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The 'Europeanisation' of Reference Groups: A Reconsideration Using EU-SILC

Christopher T. Whelan and Bertrand Maître

Abstract: In this paper we address the question of the relative importance of within and between country differences in income and material deprivation in the European Union in the context of recent suggestions that insufficient attention has been paid to cross-national differences. In particular, we respond to the argument that the 'state bounded' relative income approach obscures the significance of EU-wide reference groups. Making use of EU-SILC 2004, we have sought to quantify the magnitude of relevant within and between country differences and their relative impact. Overall, our analysis supports the view that the predominant frame of reference is a national one. The limited impact of European reference groups observed in our analysis does not require explanation in terms of the emergence of a European social stratification system. Furthermore, the significance of such comparisons depends not only on the expectations of those affected by European inequalities but on the degree of legitimacy afforded to ensuing demands. While an EU-wide income-threshold can provide information regarding progress of the Union towards greater social cohesion, its usage for this purpose does not require a strong sense of European identity. Given, the current status of the European Social Model it would seem unwise to attribute an undue degree of policy relevance to the relatively modest evidence relating to the impact of EU-wide reference groups revealed in our analysis.

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The 'Europeanisation' of Reference Groups: A Reconsideration

1. Introduction

In this paper we address the question of the relative importance of within and between country differences in income and material deprivation in Europe for households' experience of subjective economic stress. We do so in the context of the recent suggestion by Fahey (2007) that insufficient attention has been paid to the cross-national variation. Fahey (2007:35-36) argues that Townsend's (1979) conceptualisation of relative deprivation has deflected attention away from wide differences in absolute standards of living between countries and the manner in which they are experienced. Fahey (2007:45), in an analysis based on the European Quality of Life Survey (EQLS), suggests that the use of both Member State level and EU-level income poverty indicators would be preferable to the current focus on the former. In contrast Whelan and Maître (2007), using the same data set, argue that the limitations of nationally based relative income measures of poverty have little to do with the process of enlargement and widening reference groups. In this paper we take advantage of the recent availability of the first wave of European Union Statistics on Income and Living Conditions (EU-SILC) to reconsider the key issues.

The reservations expressed in this paper regarding the argument developed by Fahey (2007) do not involve any absolute rejection of the use of EU-wide measures. Arguing for the continued value of a focus on a national relative income approach does not require that one deny the utility of exploring the adoption of different units of analysis in analysing inequalities within the EU.¹ Thus, Marlier *et al* (2007:154) suggest that the use of an EU-wide median income poverty line could be justified not on the basis of the existence of European wide reference groups but precisely as a means of *promoting* the adoption of such standards.

¹ See Berthoud (2002), Mogstad *et al* (2006) and Kangas and Ritakallio (2007) for a discussion of the regional approach and Brandolini (forthcoming) for treatment of the measurement of income distribution in supranational entities.

Furthermore, adherence to a within nation perspective relative income is consistent with an acceptance that cross-national inequalities are accurately perceived and that individuals' evaluations of their material situation may be affected by cross country comparisons (Fahey and Smyth, 2004:24). For example, the case for measuring poverty by means of a within nation relative income approach is not necessarily undermined by an acknowledgement that migration may derive from a perception that opportunities are better elsewhere (Delhey and Kohler, 2006,128). However, central to Fahey's (2007) argument is the claim that a particular sociological approach to understanding relative deprivation has led to a distortion of our understanding of the significance of EU-wide reference groups.

Starting from the observation that middle income households in poorer European states have incomes that are lower than the relative income poverty threshold in richer countries, and the associated paradox that a larger share of the population in a country such as Ireland is considered poor than in Poland, Fahey (2007, 36-37) suggests that the 'state bounded approach' can be challenged on two grounds. The first involves a consideration of cross-national differences in absolute deprivation and the second involves an assessment of how people feel about their material living standards. The latter raises the issue of the importance of relative position in one's own country, as against one's perception of how the overall level of living of one's own country compares with that of others, in determining people's subjective sense of deprivation.

2. Evaluating the 'Europeanisation' of Reference Groups Argument

2.1 Townsend's conception of relative deprivation

As Fahey (2007:36) acknowledges, Townsend (1979) was pursuing a very different agenda to that motivating those coming from the *American Soldier* reference group tradition.² He understood the term 'relative deprivation' in an objective rather than a subjective sense. His concern was with the socially relative nature of needs and wants rather than the relationship between objective circumstances and feelings of satisfaction and injustice. Townsend's primary focus was on poverty as exclusion from "ordinary living patterns, customs and activities" as a consequence of inadequate

² See Merton and Kitt (1950), Merton (1960).

resources. The defining characteristic of poverty for him was the ability to participate in the society to which one belongs. The critical issue involved in evaluating the validity of his position is the relationship between income and the form of rather basic material deprivation with which he was concerned; rather than the correspondence between income and subjective responses. His own efforts at validation were focused on attempting to establish an income threshold beyond which deprivation escalated disproportionately.³

Townsend's emphasis on the objective nature of relative deprivation, however, is consistent with Sen's (1983) argument that it is the notion of shame that is the core of poverty, in that the absence of resources puts people in a situation where they cannot live with dignity in their society. His approach implies subjective reactions to such exclusion from both the excluded and the wider population. Focusing on the former, it is with stress arising from exclusion that he is concerned, rather than with satisfaction with material living standards or with issues of justice evaluation (Jasso, 2002). This is not necessarily a weakness. Failure to take into account the full range of comparisons that people make will undermine the relative income approach only if it obscures the fact that such comparisons may lead individuals to define 'acceptable' levels of participation in a different fashion or to construe 'society' in a wider fashion.

2.2 Weaker and stronger cases for an EU-wide perspective

For Delhey and Kohler (2006:126) the reference groups to which people relate themselves is the litmus test for the appropriateness of an EU-wide approach. The crucial condition would be that citizens' frames of reference would have to extend beyond the national realm. Here we suggest that it is possible to think in terms of weak and strong versions of this argument. The former would simply allow for the fact that notions of appropriate national thresholds, and of what constitutes an appropriate level of participation in one's own society, come to be influenced by one's knowledge of conditions in other societies. Thus as Kangas and Ritakallio (2007:122) note this kind of intra-European comparison is facilitated by the production of common European income and poverty statistics. Such an impact would

³ See the contributions to the debate by Piachaud (1981 and 1987) and Desai (1986). More recently see Gordon *et al* (2000).

be consistent with claims, to which Delhey and Kohler (2006) direct attention, regarding the spread of consumer culture (Ger & Belk, 1996) and the emergence of a standard package of goods that people feel is necessary in order not to feel deprived (Keyfitz, 1992). Such effects could be observed while the normative framework remained resolutely national, with the obligation for creating the conditions in which appropriate participation could take place continuing to be seen to reside with the nation state.

