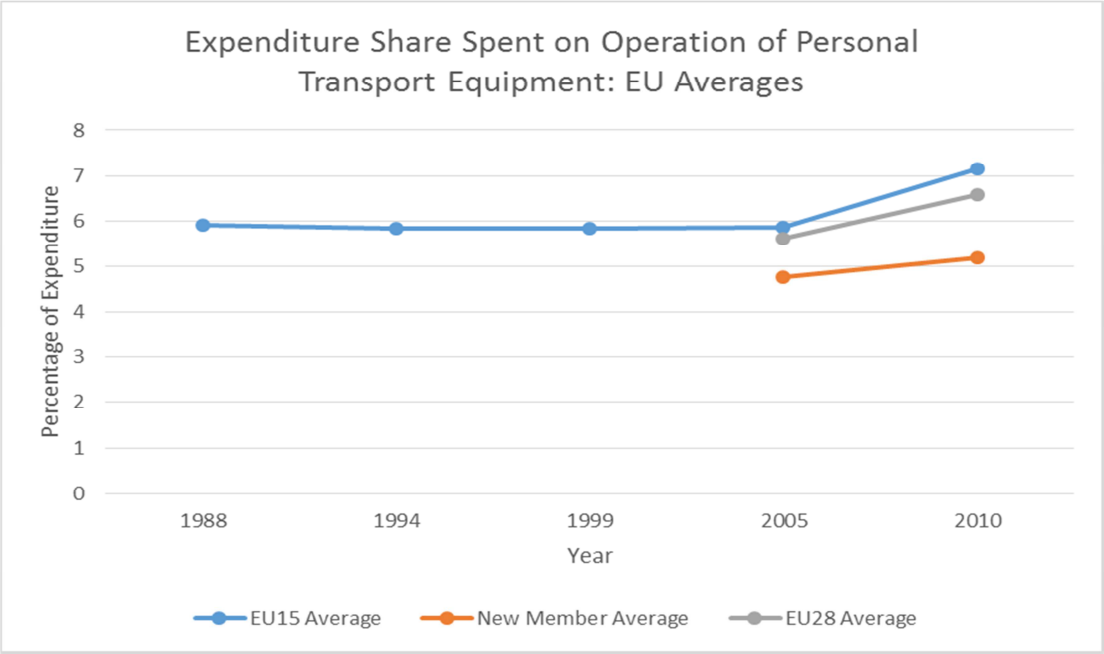
Chart 43: Expenditure Share Spent on Transport (ex. Purchasing Vehicles) by Group: New Member Averages



Source: Eurostat

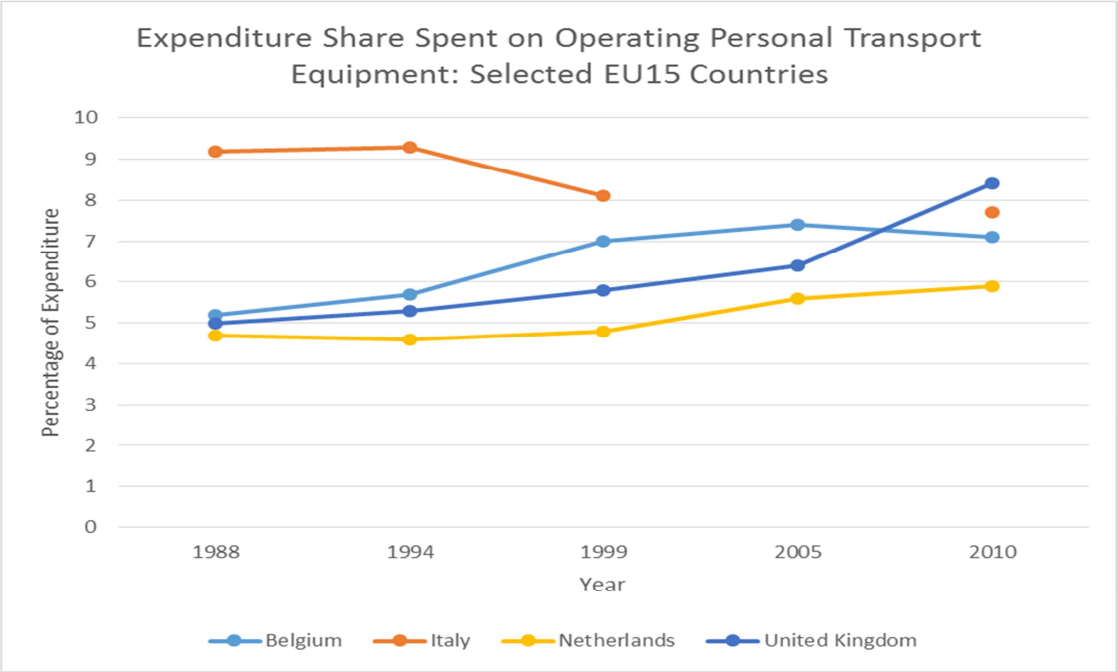
Operating personal transport equipment clearly dominates total transport expenditure when averaged across the population (Charts 39 and 44). The expenditure share spent on operating personal transport equipment in the EU15 (Chart 44) is roughly four times that of transport services (Chart 49), and the trend in expenditure shares on transport in total, for the EU15 as a whole and for individual EU15 countries, is driven by expenditure on the operation of personal transport equipment.

Chart 44: Expenditure Share Spent on Operation of Personal Transport Equipment: EU Averages



Source: Eurostat

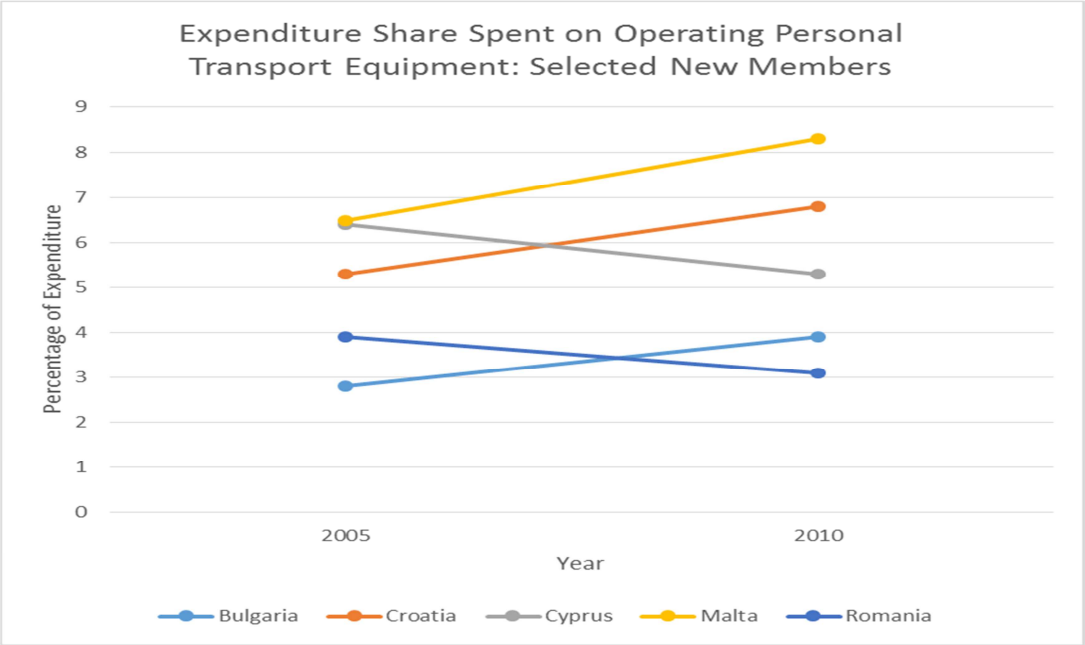
Chart 45: Expenditure Share Spent on Operating Personal Transport Equipment: Selected EU15 Countries



Source: Eurostat

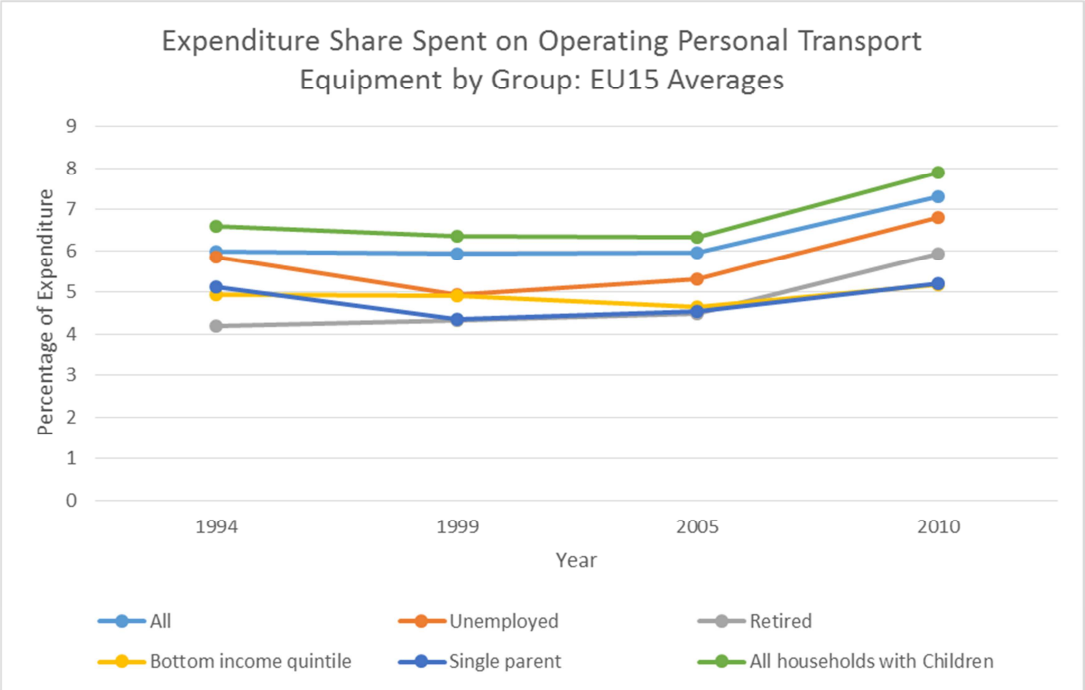
Chart 46 also appears to confirm that expenditure on operating personal transport equipment is positively correlated with total expenditure. This can be seen from the fact that Cyprus and Malta have higher expenditure shares devoted to the operation of personal transport equipment than Bulgaria and Romania. Nevertheless, Cyprus and Malta show considerable divergence in the average expenditure share devoted to running vehicles between 2005 and 2010. In 2005 both countries had virtually identical expenditure shares for operating personal transport equipment of around 6.5%. However, by 2010 this expenditure share had risen to around 8.3% for Malta, while in Cyprus the equivalent expenditure share had fallen to around 5.3%.

Chart 46: Expenditure Share Spent on Operating Personal Transport Equipment: Selected New Members



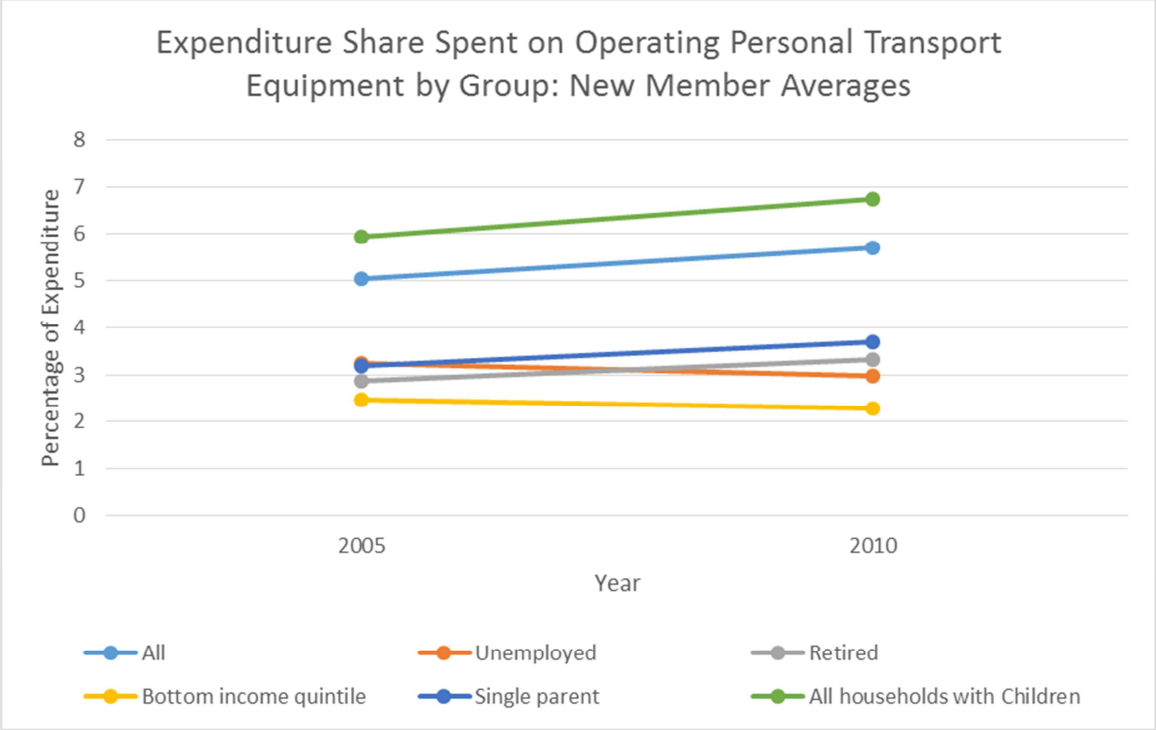
Source: Eurostat

Chart 47: Expenditure Share Spent on Operating Personal Transport Equipment by Group: EU15 Averages



Source: Eurostat

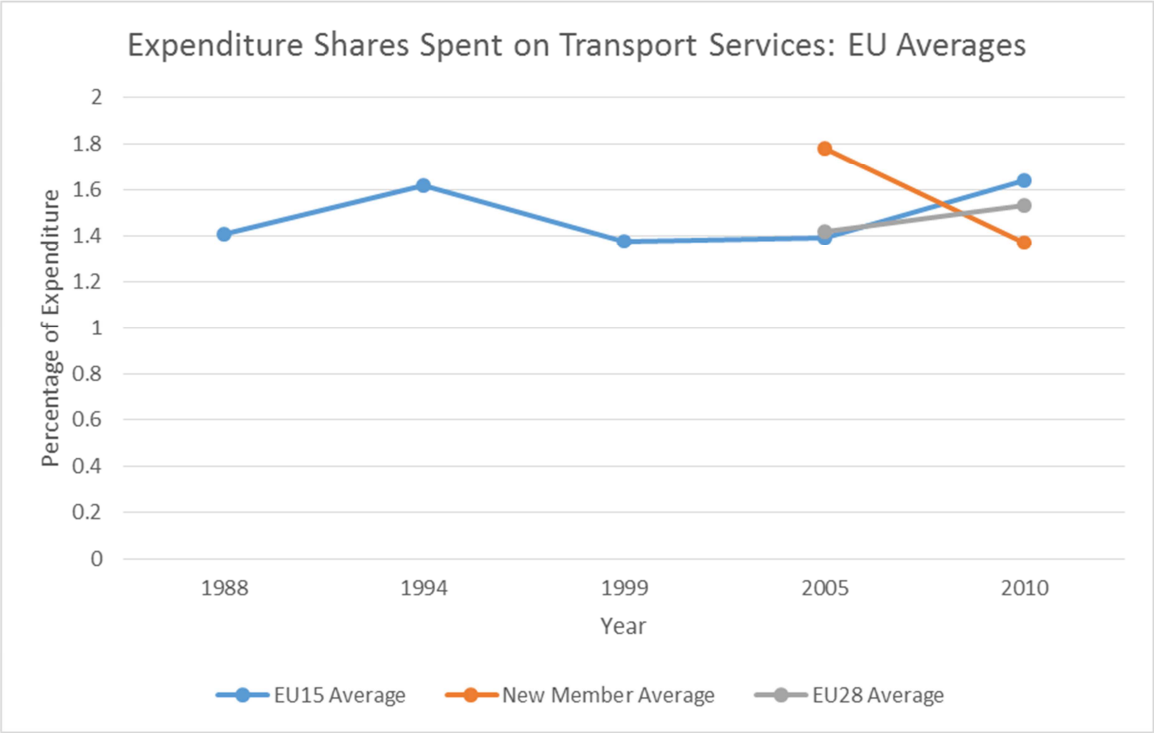
Chart 48: Expenditure Share Spent on Operating Personal Transport Equipment by Group: New Member Averages



Source: Eurostat

In broad terms the expenditure shares spent on operating personal transport equipment by different groups across the EU (Charts 47 and 48) appear to closely track the patterns for total transport expenditure.

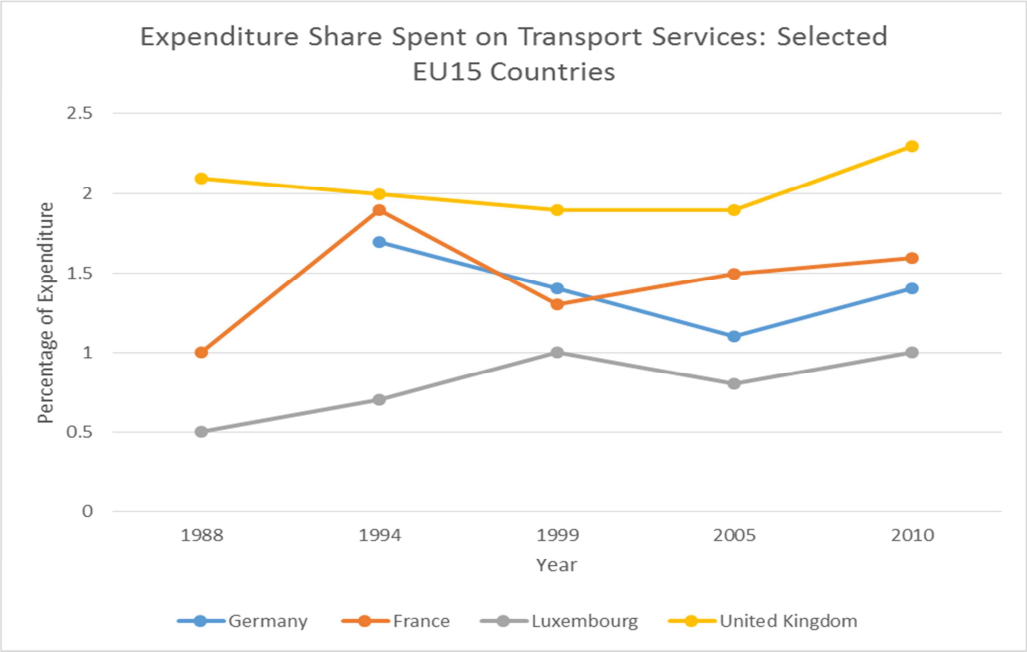
Chart 49: Expenditure Shares Spent on Transport Services: EU Averages



Source: Eurostat

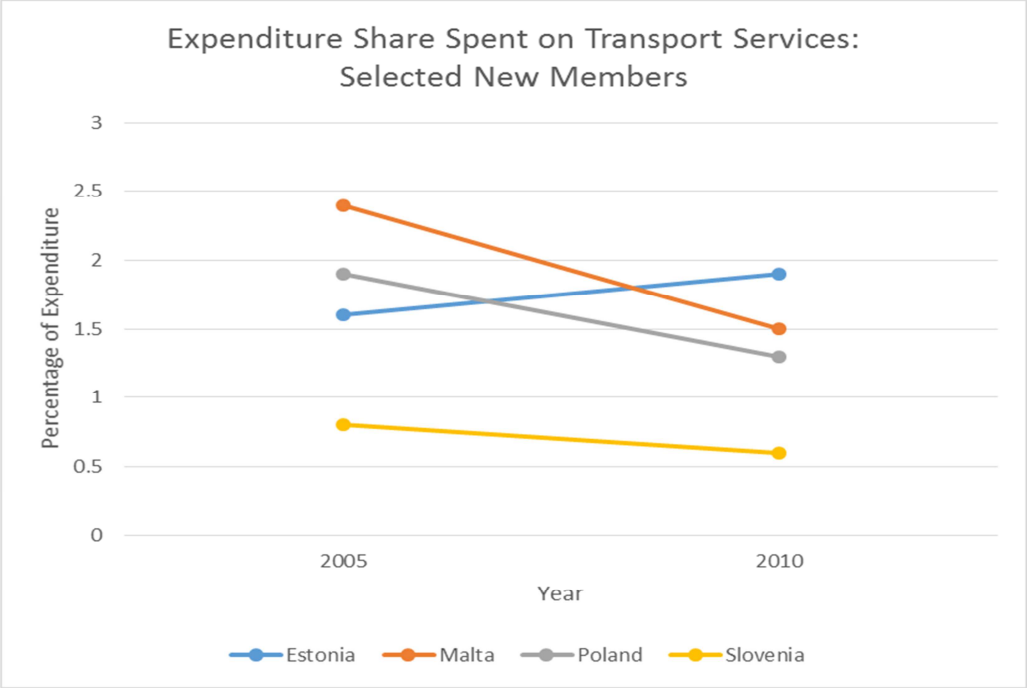
Turning to the third component of transport expenditure, transport services, Chart 49 shows that while the expenditure share of transport services in the EU15 is broadly flat, between 2005 and 2010 there was a significant drop in the share of expenditure spent on transport services in the new Member States. This trend may reflect increased car ownership/usage and a shift away from public transport. For individual countries in the EU15, Chart 50 shows considerable movement in the expenditure share devoted to transport services in different countries. For example, between 1988 and 1994 the expenditure share of transport services in France almost doubled, before falling so that by 2010 the expenditure share was only around 50% higher than in 1988.

Chart 50: Expenditure Share Spent on Transport services: Selected EU15 Countries



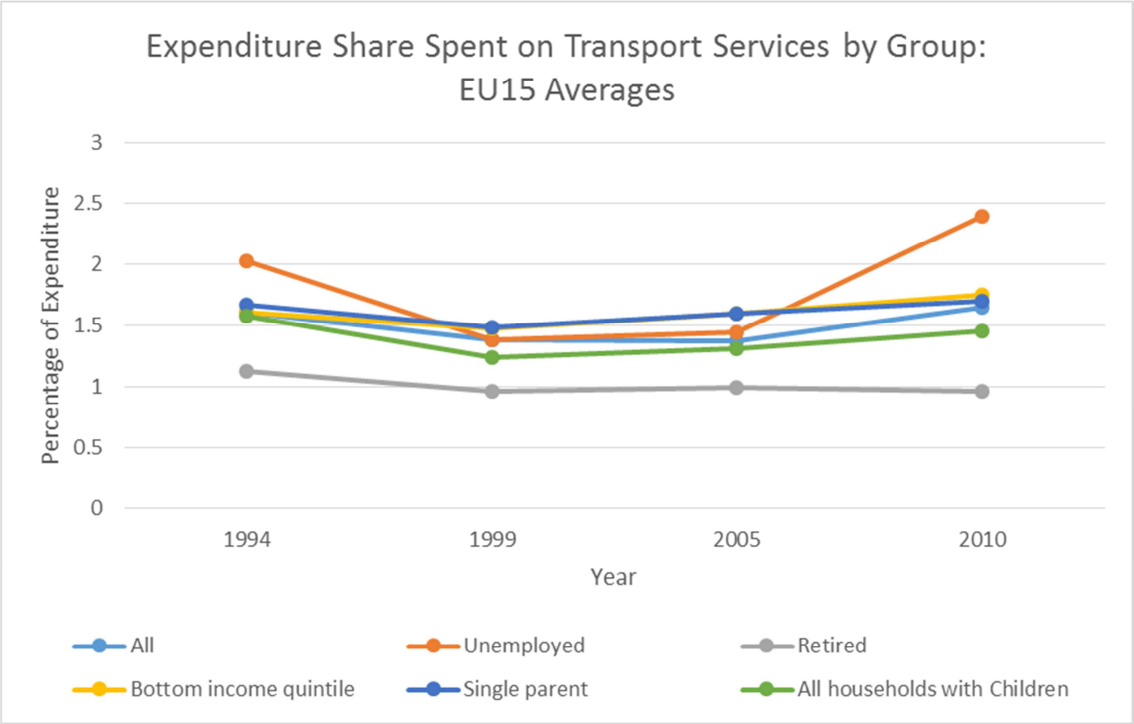
Source: Eurostat

Chart 51: Expenditure Share Spent on Transport Services: Selected New Members



Source: Eurostat

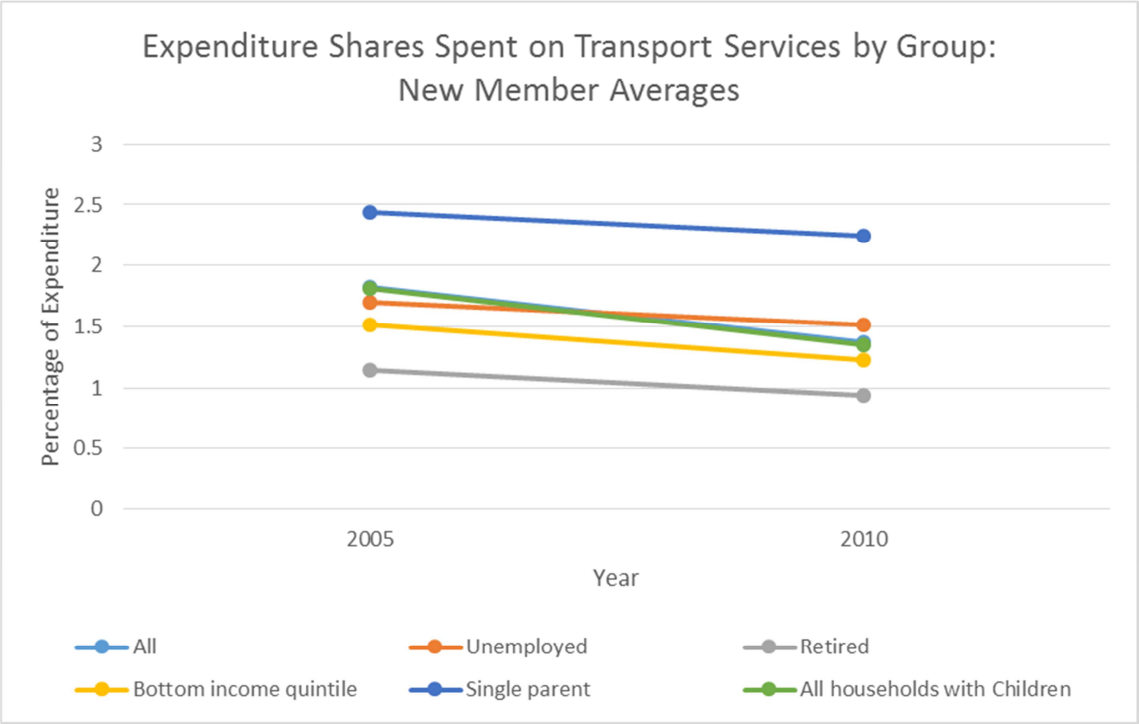
Chart 52: Expenditure Share Spent on Transport Services by Group: EU15 Averages



Source: Eurostat

Chart 52 shows that retired households spend a lower proportion of their expenditure on transport services than any other group by some margin. This may reflect policies to subsidise public transport for the elderly. For example, in the UK free bus passes are provided for those of retirement age. In the EU15 a particularly high share of expenditure is devoted to the purchase of transport services by the unemployed. In 2010 the unemployed devoted around 0.7 percentage points more of their expenditure to purchasing transport services than the next highest group (those in the bottom income quintile).

Chart 53: Expenditure Shares Spent on Transport Services by Group: New Member Averages



Source: Eurostat

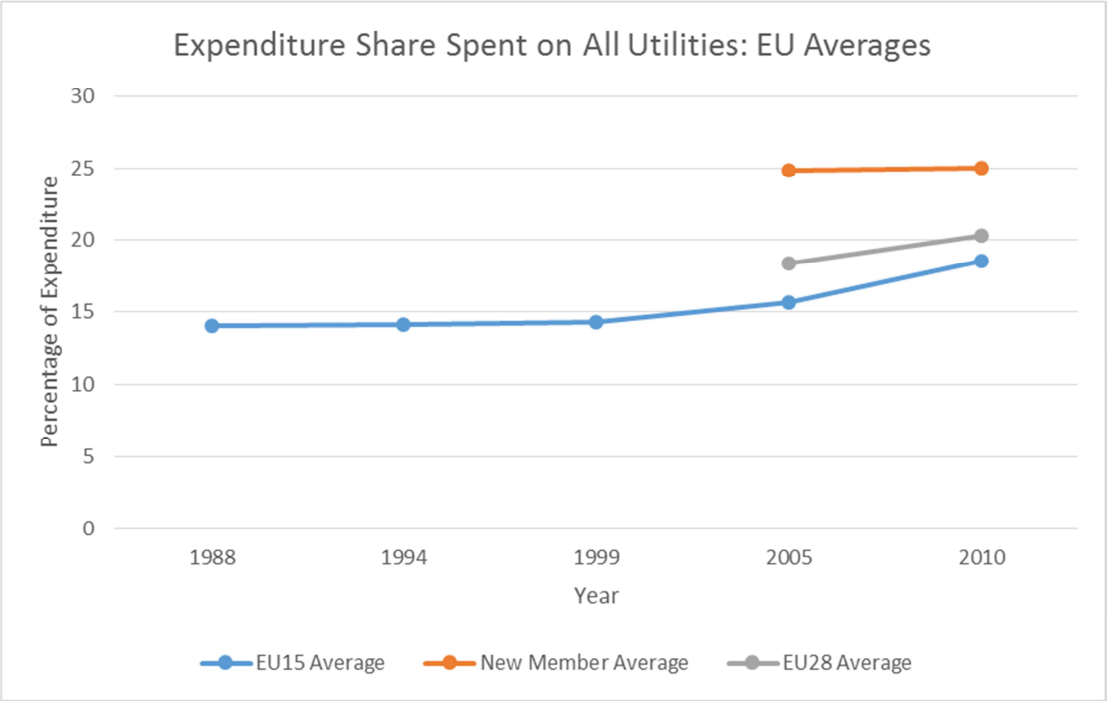
On average single parent households in new Member States devote an unusually high proportion of expenditure to purchasing transport services.

