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Identifying Childhood Deprivation: How Well do National Indicators of Poverty and Social Exclusion in Ireland Perform?

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Abstract

In light of widespread agreement that poverty and social exclusion should be understood as multidimensional phenomenon, in this paper we explore the practical implications of such an understanding in relation to widely employed indicators of such phenomena in Ireland. One persistent critique of the current national measures of poverty and social exclusion comes from those who feel that the findings they produce are inaccurate in relation to particular stages of the life-course. To date the critiques in the Irish case have been accompanied by relatively little in the way of systematic research documenting the alleged limitations of national measures. In this paper we have taken advantage of the inclusion of a special module on childhood deprivation in EU-SILC 2009 to explore such issues in more depth. Our analysis reveals that, to the extent that national measures fail to identify childhood deprivation, this is largely a consequence of limitations in capturing wider command over economic resources and distinctive risk profiles in relation to exposure to deprivation and economic stress. Overall our analysis leads us to the conclusion that those exposed to childhood deprivation are generally a sub-set of the children captured by national indicators. Adopting a multidimensional and dynamic perspective on household resources and deprivation enables us to capture the large majority of children exposed to childhood deprivation. Conversely restricting our attention to childhood deprivation would lead us to miss out on larger numbers of children living in households experiencing basic deprivation. The national measures of poverty and social exclusion that have been employed in the Irish case are largely successful in capturing childhood deprivation.

1. Introduction

While poverty is still most often measured in terms of income, it has long been accepted that poverty is not just about money The widespread adoption of the terminology of social exclusion/inclusion in Europe reflects the concern *inter alia* that focusing simply on income misses an important part of the picture. Most research takes as a starting point that people are in poverty when "their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities" (Townsend, 1979). This definition is echoed in a variety of influential formulations at EU level and in the US. Recognition that income may be not be a reliable measure of poverty in this sense has stimulated a wide range of efforts to incorporate measures of deprivation into indicators of consistent poverty and, more broadly, economic vulnerability (Whelan, 2007 and Whelan and Maître, 2010b).

These efforts, while going beyond income, involve implementation of restricted forms of multidimensionality. Such efforts could be seen as falling well short of fully capturing the fact that

"Poverty is not just the absence of income or even the material deprivation that accompanies it. It is both of these and everything that follows from them: the hassle; the hard work; the stress; the budgeting; the conflict the shame; the degraded environment.; the isolation; the helplessness; the ill-health; the misfortune – and much else that, taken together, is both a reasoned and involuntary responses to hardship and which may, quite often, serve to exacerbate it" (Tomlinson and Walker, 2009: 20).

The situation is further complicated by the fact that the typical profile of multi-dimensional deprivation characterising those in poverty may vary significantly across the life-course. By these standards pretty well all measures of poverty constructed at the national level will fail

the ‘multidimensionality’ test. However, before reaching the conclusion that this necessarily invalidates such indicators it is worthwhile subjecting the notion of multidimensionality to critical scrutiny and considering what it implies for the requirements we wish to specify for population measures of poverty.

Typically the implementation of a multidimensional approach to poverty is pursued on a fairly *ad hoc* basis. The underlying rationale for adopting such an approach is often not spelt out and its implication followed through. Here, drawing on Nolan and Whelan (2007:146-148), we attempt to clarify exactly when a multidimensional approach might be necessary or helpful. The point that needs to be stressed at the outset is that a clear distinction needs to be maintained between conceptualizing, measuring, understanding and responding to poverty. One can make a case for a multidimensional approach for each of these but it is not the same case. They have different implications and one does not simply follow from the other. The fact that poverty may be best thought of as multidimensional does not in itself imply that the poor can be identified only by using a multidimensional approach; nor does identifying the poor in a unidimensional or restricted multidimensional fashion imply that poverty can be understood only in that manner, or that poverty policy should be directed only towards that dimension. It is necessary to distinguish between identifying the poor versus capturing what it means to be poor. In some circumstances, a single indicator might be perfectly adequate to identify empirically those experiencing poverty. Thus, in principle, income might be sufficient in a particular society to identify the poor but it would still be true that the factors contributing to the distribution of income are complex and multidimensional and that the manner in which poverty is experienced may be mediated in important ways by social structures and public services.

The need for a multidimensional approach is an empirical matter, rather than something that can simply be read off from the multidimensional nature of the concepts themselves. In a

similar vein, identifying the poor is only the first step in understanding the causes of poverty, and the measure employed does not determine the best approach to exploring those causes. Poverty in highly complex societies – irrespective of how it is measured – can only be understood by taking a variety of causal factors into account.[1]

In this context studies like Whelan (2007) seek to consider the validity of measures such as the current Irish consistent poverty measure which involves being below both 60% of household median disposable equivalent income and experiencing an enforced absence of two or more of a set of eleven basic deprivation items relating to food, clothing and participation in family and social life. The approach adopted, in relation to both the income and deprivation components of the consistent poverty measure and the indicator itself, involved the assessment of construct validity. In other words, they sought to test whether the measures fulfil our expectations relating to the manner in which they are related to socio-demographic factors that we expect to determine poverty and deprivation outcomes and with regard to patterns of association with other forms of deprivation and economic stress. The analysis confirmed that the current national consistent poverty measure succeeded in identifying a group of individuals who not only fulfil the criteria for the consistent poverty measure as such but also exhibit a distinctive multidimensional risk profile in relation to a range of deprivation and economic stress outcomes. The accumulated evidence supported the view that the national consistent poverty indicator is successful in identifying those exposed to generalised deprivation arising from a lack of resources.

