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Measuring performance: does the assessment depend on the poverty proxy?

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ABSTRACT

Poverty indicators often disagree about whether a person is poor or not. Yet, when it comes to assessing whether a program is successful in reaching the poor the dominant practice is to use an income poverty indicator. This paper investigates whether the choice of welfare indicator influences the pro-poorness assessment of an intervention. Using the official European Union income and material deprivation indicators, this paper compares the outcomes of four performance indicators for three types of income transfers in six high income European countries namely Germany, France, Ireland, Netherlands, Sweden and the United Kingdom. This study finds that the dominant practice of using an income indicator systematically underestimates the performance of income transfers; when the information from both indicators is combined programs are assessed as far more successful.

Keywords: performance measurement, poverty, income, material deprivation, income transfers, European Union, EU-SILC

JEL: I32, I38

1 INTRODUCTION

In addition to efficiency, many public interventions are at least in part motivated by equity concerns such as inequity of opportunity and a low living standard (Weimer & Vining, 2005). Assessing whether an intervention is effective in reaching the less well-off is therefore often an explicit or implicit policy aim, particularly in domains such as taxation, social protection, social work, health, education and housing. Irrespective of whether an intervention is specifically targeted at the least well off or at a broader segment of the population, assessing pro-poorness requires choosing an indicator to evaluate the intervention's success.

When evaluating the pro-poorness of interventions, income is by far the most popular indicator to assess whether an intervention i) reaches the poor / is progressive, ii) has an impact and iii) is cost-effective. The advantages of income as an indicator of 'success' are that the information is widely available in administrative and survey data; it typically reflects families' most important source of financing their living standard; and, particularly in large samples, its near-continuous distribution facilitates assessing income differences between groups and over time with considerable precision.

Income, however, is not without shortcomings and it is also not the only available welfare indicator. Asset holdings, for instance, can also finance a family's living standard (Brandolini, Magri, & Smeeding, 2010). In the case of assets, ignoring such information underestimates a family's financial resources while for debt the reverse holds. Moreover, the value of in-kind transfers and indirect taxes is typically not accounted for in assessing a family's income which may also misestimate a family's resources (Garfinkel, Rainwater, & Smeeding, 2006; Paulus, Sutherland, & Tsakloglou, 2010). In all of the above cases the missing information can explain why discrepancies between a family's income and its actual living standard may arise. Another shortcoming of income is that the indicator implicitly assumes that the goods and services can be purchased from well-functioning markets; it thereby ignores market imperfections and market failures such as rationing and public goods (Bourguignon & Chakravarty, 2003). Sen (1999) further argued that, albeit important, income is merely a means to an end; and, that in addition to the above mentioned shortcomings, there are contextual differences between individuals (be they personal, environmental, social, cultural or intra-household) that can explain why individuals with the same income and desires may end up with different outcomes.

In addition to using better or complementary indicators of financial resources, an alternative group of indicators focuses on a family's material outcomes to assess the success of policy interventions. The advantage of such indicators is that they measure a family's or person's living standard in a more direct way. In Europe, Australia, Canada and developing countries such indicators are typically labeled as 'material deprivation' (Nelson, 2012; Saunders & Wong, 2011) while in the United States the term 'material hardship' has more currency (Cancian & Meyer, 2004; Huston & Bentley, 2010; Lim, Livermore, & Davis, 2010; Wu & Eamon, 2010; Zilanawala & Pilkauskas, 2012). In either case, the indicators are measuring whether the family or person is involuntarily missing an item or aspect considered to be normal or typical for the society in which they live (Guio, 2009; Townsend, 1979). Examples of such indicators are whether the family was cut off from basic utilities such as water and electricity, and whether the family can afford to have fresh fruit every day. A challenge with

material deprivation indicators is that there may be material aspects for which data is not collected because they concern items that are valued highly by some population groups though not for the majority of the population. Another challenge is that persons may, for various reasons, assess affordability differently thus affecting comparability across respondents.

As the use of non-monetary indicators increased, scholars have investigated the degree to which monetary and non-monetary poverty proxies overlap at the level of individuals (see for instance in Europe: (Fusco, Guio, & Marlier, January 2011; Nolan & Whelan, 2010; Nolan & Whelan, 2011; and in the United States: Cancian & Meyer, 2004; Sullivan, Turner, & Danziger, 2008). Using different definitions of indicators and covering different countries, the common finding among such studies is that while there is a positive correlation between monetary and non-monetary proxies, they only partially overlap resulting in significantly sized groups being poor according to one but not the other and a core group being poor according to several indicators. This mismatch arises because the proxies measure related though distinct aspects of poverty (i.e. a lack of resources versus poor outcomes resulting from a lack of resources); each has its advantages and limitations in capturing specific individual circumstances (i.e. an income proxy tends to underestimate the resources of self-employed persons); each has its own specific measurement errors (Nolan & Whelan, 2011), and there is a mismatch in the reference periods (with income referring mostly to the past calendar year and deprivation mostly referring to the moment of interview). Rather than selecting the 'best' one, the proxies are generally seen as complementary and in poverty analyses it is now common practice to monitor poverty using various proxies. The European Union for instance annually reports on poverty and social exclusion by using a portfolio of indicators (Marlier, Atkinson, Cantillon, & Nolan, 2007).

In policy analysis, however, the effect of programs and policies on poverty is typically evaluated using either a monetary or (rather rarely) a non-monetary poverty proxy (see for instance Figari, Matsaganis, & Sutherland, 2013; Nelson, 2012). This is problematic because as these indicators only partially identify the same group of individuals as poor or less well off, different indicators may assess a program's performance differently. This is exactly what Cancian and Meyer (2004) find when using an income poverty proxy and material hardship indicators to assess the living standard of TANF participants in Wisconsin.

The aim of this paper is to investigate how influential the choice of welfare indicator is when assessing the pro-poorness of policy interventions. To answer this question the research looks at various categories of income transfers which are (also) provided with the aim to reduce poverty: social assistance, housing allowances and family allowances. Our research takes a cross-national perspective comparing six EU member states including Germany (DE), France (FR), Ireland (IE), Netherlands (NL), Sweden (SE) and the United Kingdom (UK). These countries are selected because they have a similar average living standard while having different social protection systems. We use two welfare indicators that are used by the EU to construct poverty measures: income and material deprivation (i.e. Guio, 2009; Marlier et al., 2007). A transfer is considered pro-poor when it reaches the poor more than the non-poor and/or when the sum of transfers is distributed progressively.[1] For assessing the pro-poorness of transfers, it is necessary to estimate the living standard of families without the transfers in question. We improve on previous studies by developing a method to estimate pre-transfer material deprivation. The natural variation existing between these countries and the design of their income transfers provide ample scope for investigating whether using different poverty proxies affects the pro-poorness assessment and over what range such

[1] The analysis in this paper does not attempt to isolate the effect of the intervention (i.e. income transfers) from other factors influencing families' well-being such as their skills, behaviour or other help received.

assessments can differ. If differences are substantial there is reason to be concerned about the dominant practice of using income to judge a program's success in reaching the poor.

After discussing a number of key considerations relevant for (pro-poorness) assessments, this paper explains the methods and data used. This is followed by the presentation of the findings and a concluding discussion.

2 ASSESSING PRO-POORNESS

The task of evaluating the pro-poorness of an intervention appears simple in theory but is less straightforward in practice because of a double identification problem: one needs to assess whether a person is poor and whether this person is an intended beneficiary of the intervention.

TABLE 1A: EVALUATING PRO-POORNESS IN THEORY (IN PRACTICE)

	Intervention	
Economic well-being	**Participates**	**Does not participate**
Poor	Success (?)	Failure (?)
Not poor	Failure (?)	Success (?)

TABLE 1B: EVALUATING PRO-POORNESS WITH MULTIPLE PROXIES (IN PRACTICE)

	Intervention	
Economic well-being	**Participates**	**Does not participate**
Proxy I: poor	Success (?)	Failure (?)
Proxy II: poor	Success (?)	Failure (?)
Proxy I & II: poor	Success (?)	Failure (?)
Proxy I & II: not poor	Failure (?)	Success (?)

If the sole objective of the intervention is to exclusively assist every poor individual then, in theory, it is successful when poor individuals participate and non-poor individuals do not (see Table 1A). Atkinson (1998) distinguishes between two types of failures in this respect: the extent to which a program's expenditures are 'wasted' on the non-poor (vertical efficiency) and the extent to which expenditures are going to the poor relative to the total resources needed to lift everyone out of poverty (horizontal efficiency). In practice however, one relies on proxies to make such assessments. Even if data quality and misreporting are not an issue (they usually are), a proxy is only an estimate. For instance, when the data indicate that a poor person is not participating in a program, is that because the program fails to reach the poor or because the poverty proxy fails to adequately capture that person's living standard? There is thus uncertainty around the failure / success labels in Table 1A. Using several poverty proxies jointly will not solve this fundamental problem either. Unless the proxies completely overlap, the potential target population increases (Table 1B).

Most interventions do not aim to exclusively reach every poor individual. Even programs whose primary aim is to assist the poor are often explicitly designed to include the 'near poor'. This is to prevent behavioural disincentives resulting in poverty or welfare traps but also in acknowledgement of the above mentioned measurement problem. Furthermore, the experience of poverty and the escape from it is seen as a gradual process rather than a discrete event (Atkinson, 1998). Also, while

many programs do not have an explicit poverty reduction objective and serve a broader population they nevertheless assist the least well off. Social protection programs for instance can have a 'Robin Hood' function or a 'piggy-bank' function (Barr, 2001, p. 1). Whereas the former implies assisting the less well-off through the redistribution of income and wealth, the latter involves programs "that provide insurance and offer a mechanism for redistribution over the life cycle" (p. 1). From a program management perspective reaching a non-poor but intended participant is a success. However, a strict application of the pro-poorness criterion to such programs would mean that assistance to non-poor participants represents a failure. All these aspects should be taken into account when studying the pro-poorness of an intervention. Furthermore, welfare indicators, and the income indicator in particular, are routinely used to assess progressiveness of a much wider range of interventions including access to public services and above-mentioned piggy-bank programs such as pensions, health insurance and other contributory benefits.

This study looks at the poorest 20 percent of the population rather than the percentage of the population deemed poor according to the official EU income poverty and material deprivation indicators. It further focuses on income transfer programs because they represent a key instrument for supporting the less well-off in rich countries.

3 DATA AND METHODS

To investigate how different welfare indicators influence the assessment of the progressiveness of policy interventions this study takes a comparative approach involving six European Union member states, three categories of income transfers, two welfare indicators and four performance indicators. Included countries are Germany (DE), France (FR), Ireland (IE), United Kingdom (UK), Sweden (SE) and the Netherlands (NL). These countries have been selected because they have a similar average living standard but different social protection systems and different social and economic structures. On the basis of characteristics such as extent of coverage and mode of finance of unemployment benefits, the scale of active employment policies and the strictness of employment protection legislation, Bukodi and Róbert (2007) distinguish six welfare regimes in the EU. Germany and France are classified as corporatist regimes, Ireland and the UK as liberal regimes and Sweden and the Netherlands as social democratic regimes. This natural institutional variation serves as a background against which to explore the degree to which pro-poorness assessments may differ when different welfare indicators are used. A practical advantage is that for these countries information from a harmonized data source is available.

3.1 DATA

This paper uses micro data from the 2007 cross-sectional component of the European Union Statistics on Income and Living Conditions (EU-SILC). The EU-SILC data provide comparative annual statistics on income, poverty and social exclusion that are collected by the national statistics offices of 32 European countries. A common framework is used to collect harmonized variables on private households and individuals.[2] The database holds a range of individual and household level income information including disposable income and income from transfer categories such as pensions, unemployment benefits, disability benefits, family and child related allowances, housing allowances

[2] For more details about EU-SILC consult Decanq, Goedemé, Van den Bosch and Vanhille (2013) and the online resources provided by Eurostat (http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc).

and social assistance allowances. The database further holds information on a range of material deprivation items as well as information on the characteristics of the household and its members (demographics, health, labour and education). The number of observed households per country is listed in Table 2. Unless mentioned otherwise, all results are weighted taking survey design into account. The variables accounting for survey design have been programmed using the coding developed by Goedemé (2013).

3.2 WELFARE INDICATORS: INCOME AND MATERIAL DEPRIVATION

The pro-poorness assessments are performed using income and material deprivation indicators. Rather than using the official EU poverty and material deprivation indicators, which yield different estimates of poor population groups, we analyze pro-poorness focusing on the poorest 20 percent of the population based on the *pre-transfer* income and material deprivation distributions. Both indicators are measured at the household level.

The income distribution is based on households' total disposable income before transfers. This variable is calculated as total disposable income minus the sum of family, housing and social exclusion allowances (European Commission, 2009a, p. 110-111). The income variable is largely comparable across countries with main differences being the method of data collection (self-administered, interview or register) and whether income sources are collected in net or gross amounts (see Table A1 in the appendix). This definition only provides an approximate pre-transfer distribution. Firstly because the transfer variables are collected in gross values while many transfers are subject to income tax. As the simulated tax variable in EU-SILC is based on total household income, it is thus not possible to deduct the net value of each transfer category. Secondly because the simulation holds all other factors constant. Benefits in social safety nets are often interdependent: a loss of eligibility for one program may trigger entitlement to other transfers. Another effect could be that household members take up extra income generating activities to compensate for the loss of benefits. While it is common practice to calculate the pre-transfer distribution using a static simulation technique, it is likely that this estimation method underestimates a household's pre-transfer (but post-tax) disposable income.

For illustrative purposes we have calculated the income-poverty rates following the EU methodology. Table 2 shows poverty rates vary from 10.7 percent in the Netherlands to 21 percent in the United Kingdom. This is the so-called 'at-risk-of-poverty' rate which has been calculated using the adult equivalent income distribution (using OECD-modified equivalence scales) and a threshold set at 60 percent of national median income (European Commission, 2009a, p. 133).

The second proxy is the pre-transfer material deprivation distribution which is based on the estimated number of deprivation items that the household cannot afford *before* the receipt of transfers. The deprivation items are stored as binominal variables and include the following items: the ability to afford 1) to pay rent or utility bills, 2) to keep the home adequately warm, 3) to face an unexpected expense of about 800 Euro (this amount varies somewhat by country because it depends on the national poverty line) , 4) to eat meat, fish or a protein equivalent every second day, 5) a week holiday away from home, 6) a car, 7) a washing machine, 8) a colour TV, and 9) a telephone.

