

***Affordability of utilities' services: extent,
practice, policy***

***Research Paper 11: The Differences between
Affordability for Specific Household Types and
the Average for the Whole Population of
Households***

***Dr David Deller (Centre for Competition Policy, University of East
Anglia)***

***Professor Catherine Waddams (Joint Academic Director, CERRE
and Centre for Competition Policy, University of East Anglia)***

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1. Executive Summary

This research paper is a companion to Research Paper 2 and provides further manipulations of the expenditure share data from Eurostat and the subjective indicators of affordability difficulties from the European Union Statistics on Income and Living Conditions (EU-SILC). Research Paper 2 describes the absolute levels of expenditure shares/affordability difficulties reported by different household types; the present research paper focuses exclusively on distributional questions: it reports the deviation of particular household types from the whole population average. The purpose of this analysis is to identify whether the relative position of particular household types has changed through time and whether particular household types have seen common movements in their relative position across all utility sectors.

Unlike Research Paper 2, we do not split the analysis by sector, and all of the charts report results from multiple sectors to identify any common cross-sector trends for specific household groups. After the introduction, the following two sections of the present research paper report results from the EU15 and new Member States respectively. Then sections report the situation in the same six Member States as analysed in Research Paper 2: France, Austria, the UK, the Republic of Ireland, Bulgaria and Greece.

The key messages from this research paper are:

- Specific household types tend to have expenditure shares/affordability difficulties which are systematically different from the population as a whole throughout the time period considered.
- Looking across countries, there is a general tendency for low income and retired households to report higher than average expenditure shares devoted to energy, together with lower than average expenditure shares devoted to transport.
- Across countries it is generally true that households with children report lower than average expenditure shares devoted to energy and higher than average expenditure shares devoted to transport.
- When there are movements in relative affordability through time these seem to relate to specific sectors or specific sector-household group pairs. It is rare for a particular household group to experience a relative improvement or deterioration across all sectors.



2. Introduction

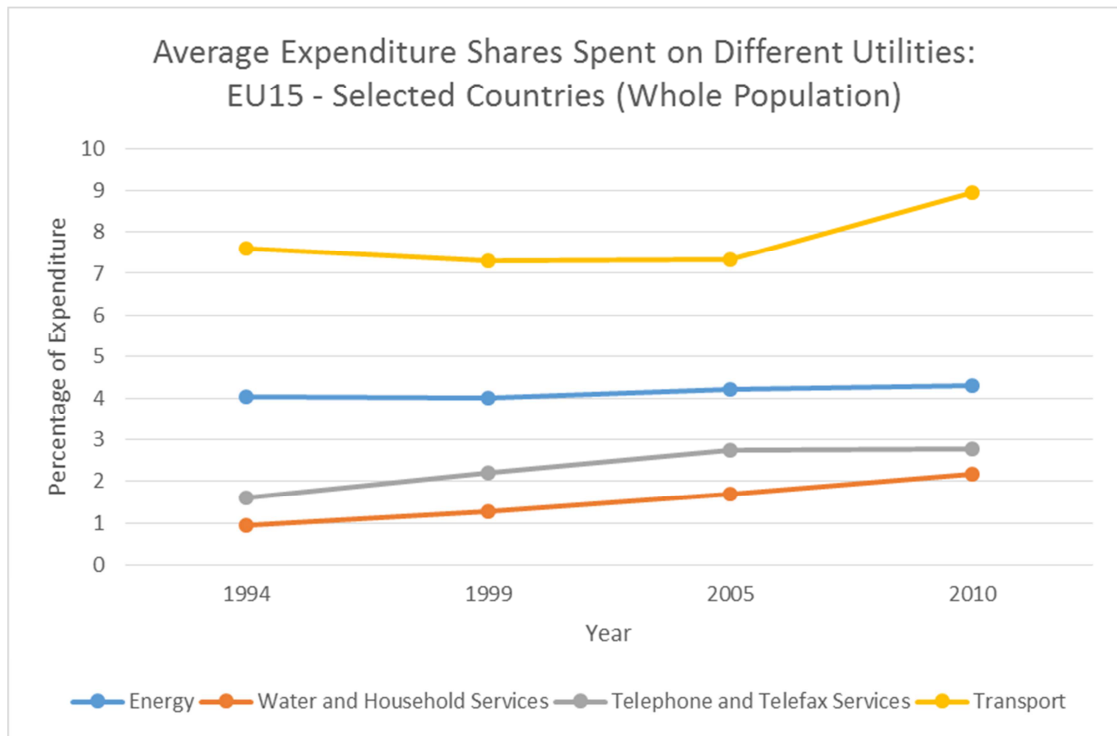
This document re-cuts the data from Eurostat and EU-SILC to highlight how the difference in figures between certain sub-populations and the average for the population as a whole evolves through time. Rather than arranging the charts by sector, the charts are arranged by sub-population so that one can see if particular sub-populations have faced consistent experiences across the different utility sectors. The purpose of this document is explicitly distributional in that it aims to identify which sub-populations have seen their position worsen or improve relative to the average. The sub-populations studied vary by whether the expenditure share or EU-SILC data is being used. When the average expenditure share data is used, the sub-populations considered are: (i) unemployed households, (ii) retired households, (iii) households in the bottom income quintile (the 20% of households with the lowest incomes), (iv) single parent households and (v) households with children. When the EU-SILC data is used the four sub-populations considered are: (i) those living in households with an income beneath 60% of the median, (ii) those living in households with at least one person aged 65 or over, (iii) those living in single parent households and (iv) those living in households containing children.

For reference, additional charts are provided showing how the average expenditure shares and percentages reporting particular affordability difficulties have evolved for the whole population in each of the countries studied. When comparing the charts it is also worth remembering that the scales used on the vertical axis vary considerably.

There are perhaps two key conclusions from this document. Firstly, specific sub-populations often have systematically higher or lower affordability difficulties than an average population member across multiple sectors. Yet for the variations in affordability position relative to the average through time, the largest changes seem to be sector specific or related to particular sector-sub-population pairs rather than to specific sub-populations.

3. EU15

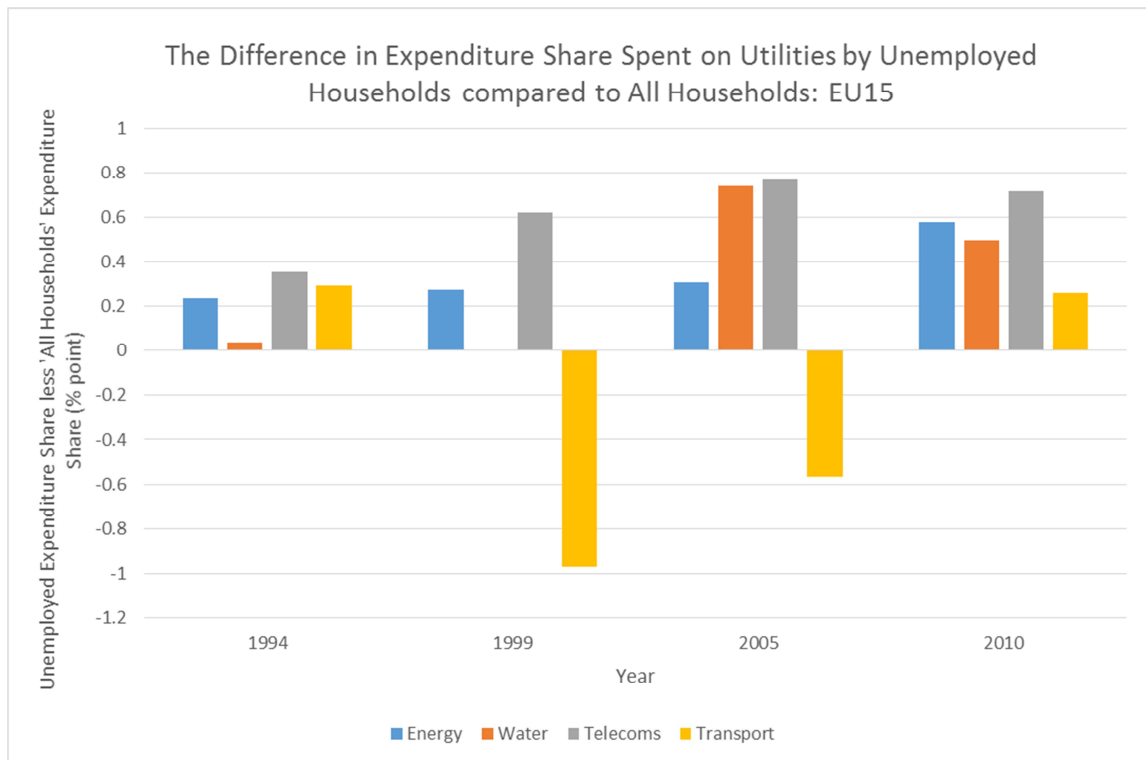
Chart 1: Average Expenditure Shares Spent on Different Utilities EU15 – Selected Countries (Whole Population)



Source: Eurostat and EU-SILC

Chart 2 shows that in energy, water and telecoms, not only do the unemployed devote a greater share of their expenditure to these utilities than the average household, but that this difference has grown between 1994 and 2010 in all 3 sectors. However the clearest point from Chart 2 is the change in position regarding the expenditure share devoted to transport. In 1999 across the EU15, the unemployed on average devoted a share of expenditure to transport that was 1 percentage point lower than the average share devoted by all households, but in 2010 the transport expenditure share of unemployed households was 0.2 percentage points higher than the average of all households.

Chart 2: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: EU15¹



Source: Eurostat and EU-SILC

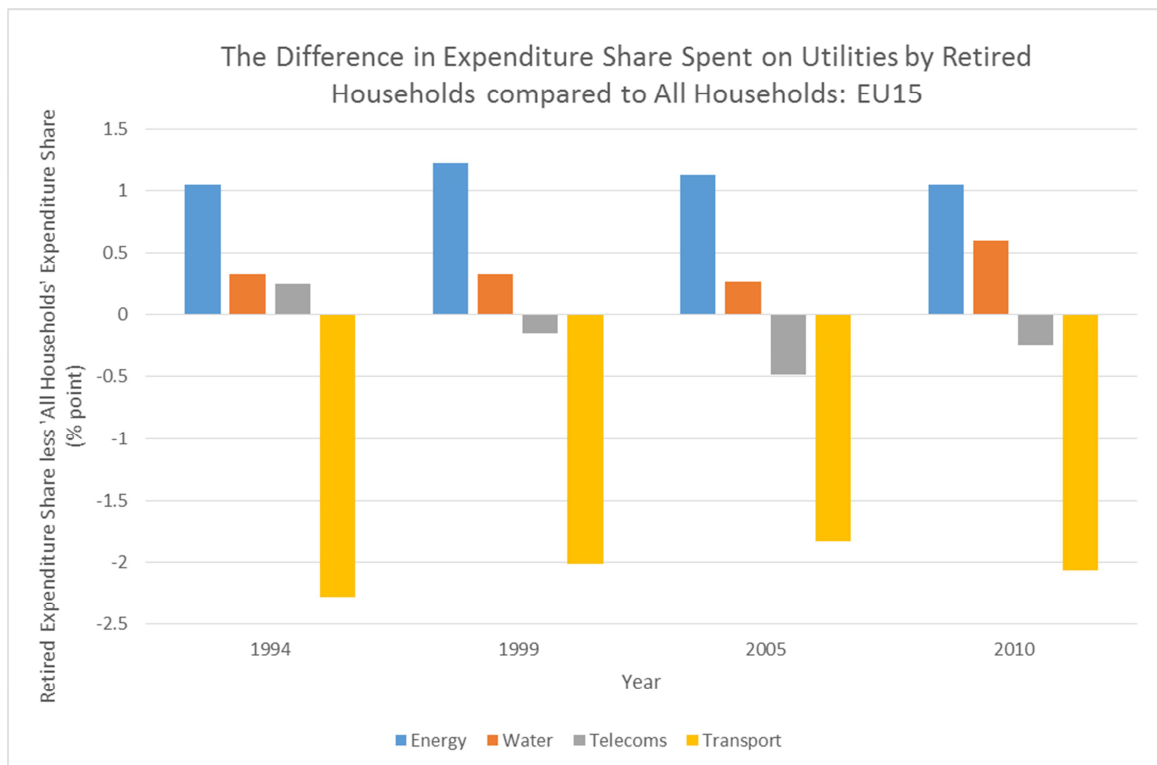
Turning to retired households, Chart 3 shows an overall picture of stability: differences between the expenditure shares of retired households when compared to the average of all households remain fairly constant. Over the period 1994-2010 retired households have seen the expenditure share devoted to water increase slightly compared to the average, while the expenditure share devoted to telecoms has fallen relative to the average.

In contrast, Chart 4 shows some quite large changes for households with the lowest 20% of incomes relative to average households. In 1999 there was virtually no difference between the expenditure share devoted to water by these low income households and the expenditure share of average households. However, by 2010 low income households in the EU15 were devoting 1 percentage point more to water expenditure than the average household. In transport, there was a similarly large change between 2005 and 2010, albeit in the opposite direction. In 2005 low income households devoted around 1 percentage point less than average households to transport

¹ Where Charts refer to 'Water' the formal Eurostat definition for this expenditure category is 'Water and Household Services' while the formal Eurostat definition for the 'Telecoms' expenditure category is 'Telephone and Telefax Services'.

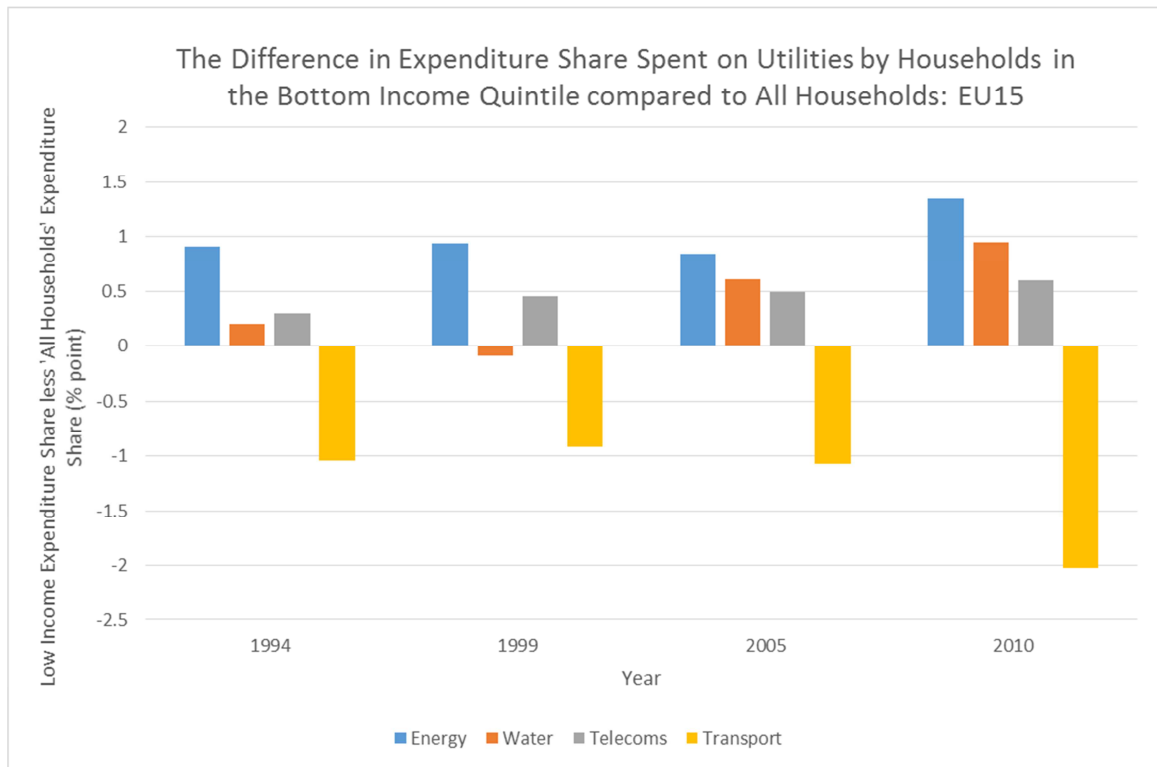
expenditure, but by 2010 the deficit of low income households had widened to 2 percentage points.

Chart 3: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: EU15



Source: Eurostat and EU-SILC

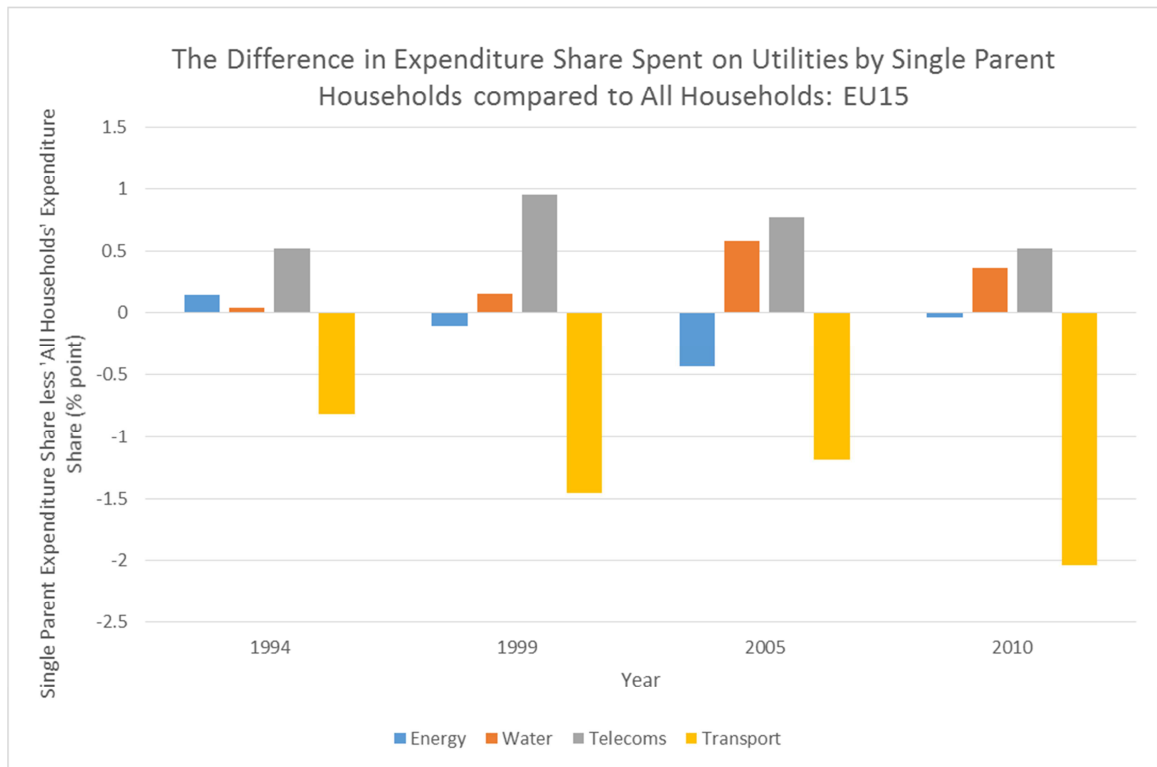
Chart 4: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: EU15



Source: Eurostat and EU-SILC

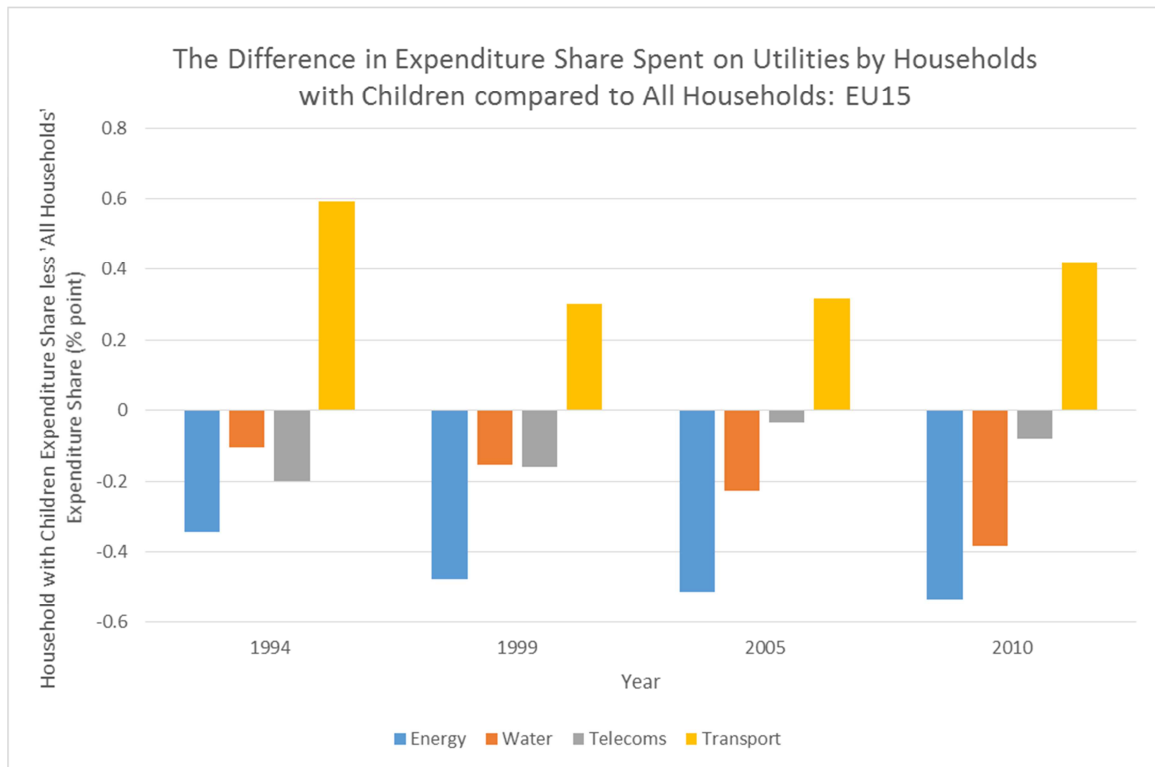
Single parent households (Chart 5) also see their share of expenditure devoted to transport fall further relative to average households between 2005 and 2010. Considering Chart 1 it is worth noting that while single parent and low income households moved further away from average households regarding their transport expenditure share between 2005 and 2010, this is against a backdrop of the average household markedly increasing the share of resources they devoted to transport between these two dates.

Chart 5: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: EU15



Source: Eurostat and EU-SILC

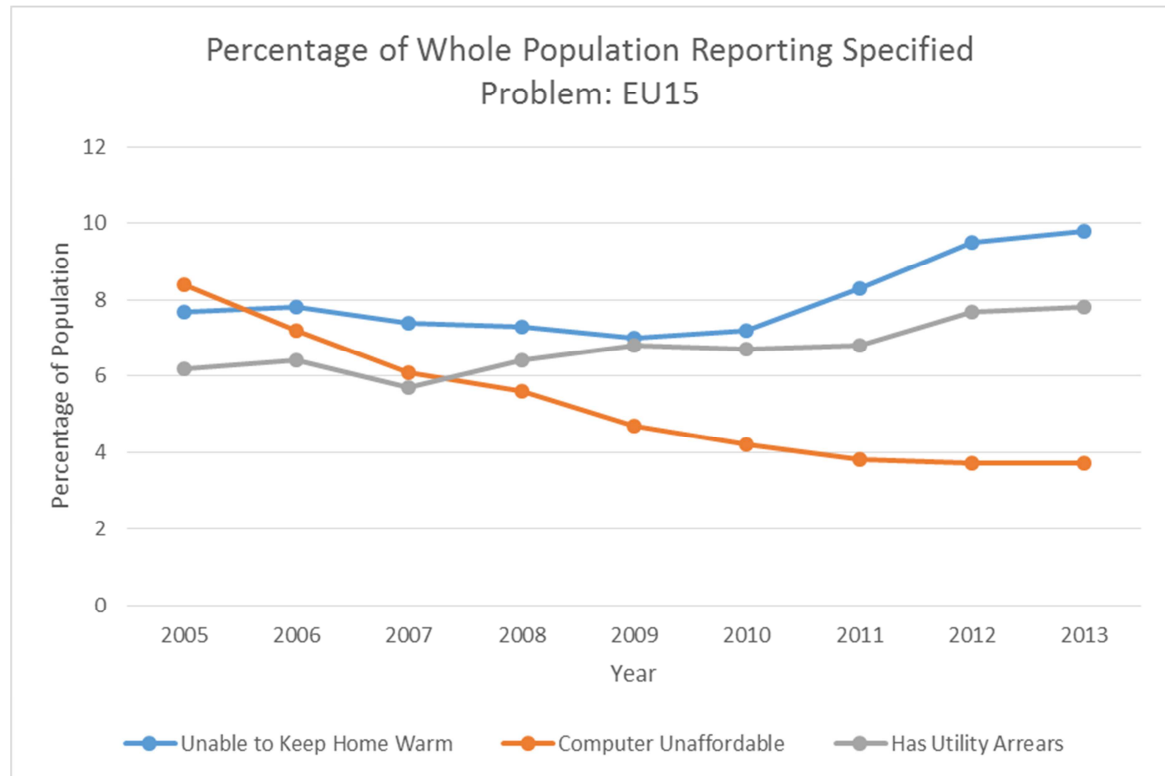
Chart 6: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: EU15



Source: Eurostat and EU-SILC

Charts 5 and 6 also starkly show how single parent households face very different levels of affordability pressures from the group of all households with children. In broad terms the differences between households with children and the average of all households are low, though households with children devote a lower than average expenditure share to telecoms and water. In contrast, in all years single parent households devote a higher than average expenditure share to telecoms and water. Moreover, whereas single parent households devote a lower than average expenditure share to transport, all households with children devote a higher than average expenditure share to transport.

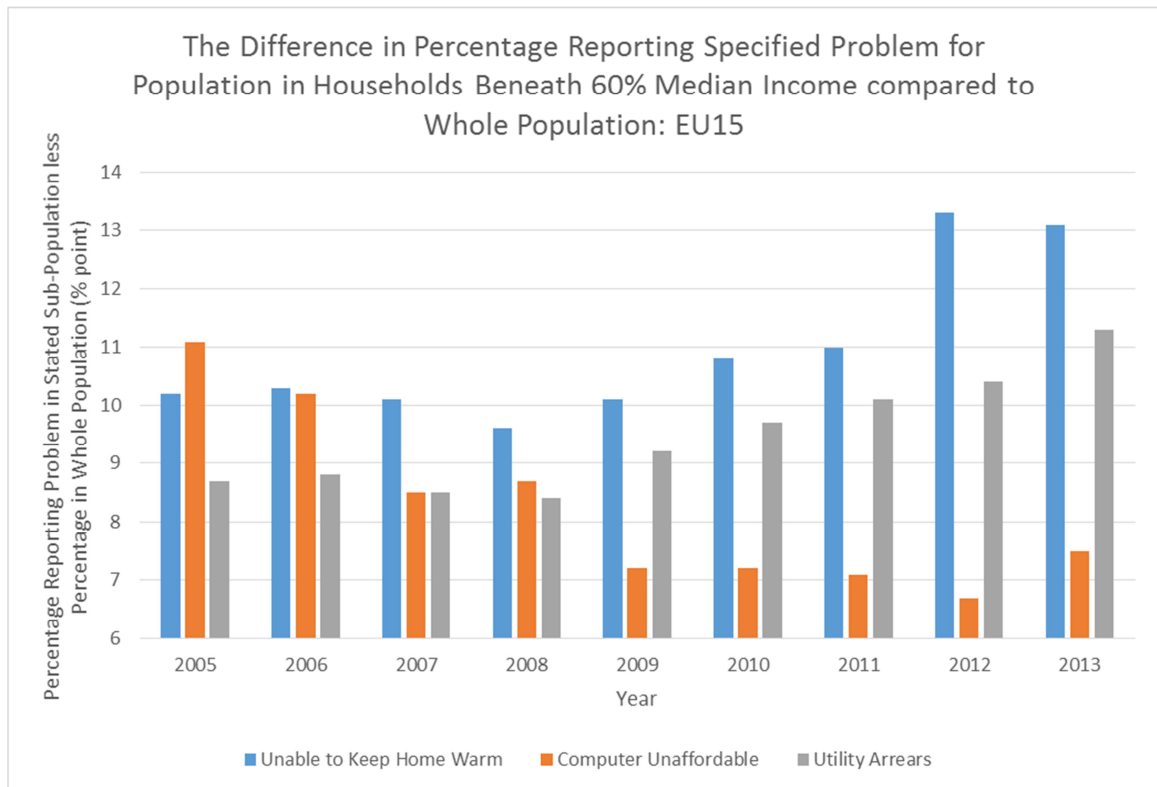
Chart 7: Percentage of Whole Population Reporting Specified Problem: EU15



Source: Eurostat and EU-SILC

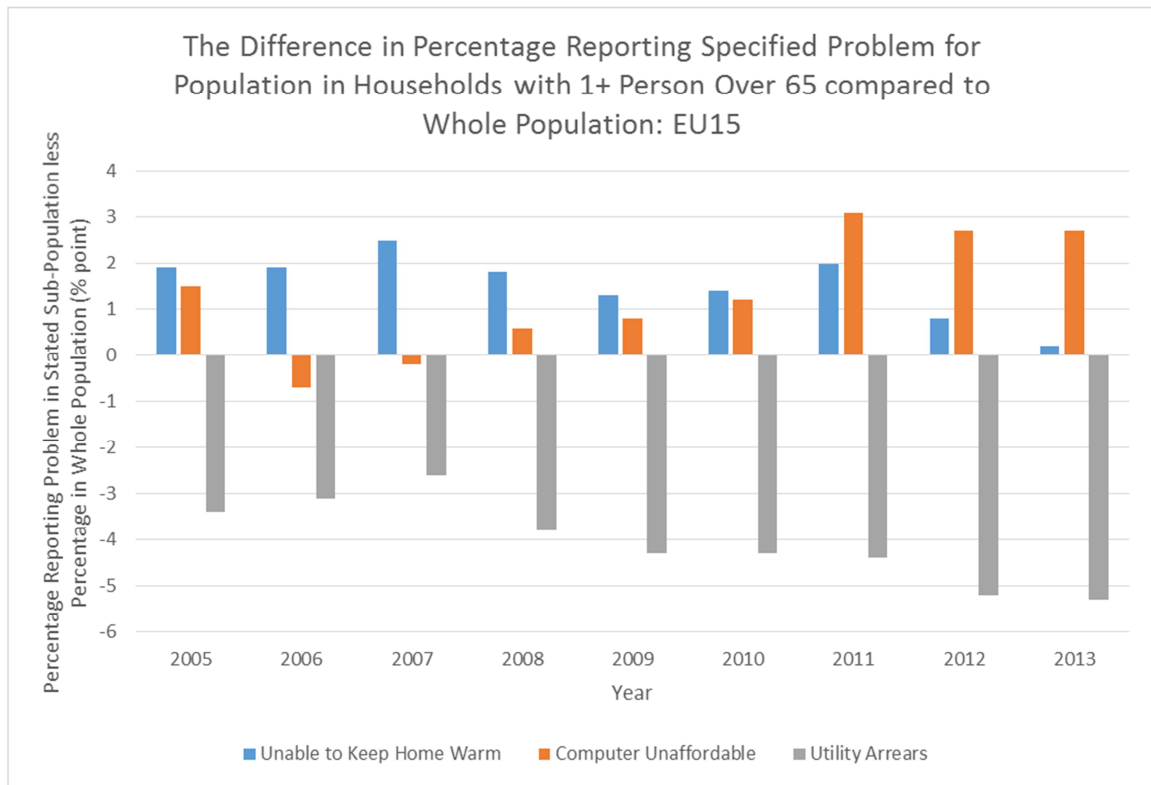
Moving on to consider the subjective measures of affordability difficulties, Chart 8 shows that those in low income households did see convergence towards the situation of average households regarding the perceived affordability of computers. The difference between the percentage of those in low income households and the percentage in the whole population perceiving computers to be unaffordable fell by around 3.5 percentage points between 2005 and 2013. However, the picture for this group and general utility affordability is much less positive. Not only does Chart 7 show that the percentages of the entire population reporting difficulties heating their home and utility arrears were increasing, but Chart 8 shows that the increases in low income households were even sharper. In all years (except 2008) 10 percentage points more of the population in low income households had difficulty heating their home than the population as whole. Between 2009 and 2013 this gap relative to the perception of the whole population grew by an additional 3 percentage points. Similarly, between 2008 and 2009 the gap between the percentage of those in low income households who had arrears on their utility bills and the percentage of the whole population who had arrears grew by 3 percentage points. This is evidence suggesting that low income households were placed under even greater economic stress by the Great Recession than was the population as a whole.

Chart 8: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: EU15



Source: Eurostat and EU-SILC

Chart 9: The Difference in Percentage Reporting Specified Problem for Population in Households with 1+ Person over 65 compared to Whole Population: EU15

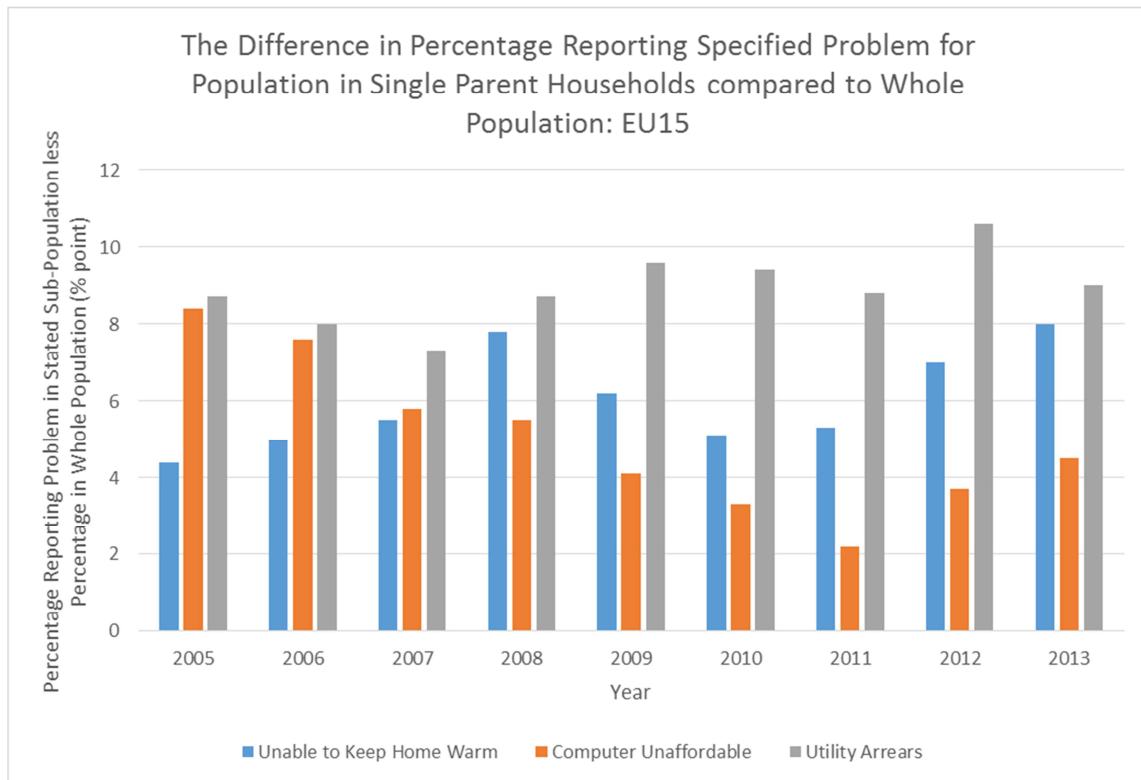


Source: Eurostat and EU-SILC

The striking feature of Chart 9 is that the percentage of households containing at least one person over 65 reporting utility arrears is always a reasonable distance below the percentage for the population as a whole. It is unclear whether this reflects older households having greater financial resources, being more assiduous bill payers or a particular generation who are less willing to admit to being in arrears.

