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**Measuring material deprivation
over the economic crisis: Does a
re-evaluation of 'need' affect
measures of material deprivation?**

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GROWING INEQUALITIES' IMPACTS

Table of Contents

Executive summary	1
1. Introduction	3
2. Measuring material deprivation.....	5
3. Empirical Analysis.....	8
4. Summary	22
References	24
Appendix	25

List of Figures

Figure 1a: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (across countries) – 2007-2011 (All).....	9
Figure 1b: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (within countries) – 2007-2011 (All).....	10
Figure 1c: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (across countries) – 2007-2011 EU15.....	10
Figure 1d: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (within countries) – 2007-2011 EU15.....	11
Figure 2: Item deprivation status by income decile – 2007 (All).....	13
Figure 3: Item deprivation status by income decile – 2007 (EU-15)	14
Figure 4: Item deprivation status D1 and D5 – 2007-2011 (All).....	16
Figure 5: Item deprivation status D1 and D5 – 2007-2011 (EU15)	17
Figure 6: Car deprivation status by population density of individuals’ residence - 2007 (All)	18
Figure 7: Car deprivation status by population density of individuals’ residence - 2007 (EU15).....	19
Figure A1: Item deprivation status by income decile – 2007 (All)	31
Figure A2: Item deprivation status by income decile – 2007 (EU-15).....	32
Figure A3: Item deprivation status D1 and D5 – 2007-2011 (All).....	33
Figure A4: Item deprivation status D1 and D5 – 2007-2011 (EU-15).....	34
Figure A6: Car deprivation status by population density of individuals’ residence - 2007 (All).....	35
Figure A6: Car deprivation status by population density of individuals’ residence - 2007 (EU15)	35

List of Tables

Table 1: Probit regression results for car deprivation (cannot afford) - All	20
Table 2: Probit regression results for car deprivation (don’t want or need) - All	21

Executive summary

Measures of material deprivation attempt to capture enforced deprivation. To achieve this survey respondents are usually asked to indicate where non-possession of an item of interest is due to not being able to afford it (classified as enforced deprivation) or for some other reason (such as not wanting or needed the item).

The information presented in this paper shows that individuals are more likely to express that they do not want or need an item the lower their household income. In addition after 2007 as the economic crisis began to hit households there is some evidence of an increase in the share of households reporting that they lived without these items for a reason other than the fact that they couldn't afford. These findings raise some important questions about what this category is capturing and that classifying these individuals as not materially deprived of an item may lead to an under recording of material deprivation.

An explanation is required to understand why individuals living in lower income households are more likely to report that deprivation is not "enforced" than are individuals living in higher income households. Some preliminary model estimates suggest that the relationship cannot be explained by differences in age, gender or residential population density, at least for cars.

In many European countries the impact of the recent economic and financial crisis hit households hard in 2011, 2012 and 2013 as unemployment increased. The EU-SILC microdata, used in this analysis, is currently available up to 2011 which will not capture the full impact of the crisis and its aftermath on material deprivation. More recent data may provide some further evidence on how individuals/households re-evaluate "need/want" as their income falls. It is shown that after 2007/2008 there have been annual increases in the share of individuals reporting that they are unable to meet unexpected financial expenses and an increase in the already steep income gradient. This suggests that as durables need repair or replacement there will be a further increase in the share of households going without these items unless household incomes increase.

Recommendations

As part of the 2015 mid-term review of the Europe 2020 Strategy it is recommended that work is done:

- To gain a better understanding of the classification of individuals into the category of “non-enforced deprivation”.
- To consider the wording of survey questions to avoid under recording of material deprivation.

1. Introduction

At the heart of the concept of material deprivation is the notion, or at least individuals' understanding of, enforced deprivation, where enforcement is due to lack of income. Eurostat define material deprivation as follows:

“Material deprivation refers to a state of economic strain and durables strain, defined as the enforced inability (rather than the choice not to do so) to pay unexpected expenses, afford a one-week annual holiday away from home, a meal involving meat, chicken or fish every second day, the adequate heating of a dwelling, durable goods like a washing machine, colour television, telephone or car, being confronted with payment arrears (mortgage or rent, utility bills, hire purchase instalments or other loan payments).

*The material deprivation rate is an indicator in EU-SILC that expresses the inability to afford some items considered by most people to be desirable or even necessary to lead an adequate life. The indicator distinguishes between individuals who cannot afford a certain good or service, and those who do not have this good or service for another reason, e.g. **because they do not want or do not need it.**” (emphasis added)¹*

It is the final statement in this definition - “do not want or do not need” - that is the focus of this research paper.

It has been noted in previous studies the interpretation of ‘want’ or ‘need’ can vary between different groups of individuals (McKay, 2004). This can be related to peer-group social norms or affected by individuals’ sense of dignity. Alongside this debate is the continual consideration of which items should be included in a measure of material deprivation and whether or not these should vary for different groups, such as children or pensioners, to achieve a better fit between what people might want or need and therefore enforced absence of such an item leading to a real sense of deprivation.

¹ http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Material_deprivation_rate

Calvert and Nolan (2012), using EU-SILC data, have shown that there exists a considerable degree of cross country variation in material deprivation rates. They highlight both differences between countries in terms of changes prior to the economic crisis (2004-2007) with considerable decreases within many new member states, particularly in Central and Eastern Europe countries which had relatively high initial rates. They also find increases over the same period in a minority of countries including Austria and Germany. Their analysis shows that the economic crisis had a non-uniform impact on material deprivation rates in the 2007-2010 period with large increases observed in Ireland, Estonia and Lithuania but also substantial declines in Bulgaria, Poland, Slovakia and Romania. At an aggregate level they find that both median income and income inequality are negatively related to material deprivation rates and inequality appears to have a greater negative effect where median income is relatively low.

In this paper we explore the extent 'deprivation' of durable goods which appears to be "non-enforced" varies over the income distribution and evidence on how it has varied over time using data from EU-SILC. Evidence for the UK suggests that the recent economic crisis appears to have led households to re-evaluate need (adapted their preferences/expectations) in light of falls in household income when it comes to considering deprivation of a number of items in relation to children (McKnight, 2013; McKnight and Tsang, 2013). This paper investigates whether such a relationship exists for durable goods across Europe. The focus of the analysis in this paper does not engage with the debate about which items should be included as indicators of material deprivation or whether different items should be adopted for different population groups (for a recent in-depth analysis of these issues see Guilo, Gordon and Marlier, 2012).

2. Measuring material deprivation

Material deprivation is included as an indicator of risk of poverty and social exclusion adopted in 2010 by the European Council to monitor progress towards meeting the social inclusion target as part of the Europe 2020 Strategy: to lift at least 20 million people in the EU from the risk of poverty and exclusion by 2020. For this indicator there are three sub-indicators:

1. At risk of poverty (i.e. low income)
2. Severe material deprivation
3. Living in very low work intensity households

In EU-SILC, nine items are currently used by the EU to measure Material Deprivation and Severe Material Deprivation. The indicator of material deprivation adopted by the Social protection committee measures the percentage of the population that cannot afford at least three of the following items. The severe material deprivation rate is defined as the enforced inability to pay for at least four of the following items:

1. To face unexpected expenses;
2. Their rent, mortgage or utility bills (avoiding arrears);
3. To keep their home adequately warm;
4. For a meal with meat, chicken, fish or vegetarian equivalent every second day;
5. For one week annual holiday away from home;
6. A washing machine;
7. A colour TV;
8. A telephone (including mobile telephone);
9. A car.

The information on these items is collected at the household level and the information is provided by the household respondent. For the financial strain variables (items 1-5) the household respondent is simply asked whether or not they have the capacity to meet these expenses through the household's own resources.

For item 1 (to face unexpected expenses) the household respondent is asked to indicate if they can face these expenses through their own resources. In this case “own resources” means that the household does not ask for financial help from anybody, nor should the expenses lead the household into debt. See Appendix one for a full description of this variable.

For items 2-4, if the household finances its holiday, pays their rent, mortgage or utility bills, pays for protein rich meal every second day, keeps home adequately warm through borrowing (from bank, relatives or friends) it is considered in the same way as if the household manages to pay through their own resources. This may seem a little strange and clearly captures the extent to which households have access to credit.

If any member of the household possesses one of the consumer durables listed (items 6-9) then it is assumed that all members of the household are not deprived of the particular item (see Appendix One for details). Possessing the item does not necessarily imply ownership: the item may be rented, leased, provided on loan, or shared with other households in (e.g.) a complex apartment (as long as they have access to the item whenever they desire). For the consumer durables, the household respondent is asked to indicate if they have the item and if they do not, is this because they:

- (a) would like to have it but cannot afford it, or
- (b) do not have one for other reasons e.g. do not want or need it.

There is clear a degree of subjectivity and not all household members may agree with the household respondents’ assessment of whether an item is something they would like to have or not but all individuals in the households are assigned the same response for these household level variables.

As the interest here is in how responses vary over the income distribution and over time in those items where individuals can express whether or not the household is without a particular item because either they cannot afford it or for some other reason, the analysis focuses on items 6, 7, 8 and 9.

The relationship between wanting material items and income has been noted previously. Guio et al (2012, p34) outline three possible explanations for why such a relationship may be observed: (1) tastes and preferences can be different in low income households holding different priorities; (2) the presence of adaptive preferences (as outlined by Sen, 1985 and 2009) where individuals’

expectations concerning material possessions tend to decrease with long-term poverty and social exclusion. The consequence of which is that these individuals may report that they do not want things that they simply cannot afford; (3) shame at not being able to afford items results in individuals preferring to respond that they do not want these items rather than not being able to afford them. However, they conclude from their analysis that there is a high degree of consistency across groups but with some remaining differences between age groups.

In this paper we do not consider material deprivation or severe material deprivation as it is measured by Eurostat. That is we do not assess changes in the shares of individuals living in households that are deprived of three/four or more items but examine differences and changes in shares of individuals going without individual items included in the measure.

3. Empirical Analysis

At present we have access to EU-SILC microdata up to 2011 which covers the start of the current economic and financial crisis that has swept across Europe but doesn't cover the last couple of years which have seen incomes fall dramatically for some households with rising unemployment and the impact of punitive austerity measures. The information on deprivation of durables refers to individuals' current possession status (at the time of the interview) while income information relates to a 12 month period either moving (ie 12 months prior to the interview) or fixed (eg previous calendar year/previous tax year).

Looking first across individuals in all countries covered by EU-SILC (where information is available)². The first chart presents shows an increase in individuals reporting that they are unable to cope with unexpected financial expenses since 2008 and how this is particularly marked for individuals living in low income households (Figure 1a). The result is that the income gradient has become much steeper during the recent economic crisis. This suggests that as material possessions such as consumer durables fail or need replacement low income households will find it difficult to meet this expense out of their own resources.

