

Social Inclusion Report No. 2

# Understanding Childhood Deprivation in Ireland

Dorothy Watson  
Bertrand Maître  
Christopher T. Whelan

Published by

Department of Social Protection  
Gandon House, Amiens Street  
Dublin 1, Ireland

and

The Economic and Social Research Institute  
Whitaker Square, Sir John Rogerson's Quay  
Dublin 2, Ireland

ISBN: 978-1-908109-11-8  
Department of Social Protection 2012

Dublin, Ireland, April 2012



## Authors:

### Dorothy Watson

Dorothy Watson is Associate Research Professor at the ESRI and the Department of Sociology, Trinity College Dublin. Dorothy is the ESRI Programme Co-ordinator for Research on Social Inclusion.

More information on the author is available online at: [http://www.esri.ie/staff/view\\_staff\\_by\\_alphabetica/view/index.xml?id=71](http://www.esri.ie/staff/view_staff_by_alphabetica/view/index.xml?id=71)

### Bertrand Maître

Bertrand Maître is a Research Officer at the ESRI.

More information on the author is available online at: [http://esri.ie/staff/view\\_all\\_staff/view/index.xml?id=78](http://esri.ie/staff/view_all_staff/view/index.xml?id=78)

### Christopher T. Whelan

Christopher T. Whelan is Professor Emeritus in the School of Sociology, UCD and a senior fellow at the Geary Institute. Chris was formerly a Research Professor at the Economic and Social Research Institute.(ESRI).

More information on the author is available online at: <http://www.ucd.ie/geary/aboutus/people/christopherwhelan/>

## This report is available online at:

<http://www.socialinclusion.ie/publications.html>

&

<http://www.esri.ie>

The **Research briefing based on the Executive Summary** are available online in English and Irish at:

[http://www.socialinclusion.ie/publications/documents/2012\\_04\\_26\\_ChildDevBriefEng.pdf](http://www.socialinclusion.ie/publications/documents/2012_04_26_ChildDevBriefEng.pdf)

&

[http://www.socialinclusion.ie/publications/documents/2012\\_04\\_26\\_ChildDevBriefIrish.pdf](http://www.socialinclusion.ie/publications/documents/2012_04_26_ChildDevBriefIrish.pdf)

This Report was commissioned from the Economic and Social Research Institute by the Department of Social Protection, as part of an on-going research programme co-ordinated by the Social Inclusion Division to monitor poverty trends under the *National Action Plan for Social Inclusion 2007-2016 (NAPinclusion)*. This report is jointly published by the Department and the ESRI as part of the Social Inclusion Report series. The author(s) are solely responsible for the views, opinions, findings, conclusions and/or recommendations expressed, which are not attributable to the ESRI who does not itself take institutional policy positions, nor are the views attributable to the Department. The researchers are responsible for the accuracy of the research and all reports are peer-reviewed.

## Authors' Acknowledgements

The authors are grateful to Jim Walsh, Kasey Treadwell Shine and Deirdre Bodkin of the Social Inclusion Division of the Department of Social Protection for comments on an earlier draft of this paper. We received very insightful comments on an earlier draft from four anonymous reviewers, and from ESRI colleagues, to whom we extend our thanks. We would like to thank the participants in a workshop, organised by the Social Inclusion Division, on 12/12/2011 for many useful suggestions. We thank Bernadette Ryan for carefully reading and commenting on the final draft. We owe a debt of gratitude to the Central Statistics Office (CSO) for facilitating access to the research microdata file, and particularly to Marion McCann who has always been extremely helpful in responding to our questions. We thank the CSO interviewers for their professionalism and the high quality of their work. Finally, we thank the respondents to the SILC survey for giving so generously of their time to make this research possible. Any remaining errors and omissions are the sole responsibility of the authors.

## Table of Contents

<b>Executive Summary .....</b>	<b>i</b>
<b>Introduction.....</b>	<b>1</b>
<b>Chapter 1: The Context.....</b>	<b>3</b>
1.1 Introduction.....	3
1.2 Poverty and Children.....	3
1.3 The Policy Context .....	6
1.4 Lifecycle Approach .....	6
1.5 The Multidimensional Concept of Poverty	8
1.6 Summary	11
<b>Chapter 2: Trends and Patterns in Child Poverty</b>	<b>12</b>
2.1 Introduction	12
2.2 Lifecycle and Income Distribution	12
2.3 At-risk-of-poverty and Age Group of Child	13
2.4 At-risk-of-poverty by Age Group of Child under Different Equivalence Scales	14
2.5 Basic Deprivation and Age Group of Child	19
2.6 Consistent Poverty and Age Group of Child	21
2.7 Irish Income Poverty and Deprivation in European Perspective	22
2.8 Economic Stress by Poverty Typology	24
2.9 Summary	26
<b>Chapter 3: Child-specific Measures of Deprivation .....</b>	<b>27</b>
3.1 Introduction	27
3.2 The Child-specific Items	28
3.3 The Child-specific Items by Age Group of Child	31
3.4 Deprivation on Child-specific Items by Income Level	32
3.5 Deprivation on Child-specific Items in Europe	34
3.6: Level of Child-specific Deprivation	34
3.7 Summary	36
<b>Chapter 4: Risk Factors for Child-specific Deprivation.....</b>	<b>37</b>
4.1 Introduction	37
4.2 Child-specific Deprivation by Gender and Age of Child	38
4.3 Child-specific Deprivation by Number of Children in Household	39

4.4 Child-specific Deprivation by Age of Mother	40	A1.4 At-risk-of-poverty (Income Poverty or ARP)	85
4.5 Child-specific Deprivation by Education Level of Mother	41	A1.5 Irish Dimensions of Deprivation	85
4.6 Child-specific Deprivation by Nationality of Mother	42	A1.6 Consistent Poverty	88
4.7 Child-specific Deprivation by Family Type	43	A1.7 EU Measure of Deprivation	89
4.8 Child-specific Deprivation by Disability of Parents	44	<b>Appendix 2: Measurement and Analysis Techniques</b>	<b>92</b>
4.9 Child-specific Deprivation by Work Status of Parents	45	A2.1 Handling Missing Information on Child-specific Deprivation Items	92
4.10 Child-specific Deprivation by Social Class	47	A2.2 Analysis Techniques	93
4.11 Child-specific Deprivation by Household Income Level	48	A2.3 Constructing a Child-specific Deprivation Scale	95
4.12 Conclusions	49	A2.4 Economic Vulnerability	98
<b>Chapter 5: Child-specific Deprivation and Household Poverty</b>	<b>51</b>	<b>Appendix 3: Detailed Logistic Regression Table</b>	<b>99</b>
5.1 Introduction	51	<b>References</b>	<b>101</b>
5.2 Child-specific Deprivation and Dimensions of Deprivation	51	<b>Glossary</b>	<b>107</b>
5.3 Child-specific Deprivation and Basic Deprivation	55		
5.4 Child-specific Deprivation, At-risk-of-poverty, Consistent Poverty and Economic Vulnerability	58		
5.5 Patterns of Child-specific and Basic Deprivation: Overlap and Non-Overlap	61		
5.6 Overlap between Child-specific Deprivation and (1) Income Poverty (At-risk-of-poverty) and (2) Consistent Poverty	64		
5.7 Risk Factors for Child-specific and Basic Deprivation among Children	65		
5.8 Summary	70		
<b>Chapter 6: Conclusion and Policy Implications</b>	<b>72</b>		
6.1 Introduction	72		
6.2 Income Poverty, Deprivation and Consistent Poverty among Children	72		
6.3 Nature and Prevalence of Child-specific Deprivation	73		
6.4 Risk Factors for Child-specific Deprivation	74		
6.5 Child-specific Deprivation and Household Poverty	74		
6.6 Child-specific Deprivation and Basic Deprivation: Overlap	76		
6.7 Policy Implications	78		
<b>Appendix 1: Technical Note on Data and Measurement</b>	<b>84</b>		
A1.1 The SILC Data	84		
A1.2 Unit of Analysis, Income, Poverty and Deprivation Measures	84		
A1.3 Income Measure	84		