The interesting feature of Chart 10 relating to single parent households is the relative instability in the gaps between the perceived difficulties of this group and the population as whole. During the period 2007 onwards, the gap between those in single parent households and the population as a whole considering computers as being unaffordable varies between a high approaching 6 percentage points and a low of 2 percentage points. The equivalent relating to the percentage reporting an inability to keep their home warm varies from around 5 percentage points to a high of 8 percentage points.

Chart 10: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Households compared to Whole Population: EU15

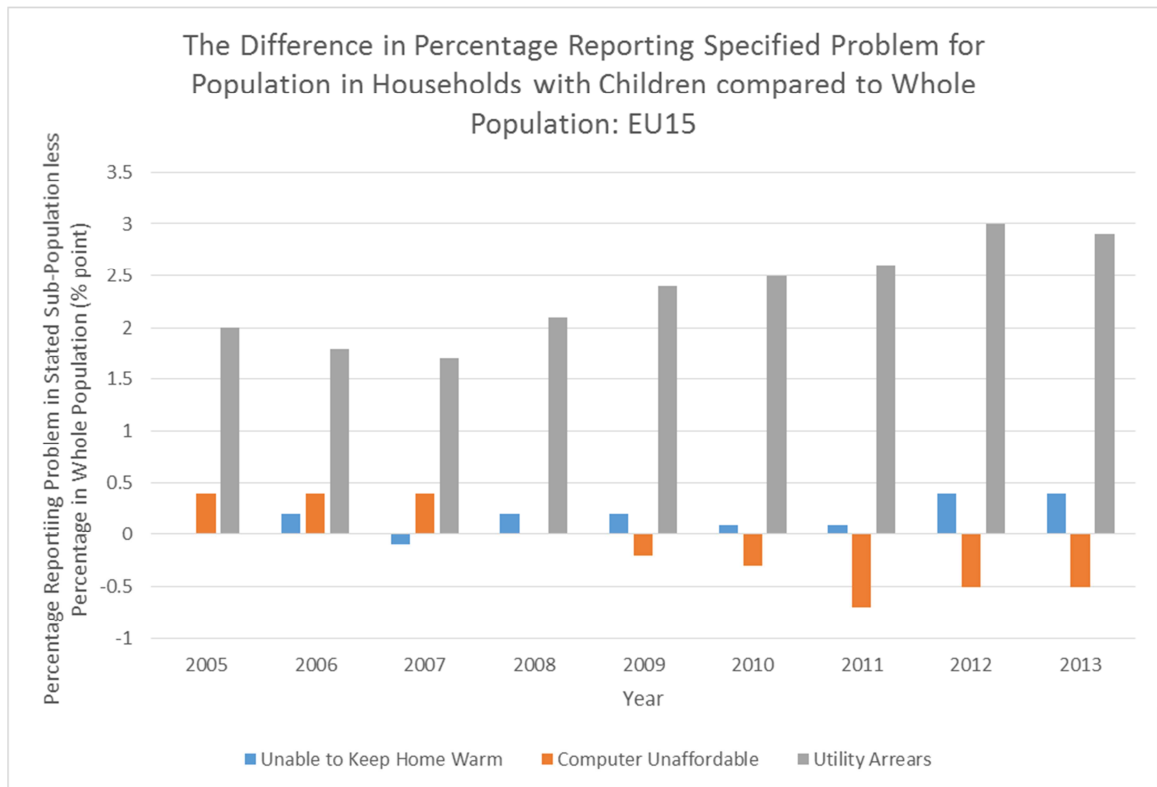


Source: Eurostat and EU-SILC

Mirroring the expenditure share data, Chart 11 shows that the affordability perceptions of those in all households with children are much closer to those of the whole population than those of single parent households.² However, those in households with children are more likely to report utility arrears than the whole population and the gap between the reported rates increases by over 1 percentage point between 2007 and 2013.

² That the single parent households are further away from the whole population figures than all households with children in part simply reflects the fact that the group of all households with children forms a much larger segment of the population than single parent households.

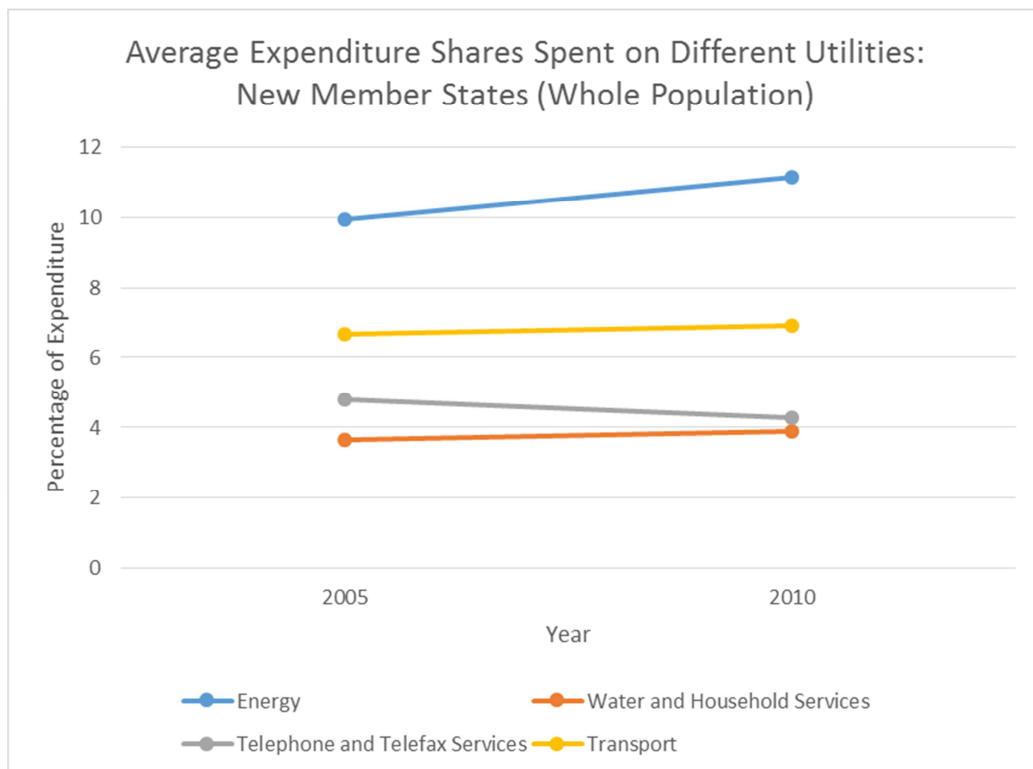
Chart 11: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: EU15



Source: Eurostat and EU-SILC

4. New Member States

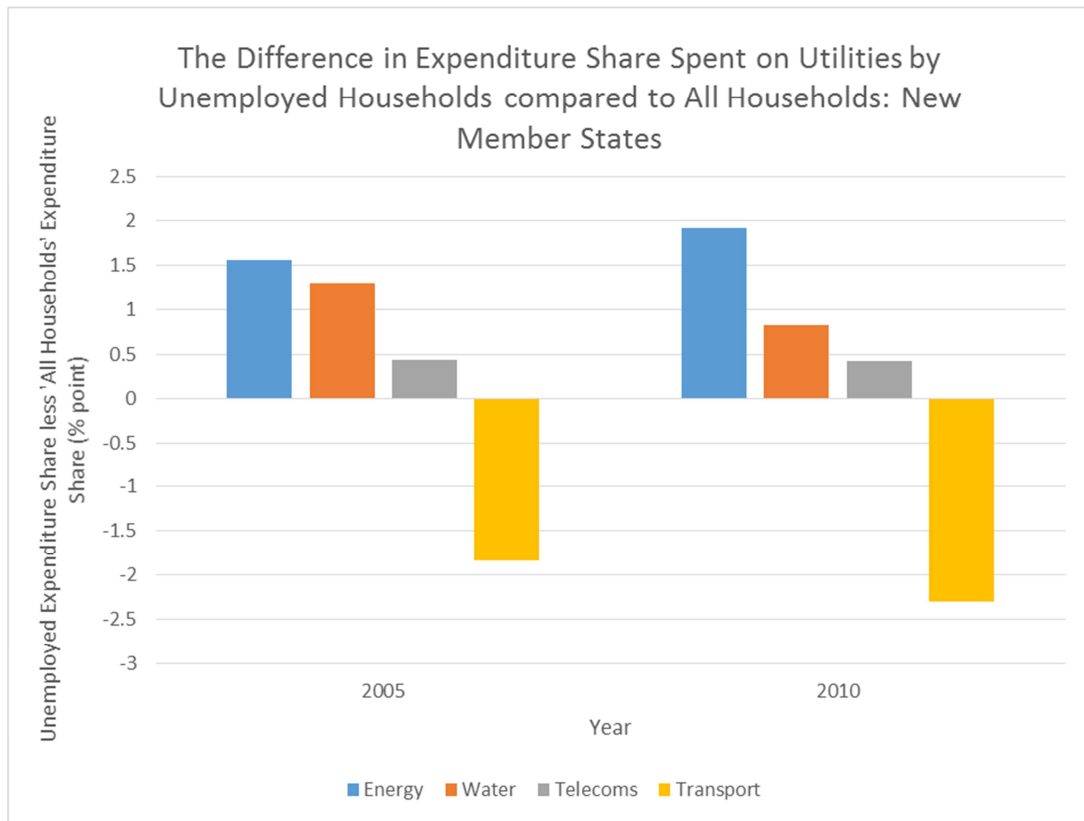
Chart 12: Average Expenditure Shares Spent on Different Utilities: New Member States (Whole Population)



Source: Eurostat and EU-SILC

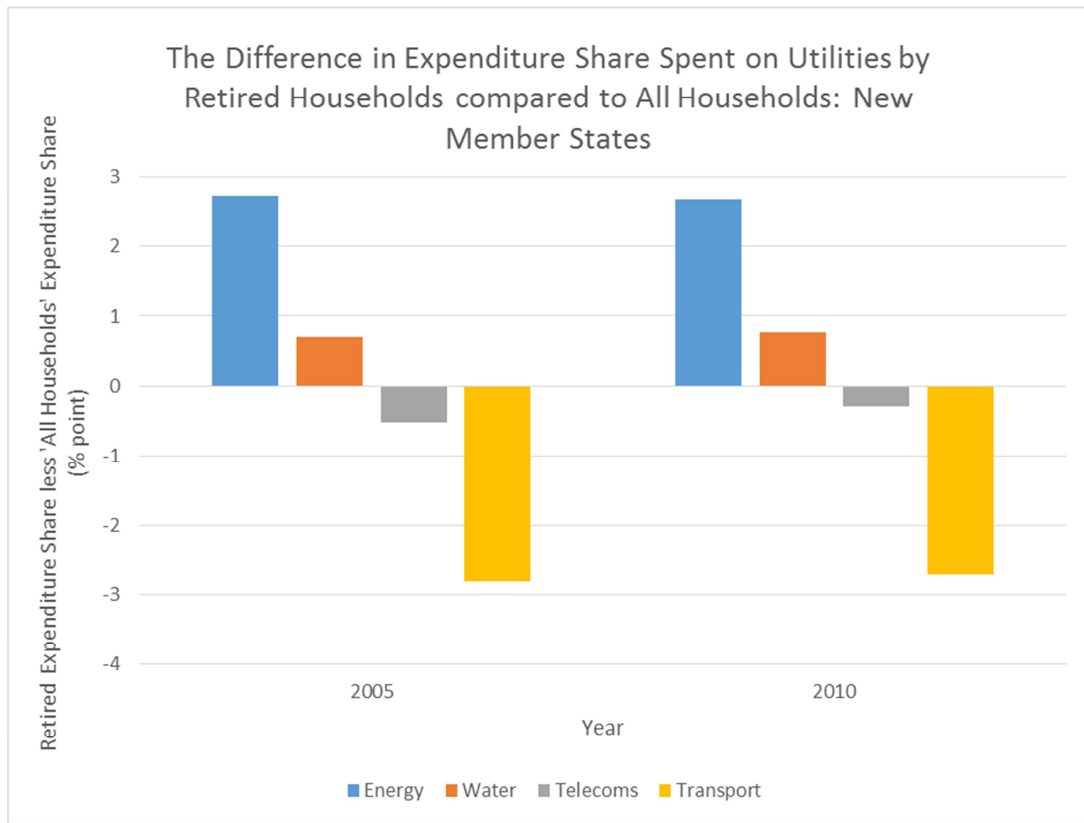
Since there are only two years of expenditure share data for the new member states it is unsurprising that Charts 13 to 15 show similar patterns to each other and across years. Potentially economically disadvantaged groups (the unemployed, those on low incomes, the retired) spend a greater proportion of their expenditure on energy and water than average households, but a lower proportion on transport. Chart 16 shows that single parent households do not seem to face the same energy affordability difficulties as the other groups in Charts 13 to 15. In 2010, single parent households in the new member states on average devoted 0.5 percentage points less to energy expenditure than average households, whereas the unemployed, retired and those on low incomes all spend 2-3 percentage points more on energy than average households.

Chart 13: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: New Member States



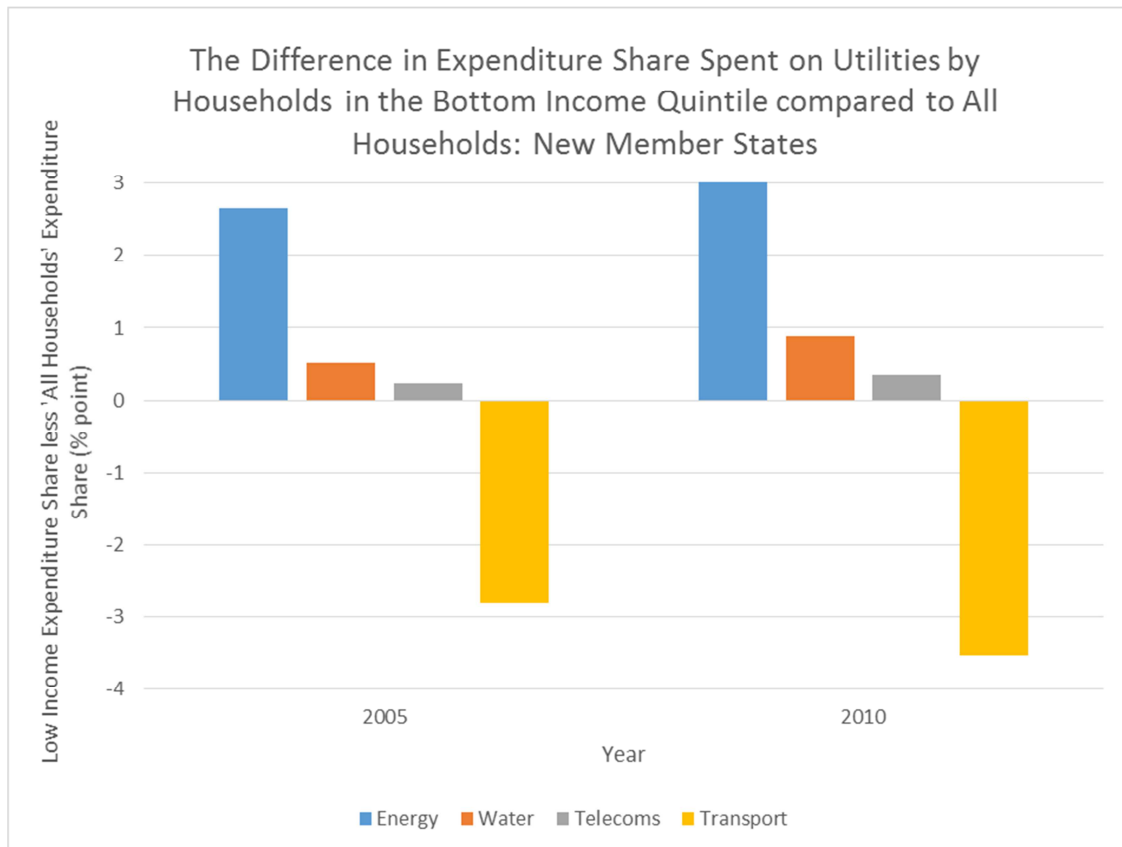
Source: Eurostat and EU-SILC

Chart 14: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: New Member States



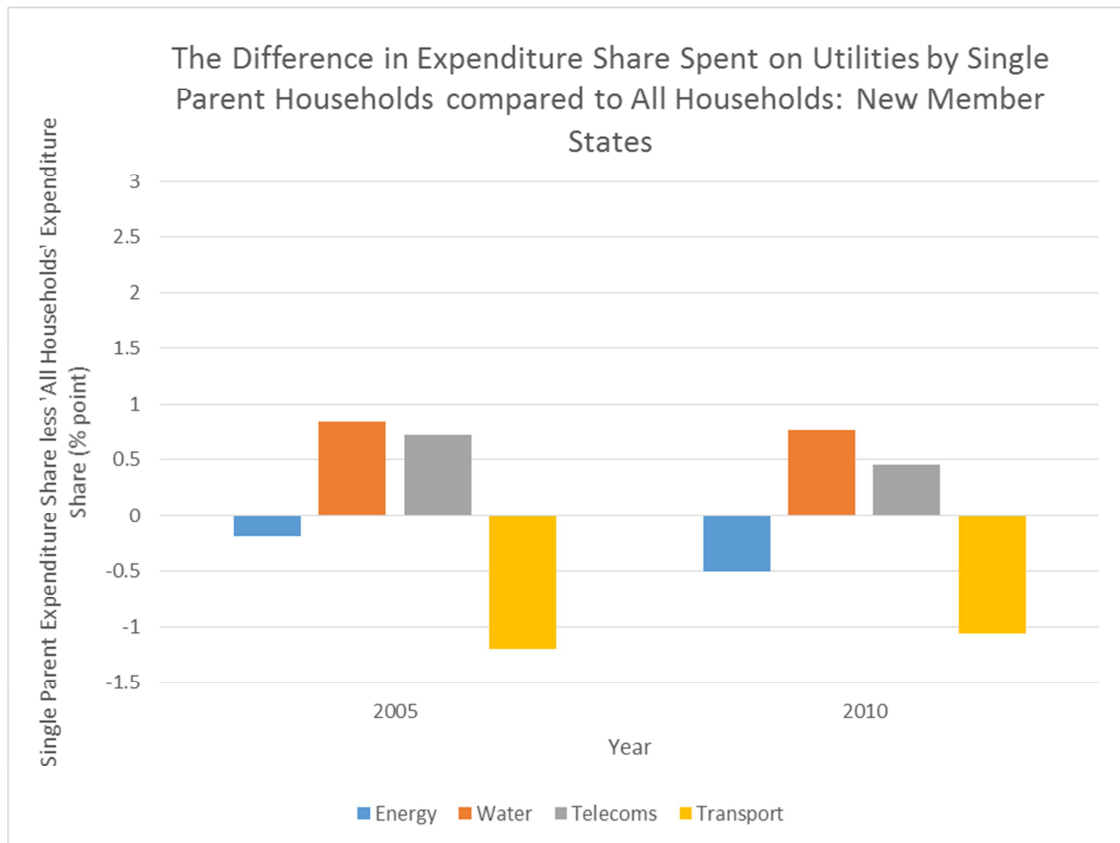
Source: Eurostat and EU-SILC

Chart 15: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: New Member States



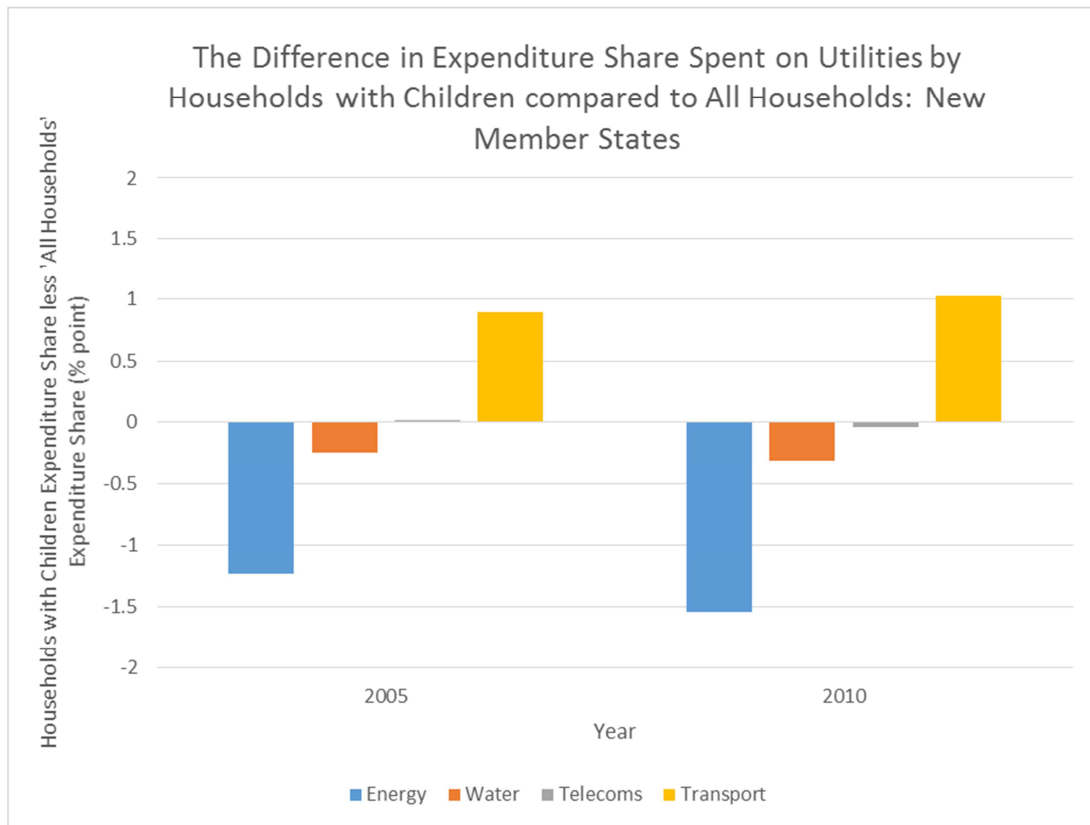
Source: Eurostat and EU-SILC

Chart 16: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: New Member States



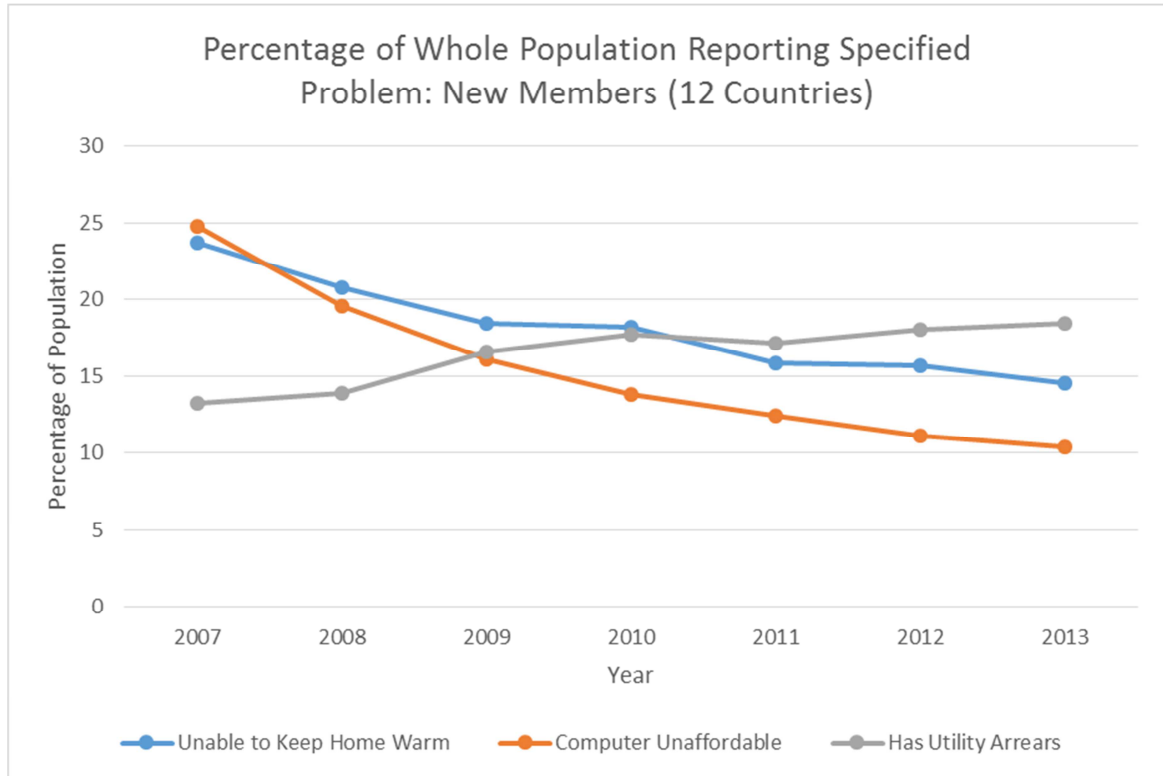
Source: Eurostat and EU-SILC

Chart 17: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: New Member States



Source: Eurostat and EU-SILC

Chart 18: Percentage of Whole Population Reporting Specified Problem: New Member (12 Countries)



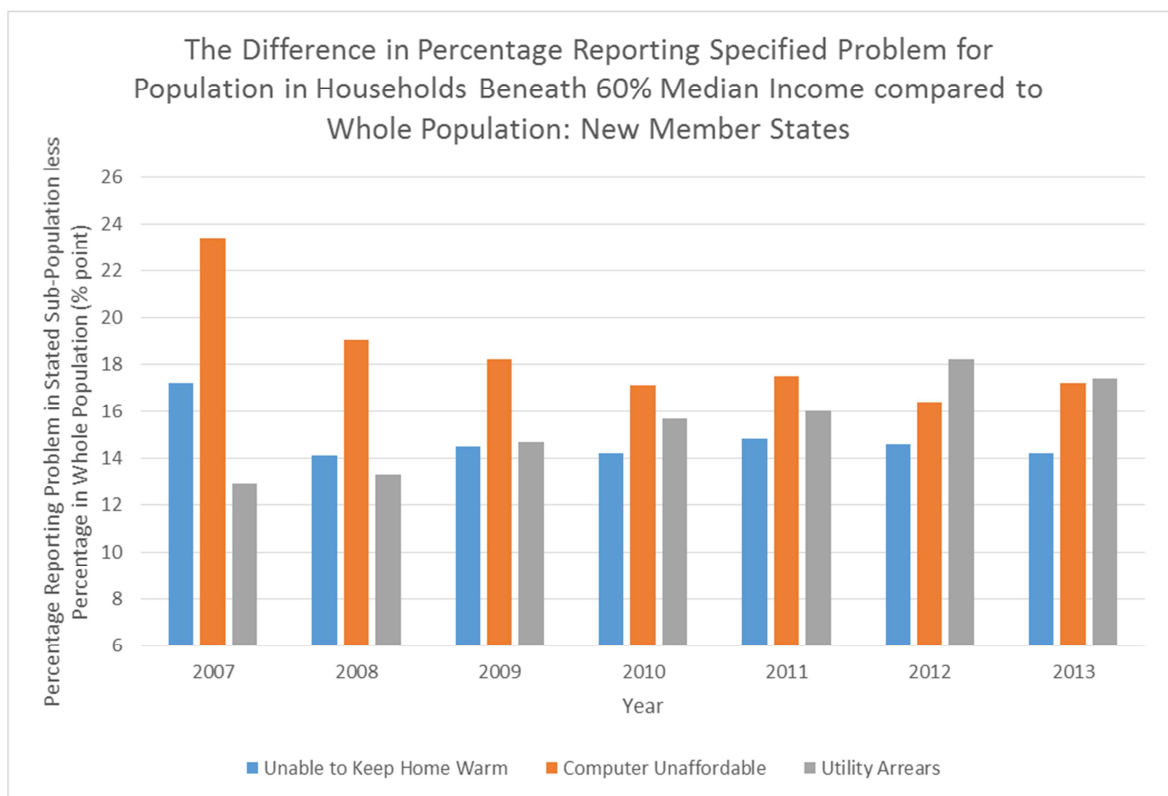
Source: Eurostat and EU-SILC

As one would expect, given the overall higher rates of affordability difficulties perceived by respondents in the new member states, the size of gaps between the perceptions of particular sub-groups compared to the perceptions of the whole population (Charts 19-20) tend to be higher than in the EU15. Looking at Charts 19 and 20 one of the interesting features is that the gaps in perceptions between those in low income households and those in retired households compared to the population as a whole is relatively stable. For example, between 2008 and 2013 the percentage of those in low income households (Chart 19) reporting an inability to keep warm is always 14-15 percentage points higher than the rate in the population as a whole. The equivalent gap relating to those in households containing someone aged 65 or over also remains pretty constant in the 8-8.5 percentage point range between 2010 and 2013.

Despite this story of stability relating to warmth, Chart 19 shows that those in low income households saw their rate of reporting utility arrears diverge further from the average of all households between 2007 and 2012. Across these years the gap widened by 5 percentage points. In contrast to this divergence, an interesting feature of Chart 20 is the convergence of the percentage of those in households containing someone over 65 reporting a computer as being unaffordable with the percentage of the whole population reporting the same issue. What is interesting is that

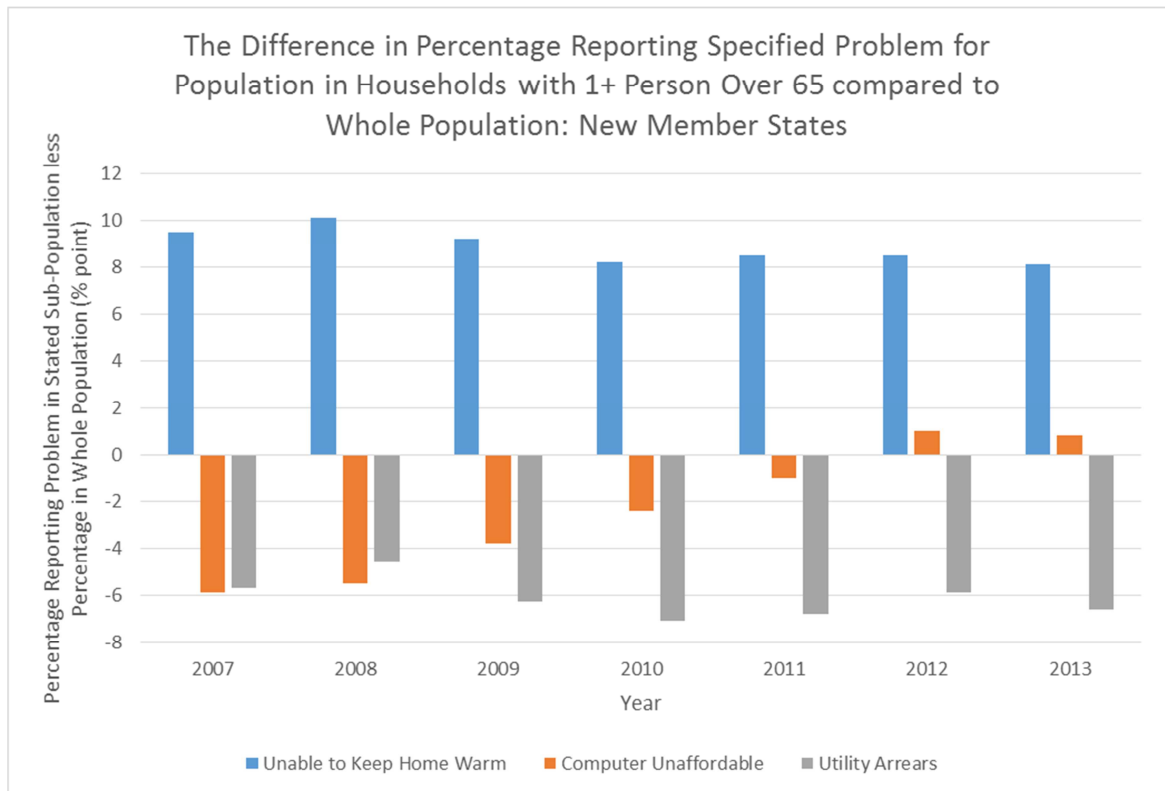
this group of older households in 2007 were less likely to report computers being unaffordable than the population as a whole. Indeed, Chart 18 highlights that the convergence of computer affordability arises from the rate of computer unaffordability reported in the population as a whole falling to become closer to that for older households.