6. All Utilities Combined

In this section we explore the total proportion of expenditure accounted for by the four key utility sectors: energy, water, telecoms and transport. As discussed in Sections 3 and 5, the expenditure categories from Eurostat do not necessarily match perfectly the sectors described as utilities above. However, from the perspective of a voting citizen and understanding industries which may have particular political salience due to the expenditure being on 'necessities', including vehicle fuel costs in the transport expenditure category appears reasonable.

Chart 54 shows that even in 2010 citizens of new Member States were on average devoting 7 percentage points more of their expenditure to the purchase of utility services than those in the EU15. Given the stability of the utility expenditure share in the EU15 in the decade from 1988 to 1999 and the stability in the new Member States expenditure share between 2005 and 2010, that the utility expenditure share in the EU15 rose by 3 percentage points between 1999 and 2010 seems a significant shift. Unfortunately, the most recent data available are for 2010, but the next round of household budget surveys (in 2015) may show that the poor performance of European economies since 2010 and the rising oil price (at least until late 2014) have resulted in the expenditure share being devoted to utilities in the EU15 continuing to rise. An increasing expenditure share devoted to purchasing utilities correlates with the increasing political salience of utility affordability within the EU.

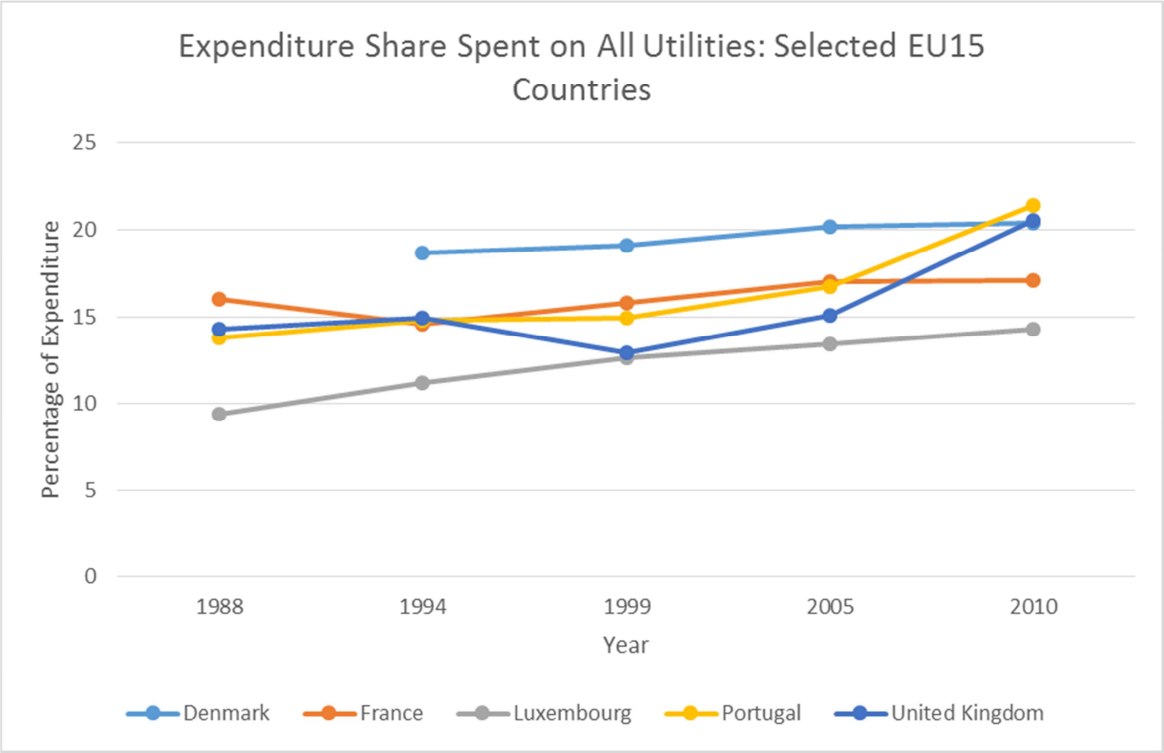
Chart 54: Expenditure Share Spent on All Utilities: EU Averages



Source: Eurostat

The increase in the expenditure share devoted to utilities is particularly apparent in the UK (Chart 55) where the utility expenditure share increased by around 8 percentage points between 1999 and 2010.

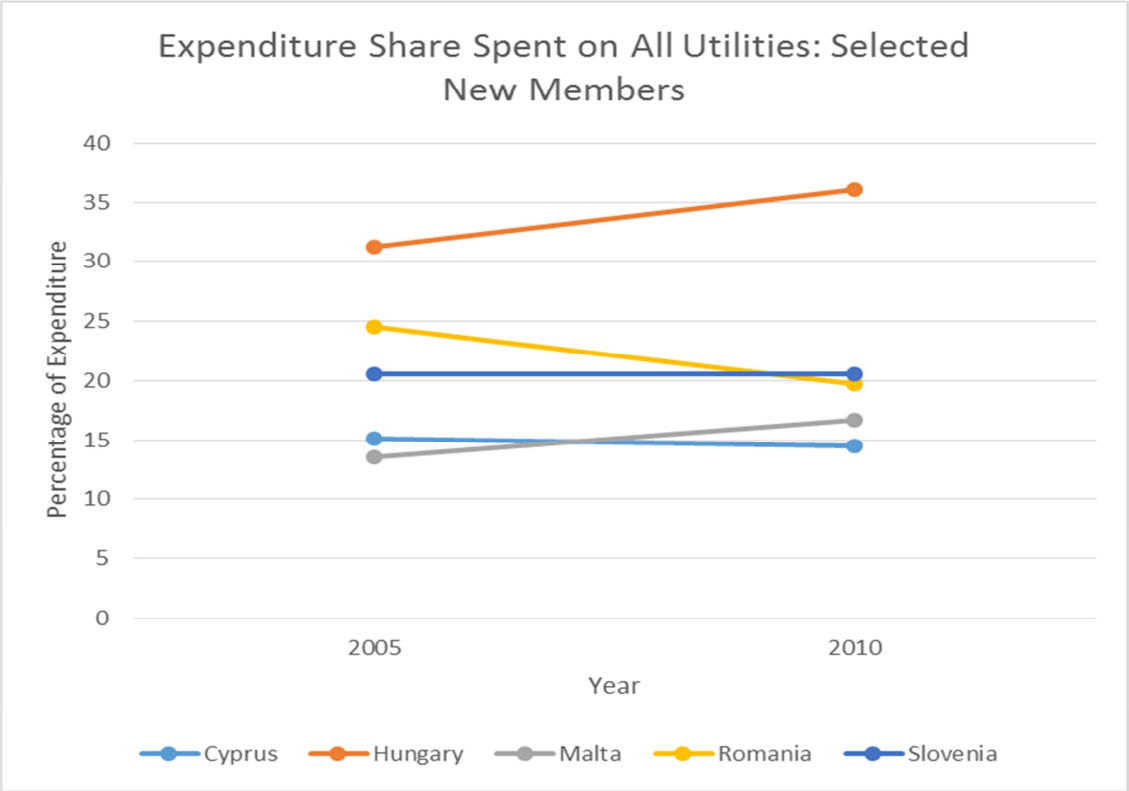
Chart 55: Expenditure Share Spent on All Utilities: Selected EU15 Countries



Source: Eurostat

The shift in the UK between 1999 and 2010 illustrates its changing position from a Member State with one of the lowest expenditure shares devoted to utility services to one of the highest. In contrast, Denmark and Luxembourg saw the expenditure share devoted to utility services increase by no more than 3 percentage points over the longer time period of 1994 to 2010.

Chart 56: Expenditure Share Spent on All Utilities: Selected New Members

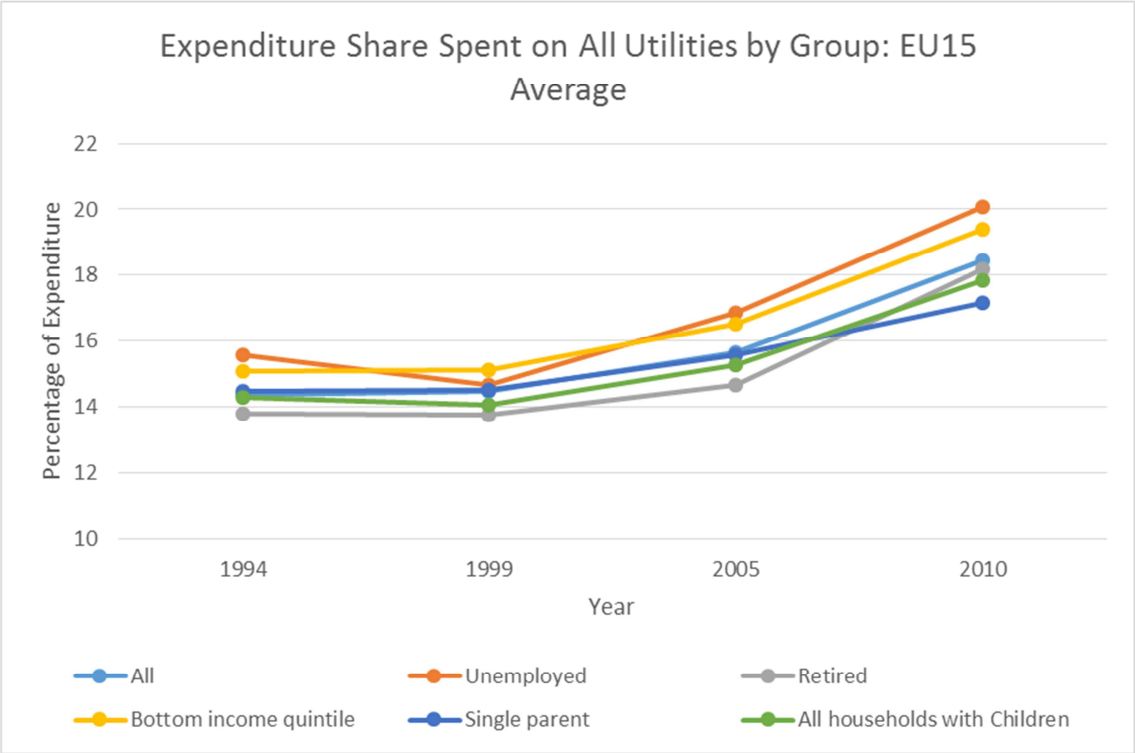


Source: Eurostat

Amongst new Member States the situation of Hungary seems an outlier. Not only did it have one of the highest utility expenditure shares of all EU Member States in 2005, but the expenditure share devoted to utilities in Hungary rose by around another 5 percentage points between 2005 and 2010. Comparing Charts 55 and 56 we note that the total expenditure share devoted to utilities in Hungary in 2010 is more than double the expenditure share in Luxembourg. Such a large discrepancy is a reminder that stark differences in living standards exist across the enlarged EU.

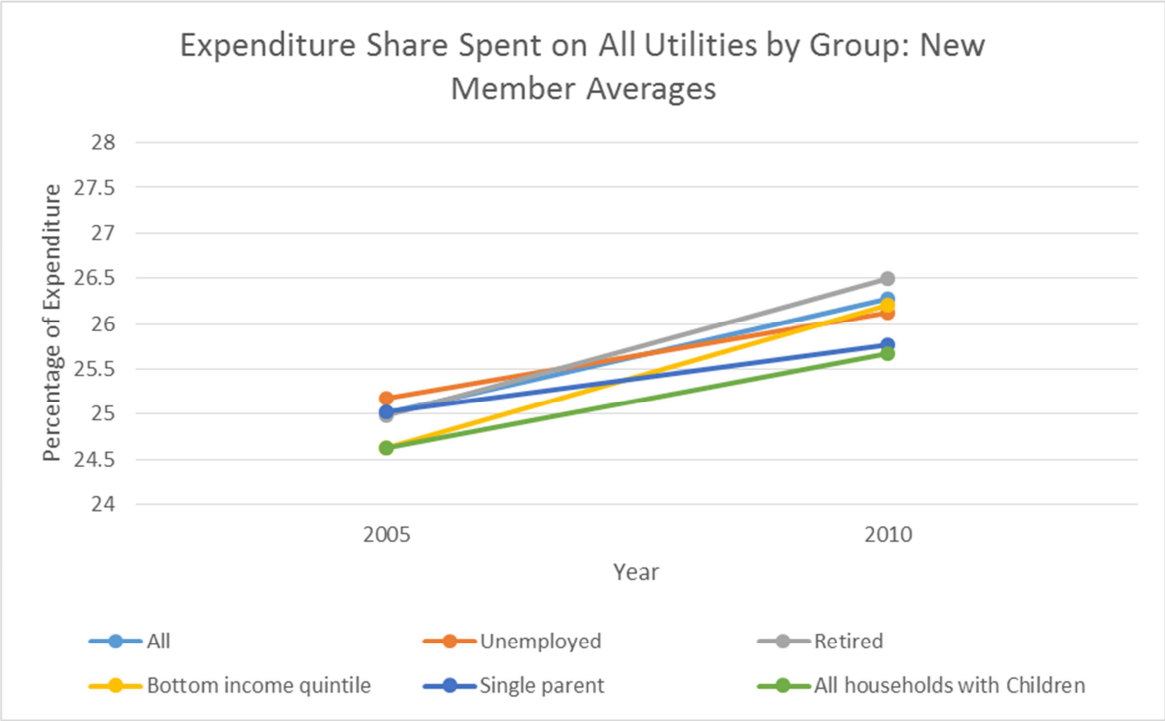
Chart 57 shows increased divergence in utility expenditure shares across different groups within the EU15. In 1999 the difference between the highest and lowest expenditure shares was under 2 percentage points, but by 2010 this difference had increased to 3 percentage points. While the average utility expenditure shares in the new Member States are much higher than in the EU15, in the new Member States the difference between the expenditure shares of different household groups is much lower than in the EU15. In both 2005 and 2010 among the new Member States the difference between the highest and lowest expenditure shares for different groups is less than one percentage point.

Chart 57: Expenditure Share Spent on All Utilities by Group: EU15 Average



Source: Eurostat

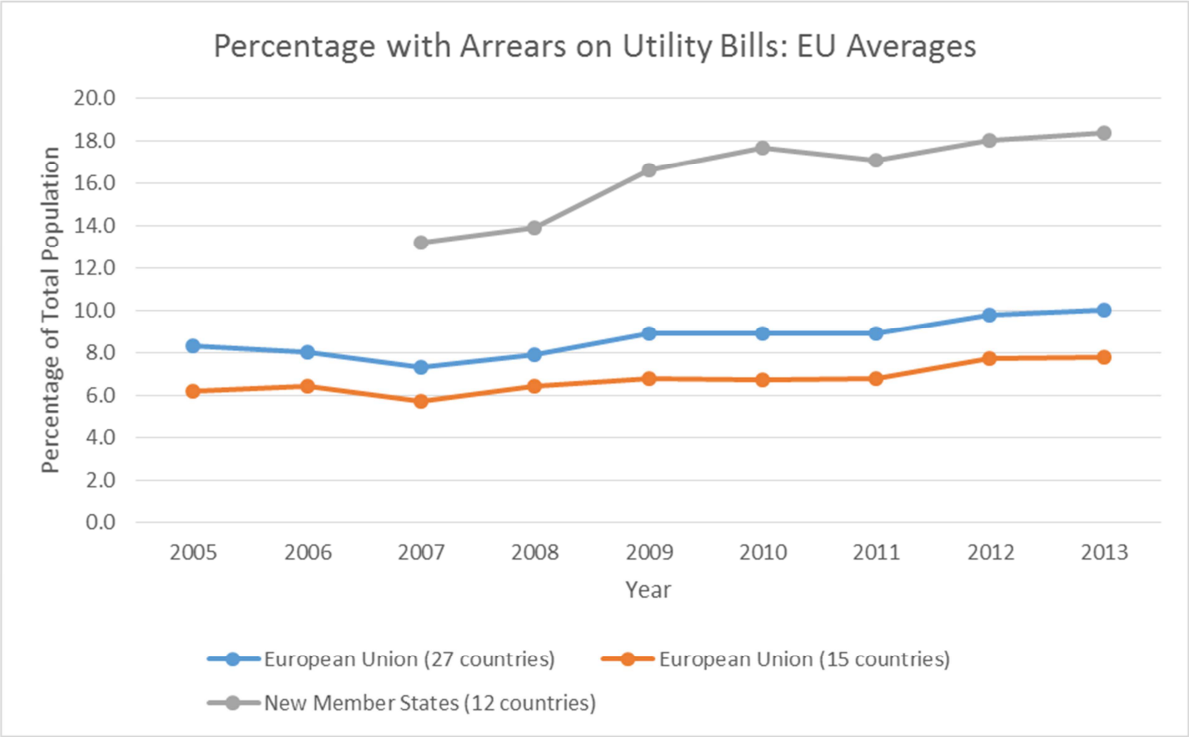
Chart 58: Expenditure Share Spent on All Utilities by Group: New Member Averages



Source: Eurostat

Between 2005 and 2010, in both the EU15 and the new Member States, the increase in expenditure share devoted to utilities rose faster for retired households than the average of all households, while the rate of increase among single parent households was lower than for the average of all households.

Chart 59: Percentage with Arrears on Utility Bills: EU Averages

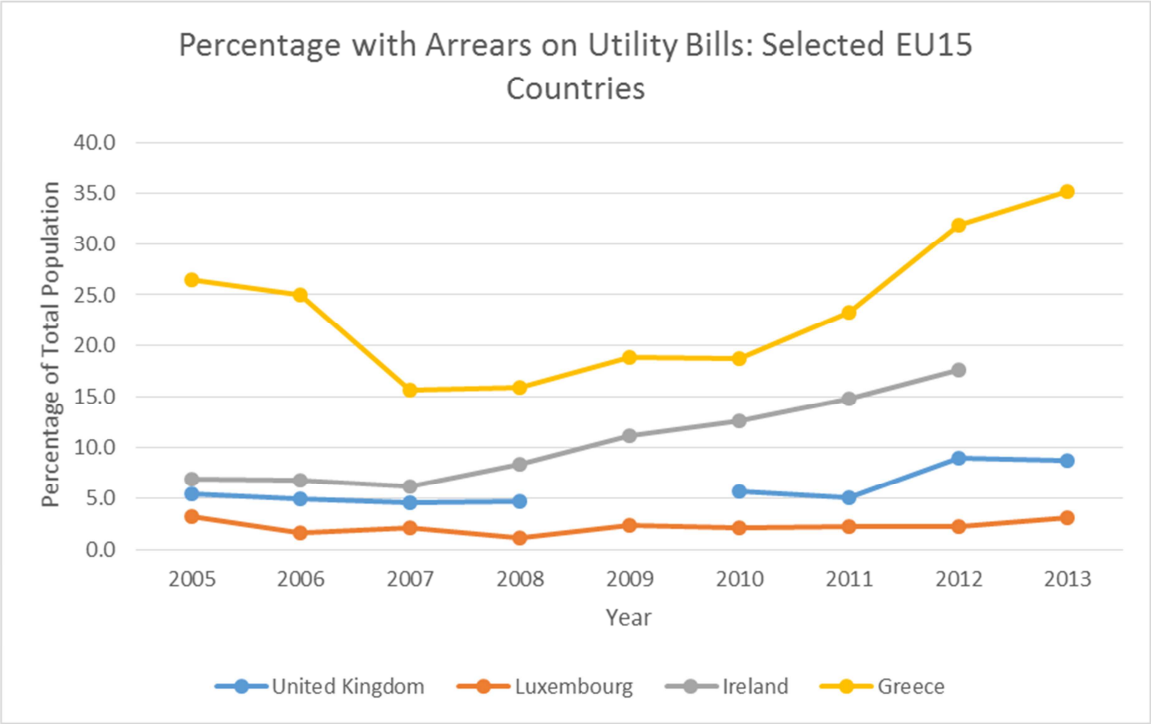


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Charts 59 to 63 utilise an alternative indicator of the combined affordability of all utilities by reporting the EU-SILC measure of whether or not respondents report arrears with their utility bills. Chart 59 shows that arrears are broadly flat through time for the EU15, despite an increasing expenditure share devoted to utilities in the EU15 after 2005 (see Chart 54). While Chart 54 indicates no change in the average expenditure share devoted to utilities in new Member States, Chart 59 shows the percentage of respondents reporting arrears in new Member States rose by about 4.5 percentage points between 2007 and 2010.

Chart 60 shows the differences in the proportion of individuals reporting arrears across the EU15 which can be linked to the Member States which have experienced the severest impacts of the Great Recession. The stark differences are shown by a constant proportion reporting arrears (at around 3%) in Luxembourg, but an increase of 20 percentage points in the proportion reporting arrears in Greece between 2007 and 2013. By 2013 the proportion of respondents reporting arrears in Greece was approximately 12 times that in Luxembourg. The percentage reporting arrears in Greece was relatively high even before the economic crisis.

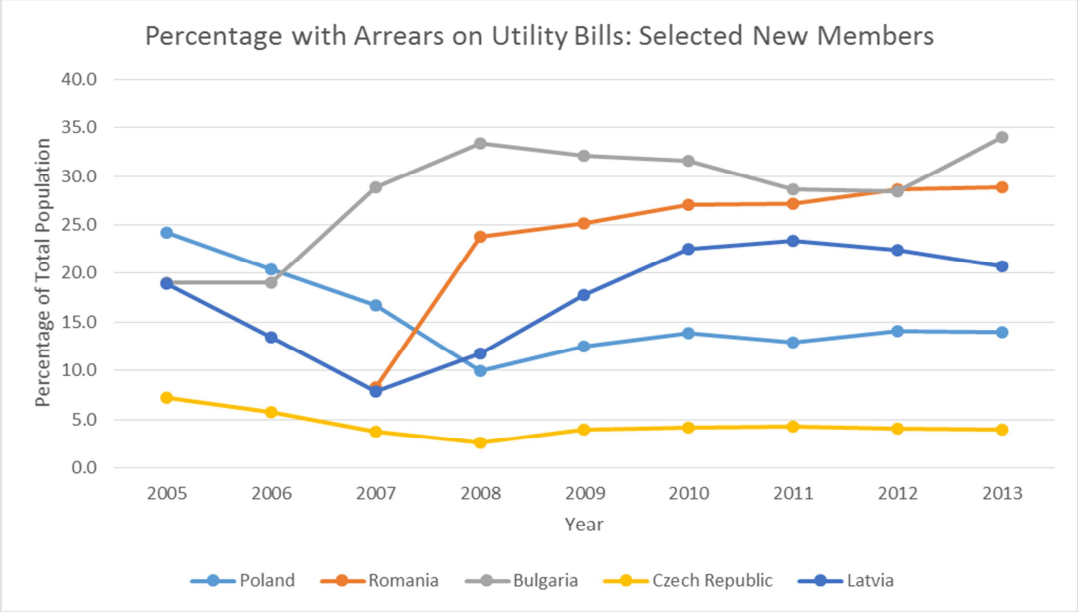
Chart 60: Percentage with Arrears on Utility Bills: Selected EU15 Countries



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

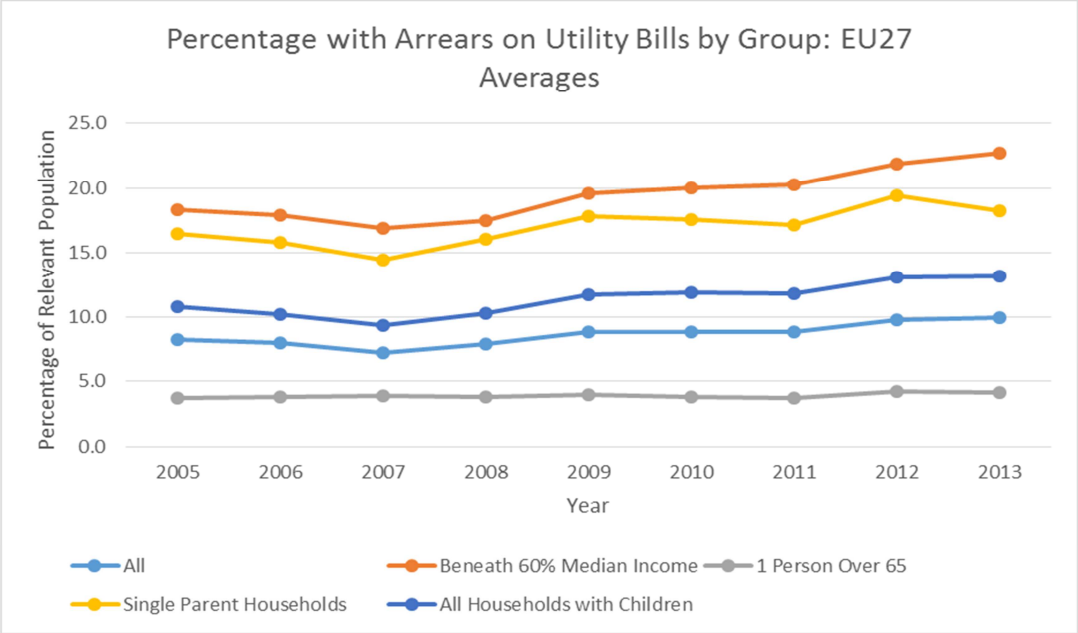
Turning to the new Member States, Chart 61 shows relative stability in the percentage of respondents reporting arrears after 2008, following divergent experiences in earlier years. Between 2006 and 2008 the proportion of respondents reporting arrears in Bulgaria rose by around 15 percentage points while the proportion of respondents reporting arrears in Poland fell by around 10 percentage points.

Chart 61: Percentage with Arrears on Utility Bills: Selected New Members



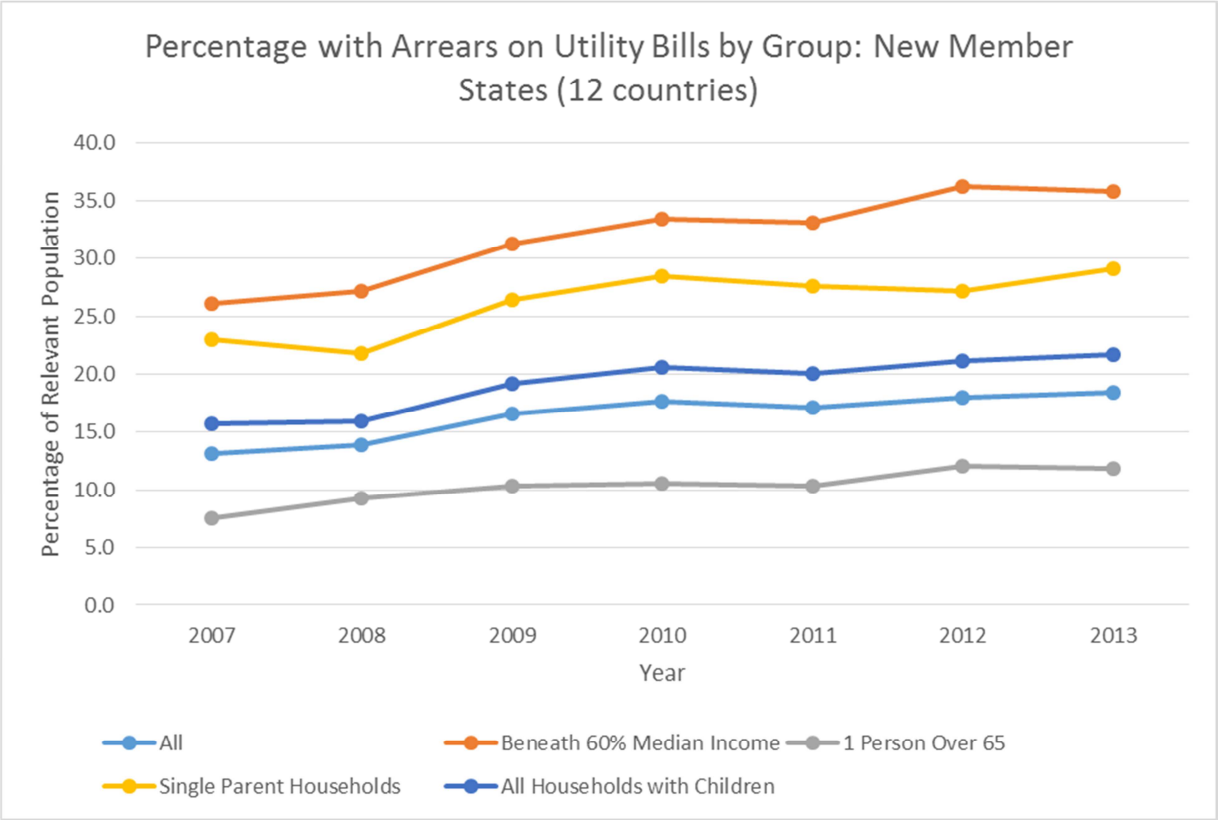
Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 62: Percentage with Arrears on Utility Bills by Group: EU27 Averages



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 63: Percentage with Arrears on Utility Bills by Group: New Member States (12 countries)



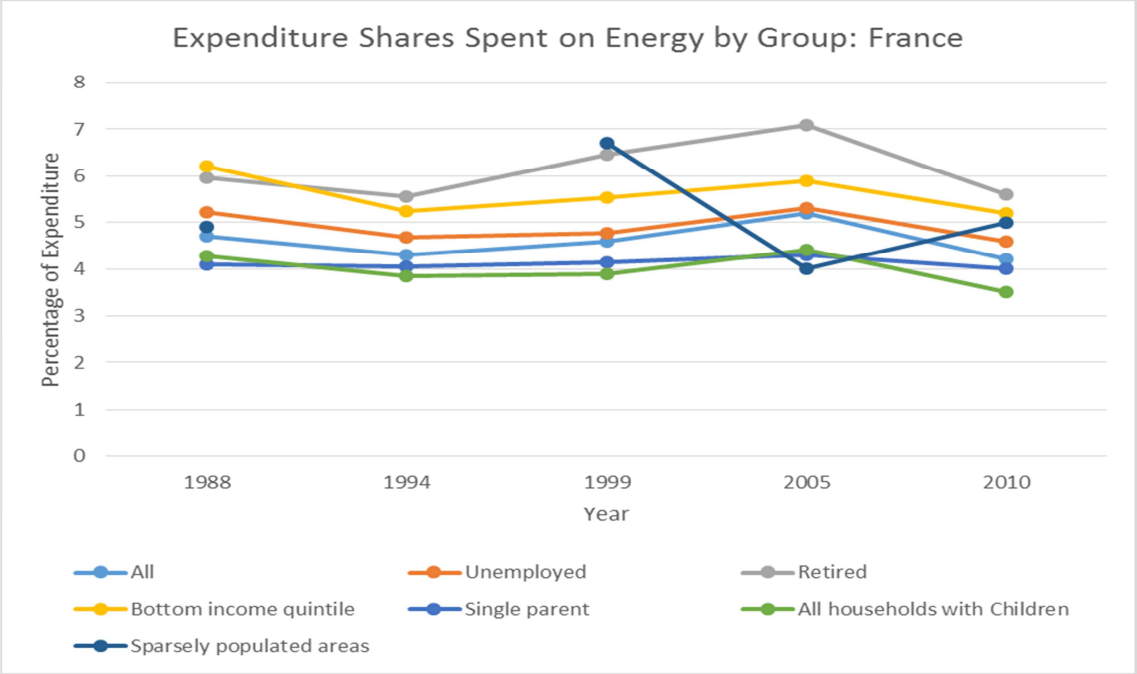
Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Charts 62 and 63 show that within the EU15 and the new Member States, the breakdown of arrears rates by household groups is similar in terms of ordering; in both sets of Member States those in households with one person over the age of 65 are least likely to be experiencing arrears on utility bills. Possible explanations for this observation include: (i) these households are wealthier than others; (ii) active policies subsidise the consumption of utilities by the elderly more than other groups; (iii) households with older members are more conscientious bill payers; or (iv) households with older members are less likely to report arrears due to social stigma. While among EU15 Member States single parent and low income households have similar reported rates of arrears, in the new Member States the proportion of single parents reporting arrears is at least 5 percentage points lower than for those on low incomes.