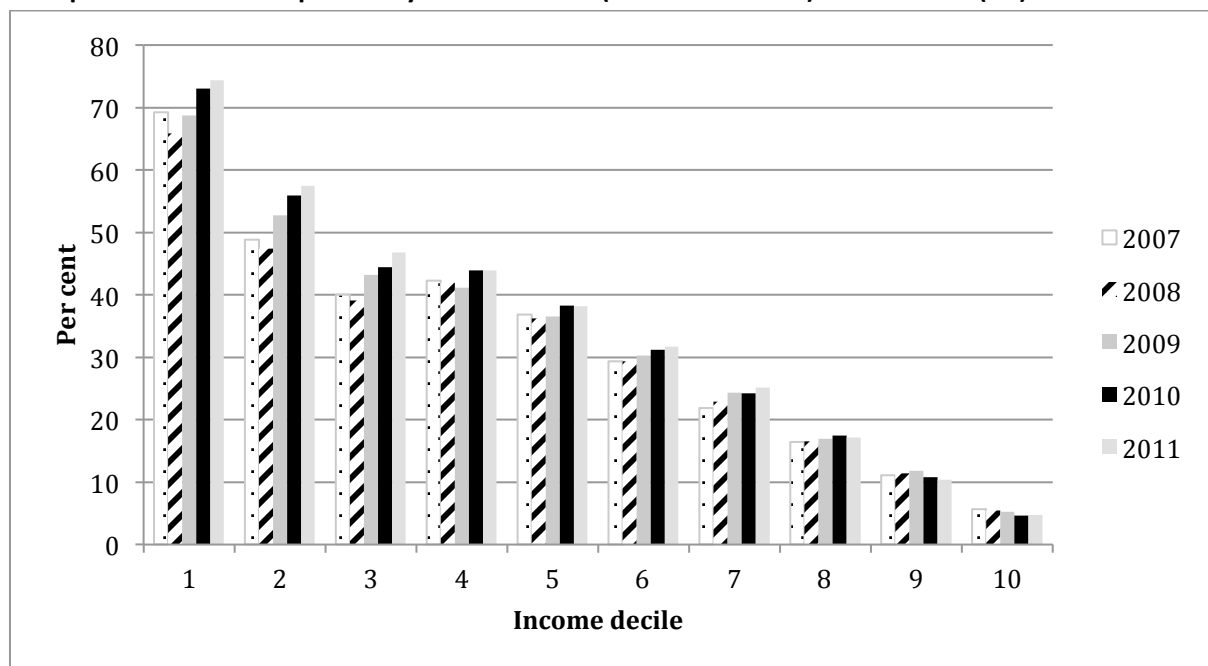
In Figure 1a individuals have been allocated to decile groups according to the equivalised disposable income of the household of which they are a member and individuals' incomes are ranked across all the countries included in the dataset. An alternative approach is to rank individuals' household incomes within their home country. With this approach individuals in one country in a particular decile may have higher or lower income than in another country. Figure 1b shows the percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by within country income deciles. This shows that although individuals in Decile 1 (lowest income) are less likely to be unable to meet unexpected financial expenses than when income deciles are defined across all countries, in deciles 2 and 3 they are more likely.

Figure 1c and 1d show the same information but is restricted to individuals living in EU15 countries. This is a richer subset of countries and therefore it is not surprising that there is a lower share of individuals reporting that they are unable to meet unexpected financial expenses. In EU15 countries we find that when income deciles are defined within countries there is a higher share of individuals

² EU-SILC data for Switzerland became available in 2011 for the first time but have been excluded from the analyses.

in the two lowest deciles who report that they are unable to meet unexpected financial expenses than is the case when income deciles are defined across countries. These data show that within EU15 countries individuals in the lowest income deciles (defined within and across countries) increasingly reported being unable to meet unexpected financial expenses since 2007.

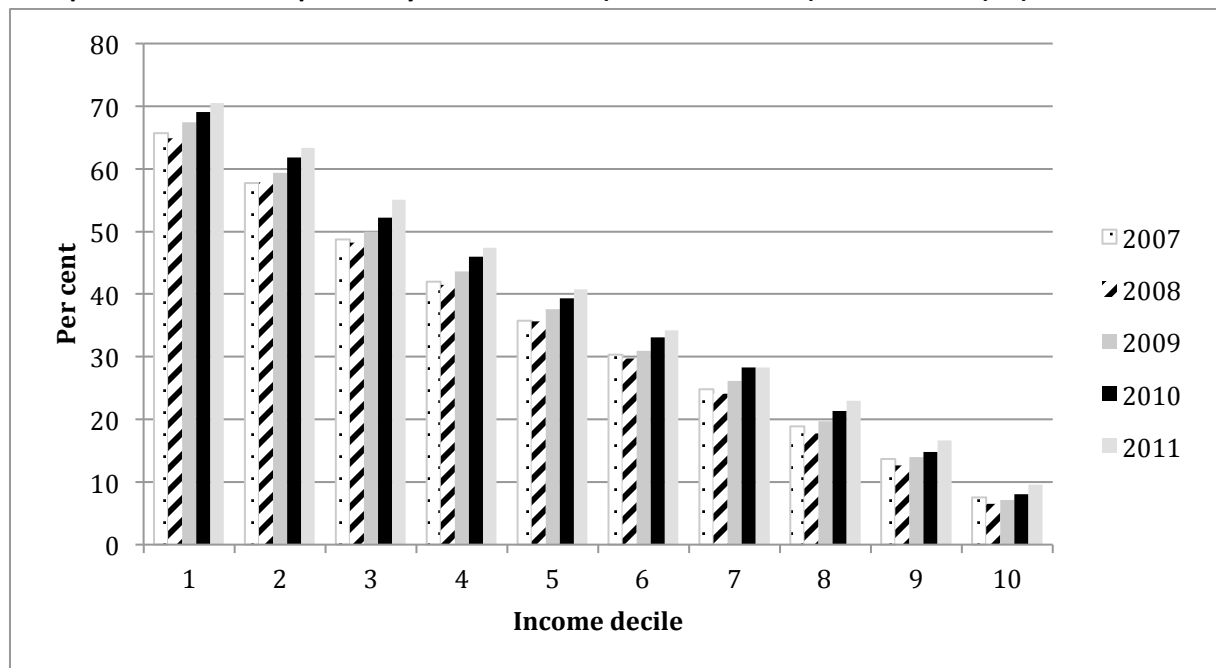
Figure 1a: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (across countries) – 2007-2011 (All)



Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed across countries. 29 European countries participating in EU-SILC (excluding Malta in 2007 and 2008 and Ireland in 2011). Individual level data are weighted using RB050.

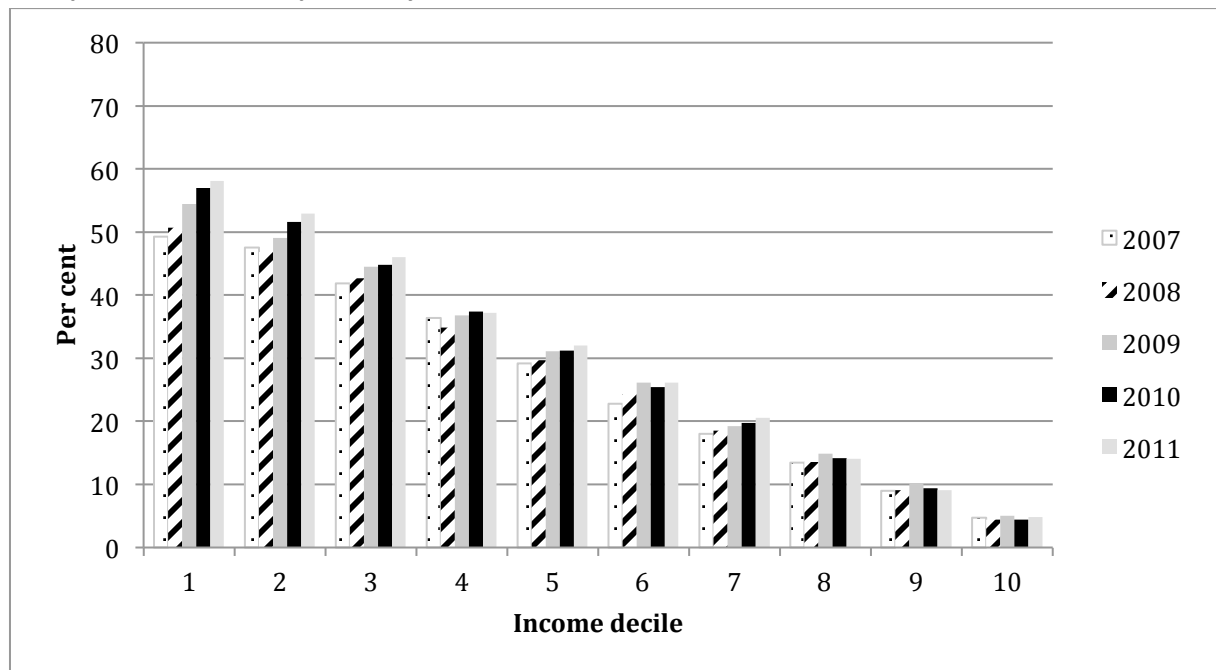
Figure 1b: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (within countries) – 2007-2011 (All)



Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed within countries. 29 European countries participating in EU-SILC (excluding Malta in 2007 and 2008 and Ireland in 2011). Individual level data are weighted using RB050.

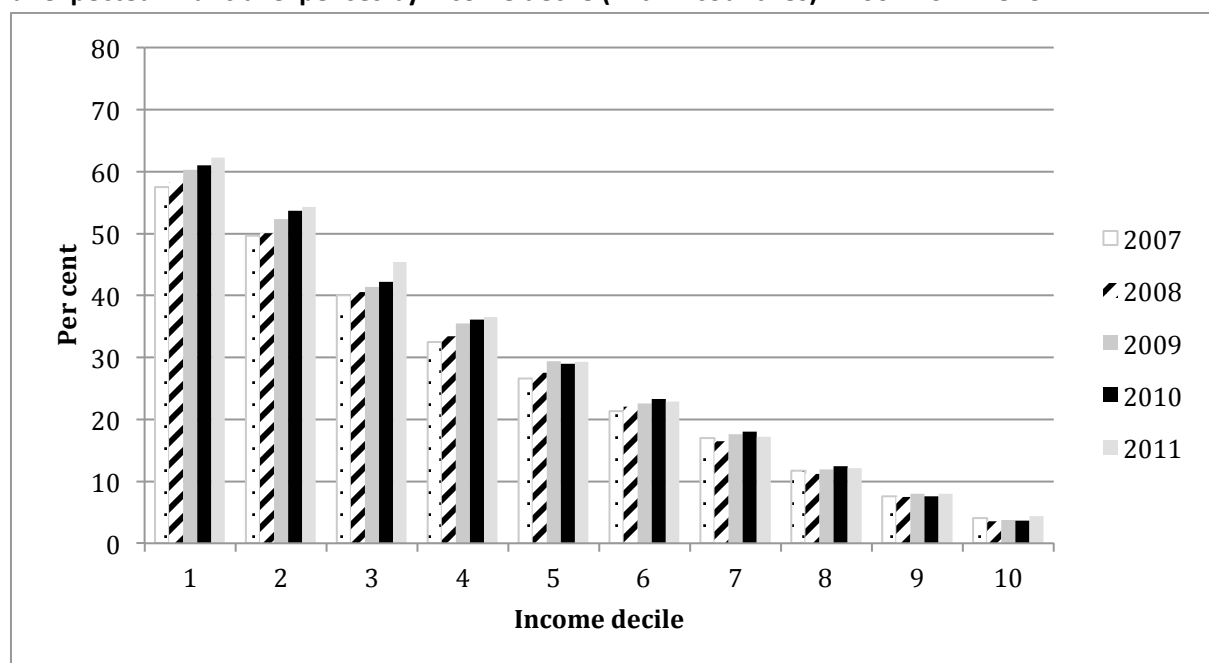
Figure 1c: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (across countries) – 2007-2011 EU15



Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed across countries. EU15 countries (excluding Ireland in 2011). Individual level data are weighted using RB050.