Chart 19: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: New Member States



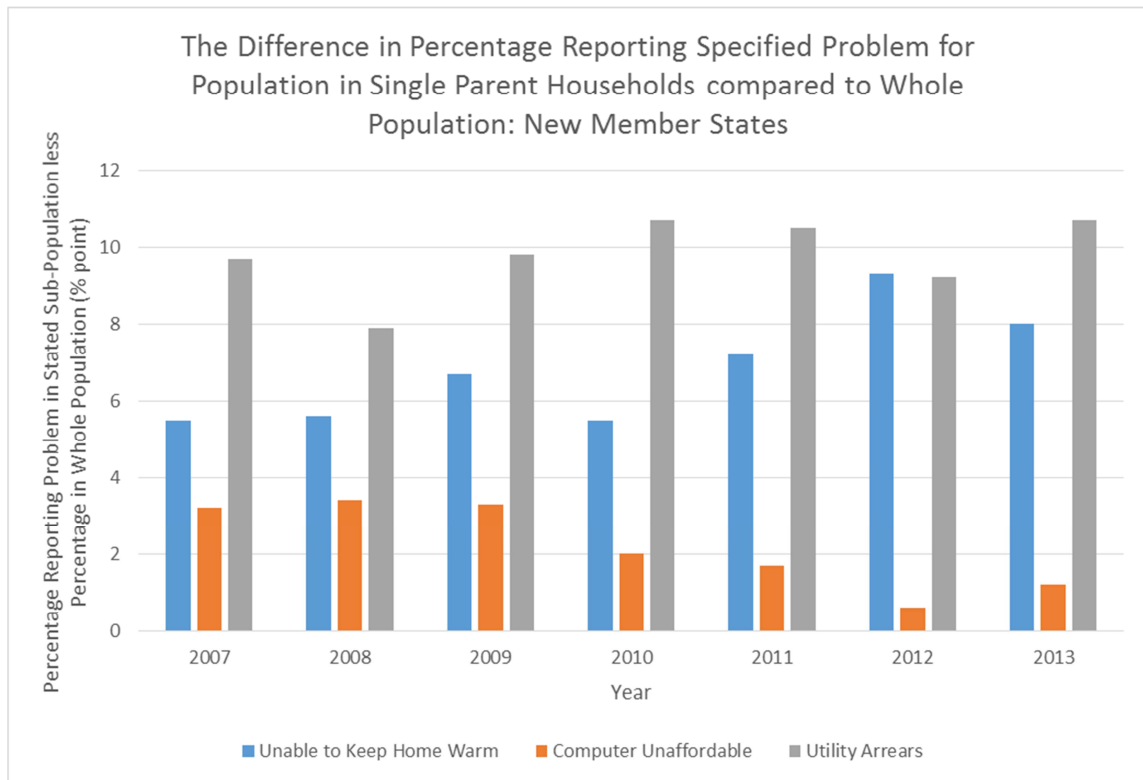
Source: Eurostat and EU-SILC

Chart 20: The Difference in Percentage Reporting Specified Problem for Population in Households with 1+ Person Over 65 compared to Whole Population: New Member States



Source: Eurostat and EU-SILC

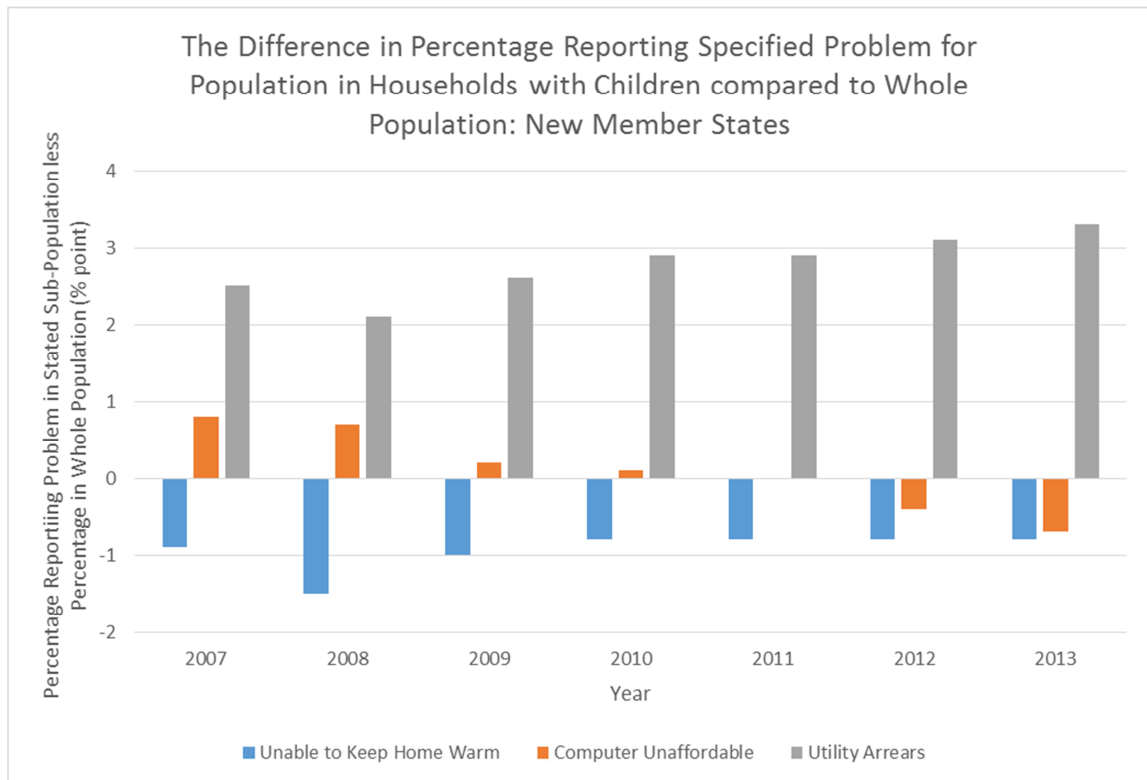
Chart 21: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Households compared to Whole Population: New Member States



Source: Eurostat and EU-SILC

As in the EU15 (Chart 21) it is difficult to see consistent patterns in the new member states for the gap in perceived affordability difficulties between those in single parent households and the population as a whole. Chart 21 shows the sharp increase in the gap from 5.5 to around 9 percentage points between those in single parent households and the population as a whole reporting an inability to keep warm between 2010 and 2012.

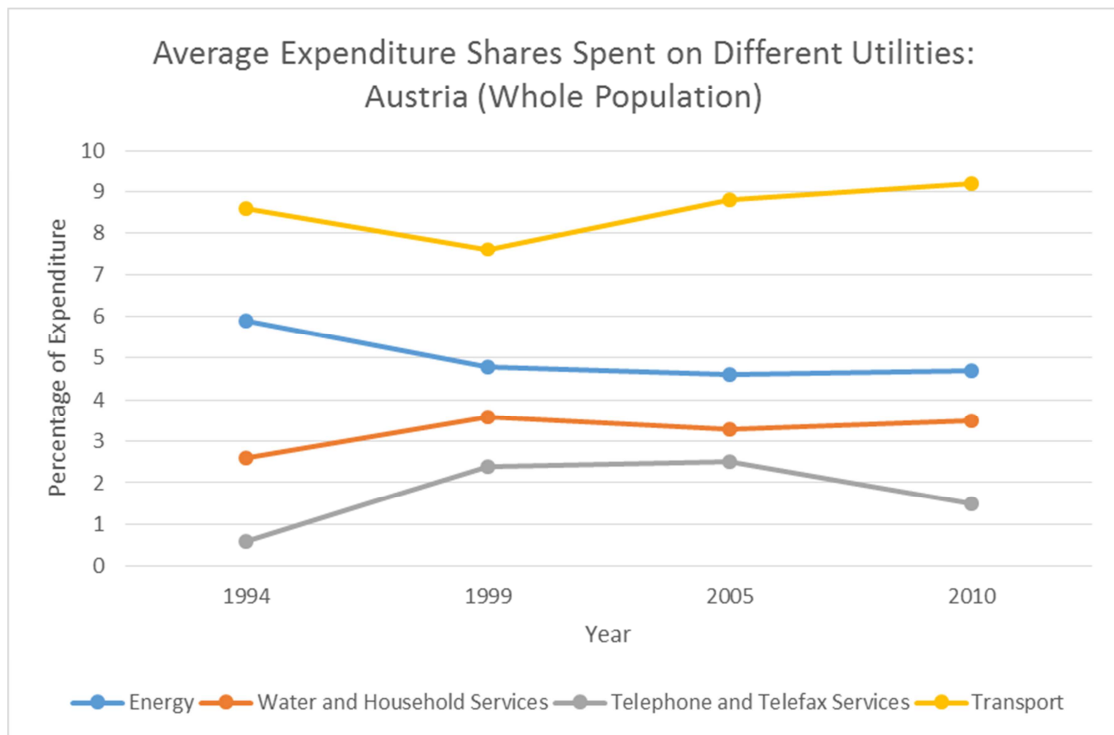
Chart 22: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: New Member States



Source: Eurostat and EU-SILC

5. Austria

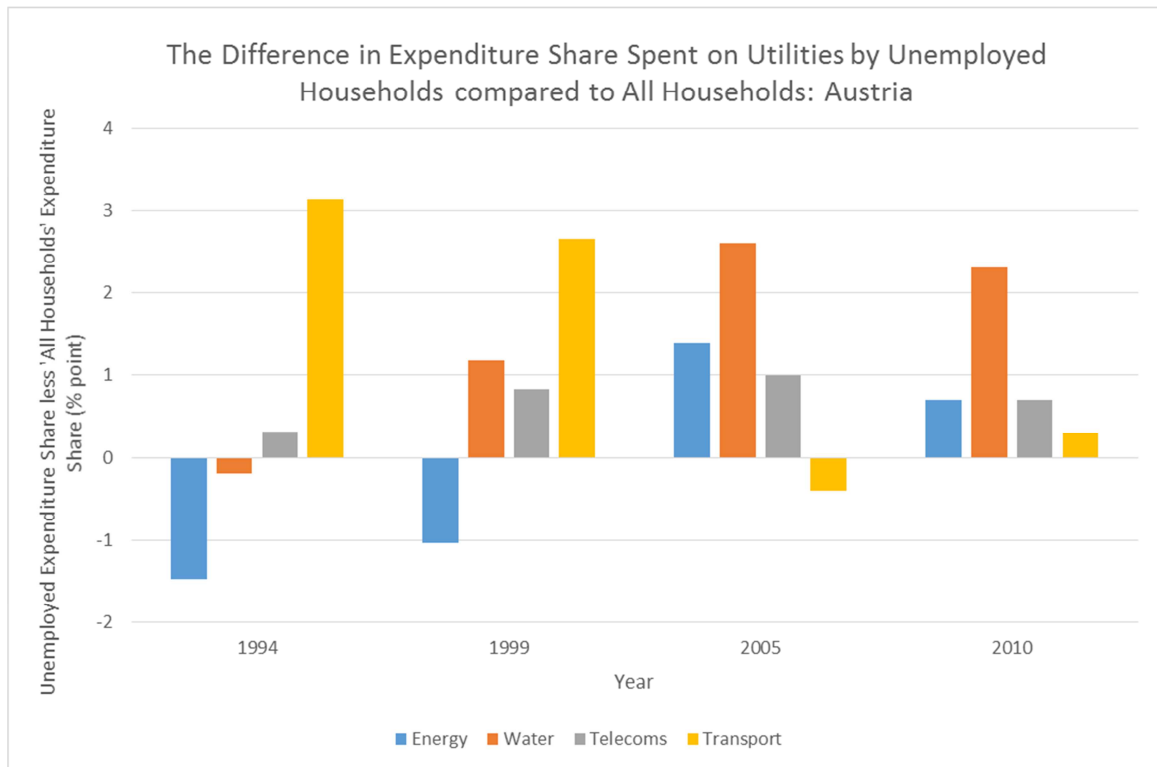
Chart 23: Average Expenditure Shares Spent on Different Utilities: Austria (Whole Population)



Source: Eurostat and EU-SILC

From Chart 24 it is clear that in Austria the unemployed have experienced two large changes in the form of their utility expenditure compared to the average household over the period 1994 to 2010. Firstly, in 1994 the expenditure share devoted to water by the unemployed and average households was slightly below the average, but by 2005 (and continuing in 2010) the unemployed devoted over 2 percentage points more of their expenditure to water services than the average household. In contrast, in 1999 the unemployed devoted 3 percentage points more of their expenditure to transport than the average household, but by 2005 unemployed households had converged to the average household in terms of transport expenditure share.

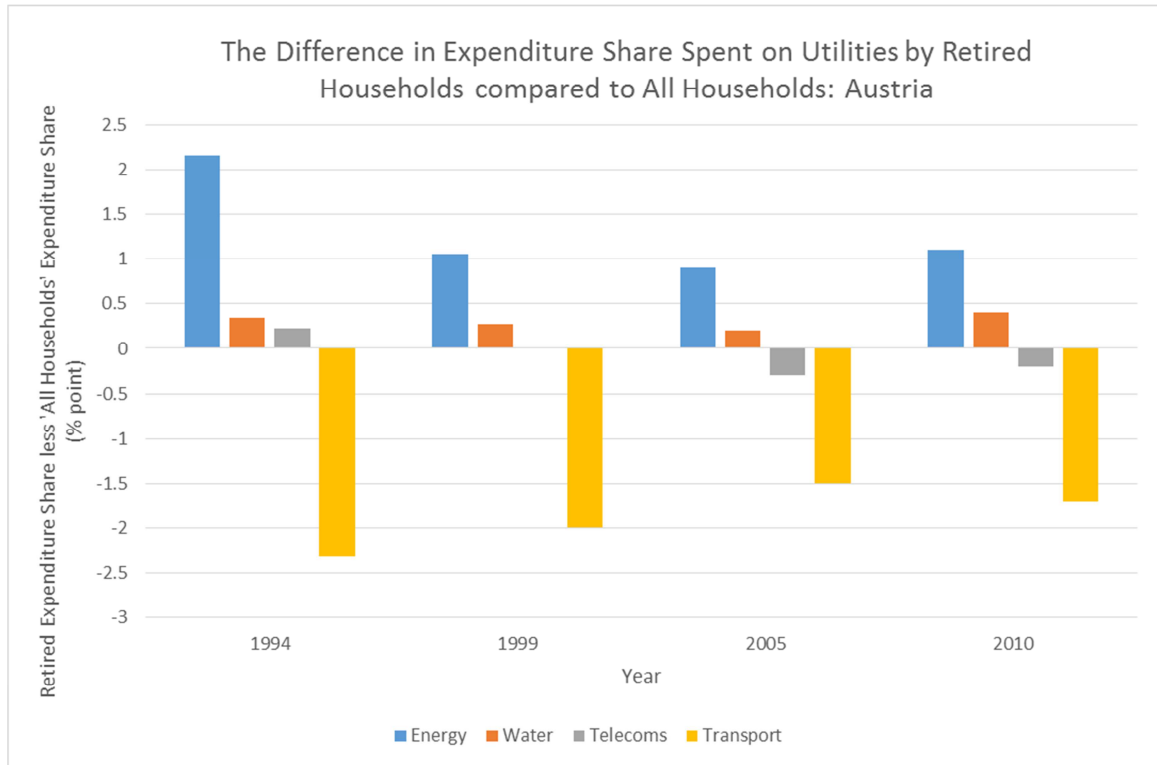
Chart 24: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: Austria



Source: Eurostat and EU-SILC

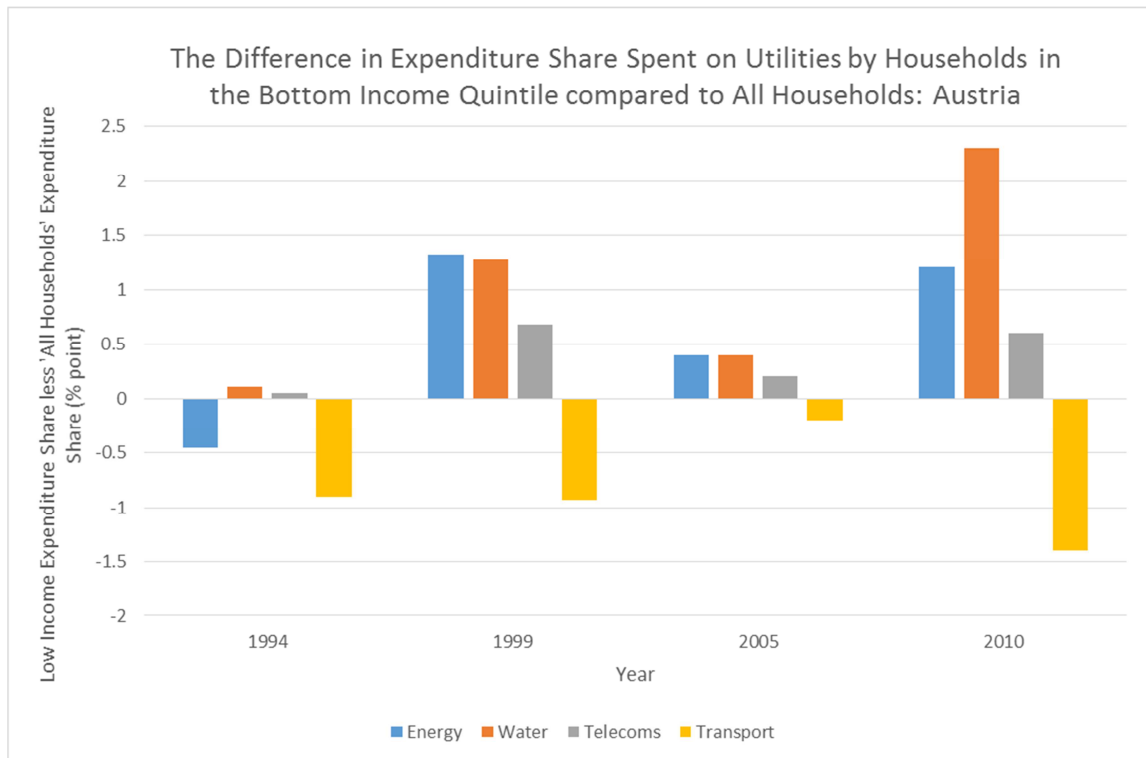
Turning to retired households, Chart 25 shows that the difference in their utility expenditure shares compared to the average household remains relatively consistent through time. The one exception to this is that there is a sharp convergence in the energy expenditure share between 1994 and 1999. In 1994 retired households devoted 2 percentage points more of their expenditure to energy than the average household, but by 1999 this gap had fallen to 1 percentage point.

Chart 25: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: Austria



Source: Eurostat and EU-SILC

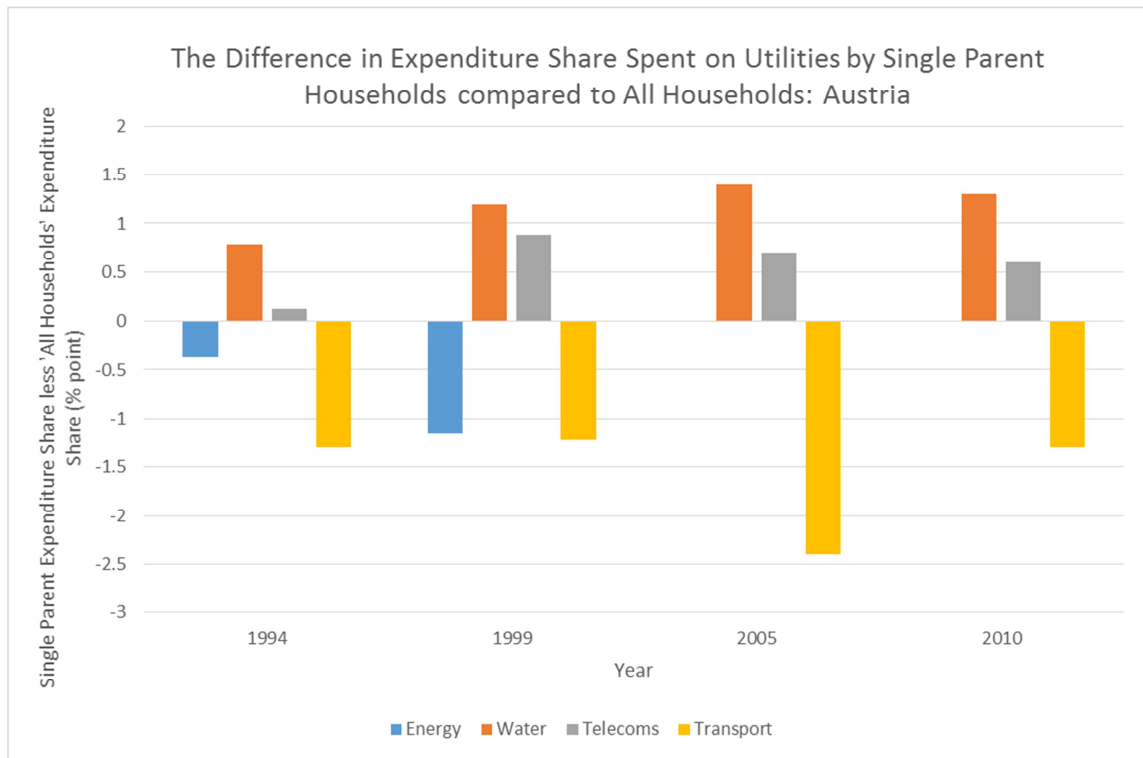
Chart 26: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: Austria



Source: Eurostat and EU-SILC

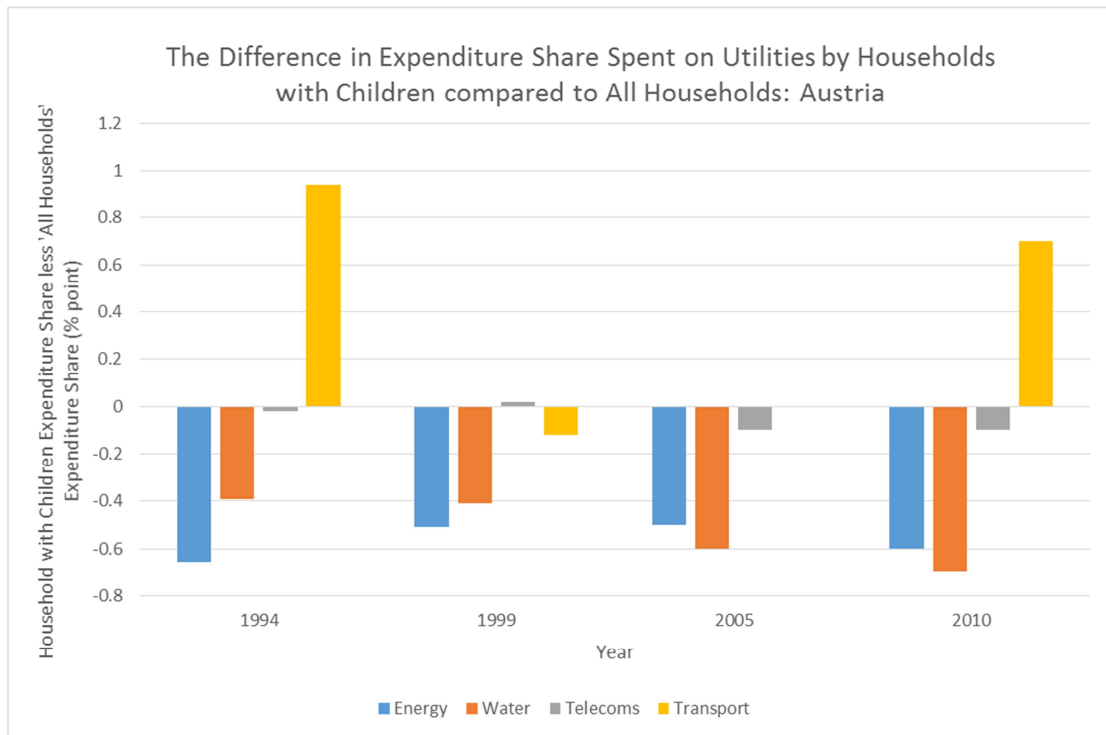
Chart 26 shows quite a lot of variability through time in the gaps in expenditure shares between low income households and the average household. As for the unemployed, between 1994 and 2010 the gap in the expenditure shares devoted to water between low income households and the average household widened considerably. Another interesting feature is that in 1994 low income households devoted almost 0.5 percentage points less of their expenditure to energy than the average household, but in 1999 low income households were devoting over 1 percentage point more to energy than the average household.

Chart 27: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: Austria



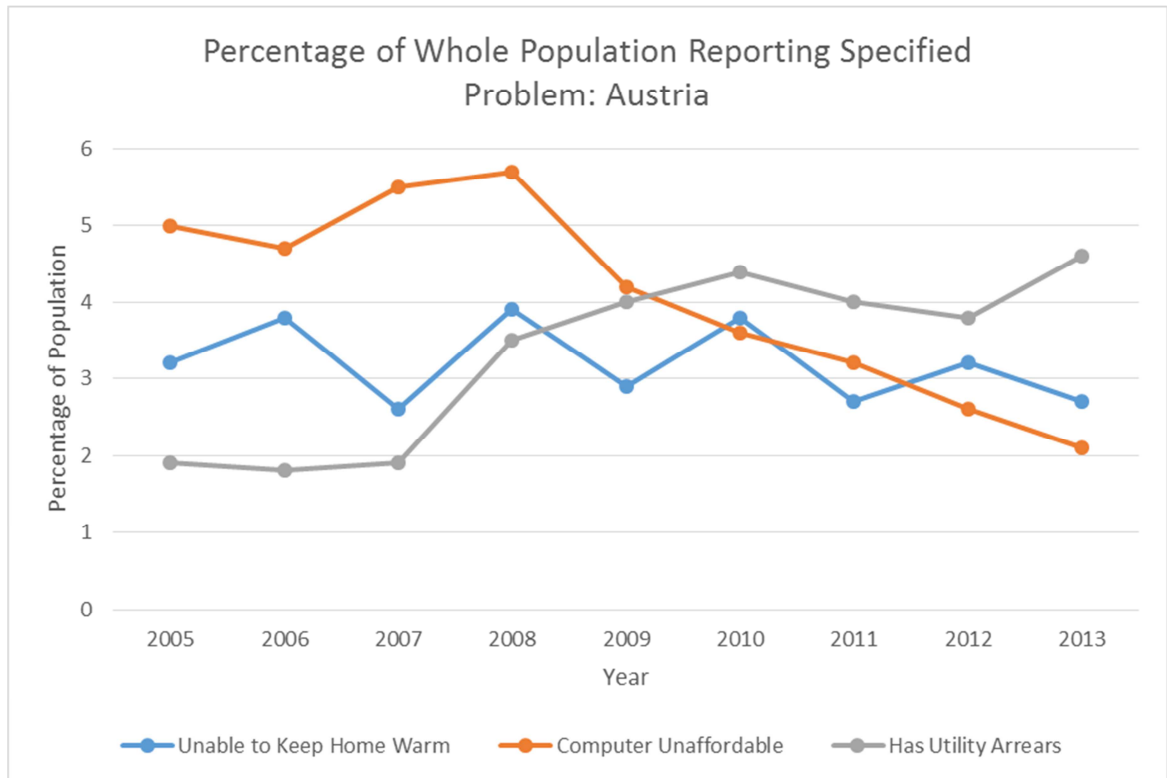
Source: Eurostat and EU-SILC

Chart 28: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: Austria



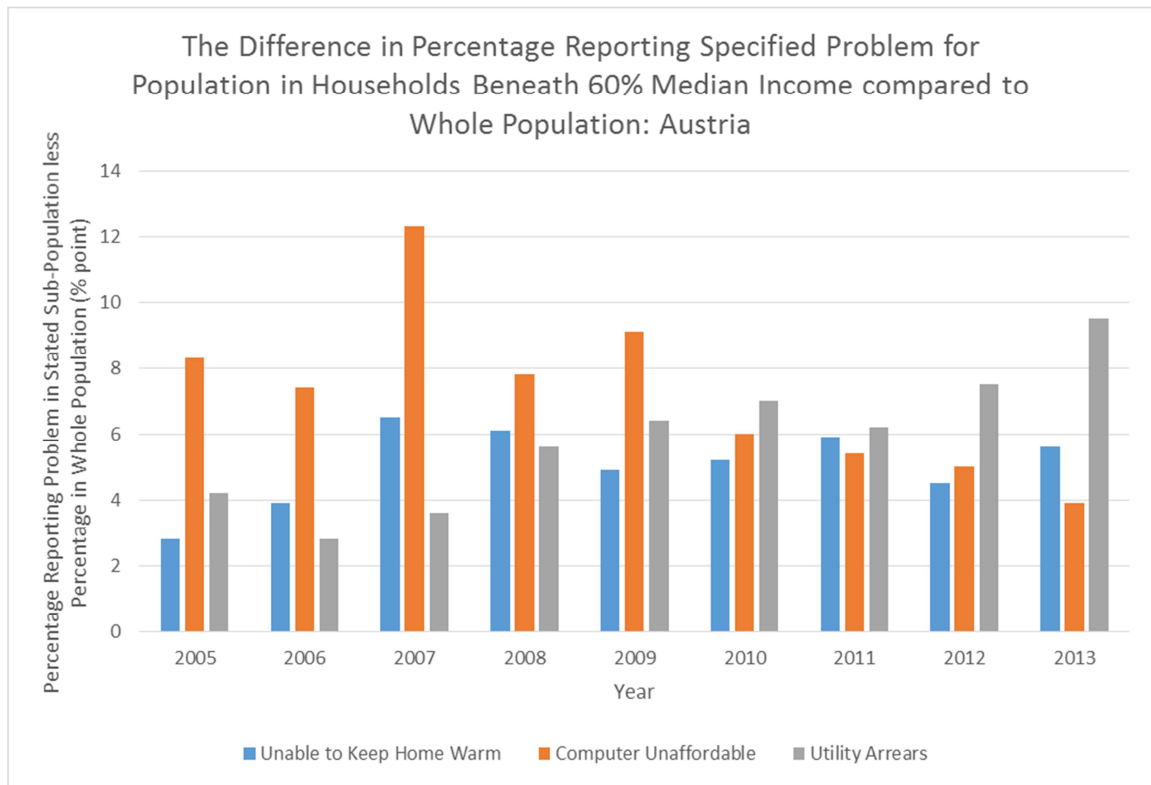
Source: Eurostat and EU-SILC

Chart 29: Percentage of Whole Population Reporting Specified Problem: Austria



Source: Eurostat and EU-SILC

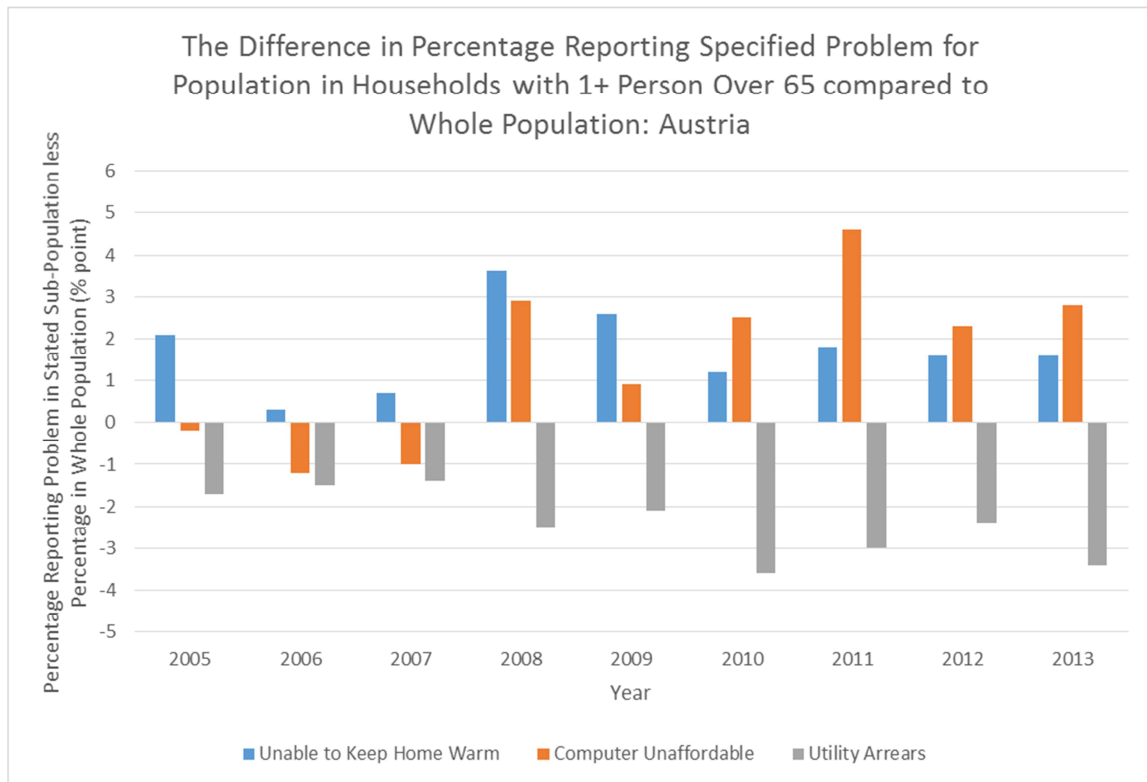
Chart 30: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: Austria



Source: Eurostat and EU-SILC

Not only does Chart 29 show that the rate of those reporting utility arrears in the whole population has increased after 2007, but Chart 30 shows that the rate of increase has been even sharper for those on low incomes. In 2006 around 3 percentage points more people in low income households reported facing utility arrears than in the population as whole, but by 2013 this gap had trebled to over 9 percentage points.

Chart 31: The Difference in Percentage Reporting Specified Problem for Population in Household with 1+ Person Over 65 Compared to Whole Population: Austria

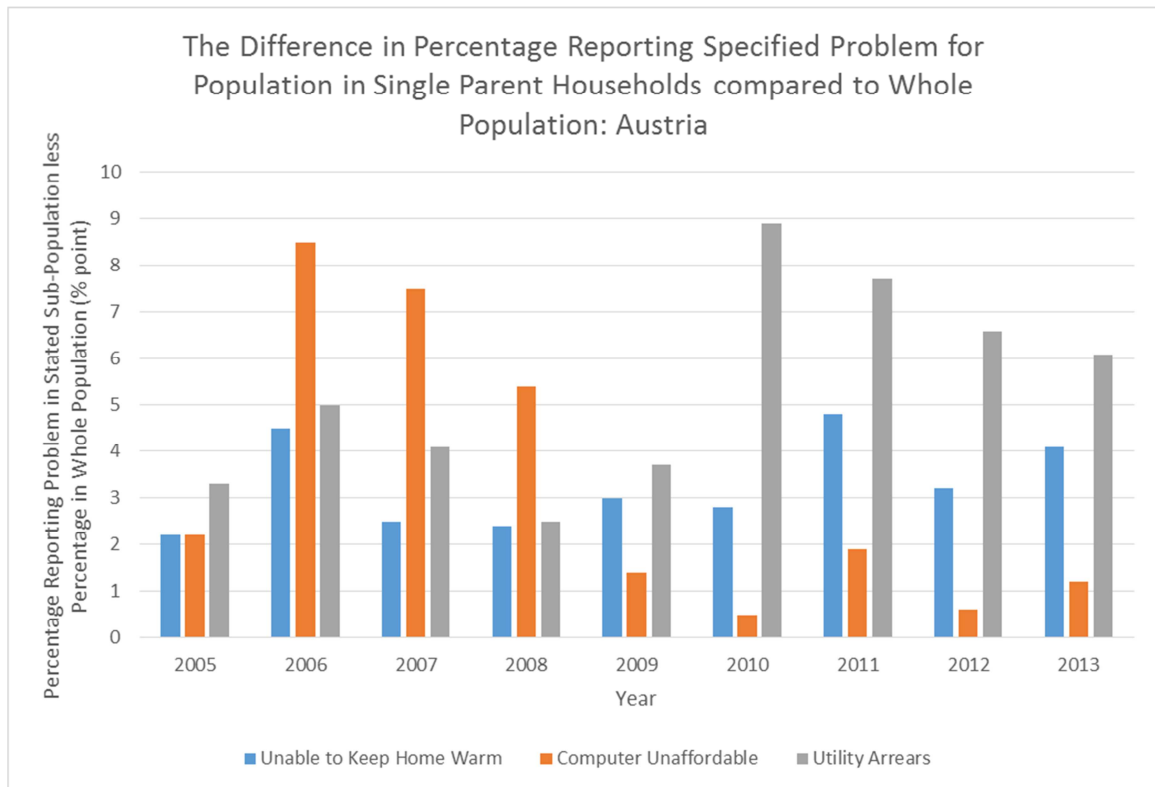


Source: Eurostat and EU-SILC

In contrast, Chart 31 shows that those in households containing someone over 65 became even less likely than the whole population to report utility arrears over the same time period. In 2006 1.5 percentage points fewer of those living in older households reported utility arrears compared to the population as a whole, and by 2013 this gap had widened so that older households were 3 percentage points less likely to report utility arrears. Another trend in Chart 31 is that initially slightly fewer elderly households thought computers were unaffordable than the population as a whole, but from 2008 onwards around 2 percentage points more of those in older households reported being unable to afford a computer compared to the population as whole.