The stronger version of the EU-wide framework requires, as Delhey and Kohler (2006: 126) argue, that people perceive

“themselves, or their countries, as part of larger European or even international stratification system. Furthermore, the perception whether false or correct, of being advantaged or disadvantaged within this system would have to play an important role in individuals’ evaluations of their own life circumstances”.

The stronger case, as Delhey and Kohler (2006: 125) note, is linked to the claim by authors such as Beck (2002) that concentration on national societies has led to distortion of our perceptions of inequalities that will be corrected as a result of Europeanisation and the emergence of European wide distribution conflicts. From this perspective, norms and aspiration shift from the national to the transnational level; as does the responsibility for meeting the associated claims.

What would constitute evidence for the fact that the relative income approach is undermined by the failure to take into account the impact of European reference groups whether in their weaker or stronger form? Fahey (2007:41) rests his argument on a comparison of absolute material deprivation levels and how people feel about such deprivation. In relation to the former, he notes that economic clusters display a similar ranking in terms of absolute levels of income, material deprivation and subjective economic stress. He also places particular emphasis on the fact that those at the upper end of the income distribution in the poorer clusters are worse off than those at the lower end of the distribution in the most affluent cluster. However, at no point does he seek to explicitly quantify the scale of within and between cluster variations

in material deprivation. Nor does he test the extent to which income allows us to account for such variation. Here we argue that both of these questions must be explicitly addressed before reaching conclusions about the relative value of a national versus an EU-wide frame of reference.

The second strand of Fahey's argument revolves around the claim that the frames of reference people use to evaluate their situation include EU-wide as well as national elements. However, as in the case of material deprivation, Fahey (2007:8) does not seek to quantify the extent of within and between cluster variations relating to outcomes such as subjective economic stress. Furthermore, his analysis does not extend to an examination of the *relationships* between income, material deprivation and subjective experience. Consequently, as Delhey and Kohler (2006:126) observe, his conclusions regarding the importance of cross-national reference groups lack an empirical underpinning and remain speculative.

Delhey and Kohler (2006:128) do demonstrate that individuals can evaluate living conditions in their own and other countries and that the latter are related to their reported levels of satisfaction. This evidence provides support for the weaker version of the European reference group argument⁴. However, we are not persuaded that it is sufficient to establish the stronger version, which would require the adoption of a more comprehensive justice evaluation methodology involving comparisons of the actual situation with what is considered to be just or fair.⁵ Our analysis, which proceeds on the basis of the assumption that individuals accurately perceive both within and between country differences in income and material deprivation, shares this limitation but does allow us to directly assess the question raised by Fahey of how much is lost by failing to incorporate the latter differences into our measures of poverty and exclusion.

In what follows we will take advantage of the recent availability of the first wave of EU-SILC to explore these issues. We wish to assess whether the operation of

⁴ Given our focus on measures of poverty the argument would be strengthened if the dependent variable was focused more on economic stress rather than general life satisfaction.

⁵ For examples of such analyses see Jasso (1999, 2000)

European wide reference groups undermines the ability of the within nation relative income approach to identify those households exposed to subjective economic stress. However, to the extent that a focus on relative income is unsuccessful in enabling us to understand the manner in which households respond to their economic circumstances, it is important that we establish the degree to which such failure is a consequence of a restricted understanding of the impact of cross-national reference groups, rather than an inability to capture those households who are relatively deprived in the objective sense of being ‘excluded from ordinary living patterns’. Unless we do so we are in danger of confusing the consequences of a focus on within country difference with the more general problems arising from the limitations of current disposable income as a predictor of command over resources or, alternatively, deprivation. Consequently, our initial analysis will focus on the relation between income and rather basic material deprivation; or in terminology that Eurostat has recently adopted, “economic strain” (Guio, 2005). We will then extend our analysis to a consideration of the impact of income and economic strain on subjective “economic stress”. In each case we explicitly address the issue of the relative magnitude of within and between country differences and the consequences of such variation.

3. The European Union Statistics on Income and Living Conditions: Data and Key Measures

3.1 Data

EU-SILC is now the reference source for statistics on income and living conditions, and common indicators for social inclusion in the EU. It was launched in 2004 in 13 Member States (Belgium, Denmark, Spain, Greece, France, Ireland, Italy, Luxembourg, Austria, Portugal, Finland, Estonia and Sweden) and in Norway and Iceland. It was only in 2005 that the EU-SILC reached its full scale with the 25 Member States plus Norway and Iceland.

For the purpose of this analysis we use the User Database (UDB) of the EU-SILC 2004 wave and our analysis is conducted at the household level. The sample sizes range from 3993 cases (Estonia) to 24204 cases (Italy) constituting a total sample size of 113771 households across 14 countries. For consistency of comparison we restrict

our analysis to those cases where the key measures involved in our analysis relating to household income, economic strain and economic stress are available giving us a total sample of 109,192 cases.

While this data covers fourteen countries it included only one of the new Member States. However, our interest is in the general argument underlying the Europeanisation of reference groups thesis rather than a descriptive account of cross-national differences. If the case for the importance of cross-national reference groups cannot be established in relation to this set of countries, it is difficult to see what formulation of the underlying social psychological processes would lead to a reversal of that conclusion when New Member States (NMS) are included in the analysis. The range of objective differences in income and deprivation between the countries included in our analysis is sufficient that if the inclusion of additional NMS countries in our analysis were to lead us to modify our conclusions it would seem that is more likely to arise from the distinctive features of those societies rather than simply greater variance in relation to income or material deprivation.⁶

3.2 Income

While the EU-SILC 2004 survey was conducted in 2004, the income period refers to 2003. The income measure we use is the total annual disposable household income. This is defined as the sum for all household members of net personal income components plus all net income components at household level. In order to adjust the level of household income to the different sizes and compositions of households we use the “modified OECD scale”.

As household incomes are expressed in national currencies, in order to control for the differing price levels across EU Member States, we convert household incomes into standard units of measurement as expressed by Purchasing Power Standards (PPS).

Finally, in all regression analyses income is entered into the relevant equations in its log form to allow for a diminishing impact at higher levels of income.

⁶ Later waves of EU-SILC will allow us to deal empirically with this issue.