## List of Tables and Figures

Table A: Risk Factors for Combinations of Basic and Child-specific Deprivation (significant odds ratios).....	viii
Figure 2.1: Percentage of Children, Adults of Working Age and Older Adults in each Income Decile (equivalised), 2009.....	13
Figure 2.2: At-risk-of-poverty for Children by Age Group, 2004-2010 .....	14
Table 2.1: Alternative Equivalence Scales to Control for Household Size and Composition.....	16
Figure 2.3: Per Capita Disposable Income by Age Group of Child, 2004-2009 .....	16
Figure 2.4: Disposable Household Income (adjusted using square root of household size) by Age Group of Child, 2004-2009 .....	17
Table 2.2: Average Number of Children Under 18 in Household by Age of Child.....	18
Table 2.3: Nature of Deprivation (per cent lacking each Item) for Total Population and Children by Age Group of Child, 2004-2009 (percentages).....	19
Figure 2.5: Percentage of Children Lacking 2 or more Basic Items by Age of Child, 2004-2010 .....	20
Figure 2.6: Consistent Poverty by Age of Children, 2004-2010 .....	21
Figure 2.7: Income Poverty in Europe (EU Measure) by Age of Child, 2009 .....	22
Figure 2.8: Material Deprivation in Europe (EU Measure) by Age of Child, 2009 .....	24
Table 2.4 : Measures of Subjective Economic Stress.....	25
Figure 2.9: High Economic Stress by Poverty Typology and Age of Child (%).....	25
Table 3.1: Child-specific Deprivation Items.....	29
Table 3.2: Percentage who Have, who Lack because they Cannot Afford and who Lack Each Item for Other Reasons (children age 2-15) .....	30
Table 3.3: Percentage Experiencing Enforced Lack of Each Item by Age of Child .....	32
Table 3.4: Percentage of Children aged 2 to 15 Experiencing Enforced Lack of Each Item by Income Band (quintiles) .....	33
Figure 3.1: Percentage Lacking Selected Child-specific Items in Selected European Countries, EU-SILC 2009.....	34
Table 3.5: Percentage of Child-specific Items Lacked because Cannot Afford by Income Quintile (children aged 2 to15).....	35
Table 3.6: Number of Child-specific Items Lacked because Household Cannot Afford Them by Age of Child.....	35
Figure 4.1: Observed and Expected Differences in Level of Child-specific Deprivation by Age of Child.....	39
Figure 4.2: Observed and Expected Differences in Level of Child-specific Deprivation by Number of Children in Household .....	40
Figure 4.3: Observed and Expected Child-specific Deprivation by Age of Mother .....	41
Figure 4.4: Observed and Expected Child-specific Deprivation by Mother's Education .....	41
Figure 4.5: Observed and Expected Child-specific Deprivation by Nationality of Mother .....	42

Figure 4.6: Observed and Expected Child-specific Deprivation by Family Type .....	43
Figure 4.7: Observed and Expected Child-specific Deprivation by Disability, of Married Mothers and Married Fathers .....	44
Figure 4.8: Observed and Expected Child-specific Deprivation by Employment of Parent(s) ....	46
Table 4.1: Household Income quintile by Work Status of Married Parents.....	47
Figure 4.9: Observed and Expected Child-specific Deprivation by Social Class of the Household Reference Person .....	47
Figure 4.10: Observed and Expected Child-specific Deprivation by Household Income Quintile .....	49
Table 5.1: Pearson Correlations of Childhood Deprivation Score with Deprivation Dimensions, Income Poverty (ARP) and Overcrowding .....	52
Table 5.2: OLS Regression of Childhood Consumption Deprivation on National Income, Deprivation and Poverty Measures (standardised coefficients).....	53
Table 5.3: Deprivation on Other Dimensions and Multiple Deprivation for All Children and Children Experiencing Child-specific Deprivation, 2009 .....	55
Table 5.4: Distribution of Child-specific and Basic Deprivation.....	56
Table 5.5: Risk of Enforced Deprivation on at least One Childhood Item by Basic Deprivation ..	57
Table 5.6: Composition of Those Lacking at least One Child-specific Item by Basic Deprivation .....	57
Table 5.7: Risk of Poverty and Economic Vulnerability by Presence of Children .....	58
Table 5.8: Risk of Enforced Deprivation on at Least 1 Child-specific Item by Poverty and Vulnerability .....	59
Table 5.9: Percentage of Children Experiencing Child-specific Deprivation who are Income Poor, Consistently Poor or Economically Vulnerable .....	60
Table 5.10: Child-specific and Basic Deprivation Typology (Percentages).....	61
Table 5.11: Childhood and Basic Deprivation Typology Risk Levels by Income Poverty, Consistent Poverty and Economic Vulnerability (percentage by column).....	62
Table 5.12: Child-specific and Basic Deprivation Typology Risk Levels by Income Level.....	63
Figure 5.1: Overlap between National Indicators (at-risk-of-poverty and consistent poverty) and Child-specific Deprivation .....	64
Table 5.13: Odds Ratios for Model of Overlap between Child-specific and Basic Deprivation (multinomial logistic regression; reference category=not deprived according to either measure).....	66
Table 6.1: Risk Factors for Combinations of Basic and Child-specific Deprivation (odds ratios, compared to not deprived).....	77
Table A1.1: Deprivation Items from the SILC Questionnaire .....	88
Table A1.2: Basic Deprivation Items from the SILC Questionnaire .....	89
Table A1.3: List of Deprivation Items Used in the Irish and EU Deprivation Measure .....	90
Table A2.1: Income Poverty (ARP), Basic Deprivation and Consistent Poverty among Children by Whether Child-specific Deprivation Items are Missing (children aged 2 to 15) .....	92
Table A2.2: Reliability of Childhood Deprivation Items (household level).....	95
Figure A2.1: Factor Structure of Items Measuring Child-specific Deprivation .....	97
Table A3.1: Odds Ratios from Logistic Regression Models for Child-Specific Deprivation .....	99



## Foreword from the Minister

I am pleased to be able to be associated with the report *Understanding Childhood Deprivation in Ireland*. The report was commissioned by my Department and uses data from the 2009 Statistics on Income and Living Conditions (EU-SILC) survey to examine child-specific deprivation – deprivation as it specifically affects children.

We already know from EU-SILC data that children are at greater risk of consistent poverty than the overall population. Addressing child poverty is a Government priority, as reflected in a range of commitments in the *Programme for Government* and in a number of policy documents. Children are one of the lifecycle groups covered by the *National Action Plan for Social Inclusion 2007-2016*. The long-term effects of child poverty contribute to poorer children's outcomes (e.g. in educational achievement, health, emotional and behavioural problems). They also contribute to the intergenerational cycle of poverty.

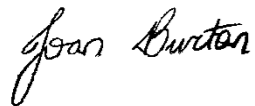
But more than this, we need to consider poverty in the context of social exclusion. This is not just about low income but also includes broader issues of living standards, social participation and well-being. This is why measuring children's deprivation (which goes beyond income) is important for a fuller understanding of the dynamics of poverty and social exclusion as they affect children now and into the future.

The report provides crucial information to help us better understand the current situation of children experiencing poverty and deprivation in Ireland. For the first time on a national sample, the authors are able to examine both national household-based measures of poverty and child-specific deprivation. I was particularly struck by the finding that less than three per cent of children are exposed to child-specific deprivation only, which suggests that many parents can and do protect their children from some of the worst effects of poverty. The report also explored risk factors for those exposed to child-specific deprivation, which will help to inform better policy responses for this small but important group.

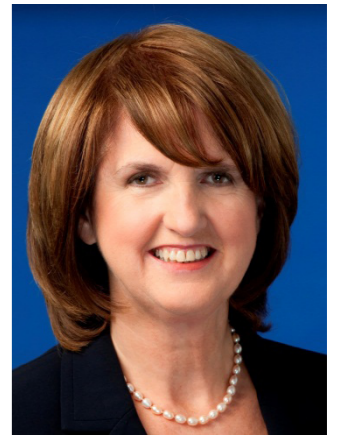
The report found that the national measures of basic deprivation and consistent poverty do identify children who are also experiencing child-specific deprivation, but to different degrees I was struck by the fact that over three-quarters of children experiencing child-specific deprivation are in households experiencing basic deprivation, which does confirm the practical usefulness of this national poverty measure in targeting this group.