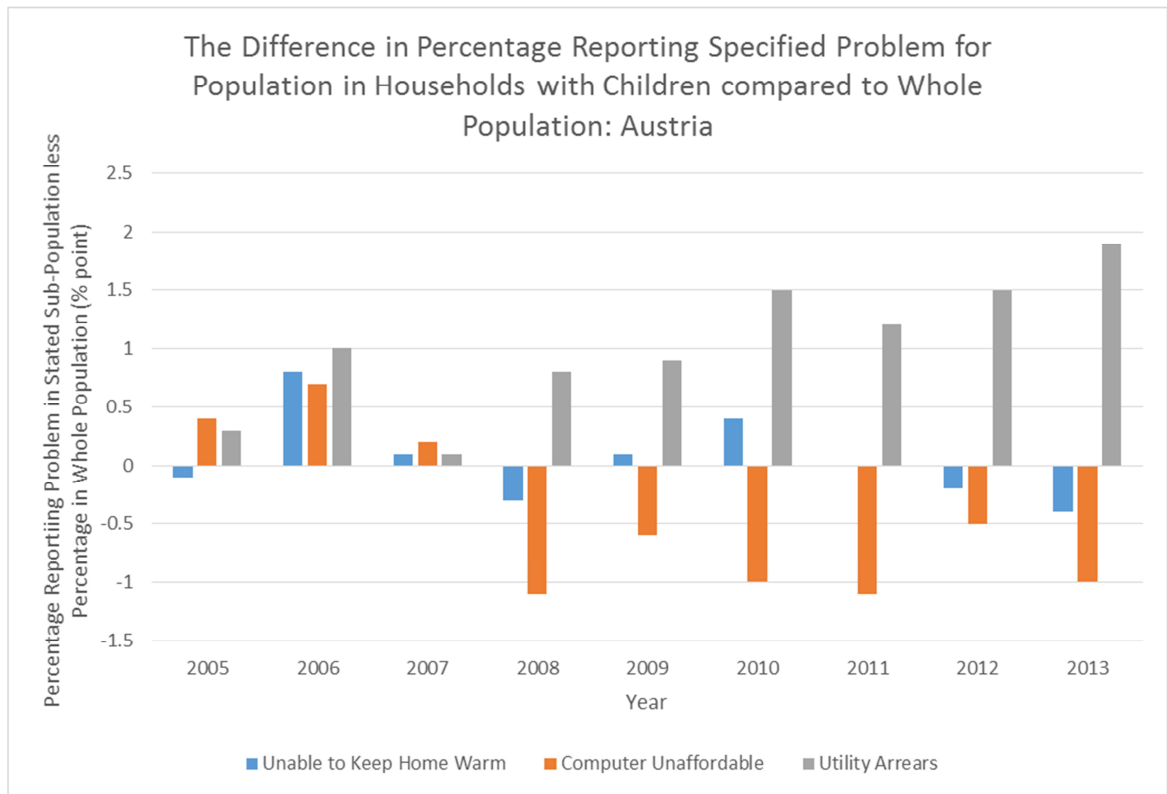
Regarding single parent households, Chart 32 has two key features. Firstly, the gap between the perceptions of single parent households and the population as a whole regarding the affordability of computers was particularly large in the period 2006-2008. Secondly, it appears that there is a significant increase of the gap with the population as whole concerning the percentage of single parent households reporting utility arrears for the years after 2009.

Chart 32: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Households compared to Whole Population: Austria



Source: Eurostat and EU-SILC

Chart 33: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: Austria

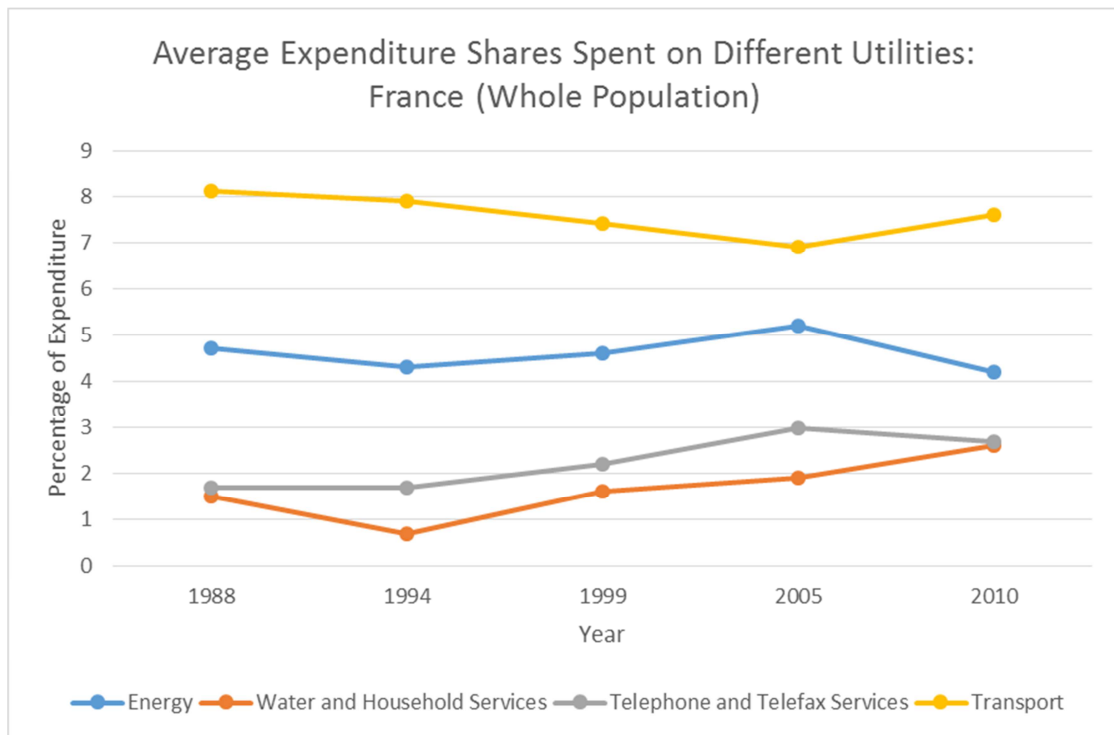


Source: Eurostat and EU-SILC

The gap between all households with children (Chart 33) and the average population regarding the percentage reporting utility arrears widened towards the end of the period, although the increase in this gap is much less pronounced than for single parent households.

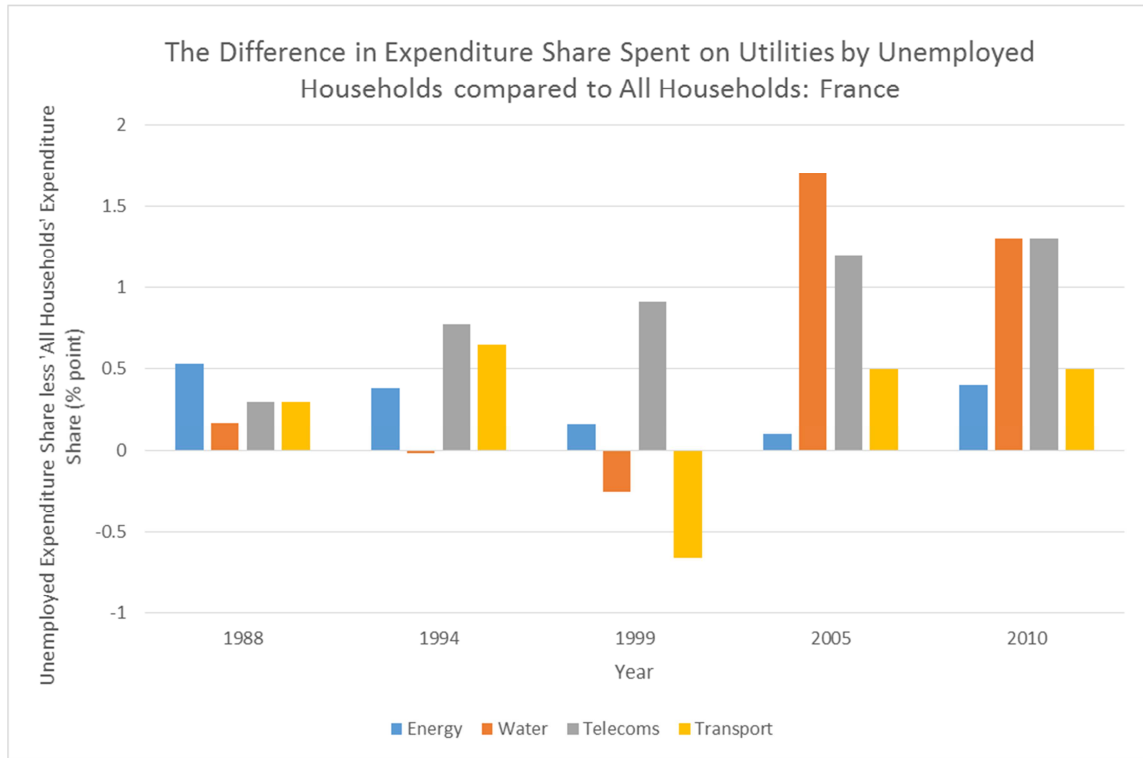
6. France

Chart 34: Average Expenditure Shares Spent on Different Utilities: France (Whole Population)



Source: Eurostat and EU-SILC

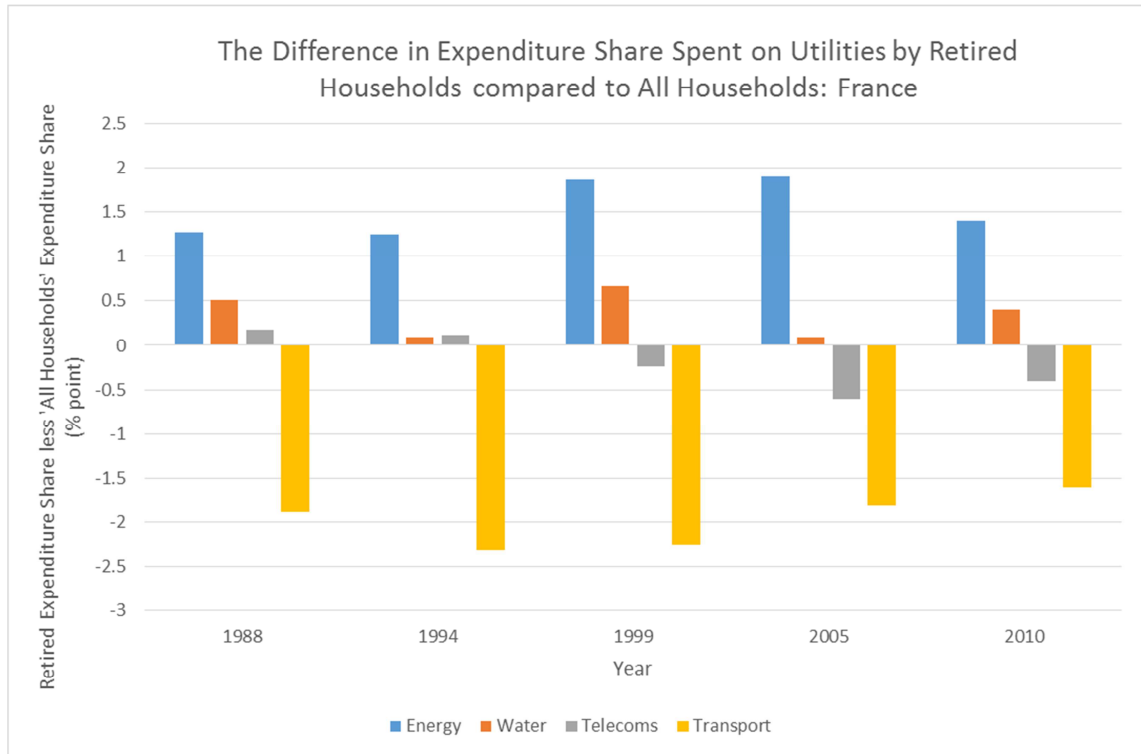
Chart 35: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: France



Source: Eurostat and EU-SILC

Chart 35 shows that the difference in expenditure share devoted to water and telecoms for unemployed households compared to the average increased between 1988 and 2010; in 1988 unemployed households spent only 0.2 percentage points more on water than the average households but by 2005 this gap had grown to around 1.7 percentage points. Similarly, in 1988 the unemployed devoted around 0.3 percentage points more expenditure than average households to telecoms, but by 2010 this figure had increased to 1.3 percentage points.

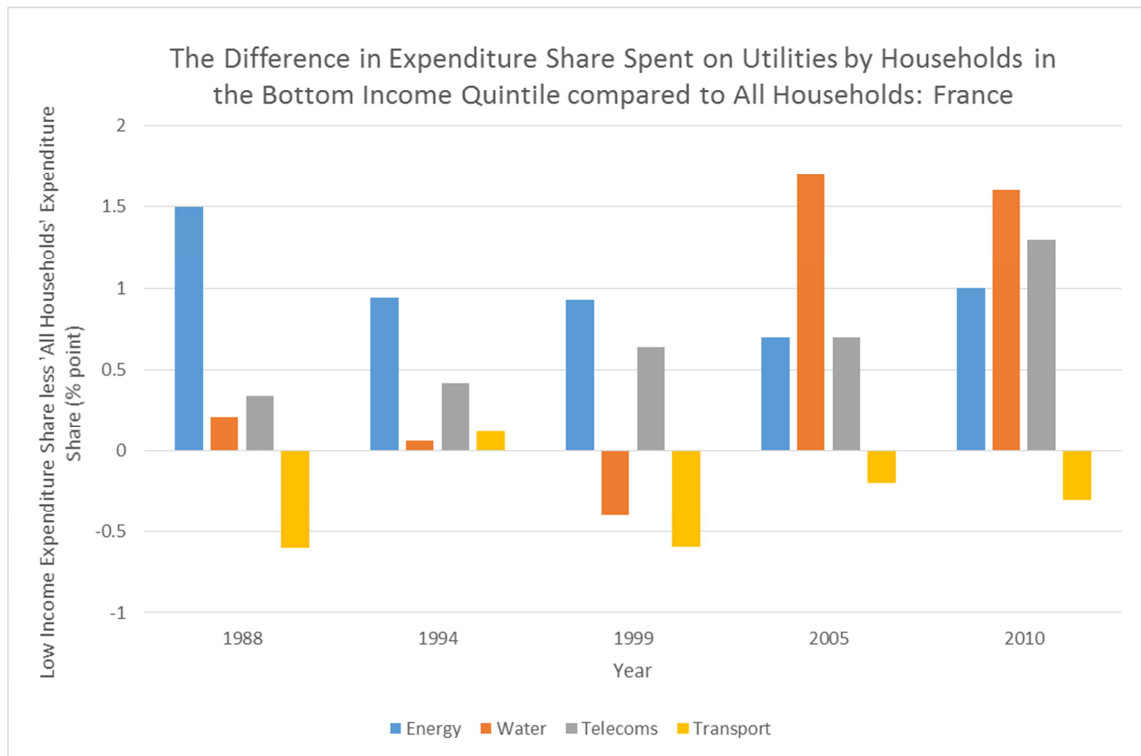
Chart 36: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: France



Source: Eurostat and EU-SILC

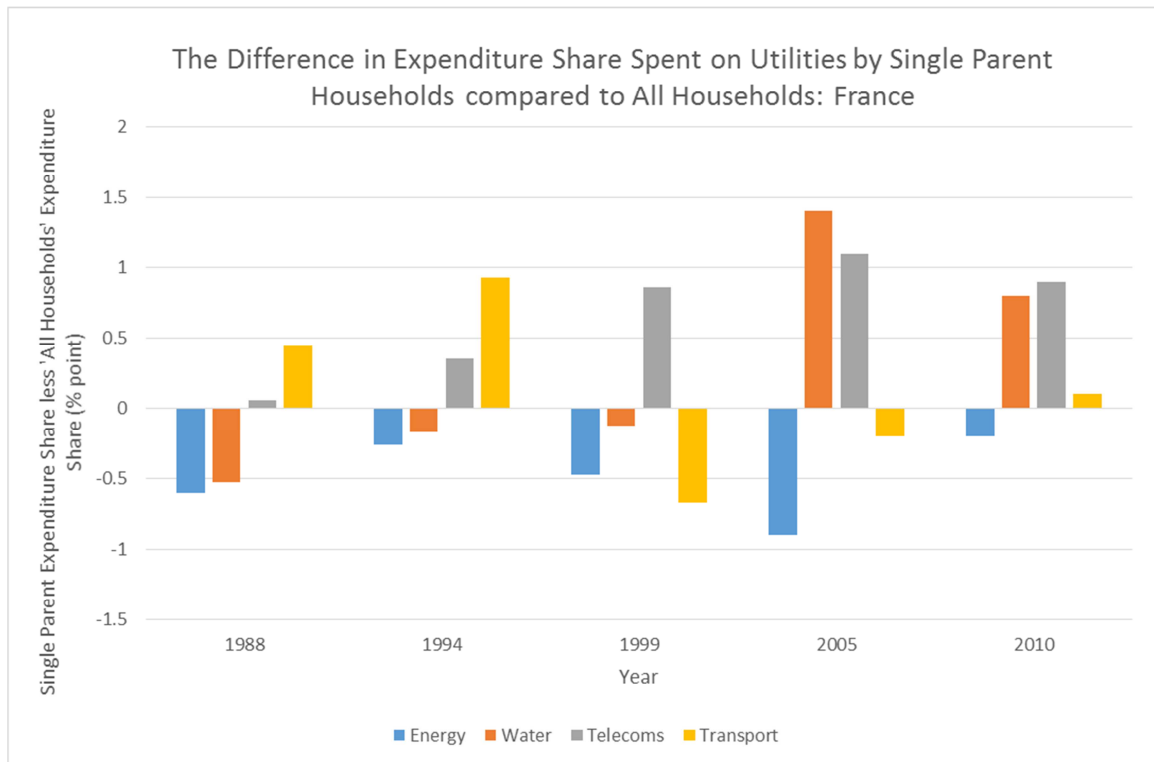
Charts 37 and Charts 38 show that it is not just the unemployed who have seen the affordability of water and telecoms services deteriorate relative to the average household over the period 1988-2010: low income households and single parent households have experienced a similar relative deterioration.

Chart 37: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: France



Source: Eurostat and EU-SILC

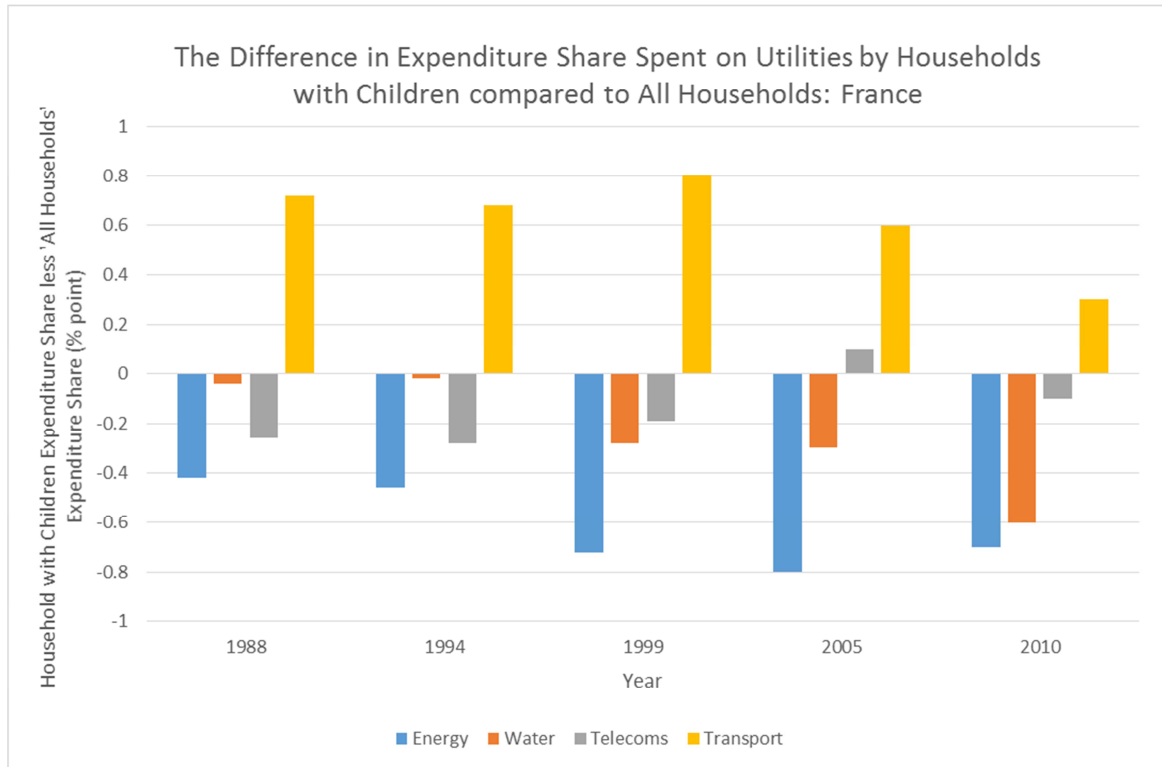
Chart 38: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: France



Source: Eurostat and EU-SILC

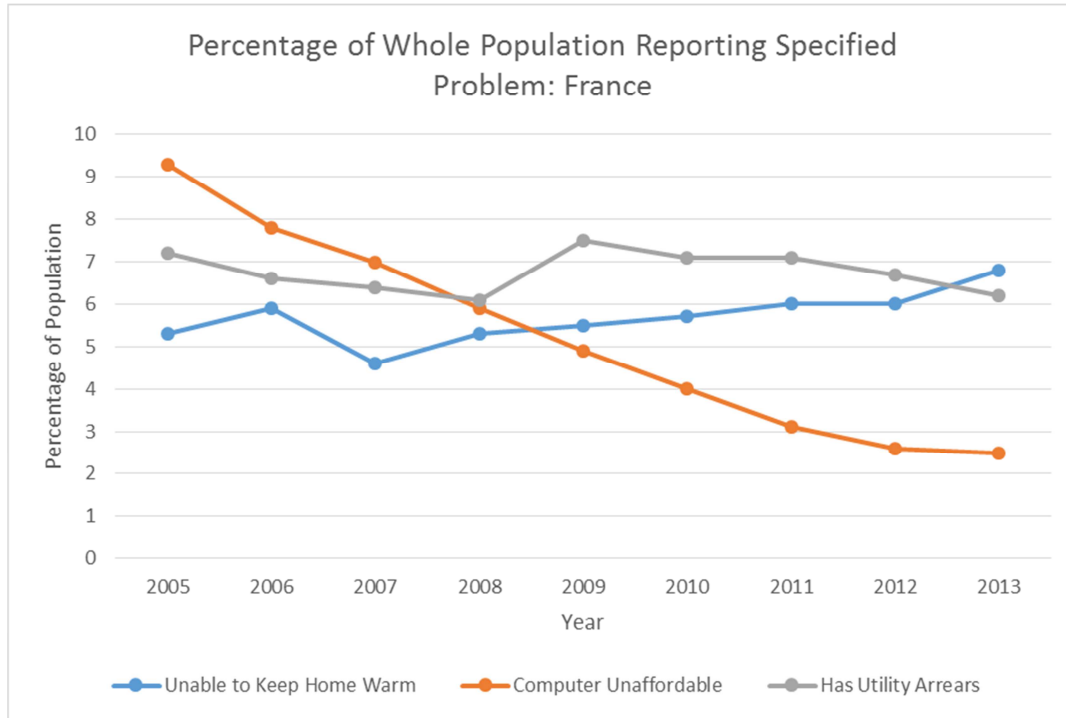
In contrast, Chart 39 shows that the relative affordability position of all households with children improved for energy and water throughout the time period. In 1988 all households with children devoted a similar expenditure share to water as did the average household, and by 2010 all households with children were devoting 0.6 percentage points less expenditure to water than the average. In energy, all households with children went from devoting 0.4 percentage points less expenditure to energy than the average household in 1988, to devoting 0.8 percentage points less expenditure in 2005.

Chart 39: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: France



Source: Eurostat and EU-SILC

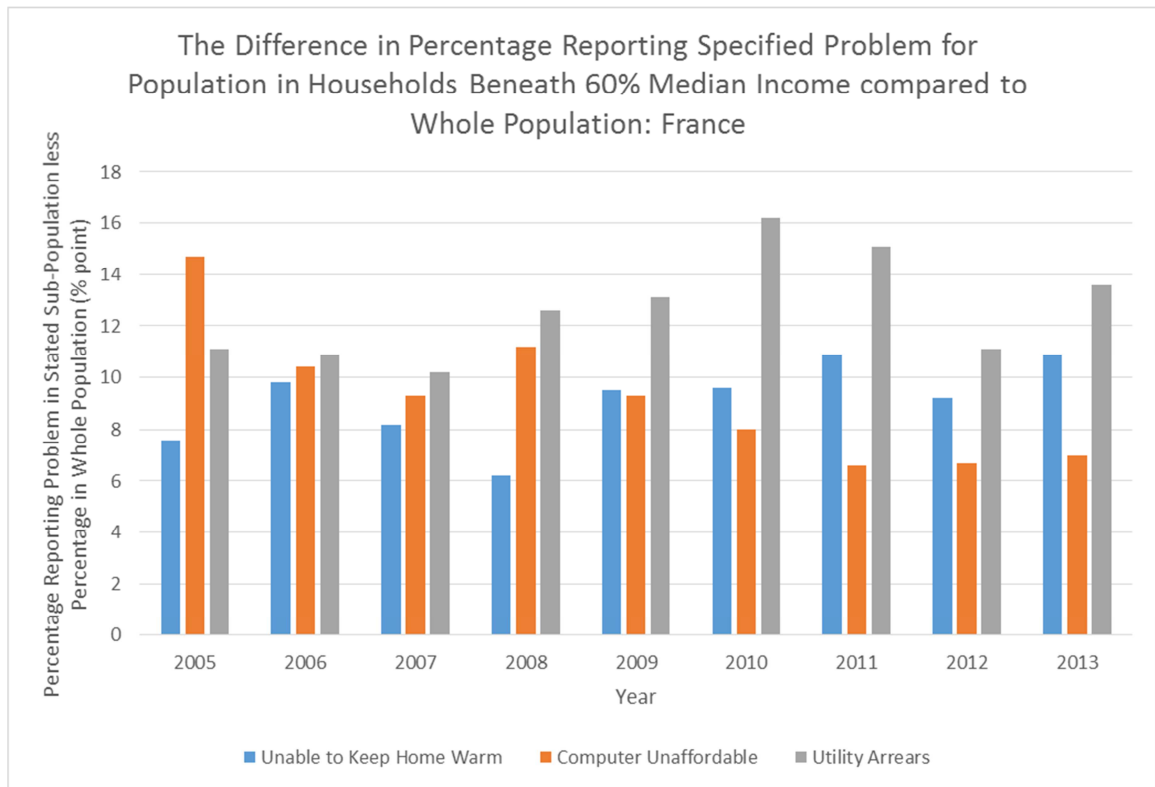
Chart 40: Percentage of Whole Population Reporting Specified Problem: France



Source: Eurostat and EU-SILC

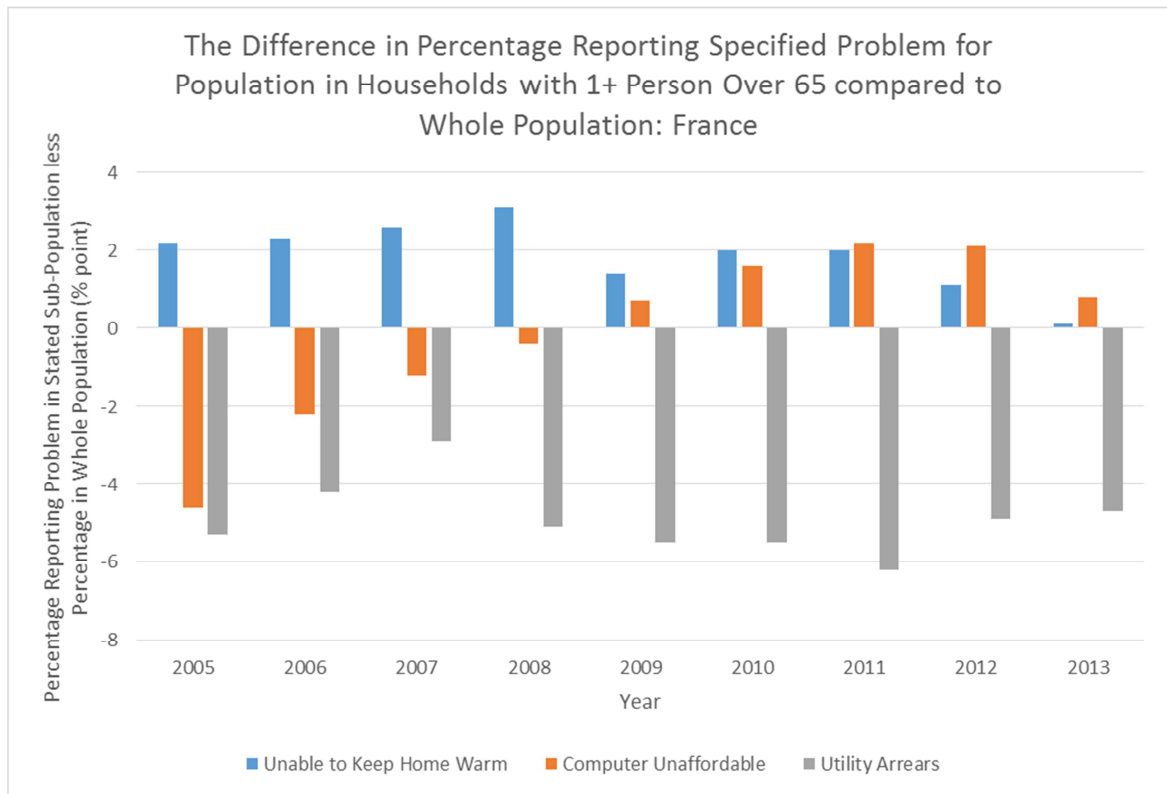


Chart 41: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: France



Source: Eurostat and EU-SILC

Chart 42: The Difference in Percentage Reporting Specified Problem for Population in Households with 1+ Person Over 65 compared to Whole Population: France

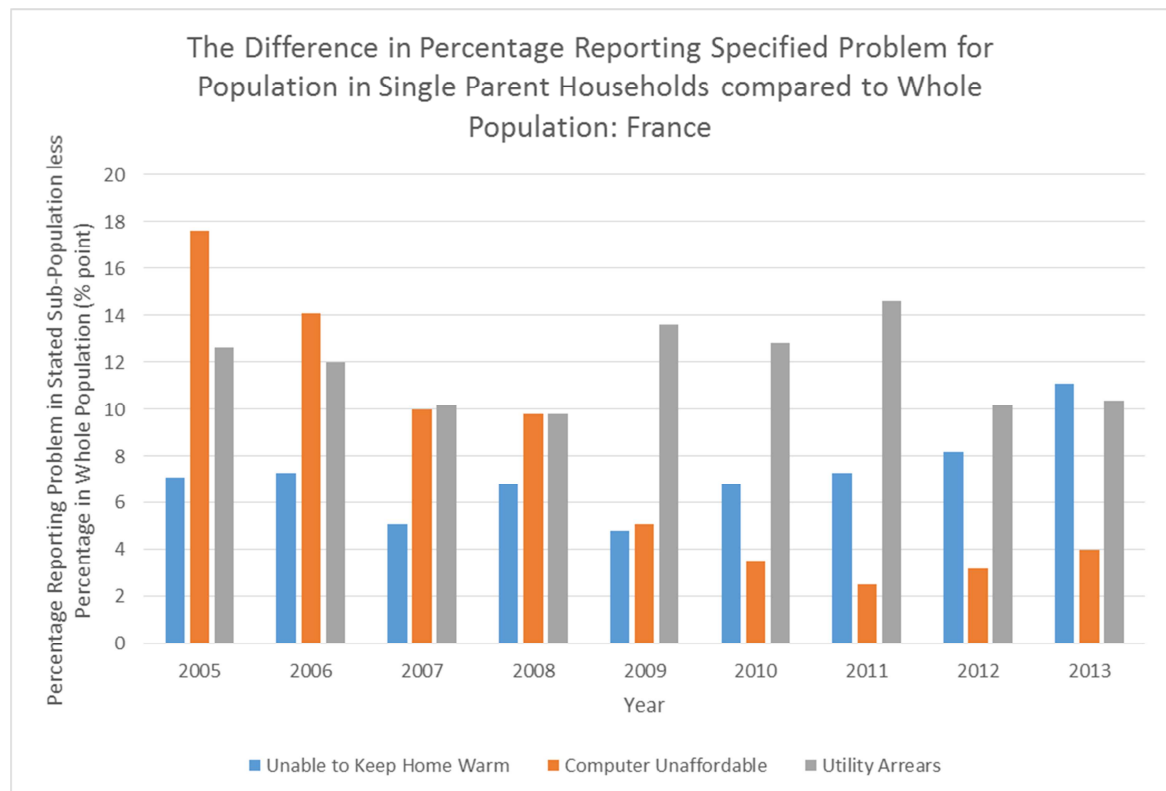


Source: Eurostat and EU-SILC

Charts 41 and 42 show no particularly stark trends, although it is worth noting the contrasting experiences relating to the gaps between the percentage of the relevant sub-population reporting a computer as unaffordable compared to the population as a whole. Chart 41 shows that perceptions of computer affordability amongst low income households have converged with those of the whole population. In 2005, 14 percentage points more of those in low income households reported computers as being unaffordable, compared to the population as a whole, but by 2013 this gap had fallen to around 7 percentage points. In contrast, older households reporting a computer as being unaffordable moved from being below the figure for the whole population to being above the average between 2005 and 2013. This trend of the relative affordability of computers among older households worsening over the period 2005-2013 appears fairly common. One interpretation is that during this time a greater proportion of older households are deciding they would like/need a

computer, and that this increase in demand/desirability³ has been occurring particular amongst older households with fewer financial resources.