As the data provide information on the items that a household cannot afford given their current *post-transfer* income, the *pre-transfer* distribution has to be estimated. This is done by means of a negative binomial regression model that estimates the income effect of (not having) the transfer on the number of material deprivations of the household. This method has the convenient side effect that it converts the estimated number of deprivations from an integer to a non-integer value, which facilitates the division of the deprivation distribution into quintiles. For households not receiving any

transfers the number of deprivations stays an integer value. As these values are sometimes distributed around the thresholds between quintiles, we *additionally* rank households by using the variable “ability to make ends meet” (taking values 1 - very difficult - to 6 - very easy -) and pre-transfer income. The methodology and results are further discussed in appendix 2.

In the EU, these items are used to calculate the material deprivation rate; a household is considered materially deprived if they lack three or more items. These items "reflect the lack of an ordinary living pattern common to a majority or large part of the population in the European Union and most of its Member States" (Guio, 2009, p. 3). The Eurobarometer survey provides an external validation for these items in the sense that these items are considered to be absolutely necessary or necessary by 50 percent or more of the EU-27 population (p. 4). The survey questions have been designed to assess whether the households experiences an enforced lack of an item due to limited resources (rather than a preference based choice). As with income, material deprivation is measured with error. As income increases, a person' expectation about her material well-being also tends to increase. Consequently, persons with a lower living standard may report that "they do not want things that are impossible to obtain" (p. 3). Moreover, feelings of shame may result in underreporting of enforced lack of items. Breunig and McKibbin (2011) mention shame as a possible explanatory factor after finding that differences in survey design lead to differences in reporting deprivation. Comparing two Australian surveys with identical deprivation questions, they find that deprivation rates collected through self-completed questionnaires are higher than those found in face-to-face computer assisted interviews. Unlike relative income-poverty, where the new national median income is automatically calculated every year for each EU members state individually, the material deprivation items are used EU wide and for consecutive survey years. Thus, even though Europe's deprivation items are selected to reflect social necessities across 27 member states, the material deprivation indicator is much less relative than the income poverty indicator.

Table 2 shows the item deprivation rates and the material deprivation rates at different cumulative deprivation thresholds. Using the official threshold of three or more items (Guio, 2009), material deprivation rates range from 6.0 percent in Sweden to 13.8 percent in Germany. As the selected countries have the highest average income levels in the EU, it is not surprising that some of the item deprivation rates are very close to zero (washing machine, colour TV and telephone).

Income poverty (using the 60% threshold) and material deprivation proxies overlap only partially (Table 2). 74 to 85 percent of the population is not poor according to either proxy, 2-7 percent is poor for both and 4-16 percent is poor according to one proxy but not the other. Using the two official proxies of the EU, these calculations show that the identification problem set out in the previous section is significant: the potential target population in the studied countries varies from 2-15 percent in Sweden and the Netherlands to 5-26 percent in Ireland.

Underlying this ‘mismatch’ are differences in well-being concepts, measurement error and imperfections in data collection. At a conceptual level, each of the indicators has advantages and limitations in identifying the specific circumstances of persons. For instance, Nolan and Whelan (2011) find that the self-employed are "particularly likely to be income poor but not deprived” and they hypothesize that this is because current income is a less suitable indicator of longer term command over resources for the self-employed (p. 113). Measurement imperfections such as underreporting are also likely to explain part of the mismatch. Finally, the reference periods for income and the material deprivation indicators overlap only partially as shown in Table A1 in the appendix. The reference period for income is either the past 12 months (Ireland and UK) or 2006 (all other countries) while for most material deprivation items the reference period is the household’s current situation, except for payment arrears which are based on the past 12 months.

This paper focuses on the 20 percent poorest households according to each welfare indicator (ranked from least to best well off) instead of the percent of poor. This approach has the advantage that it yields equally sized target groups for each welfare indicator and, thus, that differences in pro-poorness are not simply due to differences in the strictness of poverty and deprivation thresholds. As discussed in the previous section, it further takes into account that (escaping / entering) poverty is not a discrete event and that including the 'near' poor into the target group reduces welfare traps.

TABLE 2: SUMMARY STATISTICS (UNIT OF ANALYSIS: HOUSEHOLD)

Observations	**DE**	**FR**	**IE**	**NL**	**SE**	**UK**
# of households	14,015	9,973	5,522	10,010	6,734	8,679
# of households with children (age 0-17)	3,711	3,445	1,605	3,595	2,616	2,497
Income poverty (%)						
- 50% of national median income	11.3	6.8	10.3	5.1	7.2	12.6
- 60% of national median income (income proxy)	17.9	12.7	21.4	10.3	11.6	20.8
- 70% of national median income	25.8	20.2	31.1	20.5	19.5	28.9
Material deprivation indicators (%)						
- payment arrears for rent or utility bills	5.1	8.5	7.0	3.7	4.7	6.7
- cannot afford to keep home adequately warm	6.1	5.0	3.6	2.1	2.1	4.9
- is not able to face unexpected expenses [1]	38.9	33.0	39.2	23.6	20.3	26.0
- cannot afford to eat meat, fish or a protein equivalent every second day	12.1	6.7	2.1	2.2	3.9	4.0
- cannot afford a week holiday away from home	25.4	30.2	20.7	17.0	13.5	20.5
- cannot afford a car	7.3	3.9	10.0	8.0	5.3	5.4
- cannot afford a washing machine	0.7	1.5	1.1	0.2	0.0	0.5
- cannot afford a colour TV	0.7	0.3	0.3	0.1	0.9	0.1
- cannot afford a telephone	0.4	0.9	0.7	0.0	0.0	0.2
Number of deprivations (%)						
- 0 deprivations	53.3	56.1	55.8	68.6	72.2	67.1
- 1 deprivation	18.9	17.5	20.9	15.6	13.5	12.8
- 2 deprivations	14.1	14.6	13.3	8.9	8.2	10.4
- 3 deprivations (mat. deprivation proxy)	7.9	6.7	5.7	4.7	4	5.8
- 4 or more deprivations	5.8	5.1	4.3	2.2	2.0	4.1
Overlap poverty proxies (%)						
- Both	6.9	4.3	5.3	2.0	2.0	4.7
- Only income-poor (60% threshold)	11.0	8.3	16.1	8.3	9.6	16.1
- Only materially deprived (≥3 deprivations)	6.9	7.6	4.7	4.8	4.0	5.0
- Neither	75.2	79.8	73.9	84.9	84.3	74.2
Mean number of material deprivations	0.97	0.90	0.85	0.57	0.51	0.68
Mean disposable household income [2]	20,009	18,775	25,529	20,904	19,840	24,342
Mean income before transfers [2]	19,242	17,881	23,681	19,835	19,014	22,959
Mean transfer income [2 3]	2,126	2,240	2,617	2,572	2,461	3,486

1 Amount (in Euro) varies per member state: DE: 860, FR: 800, IE: 875, NL: 850, SE: 865 and UK: 733.

2 Expressed in adult equivalent annual Euro.

3 Includes family, social exclusion and housing transfers and is averaged over recipient households only.

Source: EU-SILC (2007)

TABLE 3: COMPARISON INCOME AND MATERIAL DEPRIVATION DISTRIBUTIONS (AT 1ST QUINTILE[1])

	DE	FR	IE	NL	SE	UK
Overlap first quintile (%, before transfers)						
- Both	11.1	11.4	11.2	11.9	9.7	10.8
- Only 1st quintile income	8.9	8.6	8.8	8.1	10.3	9.2
- Only 1st quintile materially deprivation	8.9	8.6	8.9	8.1	10.3	9.2
- Neither	71.1	71.4	71.1	71.9	69.7	70.7
Mean disposable household income[2]						
- In either or both 1st quintiles	10,978	11,120	13,563	12,243	12,582	13,261
- Only 1st quintile income	8,332	9,041	11,361	10,402	10,060	10,081
- Only 1st quintile materially deprivation	12,405	12,007	14,675	13,243	14,038	15,179
- In both 1st quintiles	8,781	9,027	11,613	10,833	10,379	10,915
Mean estimated income before transfers[2 3]						
- In either or both 1st quintiles	9,415	9,034	9,787	9,203	10,899	9,745
- Only 1st quintile income	6,607	6,496	6,947	6,463	7,928	5,732
- Only 1st quintile materially deprivation	10,447	9,612	10,393	9,300	12,258	10,791
- In both 1st quintiles	6,214	5,593	5,789	4,769	7,563	4,232
Mean number of deprivations						
- In either or both 1st quintiles	2.42	2.22	2.12	1.67	1.47	1.94
- Only 1st quintile income	2.21	1.92	1.90	1.45	1.18	1.66
- Only 1st quintile materially deprivation	3.09	2.91	2.81	2.25	2.14	2.71
- In both 1st quintiles	3.25	2.91	2.94	2.27	2.25	2.84
Mean estimated number of deprivations before transfers [3]						
- In either or both 1st quintiles	2.78	3.09	2.89	2.74	1.75	2.91
- Only 1st quintile income	2.71	3.12	2.96	2.94	1.59	3.04
- Only 1st quintile materially deprivation	3.59	4.06	3.85	3.74	2.54	4.07
- In both 1st quintiles	4.09	4.86	4.74	4.74	3.04	5.31

1 To obtain quintiles for the material deprivation distribution (before and after transfers) households we additionally rank households by using the variable "ability to make ends meet" (taking values 1 - very difficult - to 6 - very easy -) and pre-transfer income. The estimation of the pre-transfer material deprivation distribution is further explained in appendix 2.

2 Expressed in adult equivalent annual Euro amounts.

3 Includes family, housing and social exclusion allowances and is averaged over recipients only.

Source: EU-SILC (2007)

Table 3 compares the 1st quintiles of the income and material deprivation indicators. With the effect of the poverty threshold removed, the overlap between the welfare distributions is now strikingly similar for the studied countries. About 30 percent of the population is either in the lowest income quintile, the highest material deprivation quintile or both. And 10 percent of the population is in the lowest quintile of both distributions. Due to the ranking, the average income level of households in the 1st income quintile is lower than that of households in the 1st material deprivation quintile. Similarly, households in the 1st material deprivation quintile have on average a higher number of deprivations than households in the 1st income quintile. The group of households that is present in both quintiles is worst off in any indicator (pre or post transfer, income or material deprivation). In addition to comparing pro-poorness measures between poorest 20 percent of households according to income and material deprivation indicators, these findings motivate us to investigate if the pro-poorness assessment differs when income and material deprivation information are jointly taken into account.

A somewhat different perspective on the degree of overlap between the two welfare indicators is provided in Table 4: 20-30 percent of the 1st quintile households are in the 2nd quintiles of the other distribution while 15-25 percent are ranked in the three best off quintiles for the other indicator.

TABLE 4: RANK OF 1ST QUINTILE HOUSEHOLDS RANKED IN THE OTHER WELFARE DISTRIBUTION (%)

	DE	FR	IE	NL	SE	UK
In the 1st material deprivation quintile and:						
- In 1st income quintile	55.5	56.9	55.8	59.6	48.3	53.8
- In 2nd income quintile	24.1	26.2	25.2	24.8	27.0	22.7
- In 3-5th income quintiles	20.5	16.9	18.9	15.6	24.7	23.4
In the 1st income quintile and:						
- In 1st material deprivation quintile	55.5	57.0	55.9	59.6	48.3	53.8
- In 2nd material deprivation quintile	27.5	20.3	21.3	23.9	29.2	23.3
- In 3-5th material deprivation quintiles	17.0	22.7	22.9	16.4	22.5	22.9

Source: EU-SILC (2007)

3.3 INCOME TRANSFERS

This study uses income transfers to test whether the choice of welfare indicators influences the pro-poorness assessment of interventions for two reasons: firstly because income transfers represent a key instrument for supporting less well-off households in these countries and secondly, because this information is jointly available with the required income and material deprivation information. Social transfers in the EU-SILC are defined as "current transfers received by households during the income reference period and intended to relieve them from the financial burden of a number of risks or needs, made through collectively organised schemes, or outside such schemes by government units and Non Profit Institutions Serving Households" … "In order to be included as a social benefit, the transfer must meet one of two criteria. First, coverage is compulsory (under law, regulation or a collective bargaining agreement) for the group in question. Second, it is based on the principle of social solidarity (i.e. if it is an insurance-based pension, the premium entitlements are not proportional to the individual exposure to risk of the people protected)." … "Social benefits do not include benefits paid from schemes into which the recipient has made voluntary payments only, independently of his/her employer or government" (Commission Regulation (EC) No 1980/2003 of 21 October 2003).[3] [4]

We analyze three categories of income transfers separately and in several stages of aggregation: family and child related allowances, housing allowances and social exclusion transfers. These transfer categories were chosen because, in comparison to insurance-based transfers, they are more likely to include last resort type of transfers that aim at providing a basic minimum. As poverty reduction is often an explicit objective, it makes sense to use these transfers as cases to test whether the pro-poorness assessment differs by welfare indicator. While poverty levels are commonly estimated using individuals as a unit (i.e. Alkire & Santos, 2009; Ravallion, 1994), this paper uses the household as the unit of analysis because for the selected transfer categories program eligibility and transfer amounts are typically contingent on the household context. The reference population for social

[3] With acknowledgements to Van Rie and Marx (2011, p. 10-11) who assembled this definition from the EU-SILC documentation.

[4] For a detailed description of income and transfer variables we refer to the *Description of SILC user database variables* (European Commission, 2009a) and the *EU-SILC user database description* (European Commission, 2009b) which are also available online (https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp).

exclusion and housing allowances is thus the total household population; for family allowances where the reference population only includes households with children under the age of 18. Given the diversity in family transfer programs across countries this reference population is an approximation. In some countries, family allowances also cover families with children above the age of 17 years while in other countries social assistance transfers only cover families with adults up to pensionable age while other transfer programs are in place to cover persons of pensionable age.

TABLE 5: TYPOLOGY OF TRANSFERS (PROGRAMS IN SHADED CELLS ARE NOT INCLUDED IN EU-SILC)

	DE	FR	IE	NL	SE	UK
Family allowances						
Universal programs	yes	yes	yes	yes	yes	yes
Income-tested programs	yes	yes	yes	yes	no	yes
Means-tested programs	no	yes	yes	no	no	no
Child care programs for very young or sick children	yes (stay at home parents)	yes (sick children)	yes (working parents)	no	yes	no
Maternity related programs (contributions related or not)	no	no	no	no	yes	yes
Social exclusion allowances						
Income-tested programs	no	yes	no	yes	yes	yes
Means-tested programs	yes	no	yes	yes	yes	yes
Housing allowances						
Income-tested programs	yes	yes	no	no	yes	no
Means-tested programs	no	no	yes	yes	no	yes

Sources provided in appendix 3.

