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Counteracting material deprivation: The role of social assistance in Europe

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Abstract

Material deprivation is high on the political agenda in Europe and part of the agreed benchmarks in the EU social inclusion process. This study analyses the link between social assistance benefit levels and material deprivation in European countries. It is shown that the relationship between assistance and deprivation is negative, indicating that material deprivation is less extensive in countries with higher benefit levels. The influence of other relevant contextual effects does not change this relationship to any serious extent. There was no clear effect of public services or active labour market policy on material deprivation, factors essential in the EU discussion on poverty and social inclusion. The results demonstrate that the role of social assistance in combating material hardships should perhaps be strengthened in future EU policy frameworks. The empirical analyses are based on data from the EU-SILC and the SaMip dataset, covering 26 European countries.

Keywords

EU 2020 Strategy, EU-SILC, European Union, material deprivation, multilevel analysis, poverty, SaMip, social assistance, social inclusion, social benefits

An increasing number of comparative studies show that welfare states have important equalizing effects on the dispersion of income (Bäckman, 2009; Bäckman and Ferrarini, 2010; Brady, 2005; Cantillon, 1997; Kenworthy, 1999; Korpi and Palme, 1998; Smeeding et al., 2001). Some studies have also investigated the contribution of particular social policy programmes to the total amount of redistribution, where contributory social insurance benefits seem to alleviate relative income poverty more effectively than means-tested social assistance (Nelson, 2004). Once we go beyond the study of income distributions, our knowledge concerning the linkages between welfare states and poverty is less well developed. This concerns the issue of material deprivation, where only limited comparative evidence on policy impacts exists. Although Nolan and Whelan (2010) recently noted that the association between low income and material deprivation among households varies across groups of welfare states, the analysis made no formal attempt to explain cross-country differences as such. Kenworthy (2011) has extended the analytical framework somewhat further by showing a modest negative relationship between the size of social policy expenditure and material deprivation at the aggregate

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level among a selection of 15 industrialized democracies. However, the role of confounding factors and the effects of specific welfare state programmes in these countries were not explicitly explored, something that suggests a more in-depth investigation concerning the mix of factors at both individual and country level that may be related to poverty outcomes in the form of material deprivation.

The purpose of this paper is to assess the extent to which social assistance accounts for differences in the prevalence of material deprivation across Europe. It is expected that the relationship between assistance and deprivation is negative, indicating that material hardships are less prevalent in countries with more elaborate social assistance programmes. Comparative analyses of material deprivation and policy impacts used to be very difficult to conduct because of the lack of micro-level and institutional data. In this paper the empirical analyses are based on different waves of the *European Union Statistics on Income and Living Conditions* (EU-SILC; http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc), which gives exceptional possibilities to study material deprivation across a large number of countries. To explore the relationship between social assistance and material deprivation, we also use new institutional data on benefit levels from the *Social Assistance and Minimum Income Protection Interim Dataset* (SaMip; http://www2.sofi.su.se/~kne/). The two data sources are combined into a multilevel framework where the impacts of both micro- and macro-level variables on material deprivation are simultaneously estimated.

There is an increased relevance of studying effective policies to combat material hardships in Europe. At the moment the issue of material deprivation is high on the European political agenda. The Europe 2020 strategy for smart, sustainable and inclusive growth states that 20 million fewer EU citizens should be poor by the end of the current decade. The Member States are free to measure national progress based on a pre-defined set of indicators that most appropriately match national priorities. Relative income poverty and material deprivation are two benchmarks that the European countries can choose between. The means to achieve effective poverty reduction are complex and may differ across countries and over time. The suitable policy responses probably differ also between types of poverty indicators. For the success of the European growth strategy, it seems fair to assume that the organization of social protection is one relevant factor to consider. Particularly the role of last resort safety nets, such as social assistance, may be crucial, when focus is shifted from relative income poverty thresholds to material deprivation. One reason is that social assistance is more involved with the provision of minimum levels of consumption than in addressing relative income needs.

The next two sections discuss the issue of material deprivation and the linkages to social assistance and public policies. Thereafter, earlier comparative research on European social assistance is reviewed, followed by a section on data and methods. The results are then presented, followed by the concluding discussion.

Poverty and material deprivation

Poverty in the European discourse is often framed in terms of an inability to participate in mainstream society due to inadequate personal resources. A similar resource-based definition was adopted by the European Council in the mid 1980s (Commission of the European Communities, 1985), borrowing extensively from earlier formulations in the academic literature (Townsend, 1979). The most commonly studied resource is income, especially in comparative poverty research on affluent countries. In 2006 the EU also defined poverty in similar income terms. For example, the EU at-risk-of poverty threshold was set to 60 percent of the national equalized median income in the total population (European Commission, 2006). The relative element embodied in definitions of this kind explicitly links poverty to the issue of inequality in the broader sense, although with particular focus on the lower part of the income distribution. In EU discussions it soon became apparent that statistics on relative income positions sometimes failed to capture essential differences in living standards across the Member States, especially along with the enlargement of the EU (Marlier et al., 2007). It is true that

the fruitfulness of non-monetary poverty indicators was recognized in the leading scholarly work related to the process of developing common benchmarks to evaluate social development in the EU countries (Atkinson et al., 2002). However, it was only recently that the EU decided to also monitor material deprivation in the social inclusion process (European Commission, 2009), thus complementing the income-based conceptualization of poverty that was established a few years earlier.

The approach of studying material deprivation is not new, but has been on the agenda in poverty research since the late 1970s, at least, particularly in Ireland, the UK and the US (Mack and Lansley, 1985; Mayer and Jencks, 1989; Nolan and Whelan, 1996; Townsend, 1979). Here the focus of analysis is not on income, but rather the goods and services households can consume. People unable to afford certain basic items are considered to be materially deprived. The literature on material deprivation has fruitfully broadened the discussion about individual vulnerabilities and exposed the multifaceted nature of poverty, contributing new evidence also to related research fields, such as the study of social exclusion (Callan et al., 1993). The character of most comparative studies on material deprivation is to a large extent an expression of this achievement, among other things, focusing on the prevalence of deprivation across countries and the relationship between deprivation-based indicators and income-derived estimates of poverty (Boarini and d'Ercole, 2008; Eurostat, 2009; Fusco et al., 2011; Guio, 2009; Guio et al., 2009; Nolan and Whelan, 2010; Organisation for Economic Co-operation and Development, 2009; Whelan and Maitre, 2005; Whelan et al., 2002, 2004).

Research shows that there seems to be only moderate overlap between relative income poverty and material deprivation (Nolan and Whelan, 2010). People who are relatively income-poor are not always materially deprived. One reason is that some low-income people still get along and consume basic goods due to savings or support from relatives and friends. Others rely on in-kind benefits from public services or income from informal work, and so forth. Likewise, people who lack essential material goods are not always income poor, something that may reflect personal preferences in lifestyles. Since it is sometimes difficult to differentiate between enforced want of basic consumption and mere choice, some studies have combined income-based poverty thresholds and consumption-based deprivation indicators into a single poverty measure, counting as consistently poor only those individuals or households that are both materially deprived and have low income (Förster, 2005; Layte et al., 2001).