Figure 1d: Percentage of individuals living in households reporting that they are unable to meet unexpected financial expenses by income decile (within countries) – 2007-2011 EU15



Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed within each country. EU15 countries (excluding Ireland in 2011). Individual level data are weighted using RB050.

A comparison between Figures 1a and 1b and Figures 1c and 1d highlights that fact that there are some differences dependent on whether individuals are allocated to decile groups on the basis of income ranked across all countries or within their own country. For the remainder of the paper we include figure for income deciles which are defined in terms of income ranked within countries³. The figures for income deciles defined across countries can be found in Appendix Two.

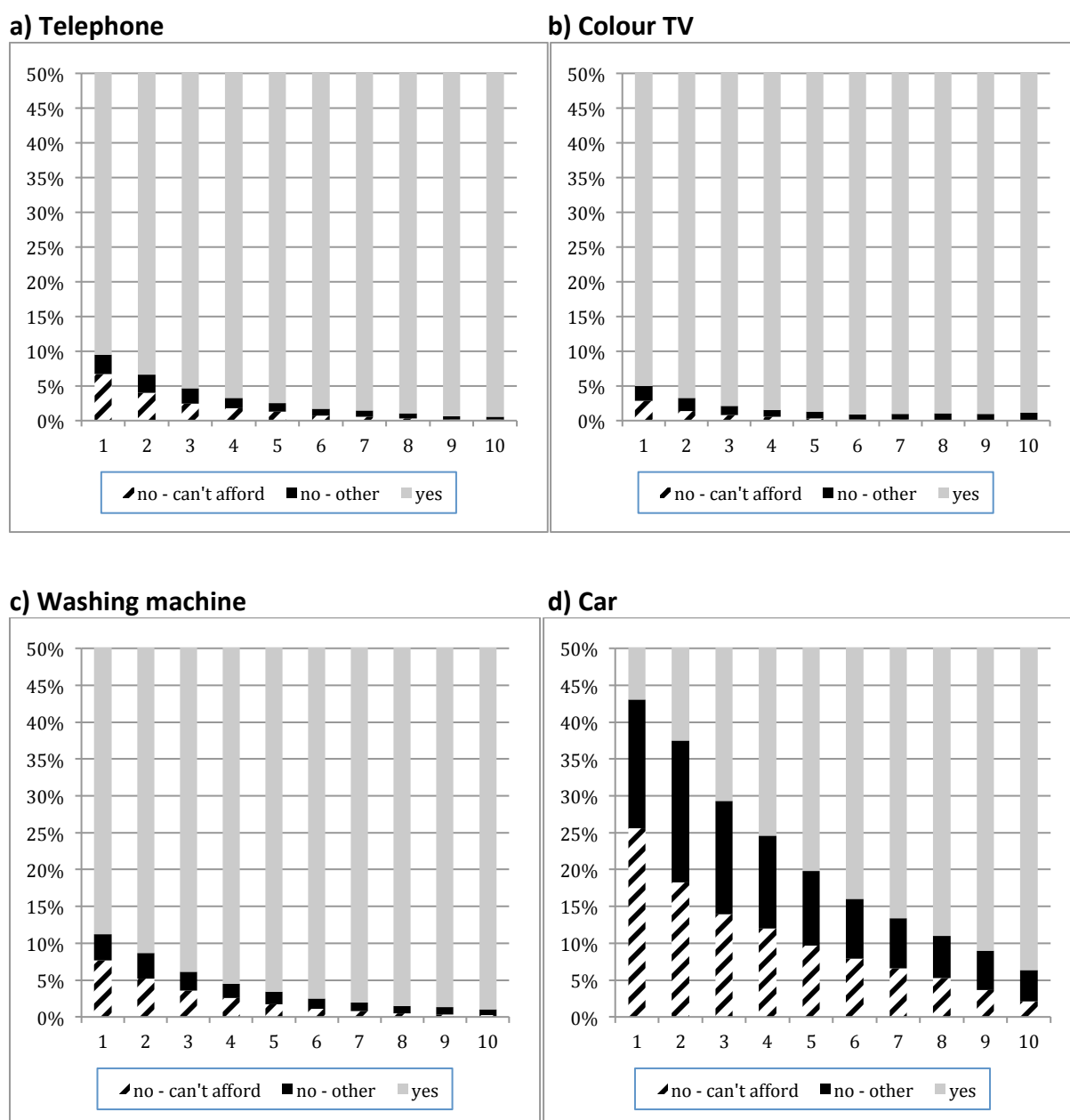
For the examination of deprivation of consumer durables we begin by examining how responses to the material deprivation questions vary over the income distribution in 2007. Figure 2 shows that out of the four items considered individuals are least likely to live in households deprived of a colour television. Only individuals living in households with incomes in the lowest two deciles report to any great extent not having a colour television because they cannot afford it (2.8 per cent in decile 1, 1.4 per cent in decile 2, and less than 1 per cent in higher income deciles). Individuals living in households with income in the lowest two deciles are more likely to report that they are without a TV for a reason other than not being able to afford one than individuals in higher income households (2 per cent compared with 1 per cent), but the fact that this rate is fairly stable above the second

³ Whelan and Maitre (2012) explore the issue of references groups in Europe in relation to material deprivation and economic stress.

deciles suggesting that an element of choice is being captured. This situation is in contrast to what we observe for the other three items where stronger income gradients are observed. Not only are individuals in low income households more likely to be deprived of these items because they report not being able to afford them but they are also more likely to report not having an item for some other reason. For telephones and washing machines there is both a higher share of individuals in the lowest income decile who are in households reporting deprivation because they are unable to afford these items (6.7 per cent telephone; 7.7 per cent washing machine) and a higher share who are going without these items for some other reason (an additional 2.8 and 3.5 percentage points, respectively) than individuals living in higher income households.

In relation to cars it is clear that out of the four items considered individuals are most likely to be deprived of this item either because they cannot afford it or for some other reason. 25.6 per cent of individuals in the lowest income decile report that they live in households deprived of a car because they cannot afford one. A further 17.5 per cent of individuals in this income group report that they are without a car for some other reason. There is a clear income gradient (the exception being that a similar share of individuals in the second lowest income decile report that they are without a car for a reason other than the fact that they cannot afford one), although the share who don't have a car because they cannot afford one falls. The car is the most expensive item in the set making it the item low income households are least likely to be able to afford either in terms of the initial purchase or in terms of additional costs (insurance, tax, maintenance, fuel, etc). There are a variety of reasons why individuals may chose not to own a car. For example, they may not be able to drive, it may not be practical or necessary for them to own a car.

Figure 2: Item deprivation status by income decile – 2007 (All)



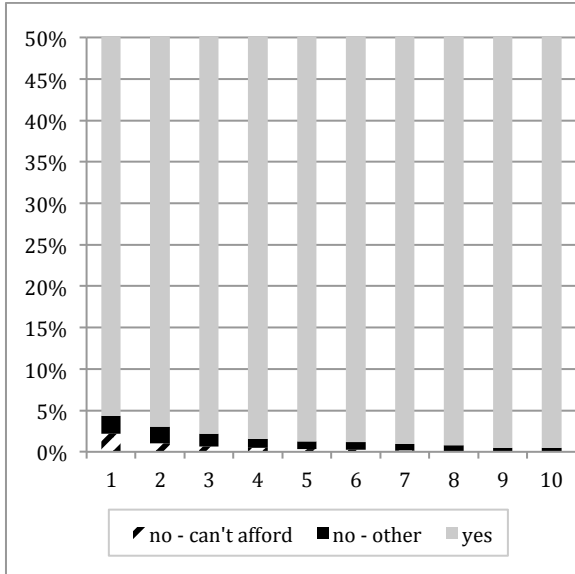
Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed within each country. 29 European countries participating in EU-SILC (excluding Malta). Individual level data are weighted using RB050.

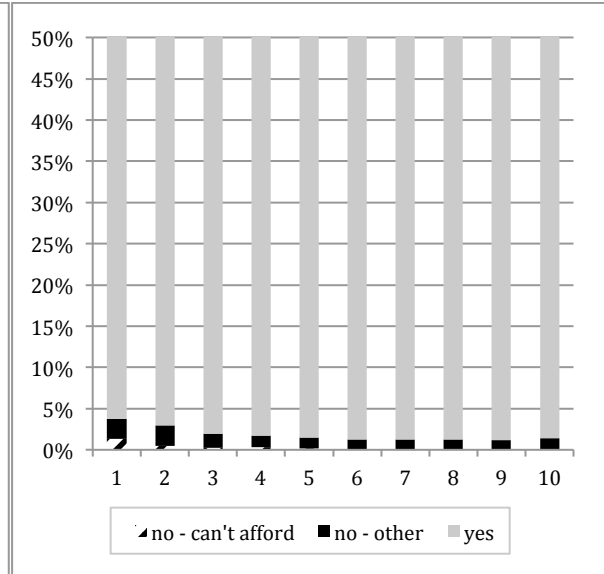
Figure 3 shows the same information as Figure 2 except the sample is restricted to individuals living in EU15 countries. As expected deprivation of these durables is lower within income deciles in EU15 countries but there is a similar pattern with falling deprivation rates as income rises for both 'enforced' deprivation and for those deprived for some other reason (did not want or need).

Figure 3: Item deprivation status by income decile – 2007 (EU-15)

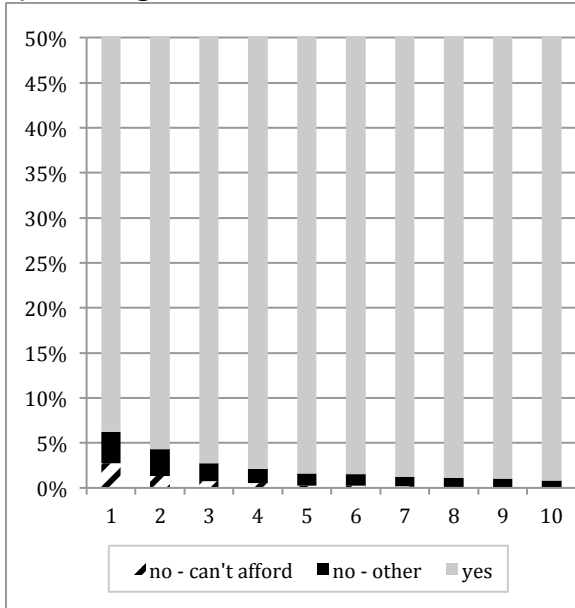
a) Telephone



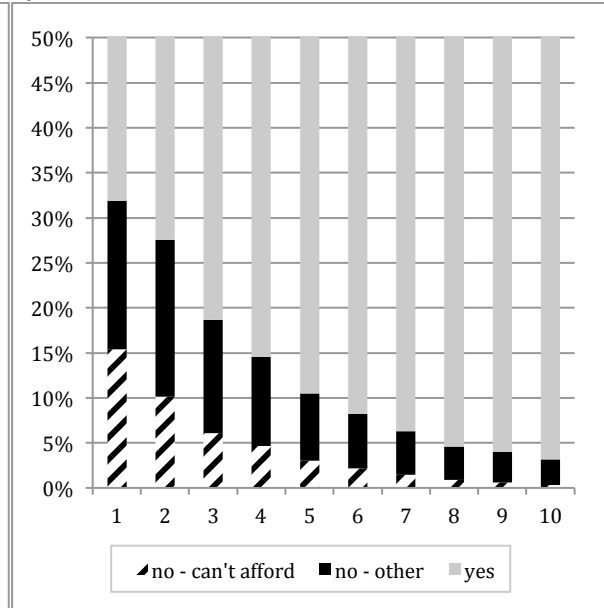
b) Colour TV



c) Washing machine



d) Car



Source: EU-SILC microdata.