Although the level of household income is a very important predictor of deprivation among children, the results of this study confirm that protecting children from all forms of deprivation and consistent poverty is much broader than just an income support issue. The report findings are intended to assist policy makers and service deliverers in supporting the achievement of the Department's and the Government's goals to address poverty and social exclusion, particularly for children. Addressing childhood deprivation and poverty will require a multi-dimensional, whole-of-Government approach, including for example examining activation strategies and supports for parents, access to services and innovative measures.

Finally, I wish to thank the authors of the report, Dorothy Watson and Bertrand Maître of the ESRI and Chris Whelan from UCD. Through their detailed, comprehensive and thorough work they have provided in this report important new insights and information to understand current childhood deprivation in Ireland. I wish to acknowledge the work of my Department's Social Inclusion Division in guiding this report and overseeing its publication in conjunction with the ESRI.



Joan Burton TD  
Minister for Social Protection



## Réamhrá ón Aire

Is áthas liom bheith bainteach leis an tuarascáil Understanding Childhood Deprivation in Ireland. Mo Roinn féin a choimisiúnaigh an tuarascáil, agus úsáidtear inti sonraí ó shuirbhé Staitisticí ar Ioncam agus ar Dhálaí Maireachtála (EU-SILC) na bliana 2009 chun díothacht sainlinbh, díothacht a bhaineann le leanaí mar ghrúpa ar leith, a scrúdú.

Is eol dúinn cheana féin ó shonraí EU-SILC gur mó an baol i gcás leanaí seachas i gcás an daonra trí chéile go mbeidh siad ag maireachtáil faoi bhochtaineacht leanúnach. Tosaíocht Rialtais is ea é díriú ar bhochtaineacht leanaí, mar a léirítear i ngealltanais éagsúla a tugadh sa Chlár Rialtais agus i roinnt doiciméad beartais. Tá leanaí ar áireamh mar ghrúpa saolré sa Phlean Náisiúnta Gníomhaíochta um Chuimsiú Sóisialta 2007-2016. Bíonn tionchar ag éifeachtaí fadtéarmacha na bochtaineachta ar thorthaí leanaí i gcoitinne (ó thaobh gnóthachtáil oideachais, sláinte, fadhbanna mothúchánacha agus iompraíochta de). Is dá dheasca, leis, a chothaítear timthriall bochtaineachta ó ghlúin go glúin.

Ach níos tábhachtaí ná sin ar fad is ea an bhochtaineacht a bhreithniú ó thaobh cuimsiú sóisialta de. Áirítear air sin ní amháin teacht isteach ach saincheisteanna níos ginearálta eile, leis, i dtaca le caighdeáin mhaireachtála, rannpháirtíocht shóisialta agus folláine. Sin an fáth gur fiú díothacht sainlinbh (a chuimsíonn rudaí seachas teacht isteach) a thomhas chun tuiscint níos iomláine a fhail ar dhinimic na bochtaineachta agus an chuimsithe shóisialta de réir mar a théann sí i bhfeidhm ar leanaí anois agus mar a rachaidh sí i bhfeidhm sna blianta amach romhainn.

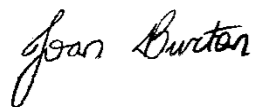
Soláthraítear sa tuarascáil seo eolas ríthábhachtach a thabharfaidh tuiscint níos fearr dúinn ar staid reatha na leanaí sin atá bocht agus díothaithe in Éirinn. Den chéad uair ar shampla náisiúnta, bhí ar chumas na n-údar scrúdú a dhéanamh ar thomhais bhochtaineachta teaghlaigh agus ar dhíothacht sainlinbh i dteannta a chéile. Fíric amháin a chuaigh i gcion orm féin ná gur lú ná trí faoin gcéad líon na leanaí atá nochta do dhíothacht sainlinbh, rud a chuireann i bhfios go gcosnaíonn formhór na dtuismitheoirí a leanaí ó na héifeachtaí is measa a ghabhann le bochtaineacht. D'fhéach an tuarascáil, leis, ar na tosca riosca i gcás leanaí a nochtar do dhíothacht sainlinbh, a chabhróidh chun freagairt bheartais níos fearr a cheapadh don ghrúpa beag tábhachtach seo.

## Executive Summary

Fuair an tuarascáil go n-aithnítear díothacht sainlinbh sna tomhais náisiúnta de dhíothacht bhunúsach agus de bhochtaineacht leanúnach, ach chuaigh sé i bhfeidhm orm, ar shlite éagsúla, go mbaineann trí cheathrú de na leanaí atá nochta do dhíothacht sainlinbh le teaghlaigh atá díothaithe ar leibhéal bunúsach, rud a dheimhníonn a úsáidí atá an suirbhé seo mar bheart praiticiúil chun díriú ar an ngrúpa seo.

Cé gur táscaire tábhachtach é teacht isteach teaghlaigh agus díothacht i measc leanaí á meas, deimhníonn torthaí an staidéir seo gur gá freagairt níos leithne ná tacaíochtaí ioncaim chun leanaí a chosaint ar gach cineál díothachta agus ar bhochtaineacht leanúnach. Tá torthaí na tuarascála ceaptha chun cuidiú le lucht déanta beartais agus le lucht seachadta seirbhísí spriocanna na Roinne agus an Rialtais maidir le dul i gceann na bochtaineachta agus an chuimsithe shóisialta a bhaint amach, go háirithe i gcás leanaí. Chun díriú ar dhíothacht agus ar bhochtaineacht leanaí, beidh gá le cur chuige iltoiseach ón Rialtas iomlán, lena n-áirítear féachaint ar straitéisí gníomhachtúcháin agus ar thacaíochtaí do thuismitheoirí, ar theacht ar sheirbhísí agus ar bhearta nuálacha.

Mar fhocal scoir, is mian liom buíochas a ghabháil le húdair na tuarascála, Dorothy Watson agus Bernard Maître ón ESRI agus Chris Whelan ó UCD. A bhuí dá n-obair mhionsonraithe, cuimsitheach agus críochnúil tá léargas agus eolas curtha ar fáil acu sa tuarascáil seo a thabharfaidh tuiscint níos fearr dúinn ar dhíothacht leanaí in Éirinn. Is mian liom a admháil, leis, go ndearna Rannóg um Chuimsiú Sóisialta mo Roinne féin a gcion leis an tuarascáil seo a threorú agus le foilsiú na tuarascála a mhaoirsiú in éineacht leis an ESRI.



Joan Burton TD

Aire Coimirce Sóisialaí

### Introduction

In Ireland, as in many European countries, the rate of poverty and deprivation is higher for children than it is for adults. This is important, not only because of a concern with the well-being of children but also because childhood deprivation can have long-term negative consequences that persist into adulthood. This report examines childhood deprivation in Ireland in 2009 in the context of this concern for the current well-being of children and their future prospects.

There are two further policy issues that form a background to this study. The first is the concern that household level measures of poverty and deprivation may not adequately identify children who are socially excluded because of a lack of resources. The second context is the widespread acknowledgement that social exclusion is multidimensional and that addressing social exclusion will require an approach that goes beyond a focus on income alone.

The goal of this report is to address five questions:

1. How much child-specific deprivation is there in Ireland and what form does it take?
2. What are the main risk factors for child-specific deprivation?
3. How well do the national measures of basic deprivation and consistent poverty identify children who are deprived?
4. How do the risk factors for child-specific deprivation differ from the risk factors for basic household-level deprivation?
5. What are the implications for policy?

There is now widespread recognition of the need for measures of social exclusion to go beyond a focus on income alone. In this context, the European Commission has developed a number of non-monetary indicators of social exclusion. The analysis in this report contributes to this endeavour by demonstrating how a focus on child-specific deprivation can provide important insights into the factors that enable parents to protect the interests of their children.



## Data

The 2009 CSO SILC dataset contains a special module on child-specific deprivation. This provides a unique opportunity to investigate the dimensionality of deprivation affecting children in the context of the Irish national measures of income poverty (at-risk-of-poverty), deprivation and consistent poverty.<sup>1</sup> The measure of child-specific deprivation is based on 13 questions answered by the householder regarding goods, services and activities the child does not have or cannot do because the household cannot afford them. These include adequate food and clothing, books, toys and games, leisure equipment, school trips and doctor/dentist visits. For the analysis of child-specific deprivation we focus on children aged 2 to 15, as this is the group for whom the childhood deprivation measures are recorded.