3.3 Economic Strain

Our analysis requires the development of an index of rather basic material deprivation that is reliable across the range of EU countries that we include in our analysis. The items we have employed are set out in Table 1. These items, apart from that relating to a PC, combine items that Eurostat have shown to load on dimensions that they have labelled “economic strain” and “consumption” (Guio, 2005). However, given the importance of achieving a satisfactory level of reliability we have chosen to focus on the combined 10-item set. The index achieves a reasonably satisfactory level of reliability across the 14-country sample with an overall Cronbach alpha of 0.69, ranging from 0.62 in Spain and Denmark to a high of 0.73 in Ireland. Thus our conclusions regarding cross-national variations will not be affected by differential reliability. In our view the 10-item measures comes closer to tapping a what we would refer to as ‘basic deprivation’ rather than more general consumption deprivation and in line with Eurostat’s terminology we shall employ the term “economic strain” in referring to it.

Table 1: Items Used to Measure Economic Strain

Cannot afford meal with meat, chicken, fish (or vegetarian) every second day
Inability to keep home adequately warm
Cannot afford to have a car
Cannot afford a telephone
Cannot afford a PC
Cannot afford a colour TV
Cannot afford a washing machine
Cannot afford a weeks holiday away from home
Cannot afford to pay unexpected required expenses
Experiencing arrears on rent, mortgage, utility bills or hire purchase payments

For our present purposes, we use a version of this measure in which each individual item is weighted by the proportion of households possessing that item across the EU. Enforced lack of a widely available item is considered of greater consequence than comparable deprivation in the case of an item whose possession is more strongly concentrated. Since we have taken EU levels of possession as the reference point, deprivation of an item such as a PC will be counted equally across all EU member states from Estonia to Luxembourg. This approach contrasts with the more usual

approach that takes national reference points.⁷ Since our concern is to evaluate the importance of within and between country differences we wish to avoid an approach that necessarily restricts deprivation differences across countries. The economic strain measure is then simply constructed as the sum of the weighted deficits on all 10 items divided by the total proportion of items possessed in the EU. Such standardisation produces scores ranging from 0 (if an individual lacks no items) to 1 (all items are lacked).

3.4 Economic Stress

The measure of subjective economic stress we employ is based on the following question asked to the household reference person:

“Thinking now of your household’s total income, from all sources and from all household members, would you say that your household is able to make ends meet?”

Respondents were offered six response categories ranging from “with great difficulty” to “very easily”. In the analysis that follows we treat this variable as a continuous one with scores ranging from ‘1’ corresponding to “very easily” to ‘6’ corresponding to great difficulty. In the analysis that follows where this outcome is a dependent variable we employ OLS regression. Although theoretically preferable approaches such as logistic or probit regression are available, with six ordered categories the attainable improvement is modest and logit analysis shows the categories to be fairly equally spaced and produces conclusions that not differ from those arising from OLS regression.⁸

4. The Cross-National Distribution of Household Income, Economic Strain and Economic Stress

In Table 2 we set out the cross-national distribution of household income adjusted for purchasing power parity, economic strain as captured by our 10-item deprivation index and economic stress as indexed by our six-category measure of the household’s

⁷ See Muffels and Fouarge (2004)

⁸ Even in the case of a binary dependent variable, standard OLS is often considered acceptable in applied work (see Wooldridge, 2006, 256)

level of difficulty in making ends meet. In considering the extent of variation across country we report two summary indices. The first is η^2 which is equivalent to the R^2 from the OLS regression with the set of dummy variables for countries. The second, rho or the intra class correlation coefficient, measures the relative homogeneity within groups in ratio to the total variation. The intra class correlation coefficient is large and positive when there is no variation within the groups, but group means differ. It will exhibit its largest negative value when group means are the same but there is great variation within groups. It can also be interpreted as the correlation between the observed values on the dependent variable of two randomly chosen individuals in the same group.

In this case both indices display similar values. Between country difference account for 10 per cent of the total variance in income, 6.5 per cent of the variance in economic strain and 19 per cent of the variance in economic stress. The corresponding intra class correlation coefficients are 0.111, 0.072 and 0.207. Thus, within country variation is in every case substantially greater than between country variation; with the ratio varying from between 13:1 for economic strain to 4:1 for economic stress with income occupying an intermediate position with a ratio of 9:1. Expressed in terms of the intra class correlation coefficient, in no case does the similarity between randomly chosen individuals within country produce a correlation higher than 0.2. Clearly, if we wish to explain variation in economic strain and economic stress our primary focus must be on within country differences.

Excluding Luxembourg, which has an exceptionally high level, mean household equivalent income ranges from almost 19,000 PPS in Norway to less than 5,000 in Estonia. The lowest mean level of economic strain of 0.032 is found in Luxembourg followed by one of 0.052 for Sweden and France, Norway and Denmark while the highest level of 0.197 is found in Estonia followed closely by Portugal and Greece. The minimum mean level of subjective economic stress of 2.4 is observed in Denmark followed by Luxembourg, Norway and Sweden. The highest level of 4.17 is observed in Portugal and Greece followed by Italy and Spain.

Overall, the ranking of countries is broadly similar across dimensions but by no means identical. The division of variation within and between countries is clearly dependent on the range of countries include in the analysis.⁹ However, the magnitude of such effects seems unlikely to have any substantial effect on our conclusions. A comparable analysis restricted to Sweden, Denmark and Austria, Estonia, Portugal and Greece also shows that the vast majority of variance is within rather than between countries.¹⁰ Similarly, Whelan and Maître (2007) in an analysis based on economic clusters covering the twenty-five EU countries and three candidate countries found that over three quarters of the observed variation in subjective economic stress was within rather than between countries.

<i>Table 2 Means by Country for Household Equivalent Income, Economic Strain and Economic Stress</i>			
	Household Equivalent Income in PPS	Economic Strain (Standardised score with range 0-1)	Economic Stress (range 0-6)
Denmark	15,827.3	0.059	2.423
Luxembourg	30,080.0	0.032	2.539
Norway	18,951.5	0.059	2.852
Sweden	15,086.6	0.052	2.966
Austria	17,870.0	0.072	3.139
France	16,707.4	0.052	3.173
Belgium	16,089.5	0.093	3.305
Finland	14,281.3	0.088	2.971
Ireland	15,826.8	0.079	3.666
Italy	14,714.7	0.097	4.148
Spain	13,588.0	0.104	3.850
Greece	12,065.5	0.168	4.170
Portugal	9,869.8	0.163	4.172
Estonia	4,953.0	0.197	3.581
Eta ²	0.100	0.065	0.189
Rho	0.111	0.072	0.207
	109192	109192	109192

In comparing our results with those reported by Fahey (2007) based on the EQLS, it is necessary to keep in mind that the relative advantages and disadvantages associated with each data set. Since the EQLS encompasses twenty-eight countries (twenty-five EU member states plus three candidate countries) and includes a larger number of the

⁹ Excluding Luxembourg reduce the respective levels of between country variation for income, economic strain and economic stress to 5.3 per cent, 5.9 per cent and 17.9 per cent.