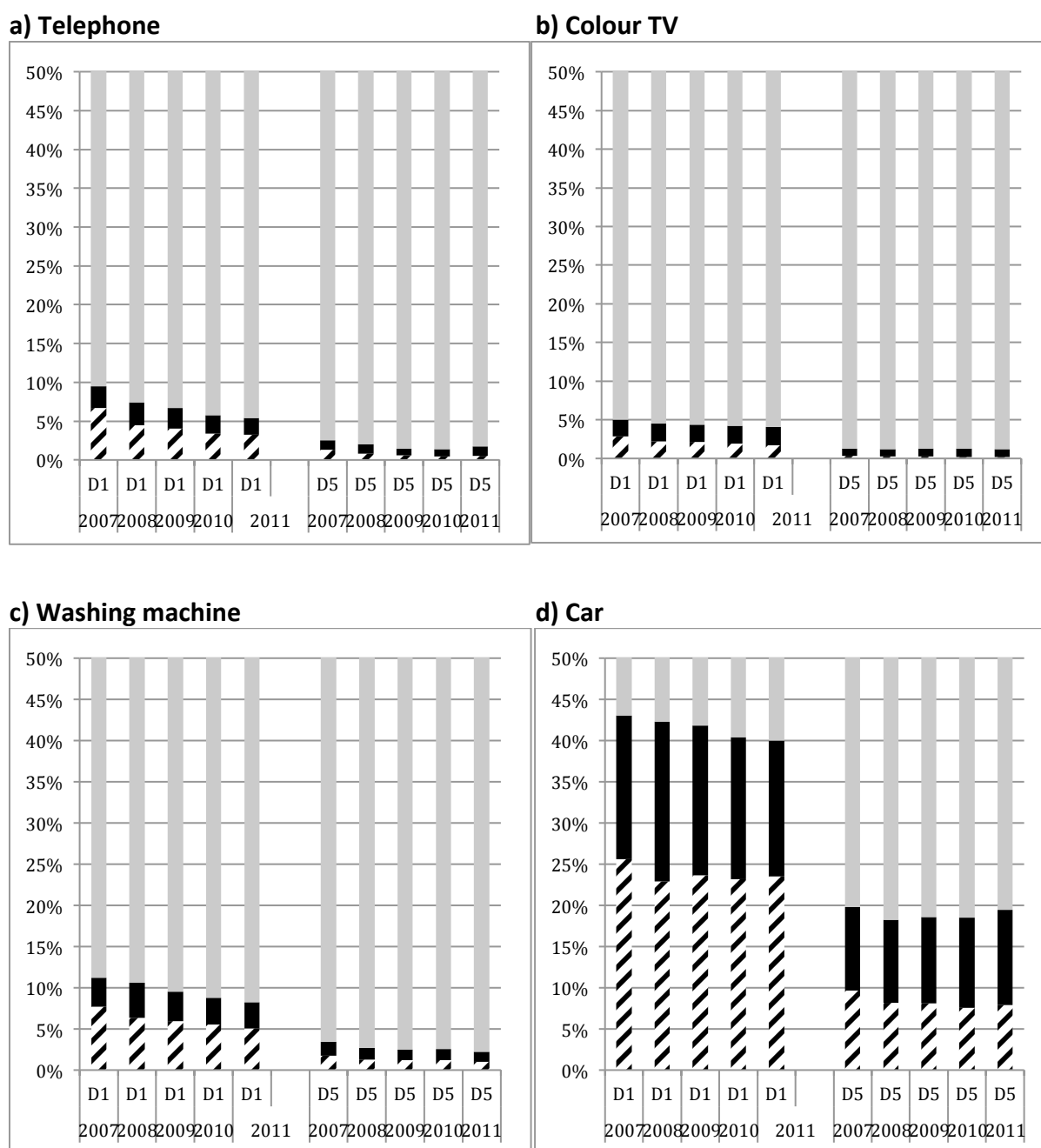
Notes: Income is household equivalised income. Deciles are computed within each country (EU-15). Individual level data are weighted using RB050.

The concern is that the higher share of lower income individuals reporting that they are without a particular item for some other reason than the fact that they report that they are unable to afford it has more to do with financial resources than the classification suggests. If it is choice then the question needs to be asked – *why* is it that lower income households are more likely to choose not to have these items than higher income households?

Figure 4 shows how item deprivation status changes between 2007 and 2011 for individuals living in the lowest income decile and for individuals living in the fifth income decile. Over this five year period for all of the items we see a fall in the share of individuals recorded as living in a household going without because they cannot afford them. The main decline appears to have occurred between 2007 and 2008. However, between 2007 and 2008 there has been an increase in the share of individuals going without a telephone, colour TV, washing machine and car for some “other reason” for individuals in the lowest income decile (D1). This means that this category constituted a larger share of deprived individuals overall. This category either remained the same or reduced in size for all items for individuals in households with income in the fifth decile (D5), with the exception of car ownership.

Figure 5 shows relatively small falls in the share of individuals in EU15 countries who are deprived of these items between 2007 and 2011 (starting from a much lower base. The share of individuals reporting that they are deprived of items because they cannot afford them is higher in D1 than in D5 as is the share of individuals reporting that they don’t have these items for some other reason (don’t want or need); around twice as big.

Figure 4: Item deprivation status D1 and D5 – 2007-2011 (All)

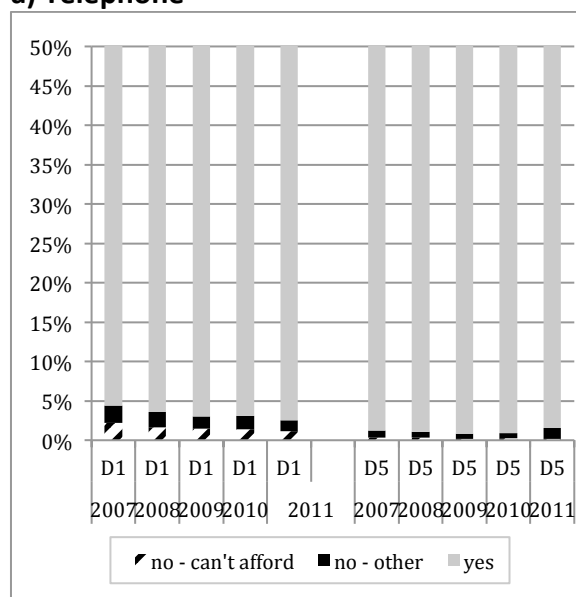


Source: EU-SILC microdata.

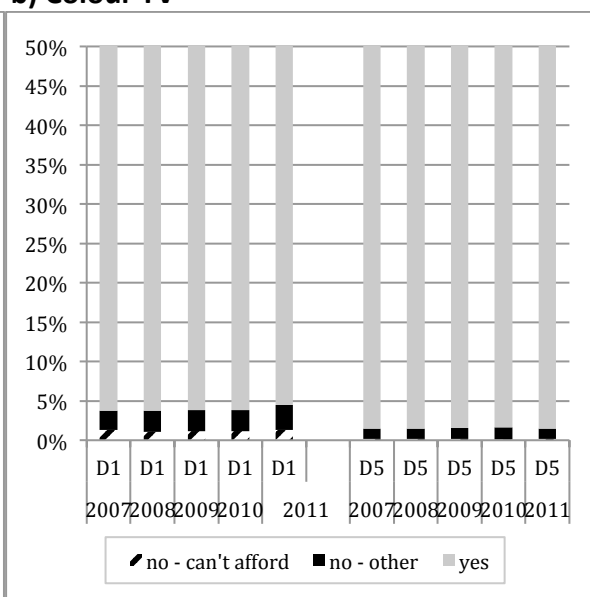
Notes: Income is household equivalised income. Deciles are computed within each country. 29 European countries participating in EU-SILC (excluding Malta in 2007 and Ireland in 2011). Individual level data are weighted using RB050.

Figure 5: Item deprivation status D1 and D5 – 2007-2011 (EU15)

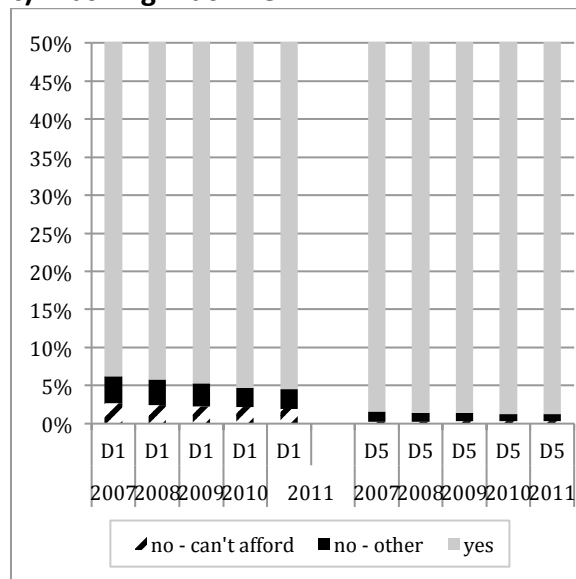
a) Telephone



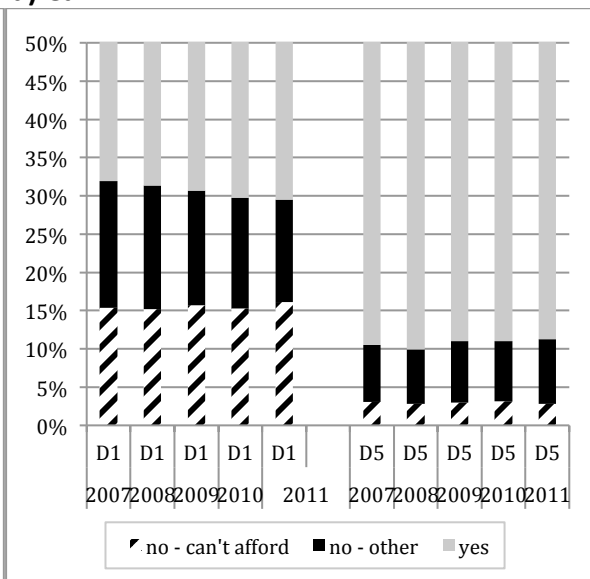
b) Colour TV



c) Washing machine



d) Car



Source: EU-SILC microdata.