The transfer information is stored in three EU-SILC variables that are labelled as “Family/children related allowances”, “Housing allowances” and “Social exclusion not elsewhere classified”. These variables report the amount of transfers received in the reference year and are claimed to be fully or largely comparable according to the data quality reports (see Table A1 in the appendix). A transfer variable may include a range of interventions whose program design varies both within and between countries. Thus, even within one transfer category for one particular country, one might find universal, income-tested and means-tested allowances targeting different population groups with different eligibility criteria and different levels of generosity. While this variation allows for a good testing ground for the influence of using different poverty proxies, the grouping of several interventions into one category limits the scope for a more detailed analysis on the relation between different styles of program design and the pro-poorness assessment. A further challenge is that the EU-SILC documentation fails to provide detailed information on what country specific arrangements are included in each category. To enhance the ability to triangulate and better interpret the results, this study addresses this challenge in two ways. Firstly, representatives of the national statistics offices have been contacted to provide additional information on the included arrangements. Secondly, this study collected information on the main design features of each arrangement. Table 5 summarizes the type of programs (universal, income-tested or means-tested) that are included in the transfer categories for each county while Table 6 summarizes the incidence rates (coverage) and mean transfer amounts. More detailed information is provided in appendix 3.

Of the three transfer variables, the one on family allowances includes by far the widest range of transfer programs. Triangulating the results from our own research with the information provided by representatives of the national statistics offices this variable is a 'catch all' for universal, means-tested, income-tested and social insurance related transfers, which are provided through transfer programs and the income tax system. In some cases though, important family related transfer programs are either not incorporated or categorized under another transfer variable (as indicated by the shaded cells in Table 5). The Netherlands, for instance, has quite a few income-tested transfers which are distributed via the tax system but these programs are not included in the family allowances variable or elsewhere. Maternity related programs on the other hand tend to be classified under sickness benefits in most countries but they are included as part of family related allowances for the UK. These blind spots in the data do not hinder our analysis but one has to be very cautious in interpreting the pro-poorness findings as they do not necessarily represent all income-support programs in these countries.

The social exclusion variable includes transfers provided as part of minimum income programs and income support to households with low but above poverty line financial resources. Countries usually have a combination of transfer programs managed by welfare offices and tax credits though the tax system. Eligibility always depends on an income-test and often on a means-test assessing both household's income and assets. As with the family allowance variable, not all relevant transfers are included in this variable. For Germany, transfers from the non-contributory unemployment assistance program (Arbeitslozengeld II) are grouped together with the unemployment insurance under the unemployment benefits variable, which may explain the very low coverage rate (2.8 percent). Unemployment assistance in France is also not included but despite this, the social exclusion coverage rate is very high (25 percent). For the Netherlands and Sweden the income-tested tax credit programs are again not included. Furthermore, the asset-test in Ireland is very lenient (high maximum income and low claw back rate) which is consistent with the high coverage rate (31 percent). In sum, our research indicates that the social exclusion variable includes either a mix of income and means-tested programs (DE, IE, NL, SE, UK) or income-tested programs only (FR and effectively IE). Except for the Netherlands and UK, coverage rates differ substantially across countries. Given the wide spread of transfer amounts within countries, average benefits are of similar levels across countries. With an average transfer amount more than double that of the other countries the UK is the outlier.

The housing allowances variable is the least complex. It includes only one transfer program (or, in the UK, two complementary programs with the same means-test). For two countries (NL, UK) the housing allowances are means-tested while for four countries the allowances are income-tested (DE, FR, SE and effectively IE because of a very lenient asset test). Coverage rates are lower in Germany, France Ireland and Sweden (3-5.6 percent) and higher in the Netherlands and the UK (10-11 percent). In terms of generosity, housing allowances vary considerably across countries with the lowest amounts in Ireland (800) and those in the other countries varying from 3,700 (FR) to 7,700 (NL).

We also aggregate the information to a variable including all transfers and a joint variable aggregating the housing and social exclusion allowances. This is because the transfer variables often include transfer programs that are designed as complementary programs. For instance, households receiving social exclusion allowances in the UK can additionally qualify for housing allowances and child related tax credits. Recipients of social exclusion transfers are thus more likely to also receive housing allowances which is confirmed by the coverage rates (Table 6). In comparison to other countries, Germany has low coverage in social assistance transfers. As explained above, this is likely due to the fact that recipients of unemployment assistance are counted as part of unemployment transfers.

Concluding, the wide cross-national variation in coverage and generosity of transfers provides a diverse sample to investigate the relationship between choice of pro-poorness indicator and the assessment of a program's success. The lack of overlap between pro-poorness indicators gives rise to the *hypothesis that this assessment is expected to differ between income and material deprivation indicators*.

TABLE 6: SUMMARY STATISTICS OF TRANSFER INDICATORS (IN GREY: 0.5 * 95% CONFIDENCE INTERVAL)

	DE	FR	IE	NL	SE	UK
Coverage (%)						
Any household transfers (family, social exclusion, housing)	36.1	39.9	70.6	41.6	33.6	39.7
	0.84 [1]	1.37	1.86	1.31	1.20	1.18
- Social assistance (social exclusion and/or housing benefits)	8.0	26.2	32.3	20.3	10.7	18.5
	0.51	1.12	1.84	1.33	0.86	1.00
- Social exclusion	2.8	24.8	30.6	15.2	9.5	13.5
	0.43	0.51	0.78	1.10	0.45	0.78
- Housing	5.6	5.0	4.0	10.4	3.1	10.8
	0.31	1.10	1.80	1.25	0.82	0.88
- Family [2]	98.3	79.2	99.8	95.8	84.5	94.5
	0.49	1.72	0.31	0.96	1.59	1.02
Mean amount of transfers [3 4]						
Any household transfers (family, social exclusion, housing)	3,789	4,060	5,130	3,664	4,634	5,796
	116	161	290	288	186	263
- Social assistance (social exclusion and/or housing benefits)	4,670	3,346	2,262	6,975	3,594	8,156
	408	145	129	512	261	351
- Social exclusion	1,154	2,232	1,533	1,796	2,146	5,083
	543	482	259	619	596	292
- Housing	5,671	3,747	838	7,748	4,413	5,508
	127	92	129	78	145	310
- Family [2]	3,752	3,681	6,692	1,699	4,665	3,460
	78	141	370	39	204	149
Average income share of transfers (%) [3]						
Any household transfers (family, social exclusion, housing)	16.0	20.6	16.7	20.5	16.9	25.9
	0.59	1.96	1.57	2.35	0.78	1.18
- Social assistance (social exclusion and/or housing benefits)	28.0	20.3	7.7	35.2	20.8	36.8
	1.76	2.94	0.59	4.12	1.96	1.57
- Social exclusion	35.7	33.7	3.9	51.5	28.7	26.2
	2.16	14.31	1.18	5.29	4.70	1.57
- Housing	8.9	14.8	7.6	12	14	29.5
	1.18	0.98	0.59	0.59	1.18	1.18
- Family [2]	12.4	11.8	18.2	5	13.2	11.8
	0.39	0.59	1.37	0.20	0.59	0.78

1 The lower and upper bounds of the confidence interval are thus 35.26 and 36.94 (36.1 + / - 0.84).

2 Only households with children age 17 or below.

3 Averaged over recipients only.

4 Expressed in annual Euro amounts

Source: EU-SILC (2007)

3.4 MEASURES OF PRO-POORNESS / PROGRESSIVENESS

All other things equal, a progressive transfer system will make the distribution of disposable income more equal than the distribution of pre-transfer income (adapted from Duclos and Araar definition of progressive taxation, 2006, p.134). As disposable income is an important means in achieving material outcomes, it is further expected that a progressive transfer system will also make the post-transfer material deprivation distribution more equal than its pre-transfer counterpart. This study assesses the pro-poorness of transfers by comparing their effect on households in the poorest quintile with those in other higher quintiles. This implies that households in the first quintile receive a welfare weight of one while all other households receive a weight of zero (Coady, Grosh, & Hoddinott, 2004) which implies that progressivity at other parts of the well-being distribution is not taken into account (Duclos & Araar, 2006).

This study looks at four measures of pro-poorness because transfers may be pro-poor in one aspect but not according to another. A transfer can be pro-poor in the sense that the coverage rate, the percentage of households receiving the transfer, is higher for first quintile households than for households in higher quintiles. The average transfer amount received by the poor is a measure of generosity. A transfer is pro-poor according to this measure when the average amount received by the first quintile is larger than that by other quintiles. Another generosity measure is the average benefit share which is measured as the contribution of the transfers make relative to disposable income. A program is pro-poor when the benefit share of first quintile households is larger than that of other households. The fourth performance measure is the share of total benefits received by the first quintile households as a percentage of total benefit expenditures in the program. A program is pro-poor when the first quintile receives more than its population share (i.e. 20 percent) of total benefit expenditures.

4 RESULTS

This research aims to find out whether one should be concerned that the current practice of using income as a performance indicator for assessing the pro-poorness of programs systematically biases the judgment of a program's success. Using the selected countries and categories of income transfers as comparative case studies, this section compares whether the 'success rate' of such interventions to reach the poorest households significantly differs between using an income or a material deprivation as a performance measure. The minimum criterion that should be met is that the confidence intervals (at a 95 % confidence level) of the performance estimates do not overlap. Further points of attention are whether the direction of the discrepancies varies in a systematic way and, arguably more subjective, whether the size of the effect appears to be large enough to potentially induce policy / program changes. As discussed in sections 1 and 2, due to measurement error and imperfections in program implementation there will always be uncertainty around success and failures labels. A small discrepancy, even though it may be statistically significant, might not be sufficient to reassess current practice. Furthermore, given that this paper looks at six countries, three transfer categories (plus two aggregates of these categories i.e. total transfers and social assistance transfers) and four performance indicators, in total 120 cases are compared. These cases are not completely independent from each other. This is not only because 48 cases are aggregates of the separate transfer categories but also because some transfers in a social safety net are designed as complementary while others act as substitutes. Such interactions between transfers are not taken into account when estimating the confidence intervals.

The analysis uses two types of reference groups to identify the target group. The first type simply compares the households in the 1st income quintile ($Q1_y$) with the households in the 1st material

deprivation quintile ($Q1_{md}$). To assess whether the transfers are progressive, the estimates also need to be compared to the non-poor quintiles ($Q2\text{-}5_y$ for income and for $Q1_{md}$ material deprivation). This perspective shows how successful the program would be perceived if only one of the welfare indicators is being used. A substantial share of the households in the 1st income quintile is also part of the 1st material deprivation quintile and this group of households is, on average, worse off than the other households in either 1st quintile (Table 3). We therefore combine the information from both indicators into a second reference group: households in both 1st income and material deprivation quintiles ($Q1_{y\ md}$) and those in 1st quintile only ($Q1_{y\ only}$ and $Q1_{md\ only}$). To assess the progressiveness of the transfer, these three groups should also be compared to the households that are not poor. The idea behind this perspective is that by (also) focusing the performance assessment on this group of 'consistent' poor[5], one is evaluating whether the transfer is successful in reaching that part of the population for which one can be more confident that it actually belongs to the target group.

The key findings of the analysis are illustrated in Figure 1, which uses the social exclusion transfers in the UK as an example, and Table 7, which focuses on transfer coverage for all countries and all transfer categories. Tables 4.1 to 4.8 in the appendix summarize all results including the confidence intervals (ci). In the UK, the income-tested Working Income Tax Credit and the means-tested Income Support are the two main programs in this transfer category and supporting the least well off is the main objective of these programs. The left panel in the top chart of Figure 1 shows that there is virtually no difference in coverage between 1st income quintile and 1st material deprivation quintile: 38 percent of 1st quintile households receive social exclusion transfers with a confidence interval of 2.6-2.7 percentage points (ppt). With coverage rates of 4 percent among households in the 2nd to 5th quintiles, these transfers are clearly progressive / pro-poor. When combining the information from both indicators however, the right panel shows that these programs appear considerably more successful in reaching out to households present in both 1st quintiles: 58 percent of those households are covered whereas in both cases only 13 percent of the households of the other poverty groups are reached. Coverage rates of all poverty groups are much higher than those among non-poor households (2.9 percent). Compared to 38 percent, a 58 percent success rate is a substantial difference.

The other performance indicators show a similar pattern: the assessment does not differ much when comparing the measures between the 1st income and 1st material deprivation quintiles but when this welfare information is simultaneously taken into account (comparing households in both 1st quintiles with non-poor households) transfers appear considerably more progressive. We elaborate on these findings by first describing the results of the other pro-poorness measures in the case of social exclusion transfers in the UK. After that we expand our focus to the other countries and other transfer categories.

The second indicator shows that the average annual social exclusion transfer amounts among 1st income and 1st material deprivation quintiles are about 6,000 Euro whereas households in higher quintiles receive on average 4,400 (ci: varying from 350 to 490). UK households in both quintiles receive on average a higher amount (6,138, ci: 389) than households present in only one of the 1st quintiles (4,900-5,500, ci: 800-950) but the confidence intervals are wide. However, in comparison to non-poor households (4,000, ci: 512) transfers amounts received by households in both 1st quintiles are significantly more generous. The third indicator shows that the average income share of the transfer for households in the 1st income quintile and 1st material deprivation quintiles is 31-33 percent (ci: 2.0 ppt) while for households in the higher quintiles this share is 11-15 percent (ci: 1.1-

[5] The concept 'consistent poor' has been introduced and studied by Brian Nolan and Christopher Whelan in several publications (starting with 1996).

2.0 ppt). Combining both indicators the share is 35 percent for households present in both quintiles (ci: 2.3 ppt), 24 percent for households only in the 1st income quintile (ci: 4.0), 13 percent for households only in the 1st material deprivation quintile (ci: 2.0) and only 9.8 percent for households that are in higher quintiles for both indicators (ci: 1.3 ppt). The 4th indicator shows that the poorest 20 percent of households in receive 75-76 percent of total benefit expenditures (ci: 8.1 ppt). Households present in both 1st quintiles represent 10.8 percent of the total population but they receive 65 percent of the transfers (ci: 8.3 ppt). In sum, all four performance indicators show that the UK social exclusion transfers are pro-poor but these transfers appear considerably more pro-poor when comparing performance between households in both 1st income and material deprivation quintiles to those who are in higher quintiles for both indicators.