Although such combined strategies in the measurement of poverty may improve the validity of the findings, for example, by including only those who cannot consume for financial reasons, the results may be problematic to interpret from a policy perspective. One reason is that public programmes may influence income and consumption differently. Thus, there is an important policy dimension to poverty measurement, which has not yet been sufficiently recognized in the literature. In light of the new Europe 2020 targets, where material deprivation seems to be placed on an equal footing to that of relative income poverty for measuring social progress, it is crucial to incorporate social policy structures into the comparative analysis of material deprivation. It has been suggested that the income approach to poverty measurement implicitly links social stratification to equality of opportunity, whereas the focus on material deprivation directs more attention to equality of outcome (Ringen, 1988).[1] Equality of opportunity and equality of outcome are certainly interlinked, making it difficult to separate adequately the two dimensions in the wider consideration of social stratification. Nonetheless, the distinction between opportunity and outcome can fruitfully be used for illustrative reasons to initiate a discussion about potential linkages between social policy and material deprivation, especially since the European welfare states seem to embody distinct elements addressing both principles.

European social policy and material deprivation

In terms of poverty alleviation it is relevant to make a distinction between social benefits and public services. The social benefit systems of most European

countries are dominated by contributory programmes that financially compensate individuals from losses in employment income during periods of work incapacity (Esping-Andersen, 1990). Contributory benefits are generally designed to uphold accustomed standards of living, for example, in the form of earnings-related social insurance entitlements providing various degrees of income security. Income redistribution and equality of opportunity seem here to be of foremost concern. In order to evaluate the distributive effects of contributory benefits, the income approach to poverty measurement seems to be a natural point of departure.

Public services also involve redistribution, but the primary objective has been related to equality of outcomes in terms of consumption (Ringen, 1988). Accordingly, non-monetary and deprivation-based poverty indicators constitute fundamental criteria for policy evaluation. The centrality of public services in the European social inclusion process and in the scholarly debate on poverty and material deprivation motivates some discussion. Kenworthy (2011), for example, recently stressed the importance of public services for reducing material deprivation. Some of the effect was assumed to be transmitted through reduced needs for household expenditure, thereby leaving greater budgetary scope for consumption of other essential household goods. In addition, public services were expected to influence labour force and employment patterns, thereby increasing the earnings capacity of individuals and households in lower income segments.[2] Public provision of care for dependents is one example (Cantillon et al., 2001; Ferrarini, 2006; Gornick and Meyers, 2003; Korpi, 2000; Sainsbury, 1999).

The importance of public services in EU discussions on social inclusion can largely be attributed to the emphasis placed on education, training and labour market activation. Most of the guidelines in the Europe 2020 growth strategy of immediate relevance for social inclusion concern employment-generating reforms. Income redistribution and social benefits enter the strategy mostly as a means to provide economic resources for those furthest away from the labour market, such as the disabled, legal minorities and the homeless (European Commission, 2010). It is difficult to seriously argue that public services as portrayed above are irrelevant for poverty alleviation, at least in the long-term perspective and when the discussion concerns human capital responses to social inclusion. The sustainability of European welfare states is very much linked to the increased demand of qualified labour and well-functioning educational systems (Morel et al., 2009), something that may restrict both the intergenerational transmission of poverty (Jenson, 2009) and the persistence of poverty across the individual life course (Esping-Andersen, 2002). Still, it should be recognized that the EU approach adopted for social inclusion has yet proved unsuccessful to fight poverty (Cantillon, 2011).

The EU social inclusion process seems essentially to concern the issue of work incentives, emphasizing measures aimed at removing obstacles to labour market participation and employment at the individual level (Scharpf, 2002). As such, activation has emerged as a cornerstone of EU policy frameworks, applying both to individuals of working age and to benefit programmes (Barbier, 2005; Weishaupt, 2011). The effects of activation on employability are complex and tend to vary across programmes, target groups and contexts (Rønsen and Skarðhamar, 2009). Activation of long-term benefit recipients and the low skilled seem to be especially problematic, particularly in terms of creating sustainable employment (Konle-Seidl and Eichorst, 2008). This is not the place to exhaust the subject of active labour market policy (ALMP) evaluation. We merely note that activation may work for some, but not necessarily all, groups that lack a foothold on the labour market. Since materially deprived individuals probably belong to those groups that are especially hard to integrate, activation may not always have the expected payoffs in terms of lowering poverty rates. Instead, the provision of minimum income benefits may be more important in reaching the headline poverty target for the whole EU set by the Europe 2020 growth strategy, particularly if material deprivation is used as the benchmark indicator.

Social assistance tends to take a middle position between that of equality of opportunity and equality of outcome. The means-tested benefits that are channelled through the system of social assistance, of

course, involve reallocation of economic resources, similar to that of social insurance, above, but involving much stronger elements of vertical redistribution. However, social assistance benefits are not necessarily designed to lift households above the income poverty thresholds commonly applied in income distribution studies. Instead, social assistance benefits are often set in accordance to expected household needs and living costs, albeit actual commitments to provide a certain minimum social standard differ across governments. The exact procedures that policymakers use to define social assistance benefit rates differ across countries. Some countries have based the level of social assistance, to varying extent, on calculated costs for certain baskets of goods. Other countries have established benefit levels with reference to expenditure patterns among the lower income groups. However, no matter which principles are used to set the minimum baseline for social assistance benefits, policymakers seem to have some kind of apprehension concerning the absolute standard of consumption that should be imposed by having to resort to social assistance for a living, even though it is unusual that beneficiaries as such actually are steered into specific types of consumption.[3] Nonetheless, the close connection between social assistance, consumption and equality of outcomes draws the attention to more direct assessments of poverty and to the issue of material deprivation analysed in this paper. Since the European countries differ extensively both in terms of social assistance benefit levels and the prevalence of material deprivation, the comparative approach seems to be a viable alternative to identify effective policy impacts in this regard.

Social assistance and European social inclusion

The development of social assistance has been on the policy agenda of the EU since the early 1990s, at least, although there are no binding legal documents at the EU level to impose certain policies on the Member States. In 1992 the European Council issued a number of recommendations concerning the organization of social assistance (European Council, 1992), ranging from the mere existence of national frameworks to the indexation of benefits, but avoiding the crucial issue of adequacy. However, recently the European Parliament (2009) stated that adequate minimum incomes should reach at least the at-risk-of poverty threshold agreed by the EU Member States. In reality, social assistance reaches this level in hardly any European countries. Typically, social assistance benefits in the European countries tend to reach 50 percent of the national equalized median household income at best. In many EU Member States benefit adequacy is even down to levels between 20 and 40 percent (Van Mechelen et al., 2011). It is therefore not surprising that comparative research generally find only modest associations at the country level between social assistance and relative income poverty rates (Nelson, 2004).