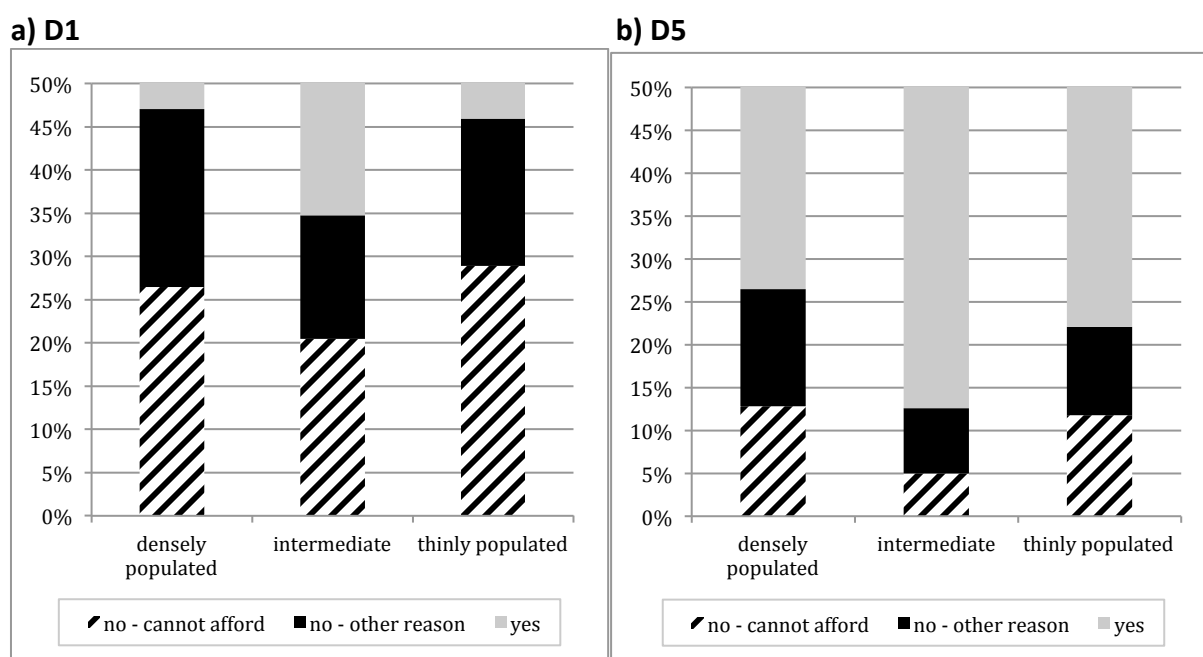
Notes: Income is household equivalised income. Deciles are computed within each country (EU-15 excluding Ireland in 2011). Individual level data are weighted using RB050.

Car ownership, as noted earlier, is the item that individuals are most likely to be deprived of out of this set of items. One of the reasons why individuals may choose not to own a car is because they live in cities or densely populated areas where the need for a car is much reduced compared to living in a rural area. This is because urban areas generally have good public transport links, parking is often very restricted (and can be expensive) both near peoples' homes and their workplaces, and congestion can mean that driving is not the best means of transport. In Figure 6 we examine the

extent to which deprivation of a car varies across area types within Decile 1 and Decile 5 for 2007. Within Decile 1 just over a quarter (26%) of individuals living in densely populated areas don't have a car because they report that they cannot afford one and a further one-fifth (21%) report that they don't have a car for some other reason. However it is not the case that individuals choosing not to have a car in densely populated areas explain the result as a similar share of individuals in Decile 1 who are living in thinly populated areas also report not having a car and - the share reporting that this is because they cannot afford one is slightly higher than in densely populated areas (29%) and the share reporting that that this is because of some other reason is slightly lower (17%). Individuals living in Intermediate density areas with incomes in Decile 1 are the least likely to report not having a car. This is the same in Decile 5 although car deprivation is lower in all area types.

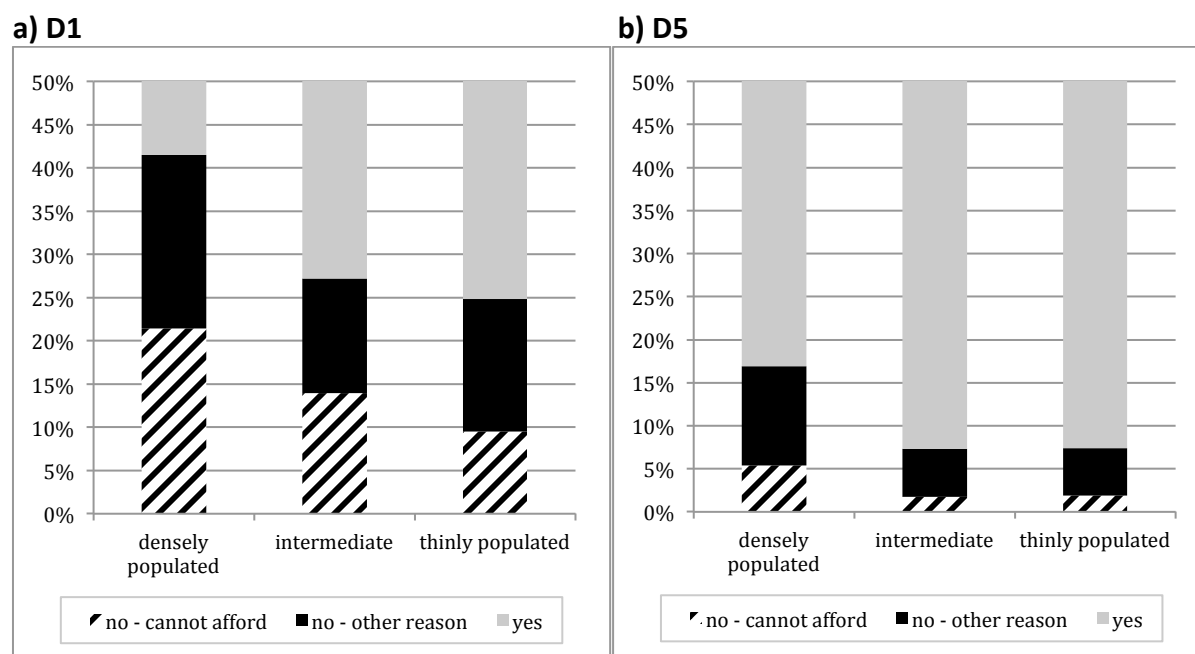
There is a different pattern when the sample is restricted to EU15 countries where there is much more marked car deprivation in densely populated areas compared with intermediate and thinly populated areas, in Decile 1 and Decile 5. There does appear to be much greater material deprivation, at least in terms of car possession, in thinly populated areas in European countries outside EU15 that is behind the difference between these two samples. Although the share of individuals reporting that they do not have a car for some other reason than that they cannot afford one is higher in densely populated areas, it is still the case that a considerable share of individuals in intermediate (13%) and thinly populated areas (15%) report the same.

Figure 6: Car deprivation status by population density of individuals' residence - 2007 (All)



Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed within each country. 29 European countries participating in EU-SILC (excluding Malta). Individual level data are weighted using RB050.

Figure 7: Car deprivation status by population density of individuals' residence - 2007 (EU15)

Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed within each country (EU-15). Individual level data are weighted using RB050.

The concern is that individuals in lower income deciles may have characteristics associated with non-possession of a car (or more generally of any of the items considered) for other reasons than not being able to afford one, for example, such as their age and where they live and it is these factors that are shaping the observed income gradient. Simple probability models such as the probit model can be estimated to explore the extent to which deprivation varies across income deciles due to individuals' age, gender and population density. Table 1 shows the probit regression results for 2007 across all 29 EU-SILC countries excluding Malta. The dependent variable in this first model is car deprivation where respondents indicate that they are without a car could not afford one. This is what is classified as 'enforced deprivation'. We find that men are less likely to be without a car because they cannot afford one than are women. Children are less likely to live in households that are without a car for this reason than individuals aged between 16 and 64 as are older adults over 65 years and particularly those over 80 years. We also find, as suggested by the earlier analysis, individuals living in densely populated areas and thinly populated areas are more likely to experience enforced deprivation of a car than individuals living in intermediate areas. However, after controlling for these factors we find a strong income gradient which is what we would expect to find as income provides households with the resources to purchase and maintain a car.

In Table 2 we show the results from a probit model for car deprivation where respondents indicate that they are without a car for some other reason (don't want or need). The results show that men are less likely than women to be without a car for this reason and children (particularly very young children) and young adults are less likely to be in a household without a car than individuals aged 22-44. However, after the age of 44 individuals are increasingly likely to report being without a car for a reason other than the fact that they cannot afford one. The age group least likely to be without a car for this reason is the 80+ group which is what we would expect to find. Individuals living in densely populated and thinly populated areas are more likely to be without a car for this reason than individuals living in intermediate areas. However, after controlling for all these factors we still find a statistically significant negative income gradient. This means that while gender, age and population density all have significant influences on this type of deprivation these factors alone do not explain the finding that individuals living in lower income households are more likely than individuals living in higher income households to report being without a car because they 'don't want or need' one.

Table 1: Probit regression results for car deprivation (cannot afford) - All

	Coef.	Std. Err.	Z	P> z	[95% Conf. Interval]	
Male	-.0491368	.0048509	-10.13	0.000	-.0586445	-.0396292
Age group						
<5 yrs	-.1565340	.0130046	-12.04	0.000	-.1820227	-.1310454
5-15 yrs	-.1268018	.0079332	-15.98	0.000	-.1423507	-.1112529
16-21 yrs	.0008511	.0096385	0.09	0.930	-.0180401	.0197423
45-64 yrs	-.0086077	.0064401	-1.34	0.181	-.0212301	.0040147
65-79 yrs	-.0680581	.0079271	-8.59	0.000	-.083595	-.0525212
80+ yrs	-.2140244	.0124093	-17.25	0.000	-.2383461	-.1897027
Area type						
Dense	.4019451	.0071237	56.42	0.000	.387983	.4159073
Thinly pop.	.3919579	.0070024	55.98	0.000	.3782335	.4056823
Income						
Decile 2	-.2377918	.0088262	-26.94	0.000	-.2550909	-.2204927
Decile 3	-.4069645	.0090935	-44.75	0.000	-.4247873	-.3891416
Decile 4	-.4928927	.0092324	-53.39	0.000	-.5109878	-.4747976
Decile 5	-.6212129	.0095941	-64.75	0.000	-.640017	-.6024087
Decile 6	-.7309310	.0099277	-73.63	0.000	-.7503889	-.711473
Decile 7	-.8303698	.0102954	-80.65	0.000	-.8505485	-.8101912
Decile 8	-.9444417	.0108255	-87.24	0.000	-.9656594	-.923224
Decile 9	-1.1321130	.0118232	-95.75	0.000	-1.155286	-1.10894
Decile 10	-1.3869360	.0137785	-100.66	0.000	-1.413942	-1.359931
Constant	-.8821447	.0092184	-95.69	0.000	-.9002124	-.8640769

Notes: (1) EU-SILC microdata. Income is household equivalised income. Deciles are computed within each country. 29 European countries participating in EU-SILC (excluding Malta). Individual level data are weighted using RB050. (2) Omitted categories are: female, 22-44 years, intermediate area type, Decile 1. (3) 516,432 observations; model Log likelihood = -166594, model Pseudo R2=0.0809.