## Key Findings

### Background: poverty, deprivation and consistent poverty among children

Before turning to child-specific deprivation, we examine patterns and trends among children in levels of income poverty (using the national measure of at-risk-of-poverty), deprivation and consistent poverty. In this section, we include all children (aged 0 to 17), because we are not limited to the group for which the child-specific items are recorded.

Turning first to at-risk-of-poverty, children have a higher rate of at-risk-of-poverty throughout the 2004 to 2010 period than the general population. The at-risk-of-poverty rate for both adults and children tended to decline between 2004 and 2008; remained relatively stable between 2008 and 2009 and then rose in 2010. In 2010, the at-risk-of-poverty rate for children was 20 per cent compared to 16 per cent for the total population. Compared to the 27 EU countries, child poverty rates in Ireland are towards the middle of the distribution, but are higher than most of the EU 15 countries.

We conducted some detailed analysis of at-risk-of-poverty by age of child. We found a higher rate of at-risk-of-poverty for older children (aged 12 to 17) and the lowest rate for pre-school age children (aged 0 to 4). Part of the pattern by age of child is due to family size and part is due to the way incomes are adjusted to take account of the needs of the household based on size and composition (i.e. the

<sup>1</sup> Income poverty, also known as 'at-risk-of-poverty', consists in having a household income (adjusted for household size and composition) below 60 per cent of the median. Deprivation consists in being unable to afford goods or services regarded as normative in society. Basic deprivation is an Irish measure that consists in being unable to afford two or more of eleven basic goods and services. Consistent poverty is an Irish national indicator which consists in being both income poor and deprived.

equivalence scale).<sup>2</sup> This adjustment implies that children over age 14 require as much household income as adults in order to achieve an adequate standard of living. Therefore a higher level of household income would be needed to keep a household with teenage children above the poverty threshold. Family size is important in differentiating between the poverty risk of pre-school and primary school children. Primary school children are more likely to have younger brothers and sisters than preschool children. Since the household size tends to be larger, a higher total household income would be needed to keep the family out of poverty.

The national measure of basic deprivation is based on an enforced lack (cannot afford) of 11 basic items, including food, clothing, heating, furniture and social participation. All of these items relate to the household as a whole or to adult members of the household. The overall basic deprivation rate fell from 2004 to 2007 and rose between 2007 and 2010. Using the national measure of basic deprivation, we see a higher deprivation rate for children than for adults. In 2010, some 30 per cent of children were in households experiencing basic deprivation compared to 23 per cent of the general population. However, there is no clear pattern by age of child. The rate for pre-school age children has been relatively stable for most of the period, while the rate for older children has fluctuated over time.

We used the EU indicator of material deprivation to compare the situation of children in Ireland in 2009 to the situation of children in other European countries. This indicator differs from the Irish indicator of basic deprivation in using different items, but like the Irish indicator the items are general (e.g. car, annual holiday, capacity to meet unexpected expenses) rather than child-specific. Material deprivation is based on lacking 3 or more of 9 items. The results indicated that the rate of material deprivation among children is high in Ireland relative to other countries in the EU 15, but is below the rate in most new Member States.

Consistent poverty, the national measure based on being both income poor and experiencing basic deprivation, is higher for children than for adults. By 2010, 8 per cent of children were in consistent poverty, compared to 6 per cent of the general population. There were also differences by age of child. The consistent poverty rate in 2010 was lowest (at 4 per cent) for children under age 5 and highest (12 per cent) for children in the 12 to 17 age group.

<sup>2</sup> This adjustment is accomplished by equivalence scales that assign a different 'weight' to household members. The weight is intended to take account of the greater needs of larger households while also taking account of the economies of scale associated with living together. Equivalence scales generally assign a lower weight to children under age 14.

It is worth noting that the measures of basic deprivation and at-risk-of-poverty give a different picture of the pattern by age of child. With the at-risk-of-poverty measure, the oldest children (aged 12 to 17) appear as having a higher risk than the younger children. This is true of the Irish measure and of the EU measure, which uses a slightly different income equivalence scale. However, in Ireland, there is no clear pattern in basic deprivation by age of child. Using the EU measure for 2009, the oldest Irish children actually have the lowest rate of material deprivation. This lack of consistency between the child age patterns for at-risk-of-poverty and deprivation suggests that the equivalence scales may be either 'overcompensating' for the higher costs associated with children in their mid to late teens, or making insufficient allowance for the costs associated with younger children (see Chapter 2).

### How much child-specific deprivation is there?

As noted above, the indicator of child-specific deprivation is based on responses from the householder regarding what the children have or are able to do. After testing a number of possible items, we develop an index of child-specific deprivation based on the 13 items across a number of dimensions: food (fruit, three balanced meals daily, protein meals); clothing (properly-fitting shoes, new clothes); play (games, outdoor leisure equipment, regular leisure activity); social participation (celebrations, inviting friends home, school trip or activity); and educational (books, place to do homework).

We constructed a scale based on children lacking any of these 13 items because the household cannot afford them. On this basis, 13 per cent of children – or just over one in eight – lack one or more of these items. There are no significant differences by age group of the child in the percentage lacking one or more items. However, pre-school age children are more likely (7 per cent) to lack two or more items than older children (5 per cent). There is also a strong relationship to the income level of the household. Looking at the results by household income quintile, adjusted for household size and composition, we found that 30 per cent of children in the lowest income group lack one or more of the child-specific items compared to only 2 per cent of children in the highest income group.

### What are the main risk factors for child-specific deprivation?

Using the constructed scale as a basis for analysis, we examined whether particular groups of children may be more at risk of child-specific deprivation. We considered characteristics of the child (gender, age group); characteristics of the family (number of children, lone parent or couple household); characteristics of the mother (age,

education, nationality and marital status); the employment social class of the parents (or parent, in lone parent households); and the income level of the household.

Before controlling for other factors, the rates of child-specific deprivation are particularly high (over 20 per cent) for the following groups of children:

- where the mother is under age 29
- where the mother has a disability
- where the mother has no educational qualifications (i.e. primary education or less)
- where the child lives with just one parent (rather than a couple)
- where the father is not at work<sup>3</sup>
- where the household social class is unknown. (Many of these households are those where the householder has never worked for pay.)
- where the household income is in the bottom quintile across households with children.

On the other hand, before controlling for other characteristics the rates are particularly low (under 8 per cent) for the following groups of children:

- for children in one-child households
- where the mother has third level education
- where the parents are married
- where the father is in employment or the mother is in employment<sup>4</sup>
- all social classes except the lower manual/service/sales and 'unknown' social classes
- where household income is in the top two quintiles across households with children.

Many of these factors are inter-related. For instance, we know that age of mother, education of mother and lone parenthood are associated and we would like to see which of these is driving the pattern. We conducted an analysis to disentangle these factors to identify those that are most significant in driving patterns of risk. Controlling for other factors, the rate of child-specific deprivation remains significantly higher for many of the groups listed above. However, the differences by age of the mother are no longer statistically significant, and there are no significant differences by age group or gender of the child, or between urban and rural areas.

<sup>3</sup> In the vast majority of cases where the father works, the work is full-time.

<sup>4</sup> In the vast majority of cases where the father is in employment, the work is full-time. Mother's part-time employment decreases risk, and full-time employment decreases the risk to an even greater extent

The following remain significantly associated with a higher risk of child-specific deprivation, controlling for other factors:

- where the mother has no educational qualifications
- in lone-parent households where the parents were formerly married
- where the household reference person has never worked
- where the household income is in the bottom quintile.

Low income is the strongest predictor of child-specific deprivation. For example, the risk of child-specific deprivation is seven times as high among children in the bottom fifth of the income distribution compared to children in the top fifth.

### **How well do national measures of basic deprivation and consistent poverty identify children who are deprived?**

We saw above that children are more likely than adults to be in deprived households, according to the basic deprivation measure. The percentage of children exposed to basic deprivation is considerably higher than the percentage of children exposed to child-specific deprivation. In 2009, 24 per cent of children were in households experiencing basic deprivation while 13 per cent of children were in households experiencing child-specific deprivation.

There is considerable overlap between the two. However, since the percentage of children exposed to basic deprivation is higher, there will be a sizeable group that is exposed to basic deprivation only. The proportion experiencing basic-only deprivation is 14 per cent while less than 3 per cent of children are exposed to child-specific deprivation only.