In evaluating the consistent poverty measure against alternatives, it is necessary to take into account that the statistically significant but modest associations observed between consistent poverty and other forms of deprivation are entirely consistent with outcomes whereby the absolute numbers experiencing multiple deprivation across a range of dimensions are

[1] See Nolan and Whelan (2007) for a more detailed discussion of these issues.

extremely modest. It is not well understood that identifying the existence of multidimensional risk profiles is not equivalent to establishing the existence of substantial numbers of multiply deprived individuals.[2]

Advocates of a multidimensional approach to the measurement of poverty have been slow to recognise the challenges presented for the implementation of such approaches by the inverse relationship between the degree of multidimensionality and the numbers identified as poor. The evaluation of any particular approach to multidimensionality is also dependent on the position one takes in relation to the importance of the causal relationship between different dimensions. Tomlinson and Walker (2009: 1) conclude that

"the direction of causality is important in devising policy responses and in providing individuals with advice, but less so in the measurement of poverty".

We take a somewhat different view and would argue for the crucial importance of keeping clear the distinction highlighted in Townsend's definition between resources and exclusion in order that our measures of poverty can be fruitfully employed in analysing poverty and exclusion processes. For the purposes of this paper it is not necessary to resolve this issue but it does serve to illustrate that the choice between more and less multidimensional approaches to the measurement poverty is a far from a straightforward matter and requires the evaluation of a range of evidence on the basis of clearly articulated theoretical assumptions.

One way in which we can extend such analysis is by considering the relationship between indicators focused on measuring poverty in the population as a whole and those intended to capture the experience of poverty at specific stages of the life-cycle. In constructing the consistent poverty measure, the objective was to construct a generalised deprivation index that would allow comparison across sub-groups. The fact that such measures do not capture

[2] See Whelan & Maître (2010a)

the distinctive aspects of the experience of older people, or indeed children, clearly does not invalidate the measure.[3] Legitimate questions can be raised about the suitability of particular measurement procedures for specific life-course stages but a proper assessment of such issues must be addressed in the context of a comprehensive and technically informed assessment of the relevance of life-course variation for issues relating to reliability and validity rather than a common sense interpretation of the 'content validity' of specific items or special pleading for the significance of the distinctive deprivation experience of one rather than another life-cycle group. [4]

Bradshaw and Main (2010: 5) note that income collected at the individual level may be a particularly unreliable indicator for children since if it is collected at individual and adult level without detailed expenditure datawe do not know whether or not it is spent on children. As they note, being in a position to cross-classify child deprivation with income poverty could be extremely revealing in this respect. However, it should be kept in mind that the limitations of income for measuring adult poverty and deprivation have also been long established (Ringen, 1987, Callan et al 1993). Consequently it is necessary to consider the possibility that any deficiencies we observe relating to the ability of income poverty to capture childhood deprivation may simply be a reflection of the corresponding well established inadequacies in its ability to identify adult or household deprivation. In order to untangle these issues we require reliable information on household income and both adult/household and childhood deprivation.

The CSO EU-SILC 2009 data provides just such an opportunity since, in addition to the usual detailed information on income and household deprivation, it contains a special module on

[3] For a contrary view see Daly (2010)
[4] For a detailed discussion of issues relating to the measurement of deprivation for children and older people see Willitts (2006) and McKay (2008). For a detailed treatment of the relationship between poverty, social exclusion and the life-cycle in Ireland see Whelan and Maître (2008).

childhood deprivation. It is necessary to enter the caveat that we are not in a position to report on the direct experiences of children but must rather rely on the reports of an adult household member. We are therefore dealing with parents' views of the extent of deprivation among their children are and it is not possible to assess the argument arising from qualitative studies that children may protect parents from knowledge of their experience of poverty and conceal their desires (Ben-Arieh, 2005, Ridge, 2002, 2005, 2009). The data, however, do allow us to consider the extent to which children may be protected from the consequences of household poverty and deprivation through the priorities of their parents and the choices that they make (Bradshaw and Main, 2010 and Bradshaw, Williams and Middleton, 2010). It is also important to remember that, even if adult deprivation is not accompanied by childhood deprivation as captured by child specific indicators, it would be unwise to assume that the latter has no consequence for children. Ridge (2009) stresses that children show keen insight into the challenges and demands that poverty generates for their parents.

Our subsequent analysis focuses on both adult and childhood deprivation defined as not possessing an item or being able to engage in an activity because it cannot be afforded. We have not made use of information on the extent to which items are defined as necessities. Consequently, we cannot address the issue of whether necessities are viewed rather differently by adults and children. However, the 'consensual' approach to measuring poverty, which relies on information relating to perceived necessities, is not without its own difficulties including the fact that more affluent households are less likely to deem items a necessity (McKay and Collard, 2004).