7. Country Study 1: France

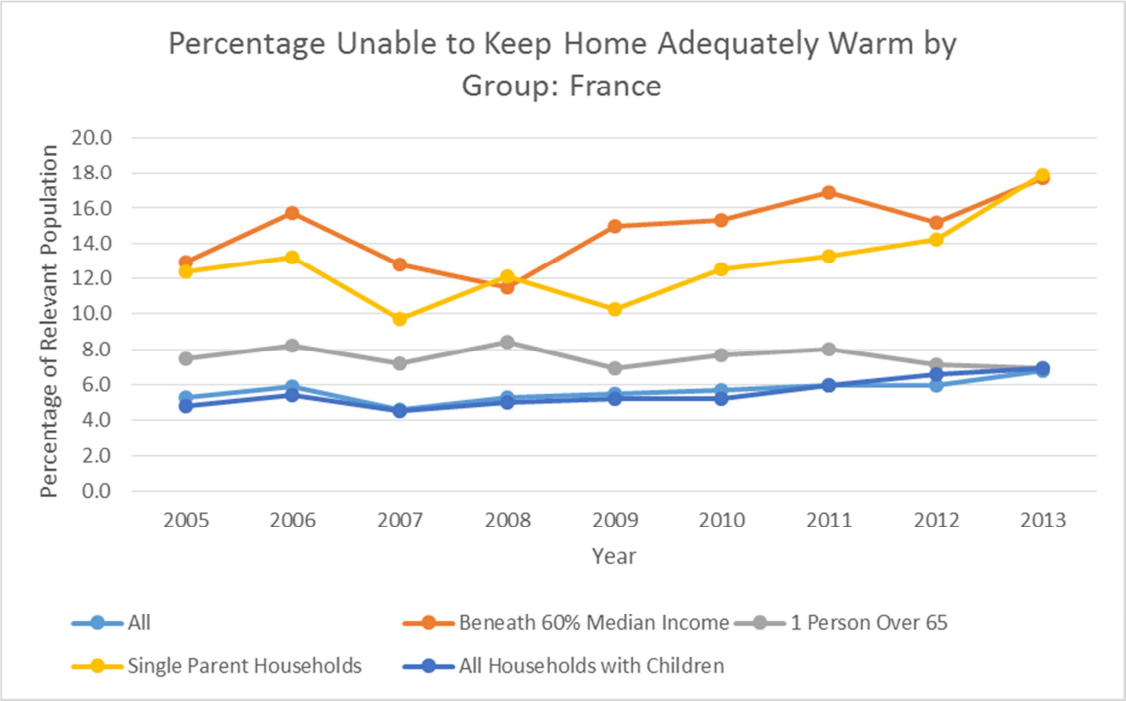
In the charts reported below, the expenditure share data for sparsely populated areas in France for 2005 appear to be inconsistent with the figures for 1999 and 2010, perhaps because of measurement issues. We exclude these figures from our commentary, but report them in the charts for completeness.

Chart 64: Expenditure Shares Spent on Energy by Group: France



Source: Eurostat

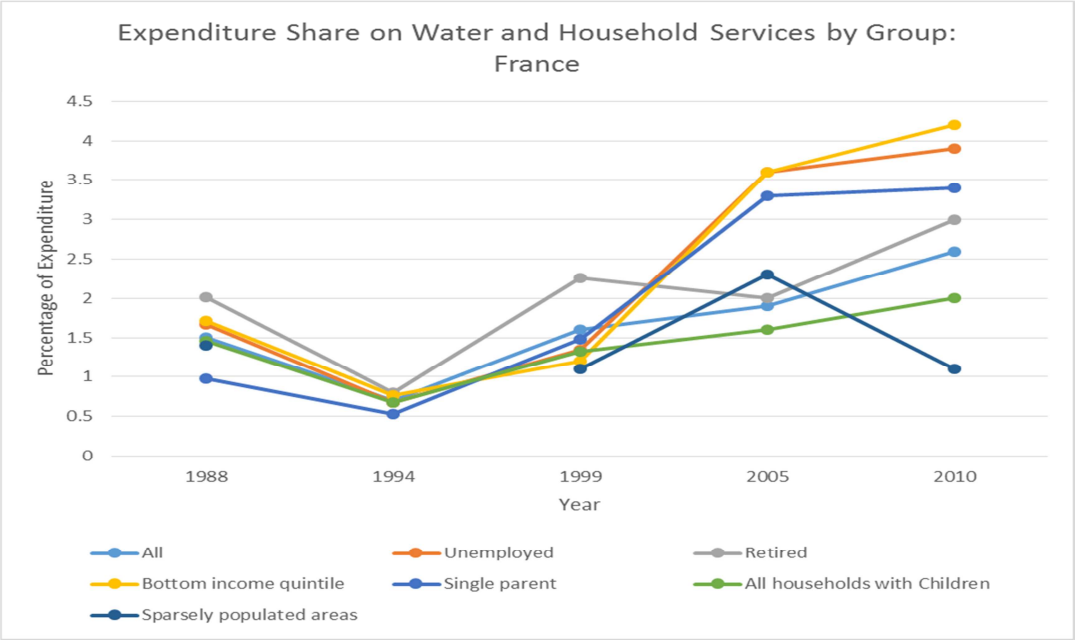
Chart 65: Percentage Unable to Keep Home Adequately Warm by Group: France



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The proportion of respondents in single parent households reporting an inability to keep warm has risen by almost 80% in France since 2009, while the proportion of those in households containing an individual over 65 reporting this form of deprivation has remained constant.

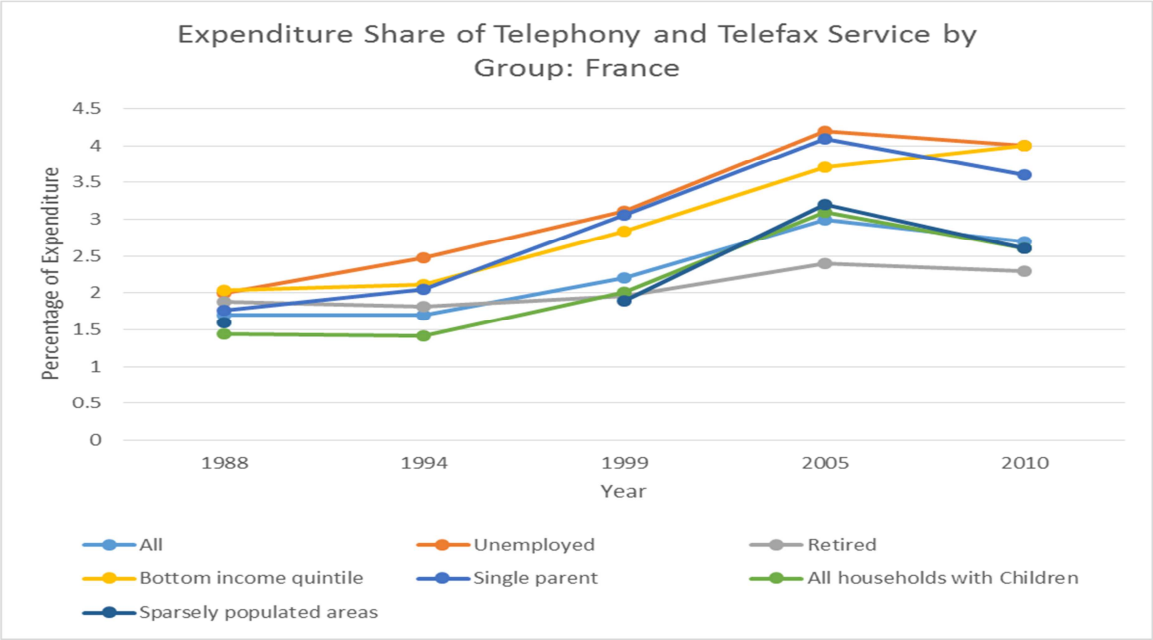
Chart 66: Expenditure Share on Water and Household Services by Group: France



Source: Eurostat

Chart 66 shows a dramatic increase in the dispersion of the expenditure shares devoted to water and household services in France between 1994 and 2010. In 1994 the difference between the highest and lowest expenditure shares was around 0.3 percentage points, but by 2010 this difference had increased to 2.2 percentage points (excluding the sparsely populated areas). The other clear trend is the upward trajectory of water expenditure shares with the minimum expenditure share increase from 1994 to 2010 more than doubling the water expenditure share in 1994.

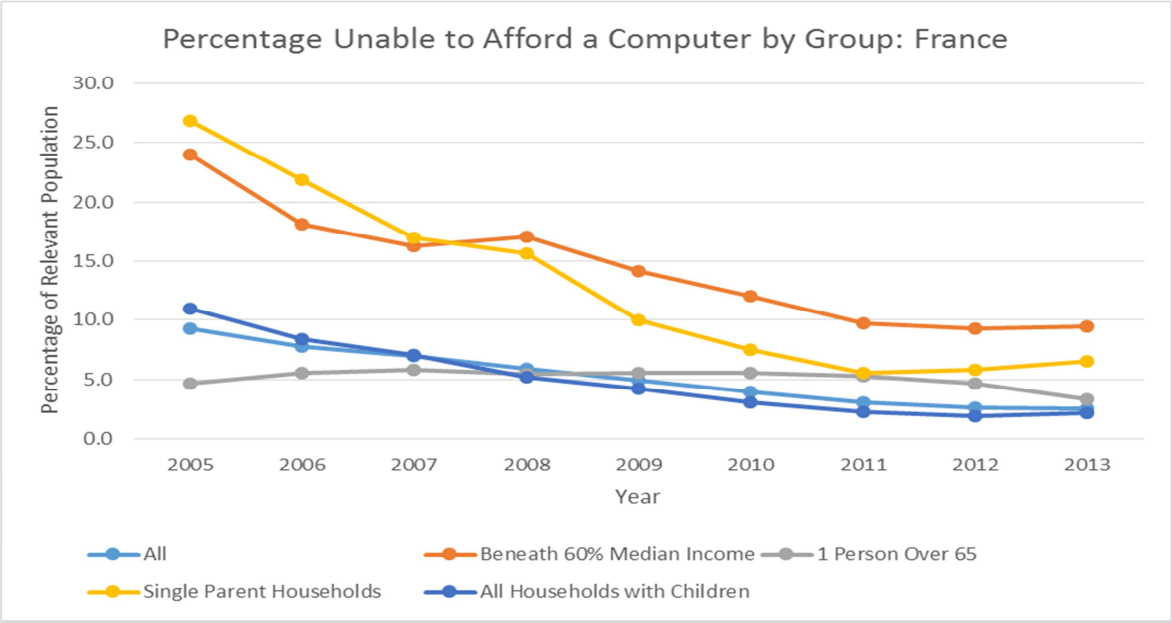
Chart 67: Expenditure Share of Telephony and Telefax Service by Group: France



Source: Eurostat

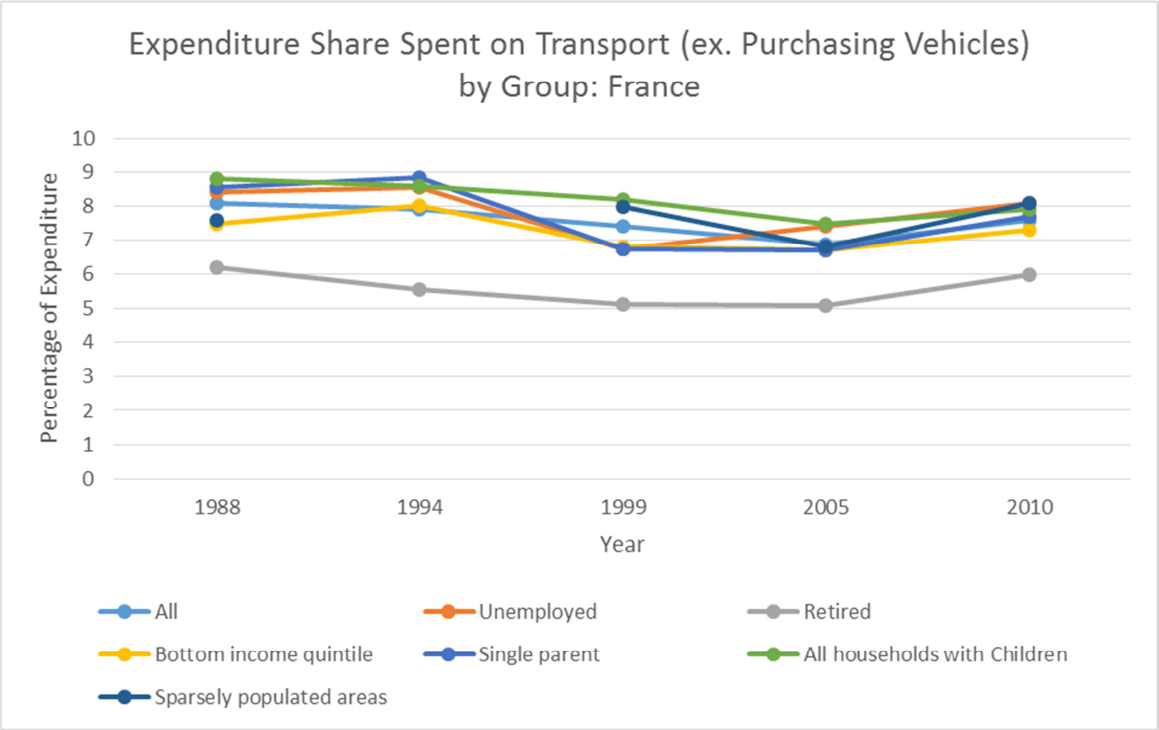
Chart 67 shows a similar increase in the dispersion of expenditure shares devoted to telephone and telefax services between 1988 and 2010 with the difference between the highest and lowest expenditure shares increasing from just over 0.5 percentage points to over 1.5 percentage points. However, Chart 68 shows a clear convergence (to a lower level) in the percentages reporting an inability to afford a computer between different household types. Between 2005 and 2013 the difference in the proportion of those reporting an inability to afford a computer between the highest and lowest groups fell from over 20 percentage points to around 7 percentage points.

Chart 68: Percentage Unable to Afford a Computer by Group: France



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 69: Expenditure Share Spent on Transport (ex. Purchasing Vehicles) by Group: France

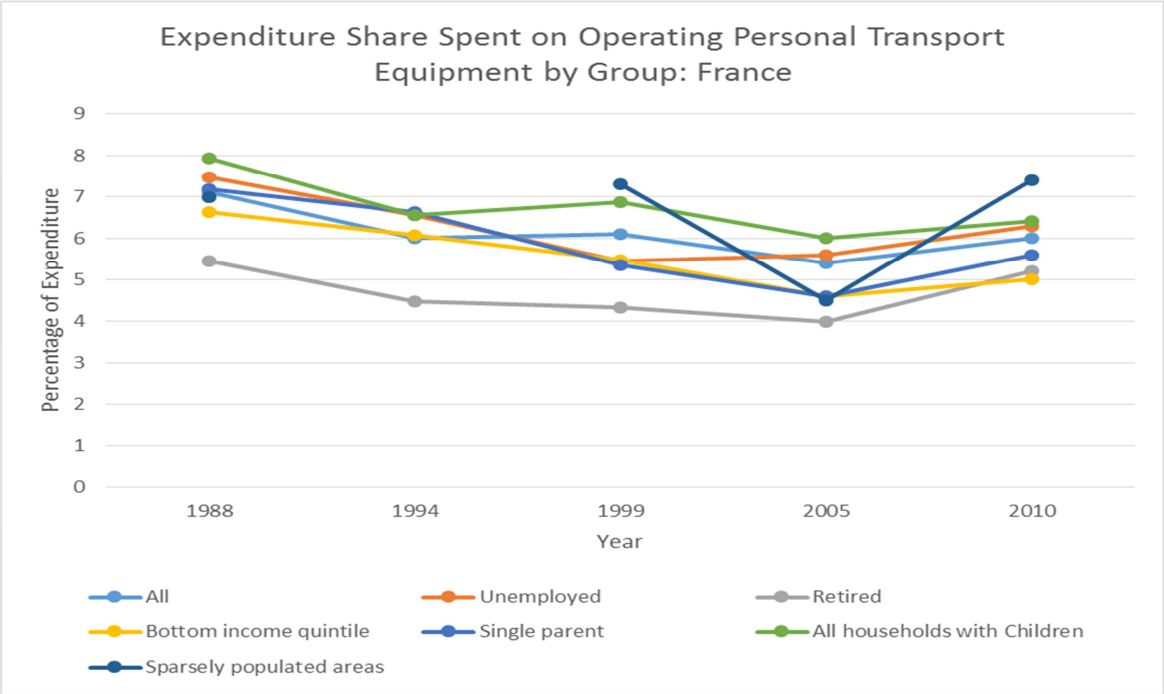


Source: Eurostat

Chart 69 illustrates that retired households are a clear outlier group with an expenditure share devoted to transport that is always at least a percentage point lower than for any other group.

Chart 70 provides an interesting comparison to the UK (Chart 90). In France the expenditure share devoted to operating personal transport equipment averaged across all households fell by around 1 percentage point between 1988 and 2010, while in the UK there was an increase of almost 3 percentage points over the same timescale.

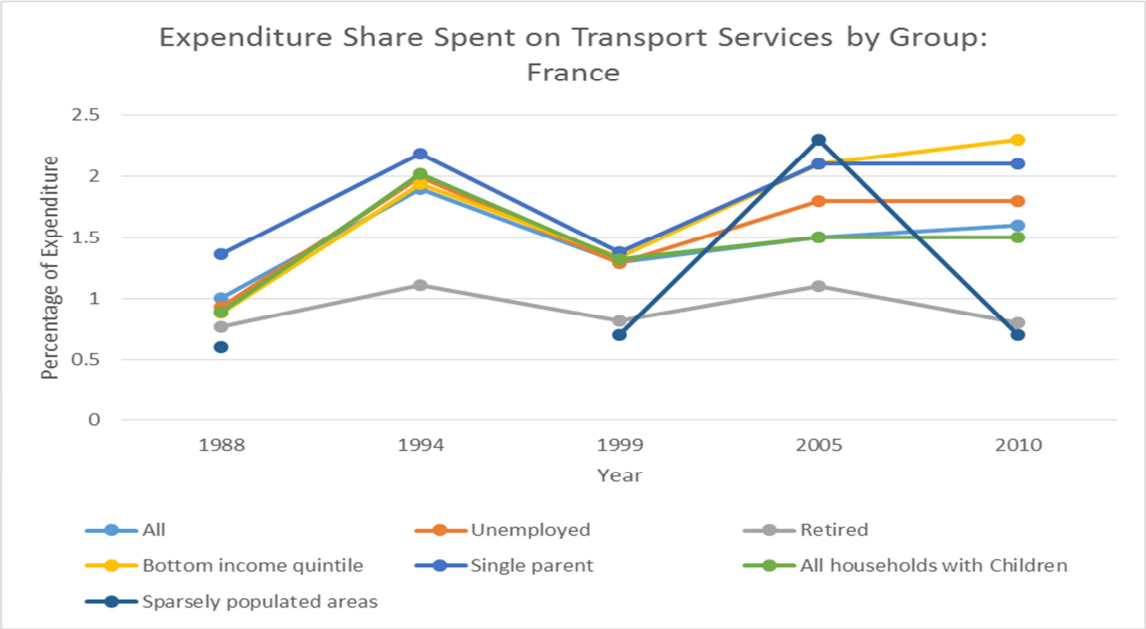
Chart 70: Expenditure Share Spent on Operating Personal Transport Equipment by Group: France



Source: Eurostat

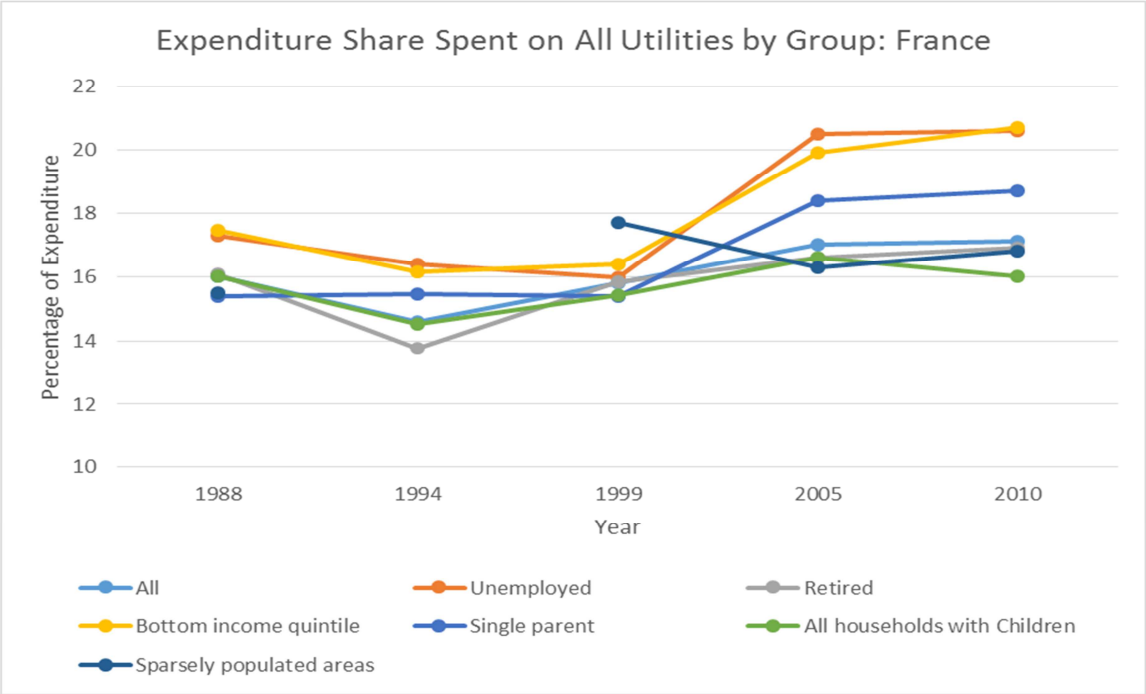
Chart 71 shows that the household groups identified (other than retired and remote households) had very similar expenditure shares in 1988, 1994 and 1999, but these expenditure shares then diverged across household groups from 1999 onwards.

Chart 71: Expenditure Share Spent on Transport Services by Group: France



Source: Eurostat

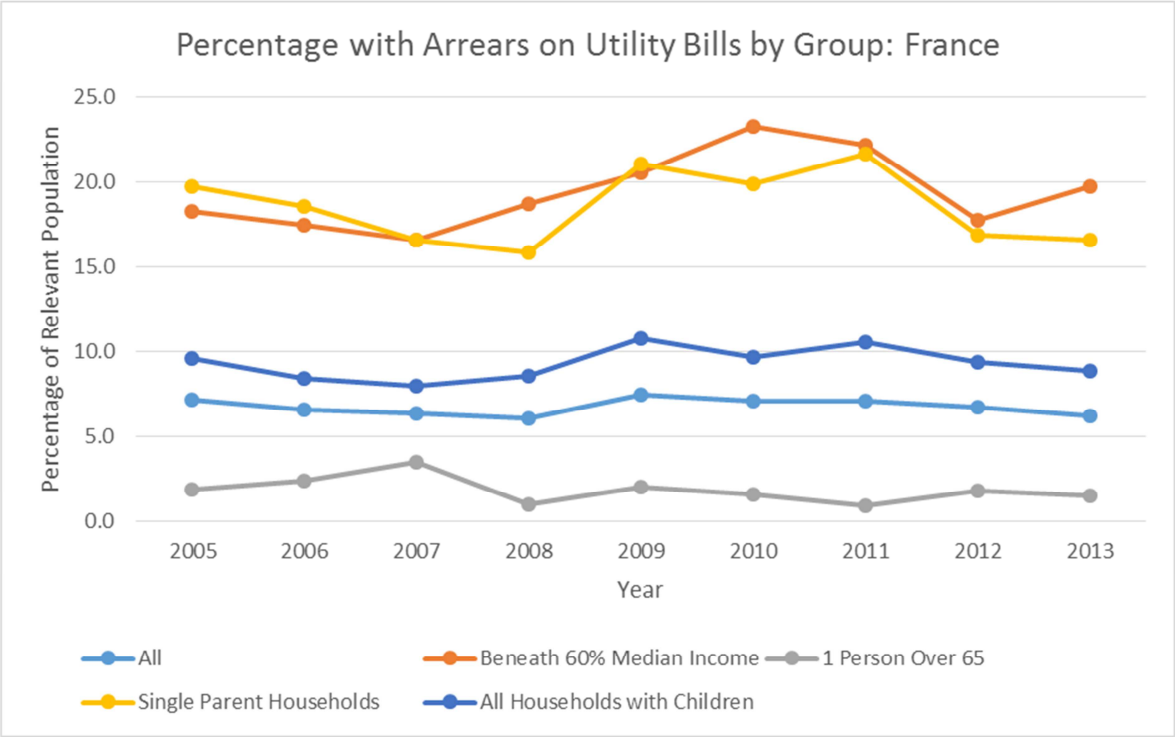
Chart 72: Expenditure Share Spent on All Utilities by Group: France



Source: Eurostat

The combined utility expenditure shares (Chart 72) show a marked divergence across household groups after 1999, and the majority of this divergence is due to the expenditure share rising disproportionately among the unemployed and those in the bottom income quintile. Such divergence in expenditure shares may result from a general widening of inequality in society or be correlated with moves towards market liberalisation within utility sectors.