About 74 per cent of children are not deprived according to either the child-specific or the basic deprivation measure while almost 10 per cent are multiply deprived (deprived according to both indicators). This means that if we focus solely on child-specific deprivation, we would be ignoring a relatively large group of children (14 per cent of children) who are exposed to basic deprivation but not to child-specific deprivation. Given research findings on the impact of household poverty on children, it would be a mistake to limit our concern to those children experiencing child-specific deprivation.

An alternative way to look at the overlap between the two measures is from a composition perspective. How many of the children experiencing child-specific deprivation are identified by the basic deprivation indicator? Nearly eight out of

ten (78 per cent) children experiencing child-specific deprivation are in households experiencing basic deprivation. This means that the basic deprivation indicator would capture the majority of children exposed to child-specific deprivation.

Child-specific deprivation is also strongly associated with both income poverty (at-risk-of-poverty) and consistent poverty. The association with at-risk-of-poverty is not as strong as was the case for basic deprivation, however. Only 46 per cent of children exposed to child-specific deprivation are in households below the at-risk-of-poverty threshold. In the case of consistent poverty, the overall percentage of children in consistently poor households (8 per cent) is lower than the percentage of children experiencing child-specific deprivation (13 per cent). This means that consistent poverty could, at most, capture about two-thirds of children exposed to child-specific deprivation. In fact, just over one-third of the children experiencing child-specific deprivation are consistently poor.

We also examined the association between child-specific deprivation and the broader measure of economic vulnerability. Economic vulnerability is intended to capture a group that is distinctive in its risk of falling below a critical resource level, that is, a group that is exposed to low income, deprivation, and economic stress, even if the household is not currently poor or deprived. Over one-quarter of children (28 per cent) are in economically vulnerable households. We found that economic vulnerability has a very strong association with child-specific deprivation: the odds of child-specific deprivation for the children in economically vulnerable households (relative to non-vulnerable children) are 26 to 1. Almost nine out of ten children exposed to child-specific deprivation are in economically vulnerable households. Moreover, because the child-specific deprivation rate is much lower (13 per cent) than the economic vulnerability rate among children (28 per cent), the economic vulnerability measure will identify a higher proportion of vulnerable children.

### **How do the risk factors for child-specific deprivation differ from the risk factors for basic deprivation?**

We saw above that the main drivers of child-specific deprivation are mother's low education, mother's marital status (especially divorced/separated) and 'unknown' household social class., while mother's high education and parental employment were important protective factors. Do these same factors explain basic deprivation in households with children? Are there particular factors that are associated with parents in households exposed to basic deprivation being able to protect their children from child-specific deprivation? What about the small group of children, exposed to child-specific deprivation, that live in households not experiencing basic deprivation?

To answer these questions we conducted an analysis to identify the factors associated with being in each of the following groups:

- no deprivation: children experiencing neither basic deprivation nor child-specific deprivation (73 per cent of children)
- multiple deprivation: children experiencing both basic deprivation and child-specific deprivation (almost 10 per cent of children)
- child-only deprivation: children experiencing child-specific deprivation only, and not also basic deprivation (under 3 per cent of children), and
- basic-only deprivation: children experiencing basic deprivation only and not also child-specific deprivation (just over 14 per cent of children).

The findings are summarised in Table A, which shows the statistically significant odds ratios. The main distinguishing characteristic of multiple deprivation is the strong association with low income and with mother’s low level of education. There is also an increase in risk associated with large family size (three or more children), but the size of the effect here does not distinguish multiple deprivation from basic-only deprivation.

**Table A: Risk Factors for Combinations of Basic and Child-specific Deprivation (significant odds ratios)**

Risk Factor	Multiple (Basic and Child)	Child only	Basic only
Number of children (3 or more vs. 1)	3		3
Mother has disability (vs. no disability)			3
Mother has no qualifications (vs. 3 <sup>rd</sup> level)	6		
Mother has lower 2 <sup>nd</sup> level education (vs. 3 <sup>rd</sup> level)			2
Lone parenthood (formerly married vs. married)		8	
Cohabiting couple (vs. married couple)		5	
Father not in employment (vs. father at work full or part-time)*			3
Mother not in employment (vs. full-time work)		8	
Intermediate social class (vs. profess./manag.)			3
Manual/Lower service/sales (vs. profess./manag.)			3
Unskilled manual/service (vs. profess./manag.)		6	
Never worked (vs. professional/managerial)		22	
Low income (bottom fifth vs. top fifth)	13		

Note on interpretation: For example, The odds ratio of 13 for ‘bottom income fifth’ and multiple indicates that children in the lowest income group are 13 times as likely to be multiply deprived (versus not deprived) as children in the highest income households.

\* In the vast majority of cases where father is in employment, the work is full-time.

The risk of child-only deprivation is strongly associated with family type, mother’s employment and social class. Child-only deprivation (in households that are not also experiencing basic deprivation) is more common in lone parent households where the parent was formerly married, where the parents are cohabiting, where the mother does not work, in lower social classes or where the household reference person has never worked. The role of family type and work, particularly the mother’s work, in protecting children is very striking.

Basic-only deprivation – where children are protected from child-specific deprivation – is associated with a number of child and family characteristics, but the patterns are not as strong as for multiple deprivation or child-only deprivation. The risks are increased in large families (three or more children), where the mother has a disability, where the mother has low levels of education, where the father is not in employment and in two of the intermediate social classes. Some of the risk factors unique to basic-only deprivation are mother’s disability, mother’s lower second level education, father’s non-employment and the two social class groupings. In terms of social class, the odds of basic-only deprivation were higher for those in the intermediate service class (mainly clerical occupations) and in the skilled and semi-skilled manual and service classes. In terms of mother’s education, it was lower second level (rather than no education) that was significant for basic-only deprivation. A possible explanation is that households experiencing basic-only deprivation are in a somewhat better resource position than those experiencing multiple deprivation, and that these resources are directed towards making sure the children have an adequate standard of living, at the expense of the parents.

**Policy Implications**

There are several reasons for policy to be concerned with childhood deprivation. Not only is poverty and social exclusion among children unacceptable, but it is also associated with longer-term problems both for the children themselves and for the wider society. These longer-term impacts include lower levels of educational achievement, emotional and behavioural problems and poorer health outcomes. Other reasons for a focus on childhood deprivation include the wider recognition that social exclusion is not just about low income but also includes broader issues of living standard and social participation. Related to this is the concern that measures of at-risk-of-poverty and deprivation at the household level may not adequately identify children at risk of social exclusion.

The results of this study indicate that protecting children from deprivation is not just an income support issue, although the level of household income is a very important predictor of deprivation among children. Apart from income, education level of the mother, employment of the parent(s), stability of the relationship between the parents and social class inequalities must also be considered. This highlights the fact that addressing childhood deprivation will involve a cross-departmental strategy that spans several different policy domains.

The implications of the findings for policy can be summarised as follows:

- Child poverty is not just an immediate child welfare issue, but one that has potential future implications for the economy and for future demand on public services. It is also important in breaking the cycle of disadvantage.
- The importance of employment in protecting children from deprivation highlights the need for economic policy to reduce unemployment as a priority.
- In measurement terms, a larger group of children is identified by the measure of basic deprivation than by the indicator of child-specific deprivation. Since most research showing negative impacts of poverty on children is based on household-level measures of poverty, this reinforces the need for a continuing emphasis on children in deprived households, whether or not they lack the child-specific items we were able to measure using the 2009 SILC data.
- As well as work, adequate income is crucial to enabling parents to protect their children from deprivation. Given the higher risk of deprivation found in larger households, careful attention should be given to the impact on household income of proposed cuts in Child Benefit for the third and subsequent child.
- Given the importance of mothers' employment to protecting children from child-specific deprivation, making affordable childcare available would significantly contribute to the well-being of children. The provision of the free pre-school year, as well as the benefits it provides directly in terms of early education of children, is an important first step in this direction.
- Educational levels of the mother are important, not only in terms of their association with mother's work and with income, but have a direct association with levels of multiple deprivation among children. In designing programmes for second chance education and training for employment, consideration should be given to removing any barriers to participation faced by mothers.
- There is evidence that instability in the relationship between the parents (marital breakdown and cohabiting) may be associated with an increased risk of child-only deprivation. Further research is needed to investigate the supports needed to protect children in these households. The *National Longitudinal Study of Children in Ireland* (the *Growing Up in Ireland Survey* or GUI), with its large sample size and broad range of child outcomes, would seem to be an ideal source of data on the experience of children in different family forms.