In this paper our analysis will proceed as follows. In Section II we provide details of the data and give a brief account of the measures on which we will focus. In Section III we will describe levels of deprivation on the available childhood measures, the relationships between these items and the development of a childhood deprivation index. In Section IV we compare

the distributions for childhood deprivation and basic deprivation for the population as a whole. We then consider the relationship of the childhood index to a range of national deprivation indices. In Section V we extend our analysis by considering the relationship between childhood deprivation and national "at risk of poverty", consistent poverty and economic vulnerability in terms of both risk levels and composition. In Section VI we construct a typology of overlapping and non-overlapping forms of national and childhood deprivation and review the relationship of different combinations to "at-risk of poverty", consistent poverty and economic vulnerability. Finally, in order to extend our understanding of non-overlapping forms of deprivation, we consider the manner in which membership of such groups is related to location in the income distribution and marital status. In Section VII we provide an overview of our findings and their implications.

II. CSO EU-SILC 2009 Data and Measures

In Ireland, the information required under the EU-SILC framework is being obtained via a survey conducted by the Central Statistics Office each year. The EU-SILC survey is a voluntary survey of private households. For this report we are using EU-SILC 2009. In 2009, the total completed sample size was 5,183 households and 12,641 individuals. A two-stage sample design with eight population density stratum groups with random selection of sample and substitute households within blocks and the application of appropriate weight was employed (CSO, 2009). In 2009 a special module was added on childhood deprivation. Our analysis is restricted to children aged less than sixteen where measures of both adult and childhood deprivation measures are available.

In the paper we make use of three national measures of poverty and social exclusion that have previously been developed employing EU-SILC. These comprise the "at risk of poverty" measure, the consistent poverty indicator and a measure of "economic vulnerability".

The "at risk of poverty" indicator identifies the proportion of the population with an equivalised household income below a certain percentage of the median income. Conventionally the income poverty threshold is generally drawn at 60% of median income. This measure is used in the Irish National Action Plan for Social Inclusion in Ireland and is also one of the key "Laeken indicators" devised to study poverty across Europe.

The consistent poverty indicator measures the proportion of the population that is "at risk of poverty" and living in a household lacking two or more items of a set of eleven basic deprivation items. These items can be divided into two groups. In the first group it contains items that are regarded as basic goods such as food, clothing or heat. The second group includes items relating to participation in family and social life such as buying presents for family or socialising with friends (Whelan *et al*, 2006 and Whelan, 2007).

Seeking to go beyond the above measures, a number of authors have proposed a measure of economic vulnerability measure derived from a latent class analysis involving a set of four categories of income poverty, the dichotomised version of the eleven basic deprivation index distinguishing those experiencing an enforced deprivation of 2+ items and a measure of subjective economic stress that differentiates between those living in households experiencing "great difficulty" or "difficulty" in making ends meet (Whelan *et al*, 2006 and Whelan and Maître 2010a & b).[5] Employing the CSO EU-SILC data set the analysis identifies a cluster of 25.9% of vulnerable individuals who are characterised by a multidimensional profile relating to these three indicators that involves a heightened level of risk that sets them apart from the remainder of the population. The 2 class model, which assumes that the three indicators are independent of each other within each of the latent classes, has a G^2 of 18.8 with 4 degrees of freedom, reduces the corresponding value for the independence model by 99.6% and misclassifies only 0.6% of cases. The contrast between

[5] For an accessible accounts of latent class analysis see McCutheon and Mills (1998)

clusters is in terms of *risk profiles* rather than *current* patterns of disadvantage. Focusing first on income poverty we find that economic vulnerability carries a 31.9 % risk of being found below the 60% of median income threshold compared to 7.9% for the non-vulnerable (the corresponding figures for the 50% line are 14.3 and 4.3% and for the 70% line 55.3 and 13.7 %). The contrasts are even sharper in relation to the remaining elements. For economic stress the figures for the vulnerable and non-vulnerable classes are 71.0 and 11.0%. However, by far the sharpest differentiation occurs in relation to being above the basic deprivation threshold where the respective figures are 66.6 and 0.01% (Whelan and Maître, 2010b).

With regard to childhood deprivation we focus on the 14 items set out in Table 1. For each item, deprivation is defined as enforced absence. We also considered items relating to visits to the GP and a dentist but these were excluded because they did not contribute to increasing the reliability of the index.[6] The childhood deprivation questions were asked in relation to children in specific age ranges. Where any child in the household is deprived the household is defined as experiencing childhood deprivation. In our analysis this information is then generalised to all children under sixteen. Our focus therefore is on children under sixteen located in a household where any child has been reported to be experiencing deprivation.

III. Measuring Childhood Deprivation

In Table 1 we report levels of enforced derivation for 14 childhood items. The levels of deprivation are extremely modest. The highest levels are observed for a regular leisure activity, participation in school trips and events that cost money and two pairs of shoes where the level ranges between 5.3 and 3.9%. For new not second hand clothes, a meal with meat, chicken or fish (or vegetarian equivalent), outdoor leisure equipment and a suitable place to study or do homework and inviting friends around to play and eat the figure ranges between

[6] Obviously the availability of free medical care on a means tested basis plays a role here.

2.6 and 1%. For the remaining items the rate is below 1%. The item relating to outdoor space was excluded from our subsequent analysis because the primary factor associated with such deprivation was urban-rural location rather than attributes reflecting to socio-economic disadvantage. Our subsequent analysis focuses on the remaining 13 items.