In some countries it may be unrealistic to expect that social assistance in the short-term can be raised to the levels envisioned by the EU for effective alleviation of relative income poverty. The policy dynamics involved in the organization of social assistance involve also the functioning of first-tier programmes, such as contributory social insurance benefits (Lødemel, 1997). In many countries social assistance is set up to tap into the holes of the social safety net created by benefit programmes that enter the distributive process in earlier stages. Social insurance may therefore influence the political, budgetary and institutional possibilities for raising social assistance benefits further up the income distribution (Nelson, 2006). The politics surrounding this interplay between programmes concern the ways in which social insurance influences cross-class political coalition-making in support of vertical redistribution, for example, in the form of social assistance. The budgetary aspect refers to the marginal economic costs of increasing the size of social assistance benefits, something that is assumed to be less substantial the more social insurance has reduced the demand for minimum income protection. The institutional requirement for raising social assistance concerns the so-called ‘distance of legitimacy’, according to which the minimum levels of social insurance to some extent set the maximum level for social assistance. All of these factors may constrain decision-making concerning welfare state

organization, and before policymakers can increase the level of social assistance they may first have to reform social insurance. Particularly, this seems to be the case in countries where social insurance is organized more or less exclusively according to basic security principles, something that involves flat-rate or only weekly earnings-related compensation for losses in work income. In reality such basic security programmes tend to produce comparatively modest replacement rates (Palme et al., 2009).

Although substantial welfare-state reform may be required before social assistance can be used effectively to combat relative income poverty as defined in agreement by the EU Member States, at present material deprivation might be a more appropriate distributive target to set for social assistance in the European social inclusion process. The income levels needed to fight material deprivation tend to be much lower than those required to reach the EU at-risk-of poverty threshold. As such, we expect social assistance benefit levels to be negatively associated with material deprivation, something that would reduce the likelihood of individuals to experience material hardships.

Data and methodological considerations

Social assistance has attracted increased research interest over the past two decades. Whereas the first wave of comparative studies on social assistance was inspired by typology construction (Gough et al., 1997; Leibfried, 1992; Lødemel, 1997; Lødemel and Schulte, 1992), the second wave of investigations focused more on indicator construction (Cantillon et al., 2004; Immervoll, 2010; Nelson, 2007; Van Mechelen et al., 2011). The SaMip dataset emanates from such recent investments in basic research, covering social assistance benefit levels for 27 countries and for each year between 1990 and 2009. Comparative analyses on social benefits are still frequently based on expenditure data, despite recognized drawbacks (Clayton and Pontusson, 1998; Gilbert and Moon, 1988; Goodin et al., 1999; Kühner, 2007). One problem is that the size of social spending is affected by several factors besides policy organization, such as changes in the business cycle and demographic shifts. A fruitful alternative strategy for studying institutional variation is type-case benefit-level data (Esping-Andersen, 1990; Korpi, 1989; Korpi and Palme, 2003). In the SaMip data set, the income position of representative stylized households is calculated based on national social assistance legislation and regulations (Nelson, 2007).

The level of social assistance is an additive average of benefits for a single person, a lone parent with two dependent children and a two-parent family with two children. It is assumed that each type-case lacks work income and has no access to contributory benefits. The benefit package includes social assistance basic scale rates, child benefits, housing benefits and refundable tax credits, where relevant. The level of housing benefits are based on the yearly rents for low-income households reported by the national experts involved in the collection of cross-sectional social assistance benefit data for the pioneering study by Eardley et al. (1996), updated according to rent indices for each country. One-off social assistance payments to cover unexpected and urgent needs or regular social assistance supplements to cover exceptional needs are not included in the social assistance benefit package. Benefits are expressed in yearly amounts for 2008 and national currencies are converted into purchasing power-adjusted US dollars. The social assistance data for Italy, in particular, should be treated with caution, due to major regional differences in programme existence and benefit levels. Other countries with decentralized social assistance frameworks, such as Germany, Norway, Austria and Spain, have established certain coordination mechanisms at the national level to homogenize benefit levels across the country.

The micro-level data in EU-SILC provide comparable social indicators on living conditions across Europe. In this study we use the definition of material deprivation that recently was agreed by the EU Member States. Material deprivation is here defined as lacking at least four out of nine basic items, including the capacity to face unexpected expenses; the capacity to have a one-week annual holiday away from home; the capacity to afford a meal with meat, chicken or fish (or vegetarian equivalent) every

second day; the ability to keep the home adequately warm; whether the household has been in arrears on mortgage, rent, utility bills, hire purchase instalments or loans; and whether the household has a washing machine, a colour television, a telephone and a car. The detailed methodology surrounding these particular items and the defined thresholds for material deprivation are discussed by Guio (2009) and Guio et al. (2009), and alternative material deprivation indices have recently been suggested. Whelan et al. (2008), for example, advocate an index involving three separate dimensions: consumption, household facilities and neighbourhood environment. Sensitivity analyses have been carried out using alternate material deprivation thresholds.[4] Although changes in the threshold for material deprivation affect the number of persons suffering from hardships, the main relationship between material deprivation and social assistance benefit levels observed below is remarkably stable. Thus, the sensitivity analyses do not distort the main results of this study.

The number of respondents in the EU-SILC cross-sectional files varies across countries, being no fewer than 10,000 (Cyprus) and no more than 52,000 (Italy) respondents. The overall household non-response rate is between 4 and 45 percent in the various countries, whereas the overall individual non-response rate is between 5 and 45 percent (Eurostat, 2010). The unit of analysis in this paper is the individual. In cases where the variables of interest are measured at the household level, something that concerns the definition of material deprivation, each individual is ascribed the household value. The empirical analyses are restricted to individuals below 65 years of age. One reason is that poverty among the elderly to a large extent is determined by the distribution of old age pensions and the structure of minimum pension benefits, rather than social assistance of the type investigated here (Pedersen, 1999).

Multilevel logistic regression is used to analyse the data and to handle the issue of correlated observations within higher-level units, where individuals are tied to countries. One potential problem of applying standard regression techniques based on such nested data is that the standard errors of the higher-level parameter effects tend to be underestimated, thus increasing the possibilities for Type I errors, where the null hypothesis of no association is rejected, while the lack of relationship is true. Multilevel models reduce the likelihood of such errors, since both the intercept and the slopes of individual-level variables are allowed to vary across the higher-level units (Snijders and Bosker, 1999). Instead of treating the dependency between observations at different levels of analysis as an annoying feature of the data that should preferably be avoided, multilevel regression attempts to extract information from this nuisance, to improve our understanding of relationships between the variables of interest. The multilevel logistic regressions in this paper are estimated by the xtmelogit command in the STATA statistical package. The log likelihood in these models is approximated by adaptive Gaussian quadrature, using the default of seven integration points, something that permits log likelihood ratio tests for the random parameters in regressions based on nested data.