Chart 43: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Households compared to Whole Population: France

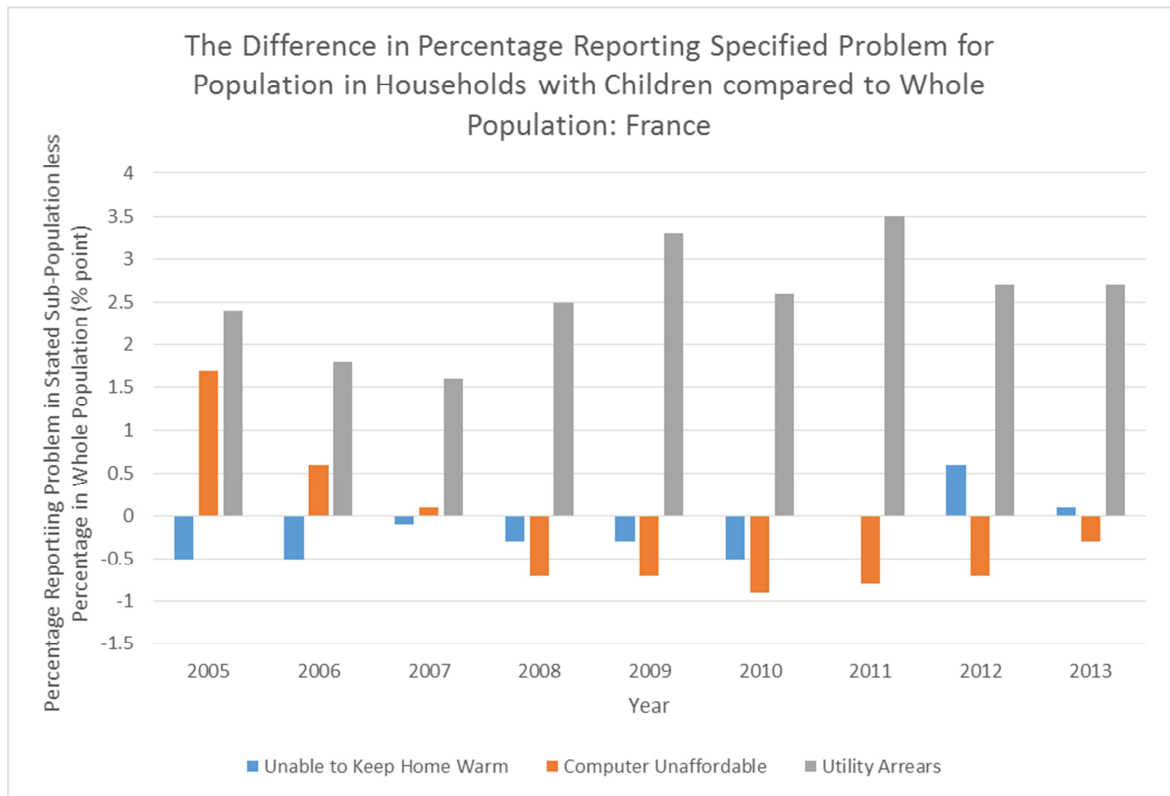


Source: Eurostat and EU-SILC

The convergence in the percentage of single parent households reporting a computer as being unaffordable to levels in the population as a whole has been particularly striking in France. In 2005 the rate reporting a computer as unaffordable was over 17 percentage points higher among those living in single parent households compared to the whole population, but by 2011 this gap had fallen to just over 2 percentage points. Less encouragingly, since 2009 the gap between the proportion of those in single parent households reporting an inability to heat their home and the proportion in the population as a whole has widened from around 5 to 11 percentage points by 2013. For those in all households containing children (Chart 44) the rate reporting utility arrears has increased somewhat since 2007 compared to the population as a whole.

³ The percentages of those reporting an inability to afford a computer are based only on the sub-population of those households which have expressed a desire for a computer/ownership of a computer.

Chart 44: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: France

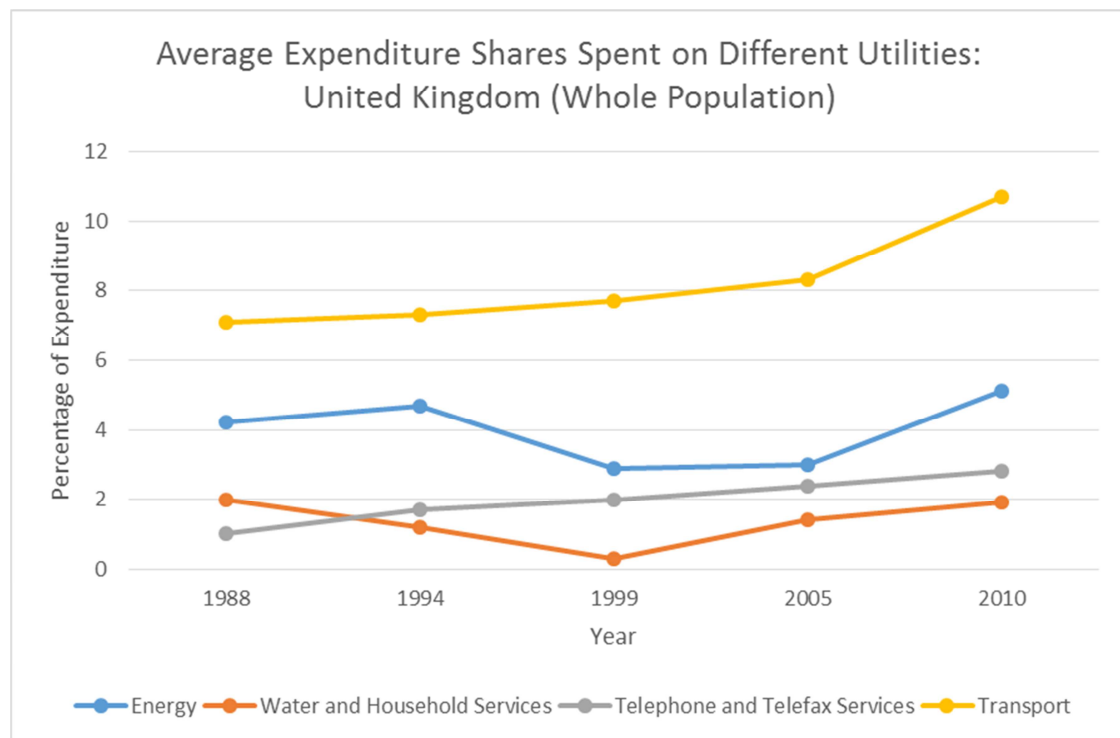


Source: Eurostat and EU-SILC

7. United Kingdom

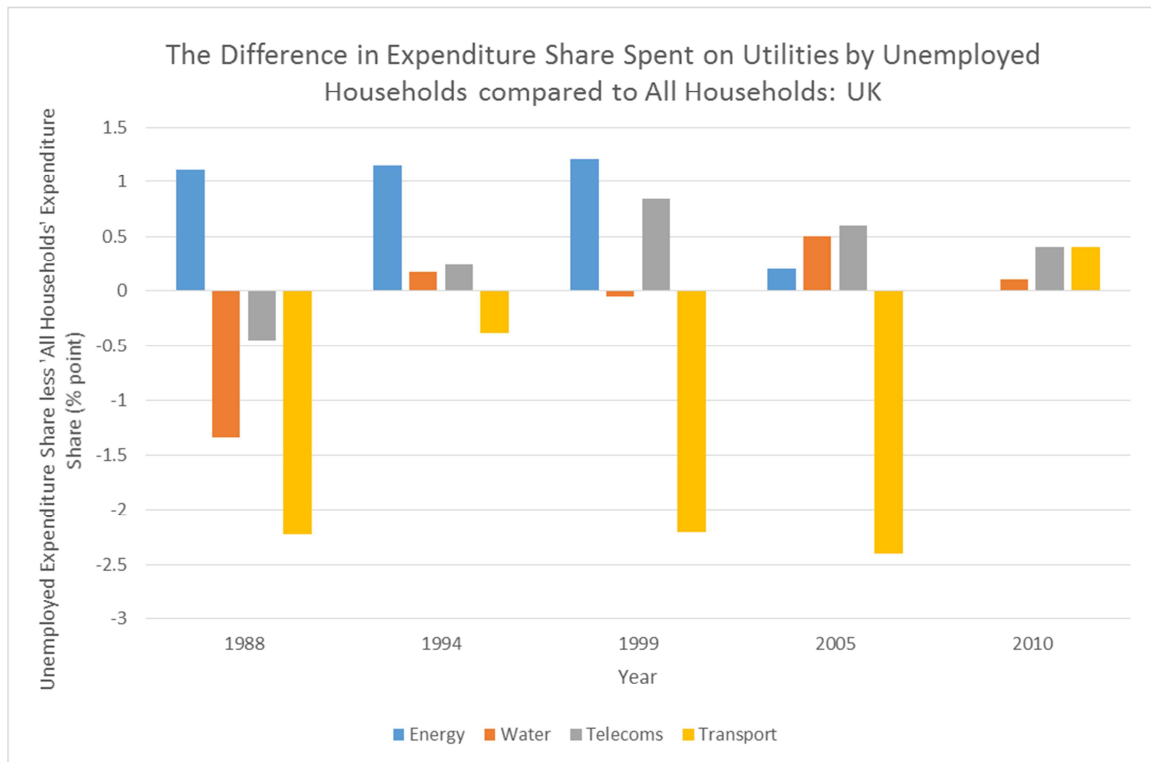
In the United Kingdom unemployed and retired households seem to have experienced some convergence to the expenditure shares devoted to the utilities by the population as whole since 1999. Chart 46 shows that while in 1999 the unemployed devoted an expenditure share to energy that was more than a percentage point higher than the population average, by 2005 this difference had narrowed to less than a quarter of a percentage point. Between 2005 and 2010 there has been an even more dramatic change in the relative position of the unemployed regarding transport spending, from almost 2.5 percentage points less of their total expenditure on transport than the average household to almost 0.5 percentage points more than the average. This relative increase is even more dramatic when one considers that the average household saw its expenditure share devoted to transport rise by around 2 percentage points over the same time period.

Chart 45: Average Expenditure Shares Spent on Different Utilities: United Kingdom (Whole Population)



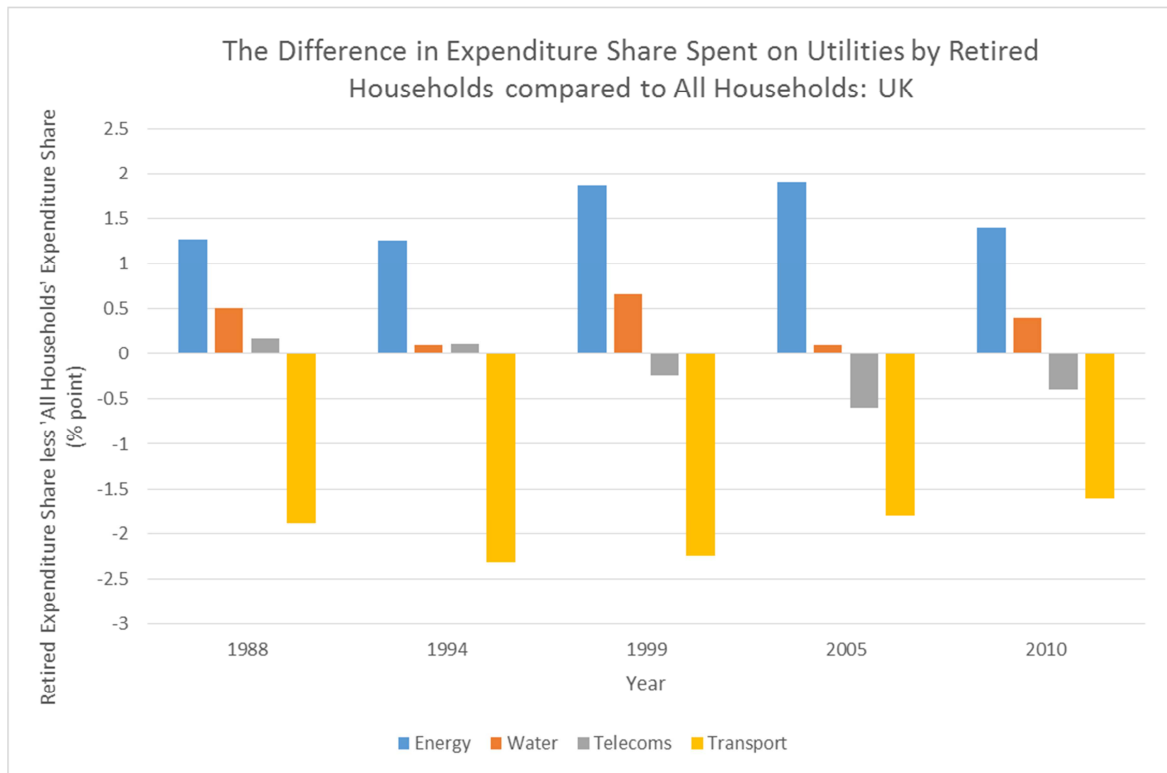
Source: Eurostat and EU-SILC

Chart 46: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: UK



Source: Eurostat and EU-SILC

Chart 47: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: UK



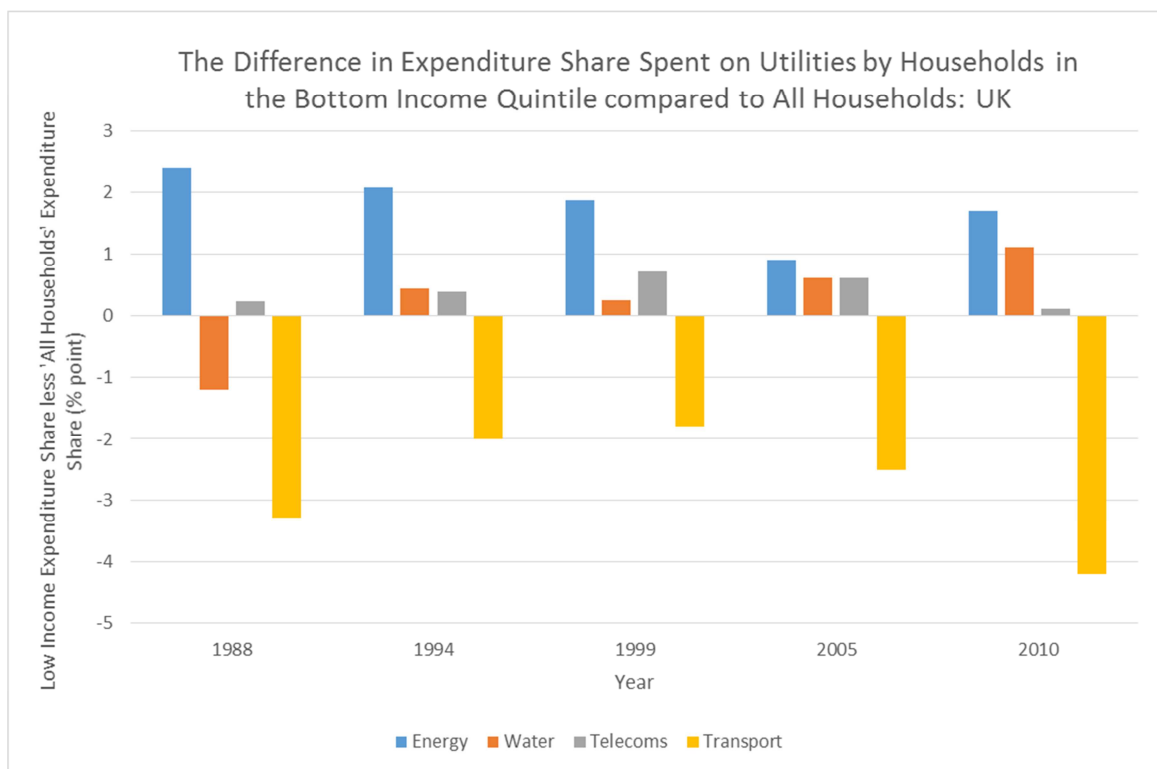
Source: Eurostat and EU-SILC

While unemployed households moved towards the average expenditure share devoted to transport, Chart 48 shows that households in the 20% of lowest incomes experienced increased deviation of their expenditure share devoted to transport compared with the average household between 1999 and 2010. In 1999 low income households spent approximately 2 percentage points less than average households on transport, and by 2010 this expenditure share was more than 4 percentage points less than average. However, in a longer run perspective the relative position of low income households regarding transport spending in 2010 is only slightly further from the average household than it was in 1988.

The theme of diverging transport expenditure shares continues into Chart 49 with single parent households showing a very marked divergence from average households since 1988. In 1988 single parent households devoted very similar expenditure shares to those of the average household to each of the utility sectors, but by 2010 single parent households in the UK were devoting 5 percentage points less of their expenditure to transport than average. However this very large divergence through time is not matched in the other utilities, and no similar divergence is apparent for the wider group of all households containing children shown in Chart 50. Noting the different

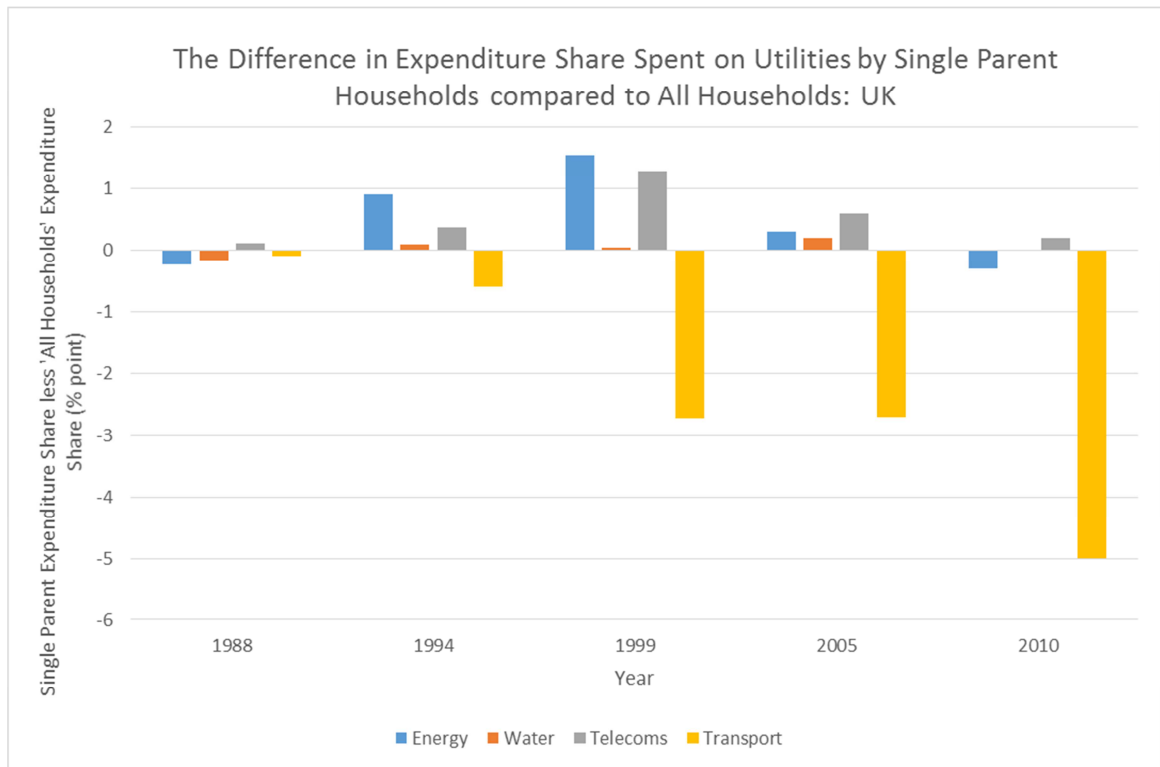
scale of the vertical axis in Chart 50, the group of all households with children is relatively close to the average household in every utility sector. That in energy, water and telecoms, households with children devote a slightly lower expenditure share than the average household probably results from a higher average income of households with children.

Chart 48: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: UK



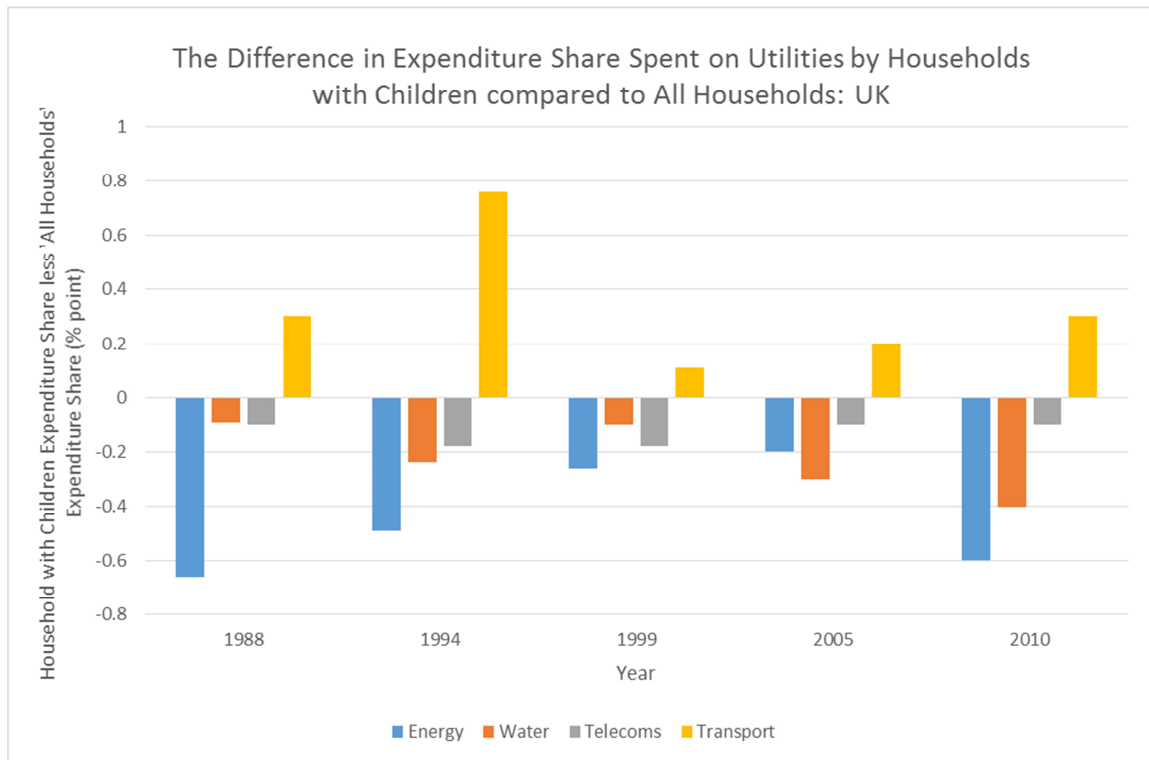
Source: Eurostat and EU-SILC

Chart 49: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: UK



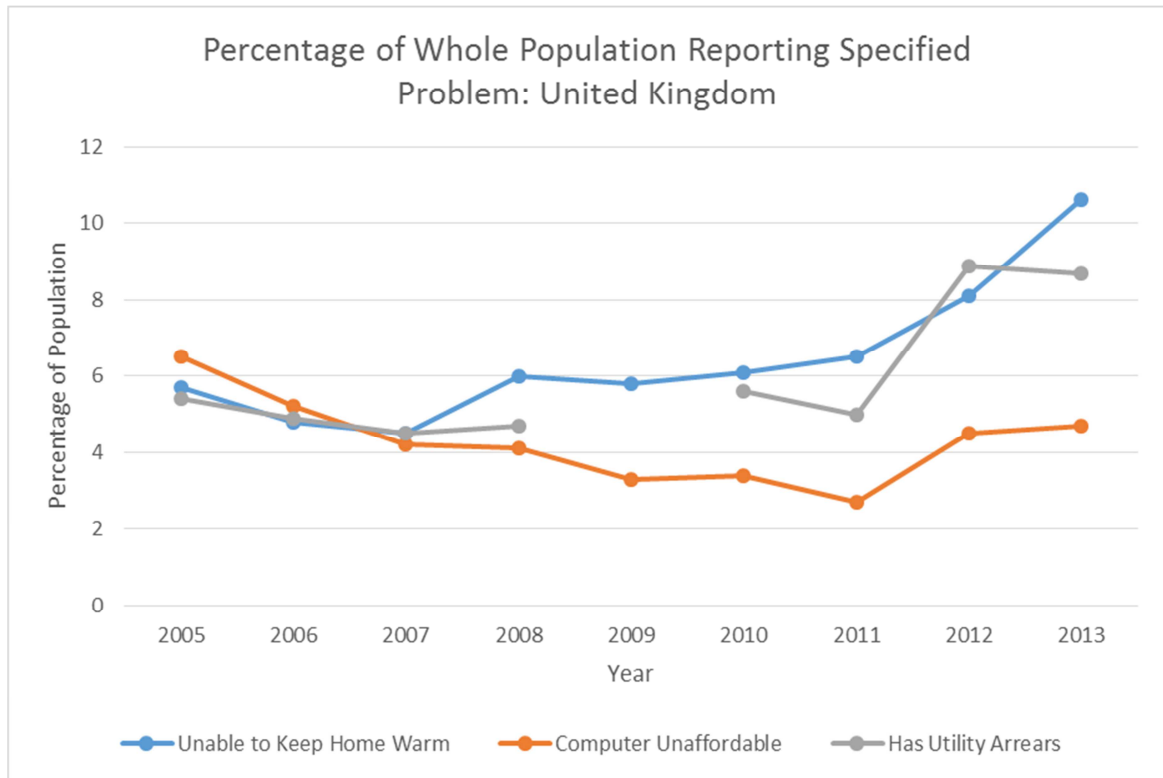
Source: Eurostat and EU-SILC

Chart 50: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: UK



Source: Eurostat and EU-SILC

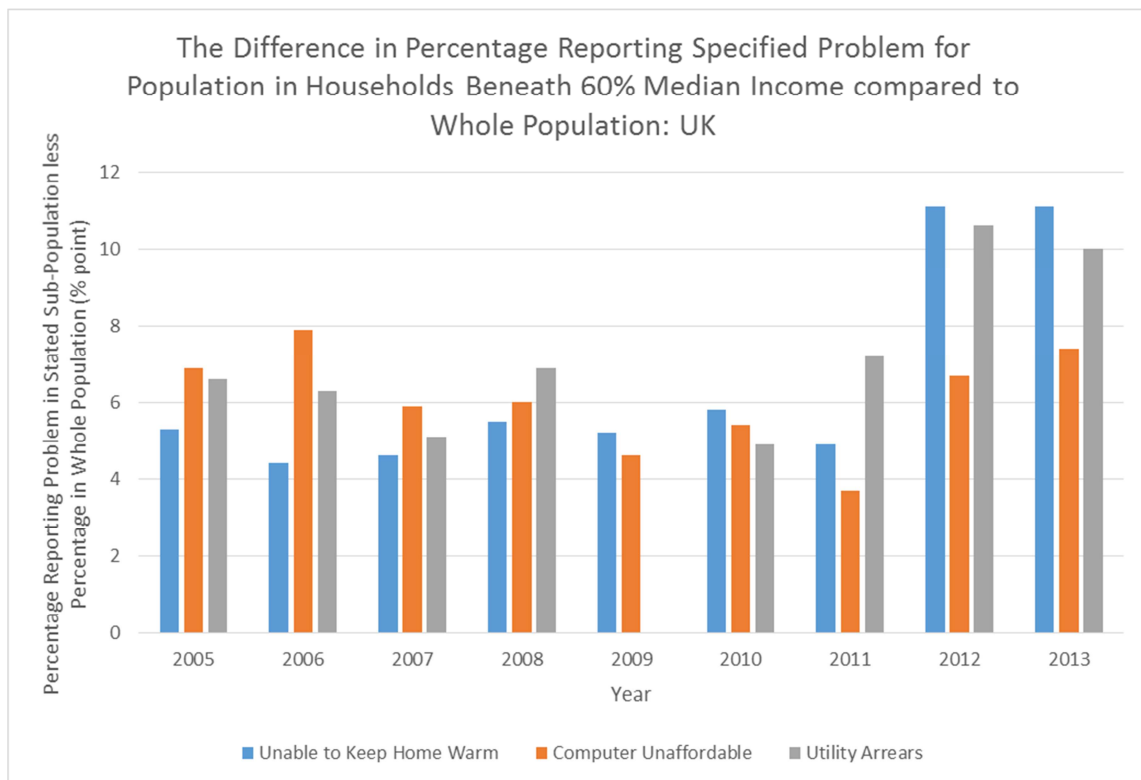
Chart 51: Percentage of Whole Population Reporting Specified Problem: United Kingdom



Source: Eurostat and EU-SILC

Chart 52 shows an expected, consistently higher level of reporting being unable to keep their home adequately warm, being unable to afford a computer and facing arrears on their utility bills amongst low income households. While during 2005-2010 the gap between low income households and the population average was fairly constant both across years and across the different affordability indicators, after 2011 the gap between low income households and the population average increases dramatically. For example, between 2011 and 2012 the gap between low income households reporting difficulties in keeping their home warm and the national average more than doubled from around 5% to around 11%.

Chart 52⁴: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: UK

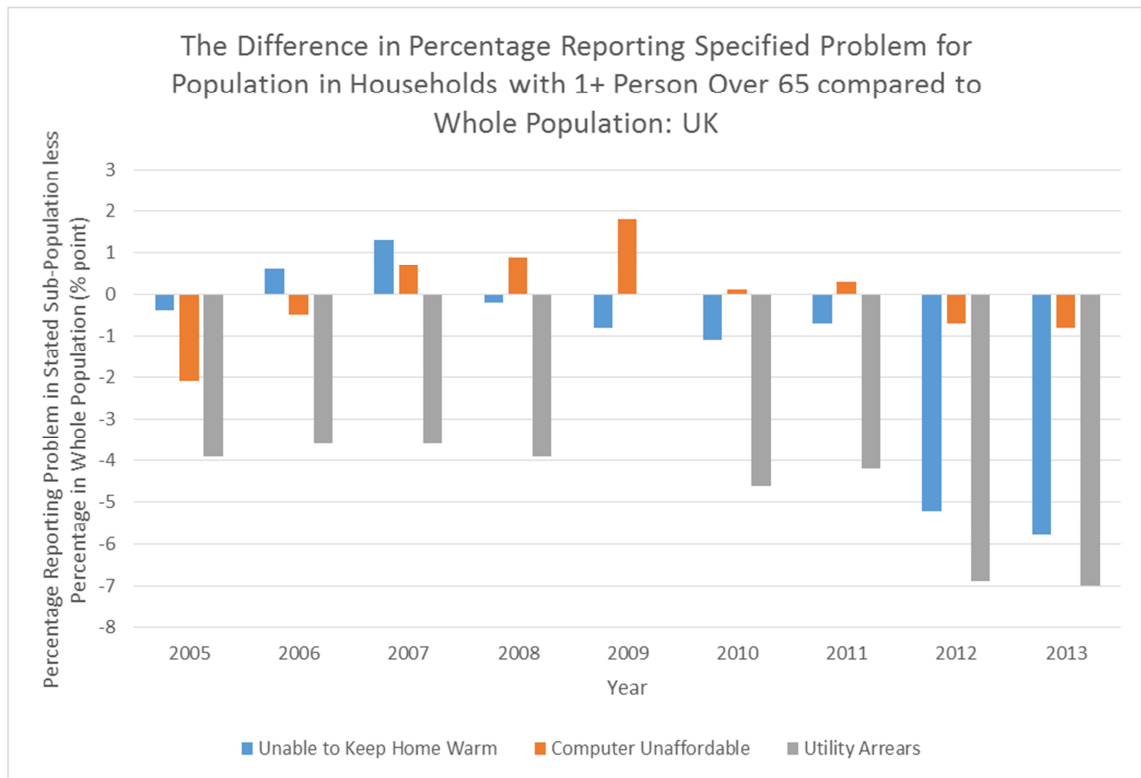


Source: Eurostat and EU-SILC

In contrast, Chart 53 shows that between 2011 and 2012 households with at least one person over 65 found themselves diverging from the national averages in the opposite direction: between 2011 and 2012 the older households went from a rate of reporting difficulties keeping their home warm that was less than one percentage point below the average to a rate that was more than five percentage points below the national average, perhaps providing evidence of a ‘success’ for policies aimed at reducing fuel poverty amongst the elderly in the UK. Older households consistently report a lower rate of arrears on their utility bills than the national average throughout the time period. Possible explanations for this observation include: older households are wealthier, the cohort of older householders are more likely to budget carefully, or older individuals are less likely to report arrears due to the historical social stigma attached to debt.

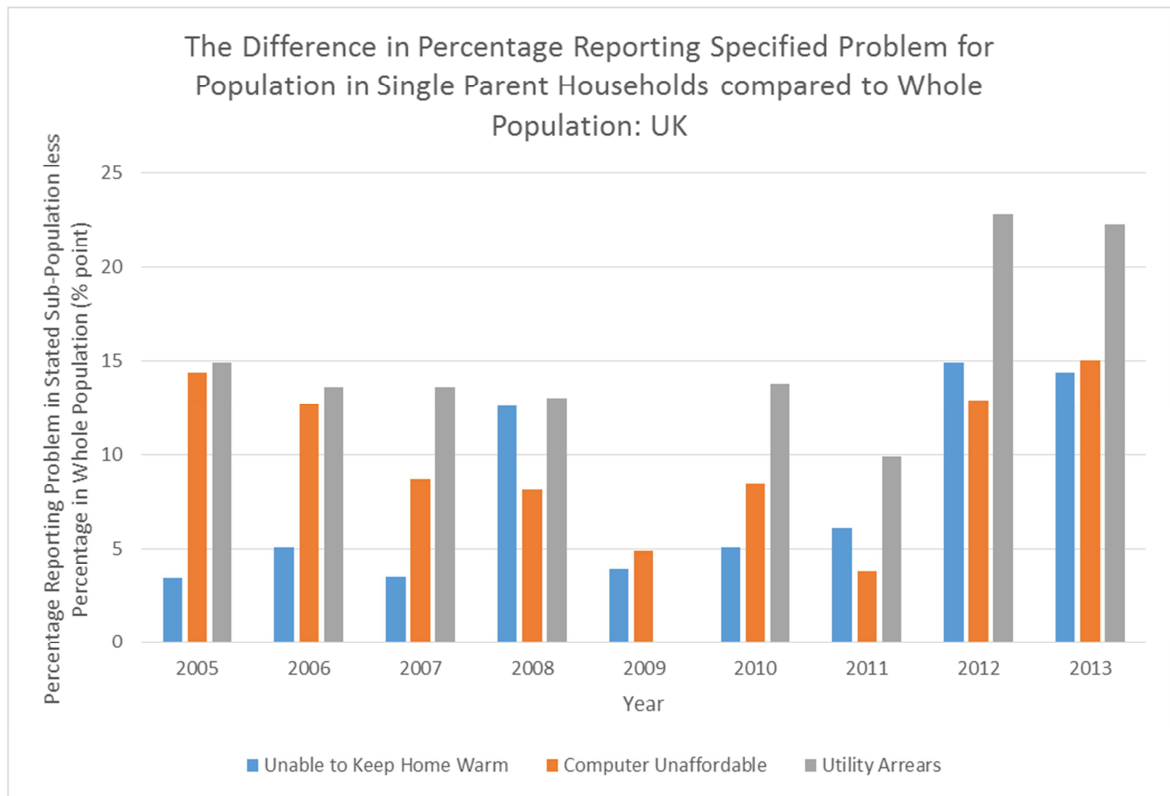
⁴ In Charts 52 to 55 no data was available for the proportion of households reporting utility arrears in 2009. The absence of a grey bar in 2009 is due to missing data rather than all the household subgroups having expenditure shares identical to the average.