Table 1: Enforced Deprivation Levels for Childhood Items	
	% Deprived
Deprivation Items	
New not second hand clothes	2.6
Two pairs of shoes	3.9
Fresh fruit and vegetables once a day	0.8
Three meals a day	0.6
Meal with meat, chicken or fish	2.0
Books at home suitable for their age	1.2
Outdoor leisure equipment	1.2
Indoor games	0.4
Regular leisure activity	5.3
Celebrations on special occasions	0.9
Invite friends around to play and eat	1.2
Participate in school trips & events that cost money	3.9
Suitable place to study or do homework	1.6
Outdoor space in the neighbourhood where children can play	0.9

In order to address the question of whether these items are tapping a common underlying dimension, in Table 2 we report the finding from a reliability analysis. In column one we show the correlation between each of the individual items and the overall level of deprivation excluding that item. For seven of the thirteen items this correlation ranges between 0.40 and 0.50. For three items the figure is between 0.35 and 0.36. The lowest correlations of between 0.25 and 0.30 are observed for the items concerning participation in school trips, inviting friends around and a suitable place to study and do homework. In column 2 we report the overall reliability level and those observed where each item is excluded from the analysis. The overall level of 0.731 is highly satisfactory providing clear indication that the items are successfully tapping a common manifest dimension. Consistent with the evidence relating to

the item total correlations, in no case does the exclusion of an item reduce the level of reliability other than in the most minimal fashion.

Because of our interest in exploring the relationship between childhood deprivation and adult deprivation and dimensions, it is important to note that the relatively uniform contribution of the items to the index shows that those items whose content is relatively similar to the corresponding items in the national basic deprivation are tapping the same underlying dimension as items such as having books at home, outdoor leisure equipment, regular leisure activity and celebrations on special occasions. Any association between the childhood deprivation dimension and the basic deprivation index cannot therefore be a consequence of common wording of items.

Table 2: Reliability of Childhood Enforced Deprivation Items

	Corrected Item-Total Correlation	*Cronbach's Alpha If item Deleted*
Deprivation Items		
New not second hand clothes	0.408	0.708
Two pairs of shoes	0.492	0.695
Fresh fruit and vegetables once a day	0.454	0.711

Three meals a day	0.453	0.714
Meal with meat, chicken or fish	0.401	0.709
Books at home suitable for their age	0.409	0.711
Outdoor leisure equipment	0.362	0.715
Indoor games	0.363	0.721
Regular leisure activity	0.424	0.712
Celebrations on special occasions	0.354	0.718
Invite friends around to play and eat	0.261	0.725
Participate in school trips & events that cost money	0.295	0.731
Suitable place to study or do homework	0.255	0.726
Overall Alpha		0.731

In order to extend this analysis we will proceed to consider the relationship between the childhood deprivation index and the basic deprivation measure. However, before doing so we wish to consider the possibility that the latter measure may constitute a less than adequate measure for some life-cycle groups. In Table 3 we set out the manner in which Cronbach's alpha reliability index, which measures the extent to which the items are tapping the same underlying dimension, varies across age groups.[7] As is clear from Table 3, the basic deprivation index is a highly reliable measure for the population as a whole with an alpha of 0.771. However, what is crucial for our present purposes is to extent to which such reliability is relatively uniform across age groups. For children and adults the respective coefficients are 0.771 and 0.772. For those aged sixty-five or over it declines marginally to 0.709. Given the nature of our analysis in this paper it is also reassuring that the alpha for those in households with children is 0.771. It is clear that the basic deprivation index constitutes a highly reliable measure that is unaffected by life cycle variation.

Table 3: Reliability of the Basic Deprivation Index by Age Group

Age Group	*Alpha*

[7] alpha= [Np{1 + p(N-1}] where N is equal to the number of items and p is equal to the mean inter item correlation.

< 18	0.771
18-64	0.772
65+	0.709
Individuals in households with children	0.772
All	0.771

In Table 4 we set out the correlation between the basic deprivation index and each of the 13 childhood items. The average correlation is 0.325. Seven of the items have correlations between 0.33 and 0.47. The lowest correlation is with the three items exhibiting the weakest correlation with the corrected childhood deprivation index i.e. inviting friends around, school trips and suitable place to study where the correlations are between 0.20 and 0.26. The results confirm that the magnitude of the relationship between the basic deprivation index and the individual childhood items is related to the extent to which each taps an underlying dimension of generalised deprivation rather than the specificities of individual items.

Table 4: Pearson Correlation of Basic Deprivation with Individual Childhood Deprivation Items

	Correlation
Deprivation Items	

New not second hand clothes	0.434
Two pairs of shoes	0.473
Fresh fruit and vegetables once a day	0.347
Three meals a day	0.325
Meal with meat, chicken or fish	0.392
Books at home suitable for their age	0.291
Outdoor leisure equipment	0.341
Indoor games	0.258
Regular leisure activity	0.460
Celebrations on special occasions	0.261
Invite friends around to play and eat	0.199
Participate in school trips & events that cost money	0.255
Suitable place to study or do homework	0.196

IV. Exploring the Relationship between Childhood Deprivation and National Measures of Deprivation

The analysis makes use of forty-two life-style deprivation indicators. Full details of these items are provided in Whelan *et al*. (2007). They can be broken down into the following five relatively distinct life-style deprivation dimensions.