- There appear to be some gaps in access to GP and dental services, affecting small numbers of children outside the very lowest income groups. Consideration should be given to designing a system to ensure that children up to middle income levels have access to affordable dental and doctor care.
- Analysis suggests that the equivalence scales may need to be reconsidered, given the discrepancy in the pattern of deprivation and at-risk-of-poverty by age of child. Further research is needed on this issue, which would combine analysis of SILC data with additional evidence on the cost of children.

## Introduction

The high rate of child poverty in Ireland, relative to the overall average, is of concern not only because of the negative current impact on children's lives, but also because childhood deprivation can have long-term adverse consequences that persist into adulthood. This report examines childhood deprivation in Ireland in 2009 in the context of such concern for the well-being of children.

Two other issues are elements of the context for this study. The first is the uncertainty as to whether household-level measures of poverty and deprivation adequately identify children who are socially excluded. The second context is the widespread acknowledgement that social exclusion is multi-dimensional and there may be important differences between children and adults in the relationships among these dimensions.

The 2009 CSO SILC dataset contains a special module on child-specific deprivation. This provides a unique opportunity to investigate the dimensionality of deprivation affecting children in the context of the Irish national measures of at-risk-of-poverty, deprivation and consistent poverty. In the following, we briefly outline the structure of the report and the nature of the analyses we plan to undertake.

The goal of this report is to address five questions:

1. How much child-specific deprivation is there in Ireland and what form does it take?
2. What are the main risk factors for child-specific deprivation?
3. How well do the national measures of basic deprivation and consistent poverty identify children who are deprived?
4. How do the risk factors for child-specific deprivation differ from the risk factors for basic household-level deprivation?
5. What are the implications for policy?

In Chapter 1 we discuss the research and policy context of this report, particularly the impact of poverty in childhood and the location of the analysis within the broad lifecycle approach to social policy. We examine poverty as a multidimensional concept and ask, specifically, what is the meaning of multidimensionality in the context of childhood deprivation.

In Chapter 2 we provide background information on what we already know from analyses of SILC data for Ireland about trends and patterns in childhood poverty and deprivation (using national measures of at-risk-of-poverty, deprivation and consistent poverty), both in Ireland and in the EU.

In Chapter 3 we discuss the measures of child-deprivation available in SILC 2009, (a) showing the percentage of children deprived according to each indicator and (b) a factor analysis of the indicators to examine whether the items form a single 'child-specific deprivation' factor.

The goal of Chapter 4 is to examine the main risk factors for child-specific deprivation including characteristics of the child and characteristics of the household. The chapter will involve a multivariate analysis of child-specific deprivation, using the scale derived in Chapter 3.

In Chapter 5 we examine in more detail the overlap between household-level basic deprivation and consistent poverty, on the one hand, and child-specific deprivation on the other. Are there children in deprived households who are 'protected' from child-specific deprivation? Are there, on the other hand, children in otherwise non-deprived households exposed to child-specific deprivation? What are the characteristics of households or children associated with these areas of 'non-overlap'? We conduct a multivariate analysis of child and household characteristics to investigate these questions.

Finally, in Chapter 6 we draw together the results of the analyses in the earlier chapters and indicate the main policy implications of the analysis.

## Chapter 1: The Context

### 1.1 Introduction

In this chapter, we provide a brief overview of the literature on child poverty, locate the issue of child deprivation within the context of the literature on the multidimensionality of poverty and discuss the policy context of this report. We examine poverty as a multidimensional concept and ask, specifically, what is the meaning of multidimensionality in the context of childhood deprivation.

### 1.2 Poverty and Children

In many respects, the focus in poverty research has been on adult concerns. 'Much of our analysis of poverty has been framed within an adult discourse of economic distribution and material resources' (Ridge, 2002, p. 6). In particular, the emphasis on exclusion from the labour market, while indirectly relevant to children, rarely concerns their lives directly. For children, social exclusion is directly experienced in their family, school and peer contexts (Ridge, 2002).

There is a wide body of poverty literature dealing with children's experience of poverty and social exclusion and its impact on children's life chances and opportunities (Duncan and Rodgers, 1991; Duncan et al., 1998; Whelan, Layte and Maître, 2002; Bane and Ellwood, 1986; Duncan, 1984). Poverty has a range of negative impacts on children, including on physical and mental health, educational achievement, emotional and behavioural outcomes. Looking at physical health there is clear evidence that children born into poverty are more likely to have poorer health outcomes such as a lower birth weight, higher infant mortality and poorer health than better-off children (DWP, 2007). Focusing on developmental issues, Duncan, Brooks-Gunn and Klebanov (1994) used cognitive measures (the Wechsler Preschool and Primary Scale Intelligence), to evaluate intelligence development as well as behavioural measures (Revised Child Behaviour Profile) to examine fear, anxiety, sadness as well as bad temper and tantrums. They found that low income was a good predictor of these outcomes. Other research also points to the importance of the early childhood years for learning self-regulation skills such as regulating attention (Duncan, Ludwig and Magnuson, 2007; Holzer, Duncan and Ludwig, 2007). Many studies have found that long-term exposure to poverty is associated with behavioural problems at school, low self-esteem, problems in peer relations (Bolger et al., 1995), and depression and anti-social behaviour (McLeod and Shanahan, 1996; Jarjoura et al., 2002).

Longitudinal research shows that poverty in childhood is associated with reduced life opportunities and a greater risk of experiencing poverty during adulthood (see review by Brooks-Gunn and Duncan, 1997). In a review of longitudinal research on child poverty that sought to control for the effects of other variables, Brooks-Gunn and Duncan (1997) found that family income seems to be more strongly related to children's ability and achievement-related outcomes than to emotional outcomes. The persistence of poverty over several years is particularly harmful and the timing of poverty is also important. Low household income during the early childhood years is associated with lower rates of high-school completion. High neighbourhood poverty and poor quality schooling may exacerbate this effect. These findings point to the importance of early-childhood interventions in reducing the impact of poverty on children's lives.

As well as being influenced by the *level* of resources available to the household, the well-being of children may also be influenced by control of resources within the household. Taking advantage of the 'natural experiment' of the transfer of Child Benefits in the UK to the mother in the 1970s, Lundberg, Pollack and Wales (1997) explored this issue. In the 1970s, the child tax allowance – which generally took the form of reducing the tax paid by the father – was replaced by a cash Child Benefit paid directly to the mother. Using data from the Family Expenditure Survey, Lundberg, Pollack and Wales found that following the transfer of control of Child Benefit to the mother, there was a substantial shift in expenditure from men's clothing to women's and children's clothing. This is evidence of incomplete income pooling within households and suggests that when mothers have control of household resources, more of these resources will be directed towards meeting the needs of children (see also Thomas, 1990; Bobonis, 2009; Lundberg and Pollack, 2007).

Research is just now emerging from the *Growing Up in Ireland* (GUI) survey on the links between childhood poverty and outcomes for children, including achievement in maths and reading, social adjustment, behavioural problems and health outcomes (Williams and Whelan, 2011). The GUI is a longitudinal survey, begun in 2007, focusing on children's lives with an infant cohort and a cohort of children in middle childhood. This will be an indispensable survey for examining the impact of poverty and deprivation on child outcomes. Because it was not designed to measure income and living standard on a harmonised basis, the estimated *levels* of at-risk-of-poverty and deprivation in this survey are not as robust as those derived from SILC. Nevertheless, the patterns of association with low income reveal disadvantages in a number of areas. For instance, 9-year-old children from the lowest income quintile

are more likely to have emotional and behavioural difficulties as well as problems with hyperactivity and in peer relationships. These children also have higher levels of absences from school and higher rates of non-completion of homework, and their mothers are more likely to have difficulties in terms of numeracy and literacy skills (Williams et al., 2009).

There is also a recent strand of research that explores the impact of poverty from the perspectives of children themselves. In an in-depth study of 40 children (aged 10 to 17) from low-income families in Bristol and Bath, conducted in 1999, Ridge found that the effects of poverty and disadvantage can permeate every aspect of children's lives (Ridge, 2002, p.131) – material, social and emotional. Impacts that were specific to children included limited access to their own economic resources (only one-quarter received pocket money regularly), the importance of access to affordable transport and the importance of friendship.