Table 2: Probit regression results for car deprivation (don't want or need) - All

	Coef.	Std. Err.	Z	P> z	[95% Conf. Interval]	
Male	-.1795376	.005085	-35.31	0.000	-.189504	-.1695712
Age group						
<5 yrs	-.2278219	.0159192	-14.31	0.000	-.2590229	-.1966209
5-15 yrs	-.2172173	.0096607	-22.48	0.000	-.2361518	-.1982827
16-21 yrs	-.1267963	.0118547	-10.70	0.000	-.1500312	-.1035614
45-64 yrs	.1646619	.0070307	23.42	0.000	.1508821	.1784418
65-79 yrs	.7840478	.0074464	105.29	0.000	.7694531	.7986424
80+ yrs	1.3783660	.0099067	139.13	0.000	1.358949	1.397783
Area type						
Dense	.3641207	.007045	51.69	0.000	.3503127	.3779286
Thinly pop.	.1600042	.0071463	22.39	0.000	.1459978	.1740106
Income						
Decile 2	-.0430531	.0096759	-4.45	0.000	-.0620175	-.0240888
Decile 3	-.1898934	.0099162	-19.15	0.000	-.2093288	-.170458
Decile 4	-.2935913	.0101037	-29.06	0.000	-.3133941	-.2737885
Decile 5	-.3912902	.0104464	-37.46	0.000	-.4117648	-.3708157
Decile 6	-.4836194	.0108129	-44.73	0.000	-.5048122	-.4624266
Decile 7	-.5799096	.0112153	-51.71	0.000	-.6018911	-.5579281
Decile 8	-.6598367	.0116179	-56.79	0.000	-.6826074	-.637066
Decile 9	-.6787900	.0116764	-58.13	0.000	-.7016754	-.6559046
Decile 10	-.7947047	.0123072	-64.57	0.000	-.8188262	-.7705831
Constant	-1.246787	.0100339	-124.26	0.000	-1.266453	-1.227121

Notes: (1) EU-SILC microdata. Income is household equivalised income. Deciles are computed within each country. 29 European countries participating in EU-SILC (excluding Malta). Individual level data are weighted using RB050. (2) Omitted categories are: female, 22-44 years, intermediate area type, income in Decile 1. (3) 516432 observations; model Log likelihood = -152267.64, model Pseudo R2=0.1522.

4. Summary

Individuals living in households who are without specified consumer durables where it is reported that this is due to a reason other than the fact that they cannot afford them are considered not to be materially deprived of these items according to the definition used by the EU to monitor progress towards the targets set within the Europe 2020 strategy.

The motivation for categorising deprivation in this way is based on the reasonable premise that individuals can choose to go without or do not have a need for an item and a measure of material deprivation should capture enforced lack of an item due to lack of resources. For example a household may decide that it does not need a car or may choose not to own a colour television.

The information presented here shows that individuals are more likely to express that they do not want or need an item the lower their household income. In addition after 2007 as the economic crisis began to hit households there is some evidence of an increase in the share of households reporting that they lived without these items for a reason other than the fact that they couldn't afford them. These findings raise some important questions about what this category is capturing. Simple probability model estimates show that after controlling for gender, age and density of population for the area in which an individual lives there remains a statistically significant negative income gradient in non-possession of a car where the household respondent has reported that this was due to a reason other than not being able to afford one (not want or need).

It is certainly possible to speculate that individuals evaluate "want/need" in relation to durables in the light of income that they have available and to re-evaluate when income changes (adaptive expectations/preferences). It is also possible that lack of finances may not be the primary reason (as the respondent sees it) but may be the underlying reason. In terms of cars an individual may report not having a car for another reason where that reason is that they do not have a licence to drive a car. They may not have a licence to drive a car because they cannot afford to pay for the necessary driving lessons. A household may not have a washing machine because they live in low quality housing (maybe rental accommodation) where there is no space for the appliance. Living in low quality housing may be the result of having a very low income but the individual may report that they do not own a washing machine for some other reason – ie because it is not possible to have one in their accommodation – not that they can't afford one even though they may not be able to afford to have one.

This is just speculation but an explanation is required to understand why individuals living in lower income households are more likely to report that deprivation is not “enforced” than individuals living in higher income households. The concern is that the current method of measuring material deprivation is an underestimate and may systematically underestimate material deprivation among lower income households.

In many European countries the impact of the recent economic and financial crisis hit households hard as unemployment increased and austerity measures bit. This is not fully captured in the currently available EU-SILC microdata, which was only available up to 2011. More recent data may provide some interesting evidence on how individuals/households re-evaluate “need/want” as their income falls. It has been shown that since 2007/2008 there have been annual increases in the share of individuals reporting that they are unable to meet unexpected financial expenses and the presence of a very strong and steepening income gradient. This suggests that as durables need repair or replacement there will be a further increase in the share of households going without these items unless household incomes increase.

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Appendix

EU-SILC Description of variables

HS060: Capacity to face unexpected financial expenses

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Format of the question

Can your household afford an unexpected required expense (amount to be filled) and pay through its own resources?

Values

1 yes

2 no

The variable records whether, according to the household respondent, the household can face itself unexpected financial expenses.

"Own resources" means:

- Your household does not ask for financial help from anybody
- Your account has to be debited within the required period
- Your situation regarding potential debts is not deteriorated.

You do not pay through own resources if you pay in instalments (or by taking a loan) expenses that you previously used to pay in cash.

Required expenses

A required expense could be different across countries but examples are surgery, funeral, major repair in the house, replacement of durables like washing machine, car.

For the calculation of the amount that should be filled in the questionnaire the national at-risk-of-poverty threshold has to be used per one consumption unit, that means it has to be used independently of the size and structure of the household. A ratio of 1/12 of the above value is used in the questionnaire. This value can be rounded but the difference between calculated value and rounded value cannot exceed 5% (for example; a calculated value of 136 can be rounded to 140 but not to 150).

HS070: Do you have a telephone (including mobile phone)?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Format of the question

Does your household have a telephone (fixed landline or mobile)?

If you do not have a telephone,

(a) would you like to have it but cannot afford it, or

(b) do you not have one for other reasons e.g. you do not want or need it.

Values

1 yes

2 no - cannot afford

3 no - other reason

Whether the household have a telephone (including mobile phone) or whether the household does not have a telephone because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford. Possession of the item does not necessarily imply ownership: the item may be rented, leased or provided on loan. In the case of mobile telephones, the household should be considered to possess the item if any member possesses it.

HS080: Do you have a colour TV?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Format of the question

Does your household have a colour TV?

If you do not have a colour TV, you:

- (a) would you like to have it but cannot afford it, or
- (b) do you not have one for other reasons e.g. you do not want or need it.

Values

1 yes

2 no - cannot afford

3 no - other reason

Whether the household have a colour TV or whether the household does not have a colour TV because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford. Possessing the item does not

necessarily imply ownership: the item may be rented, leased, provided on loan or shared with other households in (e.g.) a complex apartment and not necessarily owned. If the item is shared between households, the answer is "Yes" if there is adequate/easy access (i.e. household can use the durable whenever it wants) and "No" otherwise. In the case of a colour television, the household is considered to possess it if any member possesses it.

HS100: Do you have a washing machine?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Format of the question:

Does the household have a washing machine?

If you do not have a washing machine, you:

- (a) would you like to have it but cannot afford it, or
- (b) do you not have one for other reasons e.g. you do not want or need it.

Values

1 yes

2 no - cannot afford

3 no - other reason

Whether the household have a washing machine or whether the household does not have a washing machine because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford. Possessing the item does not necessarily imply ownership: the item may be rented, leased, provided on loan, or shared

with other households in (e.g.) a complex apartment. If the item is shared between households, the answer is "Yes" if there is adequate/easy access (i.e. household can use the durable whenever it wants) and "No" otherwise. In the case of a washing machine, the household is considered to possess it if any member possesses it.

HS110: Do you have a car?

SOCIAL EXCLUSION (Non-monetary household deprivation indicators)

Cross-sectional and longitudinal

Reference period: current

Unit: household

Mode of collection: household respondent

Format of the question:

Does your household have a car/van for private use?

If you do not have a car/van, you:

(a) would you like to have it but cannot afford it, or

(b) do you not have one for other reasons e.g. you do not want or need it.

Values

1 yes

2 no - cannot afford

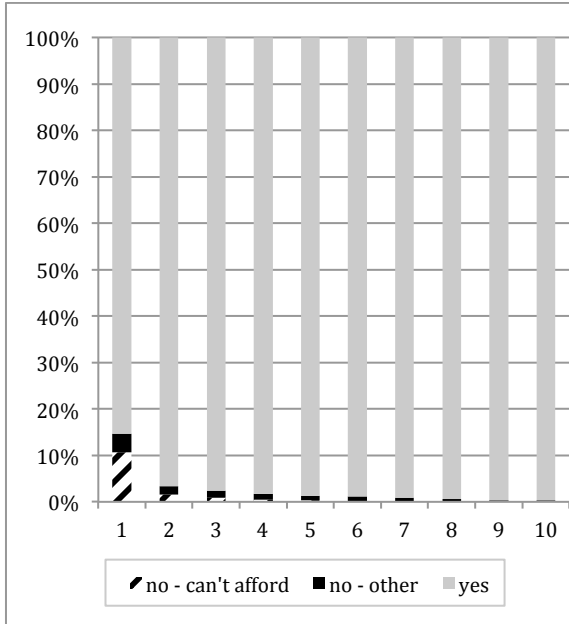
3 no - other reason

Whether the household have a car or whether the household does not have a car because it cannot afford it (enforced lack) or for other reasons. 'Enforced lack' implies that the item is something that the household would like to have, but cannot afford. Possessing the item does not necessarily imply ownership: the item may be rented, leased, provided on loan, or shared with other households. If the

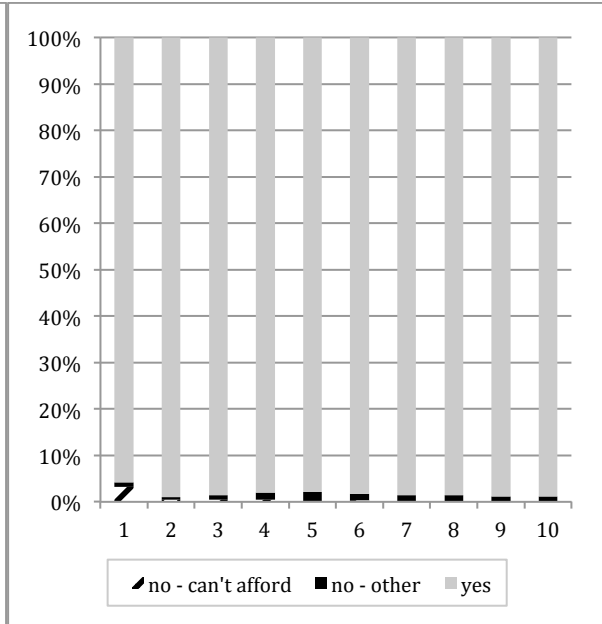
item is shared between households, the answer is "Yes" if there is adequate/easy access (i.e. household can use the durable whenever it wants) and "No" otherwise. In the case of a car, the household is considered to possess it if any member possesses it. A company car or van which is available to the household for private use counts as possessing the item. A car or van provided ONLY for professional purpose, should not be considered as possessing the item. Motorcycles are excluded.