1. Basic deprivation—consisting of 11 items relating to food, clothing, furniture, debt, and minimal participation in social life.
2. Consumption deprivation—comprising 19 items.
3. Housing facilities—is a four-item index comprising basic facilities such as bath, toilet etc.
4. Neighbourhood environment—is a five-item index encompassing pollution, crime/vandalism, noise, and deteriorating housing conditions.
5. Health status of the HRP: This dimension comprises three-items relating to overall evaluation of health status, having a chronic illness or disability and restricted mobility.

In Table 5 we show the distribution of childhood deprivation and basic deprivation. Almost 90% of children aged less than sixteen live in households where no child is reported as experiencing such deprivation. Seven per cent experienced enforced deprivation in relation to one item. Just less than three per cent are deprived of two items and just less than two per cent of three items. A comparison with the basic deprivation distribution show that levels of such deprivation are considerably higher than for childhood deprivation with close to 30% being located in households that are deprived on at least one item and 13% experience an enforced lack on three or more items. These findings are consistent with the suggestion that parents go to considerable lengths to shield their children from the impact of straitened economic circumstances. The consequence we find that the basic deprivation index identifies 2 times as many such children as being located in a household experiencing an enforced lack of two or more basic items as the childhood deprivation index does those experiencing enforced deprivation of at least one such item. The respective figures are 11.7 and 23.9%. Clearly it would be unwise to assume a priori that the latter is superior to the former in capturing the deprivation experience of children.

Table 5: Distribution of Childhood and Basic Deprivation

	Childhood Deprivation	Basic Deprivation
	%	%
0	88.3	62.7
1	6.7	13.4
2	2.6	11.4

3+	2.3	12.5
Total	100	100
N	3,130	3.339

In Table 6 we show the relationship between the childhood deprivation index and income poverty and a range of national deprivation indices. The highest correlation is with the basic deprivation index with a value of 0.609. This is followed by an association of 0.477 with consumption deprivation. The magnitude of the correlation then declines sharply to 0.182 for the health of the HRP and to 0.141 and 0.154 for housing and environmental deprivation respectively. The correlation with income poverty is a relatively modest at 0.289.

Table 6: Pearson Correlations of Childhood Deprivation Score with Deprivation Measures	
Measure	
Basic deprivation	0.609
Consumption deprivation	0.477
Housing deprivation	0.141
Environmental deprivation	0.154
Health of HRP	0.182
Income poverty at 60% of median	0.289

In Table 7 we take a multivariate perspective on the impact of income poverty employing OLS regression with childhood deprivation as the dependent variable.[8] Entering basic deprivation on its own we observe a Nagelkerke R^2 of 0.370. This rises modestly to 0.394 when we enter consumption deprivation and the health of the HRP and income poverty. Adding the housing and environmental dimensions produces no further significant increase.

The gross standardized standardized regression coefficient for basic deprivation is 0.609. Controlling for other factors the net coefficient is 0497. The corresponding coefficients for consumption deprivation and health of the HRP are respectively 0.119 and 0.018 and for income poverty the figure is 0.111. Basic deprivation is the primary factor influencing

[8] The significance levels reported in this are calculated taking into account the clustering of individuals within households.

childhood deprivation. Income poverty and secondary deprivation have modest additional effects and the health of the HRP has a relatively weak marginal effect.

Table 7: OLS Regression of Childhood Consumption Deprivation on National Income, Deprivation and Poverty Measures (standardised coefficients)		
	(i)	(ii)
	Beta	Beta
Basic deprivation	0.609***	0.497***
Consumption deprivation		0.119*
Health of HRP		0.018
Income poverty at 60% of median		0.111*
Adjusted R^2	0.370	0.394
N	2,739	2,739
*** p< .001, ** p,.01, * p<.1		

The rather skewed distributions for both the childhood deprivation and basic deprivation variables suggest caution in interpreting the substantive implications of such linear relationships. In Table 8 we show the risk of experiencing enforced deprivation in relation to at least one childhood item for categories of basic deprivation. For those children scoring zero on the basic deprivation index only 2% are in households experiencing childhood deprivation. This rises to 14% for those scoring 1 and to 23% for those scoring 2. Finally the figure peaks at 48% for basic deprivation scores of 3+. The final two rows focus on the 2+ basic deprivation threshold that makes up one part of the consistent poverty measure. For those below that threshold the rate of childhood deprivation is 4.2% and for those above the threshold the figure increases almost ninefold to 35.8%.

Table 8: Risk of Enforced Deprivation on at least one Childhood Item by Basic Deprivation	
	%
Basic Deprivation	
0	2.2
1	13.5

2	22.6
3+	47.9
0-1	4.2
2+	35.8

In Table 9 we look at the same relationship from a composition perspective. Of those individuals living in a household experiencing child deprivation 51% are in households that report deprivation on 3+ basic deprivation items. 22% and 15% are drawn from households experiencing an enforced lack of 2 and 1 respectively of the latter items. Finally only 12% are located in households that entirely avoid basic deprivation. The threshold of 2+ employed as part of the national consistent poverty measure allows us to capture close to three-quarters of those found in households experiencing childhood deprivation.

Table 9: Composition of those lacking at least one Childhood Item by Basic Deprivation	
	%
Basic Deprivation	
0	11.6
1	15.4
2	22.0
3+	51.0
Total	100
0-1	27.0
2+	73.0
	100

V. Poverty, Economic Vulnerability and Childhood Deprivation

In this section we directly address the issue of the extent to which population measures of poverty and economic vulnerability succeed in capturing individuals who are located in households experiencing childhood deprivation. The analysis reported in Table 10 compares risk levels for income poverty, consistent poverty and economic vulnerability for adults and

children under sixteen. In each case the levels are significantly higher for those in households with children. The disparity is least for income poverty where the respective figures are 13.2 and 17.1%. Differentiation is sharpest for consistent poverty with the rate for children being almost double for adults with the respective figures being 6.9 and 11.9%. Economic vulnerability occupies an intermediate position with respective figures of 19.3 and 30.2%.