Chart 73: Percentage with Arrears on Utility Bills by Group: France

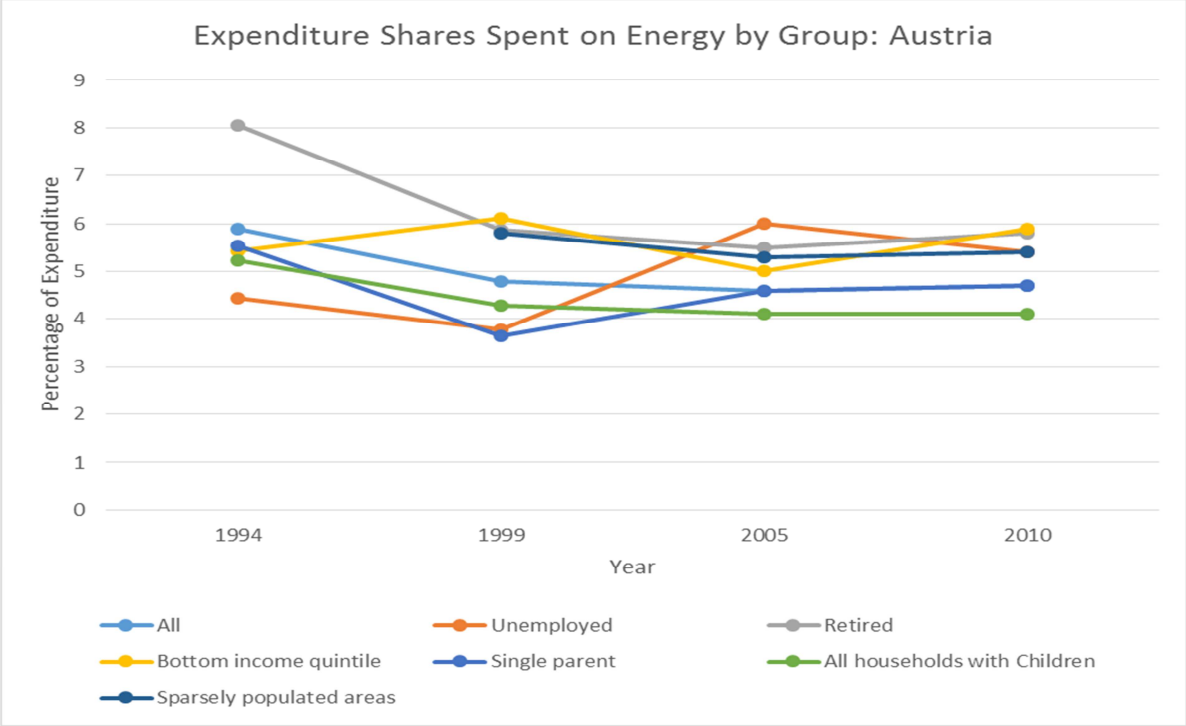


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

8. Country Study 2: Austria

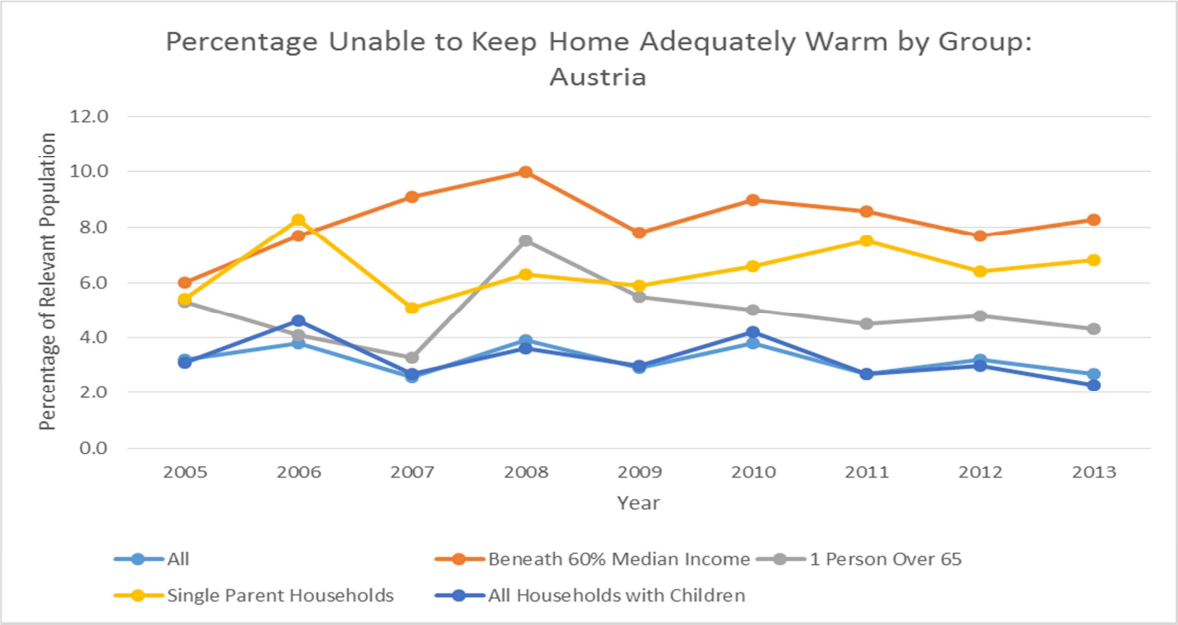
Two significant changes are recorded in the expenditure shares devoted to energy by different groups in Austria in Chart 74. The first is that the expenditure share on energy of retired households fell by over 2 percentage points between 1994 and 1999. The second is that the expenditure share devoted to energy by the unemployed rose by more than 2 percentage points between 1999 and 2005. It would be interesting to know if any policy initiatives could explain these changes.

Chart 74: Expenditure Shares Spent on Energy by Group: Austria



Source: Eurostat

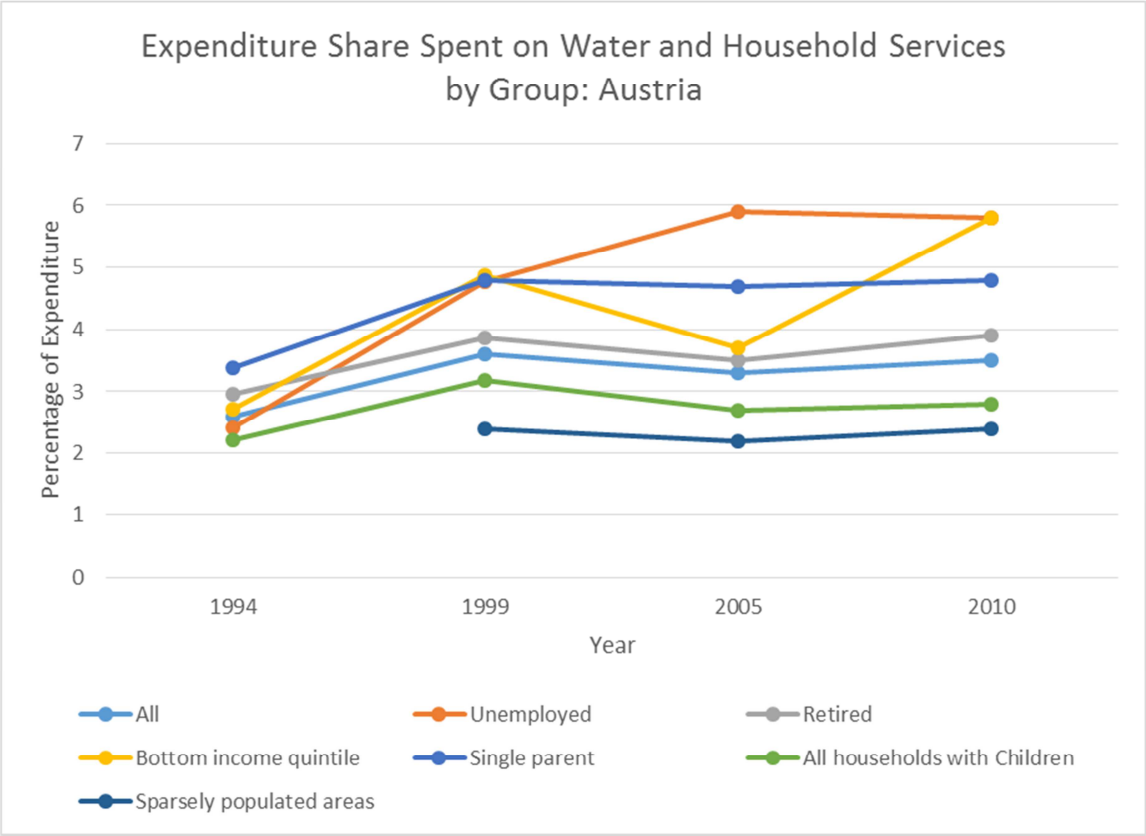
Chart 75: Percentage Unable to Keep Home Adequately Warm by Group: Austria



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Compared to France, a lower proportion of single parents and those on low incomes report an inability to keep their home adequately warm in Austria. Nevertheless there is an increasing gap between households in Austria between 2005 and 2010. In 2005 the percentage of those on low incomes reporting difficulties with keeping warm was around 3 percentage points higher than for the average of the total population, but by 2013, this difference had increased to over 5 percentage points. As in France, Chart 76 shows a marked divergence in the expenditure shares devoted to water and household services by different groups over the period 1994 to 2010.

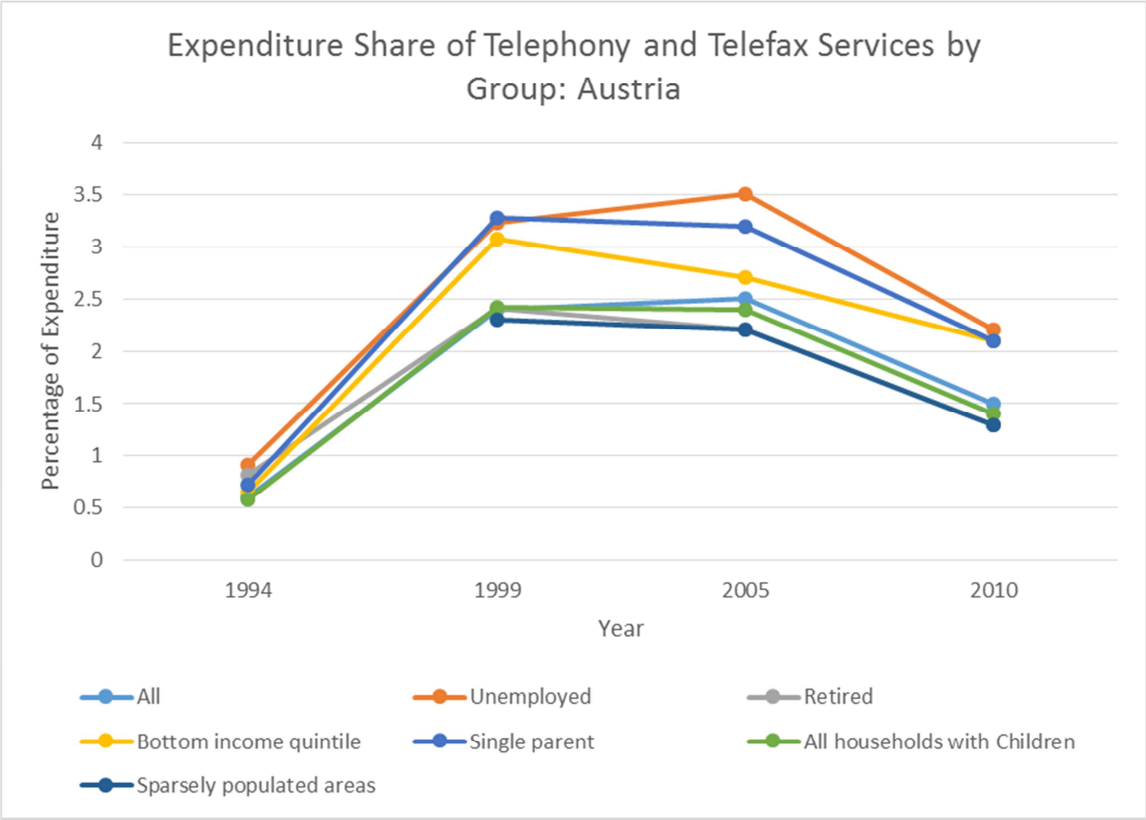
Chart 76: Expenditure Share Spent on Water and Household Services by Group: Austria



Source: Eurostat

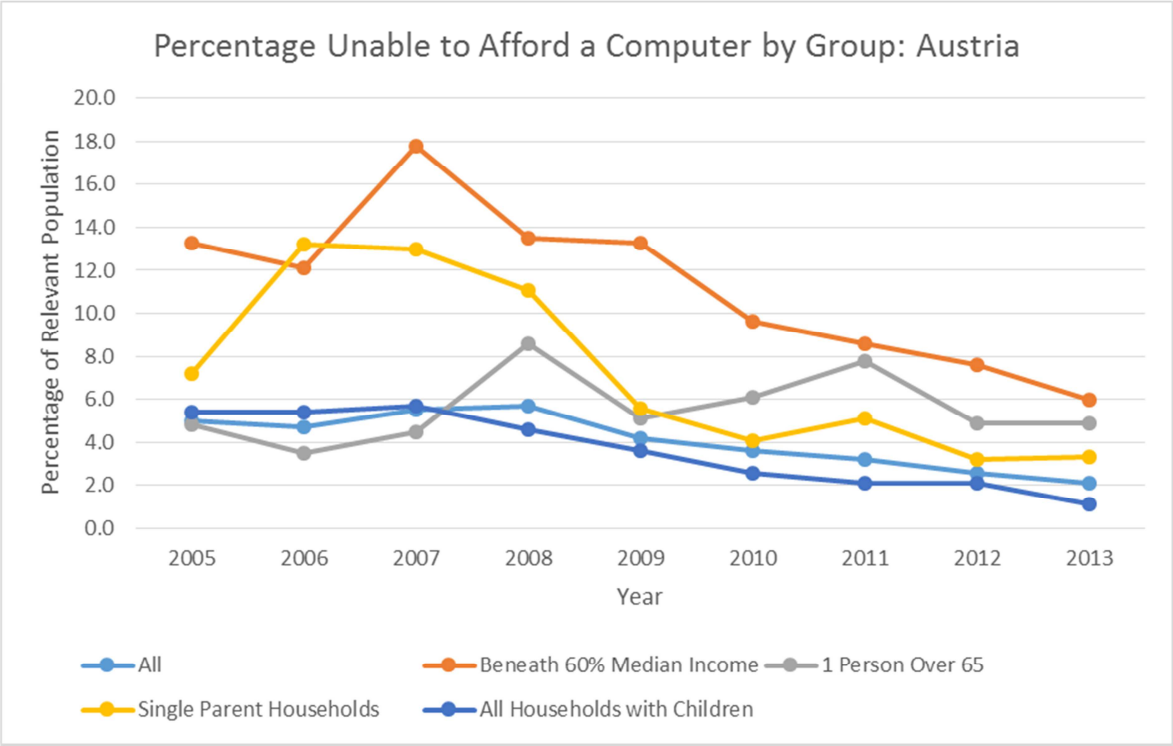
The expenditure shares of telephone and telefax services for all household groups in Austria display an intriguing inverted U shape. The expenditure shares of all groups increase by around 2-2.5 percentage points between 1994 and 1999, but all fall by at least 1 percentage point after 2005.

Chart 77: Expenditure Share of Telephony and Telefax Services by Group: Austria



Source: Eurostat

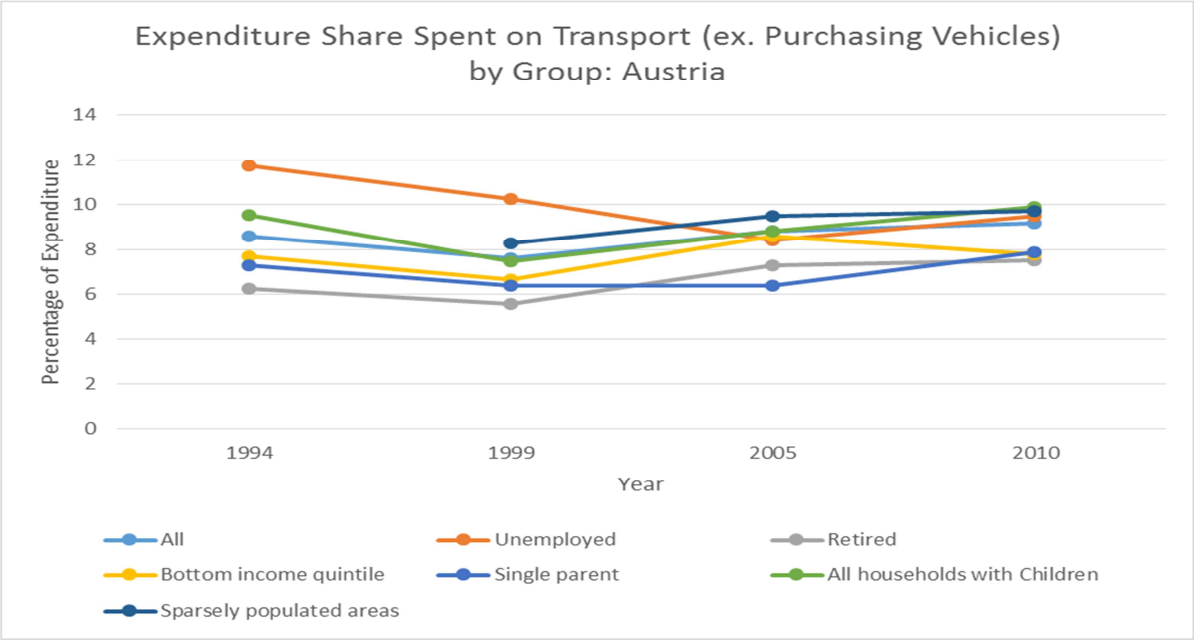
Chart 78: Percentage Unable to Afford a Computer by Group: Austria



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 78 shows that the proportion of single parent households reporting an inability to afford a computer rose by 6 percentage points between 2005 and 2006, and the proportion of those on low incomes unable to afford a computer rose by a similar amount the following year.

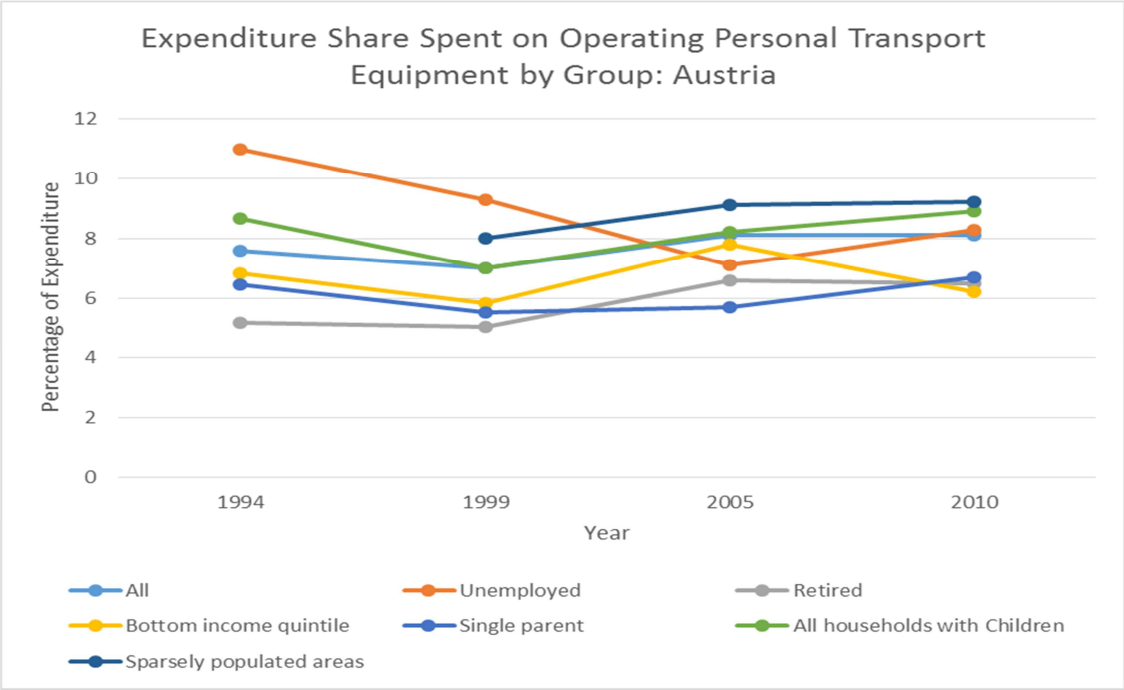
Chart 79: Expenditure Share Spent on Transport (ex. Purchasing Vehicles) by Group: Austria



Source: Eurostat

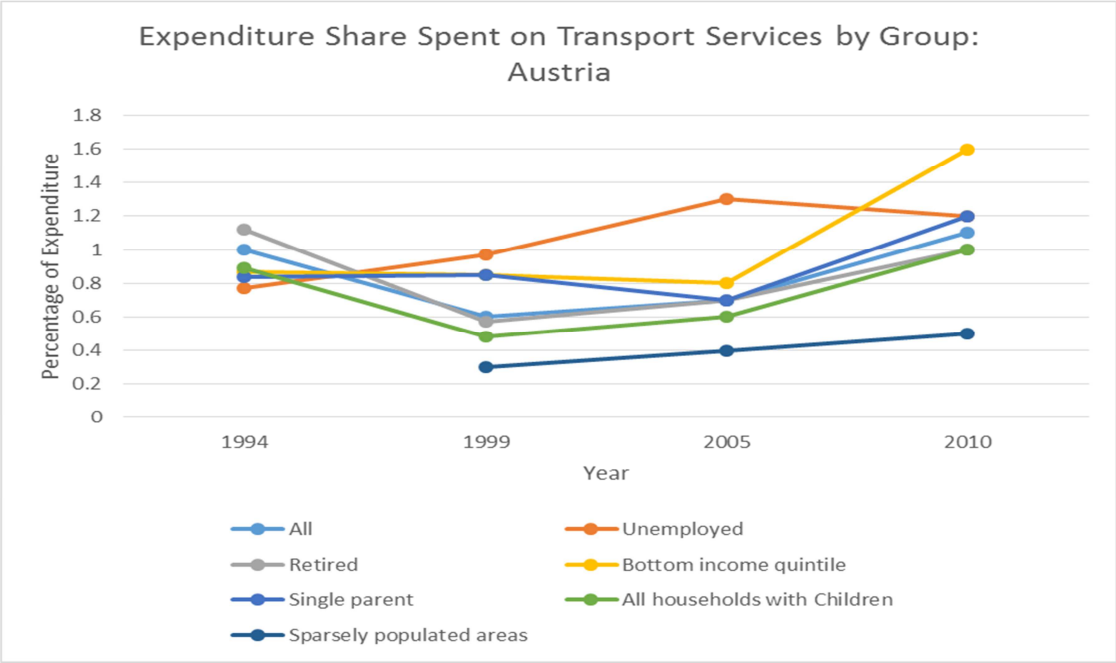
Charts 80 and 81 show that transport expenditure for those in sparsely populated areas is dominated by operating personal transport equipment (almost certainly cars) rather than transport services, presumably reflecting a lack of public transport in rural areas. Between 2005 and 2010 those in the bottom income quartile show a shift in expenditure away from operating personal transport equipment towards transport services.

Chart 80: Expenditure Share Spent on Operating Personal Transport Equipment by Group: Austria



Source: Eurostat

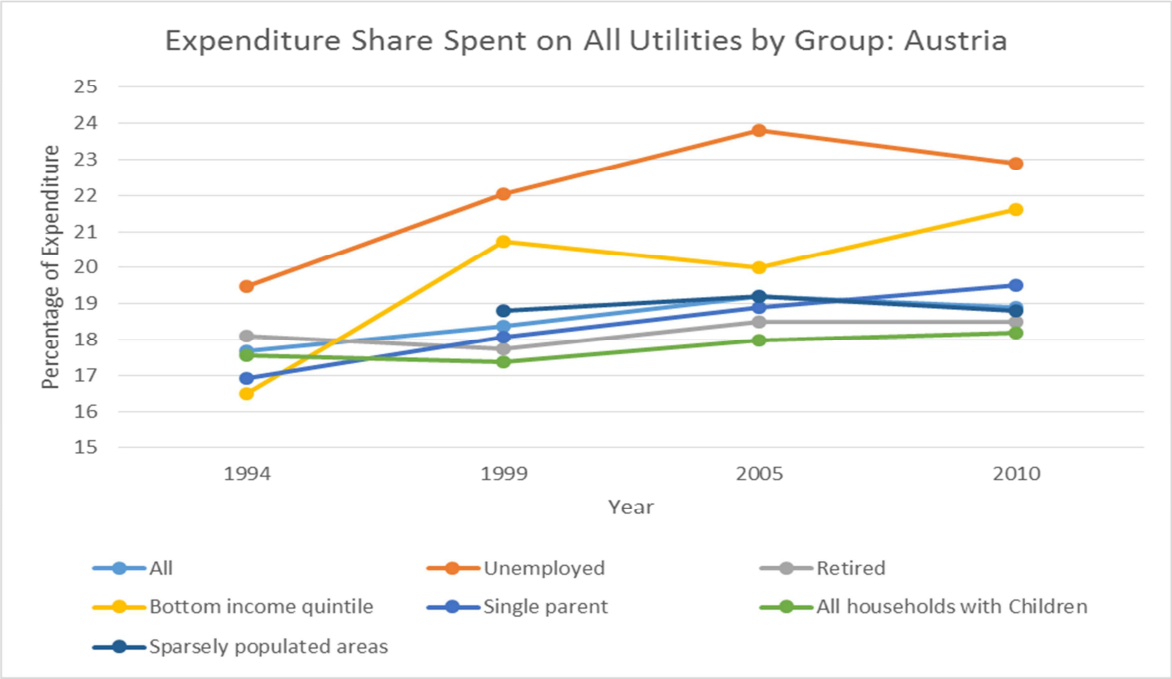
Chart 81: Expenditure Share Spent on Transport Services by Group: Austria



Source: Eurostat

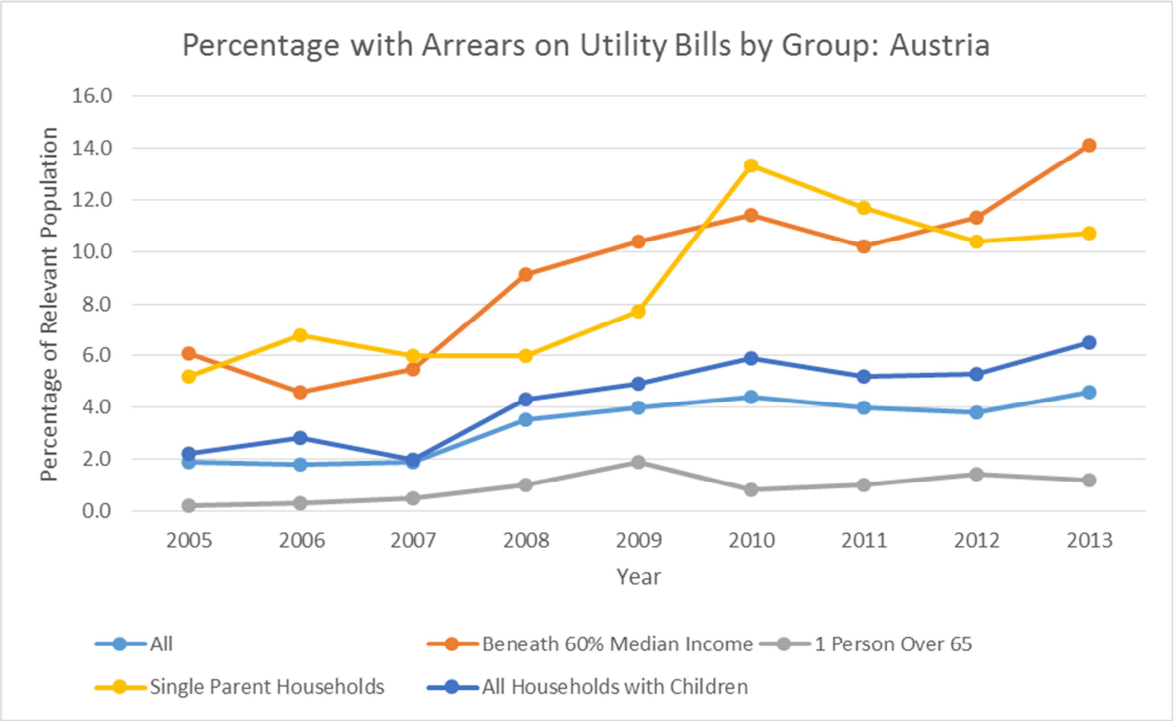
From Chart 82 it is clear that in Austria the unemployed devote the largest share of expenditure to utility services and that the gap between this group and the average of all households has increased through time from 2 percentage points in 1994 to 4 percentage points in 2010. The rise in the utility expenditure share is particularly marked for the bottom income quartile between 1994 and 1999; a rise of around 4 percentage points meant that those in the bottom income quartile went from being the group with the lowest expenditure share to that with the second highest expenditure share.

Chart 82: Expenditure Share Spent on All Utilities by Group: Austria



Source: Eurostat

Chart 83: Percentage with Arrears on Utility Bills by Group: Austria



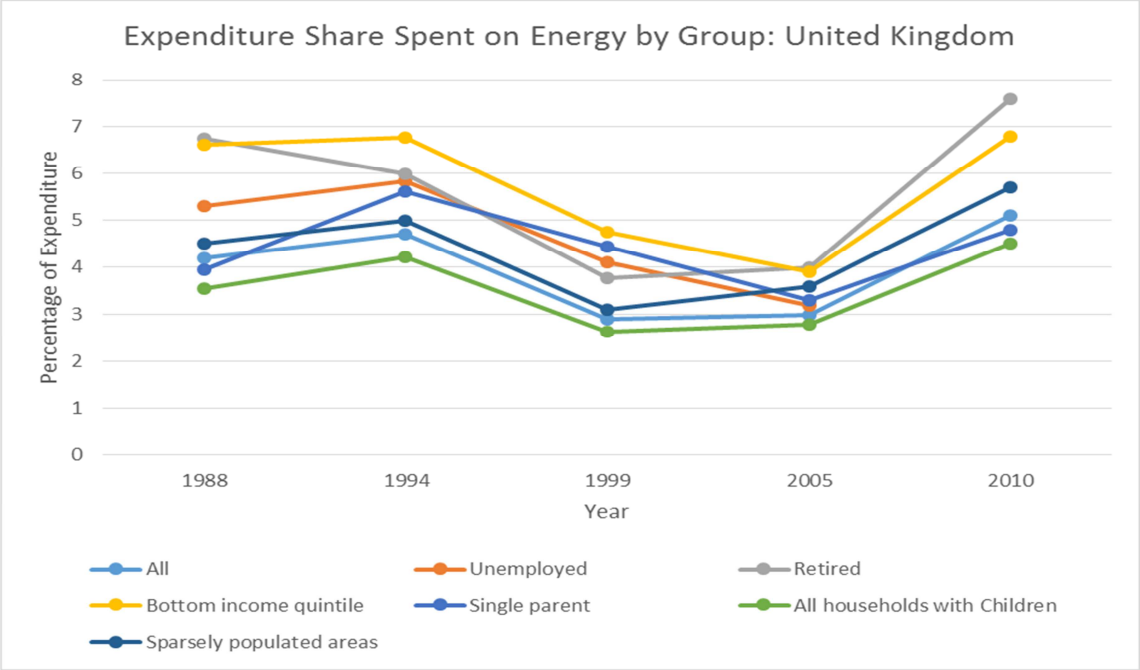
Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 83 shows that between 2006 and 2013 the proportion of those in single parent and low income households reporting arrears on their utility bills rose particularly strongly. The percentage of those in low income households reporting arrears approximately trebled between these two dates.