Chart 53: The Difference in Percentage Reporting Specified Problem for Population in Households with 1+ Person Over 65 compared to Whole Population: UK



Source: Eurostat and EU-SILC

Chart 54: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Households compared to Whole Population: UK

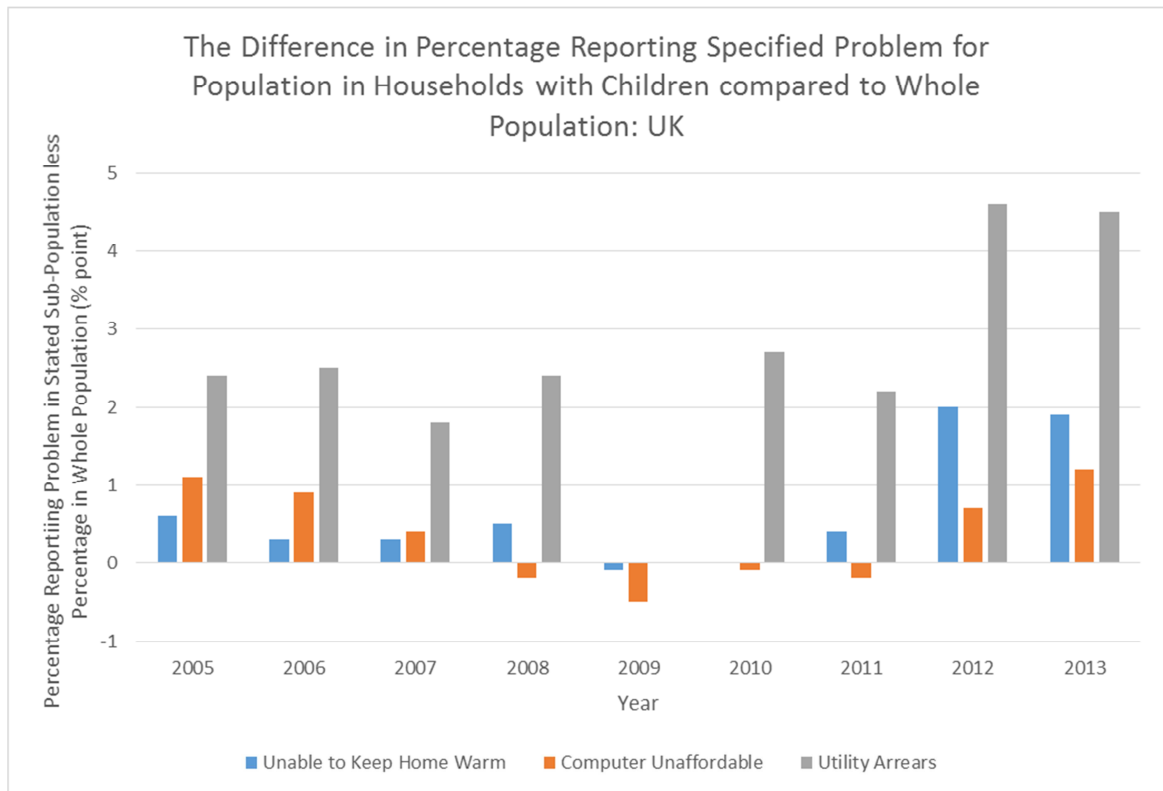


Source: Eurostat and EU-SILC

As for low income households, Chart 54 shows single parent households reported markedly increased divergences above the national average for all three of the affordability difficulty indicators after 2011. For example, the gap between the proportion of single parent households reporting utility arrears and the proportion of all households reporting utility arrears rose from 10 percentage points to more than 20 percentage points. Single parent households report the largest gaps to the national averages of any group. Another interesting feature of Chart 54 is the spike in the size of gap relating to difficulties keeping warm in 2008, perhaps reflecting the onset of the Great Recession and choices to economise on heat.

Chart 55 shows that the affordability indicators for all households with children also worsened relative to the national average post-2011, though by nowhere near the same margin as for single parents.

Chart 55: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: UK

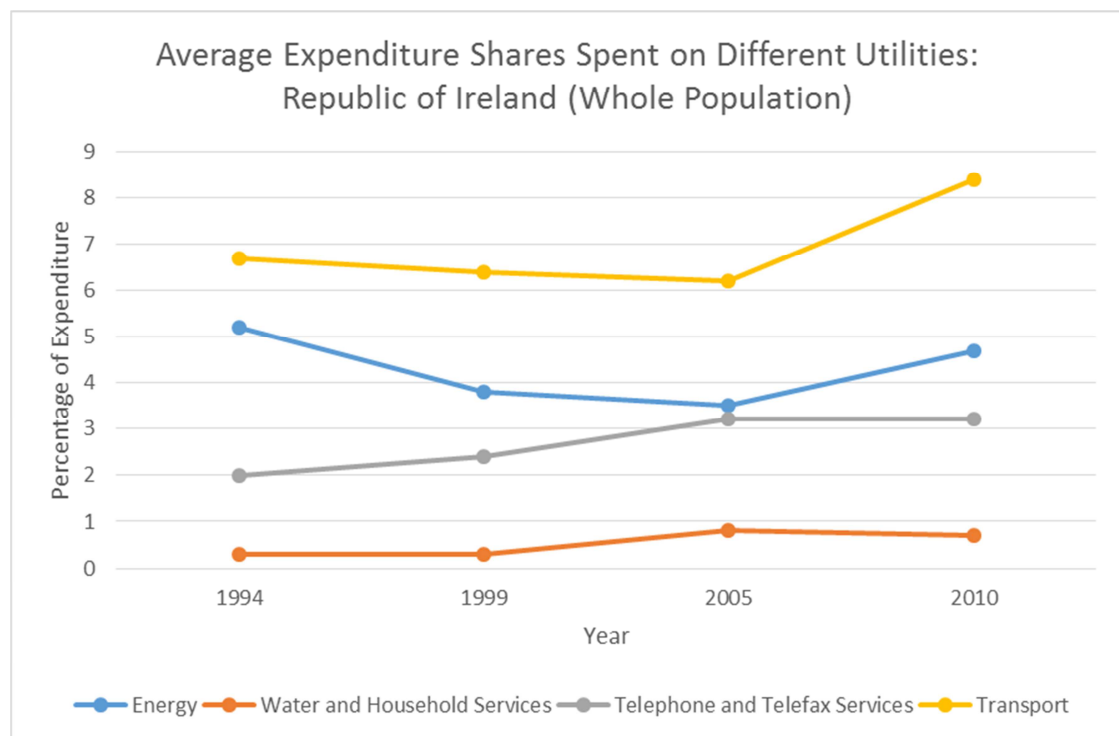


Source: Eurostat and EU-SILC

8. Republic of Ireland

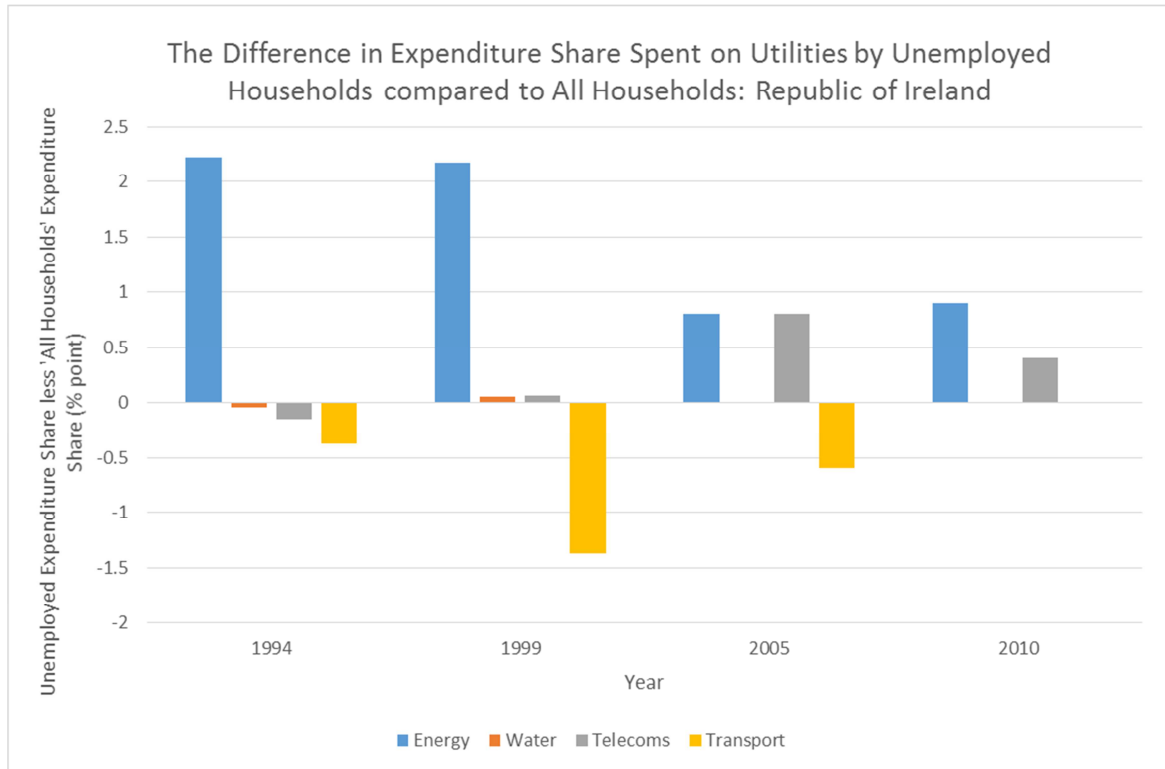
In the Republic of Ireland between 1999 and 2010 the gap in the expenditure share devoted to energy by the unemployed, relative to the average expenditure share across all households, more than halved. However, the reduction in the gap of over 1 percentage point shown in Chart 57 seems not to be related to any absolute improvement in the economic position of the unemployed, but simply reflects the increase in expenditure share devoted to energy by other households between 1999 and 2005 (see Chart 56). The same comment applies to retired households who experienced convergence to the average expenditure share on energy as shown in Chart 58.

Chart 56: Average Expenditure Shares Spent on Different Utilities: Republic of Ireland (Whole Population)



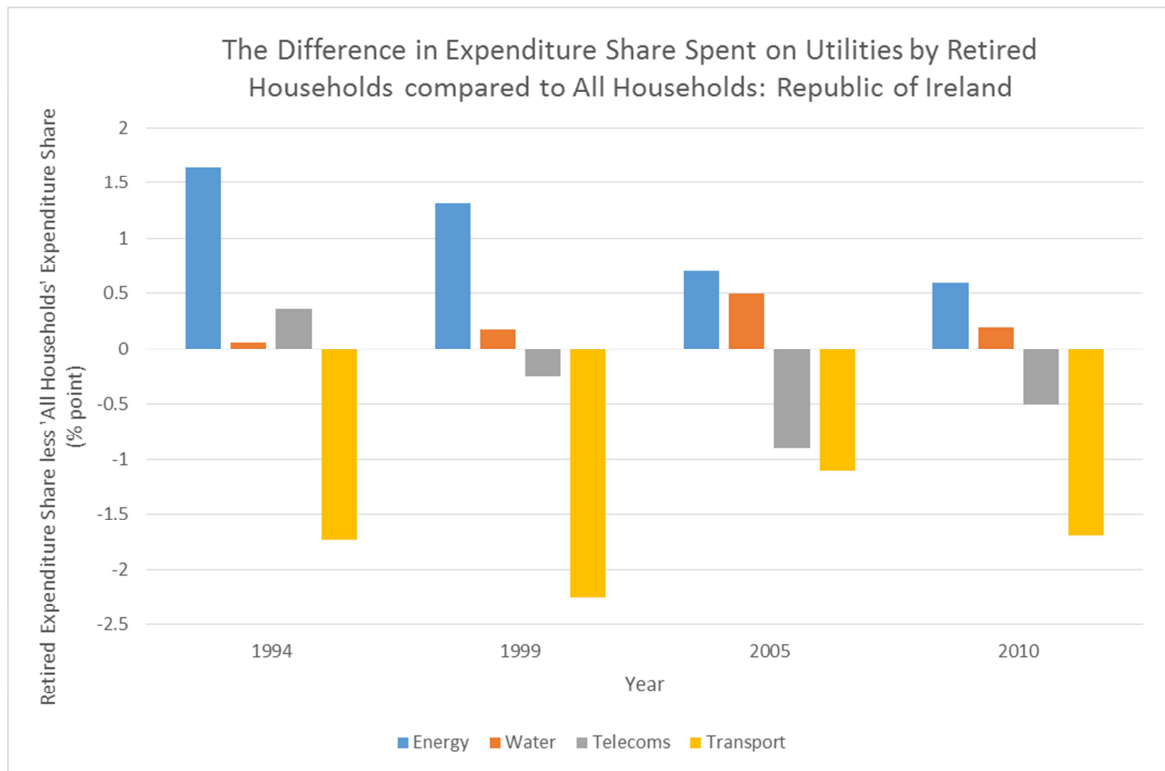
Source: Eurostat and EU-SILC

Chart 57: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: Republic of Ireland



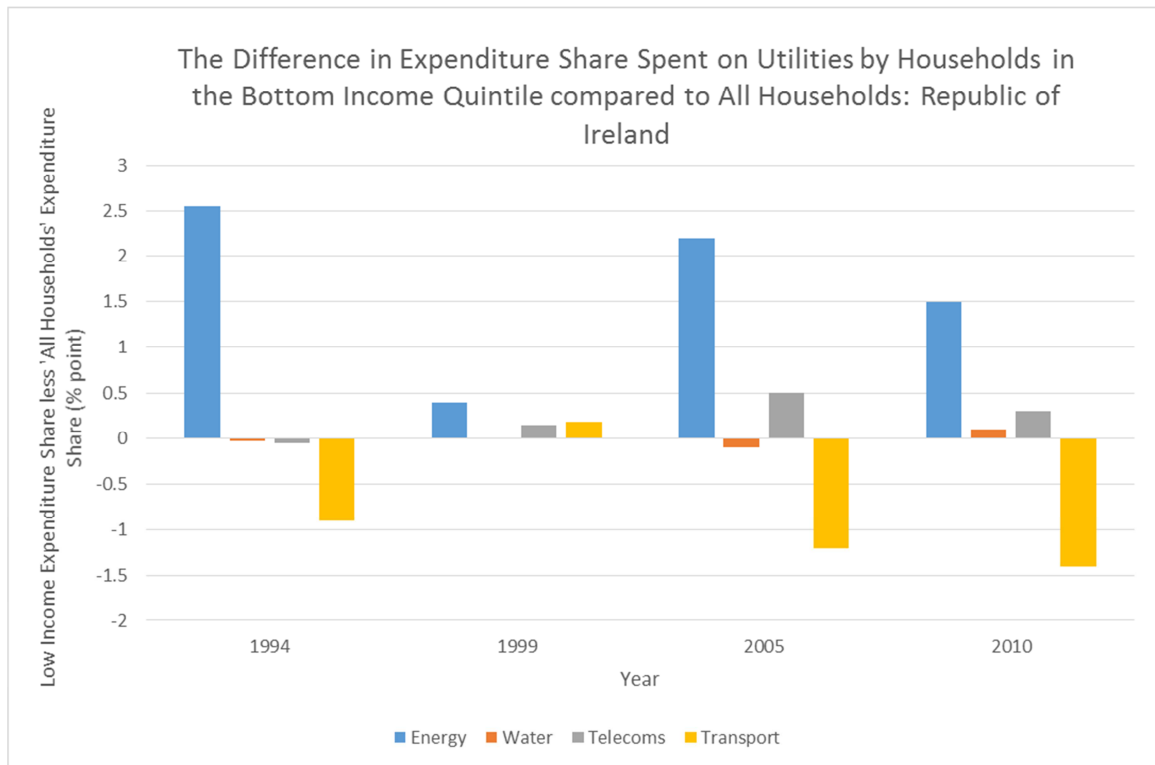
Source: Eurostat and EU-SILC

Chart 58: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: Republic of Ireland



Source: Eurostat and EU-SILC

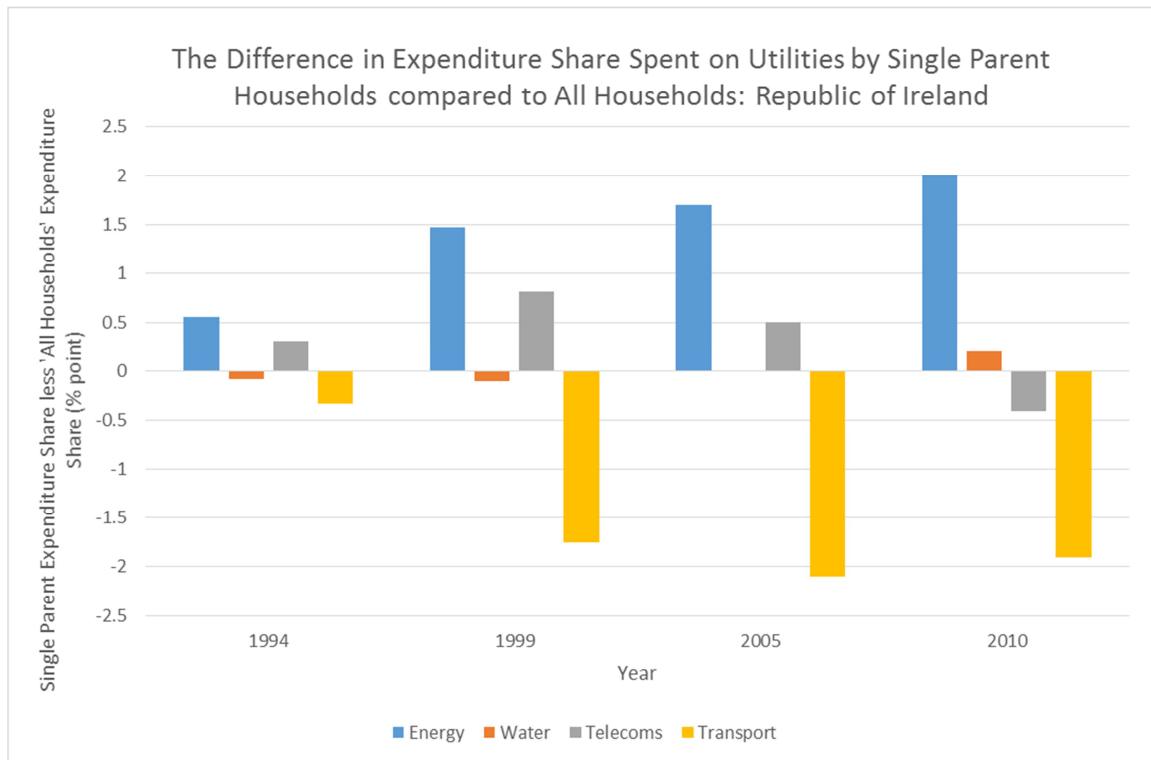
Chart 59: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: Republic of Ireland



Source: Eurostat and EU-SILC

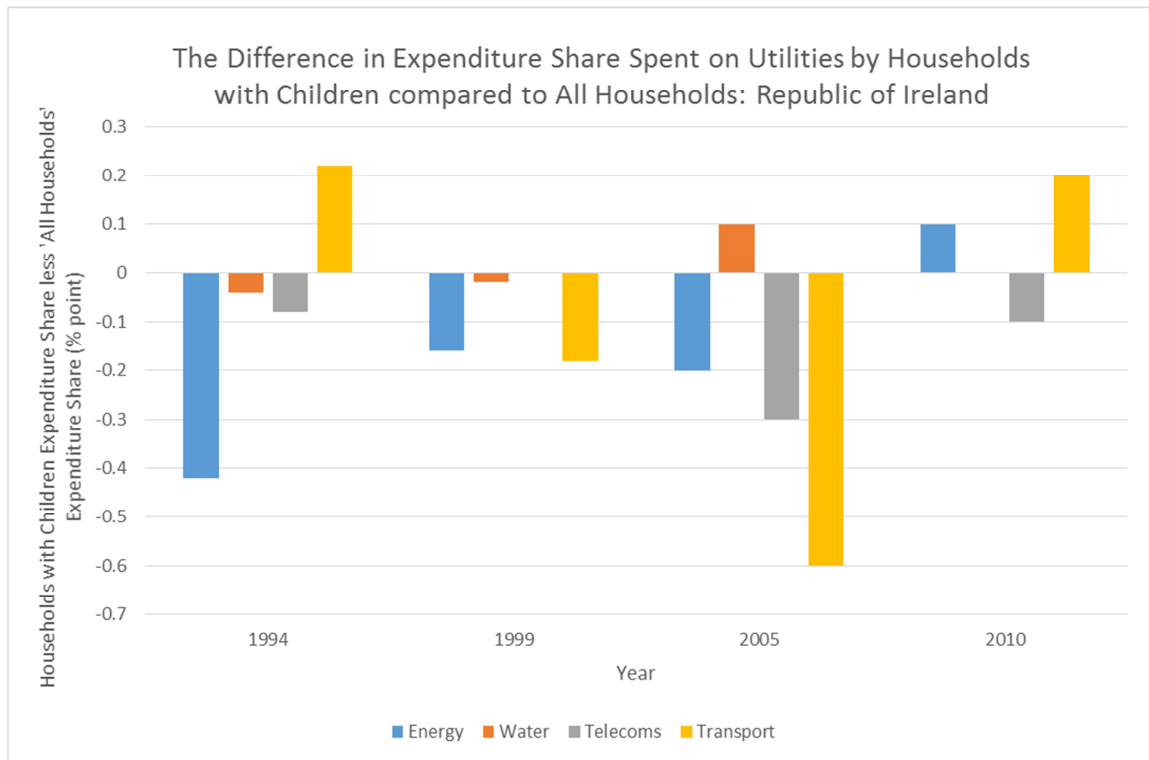
Given the convergence in the expenditure shares spent on energy towards the national average for unemployed and retired households, the fact that single parent households in the Republic of Ireland saw a divergence from the national average seems particularly significant. Chart 60 shows that in 1994 single parent households devoted 0.5 percentage points more to energy expenditure than did the average household, but by 2010 this difference had increased to 2 percentage points. The picture of a worsening economic position for single parent households is reinforced by Chart 60 showing the expenditure share devoted to transport falling to be 2 percentage points beneath that of an average household in 2010. It would be interesting to understand whether the (negative) correlation between the increasing expenditure share gaps for energy and transport result from a causal relationship, i.e. increased energy expenditure forced single parent households to economise on discretionary transport expenditure.

Chart 60: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: Republic of Ireland



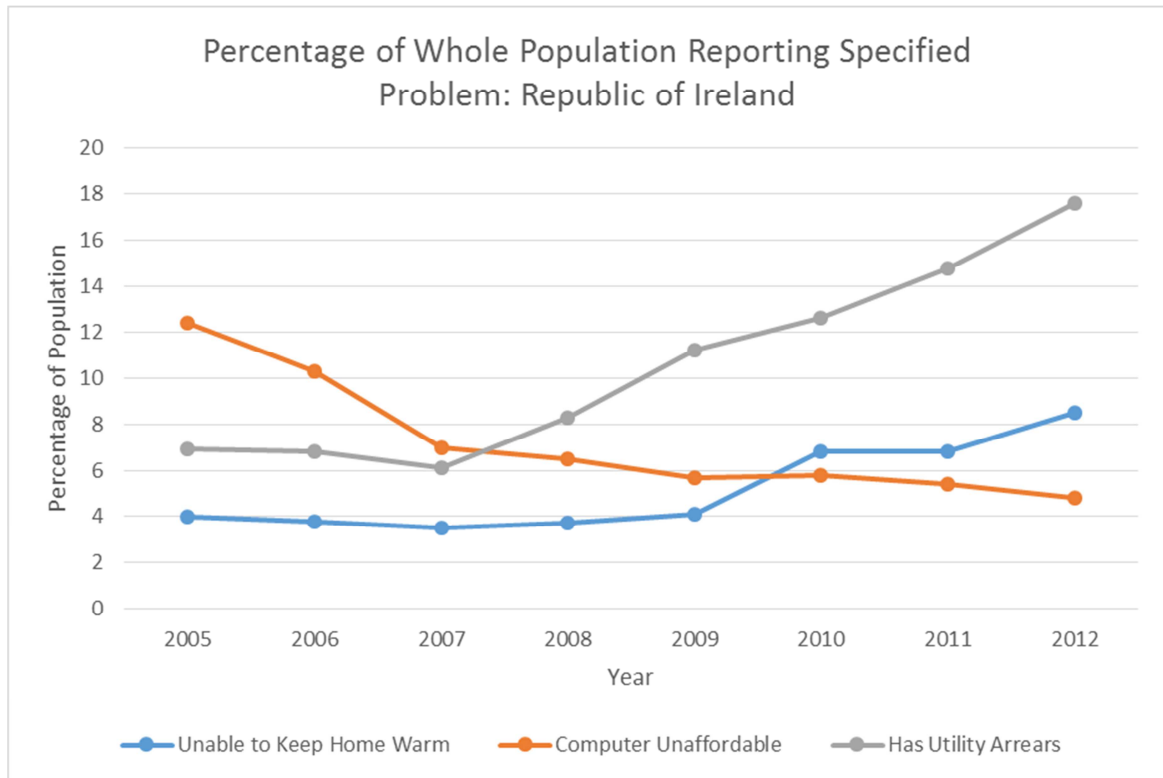
Source: Eurostat and EU-SILC

Chart 61: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: Republic of Ireland



Source: Eurostat and EU-SILC

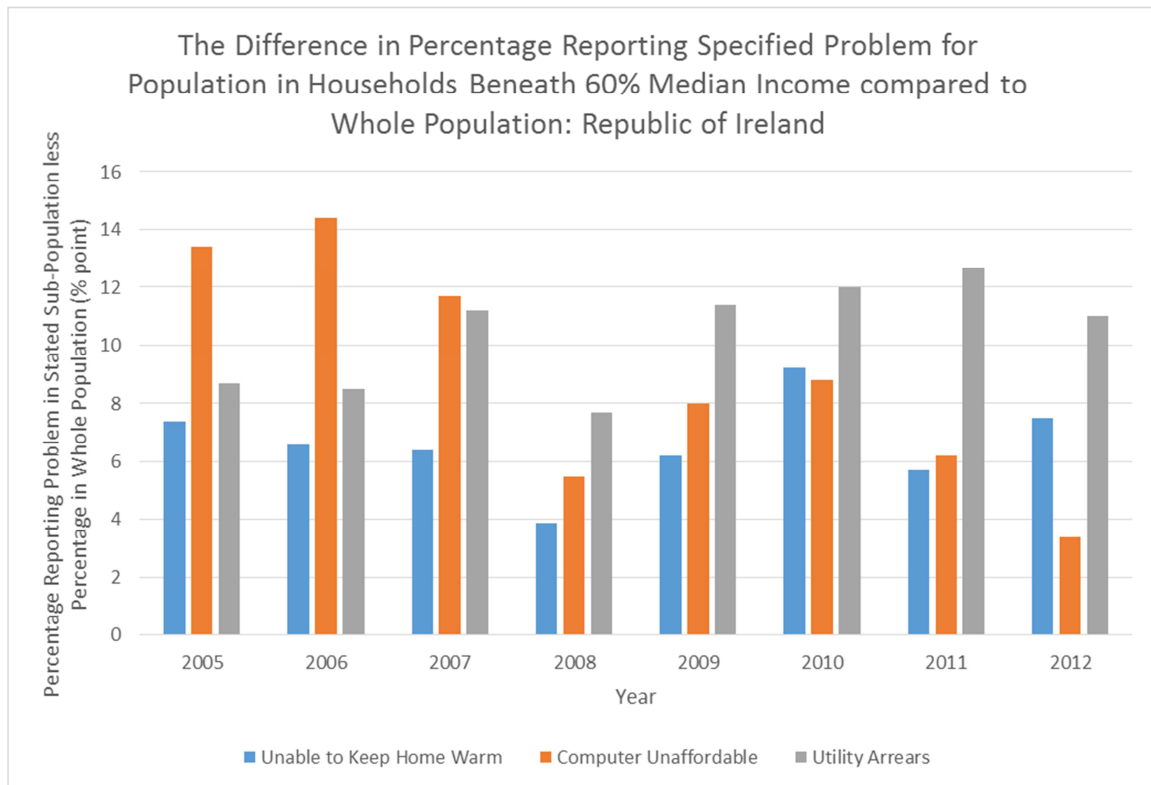
Chart 62: Percentage of Whole Population Reporting Specified Problem: Republic of Ireland



Source: Eurostat and EU-SILC

Chart 63 shows that the gaps in reported affordability difficulties between low income households and the perceptions of all households combined show significant variation across the three indicators.

Chart 63: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: Republic of Ireland



Source: Eurostat and EU-SILC

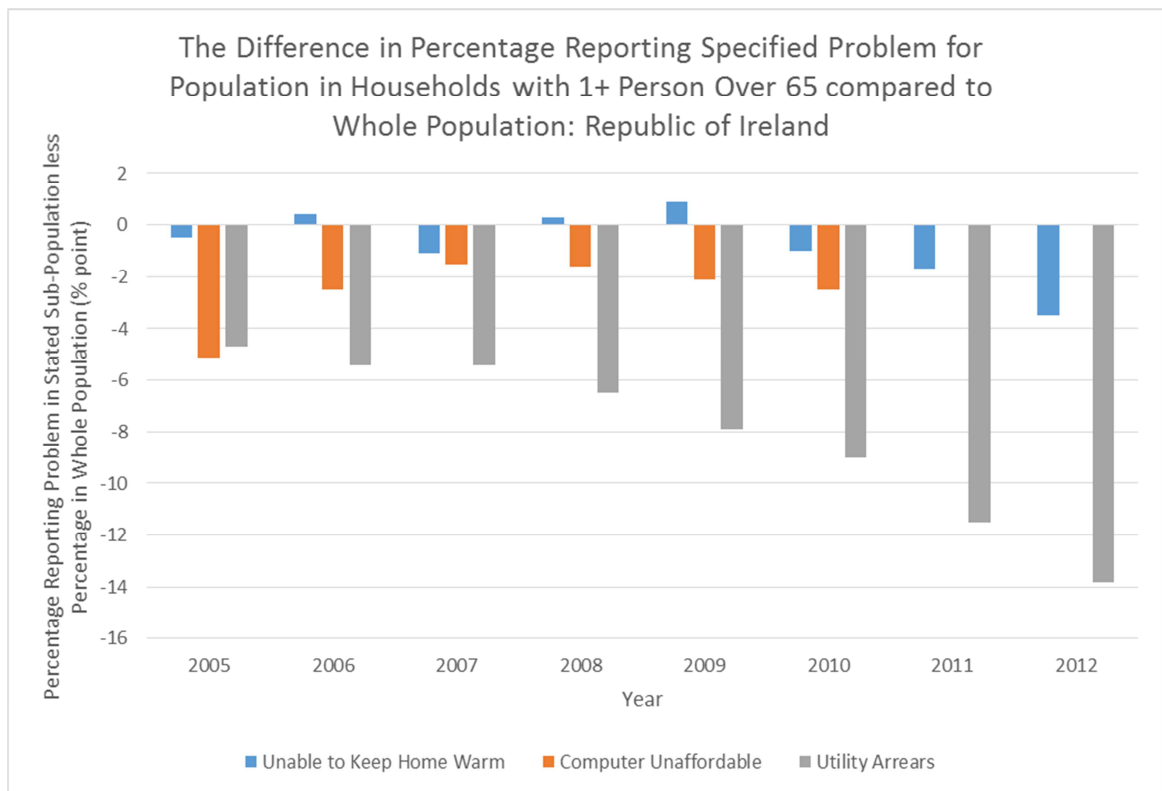
Chart 64 shows that between 2005 and 2012 the gap between older households and all households reporting utility arrears has been continuously growing. Between 2005 and 2012 older households become less likely to report utility arrears relative to all households by an additional 9 percentage points. However, combining Chart 64 with Chart 62 indicates that this divergence is because older households have been insulated against most of the rise in arrears rates recorded in the rest of the population. One possible explanation for this would be if, compared to other areas of government expenditure, Irish pensions were relatively protected against the cuts associated with the country's economic bail out.

Charts 65 and 66 contrast the relative positions of single parent households and all households with children. Chart 65 shows that between 2005 and 2012 the gap between the rate of utility arrears among single parent households and all households increased by around 5 percentage points from a gap that was already 15 percentage points. Combining the information in Chart 65 with that in Chart 62 indicates that almost 40% of single parent households were in arrears with their utility bills. In contrast, between 2007 and 2012 the gap in the rate of arrears for all households with children compared with the population as whole increased by just under 4 percentage points, but



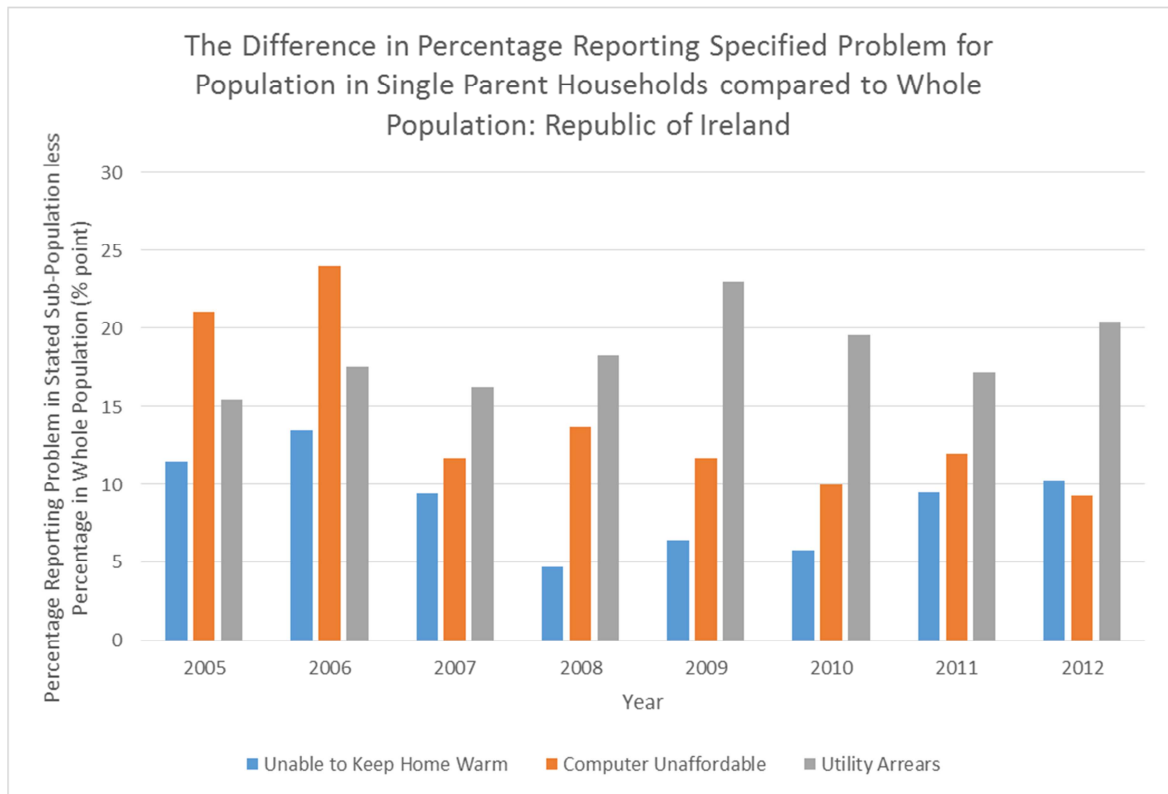
from a much lower base, since in 2007 all households with children had a rate of utility arrears that was only around 2 percentage points higher than for the population as a whole.