¹⁰ The respective R² values in relation to income, economic strain and economic stress are 0.168, 0.140 and .246

less affluent ones, it will display substantially greater absolute variation between countries. However, the balance of variation within and between countries will also be affected by variability across countries in the degree of within nation inequality. Thus Kangas and Ritakallio (2007) bases on an analysis of thirteen of the more affluent European countries concluded that within-nation income poverty differences were more pronounced than between nation differences and that conclusions based on national poverty lines were most likely to be misleading in the Mediterranean countries because regional variation in income was widest there.

Since sample sizes in the EQLS are quite modest, it is generally necessary to present results in relation to clusters of countries rather than individual nations. In addition, both the sample sizes and measurement procedures mean that estimates of both income and economic strain are likely to be considerably less precise than in the case of EU-SILC. However, certain broad conclusions are supported by both sets of analysis. On average, countries with low levels of income display high levels of economic strain and stress and those with high incomes correspondingly low levels. As Fahey (2007) notes, at the aggregate level low income is associated with both higher deprivation and with feeling under economic stress. He extends this analysis to show that the top income quartiles in the poorest cluster of countries compare unfavourably, across the range of dimensions, with the bottom income quartile in the richest cluster. While such findings will not be as striking for the more limited range of countries included in our analysis, we have no wish to dispute the general point being made that those at relatively high points in the income distribution in the poorer countries will tend to exhibit higher levels of economic strain and stress than their counterparts at substantially lower levels of the distribution in countries towards the more affluent end of the spectrum.

Such findings are consistent with the notion that, in judging their own personal situations, individuals have a reasonably accurate grasp of where their own societies stand in the international hierarchy of material living standards. However, while the above findings provide descriptively interesting information, in order to reach conclusions regarding the relative importance of within and between country differences it is necessary to take two further factors into account. The first relates to

the scale of the within and between country difference relating to the outcomes of interest. The second, on which we now focus, involves establishing the strength of the associations between such differences and the outcomes with which we are concerned.

6. The Relationship Between Income and Economic Strain

A substantial literature exists that shows that the relationship between household income and measures of household deprivation are a good deal more modest than is sometimes assumed.¹¹ Here our focus is not on the overall impact of income but on its ability to explain within and between country variation in economic strain and the implications this has for reliance on relative income lines.

As Snijders and Bosker (1999:26) note, within group relationships can, in principle, derive from completely different principles to those underlying between group associations. In the current case our sample involves households within countries. In analysing this multi-level structure, we have opted not to employ a random effects model because we are interested in specific country effects and do not wish to consider our fourteen observations as random selected from a wider population. Methodologically, given the relatively small number of second level units and the large sample size within such units, overall estimates of the effect of a variable such as income using fixed effects and random effects procedures will produce pretty well identical overall estimates of the income effect.

In Table 3 we set out the results for three regressions with economic strain as the dependent variable. They focus, respectively, on the impact of country difference, the impact of income and the combined influence of both variables. The first equation simply reproduces the differences already shown in Table 1. The set of country dummies, with Sweden as the reference category, accounts for 6.5% of the variance with the lowest levels of deprivation being observed in Sweden, Norway, Denmark and Luxembourg and the highest in Greece, Portugal and Estonia. Income has been

¹¹ See Kangas and Ritakallio (1998), Tsakloglou and Papadopoulos (1998) and Whelan *et al* (2001, 2004), Berthoud *et al* (2004).

entered in its log form to allow for a diminishing impact at higher levels. Doing so increases the R^2 from 0.065 to 0.180 and gives a coefficient of -0.088 . In equation (iii) we simultaneously enter the country dummies and income. This increases the R^2 to 0.202. The major change in the pattern of country coefficients, in comparison with equation (i), is the reduction in the coefficients for the seven least affluent countries.

	(i)		(ii)		(iii)	
Denmark	0.009	0.003			0.013	0.002
Norway	0.009	0.003			0.027	0.002
Luxembourg	-0.019	0.003			0.040	0.003
Austria	0.022	0.003			0.032	0.003
France	0.069	0.002			0.075	0.002
Belgium	0.043	0.003			0.046	0.002
Ireland	0.029	0.003			0.027	0.002
Finland	0.037	0.002			0.032	0.002
Italy	0.047	0.002			0.038	0.002
Spain	0.054	0.002			0.039	0.002
Greece	0.118	0.003			0.093	0.002
Portugal	0.113	0.003			0.063	0.003
Estonia	0.147	0.003			0.039	0.003
Log of household equivalent income			-0.088		-0.085	0.001
Constant	0.050		0.929		0.862	
R^2	0.065		0.180		0.202	
N	109,192		109,192		109,192	

The scale of the reduction gradually rises from a modest level of 0.002 for Ireland to 0.108 for Estonia. Country differences are reduced but remain significant. Controlling for country differences, which provides us with a fixed effects estimate, has little influence on the impact of income involving a reduction from -0.088 to -0.085 .¹² Allowing for interaction between income and country increases the R^2 from 0.202 to 0.210 but with no discernable substantively meaningful pattern of variation.

¹² The between country coefficient for income is -0.100

In Table 4 we address the importance of within and between country variance by partitioning the variance explanation between income and country. Country effects uniquely account for 2.2 % of the variance (0.202-0.180). Thus once we have taken income into account, country effects while significant are modest in scale. Income uniquely accounts for 13.7% (0.202-0.065) and 4.3% (20.2-2.2-13.7) is shared between them. From this we can calculate that income accounts for 14.6% of the variation within country (0.137/0.935) and 66.2% of between country variation (0.043/0.065). Thus, income is significantly more strongly associated with economic strain between rather than within countries. However, as a consequence of the fact that the vast bulk of the variation in economic strain is within country, income variation within countries accounts for more than three times the variance of between country variation - 13.7% v 4.3%. Overall, taking into account between country differences in income does improve our ability to measure income strain but the major limitation on our ability to do so is the weakness of the within country income-deprivation relationships.

Table 4: Partitioning of Variance Explanation of Economic Strain between Country and Log Of Equivalent Household Income	
	%
Unique to Country	2.2
Unique to Income	13.7
Shared	4.3
% of within country variance accounted for by income	14.6
% of between country variance accounted for by income	66.2

7. The Relationship Between Income, Economic Strain and Economic Stress

7.1 *Income and Economic Stress*

In Table 5 we look at the relationship between subjective economic stress and household equivalent income; using a log specification for the latter. In equation (i) we enter the country dummies which reproduce the pattern set out in Table 1 with the lowest level of economic stress being observed in Denmark and the highest in Greece and Portugal. The main deviation from expectation is the relatively low level in Estonia. Between country differences explain 18.9% of the variance. In equation (ii) we enter the log of income which has a coefficient of -0.762 and accounts for 15.1% of the variance. Implicit in our use of the log specification is the assumption that

respondents experience income differences in a manner that mirrors the observed relationship between income and economic strain i.e. in a proportionate rather than an absolute fashion.¹³

In Equation (iii) we simultaneously enter income and the country dummies and observe an R^2 of 0.296. The major consequence for the country dummies is the reduction of the coefficients for Greece, Portugal and Estonia with the value becoming negative in the final case. At the other extreme, we also observe a reduction in the values for Norway and Luxembourg. However, the reduction in the range of country differences declines modestly from 1.75 to 1.62.¹⁴ Controlling for country effects reduces the income coefficient to -0.712 .