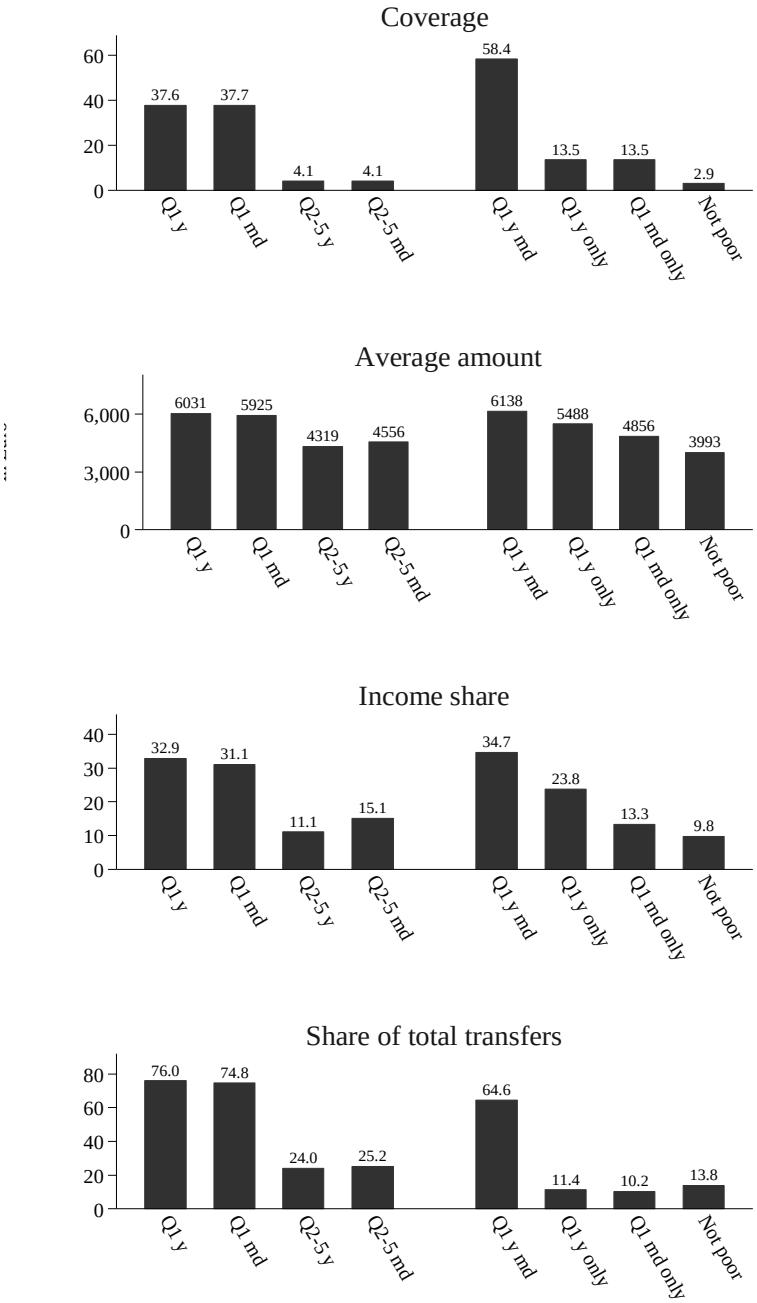
These commonalities are not limited to transfers in the UK. Despite considerable cross-national variance in coverage rates and benefit levels, social exclusion and housing transfers generally appear more pro-poor when combining the information from both welfare indicators and comparing households in both 1st quintiles with those in both higher quintiles. Only in a few cases, most notably in Ireland, the performance indicators for have overlapping confidence intervals. [6] In these cases the transfers are pro-poor in some aspects (coverage) but not in other aspects (generosity and/or program expenditures) thus suggesting at flaws in program design.

Due to the presence of universal child benefits, the coverage rates of family allowances are the same across reference groups. France is the exception as its universal child benefit (Allocation Familiale) only kicks in at the second child: 98 percent of French households in both 1st quintiles are covered in comparison to 74 percent of the households in higher quintiles for both indicators. However, as most countries have a mix of universal, income-tested and means-tested family allowances, the other performance indicators generally show pro-poorness of family transfers. Family allowances appear only moderately pro-poor in the Netherlands but this is (also) because family related income tax credits are not included in the transfer variable. Family transfers are most pro-poor in Ireland with households in both 1st quintiles receiving on average 14,500 Euro (61 percent of income) and non-poor households receiving 5,000 Euro (9 percent of income).

Let us finally compare pro-poorness measures between households in both 1st quintiles with those only in the 1st income quintile or in the 1st material deprivation quintiles. In comparison to households in both 1st quintiles, the latter two groups are less likely to be covered, and if they are receiving transfers, the transfer tends to be less generous. There are few systematic differences between households in the 1st income quintile only and those in the 1st material deprivation quintile only. A possible exception is France where 1st income quintile only households receive on average higher housing and family allowances than households that are in the 1st material deprivation quintile. The estimates for the 1st quintile only groups are less precise: due to a smaller population share and lower transfer incidence, the wider confidence intervals are overlapping regularly with those of the other groups.

[6] For social exclusion transfers exceptions are: Average amounts (DE, FR, IE), Income share (IE) and Benefit share (IE). For housing allowances exceptions are: Average amounts (DE) and Benefit share (IE).

FIGURE 1: PRO-POORNESS OF SOCIAL EXCLUSION TRANSFERS IN THE UK



Notes: 1st income quintile (Q1 y), 1st material deprivation quintile (Q1 md), 2-5th income quintile (Q2-5 y), 2-5th income quintile (Q2-5 md), 1st income & 1st material deprivation quintile (Q1 y md), 1st income quintile only (Q1 y only), 1st material deprivation quintile only (Q1 md only) and not poor.

Source: EU-SILC (2007)

TABLE 7: COVERAGE (%)

	All transfers	Housing & Social exclusion	Social exclusion	Housing	Family
DE					
$Q1_y$	51.6	30.1	20.6	11.1	98.4
$Q1_{md}$	65.9	31.5	22.9	10.2	98.7
$Q1_{y\,md}$	69.6	45.8	33.3	15.2	98.7
FR					
$Q1_y$	76.3	69.1	19.6	64.8	95.7
$Q1_{md}$	82.5	74.0	18.7	70.8	92.3
$Q1_{y\,md}$	93.2	88.7	29.9	83.8	97.9
IE					
$Q1_y$	88.7	58.1	12.7	53.0	99.8
$Q1_{md}$	92.2	54.4	13.4	48.9	99.8
$Q1_{y\,md}$	94.8	60.5	16.8	53.2	99.8
NL					
$Q1_y$	68.6	58.9	38.1	45.9	96.8
$Q1_{md}$	73.4	64.3	37.4	51.9	95.9
$Q1_{y\,md}$	86.5	81.1	56.6	65.3	96.3
SE					
$Q1_y$	56.4	36.1	12.0	32.4	84.1
$Q1_{md}$	62.3	37.7	12.7	33.4	84.7
$Q1_{y\,md}$	74.2	59.5	21.4	53.7	85.7
UK					
$Q1_y$	65.6	57.8	37.6	46.0	97.8
$Q1_{md}$	72.8	59.0	37.7	48.1	96.2
$Q1_{y\,md}$	89.5	83.9	58.4	71.5	98.2

Notes: households in 1st income quintile (Q1 y), 1st material deprivation quintile (Q1 md), 1st income & 1st material deprivation quintile (Q1 y md). Family transfers category only includes households with children under age 18.

Source: EU-SILC (2007)

5 CONCLUDING DISCUSSION

This research investigated whether the choice of welfare indicator influences the pro-poorness assessment of an intervention. This work is firstly motivated by the consistent finding that there is a large gap in overlap between monetary and non-monetary poverty measures and, secondly, by the current practice of using a monetary indicator (income) as a performance indicator for assessing the pro-poorness of programs. The implication of the first is that welfare indicators frequently 'disagree' about whether a program's participant belongs to the target group or not. The second further implies that the dominant use of income as a criterion could systematically over or underestimate the judgment of a program's success.

To investigate whether there is reason for concern, this study has taken a comparative approach involving six EU member states, three categories of income transfers and four performance indicators. The aim behind this selection of countries has been to exploit a natural variation in program interventions while controlling for differences in living standard and data collection. As welfare indicators we use the official welfare proxies of the EU, namely income and material deprivation. This study focuses on family, housing and social exclusion allowances because these transfer categories included programs aimed at assisting the least well off. Section 3 shows that the lack of overlap between the income and material deprivation distributions is very similar across countries. The program information further shows a large variation in the coverage, generosity and design of transfer programs. This confirms the appropriateness of case selection.

This study finds that the pro-poorness assessment does not differ much when comparing the measures between the 20 percent poorest households in terms of income and those in terms of material deprivation. However, when simultaneously taking this welfare information into account (comparing households in both 1st quintiles with non-poor households) transfers appear substantially more progressive. In other words, transfers are much more successful in reaching households that are among the least well-off according to both indicators.

Why is that transfers appear much more successful when the information from two noisy indicators is combined? The short answer is that by limiting the comparison to consistently poor and consistently non-poor households we are also more likely to exclude those groups for which the welfare proxies have trouble identifying their welfare levels. As discussed in the introduction, the key limitations of income indicators are firstly that they do not take alternative resources into account (financial or otherwise) and, secondly, that they do not inform about the specific needs of households and the costs associated with them (such as chronic illness or a disability). As discussed in section three, key limitations of the material deprivation indicators are that for reasons of shame and (changes in) aspirations the less well off may not report that they miss a deprivation item due to financial constraints while better off households may be more inclined to report the reverse while the reason for not having the item may be more related to spending priorities rather than insufficient resources. Part of the noise in each indicator is thus due to false negatives while another part is due to false positives. By combining the information from these indicators and imposing a stricter criterion, one reduces the noise caused by false positives i.e. households having (enough) alternative resources and of households whose deprivation levels are (in part) the result of choice rather than a lack of resources. Also, as income support programs often use a combination of income and asset tests and / or have special provisions for households meeting other needs-based criteria, this stricter criterion may better mimic the criteria according to which eligibility is determined in such programs. However, this is not to say that this group of 'consistent poor' should be seen as the 'true poor' or 'sole deserving'. Combing information on income and material deprivation does, for instance, not tell us much about special needs that a household may have. Furthermore, even if poverty reduction is the primary aim, there are additional reasons favoring a wider target group (as discussed in section 2).

Concluding, this study has shown that when survey data are used to assess the pro-poorness of income transfers, the dominant practice of using an income indicator is systematically underestimating the performance of such programs. While not investigated in this paper, the substantial differences are likely to also influence cost effectiveness assessments. It is therefore adviseable that other available information regarding households' alternative resources, needs or living standard outcomes is also used and, if not available, is more routinely collected. Material deprivation indicators appear to be a relatively simple and low cost way of doing this. This research does not suggest that it would be recommendable to use material deprivation as information on the basis of which to determine program eligibility. These indicators are not suitable because they can easily be manipulated by prospective beneficiaries.

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APPENDIX 1: COMPARISON OF INCOME AND MATERIAL DEPRIVATION VARIABLES

TABLE 1.1: CROSS-NATIONAL COMPARABILITY OF VARIABLES USED TO CONSTRUCT INCOME AND MATERIAL DEPRIVATION PROXIES

	DE	FR	IE	NL	SE	UK
Source income data [1]	Self-administered questionnaire	Interview	Interview and register	Register	Register	Interview
Reference period income data [1]	2006	2006	12 months prior to interview	2006	2006	12 months prior to interview
Collected income data at component level in gross or net amounts[1]	Gross	Net of social contributions but gross of taxes	Gross and net	Gross	Gross	Gross and net
Comparability of income variables[2]:						
- Disposable household income	Fully	Fully	Fully	Largely	Fully	Largely
- All income transfers (except pensions)	Fully	Fully	Fully	Largely	Fully	Fully
- Family / children related allowances	Fully	Fully	Fully	Largely	Fully	Fully
- Social exclusion payments (not elsewhere reported)	Fully	Fully	Fully	Fully	Fully	Fully
- Housing allowances	Fully	Fully	Fully	Fully	Fully	Fully
- Unemployment benefits	Largely	Fully	Fully	Largely	Fully	Fully
- Sickness benefits	Fully	Fully	Fully	Fully	Fully	Fully
- Disability benefits	Fully	Fully	Fully	Fully	Fully	Fully
Reference period deprivation data[3]	Past 12 months (arrears) or currently	Past 12 months (arrears) or currently	Past 12 months (arrears) or currently	Past 12 months (arrears) or currently	Past 12 months (arrears) or currently	Past 12 months (arrears) or currently
Comparability deprivation variables [3]	Yes	Yes	Yes	Yes	Yes	Yes

Sources: 1 European Commission, 2007 Comparative final quality report, version 2, June 2010. 2 European Commission, 2005 Comparative final quality report, version 2, June 2008. 3 By means of comparison of relevant questions in questionnaires of each country.

APPENDIX 2: METHOD TO ESTIMATING THE PRE-TRANSFER MATERIAL DEPRIVATION DISTRIBUTION

To assess whether transfers are reaching and assisting poor households, one requires knowing how well-off the household would have been without the transfer (family, housing and social exclusion allowances). When income is the welfare indicator, the pre-transfer amount is commonly obtained by subtracting the transfer amount from disposable income. As discussed in section 3.3, this approach assumes that there are no behavioural effects and that the benefit loss does not trigger any further income adjustments through the tax-benefit system. Similarly, the material deprivation indicator ought to be adjusted for the effect of the transfer on a household's capacity to afford the deprivation items. We are not aware of any studies that do this. This study is the first to apply such an adjustment. Using a multivariate regression method, we first estimate the income elasticity on the number of deprivations using disposable income; then we fit the model to each household to estimate the number of deprivations using pre-transfer and post-transfer income; subsequently we add this estimate of the *change* in deprivations to the actual (post-transfer) number of deprivations reported by the household. [7] [8] [9] In addition to requiring the same assumptions as for the income indicator, this method further assumes that all types of income contribute to avoiding material deprivation in the same way i.e. that one Euro family transfer is spent in the same way as one Euro wage income.