Some recent Irish research studies have focused on children's experience of poverty. Swords et al. (2011) adopted a socially-perceived necessities approach to investigate the kinds of things children in low-income households themselves identified as necessities. Beginning with qualitative studies and focus groups, the authors identified a set of 49 potential items (Kerrins, Greene and Murphy, 2011). A survey with a purposive sample of 262 children and their parents examined the extent of agreement between children and their parents on which items were essential, which items the children had available and, if not, whether this was because the household could not afford them. In general, there was broad agreement between children and parents regarding which items were necessities. The authors were able to identify 12 items that most children believed were necessities but that were lacked by at least 3 per cent of the children in the survey. These included things like three balanced meals a day, some money for themselves, a bank or post office account to save money, a family restaurant meal twice a year and an annual holiday. Some differences between parents and children emerged in terms of which items children would like to have (or parents would like their children to have), but that the household could not afford. Where children identified deprivation of an item more often than their parents (e.g. three balanced meals daily, books, food and drinks for friends when they visited the home, shops close to home) the differences tended to be small. The differences between parents and children were somewhat larger for the items on which parents were more likely than children to identify deprivation (e.g. family holiday, restaurant meal, bank or post office account).



International research has shown that levels of child poverty are not determined by the overall level of wealth in a country. Using the Luxembourg Income Study data for the 1990s, Rainwater and Smeeding reported that in the richest countries, the correlation between child poverty and GDP is essentially zero (Rainwater and Smeeding, 2005, p.26). The child poverty rate was high in the US and very low in Denmark and Sweden (Rainwater and Smeeding, 2005). Where poverty rates are high among children, they also tend to be high in old age, but the correlation over 15 nations is modest, at 0.37 (p.27). Ireland of the 2000s is an exception to this trend, with low poverty rates among older adults but high poverty rates among children (see Chapter 2).

The evidence drawn from the literature affirms not only the long-term damaging impact of the experience of poverty on children's personal outcomes, but also the longer-term costs to society associated with these negative outcomes – encompassing health problems, crime, low educational achievement and welfare dependence.

### 1.3 The Policy Context

In order to tackle poverty and social exclusion, the Irish government has established several policy programmes, the *National Anti-Poverty Strategy* from 1997 to 2007, then the *National Action Plan for Social Inclusion* from 2007 to 2016. Successive strategies are based on the definition of poverty and social exclusion first adopted in 1997 where poverty is understood as an inadequate standard of living and exclusion from participation, linked to a lack of material resources.

Ireland has been one of the leaders in the European context in developing indicators of poverty as a component of evidence-based anti-poverty policies (Callan, Nolan and Whelan, 1993). As a result of analyses of national data beginning in the late 1980s with the *Survey of Income and Programme Participation*, measures of income poverty and of basic deprivation were developed for national purposes. Much of this research was conducted on the *Living in Ireland Survey* in the 1990s and the early 2000s and has continued from the mid-2000s using data from the Survey on Income and Living Conditions (SILC) (e.g. Callan, Nolan and Whelan, 1994; Layte, Nolan and Whelan, 1998; Callan et al., 1999; Russell, Maître and Nolan, 2010).

There are three components to the measurement of poverty in Ireland: low income (below 60 per cent of the median, having adjusted for household size and composition), deprivation (lacking a number of commonly available goods or services due to lack of resources), and consistent poverty (both income poor and deprived).

The Irish targets for reducing poverty and social exclusion are defined with respect to consistent poverty, a measure that considers both income and standard of living. For instance, the *NAP Inclusion* target is: 'To reduce the number of those experiencing consistent poverty to between 2 per cent and 4 per cent by 2012, with the aim of eliminating consistent poverty by 2016, under the revised definition' (Office for Social Inclusion, 2007, p.13).

The Irish approach to poverty targets and poverty measurement is currently under review. There are a number of reasons why this review is timely. The most obvious change since the last review of the measure of consistent poverty, in 2006 and 2007 (Maître, Nolan and Whelan, 2006; Whelan, 2007), is the impact of the economic recession on employment, household income and living standards. A second reason is that developments in policy at a European level are moving the understanding of social exclusion in a somewhat different direction. The *Europe 2020* strategy, adopted by the European Council in June 2010, has as one of its aims 'promoting social inclusion, in particular through the reduction of poverty, by aiming to lift at least 20 million people out of the risk of poverty and exclusion' (European Council, 2010, p.12). The Council agreed a target defined in terms of three indicators: at-risk-of-poverty, severe material deprivation and being in a household with very low work intensity. The Council is flexible in its approach, however, 'leaving Member States free to set their national targets on the basis of the most appropriate indicators, taking into account their national circumstances and priorities' (European Council, 2010, p.12, Footnote 2).

Income poverty (referred to as 'at-risk-of-poverty' or ARP) is quite similar to the Irish measure, defined as equivalised household income below 60 per cent of the median in each Member State. While the move away from a reliance on income as the sole indicator of poverty constitutes a significant improvement, there are a number of features of the EU 2020 approach, as it has come to be known, which are potentially problematic (Nolan and Whelan, 2011). In particular, the deprivation threshold adopted (lacking 4 or more of 9 items) is very severe, so that very few people in the wealthier EU countries will be deprived according to this criterion. Second, the addition of the measure of very low work intensity is a new departure which has not been sufficiently tested in the European context. Thirdly, the approach adopted to the combination of these indicators is to consider as socially excluded all those who meet any of the three criteria. This contrasts with the Irish approach, which considers as socially excluded those who meet both of the Irish criteria: at-risk-of-poverty (ARP, using the Irish measure) and deprivation (again, using the Irish measure (Nolan and

Whelan, 2011).<sup>5</sup> Indeed work on the development of indicators for use at the EU level is ongoing (Guio, 2009; Guio, Fusco and Marlier, 2009; Fusco, Guio and Marlier, 2010).

#### 1.4 Lifecycle Approach

The emphasis on a lifecycle approach to poverty strategies in Ireland reflects the Irish policy context, as social protection programmes and intervention strategies are organised according to key lifecycle groups: children, people of working age, older adults and people with disability.

The latest published figures by the Central Statistics Office (CSO, 2011) showed that of the three lifecycle stages (children, people of working age, older people) children in Ireland in 2010 experienced the highest income poverty (at-risk-of-poverty) rate, at 20 per cent compared to 16 per cent for the total population. Children were also the group most likely to be living in households experiencing material deprivation. In 2010, 30 per cent of children lived in households lacking at least 2 items out of the 11 items used in the consistent poverty measure. The comparable figure was 22 per cent for the working age population and 10 per cent for older people. As a consequence, consistent poverty was highest across the lifecycle stages among children, at 8 per cent, compared to 6 per cent for the working age population and 1 per cent for older people.

#### 1.5 The Multidimensional Concept of Poverty

It has long been accepted that poverty 'is not just the absence of income or even the material deprivation that accompanies it' (Tomlinson and Walker, 2009, p.20). As far back as 1979, Townsend argued that poverty was not simply a matter of lacking the income 'necessary to purchase a basket of goods, but rather the lack of resources required to participate fully in society' (Townsend, 1979, p.13).

A considerable literature has argued for a multidimensional measure of poverty that incorporates direct measures of living standard as well as income (Ringen, 1988; Mack and Lansley, 1985; Callan, Nolan and Whelan, 1993; Nolan and Whelan, 1996; Gordon et al., 2000; Pantazis, Gordon and Levitas, 2006; Nolan and Whelan, 2007). Thus, poverty is more than a matter of low income – it is multidimensional. In the European context, the widespread adoption of the term 'social exclusion' is a mark of this awareness that income poverty alone does not do justice to the understanding of the phenomenon of concern.

<sup>5</sup> See Watson and Maître, 2012, for a discussion of the differences between the Irish and EU approaches to measuring deprivation.

This consensus has led to attempts to specify what exactly we mean when we say that poverty is multidimensional. There are a number of distinct ways of thinking about multidimensionality:

- multiple (relatively independent) risk factors for social exclusion (low level of education, unemployment, lone parenthood, disability, minority group membership)
- multiple consequences (low income, diminished standard of living, physical and mental health, social participation, political participation)
- cumulative disadvantage (persistence of effects of earlier disadvantage in later life).