	(i)		(ii)		(iii)	
Denmark	-0.543	0.023			-0.511	0.021
Norway	-0.114	0.023			0.032	0.021
Luxembourg	-0.428	0.027			0.064	0.025
Austria	0.173	0.025			0.261	0.023
France	0.208	0.021			0.254	0.019
Belgium	0.339	0.024			0.366	0.022
Ireland	0.700	0.024			0.684	0.022
Finland	0.005	0.021			-0.043	0.019
Italy	1.182	0.019			1.109	0.017
Spain	0.883	0.020			0.764	0.019
Greece	1.204	0.023			0.994	0.021
Portugal	1.206	0.024			0.792	0.023
Estonia	0.615	0.027			-0.283	0.026
Log of household equivalent income			-0.762		-0.712	0.006
Constant	2.966		10.689		9.736	
R^2	0.189		0.151		0.296	
N	109,192		109,192		109,192	

¹³ Using a linear specification produces an lower R^2 of 0.110 but leaves our conclusions regarding the relative importance of within and between country income differences largely unaffected.

¹⁴ Once again our analysis assumes no interaction between income and country. The addition of the full set of interaction term leads to an increase in the R^2 from 0.296 to 0.302 but with no meaningful pattern of variation.

In Table 6 we evaluate the relative importance of between and within country differences in income in accounting for subjective economic stress by partitioning the variance. Country effects uniquely account for 14.5% of the variance (0.296-0.151). Income uniquely 10.7% (0.296-0.189). The shared component accounts for 4.4% of the variance (29.6-14.5-10.7). Thus, income accounts for just less than a quarter of between country variation in economic stress (4.4/18.9). Thus the independent impact of country exhibits substantially greater explanatory power in relation to economic stress than was the case for economic strain while income is a good deal less effective in accounting for cross-national variance than was the case for economic strain. Within country, income differences account for 13.2% of corresponding variation in economic stress. As with economic strain, taking income differences between countries into account improves our predictive ability. However, it is also true that within country differences account for a good deal more of the variation – 10.7% v 4.4%. The limited predictive power of income within countries is the major factor accounting for the overall weakness of the association between income and economic stress.

Table 6: Partitioning of Variance Explanation for Economic Stress between Country and Log Of Equivalent Household Income	
	%
Unique to Country	14.5
Unique to income	10.7
Shared	4.4
% of within country variance accounted for by income	13.2
% of between country variance accounted for by income	23.2

7.2 Economic Strain and Economic Stress

In Table 7 we look at the impact of economic strain and country on economic stress. In equation (ii) we enter economic strain which has a coefficient of 5.271 and accounts for 31.2% of the variance. Controlling for country effects reduces the coefficient to 4.983.¹⁵ In equation (i) we simultaneously enter income and the country dummies. These results can be compared to those relating to the country effects alone reported in equation (i) in Table 5. The addition of economic strain increases the R²

¹⁵ The between country economic strain coefficient is 9.414.

from 0.189 to 0.450. It also leads to a substantial reduction in the coefficients for Greece, Portugal and Estonia ranging from 0.73 to 0.59. More modest reductions are observed for a range of other countries. The overall range of country differences is reduced from 1.75 to 1.54. However, excluding Italy the latter figure becomes 1.23. It remains true that a substantial component of cross-country difference in levels of economic stress cannot be accounted for by either corresponding differences in household income or economic strain.

Table 7: OLS Regressions of Economic Stress by Country and Economic Strain

	(i)		(ii)		(iii)		(iv)	
Denmark	-0.588	0.019					0.018	0.018
Norway	-0.160	0.019					-0.086	0.019
Luxembourg	-0.334	0.022					-0.113	0.022
Austria	0.064	0.020					0.118	0.020
France	-0.138	0.017					-0.076	0.017
Belgium	0.124	0.020					0.162	0.019
Ireland	0.554	0.019					0.564	0.019
Finland	-0.181	0.017					-0.182	0.017
Italy	0.949	0.015					0.942	0.015
Spain	0.616	0.016					0.591	0.016
Greece	0.617	0.019					0.586	0.019
Portugal	0.643	0.020					0.513	0.020
Estonia	-0.118	0.022					-0.457	0.022
Economic Strain (ES)	4.983	0.022	5.271	0.024	4.529	0.026	4.407	0.023
Log of Household Equivalent Income					-0.363	0.005	-0.336	0.005
Constant	2.71		2.986		6.483		5.939	0.052
R ²	0.450		0.312		0.340		0.470	
N	109,192		109,192		109,192		109,192	

In Table 8 we examine the partitioning of variance between economic strain and country effects. The latter account for 13.8% of the variance (0.45-0.312) while the figure for the former is 26.1% (0.45-0.189) and that for the shared variance is 5.1% (45-13.8-26.1). Thus while the unique effect of country was over twice that for income for economic strain the pattern is reversed. Economic strain thus accounts for

27.0% of the between country variance (5.1/18.9) and 32.2% of the within country variance (26.1/81.1). The contribution of between country variation in economic strain is very similar to that of income; which is not surprising given that the level of correlation between the variables is 0.8. In contrast, the within countries explanatory power of economic strain is almost two and a half times greater than for income. As a consequence, while between countries variation in economic strain contributes to our ability to account for subjective economic stress, the ratio of within to between country explanatory power for economic strain exceeds five to one (26.1/5.1).

Table 8: Partitioning of Variance Explanation for Economic Stress between Country and Economic Strain	
	%
Unique to Country	13.8
Unique to Economic Strain	26.1
Shared	5.1
% of within country variance accounted for by economic strain	32.2
% of between country variance accounted for by economic strain	27.0

In equation (iii) we enter income and economic stress simultaneously. Both are highly significant and they account for 34% of the variance. Controlling for country effects in equation (iv) increases the level of variance explained to 47.0% but has little effect on the income or economic strain coefficients. Controlling for the latter reduces the range of country coefficients from 1.75 to 1.40.