Because the dependent variable is a count variable (i.e. the *number* of items that the household lacks) its distribution is more akin to a Poisson type of distribution rather than a normal distribution. This implies that a regression technique such as Ordinary Least Squares (OLS) is not appropriate. Instead we estimate a negative binomial regression model because the dependent variable only has non-negative values and is overdispersed (i.e. the variance that is larger than the mean). This choice is supported by a likelihood-ratio test which tests whether the variance is equal to the mean (LR test of Alpha); as shown by the p-values in Table A2 this hypothesis is rejected implying that there is overdispersion in the data. The regressions are run for each country separately using the household as the unit of analysis.

In addition to disposable income (per equivalent adult, in natural logarithm) we include various control variables. The first set of control variables describes household characteristics, namely:

- the demographic composition of the household (number of children, adults and elderly as well as a range of dummies specifying the household type);
- its (lack of) financial assets (two dummy variables indicating whether the household finds that its debt is somewhat or a heavy financial burden);
- ownership dwelling (a dummy for whether the household is renting their home).

The second set of control variables reflects various characteristics of the respondent to the household questionnaire, namely:

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[7] Using the non-linear prediction syntax "nlpredict" in Stata 11. More information can be found in the do-files and log-files which are available upon request by the author.

[8] We prefer to use the actual distribution plus the simulated income effect (i.e. the change in number of deprivations between pre- and post-transfer income) because the simulated income effect is the best available (but not perfect) estimate of the impact of transfers.

[9] We further adjust the pre-transfer deprivation count such that the values fall within the feasible range of 0-9 deprivations as some household's estimated rank changes would be larger than what is actually feasible given that 9 deprivation items are observed.

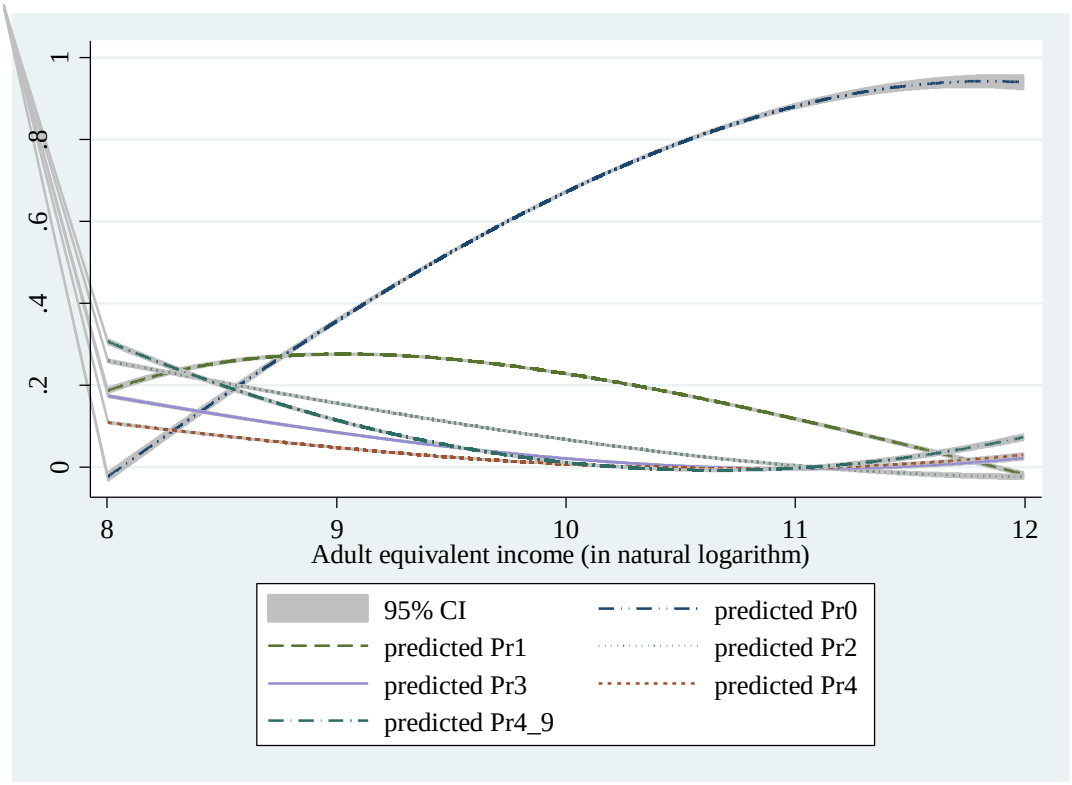
- the respondent's education level (highest level attained);
- the respondent's citizenship (local, EU and Other);
- the respondent's self-reported economic status (working, unemployed, studying, retired, permanently disabled, fulfilling domestic tasks).

Given that the regressions are performed at the household level, this means that we assume that the characteristics of this particular household member (and the capacities associated with them) are representative for those of the household as a whole. This choice is motivated by the EU-SILC data collection protocol stating that "the household respondent will be chosen according to the following priorities: 1) the person responsible for the accommodation and 2) a household member aged 16 and over who is the best placed to give the information (European Commission, 2009b, p. 15)". In addition to the above-mentioned variables, there were a number of other variables which we would have liked to include in the model but they were either not available (such as home food production, access to services, food banks) or had many missing observations (such as the household level work intensity variable for Germany, payment of wealth taxes). Finally, because these are cross-section data rather than panel data, the model does not control for household fixed effects such as tastes or individual capacities to do much with little resources.

Even though we estimate the final model for each country separately (thus allowing the income elasticity to differ between countries), we determined the model specification by examining the impact of various model specifications on the pooled data. Starting with a basic model including only the income variable and country dummies, we subsequently added the household level variables, followed by the respondent's variables, and finally a range of specifications testing interaction effects between the income and control variables (household type, ownership dwelling, education, citizenship and self-reported economic status). As control variables are added the parameter of interest (the income elasticity) decreases from -1.15 in the basic model to -0.62 in the model including all control variables but no interaction effects. With the exception of a few dummy variables, all control variables are contributing to the explanatory power of the model. However, adding the in total 25 interaction effects (of which 15 are statistically significant from zero) has little effect on the income elasticity (-0.65) we prefer using the model specification without interaction terms.

The regression results are summarized in Table 2.1. Due to the logarithmic transformation of the income variable its parameter can by approximation be interpreted as the percentage change. For instance, a 1 percent increase in income decreases the number of deprivations by 0.617 percent in the pooled model. The other parameters have the expected signs and most of them are statistically significant at a 5 percent level or better. Figure 2.1 illustrates the predictive power of the model by mapping how the probability of experiencing a specific number of deprivations changes in relation to income. As income increases, the probability of not having any deprivations increases (predicted Pr0). At lower annual income levels, roughly from 3,000 (ln 8) to 22,000 (ln 10) Euros, the probability of experiencing one or several deprivations is highest.

FIGURE 2.1 PREDICTED PROBABILITY (BY NUMBER OF DEPRIVATION ITEMS, POOLED MODEL)



Source: EU-SILC (2007)

The estimated income elasticities are subsequently used to estimate the change in deprivations due to transfer income. Taking for example a household experiencing 2 deprivations with an annual pre-transfer income of € 10,000 and receiving € 1,000 in transfers the predicted *change* in deprivations is: 2-[2*exp(-0.617*(ln(11,000)-ln(10,000))]=2-1.89=0.11 deprivations. Thus, without the transfer we would expect this household to have 2.11 deprivations.

While one would never observe a non-integer value for the number of deprivations, a convenient side effect of non-integer values is that the pre-transfer material deprivation distribution becomes less discrete which in turn facilitates the division of the population in quintiles. For households that do not report receiving any transfers (family, housing or social exclusion allowances) the number of deprivations stays the same (i.e. an integer value). Thus while the static simulation transforms the material deprivation distribution from a 10 value discrete distribution into a more continuous distribution there are still high frequency integer values. In a number of cases these values are distributed around the threshold value between two quintiles. To obtain quintiles, we *additionally* sorted households firstly by using the variable "ability to make ends meet" (taking values 1 - very difficult - to 6 - very easy -) and secondly, using pre-transfer income.

Despite the sizeable income elasticity, the impact of transfers on the material deprivation distribution is modest: the mean number of pre-transfer deprivations is 0.81 compared to a mean of 0.67 for the actual (post-transfer) distribution. The correlation between both distributions is 0.86. Using the unweighted data and rounding the pre-transfer number of deprivations to the nearest integer, Table 2.2 further shows that the impact of transfers is largest for households reporting 2 to 3 deprivations. For instance, the (unweighted) EU-SILC data show that of the 10.5 percent of the households reporting two deprivations, only 0.6 percent is estimated to report 3 deprivations without the transfers. Only for 4.5 percent of the households the transfer is estimated to have been

large enough to reduce the actual number of deprivations by one or more items. The one but last column further shows that some of the most impacted households are estimated to have 9 deprivations prior to receiving the transfers (1.5 percent of the households with estimated impacts 3 to 6 item reductions). While the above described method yields plausible results overall, these high impact cases suggest that there are specific household contexts in which the regression model does not provide a good fit. These are likely to be households receiving a large amount of transfers relative to their income. In such cases it would also be more likely that the assumptions regarding behavioural and tax-benefit effects are violated. Given the relatively small number of such cases, no further adjustments were made.

TABLE 2.2: NUMBER OF DEPRIVATIONS (IN PERCENTAGE OF HOUSEHOLDS)

	Simulated / Pre-transfer (rounded to nearest integer)										
Actual	0	1	2	3	4	5	6	7	8	9	Total
0	65.0	0.3	0	0	0	0	0	0	0	0.1	65.5
1	0	14.9	0.3	0.1	0	0	0	0	0	0.1	15.5
2	0	0	9.3	0.6	0.2	0.1	0	0	0	0.3	10.5
3	0	0	0	3.9	0.5	0.1	0.1	0	0	0.4	5.2
4	0	0	0	0	1.5	0.3	0.1	0.1	0	0.3	2.4
5	0	0	0	0	0	0.4	0.1	0.1	0	0.1	0.8
6	0	0	0	0	0	0	0.1	0	0	0.1	0.2
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
Total	65.0	15.2	9.6	4.6	2.2	1.0	0.4	0.2	0.1	1.5	100

Notes: This table compares the actual number of deprivations reported by the household with the simulated (pre-transfer) number of deprivations. The simulated number of deprivations is based on the country level regressions. For expositional purposes, the simulated deprivations have been rounded to integers and tabulated in one matrix for all six countries (rather than country specific matrices). No survey weights used.
Source: EU-SILC (2007)

TABLE 2.1A: NEGATIVE BINOMIAL REGRESSION

	Dependent variable: number of deprivation items that a household cannot afford (0-9 items)						
	Pooled	DE	FR	IE	NL	SE	UK
Disposable income (per equivalent adult, in logarithms)	-0.617***	-0.557***	-0.863***	-0.394***	-0.722***	-0.621***	-0.463***
Debt is heavy burden (1/0)	0.841***	0.772***	0.744***	0.643***	0.965***	1.359***	0.950***
Debt is somewhat a burden (1/0)	0.379***	0.320***	0.422***	0.267***	0.648***	0.813***	0.368***
Number of children below age 18	0.042*	0.099**	-0.027	0.053	0.076	0.116*	0.002
Number of adults	-0.04	0.013	-0.08	-0.093	0.067	0.08	-0.118*
Number of elderly (age 65 and above)	-0.224***	-0.084	-0.146	-0.252*	-0.561***	-0.151	-0.563***
Tenure status							
- Owned	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)
- Rented	0.699***	0.565***	0.606***	0.789***	0.879***	0.602***	1.013***
Household type							
- One person household	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)
- 2 adults, no dependent children, both adults under 65 years	-0.342***	-0.310***	-0.352***	0.06	-0.719***	-0.675***	-0.251**
- 2 adults, no dependent children, at least one adult 65	-0.255***	-0.446***	-0.245*	0.023	0.061	-0.988***	0.117
- Other households without dependent children	-0.101	-0.106	-0.125	0.087	-0.477	-0.634**	0.003
- Single parent household, one or more dependent children	0.111**	0.06	0.013	0.305*	0.061	-0.109	0.247**
- 2 adults, one dependent child	-0.253***	-0.312***	-0.202*	-0.093	-0.472*	-0.576***	-0.108
- 2 adults, two dependent children	-0.400***	-0.487***	-0.339**	-0.074	-0.789***	-0.795***	-0.141
- 2 adults, three or more dependent children	-0.290***	-0.413*	-0.152	-0.063	-0.937**	-0.719**	0.034
- Other households with dependent children	-0.111	-0.301*	-0.025	0.156	-0.54	-0.905***	0.277
- Other	0.002	0.262	-0.229	na	-22.392***	0.303	0.179
Highest education level attained							
- Pre-primary education	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)
- Primary education	-0.015	na	-0.089	na	0.355	na	na
- Lower secondary	-0.141	-0.097	-0.105	-0.269***	0.106	-0.322**	na
- Upper secondary	-0.296**	-0.273***	-0.276**	-0.495***	-0.019	-0.220*	-0.202***
- Post secondary (non-tertiary)	-0.429***	-0.499***	-25.640***	-0.483***	0.006	-0.295*	-0.05
- First or second stage tertiary	-0.665***	-0.632***	-0.646***	-0.895***	-0.464	-0.578***	-0.568***
Country of citizenship							
- Local	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)
- EU	0.058	na	-0.004	0.116	0.288	-0.005	0.096
- Other	0.316***	0.169*	0.350***	0.031	1.528***	0.299*	0.346***

Notes: * p<0.05, ** p<0.01, *** p<0.001; not available (na); estimated in Stata 11 using the "svy: nbreg" command.