Results

Social assistance benefit levels and material deprivation vary extensively across Europe. Social assistance reaches almost US$23,000 (purchasing power parities; PPPs) per year in Luxembourg, compared with US$1800 (PPPs) in Romania. Less than 1 percent of the total population below 65 years is materially deprived in Luxembourg, whereas the corresponding figure for Romania is 27 percent. Figure 1 shows the level of social assistance benefits and the material deprivation rate (percent of population below 65 years) in 26 European countries. There is quite a strong negative relationship between social assistance and material deprivation at the aggregate level. Material deprivation is comparatively widespread in Central and Eastern Europe (CEE), where social assistance benefit levels are fairly low. The most notable exception is Estonia, where the rate of material deprivation is much lower than expected, judged by the standard of social assistance benefits. The negative relationship becomes less strong the more generous benefits tend to be. Thus, there seems to be some kind of benefit threshold above which most households can afford basic necessities of the sort included in the material deprivation index. It is evident that the

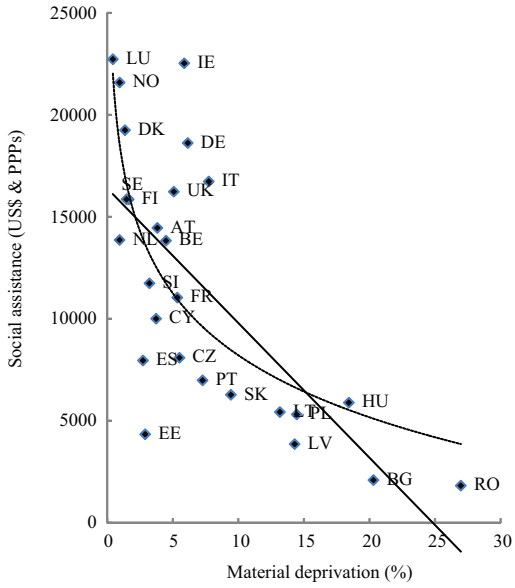

Figure 1. Social assistance benefits levels and the rate of material deprivation in 26 European countries, 2008.
Note: The straight diagonal line shows the linear function between social assistance and material deprivation, whereas the curved dotted line in the logarithmic function. Data for France are from 2007.
Source: SaMip (http://www2.sofi.su.se/~kne/) and EU-SILC (http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc).

diminishing return of social assistance at higher benefit levels creates a curve linear relationship between policy and deprivation, resembling a logarithmic function (noted by the dotted line in Figure 1).

The pattern described above calls for a more formal analysis of the link between social assistance and material deprivation. Table 1 presents the results from a series of multilevel logistic regressions with the material deprivation index as an dependent variable. The first model lacks independent variables and is merely used to benchmark the amount of variation in material deprivation at the country level.[5] The intraclass coefficient (ICC) of the first empty regression model is 0.29, which indicates that about 29 percent of the variation in material deprivation can be explained by country differences. The second regression model includes a number of individual-level characteristics of the respondents, including dummies for age, family type, educational attainment, unemployment and immigrant status. Most of the coefficients for the individual-level variables have the expected signs. Women are more likely than men to be materially deprived. Respondents less than 30 years of age are more likely to be materially deprived than those aged 50–64 years, whereas there is no difference in statistical terms between people aged 30–49 and 50–64 years. Single persons and lone parents are more likely to be deprived than couples, whereas there is no statistical difference between couples and two-parent families with children. Less educated persons are more likely to be deprived than those with higher educational attainment. Unemployed individuals are more likely to be materially deprived than employed or inactive persons. Likewise, immigrants from non-EU countries have an increased likelihood of material deprivation compared with respondents born in an EU country. There are no substantial compositional effects, since the inclusion of individual-level variables hardly changes the share of variation in material deprivation that is to be explained by country-level factors.[6]

To account for the variation in material deprivation at the country level, model 3 includes a variable for the level of social assistance benefits.[7] As expected, the associated relationship is negative, showing that social assistance tends to reduce material deprivation. Adding the social assistance variable to the model clearly reduces the share of variation in material deprivation at the country level that is left unexplained, from about 29 percent in model 2 to about 16 percent in model 3. Thus, the level of social assistance benefits explains nearly half of the cross-national variation in material deprivation, something that must be regarded as quite substantial. The explanatory power increases somewhat further, if the log of the social assistance benefit variable is used instead of the original benefit level indicator.[8] However, so far we have not explored the role of additional contextual effects. Table 2 shows the results from a further series of multilevel logistic regressions where the influence of a more elaborate set of country-level characteristics is explored. Besides the level of social assistance benefits, these models include macroeconomic development measured in terms

Table 1. Random intercept multilevel logistic regressions of material deprivation on social assistance benefit levels in 26 European countries, 2008 (standard errors within parentheses)

	Model 1	Model 2	Model 3	Model 4
Fixed effects				
Female[a]		0.024*	0.024*	0.024*
		(0.013)	(0.013)	(0.013)
Age 0–17 years[b]		0.321**	0.321**	0.321**
		(0.022)	(0.022)	(0.022)
Age 18–29 years[b]		0.173**	0.173**	0.173**
		(0.020)	(0.020)	(0.020)
Age 30–49 years[b]		−0.010	−0.010	−0.010*
		(0.018)	(0.018)	(0.018)
Single person[c]		0.895**	0.895**	0.895**
		(0.024)	(0.024)	(0.024)
Lone parent[c]		1.218**	1.218**	1.218**
		(0.026)	(0.026)	(0.026)
Two-parent family[c]		−0.007	–0.007	−0.007
		(0.017)	(0.017)	(0.017)
Primary education[d]		0.981**	0.981**	0.981**
		(0.027)	(0.027)	(0.027)
Tertiary education[d]		−1.440**	−1.440**	−1.440**
		(0.020)	(0.020)	(0.020)
Unemployed[e]		1.268**	1.268**	1.268*
		(0.022)	(0.022)	(0.022)
Non-EU immigrant[f]		0.846**	0.846**	0.846**
		(0.023)	(0.023)	(0.023)
Social assistance			−0.138**	
			(0.024)	
Ln(Social assistance)				−1.320**
				(0.208)
Intercept	−3.058**	−3.285**	−1.682**	−1.427*
	(0.228)	(0.231)	(0.323)	(0.712)
Random effects (var.)				
Intercept	1.353	1.374	0.615	0.537
	(0.376)	(0.382)	(0.171)	(0.150)
Log likelihood	−100650.420	−91088.678	−91078.237	−91076.495
ICC*100	29.141	29.460	15.749	14.032