9. Country Study 3: United Kingdom

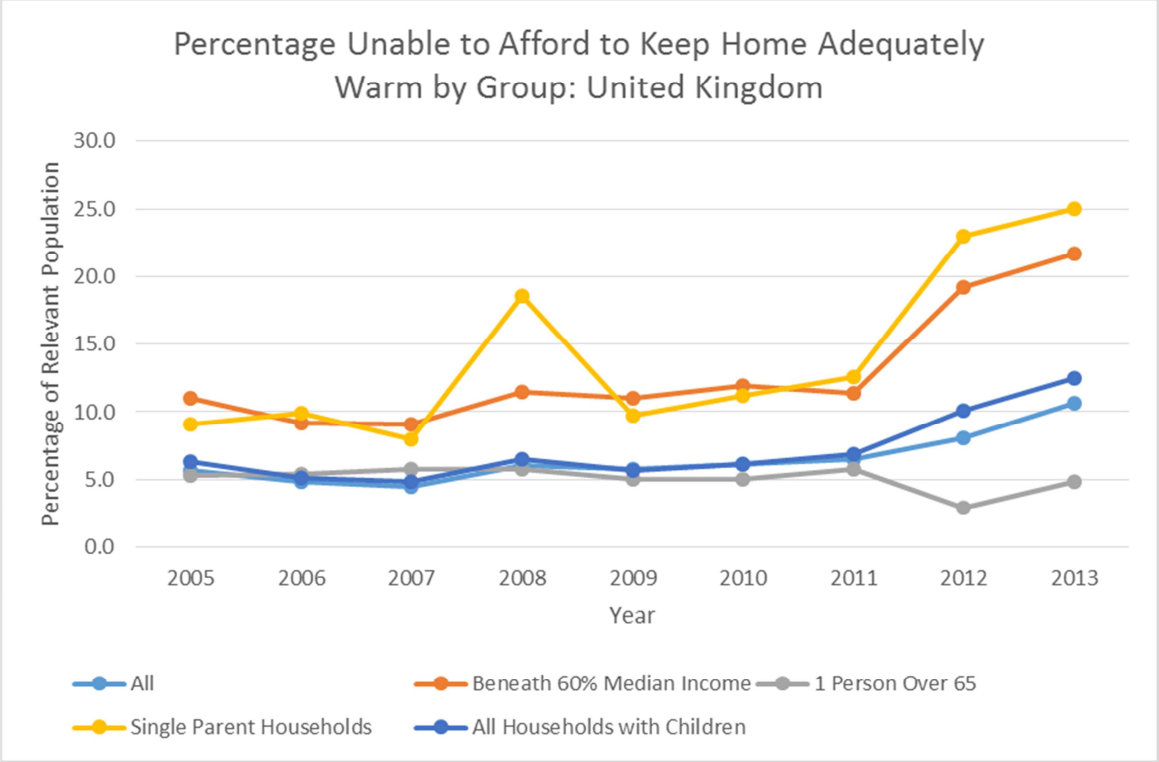
As previously noted, the key feature of the expenditure share data for energy in the UK is the U-shape apparent from 1994 onwards. Looking at Chart 84 the rise in the energy expenditure share for retired households is particularly marked for the period 2005 to 2010, rising by over 3.5 percentage points.

Chart 84: Expenditure Share Spent on Energy by Group: United Kingdom



Source: Eurostat

Chart 85: Percentage Unable to Afford to Keep Home Adequately Warm by Group: United Kingdom

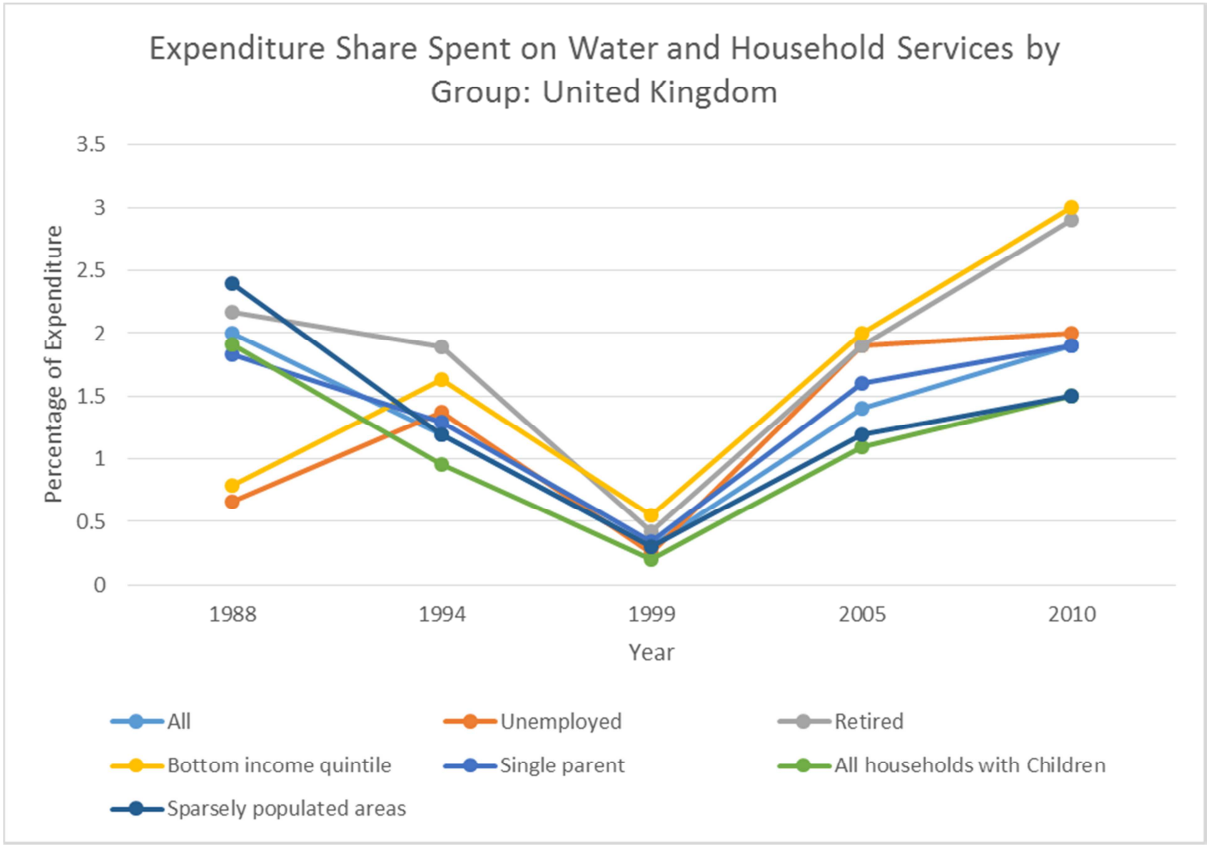


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The clear point of interest in Chart 95 is the divergence in the proportions reporting an inability to keep their homes warm across groups from 2011 onwards. Between 2011 and 2012 the proportion of respondents in homes containing a person over 65 reporting an inability to keep warm halved, while the equivalent figure for those in single parent households rose by 10 percentage points. Between 2012 and 2013 all groups experienced the same rate of increase. The interesting question is whether this divergence can be attributed to any changes implemented by the incoming coalition government of 2010.

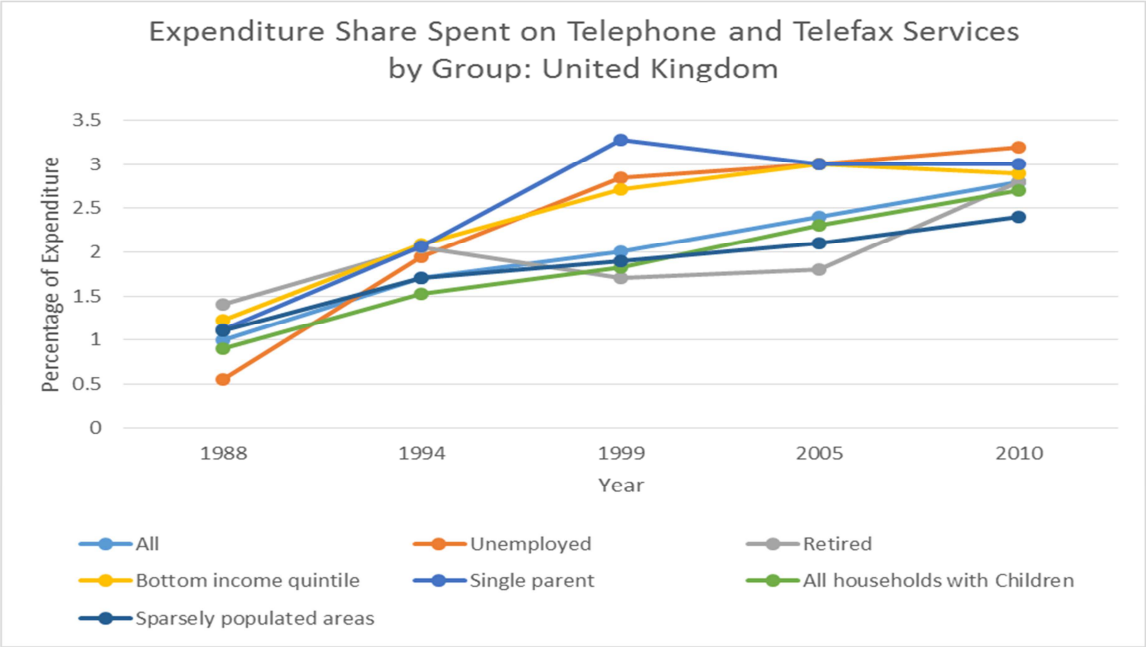
Chart 86 shows a very striking V-shape related to the expenditure shares of water and household services, raising some questions about measurement. Between 1988 and 1999 the average expenditure share across all households fell by over 1.5 percentage points, reflecting initial post-privatisation price settlements, but between 1999 and 2005 the expenditure share rose by around 1.5 percentage points. The other noticeable feature of Chart 96 is the extreme compression of the range between the highest and lowest expenditure shares in 1999 to around 0.5 percentage points.

Chart 86: Expenditure Share Spent on Water and Household Services by Group: United Kingdom



Source: Eurostat

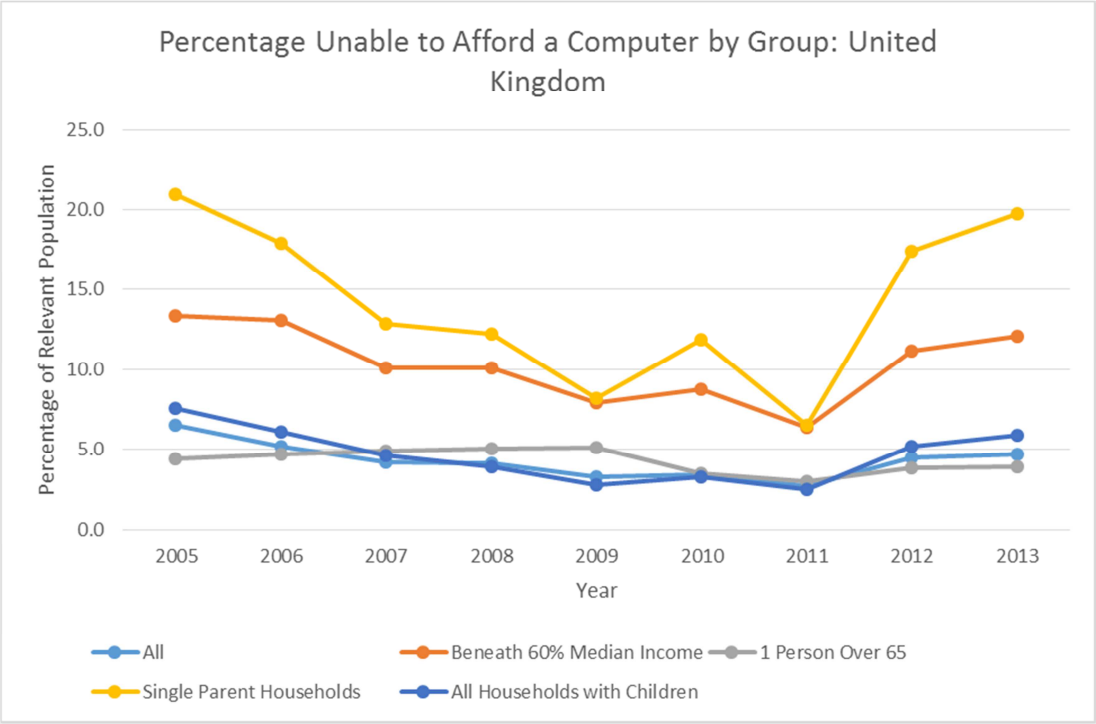
Chart 87: Expenditure Share Spent on Telephone and Telefax Services by Group: United Kingdom



Source: Eurostat

In terms of the expenditure shares devoted to telephone and telefax services the increase in the expenditure share experienced by unemployed households is particularly striking, as it increased by a factor of six between 1988 and 2010. This may suggest that telecom services are viewed as increasingly essential among all groups.

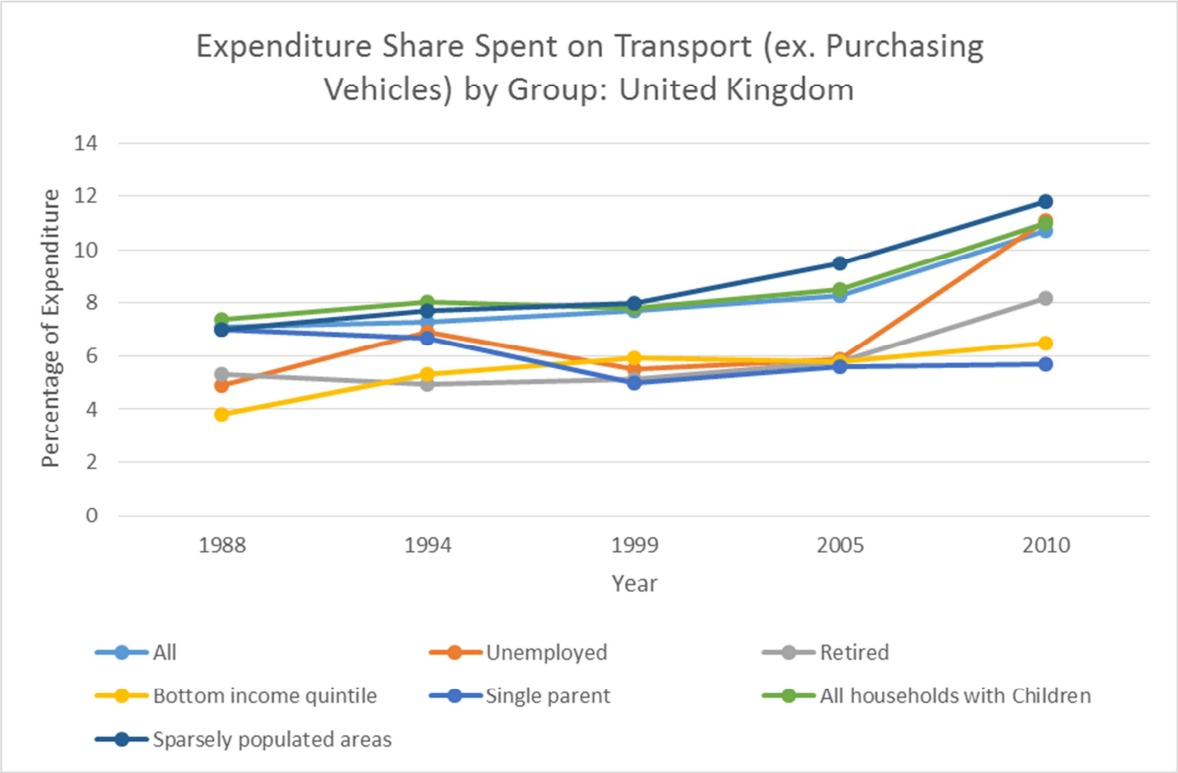
Chart 88: Percentage Unable to Afford a Computer by Group: United Kingdom



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The unusual feature of Chart 88 is that, compared to France and Austria, the UK does not show a continuously declining percentage of households reporting an inability to afford a computer. Instead, between 2011 and 2012 all groups experienced an increasing proportion reporting an inability to afford a computer. The situation for those in single parent households is particularly extreme with an increase of around 13 percentage points between 2011 and 2013, so that the proportion of those in single parent households reporting an inability to afford a computer returned to its approximate 2005 level. Given that this indicator is a subjective measure, it would be interesting to investigate whether such a rapid deterioration in fortunes for single parent households corresponds to more 'objective' indicators.

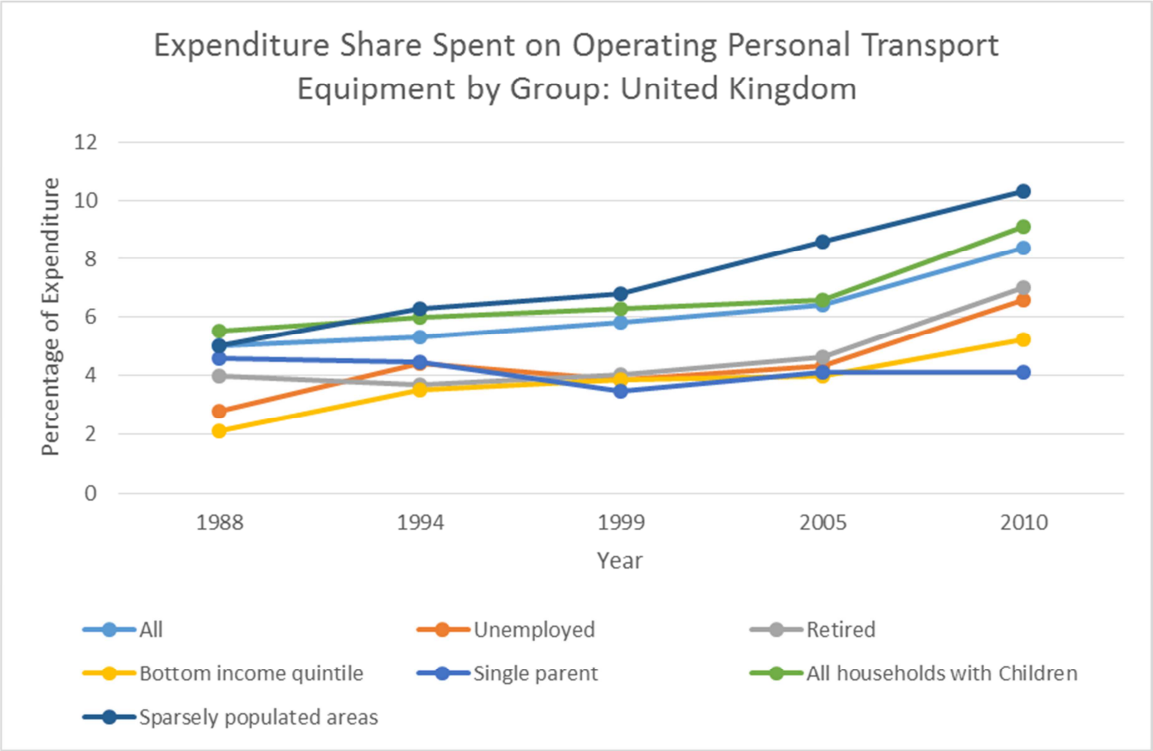
Chart 89: Expenditure Share Spent on Transport (ex. Purchasing Vehicles) by Group: United Kingdom



Source: Eurostat

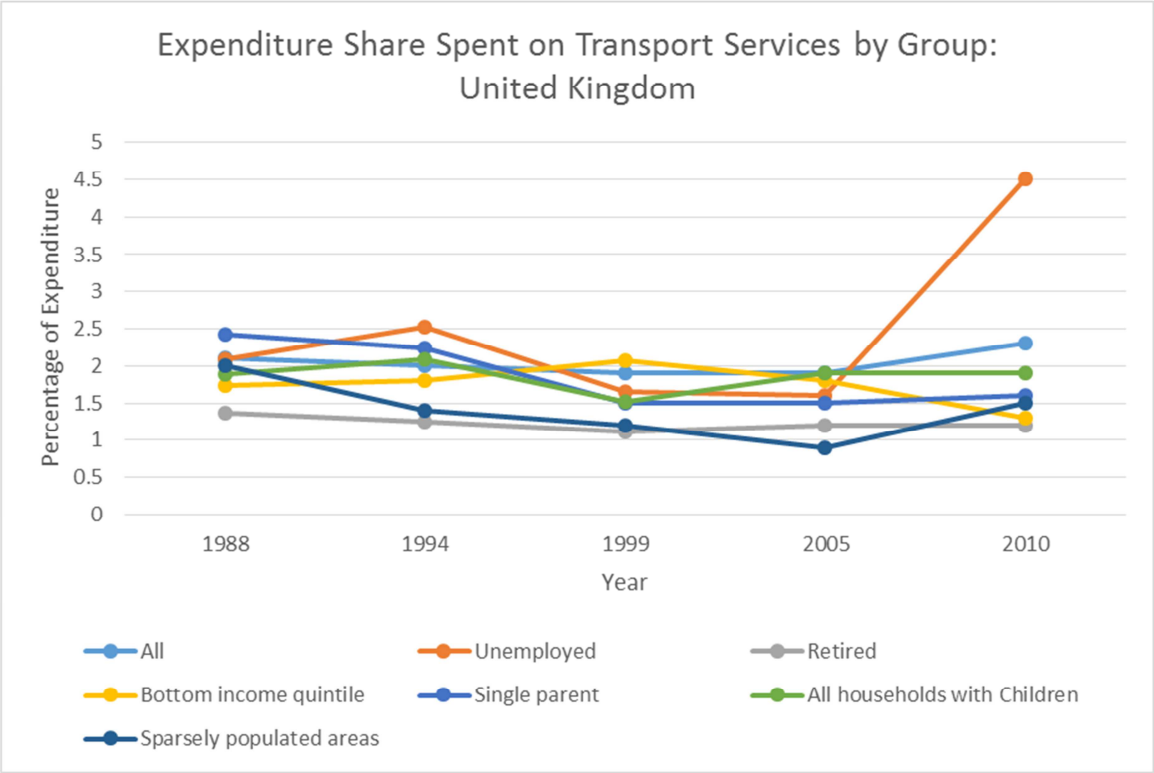
The transport expenditure share of the unemployed (Chart 89) shows a particularly marked increase between 2005 and 2010, increasing by around 5 percentage points. It would be interesting to see if this change relates to the unemployed having to travel further to look for work.

Chart 90: Expenditure Share Spent on Operating Personal Transport Equipment by Group: United Kingdom



Source: Eurostat

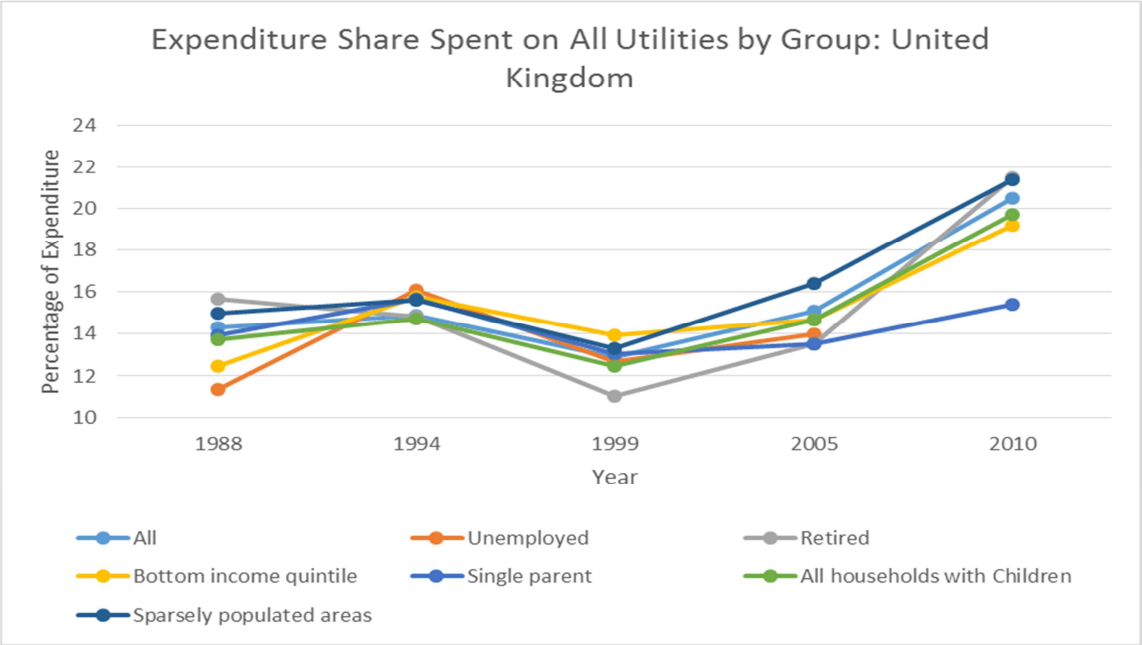
Chart 91: Expenditure Share Spent on Transport Services by Group: Untied Kingdom



Source: Eurostat

Chart 91 indicates that the increase in the expenditure share devoted to transport services by unemployed households was particularly rapid between 2005 and 2010, with the expenditure share increasing by a factor of three. Chart 92 shows that retired households experienced the biggest increase in the utility expenditure share between 1999 and 2010, with the expenditure share almost doubling from 11% to just under 22%. This dramatic change is in stark contrast to the situation in France and Austria where the utility expenditure share of retired households has remained relatively constant. Indeed, while in 1999 retired households in the UK spent a lower proportion of their expenditure on utilities than in either France or Austria, by 2010 retired households in the UK spent the highest proportion on utilities amongst these three countries.

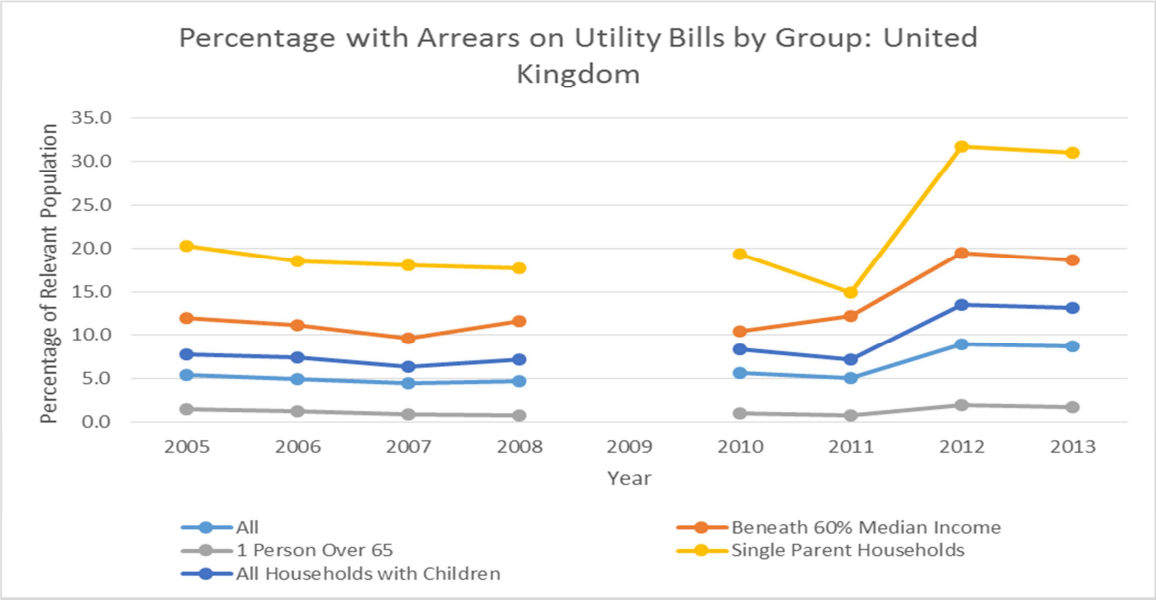
Chart 92: Expenditure Share Spent on All Utilities by Group: United Kingdom



Source: Eurostat

As with the EU-SILC data relating to the affordability of computers, the UK's data regarding arrears on utility bills shows a deteriorating picture from 2011 to 2012. Those in single parent households suffered the greatest increase in reported arrears with a rise of over 15 percentage points between these two years, so that in 2013 just under a third of single parent households reported arrears on their utility bills.