Figure A1: Item deprivation status by income decile – 2007 (All)

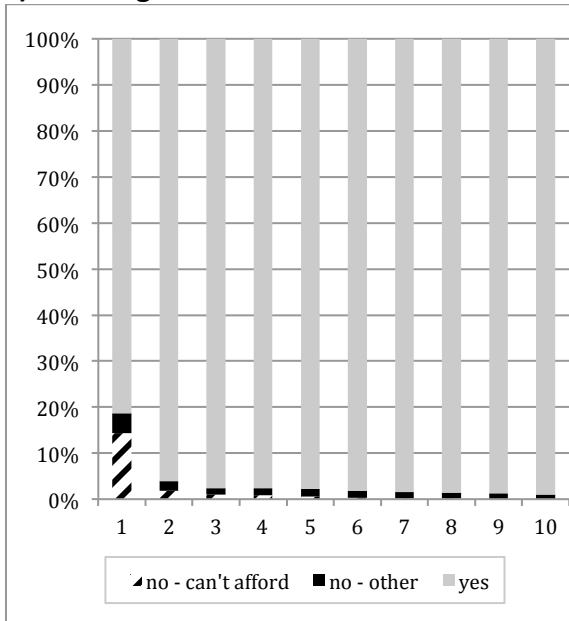
a) Telephone



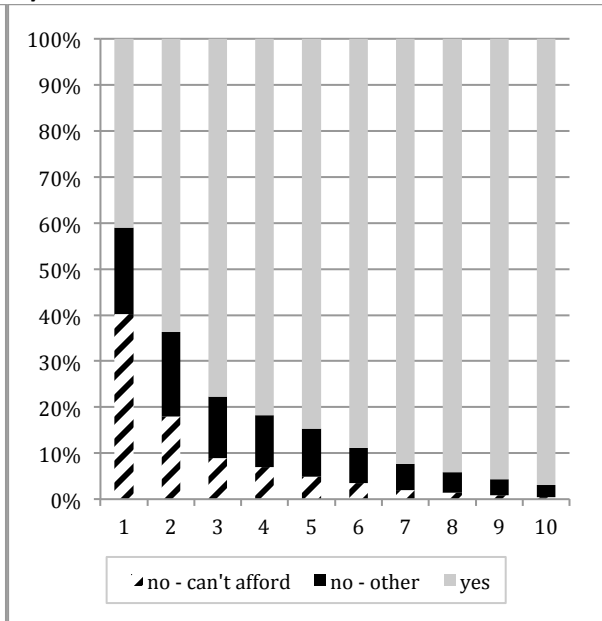
b) Colour TV



c) Washing machine



d) Car

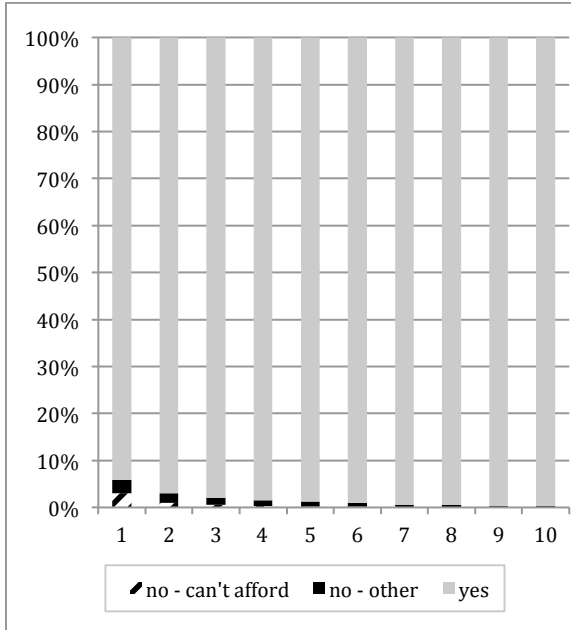


Source: EU-SILC microdata.

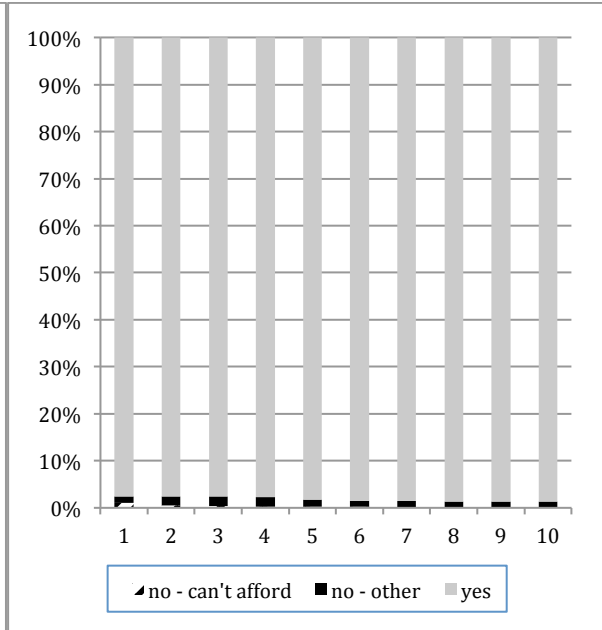
Notes: Income is household equivalised income. Deciles are computed across all 29 countries participating in EU-SILC (excluding Malta). Individual level data are weighted using RB050.

Figure A2: Item deprivation status by income decile – 2007 (EU-15)

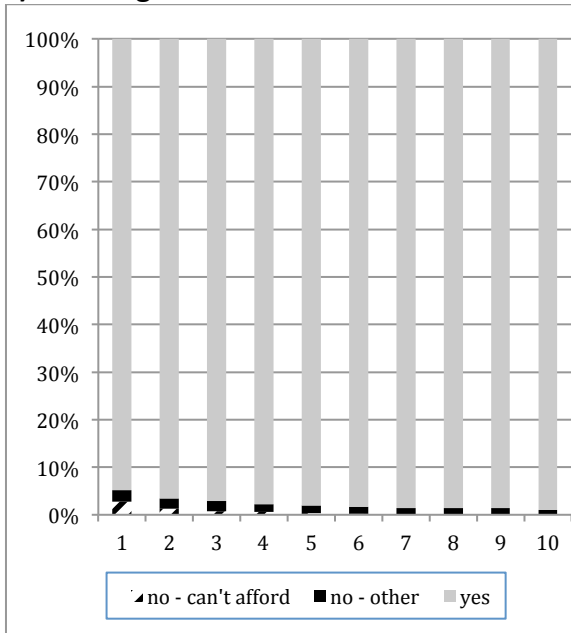
a) Telephone



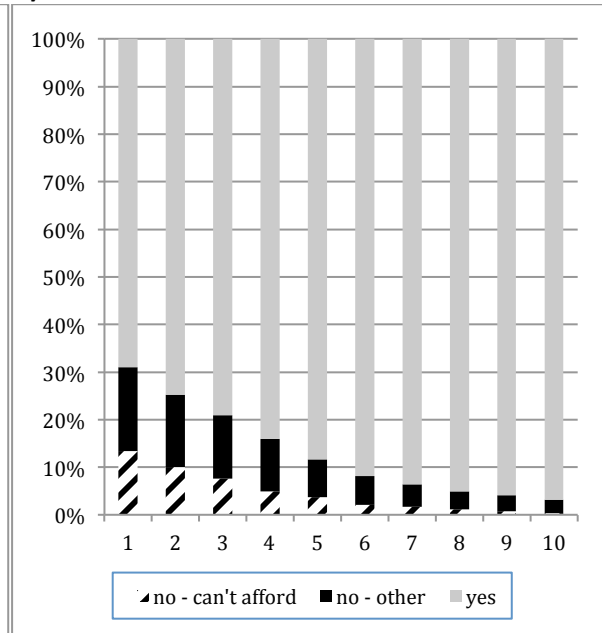
b) Colour TV



c) Washing machine



d) Car

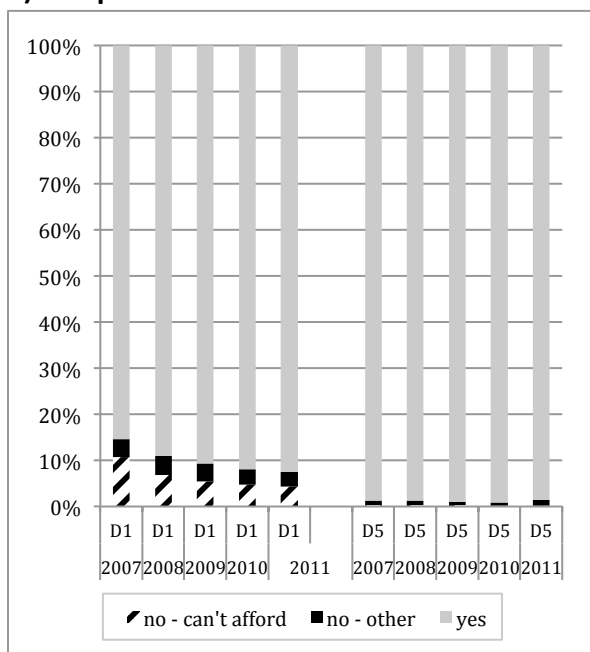


Source: EU-SILC microdata.

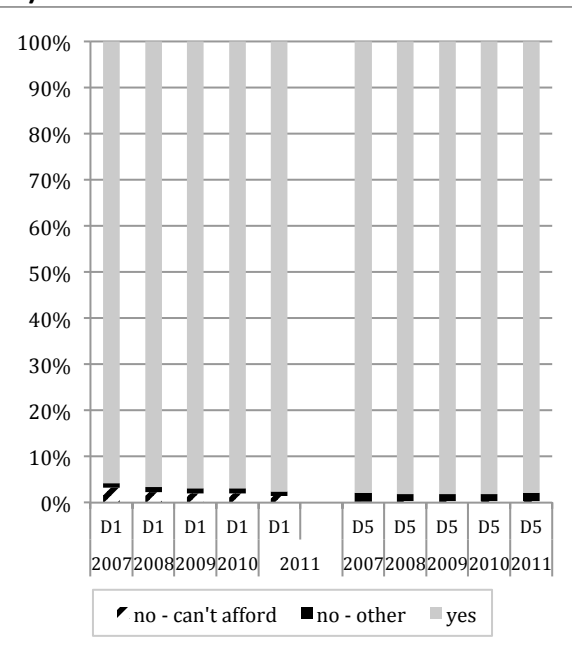
Notes: Income is household equivalised income. Deciles are computed across EU-15 countries. Individual level data are weighted using RB050.