Chart 64: The Difference in Percentage Reporting Specified Problem for Population in Households with 1+ Person Over 65 compared to Whole Population: Republic of Ireland



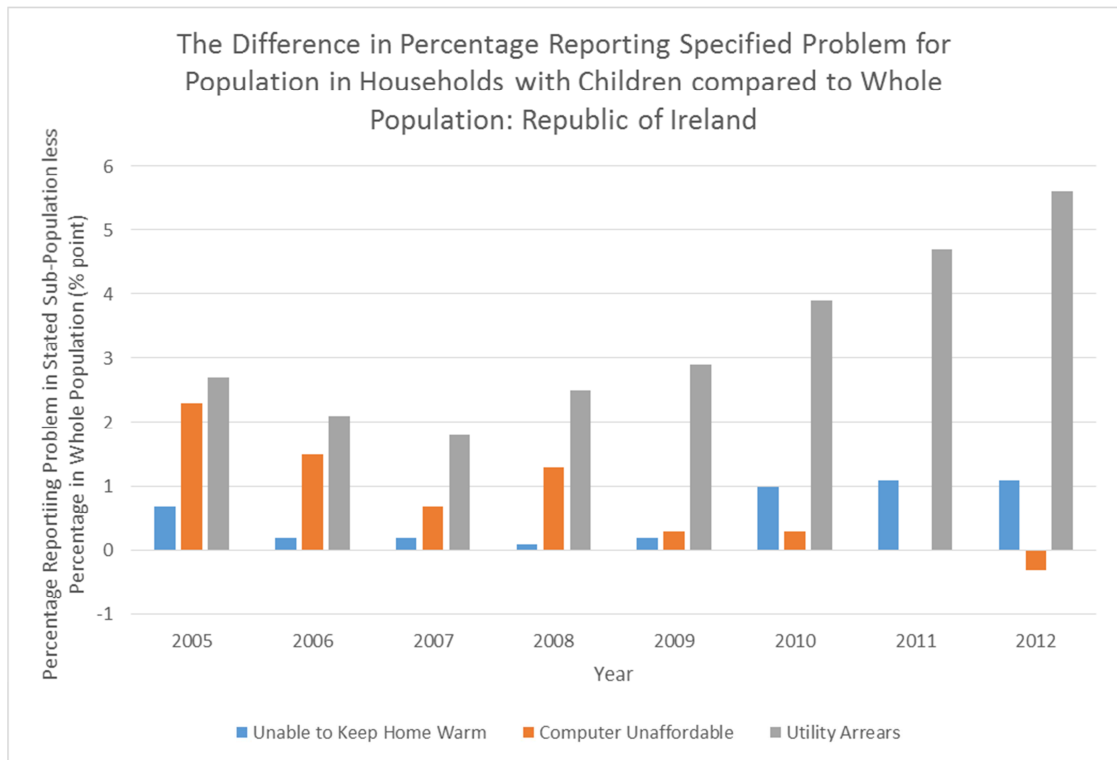
Source: Eurostat and EU-SILC

Chart 65: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Households compared to Whole Population: Republic of Ireland



Source: Eurostat and EU-SILC

Chart 66: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: Republic of Ireland



Source: Eurostat and EU-SILC

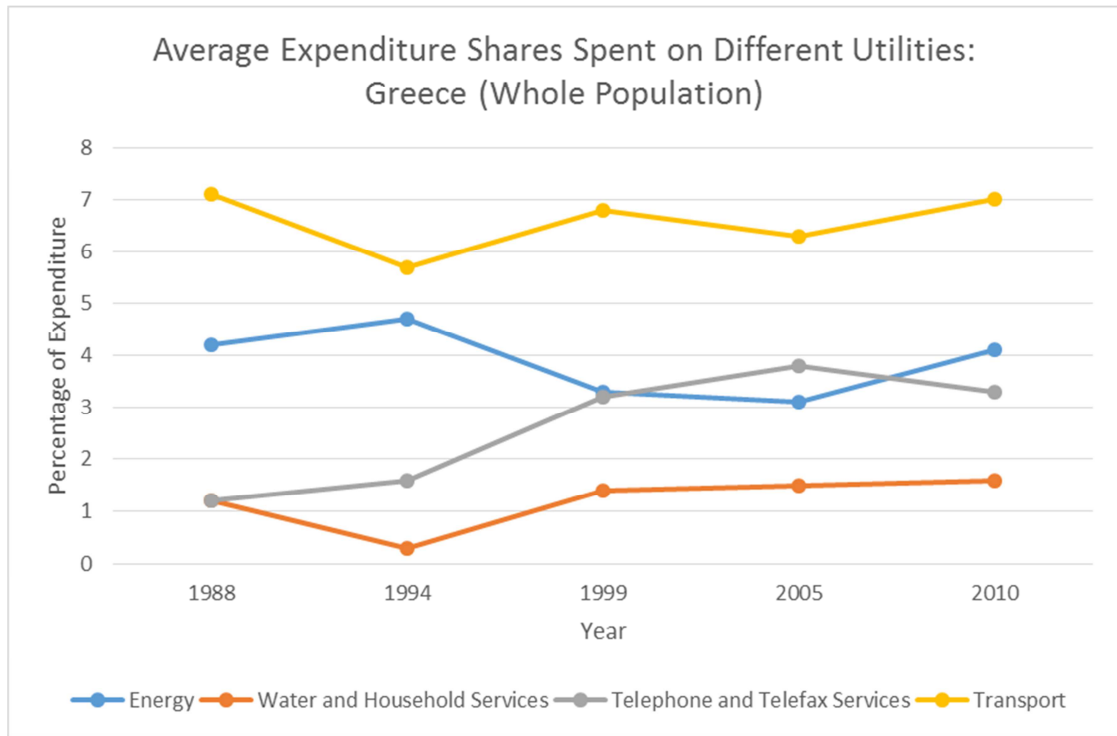


9. Greece

Chart 68 shows that in Greece, unemployed households had utility expenditure shares between 1988 and 2010 that were only slightly different from the average across all households. Chart 69 shows considerable stability in the expenditure share gaps of retired households throughout the time period. This apparent stability is also shown in Chart 70 regarding the relative position of low income households for energy and telecoms expenditure shares. However, consistency in the size of the expenditure share gaps for low income households does not extend to transport expenditure, where the gaps show quite a lot of variability. There is also a sharp rise in the gap between the proportion of expenditure devoted to water services by low income households and the proportion devoted by all households to the same sector when comparing 2005 and 2010. This sudden rise may suggest that a change in policy occurred in the mid-2000s regarding water and the support provided to low income households.

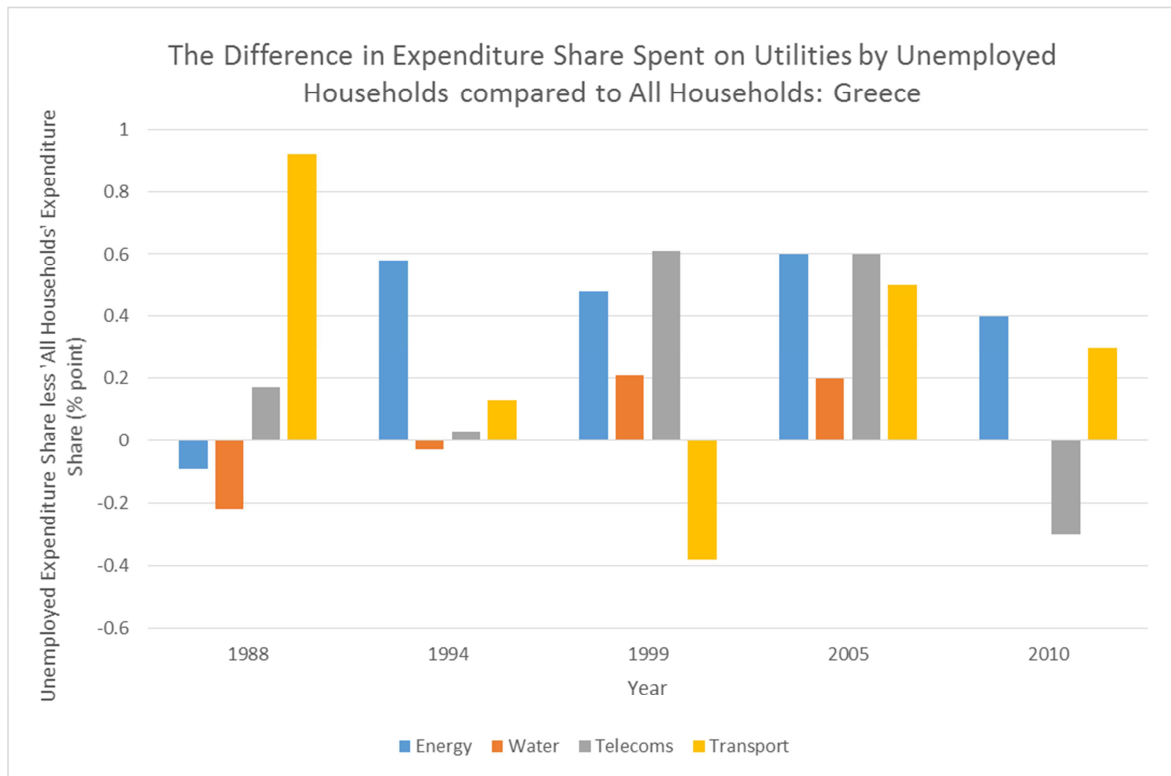
Chart 71 shows an interesting spike relating to telecoms expenditure by single parent households in Greece in 1999, when they devoted an additional percentage point of expenditure to telecoms above the average across all households. Since 1999 coincides with the initial take-off of the Internet it is tempting to conclude that at this point, while internet connections were still relatively expensive, single parent households were willing to devote a disproportionate amount of their expenditure to obtain internet access, perhaps so that their children would not be disadvantaged.

Chart 67: Average Expenditure Shares Spent on Different Utilities: Greece (Whole Population)



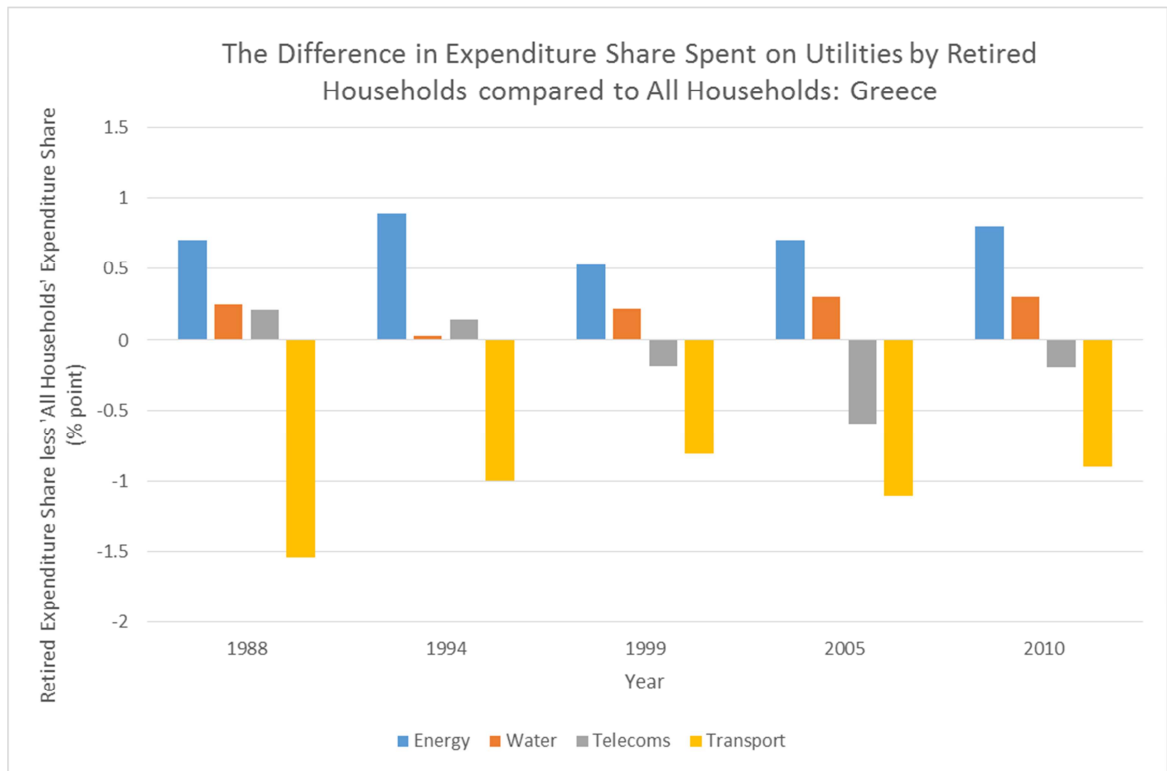
Source: Eurostat and EU-SILC

Chart 68: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: Greece



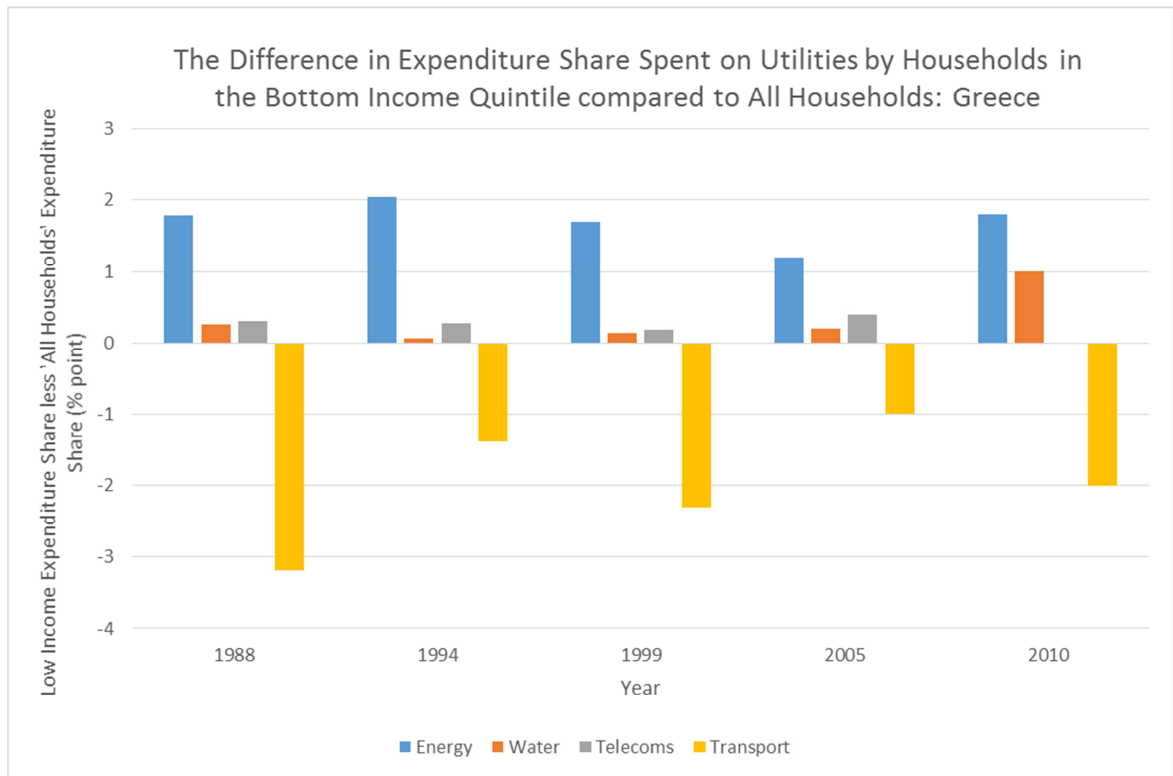
Source: Eurostat and EU-SILC

Chart 69: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: Greece



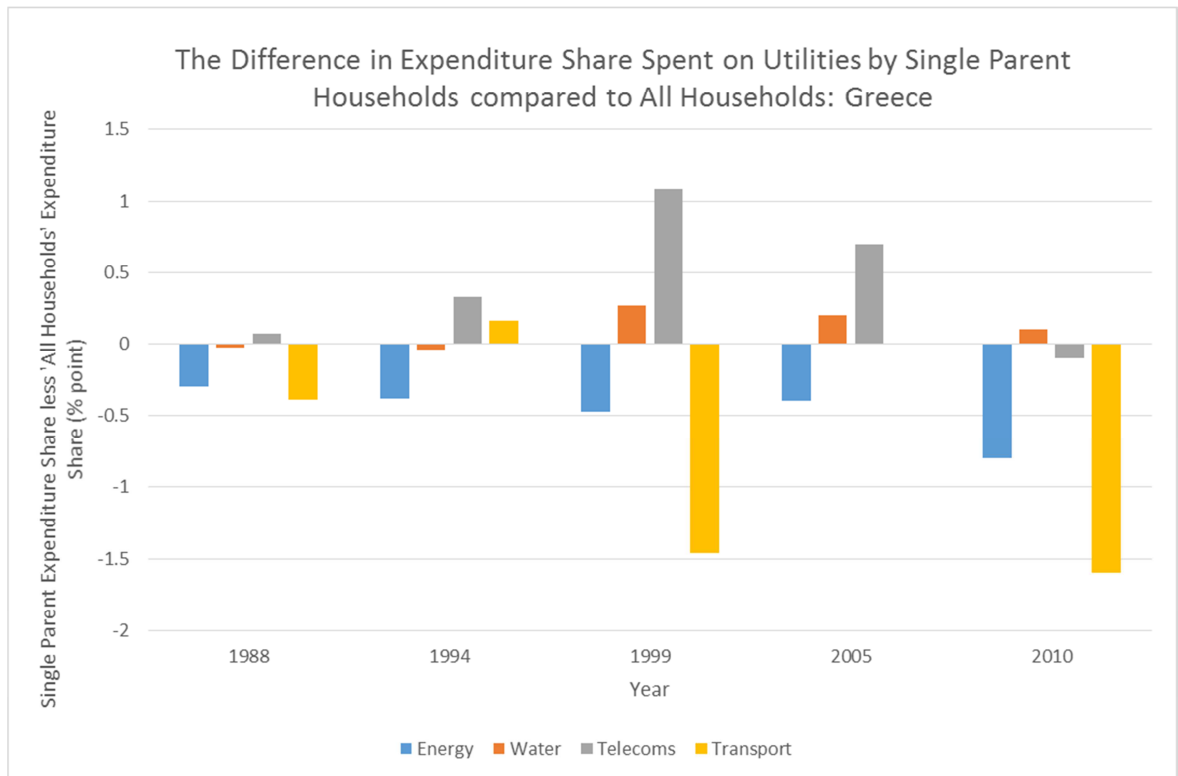
Source: Eurostat and EU-SILC

Chart 70: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: Greece



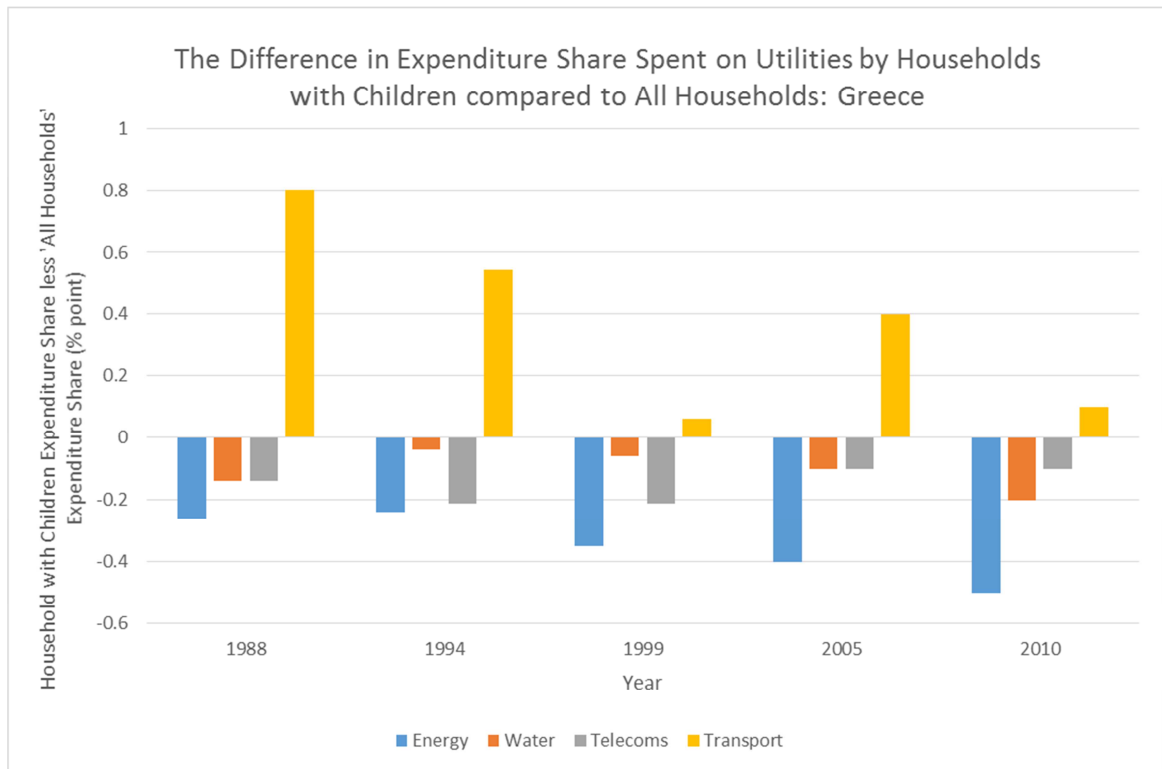
Source: Eurostat and EU-SILC

Chart 71: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: Greece



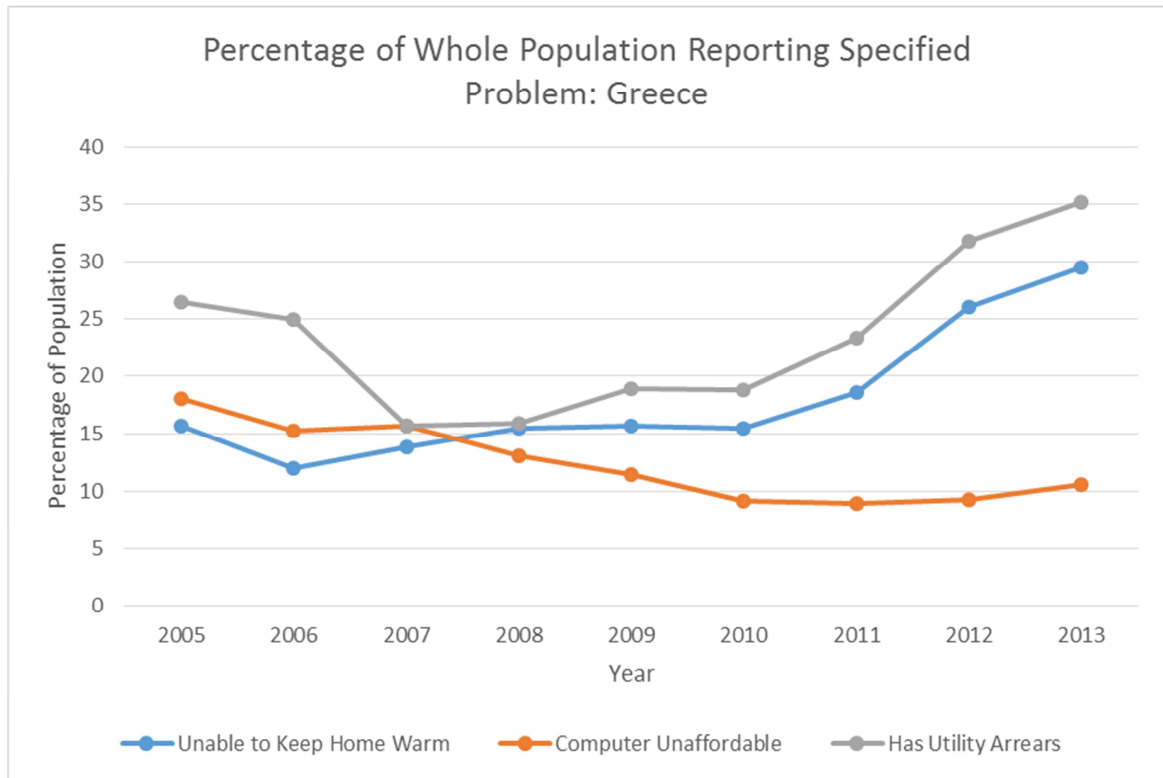
Source: Eurostat and EU-SILC

Chart 72: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: Greece



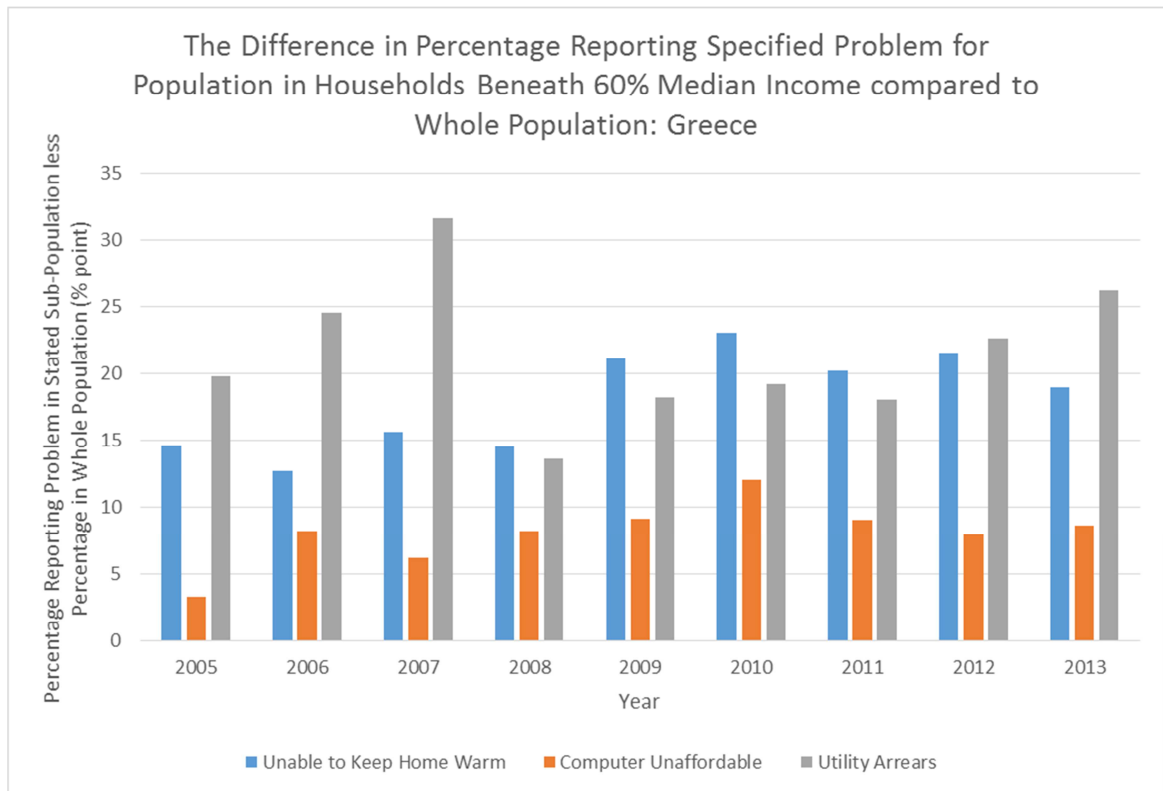
Source: Eurostat and EU-SILC

Chart 73: Percentage of Whole Population Reporting Specified Problem: Greece



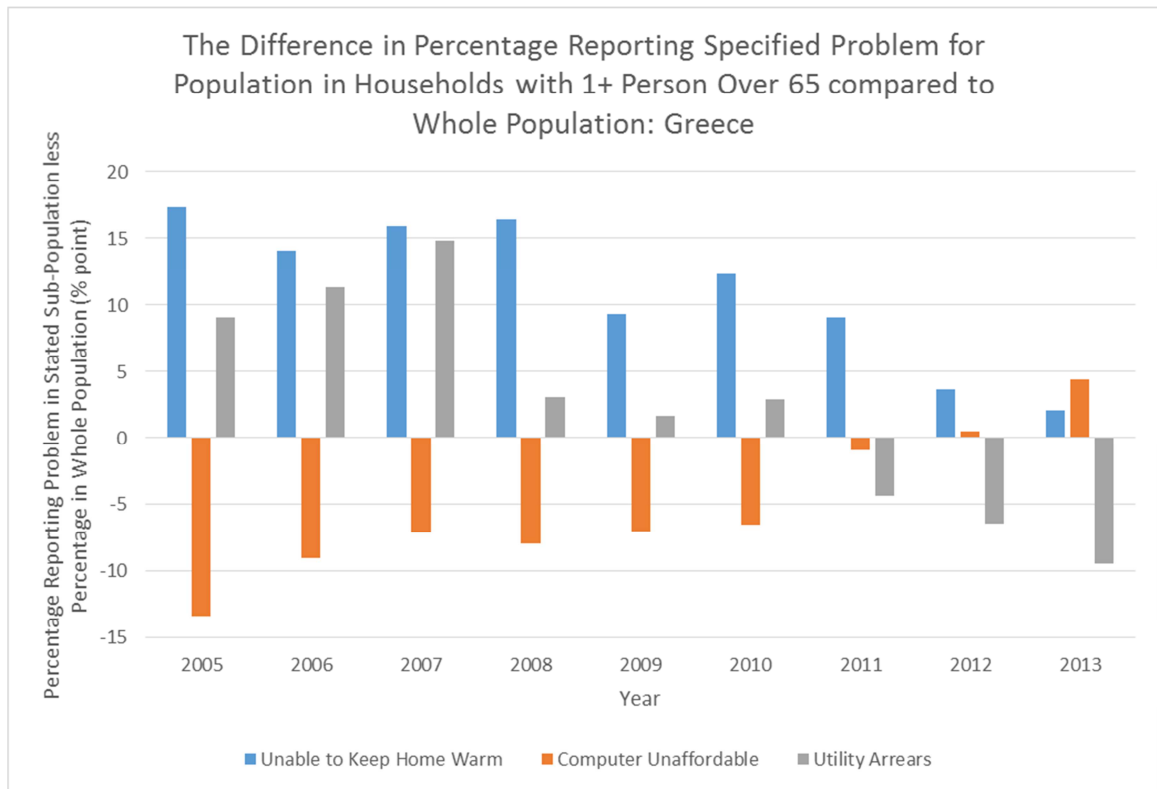
Source: Eurostat and EU-SILC

Chart 74: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: Greece



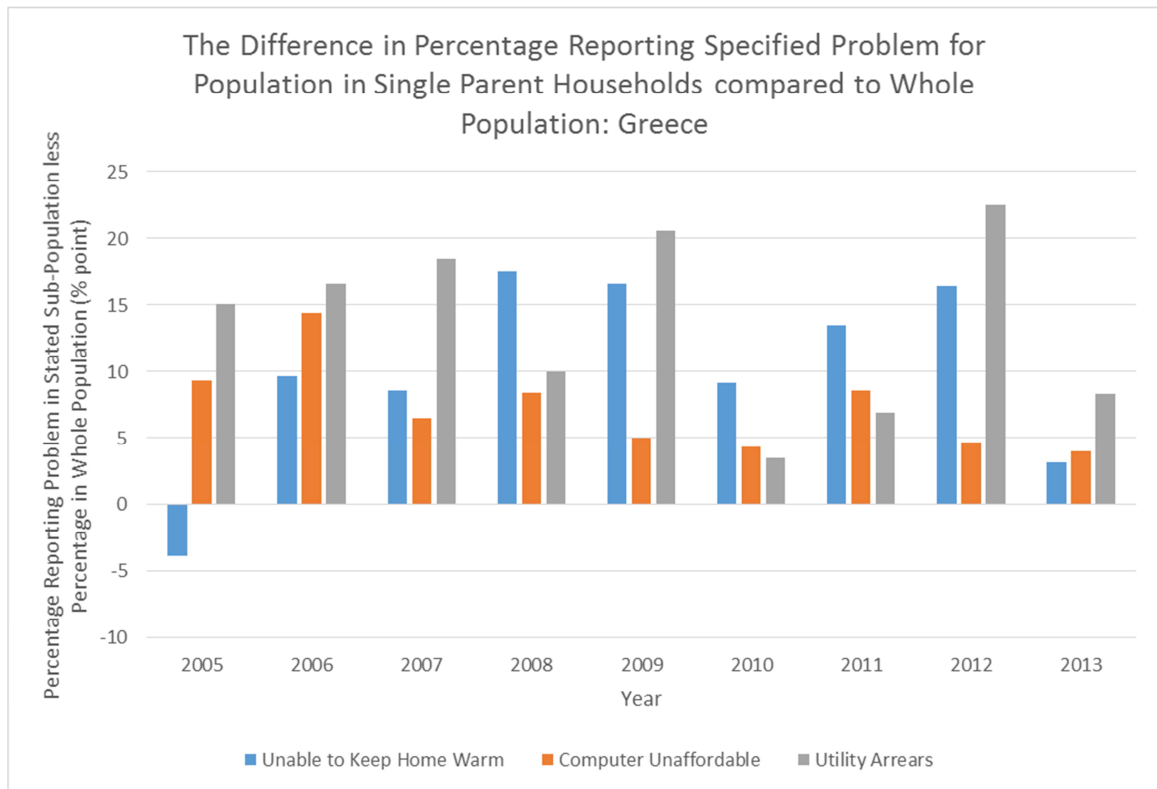
Source: Eurostat and EU-SILC

Chart 75: The Difference in Percentage Reporting Specified Problem for Population in Households with 1+ Person Over 65 compared to Whole Population: Greece