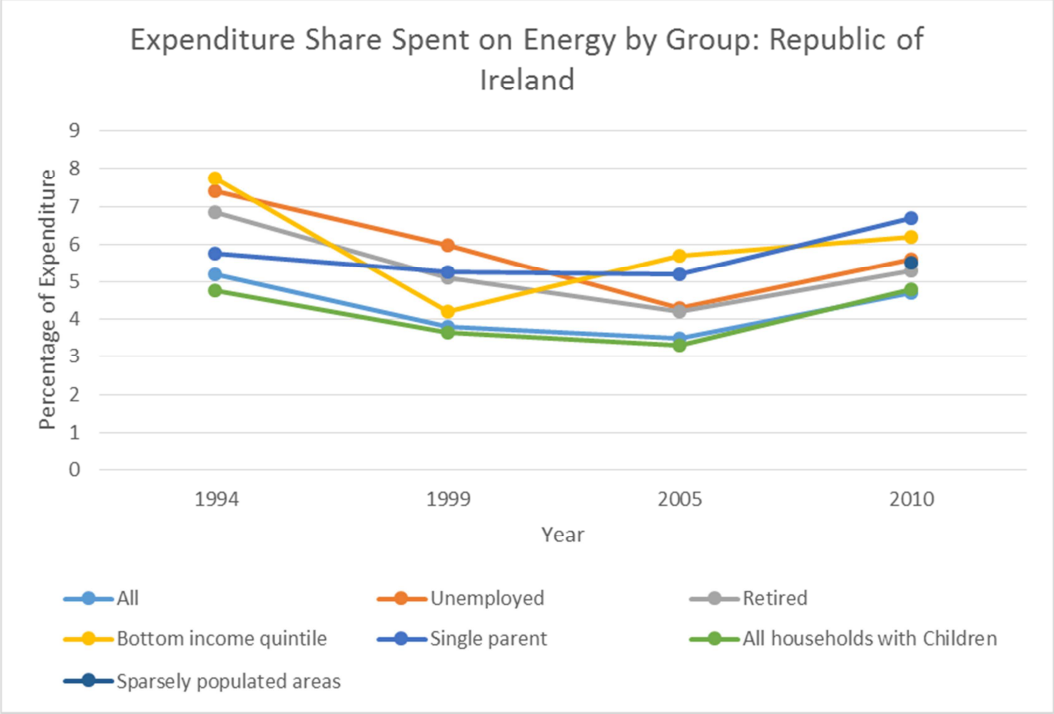
Chart 93: Percentage with Arrears on Utility Bills by Group: United Kingdom



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

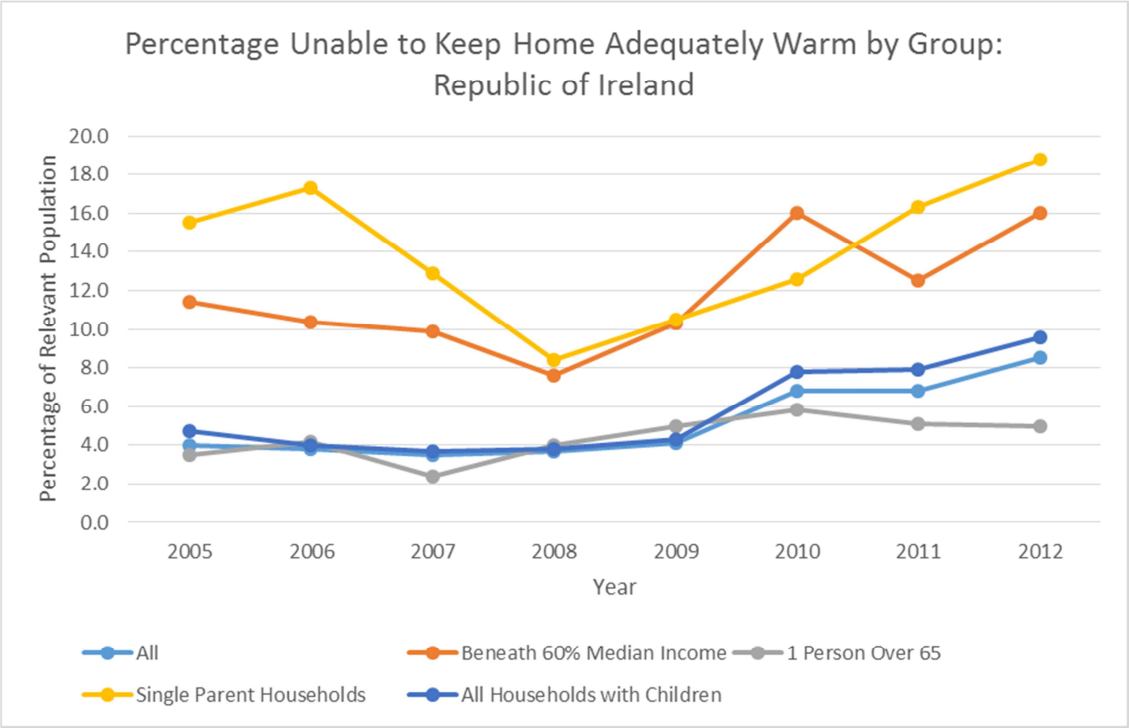
10. Country Study 4: Republic of Ireland

Chart 94: Expenditure Share Spent on Energy by Group: Republic of Ireland



Source: Eurostat

Chart 95: Percentage Unable to Keep Home Adequately Warm by Group: Republic of Ireland

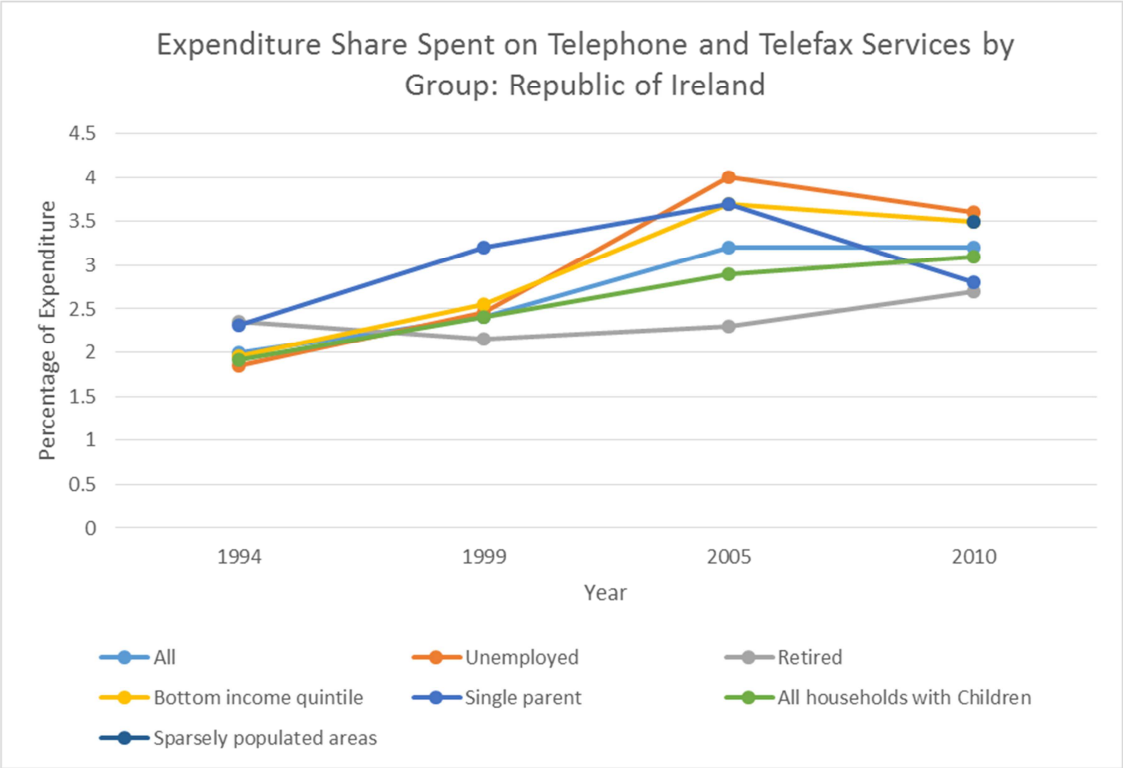


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The impact of the Great Recession on the ability of Irish citizens to keep warm in their homes is clear from Chart 95 with all groups showing an increase in the reported percentage unable to keep adequately warm after 2008. However, the level of increase varies tremendously by group. Between 2008 and 2012 the percentage of those in households containing one person over 65 reporting an inability to keep warm increased by 1 percentage point, while the percentage of those in single parent households reporting the same deprivation indicator rose by around 10 percentage points. This increase returned single parent households to their approximate position in 2005-2006.

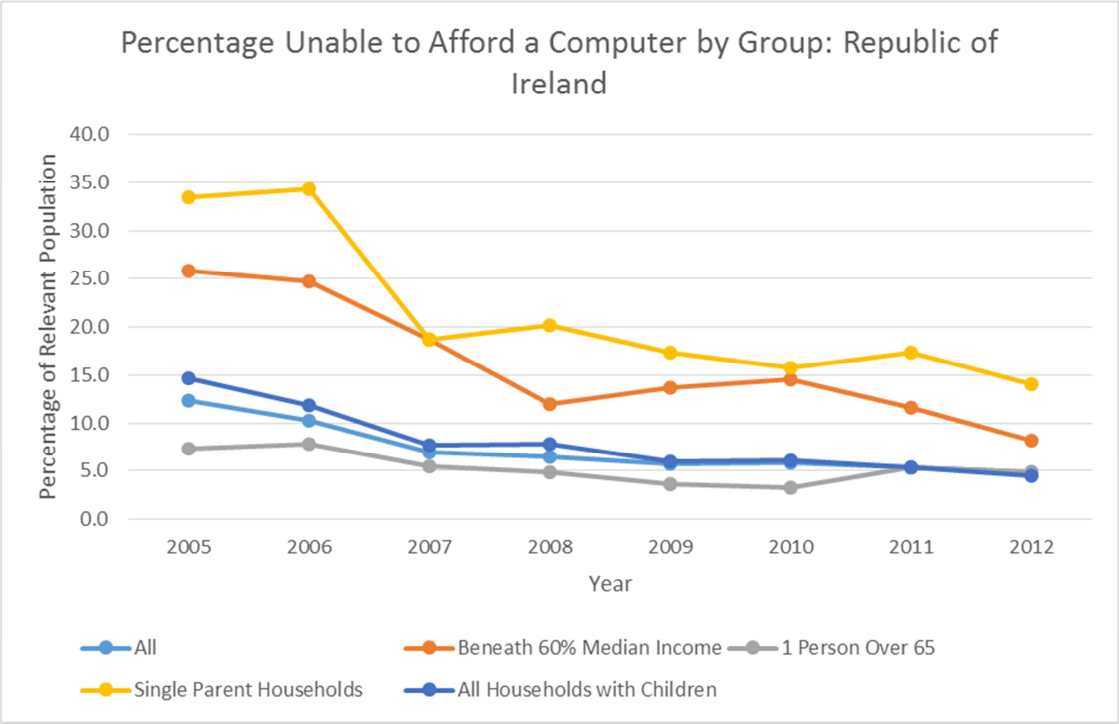
Since households were generally not charged separately for water consumption before 2014 in the Republic of Ireland, it is unclear how far the Eurostat statistics represent payment for water and sewerage services. As a result a separate chart for water and sewerage services is not included in this section; however water and sewerage services are included in the total utility expenditure figures (Chart 101).

Chart 96: Expenditure Share Spent on Telephone and Telefax Services by Group: Republic of Ireland



Source: Eurostat

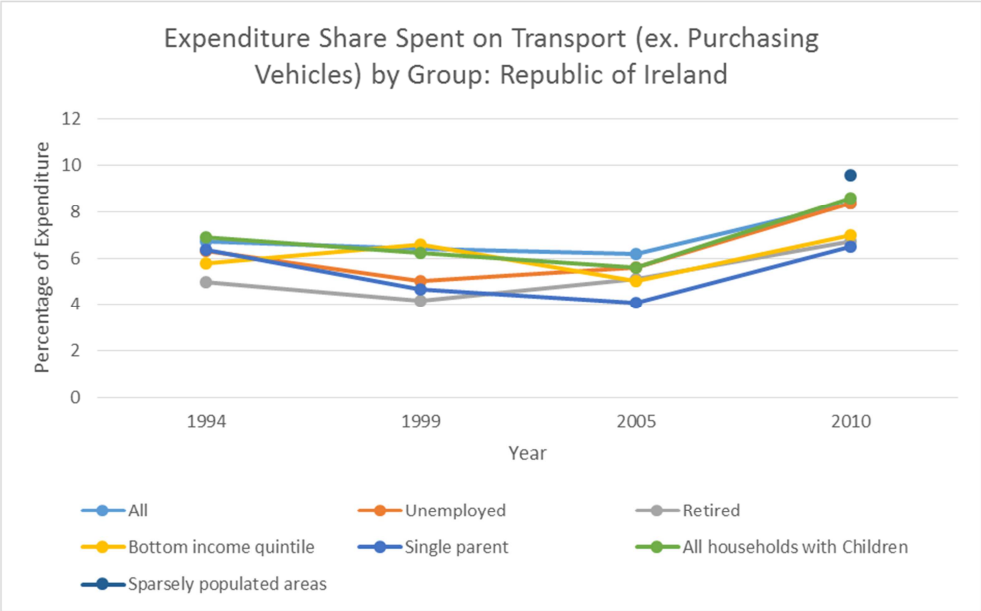
Chart 97: Percentage Unable to Afford a Computer by Group: Republic of Ireland



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

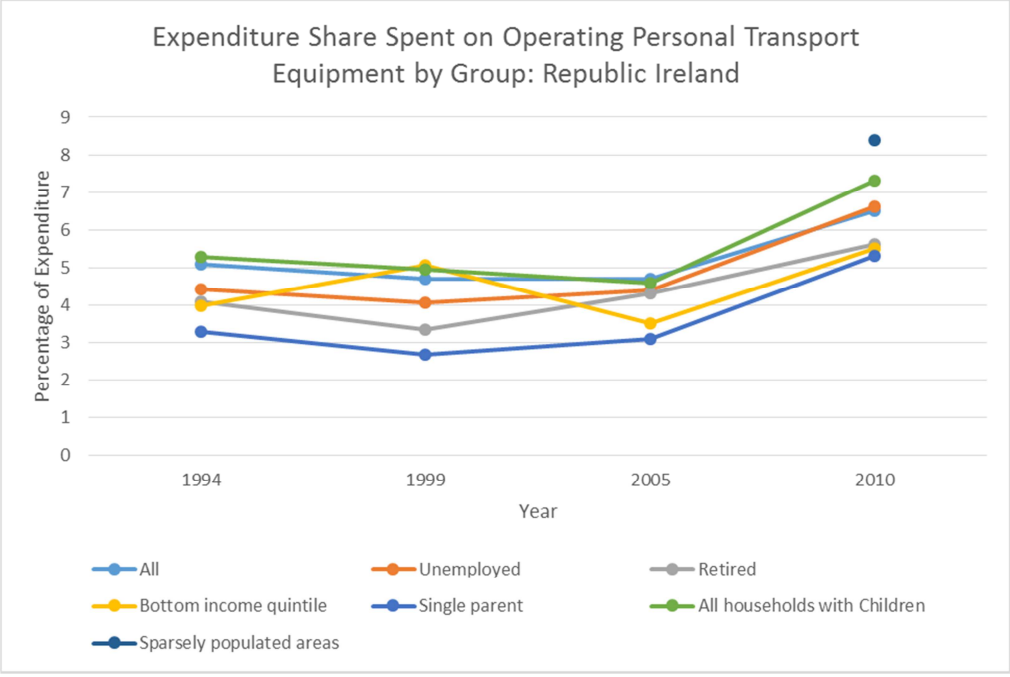
Despite having a more severe Great Recession than the UK, among Irish households there is no obvious increase in the inability to afford a computer after 2007, which contrasts with the UK. In the UK in 2011 the percentage of those in single parent and low income households unable to afford a computer was around half the level in the Republic of Ireland. However, in 2012, a greater proportion of those in these groups reported an inability to afford a computer in the UK than in the Republic of Ireland.

Chart 98: Expenditure Share Spent on Transport (ex. Purchasing Vehicles) by Group: Republic of Ireland



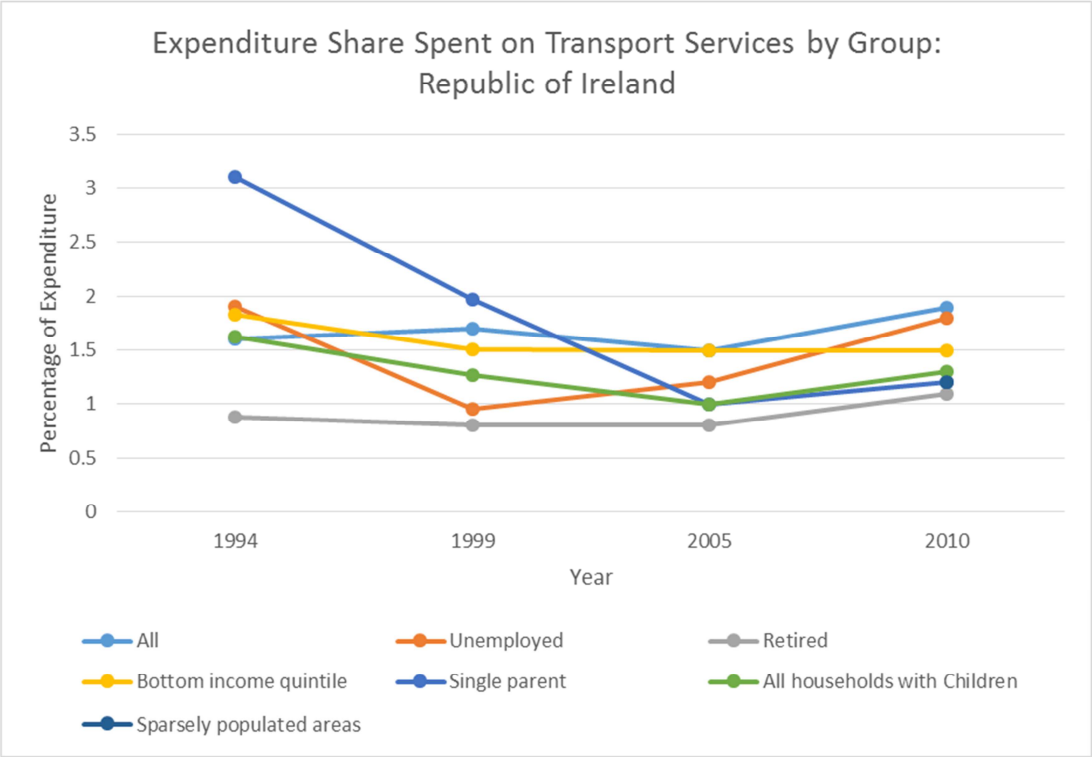
Source: Eurostat

Chart 99: Expenditure Share Spent on Operating Personal Transport Equipment by Group: Republic of Ireland



Source: Eurostat

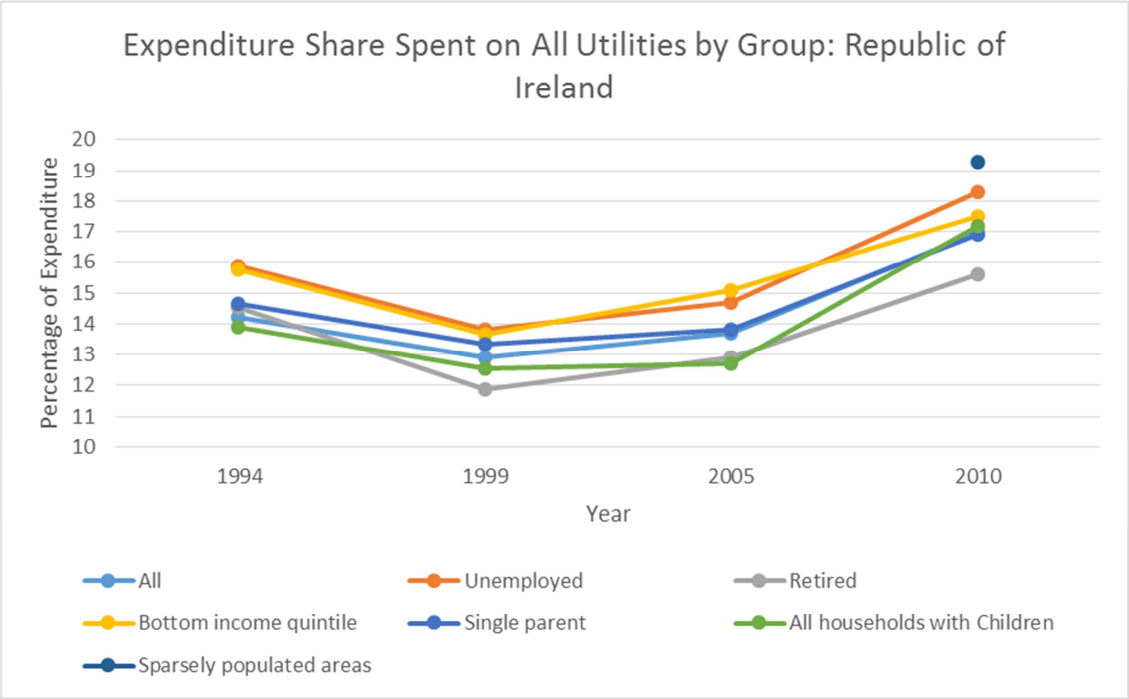
Chart 100: Expenditure Share Spent on Transport Services by Group: Republic of Ireland



Source: Eurostat

Chart 100 shows the dramatic drop in the expenditure share devoted to transport services by single parent households between 1994 and 2005, with the expenditure share dropping by two-thirds.

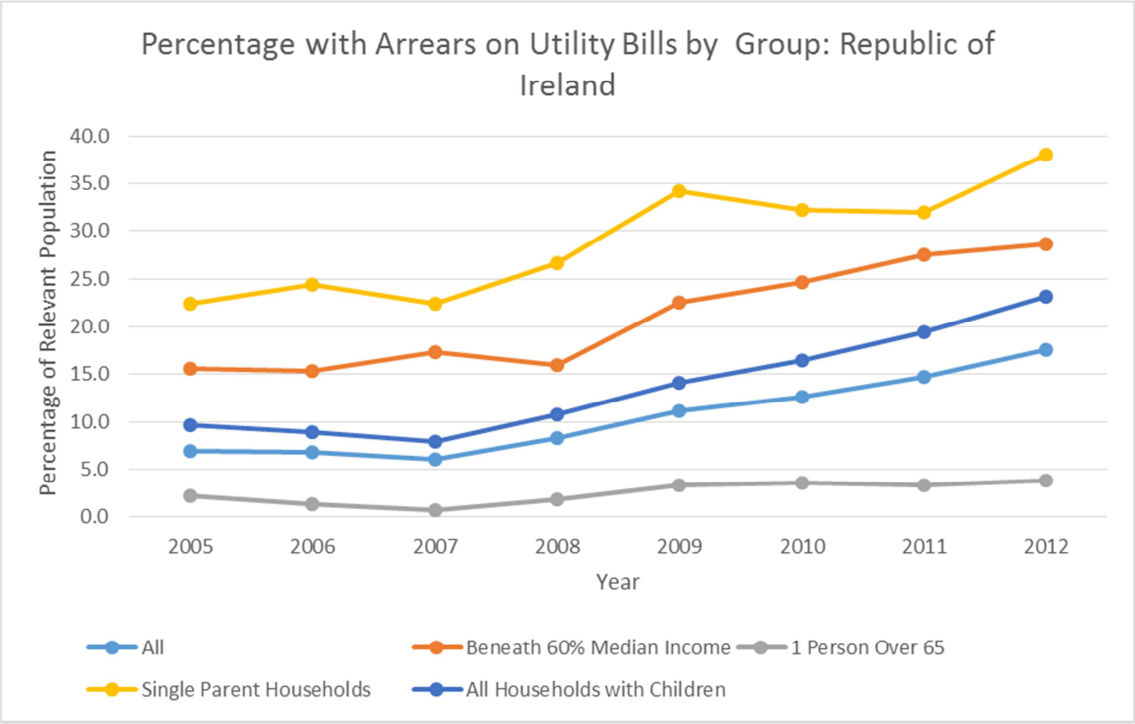
Chart 101: Expenditure Share Spent on All Utilities by Group: Republic of Ireland



Source: Eurostat

Compared to France, Chart 101 shows that in the Republic of Ireland there was little increase in the dispersion of the utility expenditure shares between different groups. However Chart 102 shows a substantial increase in the difference between the proportion in each group reporting arrears on utility bills, with single parent families being particularly severely affected by 2012.

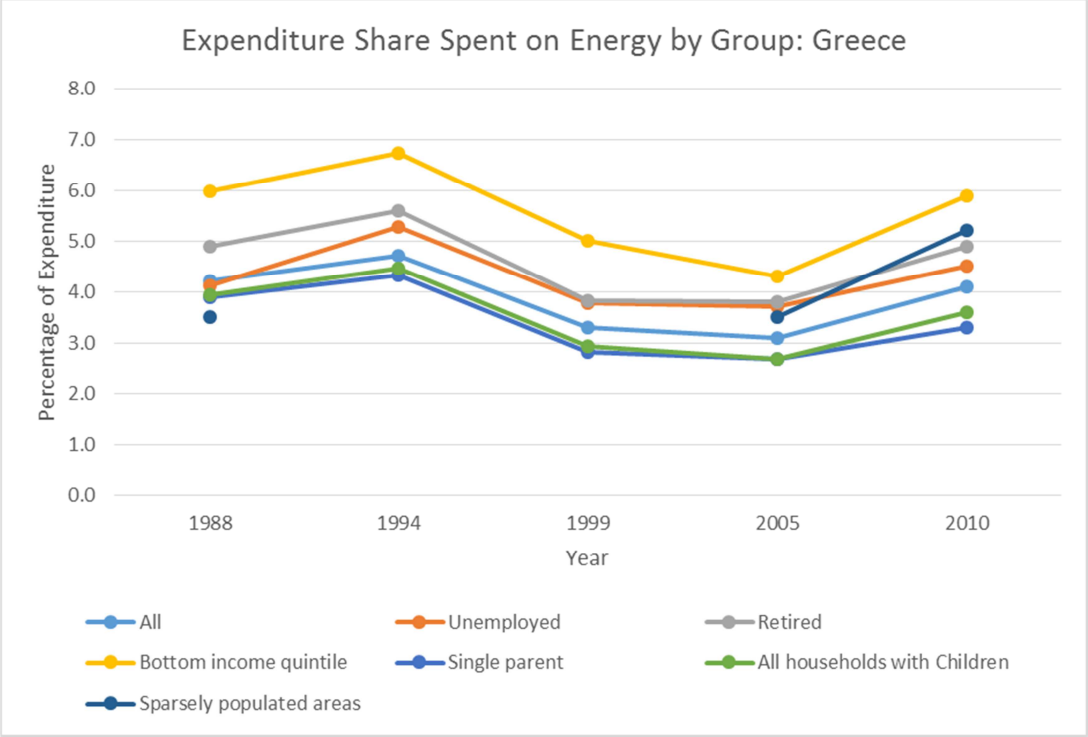
Chart 102: Percentage with Arrears on Utility Bills by Group: Republic of Ireland