7.3 The Combined Effect of Income and Economic Strain

In Table 9 we look at the partitioning of the variance between the combined impact of income and economic strain taking jointly and country. The latter uniquely accounts for 13% of the variance (0.47-0.34) and the former 28.1% (0.47-0.189), while 5.9% (0.47-0.281-0.13) is shared. Income and economic strain account for approximately one third of both the within and between country variance. However, a crucial difference emerges between the two cases. Focusing on within country differences, it is clear that economic strain is the crucial variable. Adding income to it increases the absolute level of variance explanation by 2.4% (34.6 – 32.2); while reversing the order of entry we see an increase of 21.4% (34.6 – 13.2). The variance shared

between variables is just less than eleven per cent ($34.6 - (2.4 + 21.4)$). In contrast, in the case of between country differences sixty per cent ($19/31.2$) of the variance is accounted for by income and economic strain is shared between them. Income explains a total of 4.2% ($31.2 - 27.0$) of the variance compared to 8% ($31.2 - 23.2$) by economic strain and 19% jointly ($31.2 - 4.2 - 8.0$). The degree of multicollinearity at country level makes it difficult to distinguish between the role of income and economic strain and to rule out the possible role of unmeasured variables that may display a similar level of correlation at this level of aggregation. Obviously the extent to which this matters depends on the degree to which we wish to attribute causal significance to the associations we have observed.

Table 9: Partitioning of Variance Explanation for Economic Stress between Country and Income and Economic Strain	
	%
Unique to Country	13.0
Unique to Income and Economic Strain	28.1
Shared	5.9
% of within country variance accounted for by income and economic strain	34.6
% of between country variance accounted for by income and economic strain	31.2
% of within country variance accounted for uniquely by income	2.4
% of within country variance accounted uniquely by economic strain	21.4
% of within country variance accounted shared between income and economic strain	10.8
% of between country variance accounted for uniquely by income	4.2
% of between country variance accounted uniquely by economic strain	8.0
% of between country variance accounted shared between income and economic strain	19.0

8. Cross-country Variation in the Impact of Economic Strain

Our analysis to this point confirms that taking between country differences, in either income or economic strain, into account, contributes to our ability to account for

subjective economic stress. However, the predominant role in explaining subjective economic stress must be attributed to within country influences. Despite the unambiguous nature of the evidence pointing to this conclusion, our analysis to date has underestimated the relative importance of within country differences. Up to this point we have assumed that levels of economic strain have identical outcomes across countries. In fact, as is clear from Table 10 where we display the coefficients relating to the interaction between the economic strain variable and the country dummies, there is a clearly interpretable pattern of interaction. The impact of economic strain declines as one moves from the richer to the poorest countries. The largest coefficient of 7.8 is observed for Luxembourg followed by coefficients of approximately 6.5 for Sweden, Denmark and Norway. Austria, France, Belgium and Spain, which constitutes something of an exception, are found in the range running from 5.7 to 5.4. The values for Finland, Ireland and Italy range from 4.9 to 4.7. They decline to 4.1 and 4.2, respectively, in Greece and Portugal. Finally, the lowest value of 3.1 is observed for Estonia. These findings provide clear support for the operation of restricted reference groups. The same absolute level of economic strain in Luxembourg or the wealthier Scandinavian countries is associated with a significantly lower level of economic stress than in Estonia or the poorer Mediterranean countries. Consequently, differences in levels of economic stress between countries decline as the level of economic strain increases. Such differences are entirely consistent with the reference group assumptions implicit in the use of national relative income poverty lines. The fundamental problem with such lines, as we have argued, derives not from such assumptions but from the fact that income proves to be such a poor predictor of economic strain within countries.

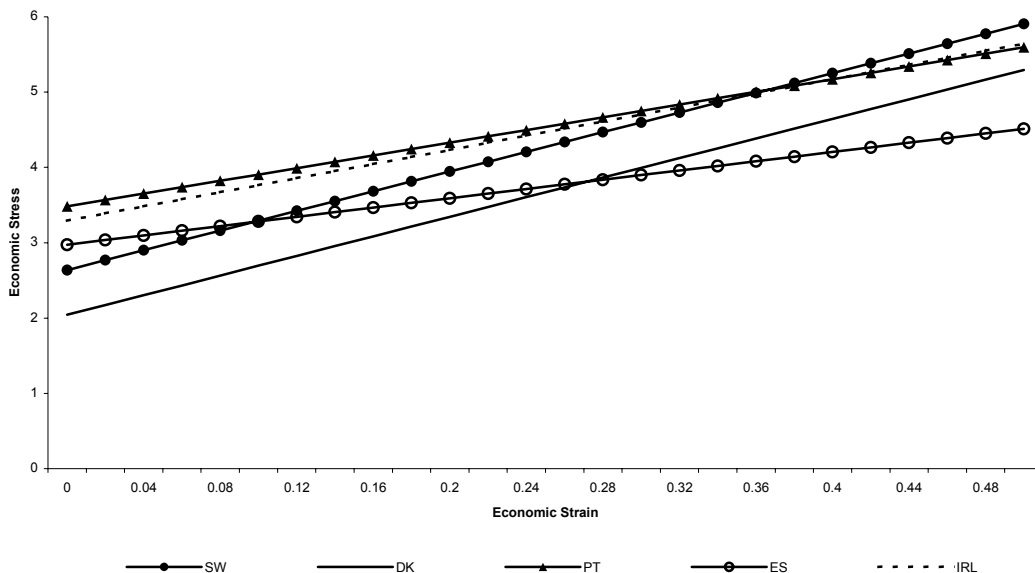
Table 10: OLS Regressions of Economic Stress by Country and Economic Strain

	B	S.E
Denmark	-0.594	0.021
Norway	-0.173	0.021
Luxembourg	-0.344	0.024
Austria	0.108	0.023
France	-0.129	0.020
Belgium	0.136	0.022
Ireland	0.655	0.022
Finland	-0.098	0.019
Italy	1.074	0.017
Spain	0.621	0.019
Greece	0.837	0.023
Portugal	0.845	0.025
Estonia	0.336	0.029
Economic Strain (ES)	6.533	0.133
Denmark*ES	-0.032	0.177
Norway*ES	-0.141	0.176
Luxembourg*ES	1.250	0.243
Austria*ES	-1.084	0.179
France*ES	-0.978	0.149
Belgium*ES	-0.838	0.164
Ireland*ES	-1.834	0.165
Finland*ES	-1.614	0.150
Italy*ES	-2.033	0.140
Spain*ES	-0.844	0.149
Greece*ES	-2.395	0.151
Portugal*ES	-2.310	0.160
Estonia*ES	-3.455	0.162
Constant	2.638	0.015
R ²	0.458	
N	109,192	