Source: EU-SILC (2007)

TABLE 2.1B: NEGATIVE BINOMIAL REGRESSION (CONTINUED)

	Dependent variable: number of deprivation items that a household cannot afford (0-9 items)						
	Pooled	DE	FR	IE	NL	SE	UK
Self-defined economic status							
- Working full-time	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)	(dropped)
- Working part-time	0.262***	0.215***	0.248***	0.252**	0.179*	0.500***	0.315***
- Unemployed	0.596***	0.671***	0.435***	0.527***	0.680***	0.846***	0.590***
- Pupil, student or otherwise in training	0.233***	0.271***	0.07	0.761***	0.217	0.605***	0.096
- Retired	0.049	0.045	-0.1	0.064	0.111	0.453***	0.229**
- Permanently disabled / unfit for work	0.618***	0.571***	0.331***	0.607***	0.754***	1.053***	0.655***
- In compulsory military / community service	0.235	0.27	na	na	na	0.482*	na
- Fulfilling domestic tasks and care responsibilities	0.282***	0.121*	0.148*	0.303***	0.367***	0.543**	0.422***
- Other inactive person	0.349***	0.424***	0.280*	1.185***	0.366**	0.678***	0.002
Country dummies							
- DE	(dropped)						
- FR	-0.097***						
- IE	-0.089*						
- NL	-0.536***						
- SE	-0.611***						
- UK	-0.252***						
Number of households	54933	14015	9973	5522	10010	6734	8679
LR test of Alpha – P-value	0	0	0	0	0	0	0
LR Chi 2 – P-value	0	0	0	0	0	0	0
Pseudo R-Squared	0.1540	0.1457	0.1386	0.1853	0.1857	0.1681	0.1752

Notes: * p<0.05, ** p<0.01, *** p<0.001; not available (na); estimated in Stata 11 using the "svy: nbreg" command.

Source: EU-SILC (2007)

APPENDIX 3: CHARACTERISTICS OF HOUSEHOLD LEVEL TRANSFERS

TABLE 3.1: SUMMARY FAMILY ALLOWANCES: TYPE OF PROGRAMS

	DE	FR	IE	NL	SE	UK
Universal programs	y	y	y	y	y	y
Income-tested programs	y	y	y	y	n	y
Means-tested programs	n	y	y	n	n	n
Child care programs for very young or sick children	y (stay at home parents)	y (sick children)	y (working parents)	n	y	n
Maternity related programs (contributions related or not)	n	n	n	n	y	y

Shaded cells indicate that transfer is not included in respective EU-SILC transfer variable (HY050G/N).

TABLE 3.2: FAMILY ALLOWANCES (IN MONTHLY AMOUNTS, PRINTED IN BOLD IF INCLUDED IN HY050G/N)

	DE	FR	IE	NL	SE	UK
Universal programs	**Kindergeld**[1] 184 € (1st & 2nd child) 190 € (3rd child) 215 € (4th and more)	Prestation d'acceuil du jeune enfant (PAJE)[3] 374-611 €, supplement for reduced work **Allocation familiale**[3] 124 € 2 children 283 € 3 children 441 € 4 children 159 € per subsequent child Supplements for children above age 11 **Allocation journalière de présence parentale**[3] max. 902-1078 € **Allocation de Soutien Familial (ASF)**[4] € 85 per child	**Child benefit**[5] 166 € per child **Early child care supplement (≤2009)**[5] 83 € per child	**Kinderbijslag**[6] Amount varies age of child and by number of children 65-128 € per child	**Barnbidrag**[7] Amount varies by number of children 114-227 € per child	**Child benefit** [8] 94 € 1st child 62 € ≥ 2nd child
Means-tested (MT) / income tested (IT)	**Kinderzuschlag (MT)**[1] max. 140 € per child **Erziehungsgeld (IT) (≤ 2007)**[2] €300 for 24 months / €450 for 12 months	Prestation d'acceuil du jeune enfant (PAJE) (IT)[3] 890 € birth grant, lump sum 178 € base allowance **Allocation familiale (IT)**[3 4] 161 €, for 3 or more children Allocation de rentrée scolaire (ARS)[3] 281-307 €, depending on age **Allocation de parent isolé (API) (MT)**[4] 187 € per child	**Qualified child increase**[5] 26 € per child **Family income supplement (IT)**[5] 60% between net earnings and net maximum earnings **Back to school clothing and footwear allowance (MT)**[5] 200-305 € annually, depending on age **One parent family payment (IT)**[5] max. 1600 € Single parent family relief €1,760 tax credit Home carers allowance Up to 770 tax credit	Kinderkorting/kindertoeslag / **kindgebonden budget** (IT)[6] 77-152 € depending on program and number of children Alleenstaande ouderkorting (IT)[6] 79 € Aanvullende alleenstaande ouderkorting (IT)[6] 4.3% of earned income with max. of 126 € Combinatiekorting / aanvullende combinatiekorting (IT) / inkomensafhankelijke combinatiekorting (IT) [6] Tax allowance for supporting a child under age 30 25-89 € depending on age child and expenses Kinderopvangtoeslag (IT) Covering 95-50% of child care costs.	No child related tax credits	**Child tax credit (IT)** [8] Basic family element: 53 € ≥1 child Baby addition: 53 € per child Child element: 222 € per child Disability element: 262 € per child Severe disability element: 106 € per child **Maternity grants (IT)** [8] 516 € birth grant

TABLE 3.2 (CONTINUATION)

	DE	FR	IE	NL	SE	UK
Contributions based	**Elterngeld (≥ 2007)**[2] min. 300 € – max. 1800 €, depending on income				Föräldraledighet & temporary parents cash benefit min. 409 € – max. 1,480 €, depending on contributions record	**Statutory maternity / paternity / adoption pay** [8] Up to 90% of gross earnings, up to 39 weeks, employment & earnings history
Other programs	Ehegattensplitting[1], Entlastungsbetrag für Alleinerziehende[1], contributions for mothers to old age insurance system, other minor transfers, maternity allowance		Early childhood care and education scheme (≥2010)[5]	Bevallingsuitkering[6] 100%, up to 16 weeks		**Maternity allowance** [8] Max. € 579, up to 39 weeks, , employment & earnings history Guardians allowance, Child maintenance bonus, Lone parent's benefit run-on, Carer's allowance

Sources Germany:
[1 0]Tarki Social Research Insitute (2010): Kindergeld (age 0-17) becomes tax allowance after certain income level resulting in higher benefit levels (own research: this is likely what is called Kinderfreibetrag & Betreuungsfreibetrag which applies for households with an annual income as of 60,000 €); Kinderzuschlag (age 0-17) is part of means-tested unemployment benefit and social assistance and is targeted at households that fall below the needs threshold for means-tested unemployment benefits. (Arbeitslosengeld II); Ehegattensplitting are tax advantages for married couples; Entlastungsbetrag für Alleinerziehende is a tax exemption for single parents.
[2] Notten, Davis and Sy (2013): Elterngeld is for parents who stop working or reduce their work hours because of the birth of a child (up to 14 months), does not apply to parents earning annually more than € 500,000; Erziehungsgeld is a means-tested supplementary allowance for women who stayed home to look after a newborn (up to 24 months).

Sources France:
[3] Notten, Davis and Sy (2013): Allocation familiale (age 0-20); Prestation d'acceuil du jeune enfant (IT, age 0-3), IT is quite generous up to € 33,700-59,400 (varying by number of children & single parent); Allocation journalière de présence parentale is a care allowance for parents with a sick child (up to 12 months); the income-test threshold for the Allocation de rentrée scolaire varies from €27,500-32,600 depending on number of children.
[4] Tarki Social Research Insitute (2010): Allocation familiale (IT) is a supplementary allowance for families with 3 or more children; Allocation de Parent Isolé (API) is MT for income below € 748 per month.

Sources Ireland:
Child benefit and qualified child increase (age 0-17, higher if child in education); Early child care supplement (age 0-5).
[5] Tarki Social Research Insitute (2010) & Notten, Davis and Sy (2013): Early childhood care and education scheme provides one free pre-school year of early child care for all children between ages 3-4; to qualify for FIS one of parents must be engaged in insurable employment (max. net earnings for a one child family are €24,960 annually).

Sources Netherlands:
[6] Notten, Davis and Sy (2013): Kinderbijslag (age 0-17, for children born after1 Jan 1995 only age is a benefit determinant); Kinderkorting (≤2007)/ kindertoeslag (2008)/ kindgebonden budget (≥2009) are all income-tested tax benefits (paid monthly & nearly automatic) with full benefits until €28,897 after which a 6.5% claw back applies; Bevallingsuitkering is for unemployed and self-employed women (16 weeks at 100% pay with max. of €190 a workday); As of 2011, Alleenstaande ouderkorting & Aanvullende alleenstaande ouderkorting (IT) are combined; Combinatiekorting & aanvullende combinatiekorting have been replaced by the inkomensafhankelijke combinatiekorting in 2009, the changes also included changes in design (requiring minimum earnings of €4,734 & increase in max. tax credits from 9 to 160 € monthly.

Sources Sweden:
[7] Notten, Davis and Sy (2013): Barnbidrag (age 0-16 or 20 if full-time student); Föräldraledighet and temporary parents cash benefit (the parental cash benefit is contributions-based but also has a basic amount for parents with low or no income; is part of sickness insurance and thus more likely to be found under sickness benefits).

Sources UK:
[8] Notten, Davis and Sy (2013): 1£ is €1.16 (31-12-2010), Child benefit (age 0-15 or 19 if in non-advanced education); Child tax credit is IT using several thresholds with different claw back rates (> € 18,780, 39%; > € 58,000, 6.7%); Maternity allowance is for women who have a work history but do not get statutory maternity pay through their employer; the Maternity Grant is a social fund grant.

TABLE 3.3: SUMMARY SOCIAL EXCLUSION ALLOWANCES: TYPE OF PROGRAMS

	DE	FR	IE	NL	SE	UK
Income-tested programs	n	y	n	y	y	y
Means-tested programs	y	N	y	y	y	y

Shaded cells indicate that transfer is not included in respective EU-SILC transfer variable (HY060G/N).

TABLE 3.4: SOCIAL EXCLUSION ALLOWANCES (IN MONTHLY AMOUNTS, PRINTED IN BOLD IF INCLUDED IN HY060G/N)

	DE	FR	IE	NL	SE	UK
Means-tested (MT) / income tested (IT)	Arbeitslosengeld II & **Sozialgeld (MT)**[1] 364 € for 1st adult, 328 € for 2nd adult, 215-291 € for each child (age dependent)	**Insertion minimum income (IT)**[2] €447.91 single person €671.87 two-member household €806.24 three-member household €940.61 couple with two children a supplement of €179.16 is paid for each additional child in a family ≥ 2 children. Unemployment assistance (IT)[2] Amounts not clear, as previous?	**Supplementary Welfare Allowance (MT)**[3] €742 single €1236 two adults €1324 two adults and one child	**Bijstandsuitkering (MT)**[4] €1319.85, couple €923.90, single parent €659.93, single adult Zorgtoeslag (IT) max. €146 for couple with 2 young children	**Försörjningsstöd (MT)**[5] €516, couple €440 and up, single parent €285, single adult Earned income tax credit (IT) max. €99 for a person with average municipal tax rate	**Working tax credit (IT)**[6] Basic element: €186 Couples element: €183 Lone parent element: €183 30 hour element: € 76 Disability element: € 248 Severe disability element: € 106 Child care costs (max.): € 812 1 child € 1,382 ≥ 2 children **Income Support (MT)**[6] Single person: € 304 Lone parents: € 304 Couples: € 477 **Community Care Grant (IT)** Discretionary
Other programs						**Social fund grants,** **Other benefit,** **Grant for funeral expenses**

Sources Germany:
[1] Notten, Davis and Sy (2013): Arbeitslosengeld II is a means-tested allowance covering persons who are capable of work, not eligible anymore for the contributions-based unemployment benefit and who are unable to cover their basic needs; Sozialgeld is the allowance for their dependents and also covers the cost of reasonable accommodation and heat, as well as any additional special needs for the household. Qualifiable with income up to 1,200 € (1,500 € if children) and low assets (complex threshold).

Sources France:
[2] Notten, Davis and Sy (2013): Insertion minimum income: The benefit is reduced by the value of any income. If the beneficiary receives the housing allowance (see Family Allowances) or other housing assistance benefits, the insertion minimum income is reduced to a fixed lump sum.

Sources Ireland:
[3] Notten, Davis and Sy (2013): SWA is subject to income (max. SWA allowance) and asset tests (value of home not included, very lenient i.e. only €1 per €1,000 [between €5,000-15,000] is taken into account).

Sources Netherlands:
Notten, Davis and Sy (2013): Bijstandsuitkering supplements up to minimum wage including income (minimum wage) and asset (max. € 5,555 (single) – 11,110 (couple)) tests; Zorgtoeslag compensates for out of pocket expenditures in health insurance premiums and has income thresholds for single parents (< €36,022) for couples (< €54,264).

Sources Sweden:
[5] Notten, Davis and Sy (2013): Försörjningsstöd varies with number of household members and age of child; the earned income tax credit was only introduced in 2007 and is thus not included in the EU-SILC income reference year for wave 2007.

Sources UK:
[6] Notten, Davis and Sy (2013): the working tax credit is income tested and two thresholds with claw back rates apply (> € 7,447, 39%; > € 58,000, 6.7%); the Community Care Grants is a social fund grant; Income Support is to help people on low incomes who do not have to be available for employment and have income <€ 7,447 and savings < € 6,960 (also includes claw back for people having savings up to € 18,560).

TABLE 3.5: SUMMARY HOUSING ALLOWANCES: TYPE OF PROGRAMS

	DE	FR	IE	NL	SE	UK
Income-tested programs	y	y	n	n	y	n
Means-tested programs	n	n	y	y	n	y

TABLE 3.6: HOUSING ALLOWANCES (IN MONTHLY AMOUNTS, PRINTED IN BOLD IF INCLUDED IN HY070G/N)

	DE	FR	IE	NL	SE	UK
Means-tested (MT) / income tested (IT)	**Wohngeld (IT)** Average monthly amount: € 91	**Family housing benefit (ALF)** **Aide personnalisée au logement (APL)** **Social housing subsidy (ALS)** Average monthly amount: € 190 (ALF, APL & ALS combined)	**Rent and mortgage supplements (MT)** Max. amounts: Single person: €520 Couple: €800 Couple with 2 children: €1,200	**Huurtoeslag (MT)** i.e. max. €266 for couple with 2 young children with annual income of €17,000	**Bostadsbidrag (IT)** i.e. max. €1,151 (before income test)	**Housing benefit (MT)** max. € 348 **Council tax benefit (MT)** max. € 28

Source Germany: Notten, Davis and Sy (2013): Wohngeld is for anyone with low income or high rent except for recipients of unemployment assistance.

Source France: Tarki Social Research Insitute (2010): ALF is for married couples (first 5 years) and families with dependent children; APL is for those renting registered accommodation and new homeowners who have been allocated subsidized loans; ALS is payable to anyone irrespective of age or employment; typically the allowance is a variable monthly amount is paid depending on rent level, income, and the number of children

Source Ireland: Notten, Davis and Sy (2013): Rent and mortgage supplements: same income and asset tests as for Supplementary Welfare Allowance.