Table 10: Risk of Poverty and Economic Vulnerability by Presence of Children

	No Children	Children
	%	%
Income Poverty	13.2	17.1
Consistent Poverty	6.9	11.7
Economic Vulnerability	19.3	30.2

In Table 11 we look at the risk levels for childhood deprivation broken down by poverty and vulnerability. Focusing first on income poverty, we observe that the likelihood of childhood deprivation rises from 7.5 to 32.2% as one moves from the non-poor to poor category. For the consistently poor, who form a significantly smaller part of the relevant population, the corresponding figures are 8.3 and 49.8%. Finally, for economic vulnerability where the group being identified is considerably larger than for income poverty the respective figures are 2.6 and 32.7%.[9] In Table 11 we also report the odds ratios from a set of logistic regressions that summarise the magnitude of the foregoing relativities.[10] The odds ratio rises from 5.9 for income poverty to 10.9 for consistent poverty and finally to 18.0 for economic vulnerability. Each of the population indicators proves to have considerable power in identifying those

[9] For the remainder of the analysis involving economic vulnerability estimates are based on employing the Latent Gold programme modal class procedures. Each observation is assigned to that latent class for which, given the manifest scores, the estimated classification probability is largest. Allocation to clusters is on the basis of modal assignment. This procedure misclassifies only 6.4 per cent of cases which is a very modest level and reduces the errors involved in allocating all individual to on class by 75.3%. The introduction of error into the analysis tends to attenuate the association between variables. Consequently the reported associations involving the latent class variable can be regarded as conservative estimates

[10] Standard errors have been estimated in all analyses to take into account the clustering of individuals within households

found in households experiencing childhood deprivation. Income poverty is a highly significant factor in identifying those children exposed to childhood deprivation. The consistent poverty measure identifies a sub-set of the income poor children who are exposed to a substantially higher risk of childhood deprivation. Greater discrimination is achieved by a more restricted focus. In the case of economic vulnerability a substantially sharper pattern of differentiation is achieved even when identifying a considerably larger disadvantaged sub-group.

Table 11: Risk of Enforced Deprivation on at Least 1 Childhood Item by Poverty & Vulnerability

	%	Odds Ratio	Nagelkerke R^2
Not Income Poor	7.5		
Income Poor	32.3	5.928***	0.126
Not Consistently Poor	8.3		
Consistently Poor	49.8	10.886**	0.153
Not Economically Vulnerable	2.6		
Economically Vulnerable	32.7	18.019***	0.305
N	2,739		

The combined impact of discriminatory power and the size of the group differentiated can be seen when we adopt a composition perspective in Table 12. Those below the income poverty line comprise 46% of those exposed to childhood deprivation. For the consistent poor this figure falls to 35% with the greater discriminatory capacity being outweighed by the smaller size of the disadvantaged group. For economic vulnerability the relevant figure rises to 84% reflecting both the sharper discriminatory power of this variables and size of the vulnerable group. [11]

[11] If we focus on those experiencing deprivation on two or more items we find the 100% are captured by the vulnerability measure.

Clearly, all three population measures prove to be powerful predictors of exposure to childhood deprivation. The overall evidence, particularly that relating to economic vulnerability, suggests that those exposed to childhood deprivation form a subset of those captured by the basic deprivation measure, While just over half of those exposed to childhood deprivation are not captured by the income poverty measure, almost two-thirds of this group are picked up by the economic vulnerability measure. By going beyond current income and identifying a group with a multidimensional risk profile in relation to income poverty, economic stress and, most particularly, basic deprivation we can identify over four-fifths of those exposed to childhood deprivation.

Table 12: Composition of those Experiencing Enforced Deprivation on at Least 1 Childhood Deprivation Item: Percentage of Child Deprived Below Relevant Poverty or Vulnerability Threshold

	% of Children Exposed to Childhood Deprived
Threshold	
Income Poverty at 60% of Median Income	46.1
Consistent Poverty at 60% of Median Income	34.7
Economically Vulnerable	84.4

Given the magnitude of the relationship, it is clear that the socio-economic factors associated with childhood deprivation will inevitable bear a close relationship to those predicting poverty and vulnerability at the level of the population as a whole. However, in order to explore this issue further, in the section that follows we will distinguish between those exposed to none and both forms of deprivation and those affected by only one or the other.

VI. Patterns of Population and Childhood Deprivation

In Table 13 we document the distribution of combinations of basic and childhood deprivation. Over 70% of children succeed in avoiding both forms of deprivation. In contrast only 8.5% are multiply deprived. The number experiencing basic deprivation but not

childhood deprivation reaches 15.4%. Finally only 3.2% are exposed to childhood deprivation only. Focusing solely on childhood deprivation would lead us to miss out the 15.0% of children who are exposed to basic deprivation but not to childhood deprivation. Given the likely consequences for children of exposure to such deprivation it is clear that the population measure is just as important for capturing the experience of children as of adults.