Note: **p<0.01, *p<0.05. Reference categories are [a]male, [b]age 50–64 years, [c]couple, [d]secondary education, [e]employed or inactive, [f]respondents born in EU country. Var. refers to variance.

of gross domestic product (GDP) per capita, which is one of the most important factors in liberal economics to explain aggregate levels of poverty (Brady, 2003). The importance of non-means-tested benefit expenditure, public service expenditure, the activity rate, the unemployment rate, the long-term unemployment rate, educational expenditure and ALMP expenditure are also explored. All of these additional contextual variables are based on data published by Eurostat.[9] Since it is somewhat problematic to include a large set of contextual variables in multilevel regressions based on

Table 2. Random intercept multilevel logistic regressions of material deprivation on various contextual variables in 26 European countries, 2008 (standard errors within parentheses)

	Model 1:a	Model 2:a	Model 3:a	Model 4:a	Model 5:a	Model 6:a	Model 7:a	Model 8:a
GDP/Cap.	−0.074**							
	(0.012)							
Non mt-Ben		−0.492**						
		(0.107)						
Pub. serv.			−0.314**					
			(0.066)					
Act. rate				−0.173**				
				(0.058)				
Unemp.					0.263**			
					(0.104)			
Lt. unemp.						0.466**		
						(0.144)		
Education							−0.521**	
							(0.196)	
ALMP								−3.596
								(2.336)
	Model 1:b	Model 2:b	Model 3:b	Model 4:b	Model 5:b	Model 6:b	Model 7:b	Model 8:b
GDP/Cap.	−0.038*							
	(0.017)							
Non mt-Ben		−0.182						
		(0.120)						
Pub. serv.			−0.119					
			(0.077)					
Act. rate				−0.118**				
				(0.036)				
Unemp.					0.145*			
					(0.070)			
Lt. unemp.						0.280**		
						(0.098)		
Education							−0.227	
							(0.142)	
ALMP								−0.646
								(1.602)
Ln(soc. ass.)	−0.811**	−1.027**	−1.006**	−1.183**	−1.204**	−1.149**	−1.193**	−1.292**
	(0.299)	(0.277)	(0.284)	(0.180)	(0.201)	(0.191)	(0.214)	(0.218)

Note: **p<0.01,*p<0.05. All regression models include the full set of individual level variables. The individual level effects and the random parameter estimates are not shown. GDP/capita, the gross domestic product in 1000s purchasing standards per inhabitant; Non mt-Ben, non means-tested benefit expenditure as percentage of GDP; Pub. Serv., public services expenditure as percentage of GDP; Act. rate, the activity rate; Unemp., the unemployment rate; Lt. unemp., the long-term unemployment rate; Education, education expenditure as percentage of GDP; ALMP, active labour market policy expenditure as percentage of GDP; Ln(soc. ass), the log of social assistance benefit levels in purchasing power standards.

small group sizes (Meuleman and Billiet, 2009), the influence of the macro-level variables are at first tested one at a time.

GDP per capita, non-means-tested benefit expenditure, public service expenditure, the activity rate and educational expenditure seem to decrease

Table 3. Random slope multilevel logistic regression of material deprivation on social assistance benefit levels in 26 European countries, 2008 (standard errors within parentheses)

	Model 1	Model 2	Model 3	Model 4
Rand. slope	Single[a]	Lone parent[a]	Primary education[b]	Unemployed[c]
Fixed effects				
Coef.	0.528	0.577**	1.630**	0.937**
	(0.307)	(0.193)	(0.400)	(0.169)
Ln(soc.ass.)	−1.389**	−1.371**	−1.321**	−1.337**
	(0.226)	(0.215)	(0.210)	(0.209)
C.l. inter.	−0.268*	−0.342**	−0.214	−0.169 *
	(0.131)	(0.083)	(0.176)	(0.076)
Log likelihood	−90939	−90985	−91018	−91034
L.R. Test	4**	12**	3*	6*

Note: **p<0.01, *p<0.05. Reference categories are [a]couple, [b]secondary education, [c]employed or inactive. All regression models include the full set of individual level variables. The additional individual level effects and the random parameter estimates are not shown. Coef. refers to the parameter estimate of the fixed effect of the individual level random slope variable. C.l. Inter. refers to the cross-level interaction between the individual level random slope variable and the log of the social assistance benefit level variable. The L.R. Test is based on models without the cross-level interaction term and shows whether the more elaborate model provides a better fit to the data.

material deprivation, whereas the unemployment rate and the long-term unemployment rate tend to increase it. In statistical terms it is not possible to establish any relationship between ALMP expenditure and material deprivation. Some interesting changes in the results appear when the level of social assistance benefits is controlled for. Notably, non-means-tested benefits, public services and educational expenditure lose statistical power and tend no longer to be associated with material deprivation. Some policy areas of utmost prominence in the European discussion on poverty and social exclusion therefore need further empirical clarification.[10] One could argue that both education and ALMP may have an important indirect relationship to material deprivation, which is mediated through increased activity rates or lower unemployment rates. However, if such indirect effects were to be substantial, we should be able to observe at least some influence of education and ALMP that goes beyond that of social assistance. Evidently, this is not the case. In comparison, social assistance seems to be more crucial for combating material deprivation, not the least since the relationship to material deprivation appears also when the influence of additional country-level variables is considered. The strength of this relationship between social assistance and material deprivation is fairly stable across the regression models, although the association becomes somewhat weaker when economic development (GDP per capita) is controlled for.

The marked mitigating impact of social assistance on material deprivation at the country level makes it pertinent to analyse whether benefit levels also are related to individual risks, for example, whether the impact of lower educational attainment on material deprivation differs between countries due to the level of social assistance benefits. In order to analyse such aspects, Table 3 shows a series of multilevel logistic regressions where the association between individual-level variables and material deprivation is allowed to differ across countries. The presentation is restricted to four categories of people whose likelihood of material deprivation clearly deviates across countries: single persons, lone parents, the unemployed and those with only primary education.

The role of social assistance for the four individual risks is evaluated by inspecting the cross-level interaction between the individual-level variable and the benefit-level indicator. All of these cross-level interactions are inversely related to

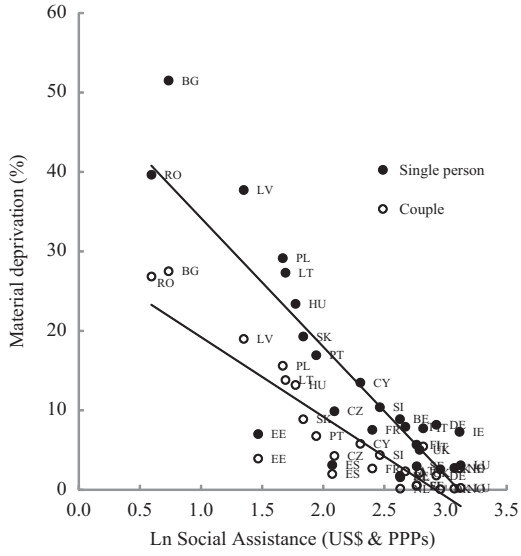

Figure 2. Social assistance benefit levels and the rate of material deprivation among single persons and couples in 26 European countries, 2008.