Source Netherlands: Notten, Davis and Sy (2013): Huurtoeslag, the amount depends on composition household, rent amount, income (max. €29,125) and assets (€20,661).

Source Sweden: Notten, Davis and Sy (2013): Bostadsbidrag depends on household composition, rent amount and income (max. €12,647 (lone parents) or €6,324 (family with 1 or more child); for social assistance recipients the rent may be fully covered.

Source UK: Notten, Davis and Sy (2013): Housing benefit applies the same asset test as Income Support but the income threshold is higher with € 21,474; for the Council tax benefit, which is a tax rebate, the same MT criteria apply as for the housing benefit.

APPENDIX 4: COMPARISON PERFORMANCE INDICATORS

TABLE 4.1: COVERAGE ACROSS INCOME (Y) AND MATERIAL DEPRIVATION (MD) QUINTILES (Q)

	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family [1]	
	%	ci [2]	**%**	ci	**%**	ci	**%**	ci	**%**	ci
DE										
$Q1_y$	51.6	2.1	30.1	1.9	20.6	1.7	11.1	1.3	98.4	1.1
$Q1_{md}$	65.9	2.0	31.5	1.9	22.9	1.7	10.2	1.3	98.7	1.0
$Q2\text{-}5_y$	32.2	0.9	2.5	0.3	1.9	0.3	0.7	0.2	98.3	0.5
$Q2\text{-}5_{md}$	28.6	0.9	2.2	0.3	1.3	0.2	0.9	0.2	98.2	0.5
FR										
$Q1_y$	76.3	2.5	69.1	2.6	19.6	2.1	64.8	2.7	95.7	2.2
$Q1_{md}$	82.5	2.6	74.0	2.7	18.7	2.2	70.8	2.8	92.3	3.2
$Q2\text{-}5_y$	30.8	1.5	15.5	1.0	1.3	0.3	14.8	1.0	75.0	2.0
$Q2\text{-}5_{md}$	29.2	1.4	14.3	1.0	1.5	0.3	13.3	0.9	75.9	2.0
IE										
$Q1_y$	88.7	2.2	58.1	5.3	12.7	3.1	53.0	5.2	99.8	0.3
$Q1_{md}$	92.2	2.2	54.4	5.4	13.4	2.9	48.9	5.3	99.8	0.3
$Q2\text{-}5_y$	66.1	2.2	25.9	1.8	1.8	0.6	25.0	1.8	99.8	0.4
$Q2\text{-}5_{md}$	65.2	2.2	26.8	1.8	1.6	0.6	26.1	1.8	99.8	0.4
NL										
$Q1_y$	68.6	3.8	58.9	4.1	38.1	4.2	45.9	4.2	96.8	2.6
$Q1_{md}$	73.4	3.1	64.3	3.3	37.4	4.0	51.9	3.8	95.9	2.7
$Q2\text{-}5_y$	34.8	1.3	10.7	1.0	3.5	0.5	7.5	0.9	95.5	1.0
$Q2\text{-}5_{md}$	33.6	1.3	9.4	1.0	3.7	0.5	6.0	0.9	95.7	1.0
SE										
$Q1_y$	56.4	3.2	36.1	3.1	12.0	2.0	32.4	3.0	84.1	3.9
$Q1_{md}$	62.3	3.1	37.7	3.0	12.7	2.0	33.4	3.0	84.7	3.6
$Q2\text{-}5_y$	27.9	1.2	4.4	0.6	0.9	0.3	3.8	0.6	84.6	1.7
$Q2\text{-}5_{md}$	26.4	1.2	4.0	0.6	0.7	0.2	3.5	0.6	84.4	1.8
UK										
$Q1_y$	65.6	2.5	57.8	2.6	37.6	2.6	46.0	2.7	97.8	1.3
$Q1_{md}$	72.8	2.5	59.0	2.7	37.7	2.7	48.1	2.7	96.2	1.9
$Q2\text{-}5_y$	33.2	1.2	8.7	0.8	4.1	0.6	5.4	0.6	93.7	1.2
$Q2\text{-}5_{md}$	31.4	1.2	8.4	0.7	4.1	0.6	4.8	0.5	94.1	1.2

[1] Only including households with children under age 18.

[2] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

TABLE 4.2: AVERAGE TRANSFER AMOUNTS ACROSS INCOME (Y) AND MATERIAL DEPRIVATION (MD) QUINTILES (Q) [1]

	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family [2]	
	€	ci [3]	€	ci	€	ci	€	ci	€	ci
DE										
$Q1_y$	5,096	351	4,562	520	5,994	708	1,238	151	4,363	233
$Q1_{md}$	4,623	279	4,670	501	5,894	644	1,171	160	4,123	216
$Q2\text{-}5_y$	3,265	71	3,764	480	4,778	570	830	194	3,599	76
$Q2\text{-}5_{md}$	3,309	79	3,245	487	4,677	706	1,106	198	3,659	80
FR										
$Q1_y$	5,802	312	3,702	175	3,662	315	2,839	98	4,940	335
$Q1_{md}$	4,880	283	3,346	187	3,608	333	2,541	128	4,387	364
$Q2\text{-}5_y$	2,980	158	1,837	215	4,059	1,934	1,565	136	3,280	146
$Q2\text{-}5_{md}$	3,480	177	2,136	223	4,171	1,609	1,818	120	3,467	146
IE										
$Q1_y$	9,066	842	2,090	309	758	212	2,110	328	12,348	1,022
$Q1_{md}$	8,810	828	2,262	330	649	167	2,339	352	12,306	981
$Q2\text{-}5_y$	3,806	226	1,256	102	981	608	1,228	93	5,275	302
$Q2\text{-}5_{md}$	3,824	228	1,197	84	1,241	746	1,155	73	5,287	295
NL										
$Q1_y$	7,317	665	7,608	737	9,491	694	1,885	103	2,102	137
$Q1_{md}$	6,713	624	6,975	673	9,391	652	1,879	89	1,810	127
$Q2\text{-}5_y$	1,864	66	2,118	187	2,964	473	1,659	117	1,597	34
$Q2\text{-}5_{md}$	2,002	115	2,413	384	3,545	891	1,615	152	1,672	38
SE										
$Q1_y$	6,543	420	3,986	356	5,218	727	2,517	186	7,445	636
$Q1_{md}$	4,795	324	3,594	344	4,745	695	2,258	178	5,082	470
$Q2\text{-}5_y$	3,668	176	1,528	190	1,782	532	1,349	159	3,972	188
$Q2\text{-}5_{md}$	4,539	226	2,211	301	2,997	934	1,882	249	4,560	226
UK										
$Q1_y$	10,603	569	8,273	491	6,031	363	5,456	421	6,031	433
$Q1_{md}$	9,632	548	8,156	490	5,925	351	5,356	414	5,624	461
$Q2\text{-}5_y$	3,420	167	4,679	346	4,319	443	4,284	333	2,789	126
$Q2\text{-}5_{md}$	3,572	170	4,756	323	4,556	488	4,404	261	2,902	132

[1] Averaged over recipients only.

[2] Only including households with children under age 18.

[3] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

TABLE 4.3: AVERAGE INCOME SHARE OF BENEFIT (%) ACROSS INCOME (Y) AND MATERIAL DEPRIVATION (MD) QUINTILES (Q) [1]

	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family [2]	
	%	ci [3]	**%**	ci	**%**	ci	**%**	ci	**%**	ci
DE										
$Q1_y$	34.9	1.5	32.8	2.1	42.4	2.4	10.2	1.3	26.3	1.5
$Q1_{md}$	27.4	1.3	31.6	2.1	39.1	2.3	9.7	1.4	22.6	1.5
$Q2\text{-}5_y$	8.4	0.2	13.7	1.8	17.1	2.1	3.9	0.8	9.0	0.2
$Q2\text{-}5_{md}$	9.5	0.3	15.1	2.2	20.4	3.1	6.9	1.3	9.9	0.3
FR										
$Q1_y$	39.9	4.9	32.1	5.4	40.0	18.2	22.2	1.3	22.6	1.4
$Q1_{md}$	33.5	4.6	28.2	5.0	39.5	19.0	19.0	1.3	19.8	1.6
$Q2\text{-}5_y$	8.6	0.4	7.2	0.5	10.3	3.3	6.7	0.5	8.4	0.4
$Q2\text{-}5_{md}$	11.4	0.6	10.1	1.0	15.9	3.6	9.1	0.9	9.4	0.4
IE										
$Q1_y$	41.9	4.0	11.8	1.3	4.3	1.5	11.9	1.3	51.3	3.6
$Q1_{md}$	36.3	4.3	10.8	1.3	3.4	1.2	11.1	1.4	47.4	4.2
$Q2\text{-}5_y$	8.2	0.4	5.4	0.3	3.1	2.0	5.3	0.3	9.9	0.7
$Q2\text{-}5_{md}$	9.7	0.8	6.1	0.3	4.8	2.7	6.0	0.3	10.9	0.9
NL										
$Q1_y$	50.6	5.2	54.2	5.8	67.5	5.8	13.5	0.8	10.3	1.0
$Q1_{md}$	46.5	5.0	49.7	5.4	67.5	5.8	13.0	0.7	8.3	0.9
$Q2\text{-}5_y$	5.6	0.3	9.2	0.7	7.6	1.4	9.6	0.8	3.7	0.1
$Q2\text{-}5_{md}$	6.3	0.4	10.4	1.2	10.6	2.6	9.9	1.0	4.2	0.2
SE										
$Q1_y$	33.1	2.0	27.8	2.6	35.6	5.6	17.8	1.6	29.4	2.4
$Q1_{md}$	24.4	1.9	24.1	2.6	32.1	5.6	15.0	1.6	20.4	2.3
$Q2\text{-}5_y$	8.7	0.4	6.2	0.8	5.9	1.7	5.8	0.7	9.2	0.4
$Q2\text{-}5_{md}$	12.5	0.7	12.9	2.0	14.1	4.6	11.7	2.0	11.5	0.6
UK										
$Q1_y$	59.8	2.2	48.9	2.1	32.9	2.0	34.5	1.6	32.7	2.7
$Q1_{md}$	51.0	2.4	45.7	2.2	31.1	2.0	31.7	1.6	28.9	2.9
$Q2\text{-}5_y$	9.1	0.5	16.7	1.0	11.1	1.1	18.6	0.9	6.4	0.3
$Q2\text{-}5_{md}$	11.3	0.7	21.1	1.4	15.1	2.0	23.9	1.3	7.4	0.4

[1] Averaged over recipients only.

[2] Only including households with children under age 18.

[3] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

TABLE 4.4: SHARE OF TOTAL BENEFITS (%) ACROSS INCOME (Y) AND MATERIAL DEPRIVATION (MD) QUINTILES (Q) [1]

	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family [2]	
	%	ci [3]	**%**	ci	**%**	ci	**%**	ci	**%**	ci
DE										
$Q1_y$	38.5	3.1	78.3	10.3	77.6	11.2	85.1	14.4	23.3	1.6
$Q1_{md}$	44.6	3.0	83.9	10.4	84.9	11.4	74.0	13.5	22.1	1.5
$Q2\text{-}5_y$	61.5	2.2	21.7	3.8	22.4	4.1	14.9	4.8	76.7	2.1
$Q2\text{-}5_{md}$	55.4	2.1	16.1	3.2	15.1	3.4	26.0	7.1	77.9	2.2
FR										
$Q1_y$	54.7	5.2	69.2	8.5	76.9	11.9	66.6	8.8	32.5	2.8
$Q1_{md}$	49.8	5.2	67.0	8.3	72.6	11.5	65.1	8.6	27.8	2.8
$Q2\text{-}5_y$	45.3	3.6	30.8	4.8	23.1	12.1	33.4	4.7	67.5	4.2
$Q2\text{-}5_{md}$	50.2	3.7	33.0	5.1	27.4	12.5	34.9	4.8	72.2	4.2
IE										
$Q1_y$	44.5	5.7	48.4	8.7	58.0	19.9	47.7	9.1	37.0	4.5
$Q1_{md}$	45.0	5.9	49.0	9.1	52.6	17.8	48.8	9.5	36.8	4.9
$Q2\text{-}5_y$	55.5	4.9	51.6	5.8	42.0	28.8	52.3	5.7	63.0	5.6
$Q2\text{-}5_{md}$	55.0	4.9	51.0	5.0	47.4	30.0	51.2	4.9	63.2	5.4
NL										
$Q1_y$	65.9	10.1	83.2	14.0	89.8	16.7	63.5	8.7	25.0	2.3
$Q1_{md}$	64.7	10.2	83.2	14.0	87.1	16.6	71.7	9.0	21.4	2.4
$Q2\text{-}5_y$	34.1	2.5	16.8	2.4	10.2	2.3	36.5	5.8	75.0	4.0
$Q2\text{-}5_{md}$	35.3	2.9	16.8	3.3	12.9	3.9	28.3	5.4	78.6	4.2
SE										
$Q1_y$	47.4	3.5	84.3	9.9	90.5	18.0	80.1	9.8	31.8	2.9
$Q1_{md}$	38.4	3.0	79.3	9.7	87.1	17.7	74.0	9.1	21.9	2.2
$Q2\text{-}5_y$	52.6	3.2	15.7	2.8	9.5	3.8	19.9	3.7	68.2	3.6
$Q2\text{-}5_{md}$	61.6	4.0	20.7	4.1	12.9	5.4	26.0	5.5	78.1	4.3
UK										
$Q1_y$	60.5	5.2	74.5	7.2	76.0	8.1	73.2	8.6	36.1	3.3
$Q1_{md}$	61.0	5.2	75.0	7.2	74.8	8.1	75.1	8.7	33.3	3.2
$Q2\text{-}5_y$	39.5	2.9	25.5	3.1	24.0	4.1	26.8	3.9	63.9	3.9
$Q2\text{-}5_{md}$	39.0	2.8	25.0	2.9	25.2	4.4	24.9	3.3	66.7	4.2

[1] Averaged over recipients only.

[2] Only including households with children under age 18.