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

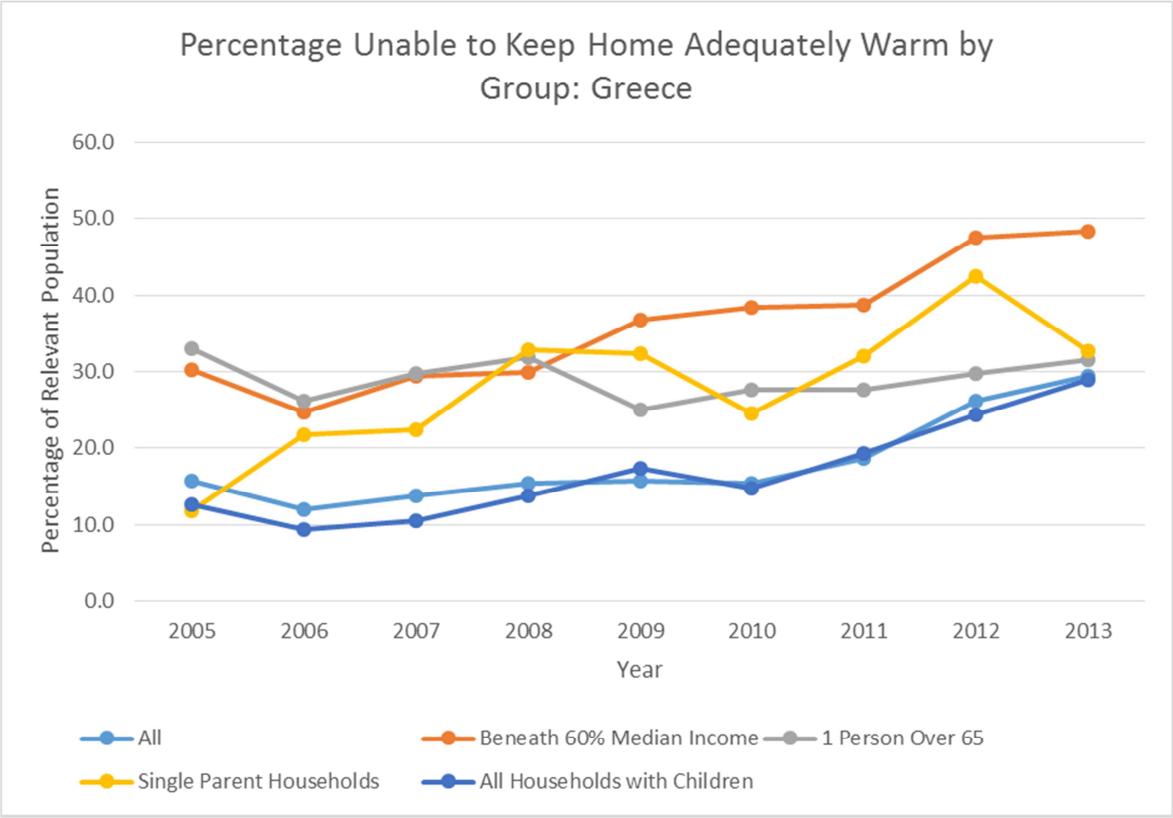
11. Country Study 5: Greece

Chart 103: Expenditure Share Spent on Energy by Group: Greece



Source: Eurostat

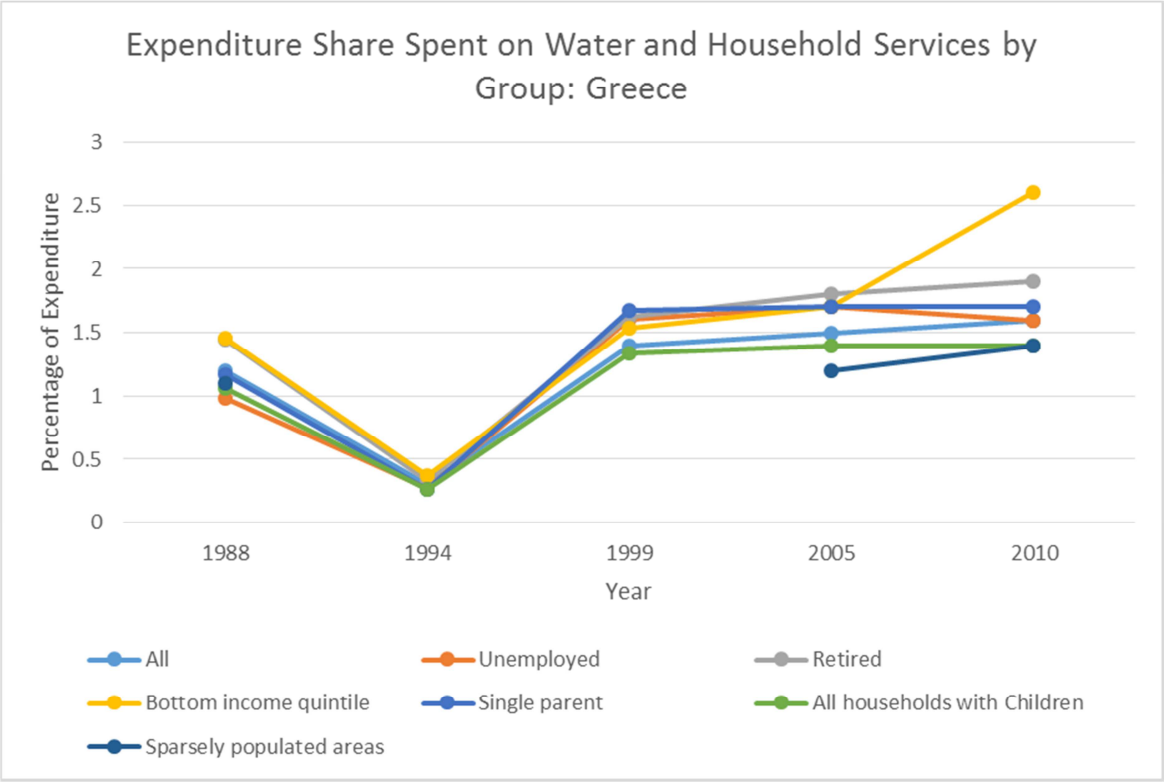
Chart 104: Percentage Unable to Keep Home Adequately Warm by Group: Greece



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 104 shows that while the Great Recession can be associated with a rise in those reporting an inability to keep warm in Greece, the increase is not immediate after 2007 and not uniform across all groups. The upward trajectory of those in low income households reporting an inability to stay adequately warm begins in 2006, and that for those in single parent households in 2005, both dates before the onset of the Great Recession. Moreover, this deprivation indicator was stable or declining for three groups between 2008 and 2009. Moreover those in households containing an individual over 65 show virtually no change in the percentage unable to keep warm throughout the period. However, this figure for those in households with someone aged over 65 is at a level that is much higher than in most of the EU15.

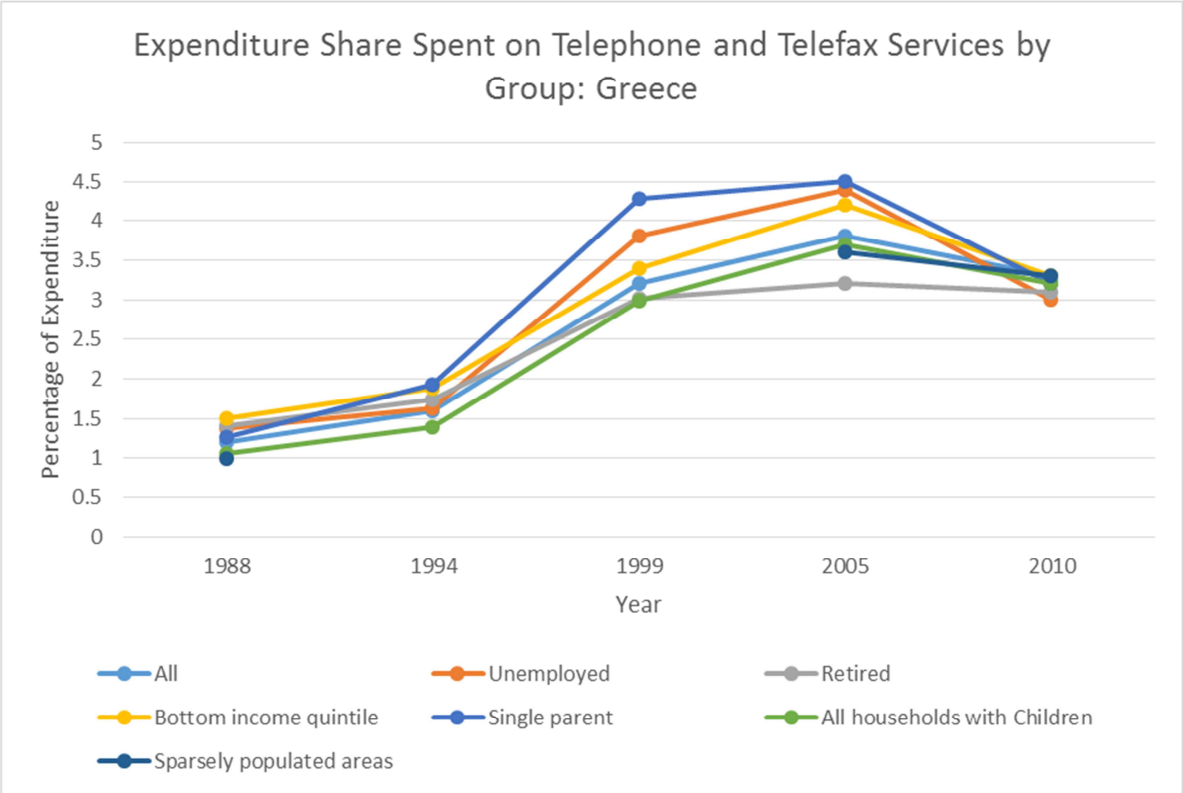
Chart 105: Expenditure Share Spent on Water and Household Services by Group: Greece



Source: Eurostat

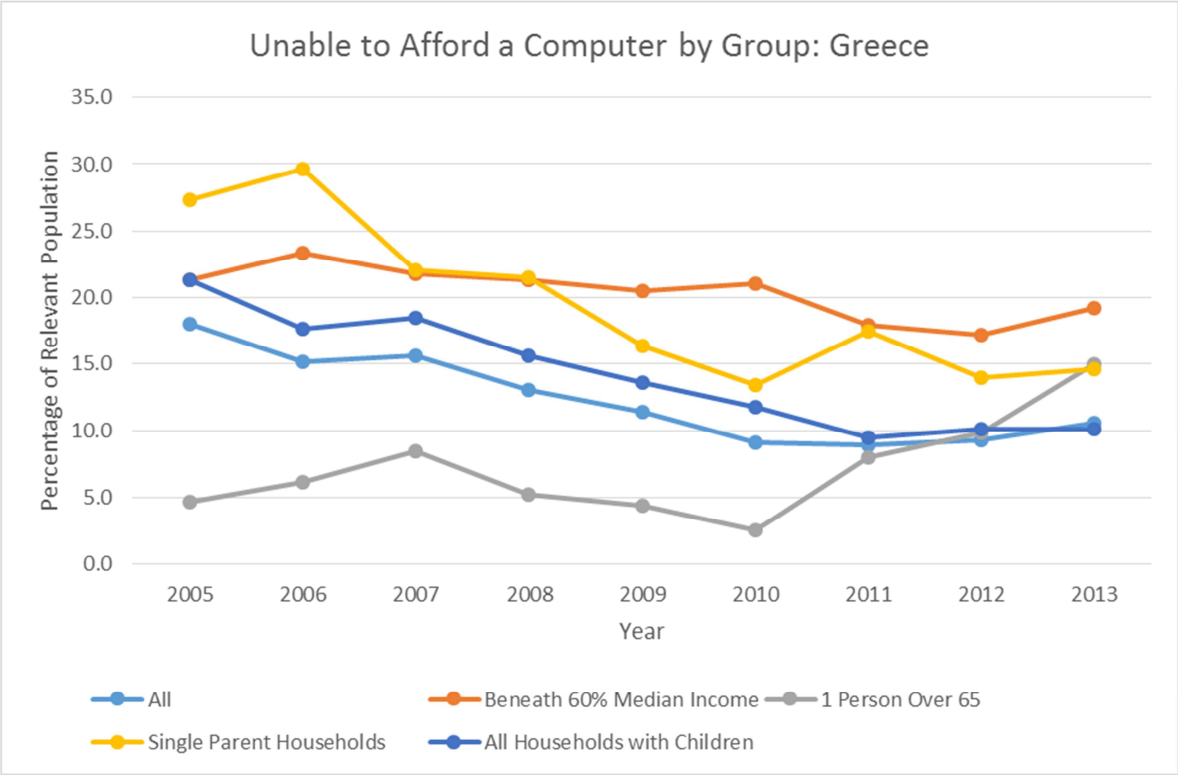
The most noticeable feature of Chart 105 is the compression of differences in water expenditure shares across groups in 1994 with the difference being even less than in 1988. Another feature of Chart 105 is the increase of around 1 percentage point in the water expenditure share for those in the bottom income quartile between 2005 and 2010. A final comparison is to consider the expenditure shares devoted to water and household services in Austria and Greece. After 1994 the water expenditure share in Austria is higher (often considerably higher) for virtually all groups, despite Austria being richer and less arid than Greece.

Chart 106: Expenditure Share Spent on Telephone and Telefax Services by Group: Greece



Source: Eurostat

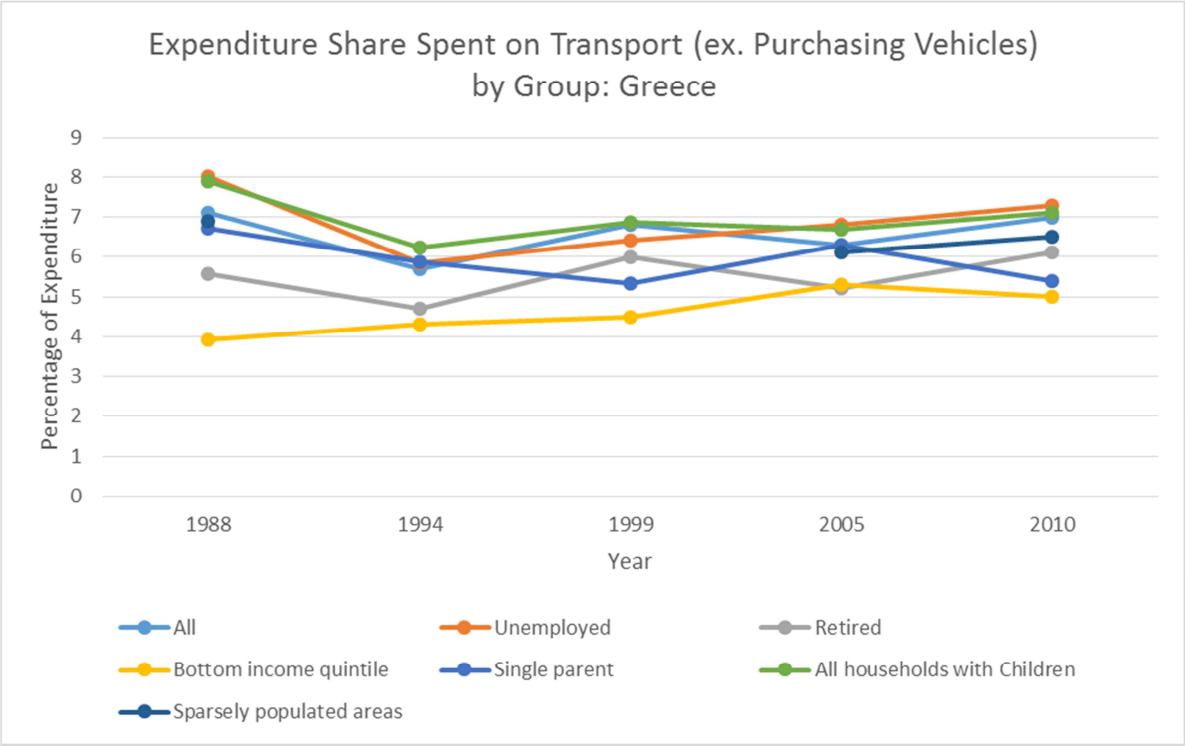
Chart 107: Unable to Afford a Computer by Group: Greece



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The importance of falling prices in driving the increased affordability of computers is apparent in Chart 107. Despite the severity of the Great Recession facing Greece, the only group showing a marked increase in reporting an inability to afford a computer are those in households containing an individual over the age of 65, for whom the rate of unaffordability rose five-fold between 2010 and 2013. Nevertheless the percentage of those across all households unable to afford a computer in Greece is consistently higher than in other EU15 countries with roughly double the percentage of those in each group being unable to afford a computer compared with France or Austria.

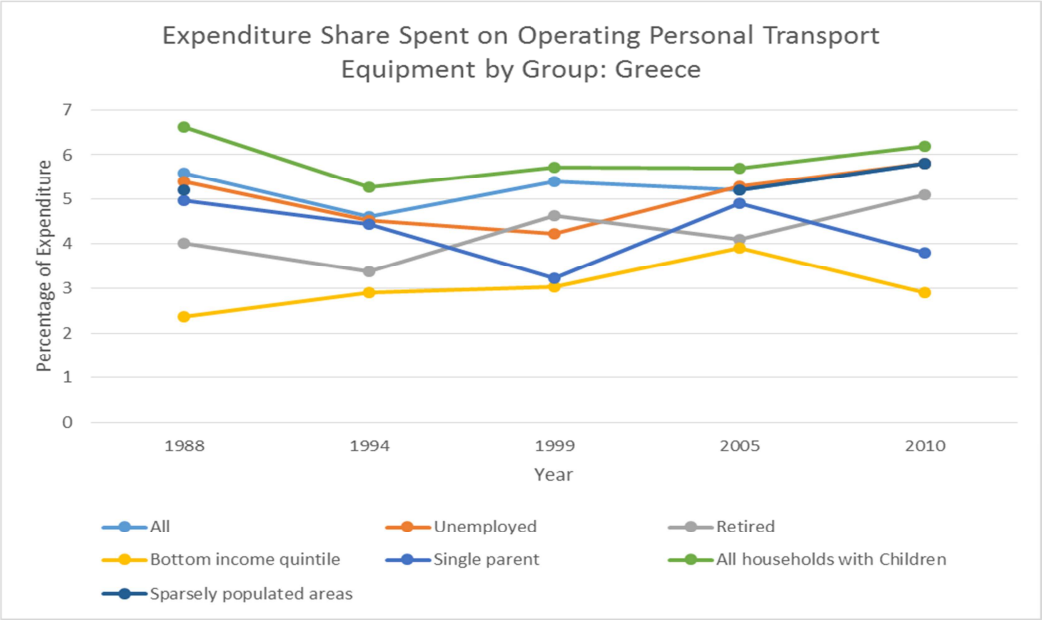
Chart 108: Expenditure Share Spent on Transport (ex. Purchasing Vehicles) by Group: Greece



Source: Eurostat

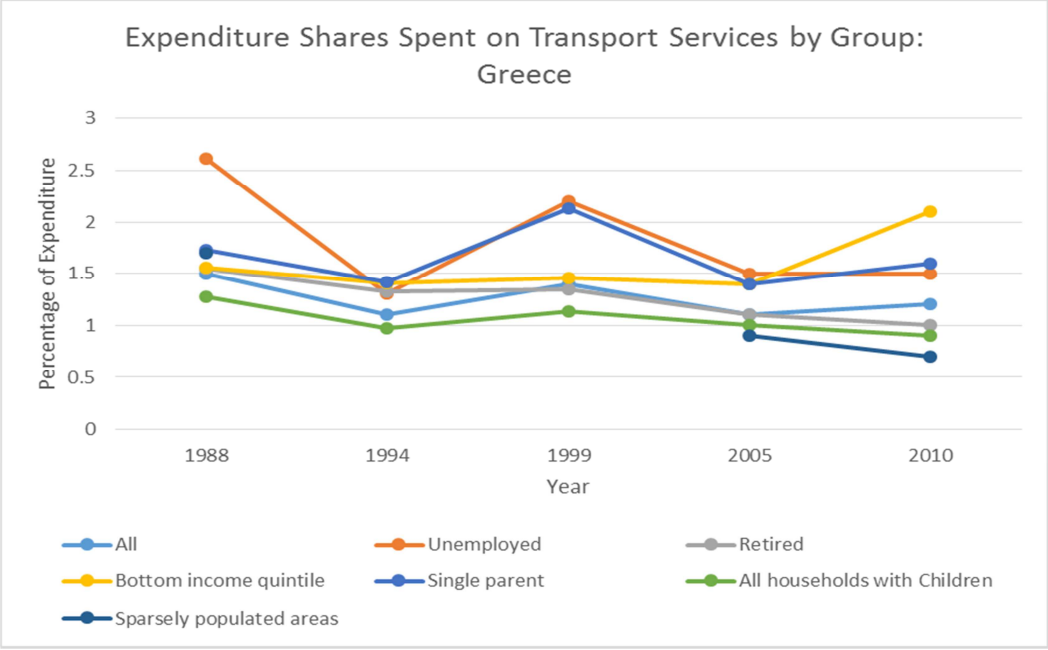
Chart 108 shows that in Greece those in the bottom income quartile spend a distinctly lower proportion of their expenditure on transport than other groups. The breakdown between the operation of personal transport equipment and transport services in Charts 109 and 110 demonstrates that, as expected, those on low incomes are more reliant on purchasing transport services than using their own vehicle, when compared to other groups. Compared to many of the other country-sector charts, the transport expenditure shares in Chart 108 show convergence across groups, with a decline in the gap between the highest and lowest expenditure shares from 4 percentage points in 1988 to less than 2.5 percentage points in 2010.

Chart 109: Expenditure Share Spent on Operating Personal Transport Equipment by Group: Greece



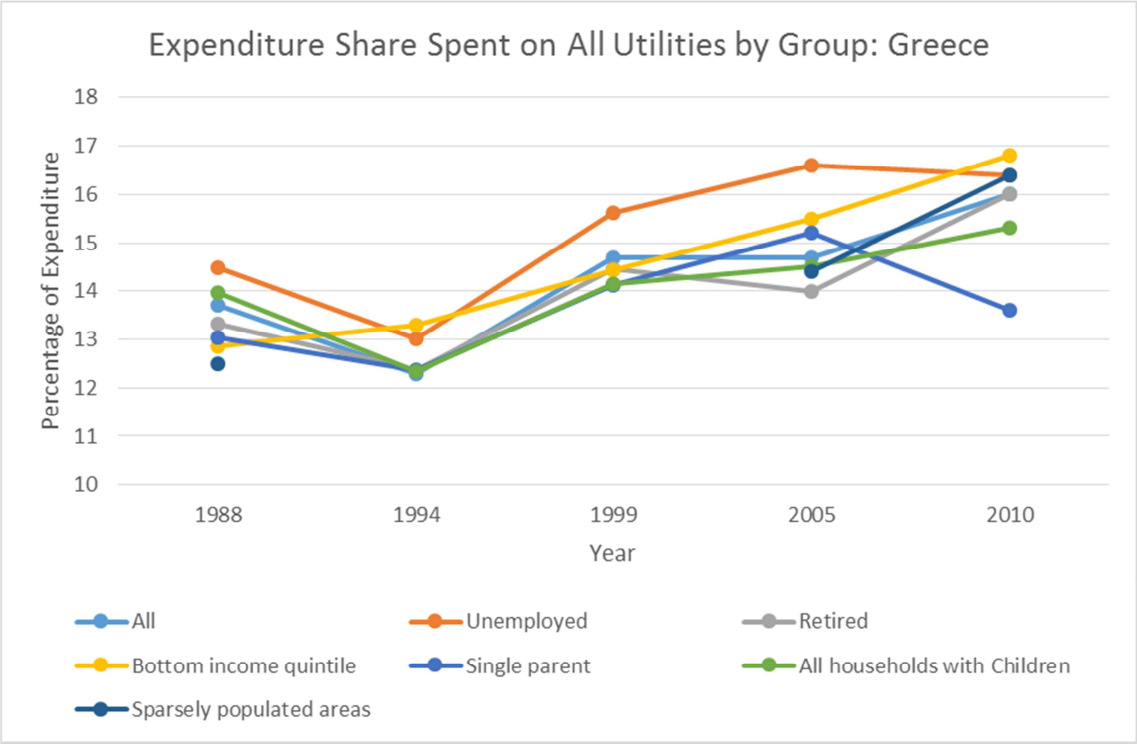
Source: Eurostat

Chart 110: Expenditure Shares Spent on Transport Services by Group: Greece



Source: Eurostat

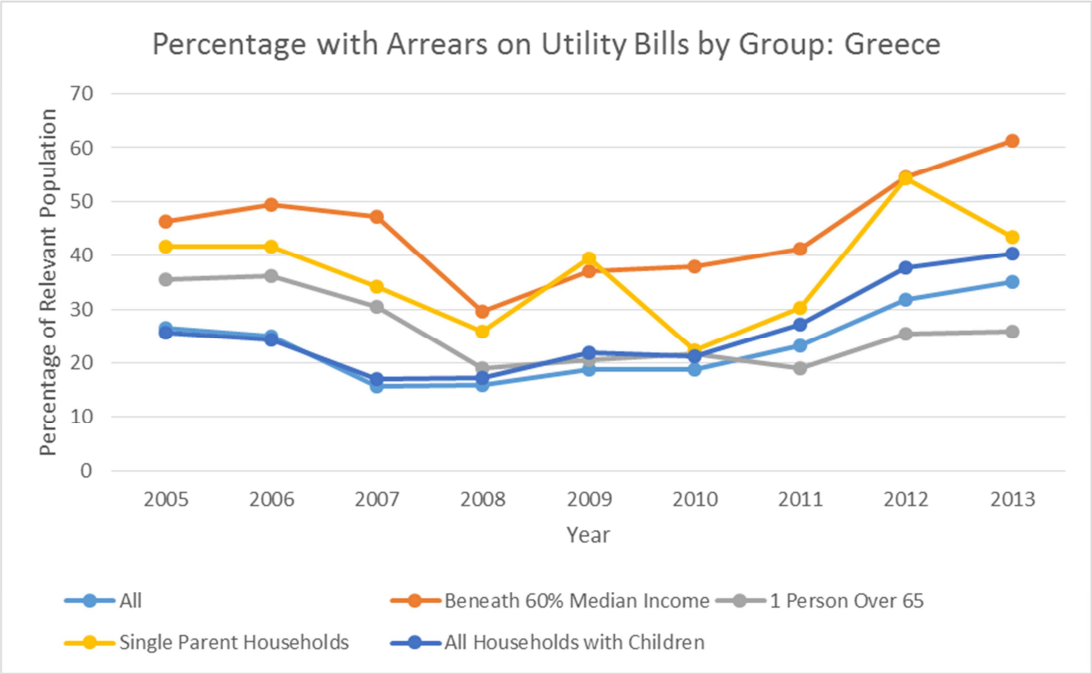
Chart 111: Expenditure Share Spent on All Utilities by Group: Greece



Source: Eurostat

Two features of Chart 111 stand out. The first is the continuously increasing percentage of expenditure on utilities by those in the bottom income quintile. Between 1988 and 2010 the expenditure share of the bottom income quintile rose by 4 percentage points. Secondly, single parent households see the share of expenditure spent on utilities fall by almost 2 percentage points between 2005 and 2010, also reflected by fewer in this group reporting utility bill arrears (Chart 112), while all other groups experienced an increasing share of expenditure devoted to the utilities.

Chart 112: Percentage with Arrears on Utility Bills by Group: Greece

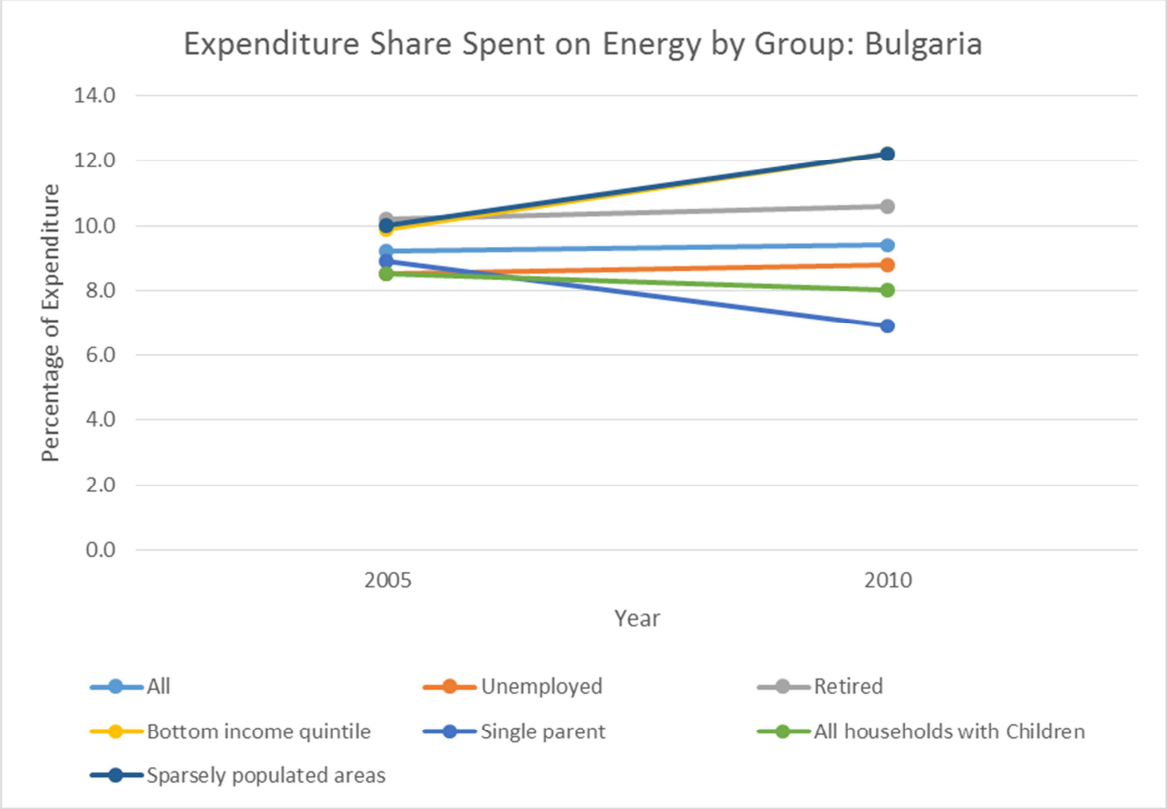


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The impact of the Great Recession appears relatively clear in Chart 112 with all groups seeing an increase in the percentage reporting arrears on their utility bills from 2008 onwards. The percentage of those in low income households and those with children reporting arrears double between 2008 and 2013. However, it is again clear that those in households containing one person over the age 65 appear more insulated from affordability pressures than other groups, with the percentage of this group reporting arrears declining by around 10 percentage points between 2005 and 2013.