Figure A3: Item deprivation status D1 and D5 – 2007-2011 (All)

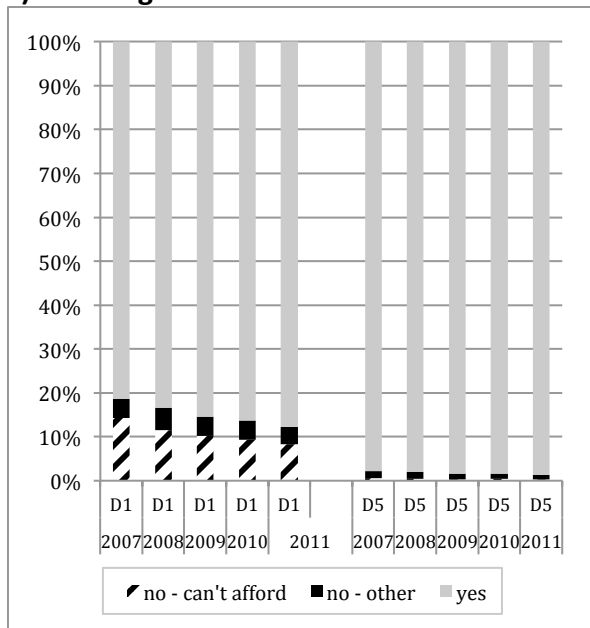
a) Telephone



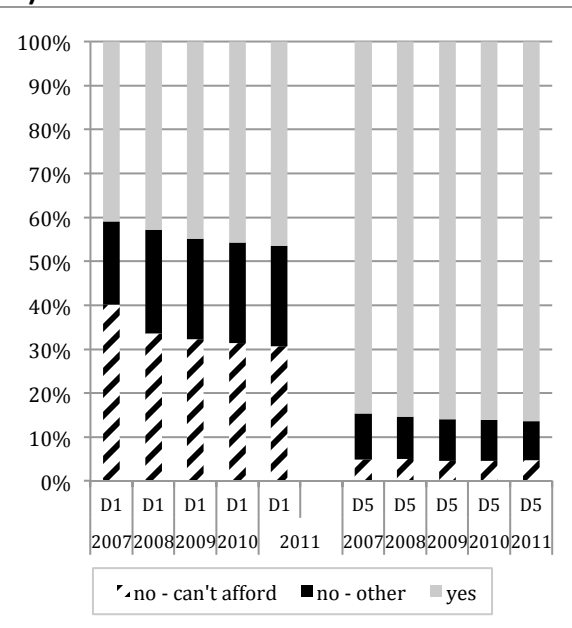
b) Colour TV



c) Washing machine



d) Car

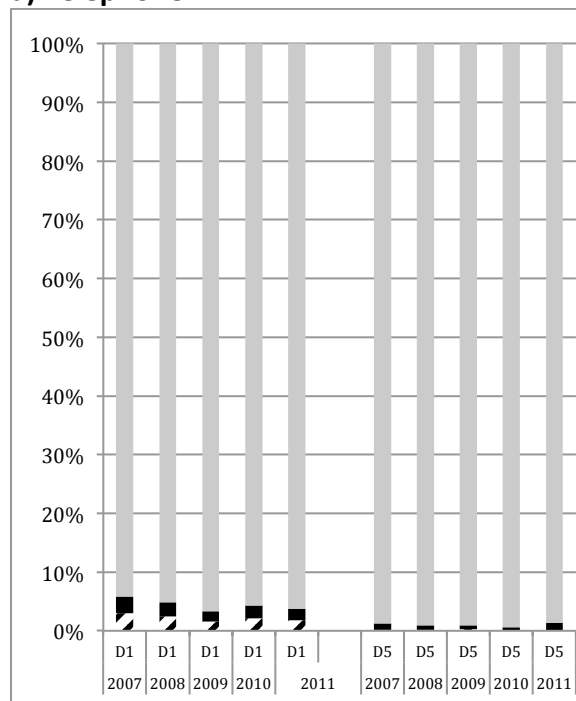


Source: EU-SILC microdata.

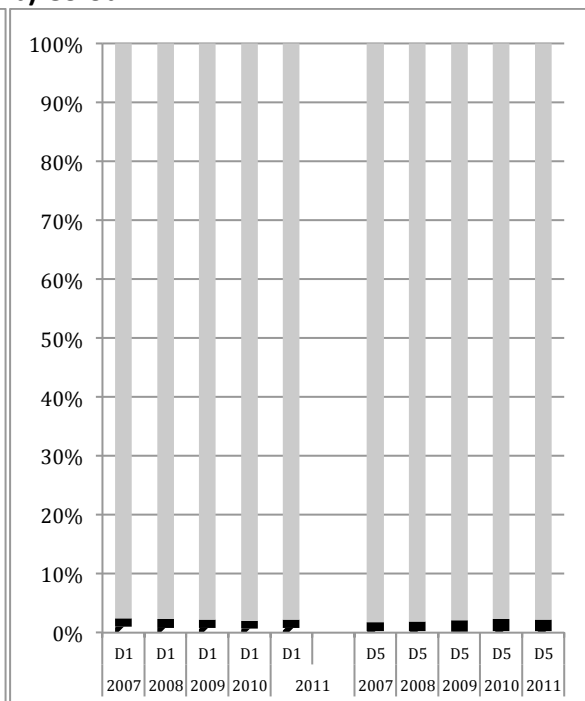
Notes: Income is household equivalised income. Deciles are computed across all 29 countries participating in EU-SILC (excluding Malta in 2007 and 2008 and Ireland in 2011). Individual level data are weighted using RB050.

Figure A4: Item deprivation status D1 and D5 – 2007-2011 (EU-15)

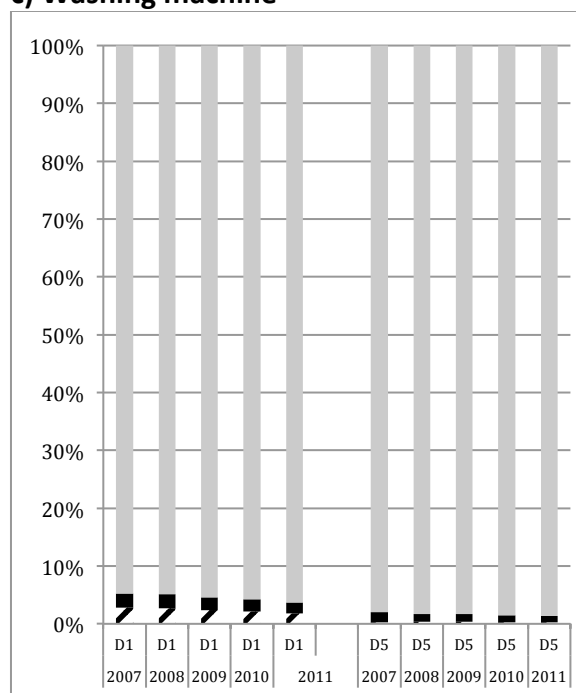
a) Telephone



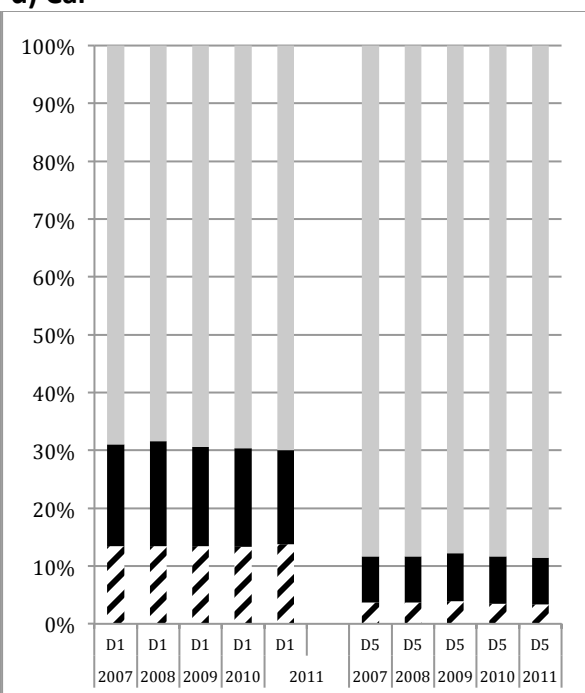
b) Colour TV



c) Washing machine



d) Car

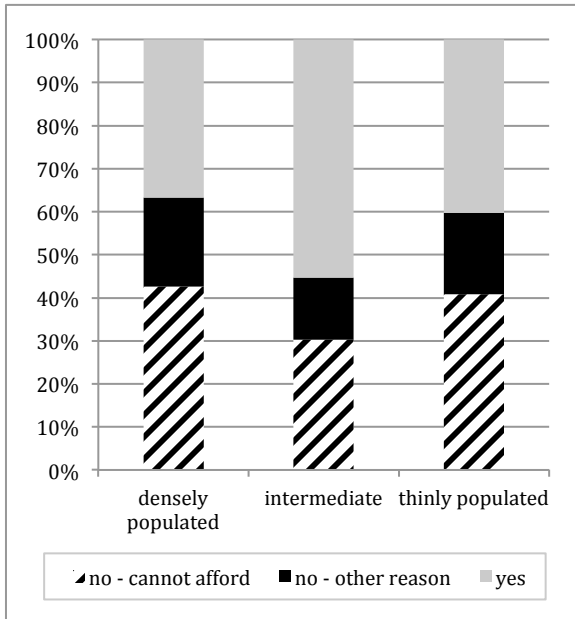


Source: EU-SILC microdata.

Notes: Income is household equivalised income. Deciles are computed across EU-15 countries (excluding Ireland in 2011). Individual level data are weighted using RB050.

Figure A6: Car deprivation status by population density of individuals' residence - 2007 (All)

a) D1



b) D5

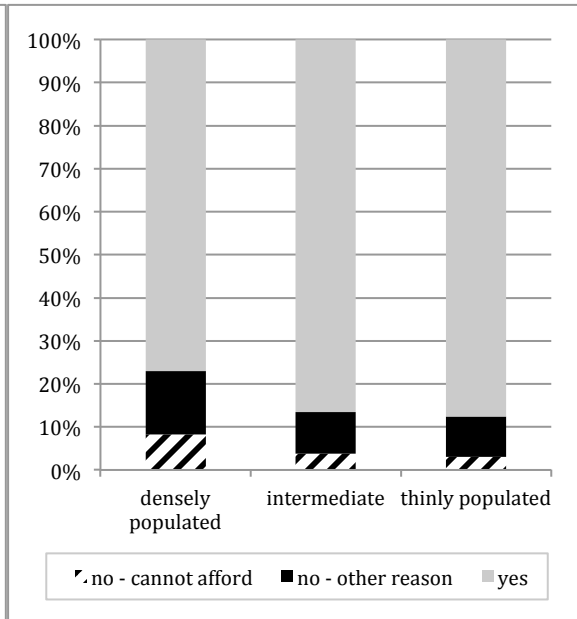
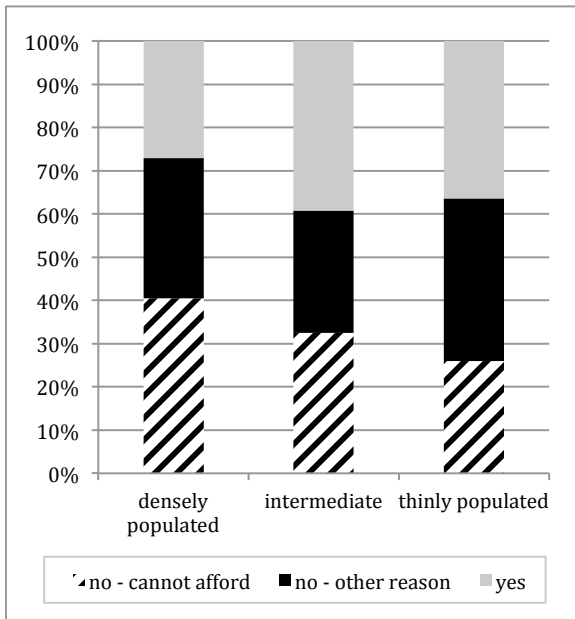


Figure A6: Car deprivation status by population density of individuals' residence - 2007 (EU15)

a) D1



b) D5