In Figure 1 we illustrate the consequences of the interactions for a selected range of countries in order to provide appropriate contrasts between countries at the upper and lower end of the affluence spectrum for a realistic range of values. When the economic strain score is zero the lowest level of economic stress of 2.0 is observed in Denmark this rises to 2.6 for Sweden, 3.0 for Estonia and 3.3 for Ireland and 3.5 for Portugal. Thus, at this level substantial differences in levels of economic stress exist between countries, although the level for Estonia is slower than we might have expected on an *a priori* basis. The largest difference of 1.5 points is observed between

Denmark and Portugal, followed by one of 0.9 between the latter one and Sweden. As the economic strain score increases the economic stress score narrows between Denmark and poorest countries such as Portugal. At the point at which economic strain values are equal to 0.5 the gap between Denmark and Portugal has narrowed to 0.3. For the comparisons involving Sweden we see a reversal of positions with the economic stress score reaching a level that is 0.3 points higher than that for Portugal. Of course the numbers involved at this level of economic strain are substantially higher in Portugal than in Sweden. In the Estonian case, starting from a point in the middle of the range for this set of countries, as economic strain levels rise economic stress increases more slowly than in the case of any other country. At the point at which the value of the former reaches 0.5 the economic stress level for Estonia is the lowest for the set of countries included in Figure 1 and indeed for the fourteen countries included in our overall analysis. The economic stress score for Sweden at this stage is 1.4 points higher and for Denmark the corresponding gap is 0.8.

Figure 1: The Predicted Relationship between Economic Stress and Economic Strain for a Selected Set of Countries as set Out in Table 10



9. Conclusions

In this paper we have argued that a failure to take into account that comparisons extend beyond national boundaries will undermine approaches based on within nation relativities only if they impact on what people come to think of as an acceptable manner of participation in society or lead them to construe society in a wider geographical fashion.

Our analysis shows that variation in each of key measures relating to household income, economic strain and economic stress is predominantly within country. The available evidence suggests that, while the precise magnitude of such differences will be affected by the sample of countries on which one focuses, this broad conclusion will be robust to such changes. Similarly it is difficult to see *a priori* why the relationships between income and economic strain and economic stress that we have estimated would be affected, for example by the inclusion of further New Member States in a manner that would cause us to seriously revise our conclusions. The crucial issue is not simply whether their inclusion would lead us to an increase in the overall proportion of variance in economic stress accounted by cross-national differences in economic stress but the extent to which our conclusions relating to the ability of income and economic strain to explain such variation would need to be revised. In fact both on *a priori* grounds and the available evidence it is difficult to see that this would be the case. In fact, given the distinctive experience of such countries it would seem more plausible that factors other than current income and deprivation such difference relating to historical experience and expectations for the future are likely to play a particularly important role in mediating subjective responses to objective economic circumstances. In which case it seems more plausible to hypothesis an increase in the unique variance attributed to cross-national differences.

While taking into account between country differences in income and economic strain can contribute to our understanding of subjective economic stress, within country differences have a great deal more explanatory power. This conclusion relating to restricted reference groups holds true even if one assumes a uniform impact of economic strain across countries. However, it is strengthened by the fact that the

economic strain interacts with country in a manner that leads to it having more substantial consequence for subjective economic stress in richer rather than poorer countries.

Overall, our conclusions are consistent with those of Delhey and Kohler (2006) that the predominant frame of reference is a national one. The evidence suggests that European reference groups are of significantly less consequence than their national counterparts but they do influence the manner in which people experience their economic situation. What are the consequences of our findings for the questions relating to the level at which we should construct indicators of poverty and social exclusion and the relative importance of national and EU-level policy responses? Focusing first on the possibility of having an EU-wide relative income measure in addition to national variants, we are entirely in agreement with Brandolini (forthcoming) that given that EU member countries are engaged in a process of economic and political unification EU wide indices have a significance that goes beyond intellectual curiosity. Thus, in the context of EU-regional policy aimed at promoting economic and social cohesion by bringing convergence in economic development and living standards¹⁶, they provide basic information relating to the progress of the Union towards greater cohesion.¹⁷ Crucially, as Brandolini (forthcoming) notes, while an EU-wide perspective can be seen as a significant step towards viewing the EU as a social entity, it does not necessarily require a strong sense of European identity. It is precisely on this latter aspect that we have focused.

Marlier *et al* (2007:155), in proposing that an EU-wide income threshold could be used to *complement* their set of social inclusion indicators, emphasise that its value would lie in addressing the key issue of social cohesion/convergence across the EU rather than capturing “absolute poverty”. Given the substantially greater role of within country income variation in accounting for economic stress, substituting an EU-wide line for the national versions would lead us to be substantially less successful in identifying those exposed to economic stress. Our findings in relation to the variable impact of economic strain across countries provides further support for the conclusion

¹⁶ See European Commission (2004).

¹⁷ However, as Kangas and Ritakallio (2007:122) observe since the structural funds are aimed at eradicating regional disparities they can also have the potential to intensify internal comparisons.

of Marlier *et al* (2007-154-155) that a EU-wide approach by failing to take into account differences in “the significance of goods in social functioning” would miss people in richer countries who are experiencing genuine exclusion from their own society while counting substantial numbers in the poorer societies who are not experiencing such exclusion. A shift from a focus on income to one on economic strain, or an approach that combines information on both indicators, would do a great deal more to improve our understanding of subjective economic stress than a change in the geographical unit of analysis.

Even though the impact of between country differences is modest, they do contribute to our ability to account for the distribution of subjective economic stress. It is possible that the effects we have observed reflect the fact that notions of appropriate national norms have come to be influenced by perceptions of standards elsewhere. In that case a successful EU regional policy by reducing between country differences in living standards would also contribute to reductions in corresponding differences in levels of subjective economic stress and contribute to increased social cohesion. However, it is possible to justify a European perspective on such grounds without assuming anything about the manner in which people evaluate the justice of cross-national differences or the degree to which they hold national or supranational agencies responsible for their relative deprivation. The fact that people compare themselves with those in other countries and are affected by such comparisons does not require us to posit the existence of a larger European Social Stratification System within which as, Delhey and Kohler (2007:137) put it, the feeling of being deprived compared to the EU average could lead to increasing demands for redistribution at the EU level.

The available evidence is consistent with the weaker version of the EU-wide reference group hypothesis. In any event, the significance of such effects depends not only on the expectations of those affected by such inequalities, and the demands that they feel justified in making, but also on the extent to which the national and supranational agencies to which such claims are addressed deem them to be legitimate. In the context of EU enlargement, at-risk-of-poverty indices based on national relative income poverty lines are likely to seem increasingly counter intuitive and the demand

is likely to increase for social indicators that capture cross-national differences that can serve as a basis for monitoring the success of EU-regional policy in fostering increased social and economic integration. However, at the same time, the distinction between EU regional and social policy is likely to continue to be of particular significance.