Table 13: Childhood and Basic Deprivation Typology Frequencies

	% of Children
Neither	72.9
Basic Only	15.4
Childhood Only	3.2
Both	8.5
Total	100
	2,877

In Table 14 we show the relationship between the deprivation typology and the national indicators of poverty and social exclusion. Focusing first on income poverty, we observe that for children classified as poor levels of adult only and multiple deprivation are very similar with respective figures of 23.9 and 23.7%. Childhood only deprivation remains a relatively rare phenomenon even among the income poor with an observed rate of 8.7%. For those consistently poor the risk level is close to 50% for both basic deprivation only and multiple deprivation while by definition it is zero for the remaining categories. Finally for the economically vulnerable we find that 28% are multiply deprived, 51% experience basic deprivation only, 4.4% childhood deprivation only and 16.5 per cent neither. It is noticeable that, while for all other categories of the typology there is a striking contrast in risk levels between the vulnerable and non-vulnerable categories, for the childhood deprivation there is almost nothing in way of differentiation between these groups.

Table 14: Childhood and Adult Deprivation Typology Risk Levels by Income Poverty, Consistent Poverty & Economic Vulnerability (percentage by column)						
	Income Poverty		Consistent Poverty		Economic Vulnerability	
	No	Yes	No	Yes	No	Yes
	%	%	%	%	%	%
Deprivation Typology						
Neither	79.0	43.6	79.4	0.0	97.4	16.5
Basic Only	13.6	23.9	12.3	49.8	0.0	50.9
Childhood Only	2.1	8.7	3.4	0.0	2.6	4.4
Both	5.4	23.7	4.9	50.2	0.0	28.3
Total	100	100	100	100	100	100
N	3,130		3,130		3,130	

The foregoing suggests that the factors associated with childhood deprivation overlap substantially with those shaping population patterns of poverty and social exclusion. In Table 15 we provide an initial exploration of this issue by breaking down risk levels for the categories of the deprivation typology by equivalent disposable household income quintile. From Table 15 we can see that the likelihood of experiencing neither form of deprivation increases systematically as one ascends the income hierarchy. The lowest probability is observed for the bottom quintile where the figure is 44%. It increases sharply to 71% for the second quintile and then rises steadily to 99% for the top quintile. For the multiple deprivation category the reverse pattern is observed In the bottom quintile 28% are found in this category. It then falls to 10% for the second quintile and gradually declines to less than 1 per cent for the top quintile. The basic only category also reveals a clear pattern of differentiation by income level. Among those in the bottom quintile 28% are found in this category. This falls to 16% for the second quintile and gradually declines to less than 1%. In clear contrast to the unambiguous role of income in these cases, for the childhood only category it plays a very modest role. While no one in the top quintile experiences such deprivation very little in the way of differentiation is observed across the remaining quintiles.

The highest rate of 7% is observed in the bottom quintile but the level in the fourth quintile of 3% is not a great deal lower.

Table 15: Childhood and Adult Deprivation Typology Risk Levels by Income Poverty

	Income Quintile				
	1	2	3	4	5
	%	%	%	%	%
Deprivation Typology					
Neither	44.1	70.7	76.0	87.3	98.5
Basic Only	27.5	15.8	18.0	8.7	0.9
Childhood Only	6.8	3.1	1.7	3.0	0.0
Both	27.5	10.4	4.3	0.9	0.6
Total	100	100	100	100	100
	680	608	605	528	454

In Table 16 we provide a more formal analysis of the impact of income and also take into account the role of the marital status of the household reference person (HRP) in reporting the results of a multinomial regression with those experiencing neither form of deprivation as the reference category. For the purposes of this analysis, given that levels of deprivation are close to zero for two of the three deprivation categories, we have made the fourth and fifth quintiles the reference category for the income variable. Focusing first on the contrast between the multiply deprived category and the reference group we can see that the net impact of quintile, as captured by the odds ratios, increases from 4.9 to 11.6 and finally 34.3 as one moves from the third to the bottom quintile. The net odds ratio for divorce is 7.8 and for separation and being single the respective figures are 2.8 and 3.6. For the adult deprivation category a similar but rather weaker pattern of differentiation is observed for income. The odds ratio for the bottom quintile reaches 8.5 with the figures for the second and third quintile being respectively 3.4 and 3.7. The impact of being single is similar to the earlier case. However, the impact of

Table 16: Multinomial Regression of Typology of Childhood and Adult Deprivation –

Reference Category is experiencing neither type of deprivation			
	Both	Basic Only	Childhood Only
	Odds Ratio	Odds Ration	Odds Ratio
Income Quintile			
Reference Category Quintiles 3 & 4			
Quintile 1	34.295***	8.453***	5.434*
Quintile 2	11.592***	3.412*	1.668
Quintile 3	4.886*	3.655*	0.969
Separated	2.833*	1.820	7.701**
Divorced	7.797***	3.739*	0.498
Single	3.682***	3.739**	5.036**
Reduction in Log Likelihood	752.0		
Degrees of freedom	18		
Nagelkerke R^2	0.290		
N	2,739		

being separated and divorced is weaker with the respective odds ratios being 1.8 and 3.7. Finally, for the childhood deprivation category the net impact of income is relatively weak. No significant differentiation is observed between the second and third quintile and the reference category. For the second and bottom quintile significant but modest odds ratios of 1.7 and 5.4 are observed. For the bottom quintile the observed odds ratio of 5.4 is somewhat lower than for basic deprivation only.