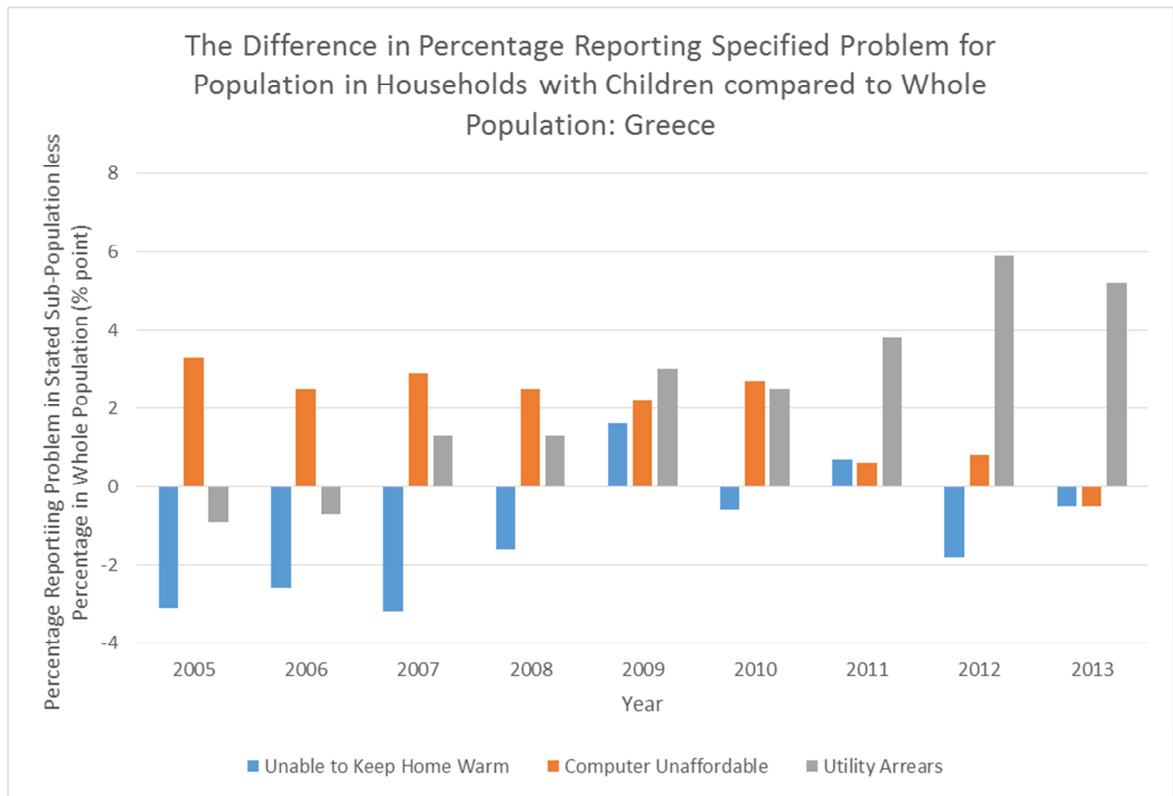
Source: Eurostat and EU-SILC

Chart 76: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Households compared to Whole Population: Greece



Source: Eurostat and EU-SILC

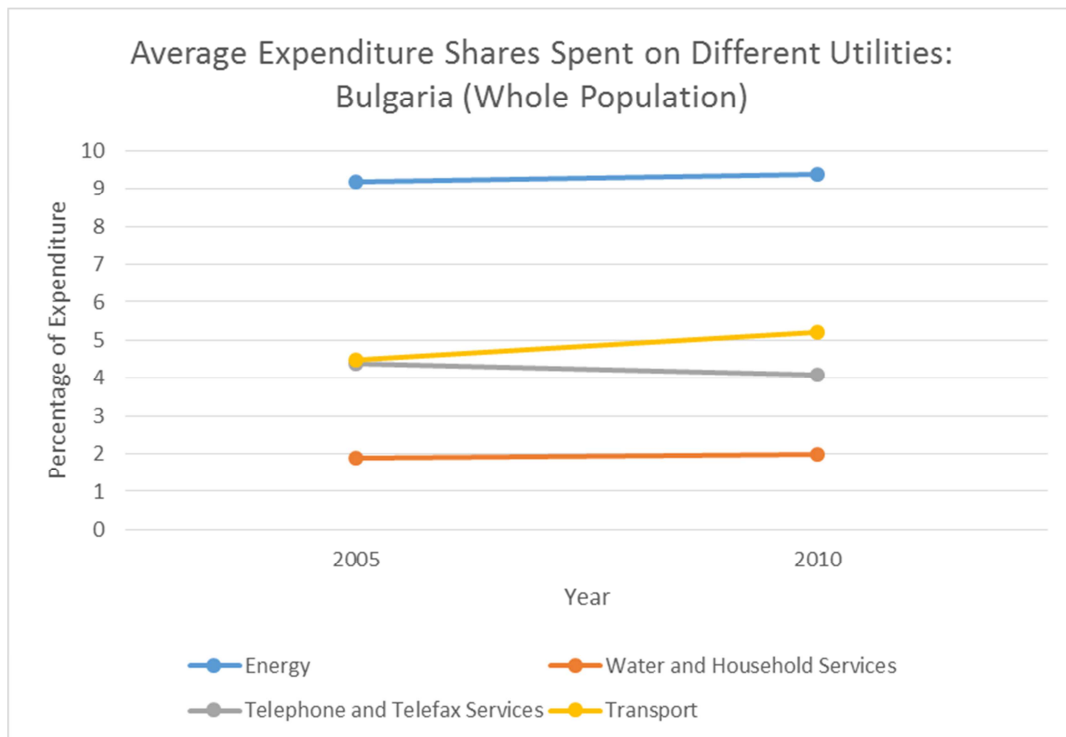
Chart 77: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: Greece



Source: Eurostat and EU-SILC

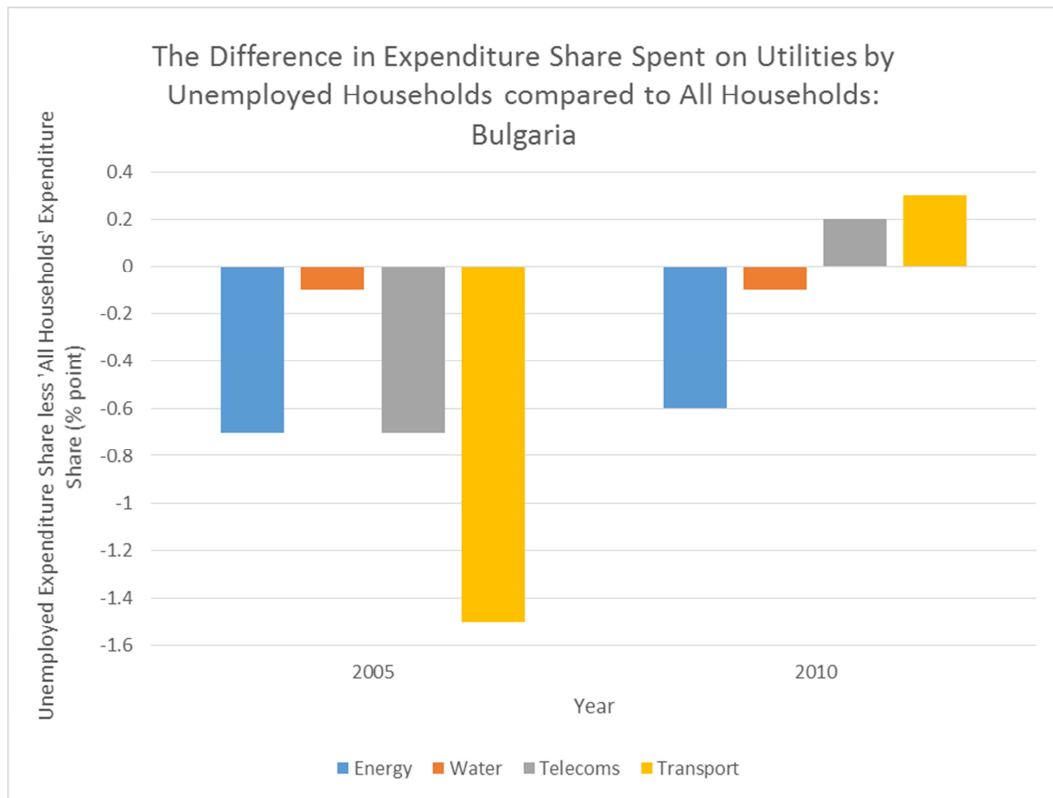
10. Bulgaria

Chart 78: Average Expenditure Shares Spent on Different Utilities Bulgaria (Whole Population)



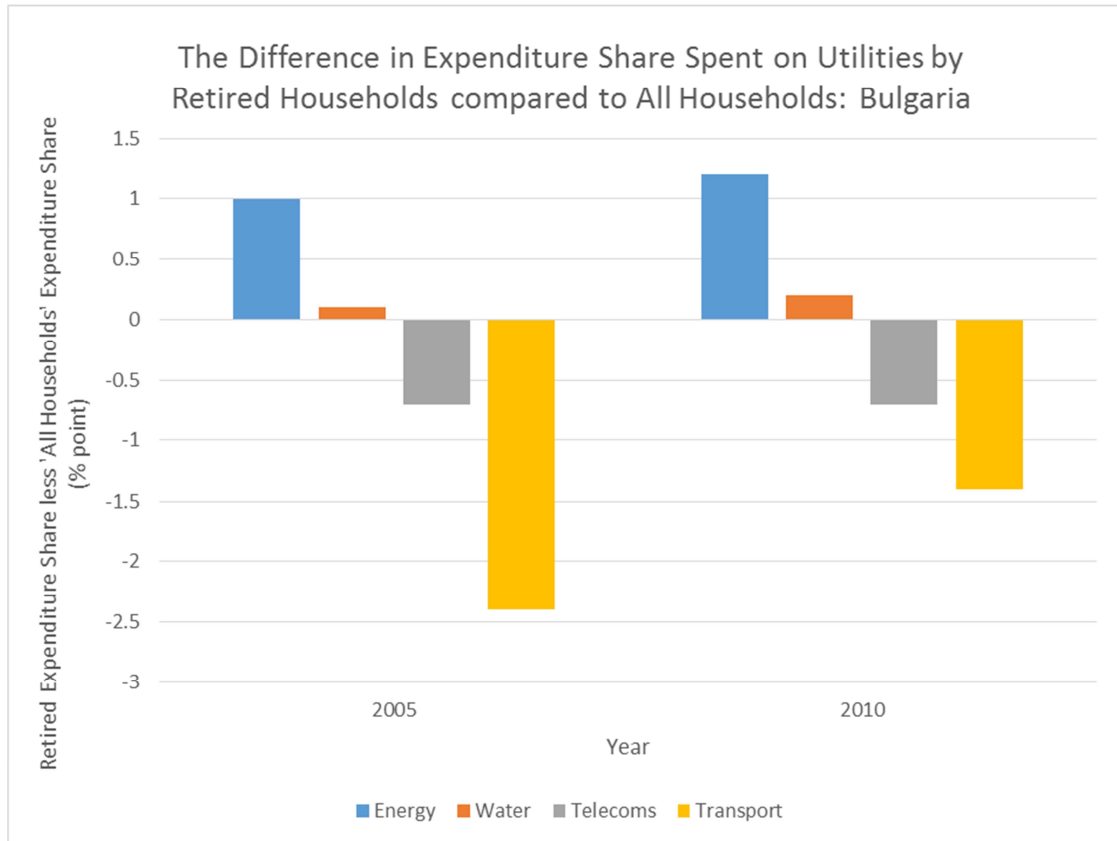
Source: Eurostat and EU-SILC

Chart 79: The Difference in Expenditure Share Spent on Utilities by Unemployed Households compared to All Households: Bulgaria



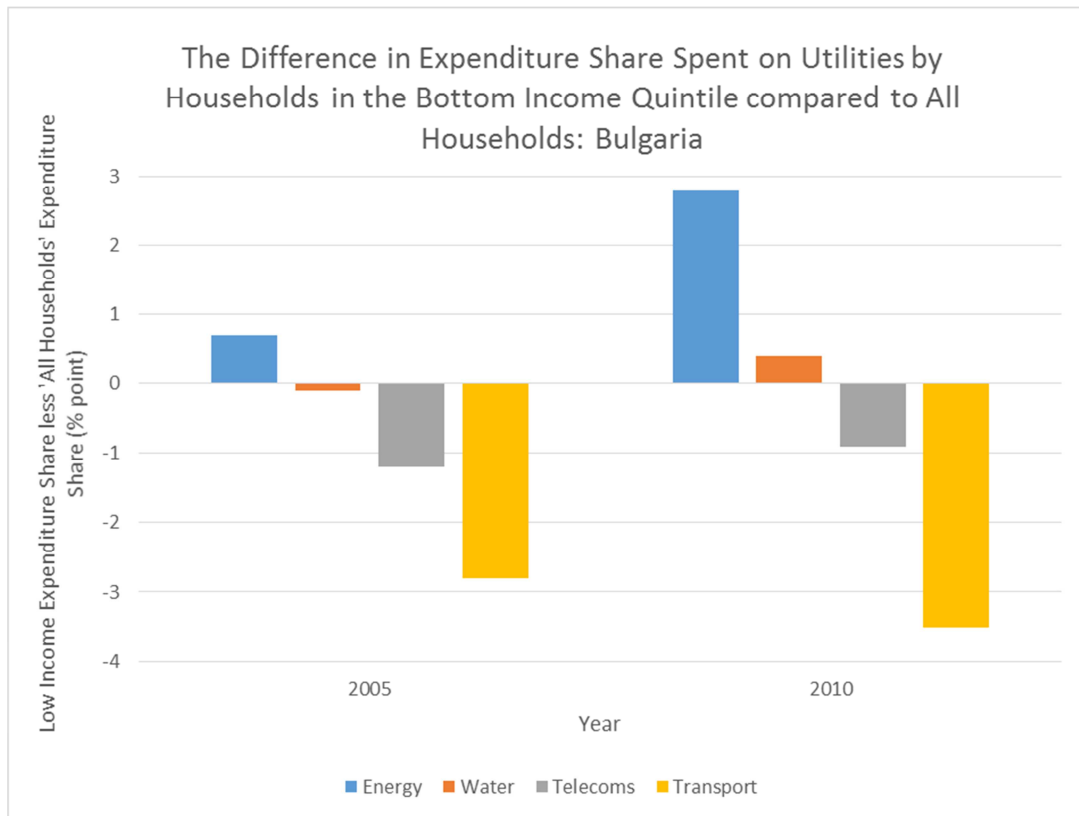
Source: Eurostat and EU-SILC

Chart 80: The Difference in Expenditure Share Spent on Utilities by Retired Households compared to All Households: Bulgaria



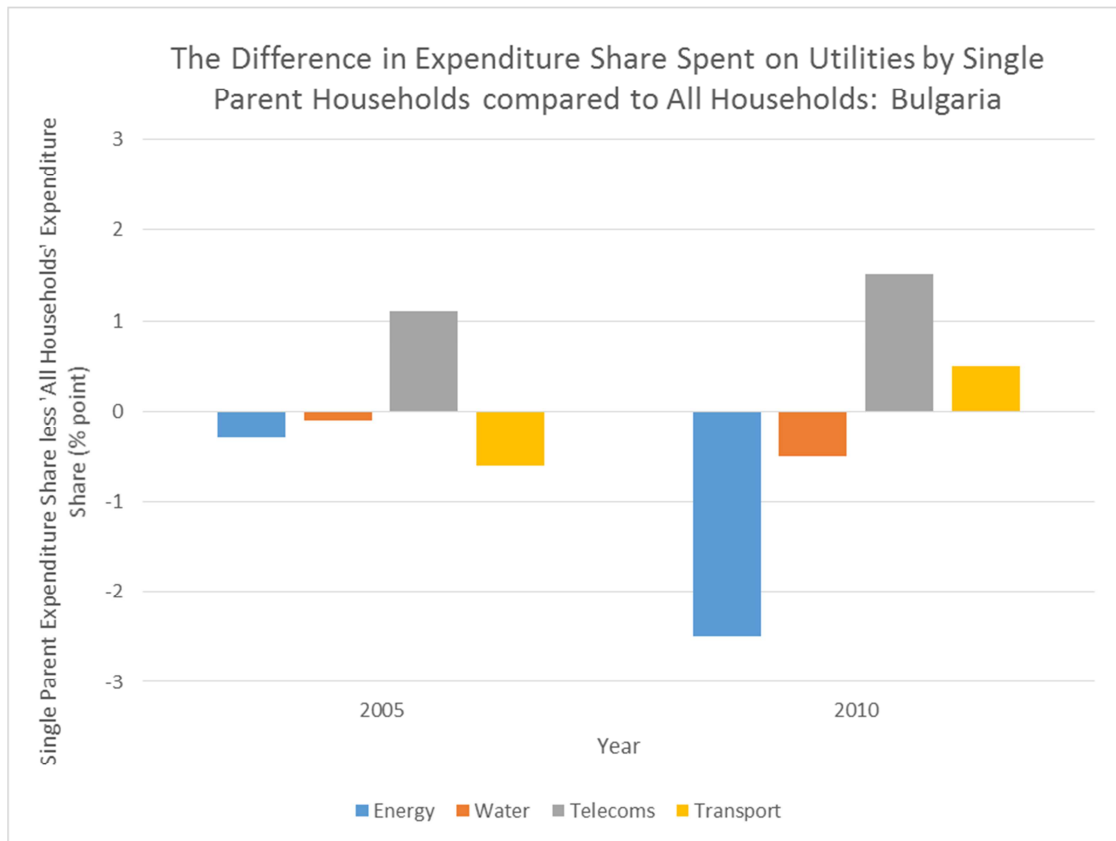
Source: Eurostat and EU-SILC

Chart 81: The Difference in Expenditure Share Spent on Utilities by Households in the Bottom Income Quintile compared to All Households: Bulgaria



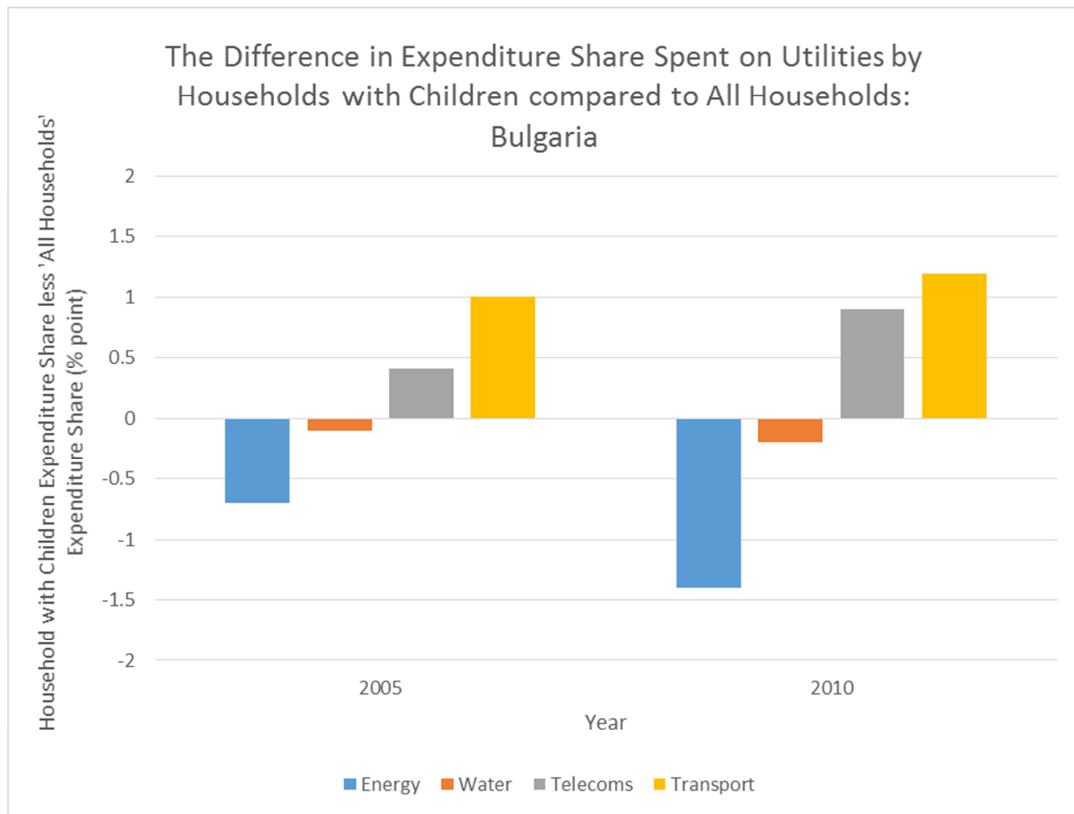
Source: Eurostat and EU-SILC

Chart 82: The Difference in Expenditure Share Spent on Utilities by Single Parent Households compared to All Households: Bulgaria



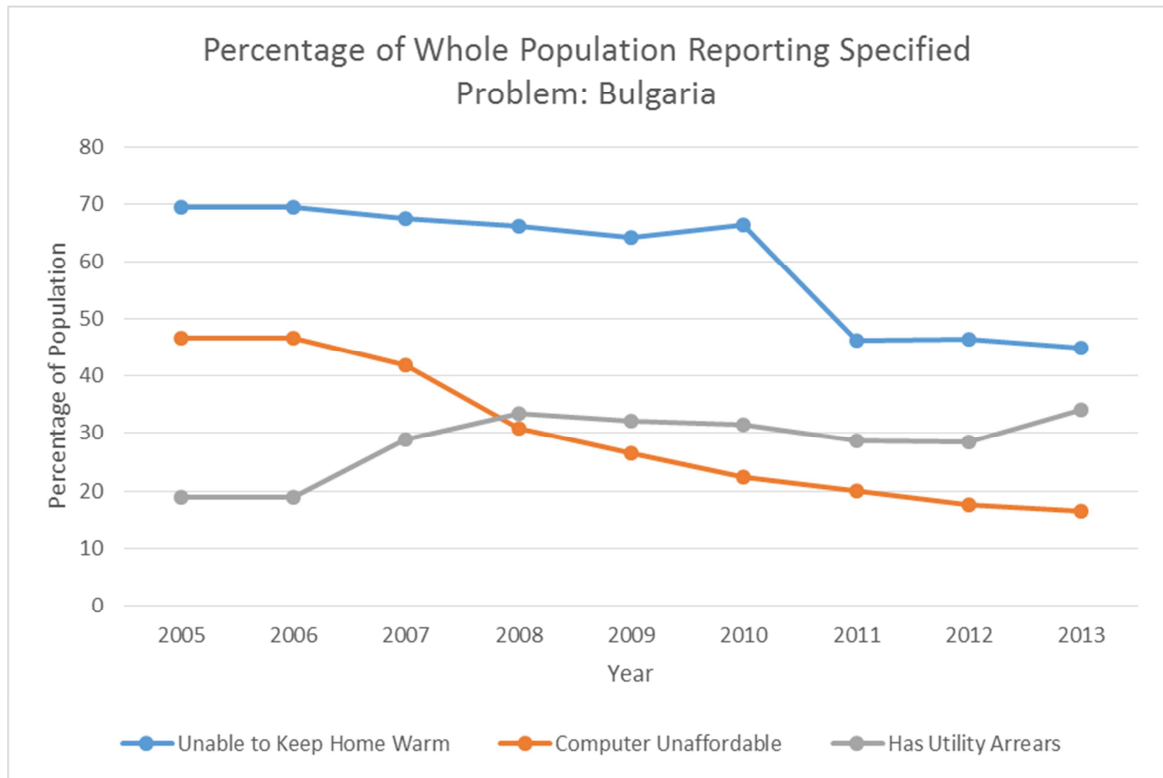
Source: Eurostat and EU-SILC

Chart 83: The Difference in Expenditure Share Spent on Utilities by Households with Children compared to All Households: Bulgaria



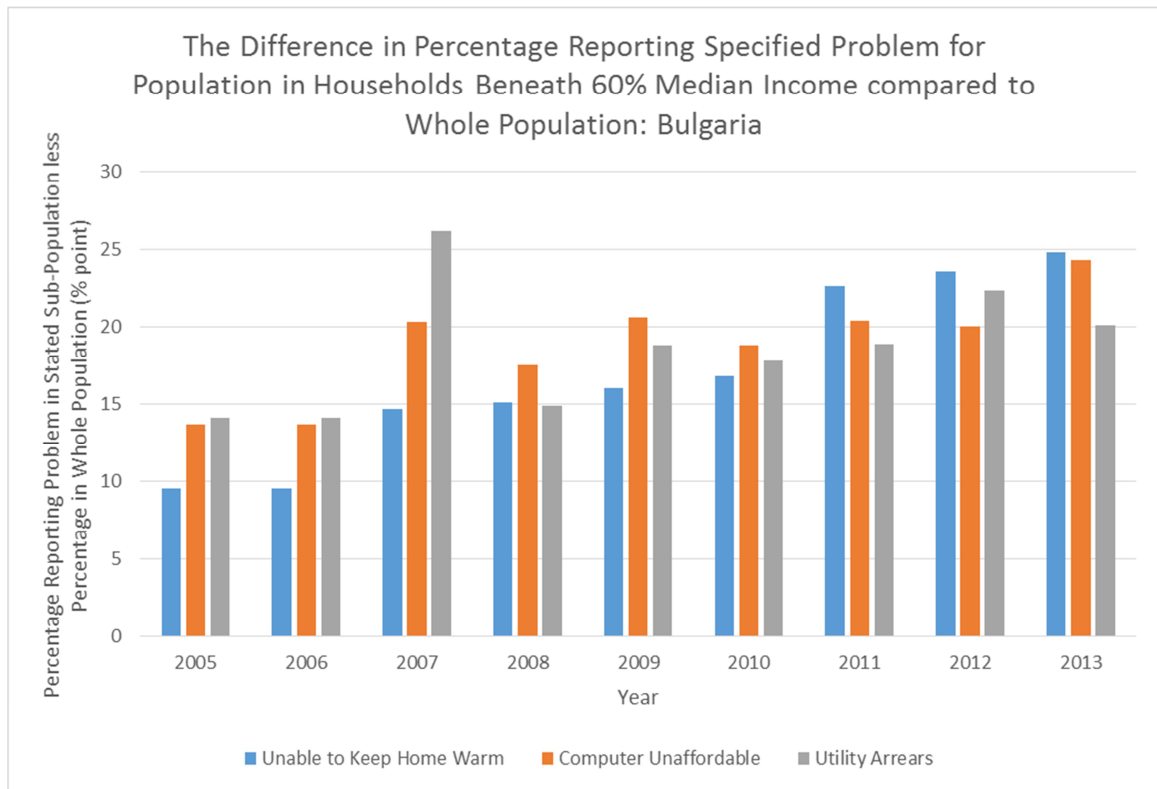
Source: Eurostat and EU-SILC

Chart 84: Percentage of Whole Population Reporting Specified Problem: Bulgaria



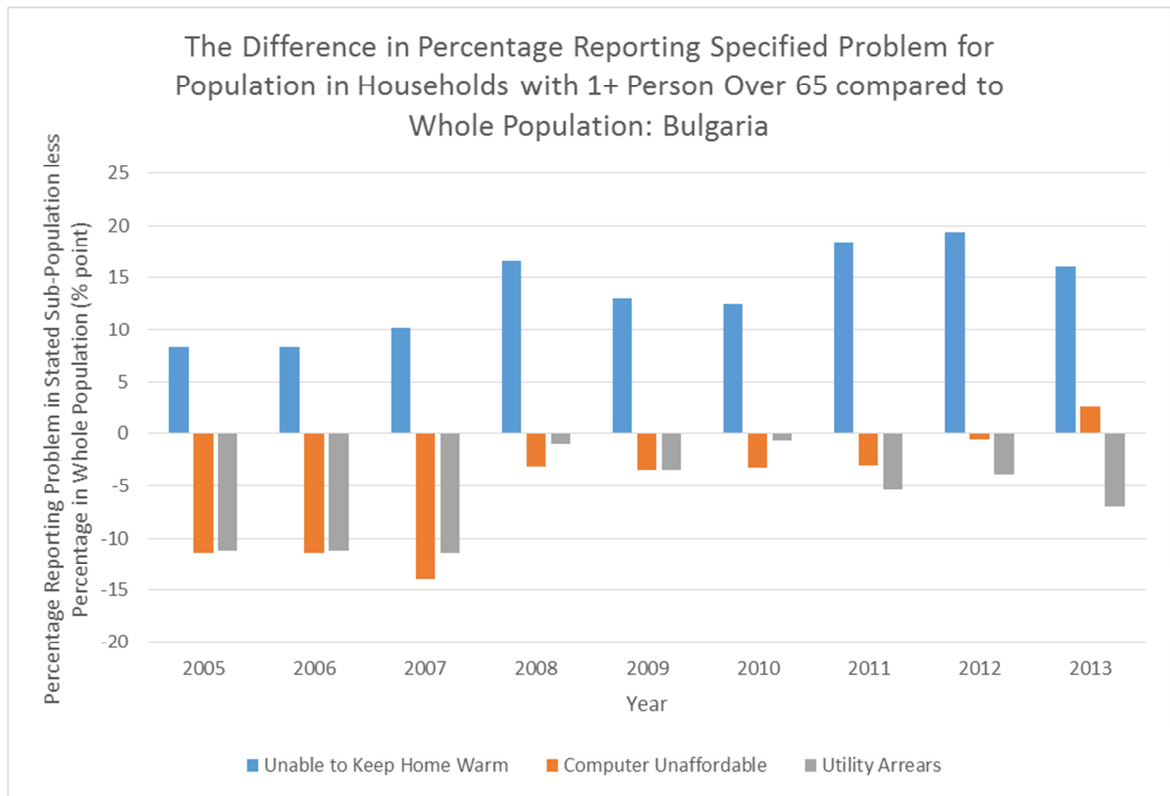
Source: Eurostat and EU-SILC

Chart 85: The Difference in Percentage Reporting Specified Problem for Population in Households Beneath 60% Median Income compared to Whole Population: Bulgaria



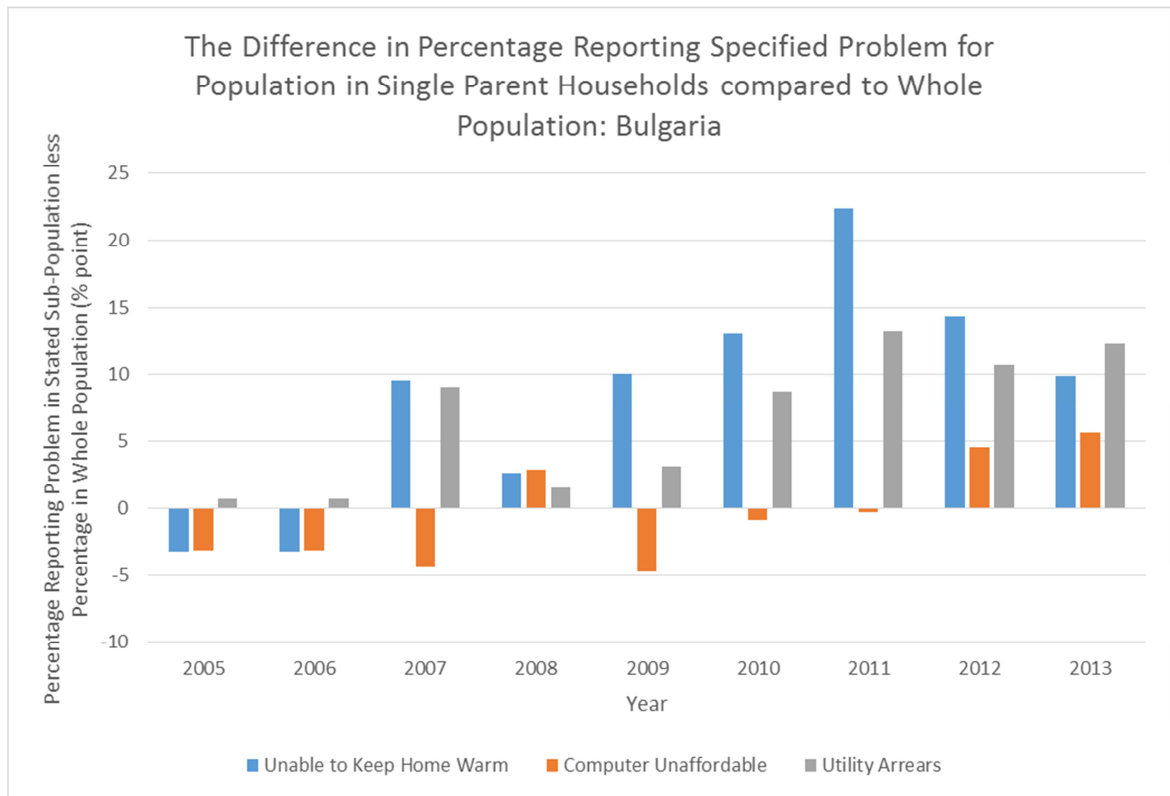
Source: Eurostat and EU-SILC

Chart 86: The Difference in Percentage Reporting Specified Problem for Population in Households with 1+ Person Over 65 compared to Whole Population



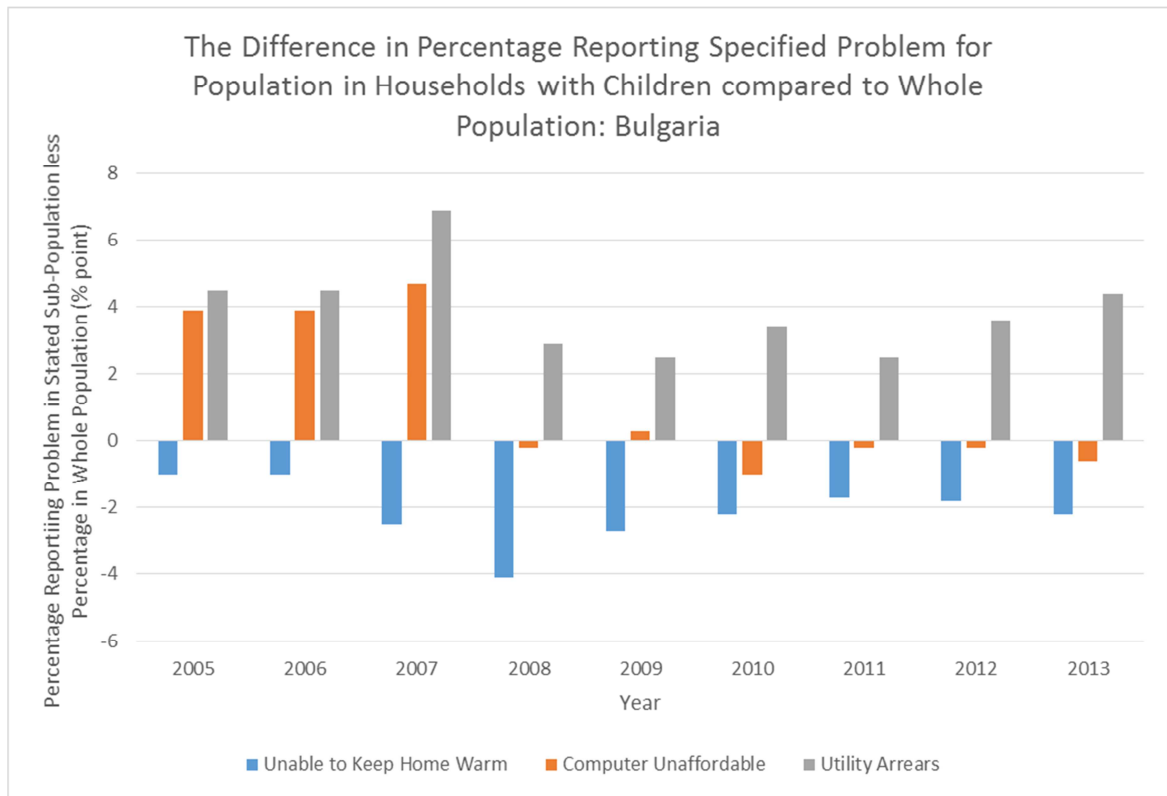
Source: Eurostat and EU-SILC

Chart 87: The Difference in Percentage Reporting Specified Problem for Population in Single Parent Household Compared to Whole Population: Bulgaria



Source: Eurostat and EU-SILC

Chart 88: The Difference in Percentage Reporting Specified Problem for Population in Households with Children compared to Whole Population: Bulgaria



Source: Eurostat and EU-SILC