As O'Connor (2005: 347) notes, the European Social Model is not a reality in the sense in which we think of the national welfare state since the social dimension relates not to direct provision of services but is designed to alleviate the consequences of economic development. For O'Connor (2005:346) the ESM "reflects a tension between aspirations and values expressed at the EU level and subsidiarity" and for Jespen and Serrano Pascual (2006:5) "a political project under construction". In this context, despite the danger of leaving oneself open to being castigated as a 'methodological nationalist'¹⁸ it would seem extremely unwise to attribute an undue degree of policy significance to the relative modest impact of EU-wide reference groups that our analysis reveals.

¹⁸ See Yeates and Irving (2005:43)

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References

- Beck (2002), 'The Cosmopolitan society and its Enemies', *British Journal of Sociology*, 51,79-106.
- Berthoud, R. (2004). *Patterns of Poverty Across Europe*. Bristol: The Policy Press.
- Berthoud, R., Bryan, M. and Bardasi. E. (2004), *The dynamics of deprivation: the relationship between income and material deprivation over time*. Department for Work and Pensions, Research Report No 219
- Brandolini, D. (forthcoming), 'measurement of Income Distribution in Supranational entities: The Case of the European Union', in J. Micklewright and S. Jenkins (eds.), *Inequality and Poverty Re-examined*, Oxford: Oxford University Press
- Delhey, J. and Kohler, U. (2006). From nationally bounded to Pan-European inequalities? On the importance of foreign countries as reference groups. *European Sociological Review*, 22, 22–40.
- Desai, M. (1986), 'Drawing the Line: On Defining the Poverty Threshold', in P. Golding (ed.), *Excluding the Poor*, London: Child Poverty Action Group.`
- European Commission (2004) A New Partnership for Cohesion. Convergence Competitiveness Cooperation. Third Report on Economic and Social Cohesion. Luxembourg: Office for Official Publications of the European Communities.
- Fahey. T. (2007), 'The Case for an EU-wide measure of Poverty', *European Sociological Review*, 23,1, 35-47.
- Fahey, T. and Smyth ((2004), 'Do Subjective Indicators Measure Welfare? Evidence from 33 European Societies, *European Societies*, 6, 5-27.
- Ger, G. and Belk (1996), 'Cross-Cultural Differences in Materialism', *Journal of Economic Psychology*, 17, 55-77.
- Gordon, D., Adelman, L, Ashworth, K., Bradshaw, J., Levitas, R., Middleton, S., Pantazis, C. Patsios, D., Payne, S, Townsend, P and Williams, J. (2000), *Poverty and Social Exclusion in Britain*, York: Joseph Rowntree Foundation.
- Guio, A.-C. (2005a). 'Material deprivation in the EU' Eurostat *Statistics in Focus* 05/2005.
- Guio, A-C and Marlier, E. (2004), 'The Laeken Indicators: Some Results and methodological Issues in New member states and Candidate Countries', *EMERGO Journal of Transforming Economies and Societies*,11, 2: 21-48

- Jasso, G. (1999), 'How Much Injustice is There in the World: Two New Justice Indices', *American Sociological Review*, 64: 133-168
- Jespen, M. and Serrano Pascual, A. (2006), 'The Concept of ESM and Supranational Legitimacy-building', in Jespen, M. and Serrano Pascual, A., *Unwrapping the European Social Model*, Bristol: Policy Press
- Jasso, G. (2000), 'trends in the Experience of Injustice: Justice Indices about Earnings in six Societies, 1991-1996', *Social Justice Research*, 13,2,101-1231
- Kangas, O. and Ritakallio, V. (1998) "Different Methods – Different Results", in Andress, H.J., ed., *Empirical Poverty Research in a Comparative Perspective*, Ashgate: Aldershot.
- Kangas, O. and Ritakallio, V. (2007), 'Relative to What?: Cross National Picture of European Poverty Measured by Regional national and European Standards', *European Societies*, 9,2,119-145
- Ketfitz, N. (1992), 'Development and the Elimination of Poverty', *Economic Development and Cultural Change*, 30, 649-670
- Marlier, E, Atkinson, A., Cantillon and Nolan, B. (2007), *The EU and Social Inclusion :Facing the Challenges*, Bristol: Policy press
- Merton, R. M. (1956), 'Continuities in the Theory of reference Groups and Social Structure', *Social Theory and Social Structure*, New York: Free Press
- Merton R. M. and Kitt , A. S. (1950), 'Contributions to the Theory Reference Group Behaviour' in Merton, R. K. and Lazarsfeld, P. F. (eds.), *Studies in the Scope and Method of the American Soldier*, Glencoe: the Free Press pp. 40-106
- Mogstad, M., Langoren and Aberge, A. (2006), 'Region Specific Versus Country-Specific Poverty Lines in analysis of Poverty', *Journal of Economic Inequality*.
- Muffels, R.. and Fouarge, D. (2004), 'The Role of European Welfare States in Explaining Resources Deprivation', *Social Indicators Research*. 68, 3, 299-330
- O' Connor, J.S, 'Policy Coordination, Social Indicators and the Social Policy Agenda in the EU', *Journal of European social Policy*, 15,4,345-36.
- Piachaud, D., (1981), 'Peter Townsend and the Holy Grail, *New society*, 10 September, 419-421.
- Piachaud, D., (1987), 'Problems in the Definition and Measurement of Poverty', *Journal of Social Policy*, 16, 2, 147-164.
- Sen, (1983), 'Poor relatively Speaking', *Oxford economic Papers*, 35,2, 153-169

- Townsend, P. (1979). *Poverty in the United Kingdom. A survey of household resources and standards of living*. Harmondsworth: Penguin Books.
- Tsakloglou, P. and Papadopoulous, F. (2002) 'Aggregate level and determining factors of social exclusion in twelve European countries', *Journal of European Social Policy*, 12 (3): 211–25.
- Wooldridge, J.M. (2006), *Introductory Economics: A Modern Approach, 3rd edition* Thompson, Mason Ohio
- Whelan, C. T., Layte, R., Maître, B. and Nolan, N. (2001). Income, deprivation and economic strain: an analysis of the European Community Household Panel. *European Sociological Review*, 17, 357–372.
- Whelan, C. T. and Maître, B. (2007), 'Income, Deprivation and Economic Stress in an Enlarged European Union', *Social Indicators Research*
- Yeates, N. and Irving, Z. (2005). Introduction: transnational social policy. *Social Policy and Society*, 4, 403–405.

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