Note: Data for France are from 2007.

Source: SaMip (http://www2.sofi.su.se/~kne/) and EU-SILC (http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc).

material deprivation, showing that social assistance in some instances may reduce the influence of individual-level factors.[11] Thus, social assistance benefit levels seem to yield a partial explanation of cross-country differences in individual risks for material deprivation. At the aggregate level this type of relationship can be illustrated with a simple scatter plot. Due to considerations of space the example is confined to single persons and couples. Figure 2 plots the log of the social assistance benefit level indicator and the material deprivation rates among single persons and couples in the various countries. The crucial point for our purpose is the distance between the two diagonal lines, which show the correlations for the two population categories. The fanning in pattern reveals that the rate of material deprivation among single persons and couples is more similar in countries with higher benefit levels, something that provide additional support for the relevance of social assistance for individual level risks.[12]

Discussion

In this paper it has been shown that the level of social assistance benefits tends to account for a substantial part of the differences in material deprivation across Europe. The regression framework provided robust empirical evidence of a negative association between benefit levels and material hardships, indicating that poverty can be reduced by redistributive policies. The analysis also revealed that a number of individual-level factors seemed to increase the likelihood of material deprivation. In several instances the impact of individual-level factors varied across countries, in part due to the structure of social assistance. In particular, this concerned the risks associated with single persons, lone parents, unemployed persons and those with only primary education. The likelihood of material deprivation observed among people in these groups tended to be higher in countries with lower levels of social assistance benefits.

We are still only beginning to understand the mechanisms at the country level that are related to material deprivation, and the results presented in this study show some promising areas for continued research. It seems especially crucial to continue the investigation on the role of confounding contextual factors. Although the results above provide new insights into the net effects of social assistance, the regression framework is somewhat restricted when it comes to studying the multiple causes of deprivation at the country level. This limitation concerns not least the ways in which policies may combine and produce important outcomes. In-depth country investigations and analytical techniques based on Boolean algebra may be fruitful alternatives to more closely reveal configurations of policies of relevance for material deprivation.

Another aspect concerns the measurement of individual vulnerabilities and the relationship between social assistance and specific types of deprivation. It is beyond the scope of this study to fully scrutinize the expanding and rich literature on poverty of relevance for social stratification. European integration, of course, motivates a close focus on the particular type of deprivation defined in agreement by the EU Member States, how it varies across countries and can effectively be combated. Nonetheless, it is

imperative to the debate surrounding the European social inclusion process to assess how policies relate also to alternative poverty indicators. Such analyses should consider not only income and material deprivation, and the intersection of the two, but also encompass the enforced lack of non-material resources (Nolan and Whelan, 2010).

Despite the fact that poverty and deprivation can be conceptualized and measured differently than has been done here, the significance of the results presented in this study for the continued fight against poverty in Europe is evident. The social agenda of the EU involves a clear active dimension, whereby emphasis is placed on measures to increase work incentives. It is doubtful whether this active dimension of European integration suffices to alleviate poverty to the extent envisioned by the Europe 2020 growth strategy. In this paper we could not find any empirical evidence of an association between ALMP and material deprivation. Nor was it possible to observe any relationship between public services and material deprivation. Instead, the empirical analysis convincingly singled out social assistance as a key component at the institutional level to effectively combat material hardships in the EU Member States. This result seems to demonstrate that social assistance should be part of the arsenal of policy programmes to counteract poverty and material deprivation in Europe. The role of social assistance in guaranteeing minimum levels of consumption should perhaps be strengthened further in future EU policy frameworks.

Notes

1. Other scholars have expressed somewhat parallel ideas concerning poverty measurement and conceptualization. Sen (1979) conceptually linked the distinction between deprivation and income-based poverty measurements to that of needs and abilities, respectively, whereas Atkinson (1987) referred to standards of living and the command over resources.
2. Indirectly, public services are therefore relevant also for equality of opportunity in the wider sense, for example, as a means to avoid the restrictive nature of poverty relevant for social exclusion (Sen, 2000). Besides the lack of material resources, non-participation in social life may in this regard be related also to essential non-material lifestyle factors, such as social networks, security and health (Hills et al., 2002).
3. One obvious exception is vouchers for food, which are used, for example, in the US Food Stamp programme.
4. The empirical analyses have been re-examined using poverty thresholds defined as lacking at least two, three or five out of the nine basic items, respectively. These sensitivity results can be obtained after correspondence with the author.
5. The partitioning of variance at the country level is based on the latent variable approach, where the variance at the individual level is assumed to follow a standard logistic distribution equal to $\pi^2/3$ (Snijders and Bosker, 1999).
6. Compositional effects can sometimes appear if countries differ, for example, in terms of age and household structure. Due to the fixed variance at level one, the ICC may increase slightly after inclusion of individual-level variables (Snijders and Bosker, 1999).
7. Social assistance benefit levels are expressed in US$1000s (PPPs).
8. The effect of the social assistance variable (in both its standard and logarithmic forms) is also significantly negative when Bulgaria, Hungary and Romania are excluded from the analysis. Excluding Norway, which is the only non-EU country in this analysis, has no substantial impact on the results. When all CEE countries are excluded from the analysis, the effect of the social assistance variable is still negative, albeit not statistically significant, something that probably reflects the diminishing return of social assistance at higher benefit levels noted above and the substantial reduction in the number of countries. Typically, the latter tends to increase the standard errors of the parameter estimates at the country level.
9. GDP per capita is expressed in 1000s purchasing standards per inhabitant. Non-means-tested benefit expenditure and public service expenditure include only programmes for those below old age and are measured in percentage of GDP. The activity rate is the sum of employed and unemployed individuals aged 25–64 years as a percentage of total population in the same age group. The long-term unemployment rate includes economically active persons aged 15 or more who have been unemployed for at least 12 months, as a percentage of all economically active persons above 15 years. Educational expenditure includes all levels of education and is expressed as a percentage of GDP. ALMP expenditure includes all

in-kind benefit programmes targeted to the unemployed and is measured as a percentage of GDP.

10. A similar result appears also when the original social assistance benefit-level variable is used instead of its logarithmic function.
11. For those with primary education the cross-level interaction term is not statistically significant. However, the more elaborate model provides a significantly better fit to the data than a model without the cross-level interaction.
12. The similar pattern appears also for the original benefit level indicator.

References

Atkinson, A.B. (1987) 'On the Measurement of Poverty', *Econometrica* 55: 749–64.

Atkinson, A.B., Cantillon, B., Marlier, E. and Nolan, B. (2002) *Social Indicators: The EU and Social Inclusion*. Oxford: Oxford University Press.