[3] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

TABLE 4.5: COVERAGE (%) BY OVERLAP GROUPS

	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family [1]	
	%	ci [2]	%	ci	%	ci	%	ci	%	ci
DE										
$Q1_{y\ md}$	69.6	2.7	45.8	2.8	33.3	2.7	15.2	2.0	98.7	1.3
$Q1_{only\ y}$	29.2	2.8	10.5	1.9	4.8	1.3	5.9	1.5	97.9	2.3
$Q1_{only\ md}$	61.3	3.0	13.6	2.1	10.0	1.8	3.9	1.2	98.6	1.7
Not poor	28.6	0.9	1.1	0.2	0.8	0.2	0.3	0.1	98.3	0.6
FR										
$Q1_{y\ md}$	93.2	2.4	88.7	2.6	29.9	3.4	83.8	3.0	97.9	1.6
$Q1_{only\ y}$	54.0	4.2	43.2	4.3	5.9	2.0	39.8	4.3	91.5	5.0
$Q1_{only\ md}$	68.4	5.0	54.5	5.0	4.0	1.8	53.8	4.9	81.4	8.2
Not poor	26.3	1.5	10.8	0.9	1.0	0.3	10.1	0.9	74.4	2.0
IE										
$Q1_{y\ md}$	94.8	2.0	60.5	7.9	16.8	4.3	53.2	7.7	99.8	0.5
$Q1_{only\ y}$	81.0	4.1	55.1	6.6	7.3	4.8	52.8	6.6	100.0	0.0
$Q1_{only\ md}$	89.0	4.1	46.8	7.1	9.1	4.1	43.5	7.0	100.0	0.0
Not poor	63.2	2.3	23.3	1.8	0.9	0.3	22.7	1.7	99.8	0.4
NL										
$Q1_{y\ md}$	86.5	4.0	81.1	4.3	56.6	5.6	65.3	5.4	96.3	3.6
$Q1_{only\ y}$	42.1	5.6	26.1	5.1	10.7	3.2	17.2	4.5	97.6	3.3
$Q1_{only\ md}$	53.9	4.4	39.5	4.3	8.9	2.4	32.2	4.2	95.4	3.6
Not poor	32.7	1.3	7.5	1.0	2.9	0.4	4.7	0.9	95.5	1.0
SE										
$Q1_{y\ md}$	74.2	4.3	59.5	4.5	21.4	3.6	53.7	4.6	85.7	4.8
$Q1_{only\ y}$	39.7	4.2	14.3	3.2	3.1	1.4	12.5	3.0	82.3	6.2
$Q1_{only\ md}$	51.2	4.1	17.3	3.2	4.5	1.7	14.4	3.0	83.5	5.3
Not poor	24.4	1.2	2.5	0.5	0.4	0.2	2.2	0.4	84.7	1.8
UK										
$Q1_{y\ md}$	89.5	2.1	83.9	2.6	58.4	3.7	71.5	3.3	98.2	1.3
$Q1_{only\ y}$	37.9	3.6	27.3	3.4	13.5	2.8	16.4	2.7	96.6	3.2
$Q1_{only\ md}$	53.4	4.0	29.9	3.6	13.5	2.6	20.9	3.2	90.6	6.1
Not poor	30.6	1.2	6.0	0.7	2.9	0.5	3.3	0.5	93.9	1.3

[1] Only including households with children under age 18.

[2] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

TABLE 4.6: TRANSFER AMOUNTS BY OVERLAP GROUPS [1]

	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family [2]	
	€	ci [3]	€	ci	€	ci	€	ci	€	ci
DE										
$Q1_{y\ md}$	5,390	448	4,888	600	6,150	776	1,262	185	4,283	284
$Q1_{only\ y}$	4,222	399	2,783	631	4,643	1,174	1,163	229	4,515	403
$Q1_{only\ md}$	3,537	202	3,755	628	4,830	750	732	206	3,821	314
Not poor	3,192	72	3,778	741	4,700	869	976	370	3,578	77
FR										
$Q1_{y\ md}$	6,195	373	4,131	209	3,832	337	3,007	101	5,052	415
$Q1_{only\ y}$	4,904	424	2,533	278	2,522	773	2,372	226	4,708	568
$Q1_{only\ md}$	2,515	306	1,661	290	1,374	771	1,583	286	2,833	552
Not poor	3,126	181	1,944	295	5,339	2,712	1,554	123	3,325	150
IE										
$Q1_{y\ md}$	11,316	1,376	2,632	503	699	217	2,773	553	14,469	1,225
$Q1_{only\ y}$	5,730	834	1,336	176	932	591	1,265	159	8,317	1,348
$Q1_{only\ md}$	5,434	771	1,657	313	531	219	1,668	311	8,185	1,299
Not poor	3,521	222	1,156	95	1,567	1,298	1,123	83	5,001	292
NL										
$Q1_{y\ md}$	8,618	762	8,556	782	10,030	662	1,928	109	1,958	180
$Q1_{only\ y}$	3,369	766	3,262	1,215	5,296	2,688	1,644	252	2,363	190
$Q1_{only\ md}$	2,193	240	2,181	313	3,414	1,130	1,732	124	1,536	131
Not poor	1,804	63	2,080	229	2,806	476	1,602	185	1,603	35
SE										
$Q1_{y\ md}$	6,108	502	4,225	421	5,485	791	2,495	207	6,110	742
$Q1_{only\ y}$	7,303	740	3,052	544	3,515	1,532	2,605	423	9,041	1,012
$Q1_{only\ md}$	3,015	288	1,562	288	1,434	580	1,430	248	3,869	484
Not poor	3,872	210	1,493	247	2,377	948	1,269	200	3,985	203
UK										
$Q1_{y\ md}$	11,870	706	9,018	583	6,138	389	5,578	491	6,117	536
$Q1_{only\ y}$	7,115	705	5,603	646	5,488	952	4,836	506	5,782	721
$Q1_{only\ md}$	5,264	596	5,335	701	4,856	796	4,476	659	4,133	705
Not poor	2,999	139	4,251	321	3,993	512	4,127	258	2,696	124

[1] Averaged over recipients only.

[2] Only including households with children under age 18.

[3] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

TABLE 4.7: AVERAGE INCOME SHARE OF BENEFIT (%) BY OVERLAP GROUPS [1]

	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family [2]	
	%	ci [3]	%	ci	%	ci	%	ci	%	ci
DE										
$Q1_{y\ md}$	38.6	1.9	35.8	2.4	44.3	2.6	10.9	1.7	28.0	2.1
$Q1_{only\ y}$	24.0	1.6	16.9	3.3	26.8	5.7	8.2	1.6	22.9	1.6
$Q1_{only\ md}$	11.5	0.7	14.2	2.4	17.9	2.8	3.6	0.9	12.4	0.8
Not poor	7.6	0.2	13.0	2.6	15.8	3.1	4.2	1.6	8.6	0.2
FR										
$Q1_{y\ md}$	46.7	7.0	37.8	7.2	43.0	20.9	24.7	1.5	24.5	1.9
$Q1_{only\ y}$	24.2	1.7	16.8	2.3	20.0	5.9	15.2	2.0	18.5	1.7
$Q1_{only\ md}$	9.6	0.8	7.8	0.8	4.9	2.3	7.5	0.8	8.6	1.4
Not poor	8.3	0.4	6.9	0.7	12.9	4.5	6.1	0.6	8.3	0.4
IE										
$Q1_{y\ md}$	52.9	5.5	13.5	2.0	4.0	1.7	14.0	2.1	61.2	4.4
$Q1_{only\ y}$	25.5	3.4	9.6	0.9	5.3	3.5	9.3	0.8	32.5	4.5
$Q1_{only\ md}$	13.8	1.4	6.5	0.9	2.1	1.0	6.6	0.9	20.9	2.9
Not poor	7.2	0.4	5.1	0.3	4.4	4.2	5.0	0.3	8.9	0.6
NL										
$Q1_{y\ md}$	62.1	6.0	62.6	6.3	73.7	5.8	13.8	0.9	10.3	1.4
$Q1_{only\ y}$	15.7	2.2	15.7	3.4	19.3	7.5	11.8	1.7	10.5	1.3
$Q1_{only\ md}$	9.5	0.8	10.5	1.0	9.5	3.5	10.3	0.7	4.6	0.3
Not poor	4.9	0.3	8.4	1.0	6.9	1.4	9.1	1.3	3.6	0.1
SE										
$Q1_{y\ md}$	35.7	2.9	29.4	3.1	38.1	6.3	17.4	1.9	28.1	3.7
$Q1_{only\ y}$	28.6	2.0	21.6	3.2	20.1	6.8	19.7	3.3	31.0	2.6
$Q1_{only\ md}$	9.1	0.7	7.0	1.2	5.3	2.0	6.8	1.2	11.2	1.2
Not poor	8.6	0.4	5.4	0.9	6.9	3.0	4.9	0.9	9.0	0.4
UK										
$Q1_{y\ md}$	68.8	2.6	54.1	2.4	34.7	2.3	35.2	1.9	34.5	3.5
$Q1_{only\ y}$	35.2	2.1	30.5	2.5	23.8	4.0	31.3	2.2	27.5	2.5
$Q1_{only\ md}$	16.2	1.3	18.6	1.6	13.3	2.0	18.0	1.5	11.9	1.7
Not poor	7.5	0.4	15.4	1.2	9.8	1.3	19.1	1.2	6.0	0.3

[1] Averaged over recipients only.

[2] Only including households with children under age 18.

[3] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

TABLE 4.8: SHARE OF TOTAL BENEFITS (%) BY OVERLAP GROUPS [1]

	Population share	All transfers		Housing & Social exclusion		Social exclusion		Housing		Family[2]	
	%	%	ci [3]	%	ci	%	ci	%	ci	%	ci
DE											
$Q1_{y\ md}$	11.1	30.5	3.2	70.9	10.5	71.4	11.3	66.1	13.3	15.0	1.8
$Q1_{only\ y}$	8.9	8.0	1.1	7.4	2.1	6.2	2.3	19.0	6.2	8.3	1.4
$Q1_{only\ md}$	8.9	14.1	1.3	13.0	3.0	13.5	3.3	7.9	3.2	7.1	1.1
Not poor	71.1	47.4	1.9	8.7	2.4	8.9	2.6	7.0	3.5	69.6	2.4
FR											
$Q1_{y\ md}$	11.4	40.6	4.9	56.4	7.8	70.0	11.8	51.9	7.7	22.4	3.1
$Q1_{only\ y}$	8.6	14.1	2.0	12.7	2.6	6.9	3.3	14.7	2.9	10.0	1.8
$Q1_{only\ md}$	8.6	9.2	1.5	10.6	2.3	2.5	1.6	13.3	3.0	5.4	1.3
Not poor	71.4	36.2	3.0	20.3	3.9	20.6	12.0	20.2	3.1	62.2	4.0
IE											
$Q1_{y\ md}$	11.2	33.2	5.5	35.4	8.6	39.7	16.1	35.1	9.1	28.4	5.4
$Q1_{only\ y}$	8.8	11.3	2.7	12.9	2.7	18.3	11.9	12.6	2.6	8.6	2.5
$Q1_{only\ md}$	8.9	11.8	2.8	13.6	4.0	12.9	8.3	13.7	4.0	8.4	2.6
Not poor	71.1	43.7	4.2	38.0	4.3	29.1	27.6	38.6	4.2	54.6	5.2
NL											
$Q1_{y\ md}$	11.9	58.4	10.6	76.8	14.6	84.1	17.2	55.1	9.2	15.0	2.8
$Q1_{only\ y}$	8.1	7.5	2.1	6.4	2.7	5.7	3.5	8.4	2.5	10.0	1.9
$Q1_{only\ md}$	8.1	6.3	1.1	6.5	1.4	3.1	1.5	16.5	3.0	6.3	1.1
Not poor	71.9	27.8	2.0	10.4	1.8	7.2	1.7	19.9	4.8	68.6	3.9
SE											
$Q1_{y\ md}$	9.7	28.2	3.3	71.2	10.3	82.3	18.1	63.6	9.5	14.2	2.5
$Q1_{only\ y}$	10.3	19.3	2.8	13.2	3.7	8.3	4.6	16.5	5.0	17.6	3.2
$Q1_{only\ md}$	10.3	10.3	1.4	8.2	2.1	4.8	2.6	10.4	2.8	7.6	1.4
Not poor	69.7	42.3	3.1	7.5	1.8	4.7	2.7	9.5	2.3	60.5	3.7
UK											
$Q1_{y\ md}$	10.8	49.7	5.6	63.5	7.7	64.6	8.3	62.5	8.9	27.2	3.9
$Q1_{only\ y}$	9.2	10.8	1.8	11.0	2.1	11.4	3.2	10.7	2.3	8.9	2.1
$Q1_{only\ md}$	9.2	11.3	1.9	11.5	2.4	10.2	2.8	12.6	3.2	6.1	1.6
Not poor	70.7	28.2	2.1	14.0	1.9	13.8	3.0	14.2	2.2	57.8	3.8

[1] Averaged over recipients only.

[2] Only including households with children under age 18.

[3] The 95 % confidence intervals (ci) take survey design into account.

Source: EU-SILC (2007)

ImProvE: Poverty Reduction in Europe. Social Policy and Innovation

Poverty Reduction in Europe: Social Policy and Innovation (ImPRovE) is an international research project that brings together ten outstanding research institutes and a broad network of researchers in a concerted effort to study poverty, social policy and social innovation in Europe. The ImPRovE project aims to improve the basis for evidence-based policy making in Europe, both in the short and in the long term. In the short term, this is done by carrying out research that is directly relevant for policymakers. At the same time however, ImPRovE invests in improving the long-term capacity for evidence-based policy making by upgrading the available research infrastructure, by combining both applied and fundamental research, and by optimising the information flow of research results to relevant policy makers and the civil society at large.

The two central questions driving the ImPRovE project are:

> How can social cohesion be achieved in Europe?
>
> How can social innovation complement, reinforce and modify macro-level policies and vice versa?

The project runs from March 2012 till February 2016 and receives EU research support to the amount of Euro 2.7 million under the 7th Framework Programme. The output of ImPRovE will include over 55 research papers, about 16 policy briefs and at least 3 scientific books. The ImPRovE Consortium will organise two international conferences (Spring 2014 and Winter 2015). In addition, ImPRovE will develop a new database of local projects of social innovation in Europe, cross-national comparable reference budgets for 6 countries (Belgium, Finland, Greece, Hungary, Italy and Spain) and will strongly expand the available policy scenarios in the European microsimulation model EUROMOD.

More detailed information is available on the website http://improve-research.eu.

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