The most powerful influence in this case is clearly the HRP being separated where the odds ratio reaches 7.7. This is followed by the HRP being single with a coefficient of 5.0. However, unlike the earlier cases, being divorced has no significant impact. The differential impact of separation and divorce clearly requires a degree of further exploration which goes beyond the scope of this paper. While overall income and marital status, particularly divorce, appear to capture resource factors that influence childhood deprivation where such deprivation is separated from basic deprivation more specific aspects of relationship breakdown independent of resources appear to come in play.

VII. Conclusions

In light of widespread agreement that poverty and social exclusion should be understood as multidimensional phenomenon, in this paper we have sought to explore the practical implications of such an understanding in relation to widely employed indicators of such phenomena in Ireland. We have stressed that a clear distinction can be made between conceptualizing, measuring, understanding and responding to poverty and that while a cases can made for a multidimensional perspective for each of these it is not the same case. As we have noted, the choice between more and less multidimensional approaches requires an appropriate evaluation of evidence. In the case of the Irish consistent poverty measure we have argued that the existing evidence suggests that it succeeds in identifying a group of individuals who display a profile of multidimensional disadvantage in relation to a range of deprivation and economic stress outcomes.

A persistent critique of the current national measures of poverty and social exclusion comes for those who feel that they miss or obscure distinctive aspects of experience of groups at specific stages of the life-cycle. The criticism has been most vocal in relation to older people but children constitute another group of obvious concern. To date the critiques in the Irish case have been accompanied by relatively little in the way of systematic research documenting the alleged limitations of national or population measures. In this paper we have taken advantage of the inclusion of a special module on childhood deprivation in EU-SILC 2009 to explore such issues in more depth.

Our analysis of individuals living in households with children reveals that childhood deprivation is considerably less widespread than basic deprivation. Furthermore, the latter identifies over twice as many children exposed to deprivation as does the former. A concern with children's welfare does not automatically dictate the choice of the childhood measure over the national indicator of basic deprivation. Exploring the factors associated with

childhood deprivation it is clear that by far the most significant factor is basic deprivation with variables such as income poverty and consumption deprivation playing a modest additional role.

The national measures of income and consistent poverty and economic vulnerability prove to be powerful predictors of childhood deprivation with the discriminatory power increasing as one moves from the first to the last. Both income poverty and consistent poverty allow us to identify over 40% of those exposed to childhood deprivation and this figure increases to over 80% for economic vulnerability. Clearly the national poverty indicators perform rather well in predicting childhood deprivation. Furthermore, as the evidence relating to economic vulnerability indicates, whatever limitations can be observed in this respect, appear to be in large part related to their limitations in capturing wider command of resources and longer term risk of exposure to deprivation and stress rather than the role of non-material factors.

In order to explore these issues further, we constructed a typology of deprivation capturing the combinations of adult and basic deprivation. Taking those experiencing neither type of deprivation as the benchmark we find that those experiencing both types of deprivation are sharply differentiated from the reference group in terms of position in the income hierarchy. For those exposed to adult deprivation only income is also an important predictor but is significantly less powerful than in the former case. Marital status of the HRP is also a significant factor in both cases. For childhood deprivation only income has a substantially weaker effect and by far the most powerful influence is the household reference person being separated. It is followed by being single while divorce has no effect. As we have indicated, such differential effects require further in-depth exploration.

Overall our analysis leads us to agree with McKay and Collard's (2004) conclusion that those children experiencing childhood deprivation are a sub-set of those located in households

exposed to basic deprivation rather than constituting a distinct sub-group. Adopting a broad and dynamic perspective on household resources and deprivation enables us to capture the large majority of individuals of such children and the population. Conversely restricting our attention to childhood deprivation, as captured by the indicators in the EU-SILC module, would lead us to miss out on larger numbers of children living in households experiencing basic deprivation. [12]

Our analysis does reveal a group constituting approximately 3% of children comprising just over one quarter of those exposed to childhood deprivation where rather different factors to those captured by the national indicators of poverty and social exclusion come into play. However, it is highly questionable whether one would wish to recalibrate the national measures of poverty and social exclusion in order to capture phenomenon which seem to be, in significant part, a consequence of the specificities of partnership dissolution rather than material circumstances. Instead it would seem more appropriate to accept this as an instance of the operation of multivariate influences only some of which we can hope or indeed would wish to capture in national indicators of poverty and social exclusion.

Similarly, it is important to keep in mind our early distinction between measuring and understanding poverty in the case of children. As review of the evidence by Ridge (2009) makes clear, an in-depth understanding of the manner in which children experience poverty and social exclusion would require that we take into account the coping strategies of both children and parents and the institutional contexts, such as schools and neighbourhoods, which play a substantial role in shaping the qualitative nature of that experience. Notwithstanding such qualifications, it is clear that the finding of our analysis support the view that the national measure of poverty and social exclusion that have been employed in

[12] Recent evidence for the UK Household Longitudinal Study suggests that household deprivation is a more powerful predictor of children's life satisfaction. Although both are insignificant when one controls for other factors (Knies, 2011).

Ireland are largely successful in capturing childhood deprivation. While there is clearly a value in supplementing such measures with child specific measures, it would be extremely unwise to rely solely on the latter.

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