Bäckman, O. (2009) 'Institutions, Structures and Poverty: A Comparative Study of 16 Countries, 1980–2000', *European Sociological Review* 25(2): 251–64.

Bäckman, O. and Ferrarini, T. (2010) 'Combating Child Poverty? A Multilevel Assessment of Links Between Family Policy Institutions in 20 Countries', *Journal of Social Policy* 39: 275–96.

Barbier, S.C. (2005) 'The European Employment Strategy, A Channel for Activating Social Protection?' in J. Zeitlin, P. Pochet and L. Magnusson (eds) *The Open Method of Co-ordination in Action: The European Employment and Social Inclusion Strategies*. Brussels: Peter Lang.

Boarini, R. and d'Ercole, M. (2008) 'Measures of Material Deprivation in OECD Countries', *OECD Social, Employment and Migration Working Papers 37.* Paris: OECD.

Brady, D. (2003) 'The Poverty of Liberal Economics', *Socio-Economic Review* 1(3): 369–9.

Brady, D. (2005) 'The Welfare State and Relative Poverty in Rich Western Democracies, 1967–1997', *Social Forces* 8(4): 1329–64.

Callan, T., Nolan, B. and Whelan, C.T. (1993) 'Resources, Deprivation and the Measurement of Poverty', *Journal of Social Policy* 22: 141–72.

Cantillon, B. (1997) *The Challenge of Poverty and Exclusion*. OECD Social Policy Studies No. 21. Paris: OECD.

Cantillon, B. (2011) 'The Paradox of the Social Investment State: Growth, Employment and Poverty in the Lisbon Era', *Journal of European Social Policy* 21(4): 423–49.

Cantillon, B., Ghysels, J., Mussche, N. and Van Dam, R. (2001) 'Female Employment Differences, Poverty and Care Provisions', *European Societies* 3(4): 447–69.

Cantillon, B., Marx, I., Van den Bosch, K. and Van Mechelen, N. (2004) *The Evolution of Minimum Income Protection in 15 European Countries 1992–2001*. Antwerp: Centrum voor Sociaal Beleid Herman Deleeck.

Clayton, R. and Pontusson, J. (1998) 'Welfare-State Retrenchment Revisited: Entitlement Cuts, Public Sector Restructuring, and Inegalitarian Trends in Advanced Capitalist Societies', *World Politics* 51: 67–98.

Commission of the European Communities (1985) *On Specific Community Action to Combat Poverty 85/8/EEC*. Brussels: Commission of the European Communities.

Eardley, T., Bradshaw, J., Ditch, J., Gough, I. and Whiteford, P. (1996) *Social Assistance in OECD Countries: Synthesis Report*. London: HMSO.

Esping-Andersen, G. (1990) *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press.

Esping-Andersen, G. (2002) 'Positive-Sum Solutions in a World of Trade-Offs?' in G. Esping-Andersen (ed.) *Welfare States in Transition: National Adoptions in Global Economies*. London: Sage.

European Commission (2006) *Portfolio of Overarching Indicators and Streamlined Social Inclusion, Pensions, and Health Portfolios*. Brussels: European Commission.

European Commission (2009) *Portfolio of Indicators for the Monitoring of the European Strategy for Social Protection and Social Inclusion – September 2009 update*. Brussels: European Commission.

European Commission (2010) *Proposal for a Council Decision on Guidelines for the Employment Policies of the Member States [SEC (2010) 488]*. Brussels: European Commission.

European Council (1992) *Council Recommendation of 24 June 1992 on Common Criteria Concerning Sufficient Resources and Social Assistance in Social Protection 92/441/EEC*. Brussels: European Council.

European Parliament (2009) *Active Inclusion of People Excluded from the Labour Market,* 2008/2335(INI). Brussels: European Parliament.

Eurostat (2009) *Income Poverty and Material Deprivation in European Countries*. Luxembourg: Eurostat.

Eurostat (2010) *Comparative EU Intermediate Quality Report, Ver. 2*. Luxembourg: Eurostat.

Ferrarini, T. (2006) *Families, States and Labour Markets: Institutions, Causes and Consequences of Family Policy in Post-War Welfare States*. Cheltenham: Edward Elgar.

Förster, M. (2005) 'The European Union Social Space Revisited: Comparing Poverty in the Enlarged European Union', *Journal of Comparative Policy Analysis* 7(1): 29–48.

Fusco, A., Guio, A.C. and Marlier, E. (2011) 'Income Poverty and Material Deprivation in European Countries', *Working Paper 2011–04*. Luxembourg: CEPS/INSTEAD.

Gilbert, N. and Moon, A. (1988) 'Analyzing Welfare Effort: An Appraisal of Comparative Methods', *Journal of Policy Analysis and Management* 7(2): 326–40.

Goodin, H., Muffels, R. and H.-J. Dirven. (1999) *The Real Worlds of Welfare Capitalism*. Cambridge: Cambridge University Press.

Gornick, J.C. and Meyers, M.K. (2003) *Families that Work: Policies for Reconciling Parenthood and Employment*. New York: Russell Sage Foundation.

Gough, I., Bradshaw, J., Eardley, T. and Whiteford, P. (1997) 'Social Assistance in OECD Countries', *Journal of European Social Policy* 7(1): 17–43.

Guio, A.C. (2009) *What Can Be Learned from Deprivation Indicators in Europe?* Eurostat Methodologies and Working Paper. Luxembourg: Eurostat.

Guio, A.C., Fusco, A. and Marlier, E. (2009) 'An EU Approach to Material Deprivation EU-SILC and Eurobarometer Data', *IRISS Working Paper 2009-19*. Luxembourg: CEPS/INSTEAD.

Hills, J., Le Grand, J. and Piachaud, D. (2002) *Understanding Social Exclusion*. Oxford: Oxford University Press.

Immervoll, H. (2010) 'Minimum Income Benefits in OECD Countries: Policy Design, Effectiveness and Challenges', *Social, Employment and Migration Working Paper 100*. Paris: OECD.

Jenson, J. (2009) 'Redesigning Citizenship Regimes after Neoliberalism: Moving Towards Social Investment', in N. Morel, B. Palier and J. Palme (eds) *Towards a Social Investment Welfare State?* Bristol: Policy Press.

Kenworthy, L. (1999) 'Do Social Welfare Policies Reduce Poverty? A Cross-National Assessment', *Social Forces* 77(3): 1119–40.

Kenworthy, L. (2011) *Progress for the Poor*. Oxford: Oxford University Press.

Konle-Seidl, R. and Eichhorst, W. (2008) 'Does Activation Work?', in W. Eichhorst, O. Kaufmann and R. Konle-Seidl (eds) *Bringing the Jobless into Work? Experiences with Activation Schemes in Europe and the US*. Berlin: Springer.