12. Country Study 6: Bulgaria

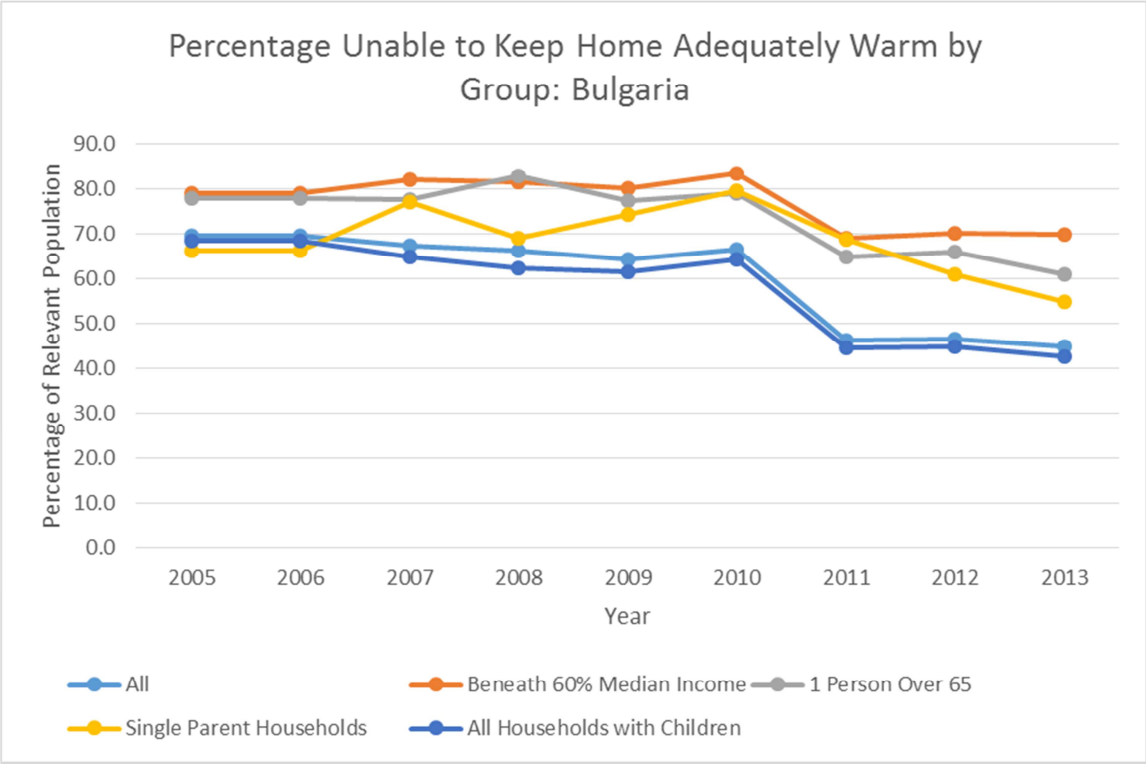
Chart 113: Expenditure Share Spent on Energy by Group: Bulgaria



Source: Eurostat

Chart 113 shows a marked divergence in the energy expenditure shares of different groups between 2005 and 2010. The difference between the highest and lowest expenditure shares increases from around 2 percentage points in 2005 to almost 6 percentage points in 2010. This pattern is also present in Bulgaria for water and household services (Chart 115). It is interesting that for both energy and water it is single parent households which have seen the greatest drops in expenditure shares.

Chart 114: Percentage Unable to Keep Home Adequately Warm by Group: Bulgaria

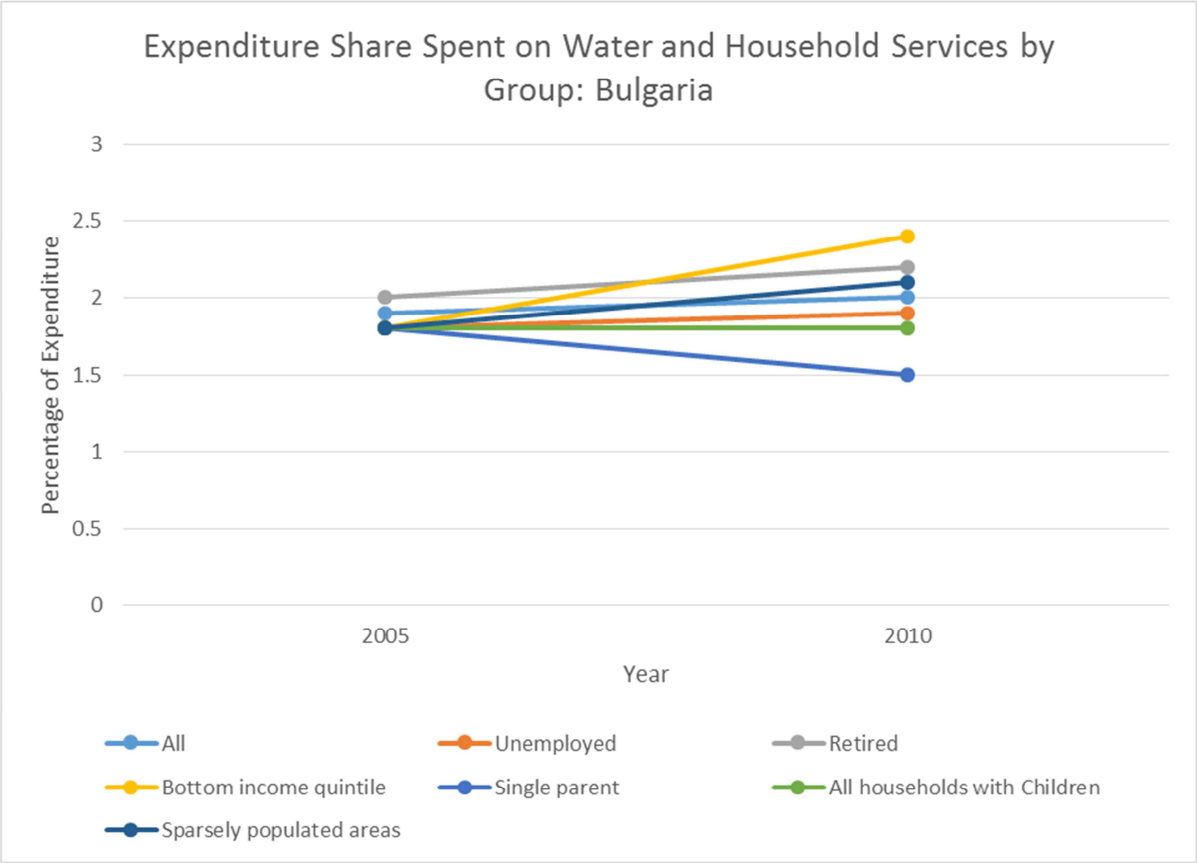


Source: European Union Statistics on Income and Living Conditions (EU-SILC)

The most striking feature of Chart 114 is the chronically high percentage of households in all groups reporting an inability to keep their home adequately warm, with this indicator of deprivation being reported by over 60% of all groups between 2005 and 2010. Among those on low incomes and those in households containing a person over 65, around 80% of households reported an inability to keep their home warm between 2005 and 2010. There is a dramatic step-change in the percentage reporting an inability to keep warm between 2010 and 2011, with the average for all households dropping by around 20 percentage points. Such a sharp change raises some questions about the statistics, as well as whether any event caused sufficiently sharp changes in price. The only group where this break is less visible is among those in single parent households where there is a continuous, steady decline in the percentage reporting an inability to keep adequately warm between 2010 and 2013.

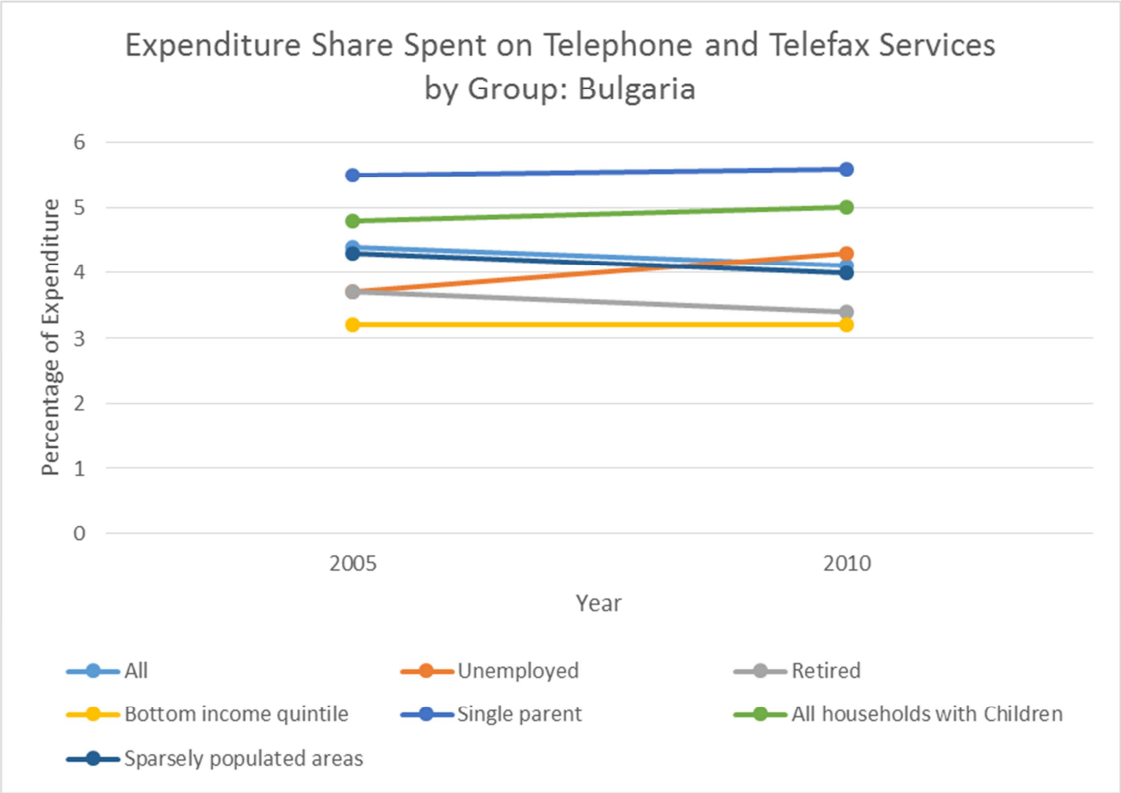
We note that even in 2013, after the full force of the Great Recession, all categories of Bulgarian households have report rates of inability to keep their homes warm between 10 and 20 percentage points higher than in Greece.

Chart 115: Expenditure Share Spent on Water and Household Service by Group: Bulgaria



Source: Eurostat

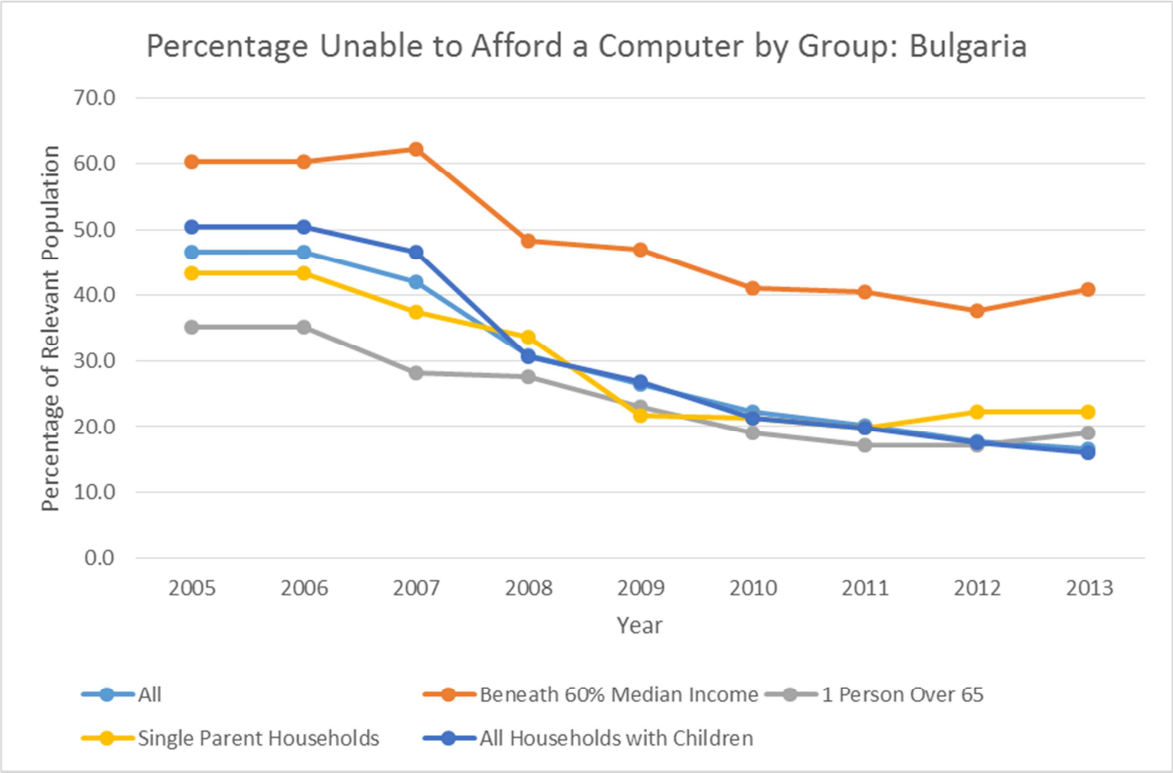
Chart 116: Expenditure Share Spent on Telephone and Telefax Services by Group: Bulgaria



Source: Eurostat

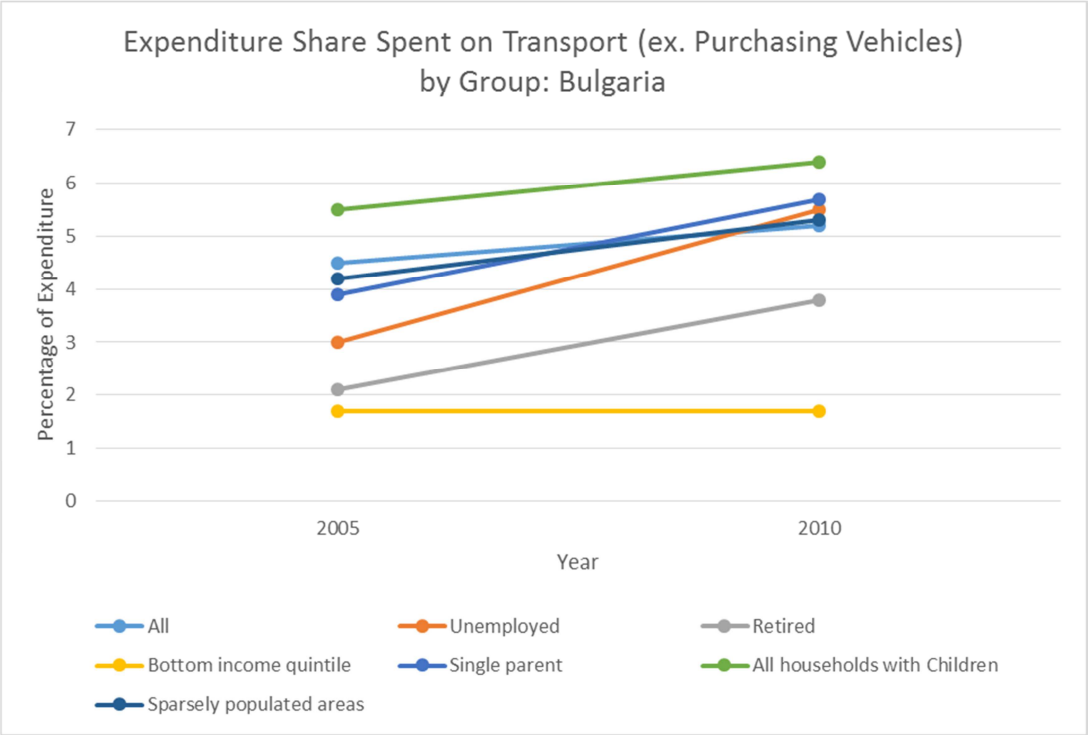
In comparison to energy and water, the expenditure shares of telephone and telefax services show almost complete stability between 2005 and 2010, and marked falls for all groups in the proportions reporting inability to afford a computer (Chart 117).

Chart 117: Percentage Unable to Afford a Computer by Group: Bulgaria



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

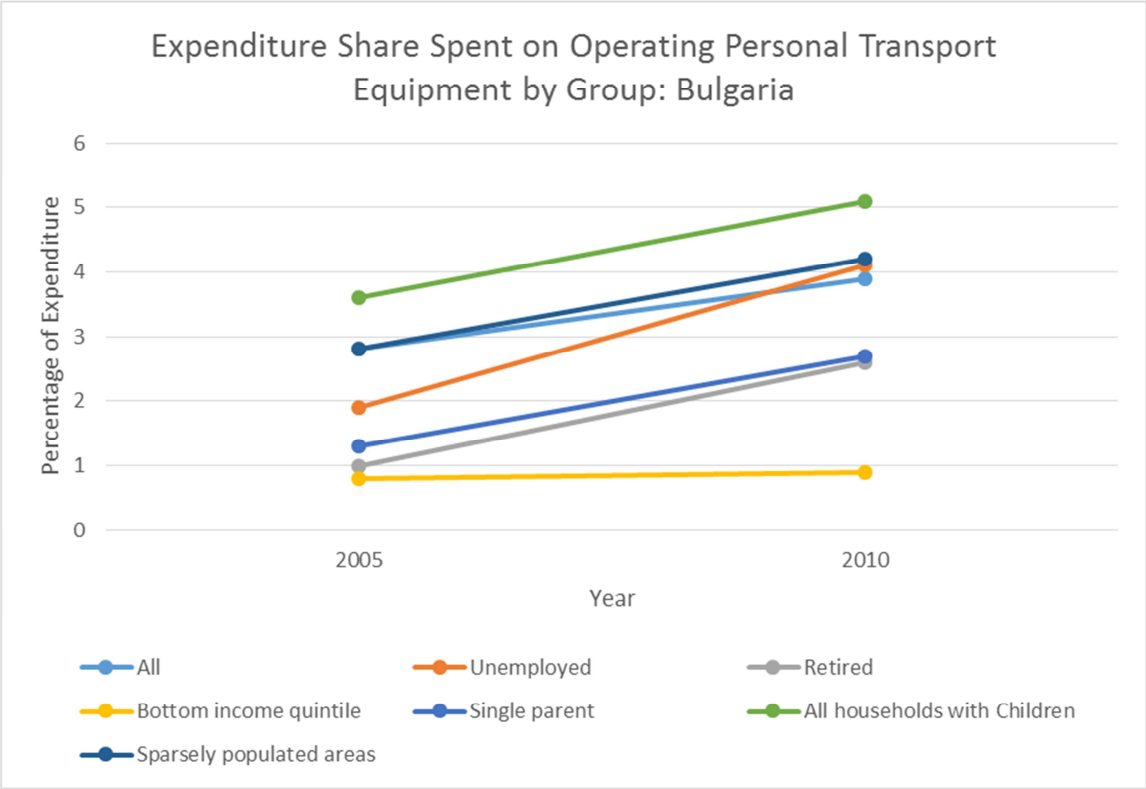
Chart 118: Expenditure Share Spent on Transport (ex. Purchasing Vehicles) by Group: Bulgaria



Source: Eurostat

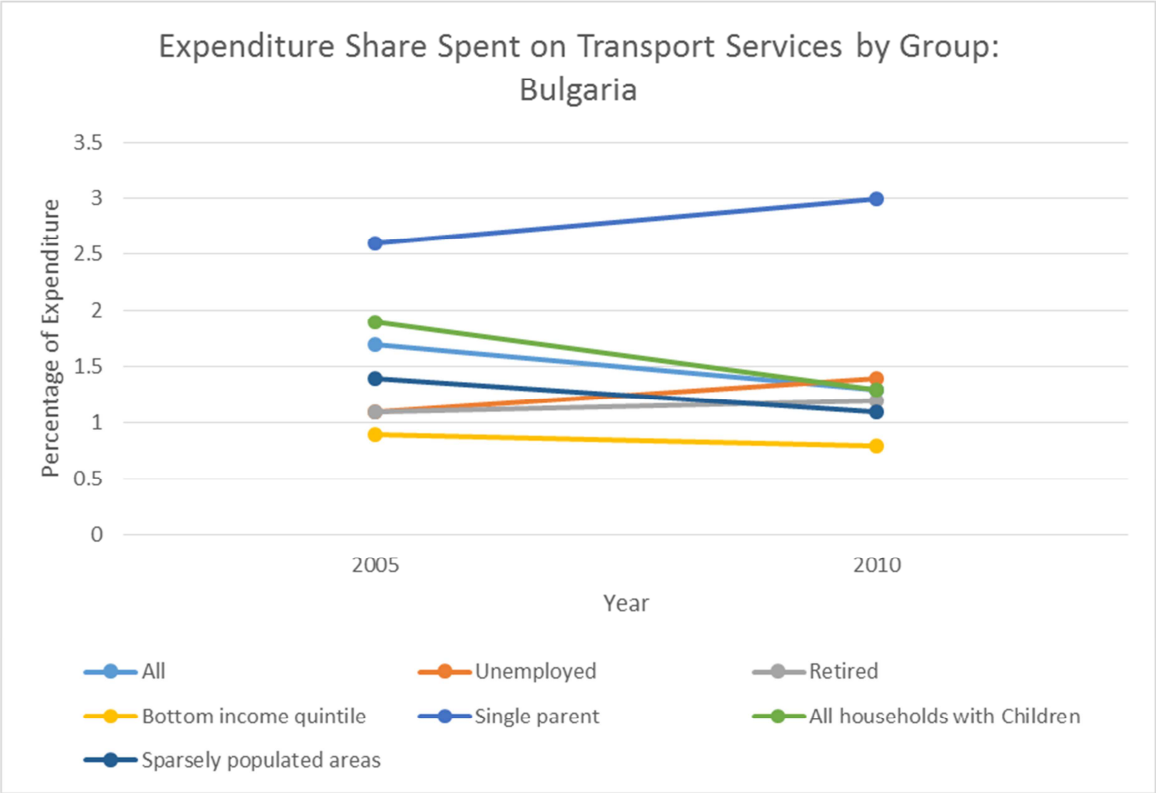
Chart 118 highlights that many groups in Bulgaria have been devoting an increasing proportion of expenditure to transport between 2005 and 2010. This is particularly apparent among the retired and unemployed whose expenditure shares increase by almost 2 and 2.5 percentage points respectively over the five years considered. Charts 119 and 120 suggest that these increases in the proportion of expenditure devoted to transport may be part of general economic development, since six out of seven groups in Chart 119 show an increasing proportion of expenditure being devoted to operating personal transport equipment, while 4 out of 7 groups in Chart 120 exhibit a decreasing proportion of expenditure devoted to transport services. This picture is consistent with households who are experiencing rising living standards switching to cars as a preferred means of transport compared to public transport.

Chart 119: Expenditure Share Spent on Operating Personal Transport Equipment by Group: Bulgaria



Source: Eurostat

Chart 120: Expenditure Share Spent on Transport Services by Group: Bulgaria

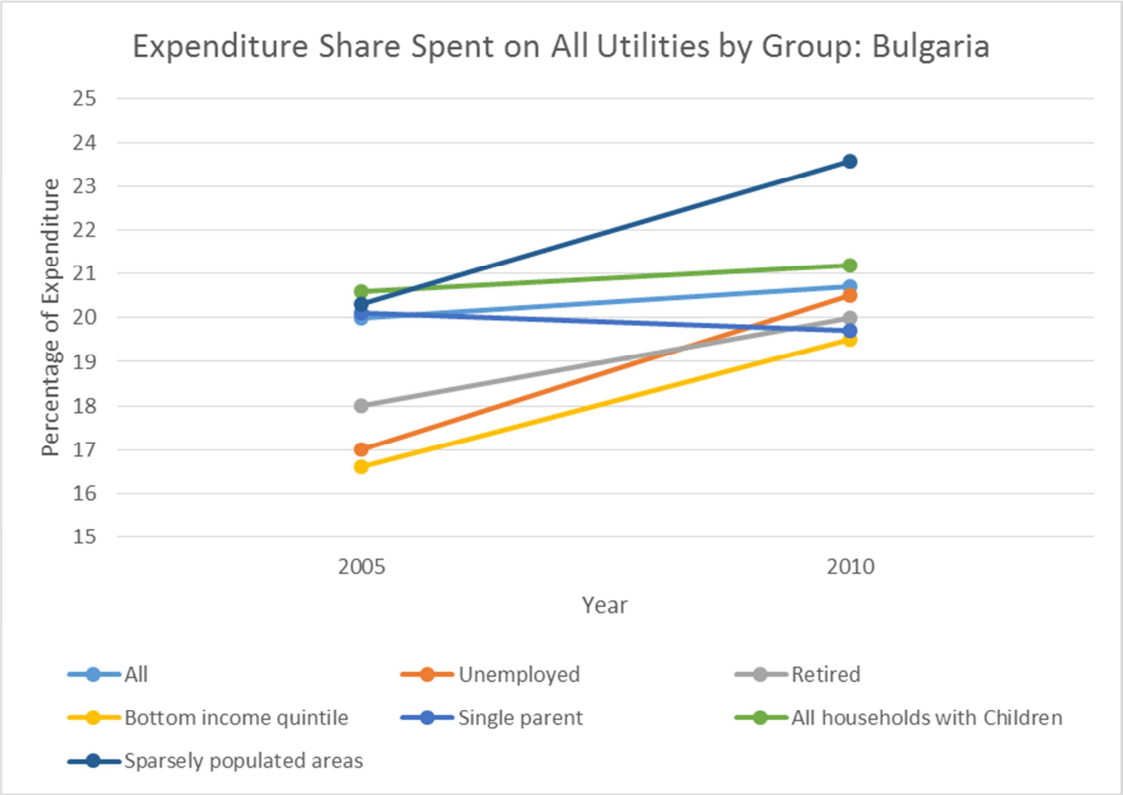


Source: Eurostat

A distinctive feature of Chart 120 is the much greater proportion of expenditure devoted to transport services by single parent households than by other groups. By 2010 single parent households in Bulgaria were devoting twice the expenditure share to transport services as the group with the next highest expenditure share.

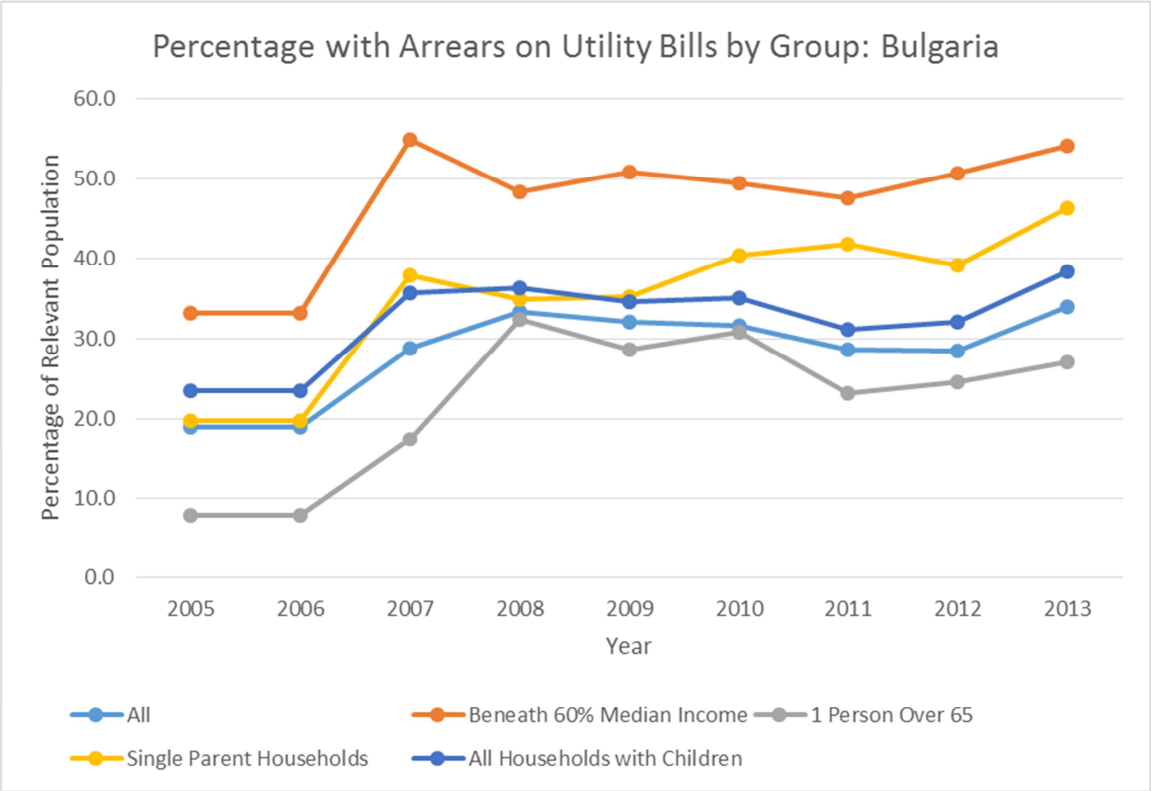
Chart 121 shows that the utility expenditure share for households with children has been more stable than for most other groups. While households with children have seen the utility expenditure share rise by around 0.5 percentage points between 2005 and 2010, all other groups have seen their utility expenditure shares rise by at least 2 percentage points. The group that has experienced the greatest increase in their utility expenditure share is households in sparsely populated areas, who between 2005 and 2010 saw their utility expenditure share increase by approximately 3.5 percentage points. This change for sparsely populated areas may reflect increasing costs as various subsidies are removed.

Chart 121: Expenditure Share Spent on All Utilities by Group: Bulgaria



Source: Eurostat

Chart 122: Percentage with Arrears on Utility Bills by Group: Bulgaria



Source: European Union Statistics on Income and Living Conditions (EU-SILC)

Chart 122 shows a large increase amongst those in all household types in Bulgaria reporting arrears on their utility bills between 2006 and 2008. The group experiencing the largest reported increase in arrears is those in households with an individual aged over 65, who saw a trebling in the proportion reporting arrears between 2006 and 2008.