Korpi, W. (1989) 'Power, Politics, and State Autonomy in the Development of Social Citizenship: Social Rights during Sickness in Eighteen OECD Countries since 1930', *American Sociological Review* 54(3): 309–28.

Korpi, W. (2000) 'Faces of Inequality: Gender, Class, and Patterns of Inequalities in Different Types of Welfare Sates', *Social Politics* 7(2): 127–91.

Korpi, W. and Palme, J. (1998) 'The Paradox of Redistribution and Strategies of Equality: Welfare State Institutions, Inequality, and Poverty in the Western Countries', *American Sociological Review* 63(5): 661–87.

Korpi W. and Palme, J. (2003) 'New Politics and Class Politics in the Context of Austerity and Globalization: Welfare State Regress in 18 Countries 1975–95', *American Political Science Review* 97(3): 425–46.

Kühner, S. (2007) 'Country-level Comparisons of Welfare State Change Measures: Another Facet of the Dependent Variable Problem within the Comparative Analysis of the Welfare State?', *Journal of European Social Policy* 17(1): 5–18.

Layte, R., Maître, B., Nolan, B. and Whelan, C.T. (2001) 'Persistent and Consistent Poverty: An Analysis of the First Two Waves of the ECHP', *Review of Income and Wealth* 47(4): 357–72.

Leibfried, S. (1992) 'Towards a European Welfare State? On Integrating Poverty Regimes into the European Community', in Z. Ferge and J. Kolberg (eds) *Social Policy in a Changing Europe.* New York: Westview/Campus.

Lødemel, I. (1997) *The Welfare Paradox: Income Maintenance and Personal Social Services in Norway and Britain, 1946–1966*. Oslo: Scandinavian University Press.

Lødemel, I. and Schulte, B. (1992) 'Social Assistance: A Part of Social Security or the Poor Law in New Disguise?', in European Institute of Social Research (eds) *Reforms in Eastern and Central Europe: Beveridge 50 Years After*. Leuven: Acco.

Mack, J. and Lansley, S. (1985) *Poor Britain*. London: Allen and Unwin.

Marlier, E., Atkinson, A.B., Cantillon, B. and Nolan, B. (2007) *The EU and Social Inclusion: Facing the Challenges*. Bristol: Policy Press.

Mayer, S.E. and Jencks, C. (1989) 'Poverty and the Distribution of Material Hardship', *Journal of Human Resources* 24(1): 88–114.

Meuleman, B. and Billiet, J. (2009) '*A Monte Carlo Sample Size Study: How Many Countries Are Needed for Accurate Multilevel SEM?*', Survey Research Methods 3(1): 45–58.

Morel, N., Palier, B. and Palme, J. (2009) *Towards a Social Investment Welfare State?* Bristol: Policy Press.

Nelson, K. (2004) 'Mechanisms of Poverty Alleviation in the Welfare State: A Comparative Study of Anti-poverty Effects of Non Means-tested and Means-tested Benefits in Five Countries in the 1990s', *Journal of European Social Policy* 14(4): 371–90.

Nelson, K. (2006) 'The Last Resort: Determinants of the Generosity of Means-tested Minimum Income Protection Policies in Welfare Democracies', in E. Carroll and L. Ericsson (eds) *Welfare Politics Cross-Examined: Eclecticist Analytical Perspectives on Sweden and on the Developed World*: Amsterdam: Aksel Atland.

Nelson, K. (2007) 'Universalism versus Targeting: The Vulnerability of Social Insurance and Means-tested Minimum Income Protection in 18 countries 1990–2002', *International Social Security Review* 60(1): 33–58.

Nolan, B. and Whelan, C.T. (1996) *Resources, Deprivation and Poverty*. Oxford: Clarendon Press.

Nolan, B. and Whelan, C.T. (2010) 'Using Non-Monetary Deprivation Indicators to Analyze Poverty and Social Exclusion: Lessons from Europe?', *Journal of Policy Analysis and Management* 29: 305–25.

Organisation for Economic Co-operation and Development (2009) *Growing Unequal? Income Distribution and Poverty in OECD Countries*. Paris: OECD.

Palme, J., Nelson, K., Sjöberg, O. and Minas, R. (2009) *European Social Models, Protection and Inclusion*. Research Report 2009/1. Stockholm: Institute for Future Studies.

Pedersen, A.W. (1999) *The Taming of Inequality in Retirement: A Comparative Study of Pension Policy Outcomes*. Report No. 317, Oslo: Fafo.

Ringen, S. (1988) 'Direct and Indirect Measures of Poverty', *Journal of Social Policy* 17(3): 351–66.

Rønsen, M. and Skarðhamar, T. (2009) 'Do Welfare-to-Work Initiatives Work? Evidence from an Activation Programme Targeted at Social Assistance Recipients in Norway', *Journal of European Social Policy* 19(1): 61–77.

Sainsbury, D. (1999) *Gender and Welfare State Regimes*. Oxford: Oxford University Press.

Scharpf, F.W. (2002) 'The European Social Model', *Journal of Common Markets Studies* 40(4): 645–70.

Sen, A. (1979) 'Issues in the Measurement of Poverty', *Scandinavian Journal of Economics* 81(2): 285–307.

Sen, A. (2000) 'Social Exclusion: Concept, Application, and Scrutiny', *Social Development Papers 1*. Mandaluyong City: Asian Development Bank.

Smeeding, T.M., Rainwater, L. and Burtless, G. (2001) 'U.S. Poverty in Cross-national Context', in S. Danziger and R. Haveman (eds) *Understanding Poverty.* Cambridge, MA: Harvard University Press.

Snijders, T.A.B. and Bosker, R.J. (1999) *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modelling*. London: Sage.

Townsend, P. (1979) *Poverty in the United Kingdom*. Harmondsworth: Penguin.

Van Mechelen, N., Marchal, S., Goedemé, T., Marx, I. and Cantillon, B. (2011) 'The CSB-Minimum Income Protection Indicators Dataset (CSB-MIPI)', *CSB Working Paper* 11/05. Antwerp: Herman Deleeck Centre for Social Policy.

Whelan, C.T. and Maître, B. (2005) 'Vulnerability and Multiple Deprivation Perspectives on Economic Exclusion in Europe: A Latent Class Analysis', *European Societies* 7(3): 423–50.

Whelan, C.T., Layte, R. and Maître, B. (2002) 'Multiple Deprivation and Persistent Poverty in the European Union', *Journal of European Social Policy* 12(2): 91–105.

Whelan, C.T., Layte, R. and Maître, B. (2004) 'Understanding the Mismatch between Income Poverty and Deprivation: A Dynamic Comparative Analysis', *European Sociological Review* 20(4): 287–302.

Whelan, C.T., Nolan, B. and Maître, B. (2008) 'Measuring Material Deprivation in the Enlarged EU', *ESRI Working Paper 249*. Dublin: ESRI.