From the perspective of national anti-poverty strategies, the main emphasis in Ireland has been on ensuring that the measure of poverty is adequate to *identify* the groups most at-risk-of-poverty and social inclusion, rather than seeking to encompass all dimensions or processes (Whelan and Maître, 2012). In this regard, the main concern has been that income alone is inadequate to identify this group (Townsend, 1979; Mack and Lansley, 1985). There are a number of reasons for this (Layte, Nolan and Whelan, 1998; see discussion in Chapter 1, Whelan et al., 2003; Layte et al., 2006). First, income is measured at a point in time and does not capture longer-term access to resources. A household may have a low income in a particular year, but if resources have been adequate over a long period, it may be able to draw on savings in order to maintain an adequate standard of living. Second, there are problems in measuring income for some groups, notably the self-employed. As a result, self-employed people and farmers often emerge as having particularly low incomes but without the associated drop in living standards.

The strategy adopted in Ireland is to bring together measures of low income (adjusted for household size and composition) and deprivation. Deprivation refers to the lack of basic goods and services considered the norm in a society because of an inability to afford them. A measure of 'basic deprivation', based on lacking access to 2 or more of 11 basic goods and services has been developed for Ireland based on the SILC data (Whelan, 2007 and Whelan and Maître, 2010). Consistent poverty is defined in terms of low income combined with a lack of basic goods and services, and the national anti-poverty targets have been set with respect to consistent poverty. By incorporating measures of current income and measures of deprivation across a number of domains (including food, clothing, heating and social participation), the consistent poverty measure is multidimensional.

A related concern in the literature on child poverty is the question of whether household-level measures of deprivation adequately identify children who are at risk of deprivation. Whelan and Maître (2012) have examined the relationship between basic deprivation and child-specific deprivation using the 2009 SILC data. They found that the measure of basic deprivation captures most of those children who experience child-specific deprivation, as measured by the additional items included in the 2009 SILC survey. In fact, the basic deprivation measure identifies a higher number of children living in deprived households than are identified as deprived according to the child-specific items: 15 per cent of children live in households experiencing basic deprivation but are *not* deprived according to the child-specific items. A much smaller group, 3 per cent of children, are deprived according to the child-specific items but are not living in households experiencing basic deprivation. The analysis in this paper will develop these earlier findings by examining whether the risk factors for child-specific and basic deprivation differ.

The focus of this report is on deprivation, although in Chapter 2 we also provide figures on the trends in the number of children at risk of poverty. Given the centrality of deprivation to the measurement of poverty for policy purposes in Ireland, it is important to ensure that the measure of deprivation is adequately identifying those who cannot afford goods and services that are considered the norm for the population. The advantage of the measure of basic deprivation is that it has a high reliability for different lifecycle stages (Whelan and Maître, 2012). Nevertheless, concerns have been expressed that measures of poverty at the household level may not be adequate for identifying deprivation among children, as children's well-being will be influenced by how household income is spent (Bradshaw and Main, 2010, p.5).

We will examine multiple deprivation among children, defined as living in a household experiencing basic deprivation according to the national measure and also experiencing child-specific deprivation. In the course of the analysis, we will also examine the extent to which child-specific deprivation overlaps with at-risk-of-poverty and consistent poverty and its association with dimensions of deprivation identified in previous research on SILC data (Whelan, Maître and Nolan, 2007).

## 1.6 Summary

This chapter has set the context for this study in terms of Irish anti-poverty policy and the research areas of the dimensionality of poverty and child poverty. We discussed the need to review the national anti-poverty strategy in the context of the recession and changes in the targeting at EU-level. We also noted the need to examine the adequacy of the national measures of poverty, deprivation and consistent poverty in identifying the experience of poverty among children. We saw that child poverty is associated with long-term risks of adverse outcomes and that, internationally, the association between national wealth and child poverty is relatively weak.

In the next chapter, we provide further background to the detailed examination of child-specific deprivation by examining trends since 2004 and patterns across Europe in children's exposure to at-risk-of-poverty, basic deprivation and consistent poverty.

## Chapter 2: Trends and Patterns in Child Poverty

### 2.1 Introduction

In this chapter we provide background information on what we already know from analyses of SILC data for Ireland and for the EU as a whole about trends and patterns in childhood poverty and deprivation. We focus on the household measures of basic deprivation. In Ireland, this is the 11-item national measure. For the purpose of comparison with other European countries, we use the 9-item EU measure (see Appendix 1 for details on items). The questions we ask are:

- How do children compare to other lifecycle groups in terms of their risk of income poverty (at-risk-of-poverty), deprivation and consistent poverty in Ireland?
- How has this changed over time?
- How does the risk of income poverty and deprivation for children in Ireland compare to the risk of income poverty and deprivation for children in other EU countries?

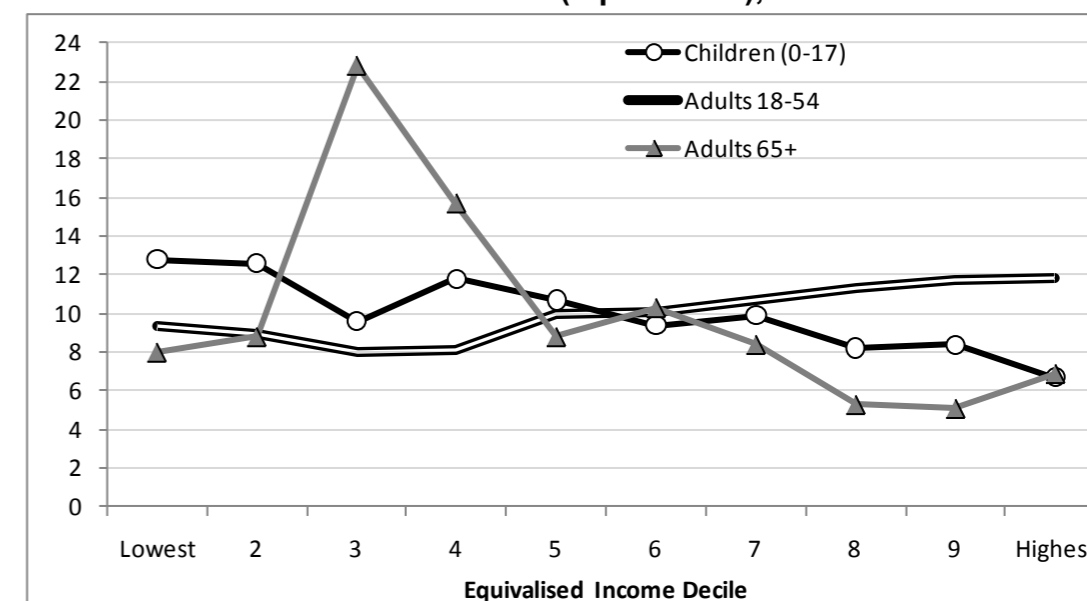
We go beyond previous analyses in this area (e.g. Dunne et al., 2007) by distinguishing three different age groups among children: pre-school children (aged 0 to 4); children of primary school age (5 to 11) and children of secondary school age (12 to 17). We might expect differences between the age groups for a number of reasons, including changes in the career progression of parents, changes in family size and differences in the costs associated with children of different ages. To some extent, the different costs associated with older children (aged 15 and over) are already captured by the adjustment for household size and composition built into the measure of income poverty (at-risk-of-poverty) – we will discuss the implications and consequences of this below.

### 2.2 Lifecycle and Income Distribution

Before examining at-risk-of-poverty rates over the period, it is worth noting that there are important differences in the distribution of income between the lifecycle groups. Figure 2.1 shows the percentage of each of three lifecycle groups (children, adults or working age, older adults) by household equivalised income decile. ‘Equivalised income’ means that an adjustment has been made for differences in household size and composition.<sup>6</sup>

<sup>6</sup> The national equivalence scale assigns the first adult in each household a value of 1, each subsequent adult a value of 0.66 and each child a value of 0.33 (CSO, 2010, p. 17).

**Figure 2.1: Percentage of Children, Adults of Working Age and Older Adults in each Income Decile (equivalised), 2009**



Source: CSO SILC 2009, Table 1.6, pp. 30-31.

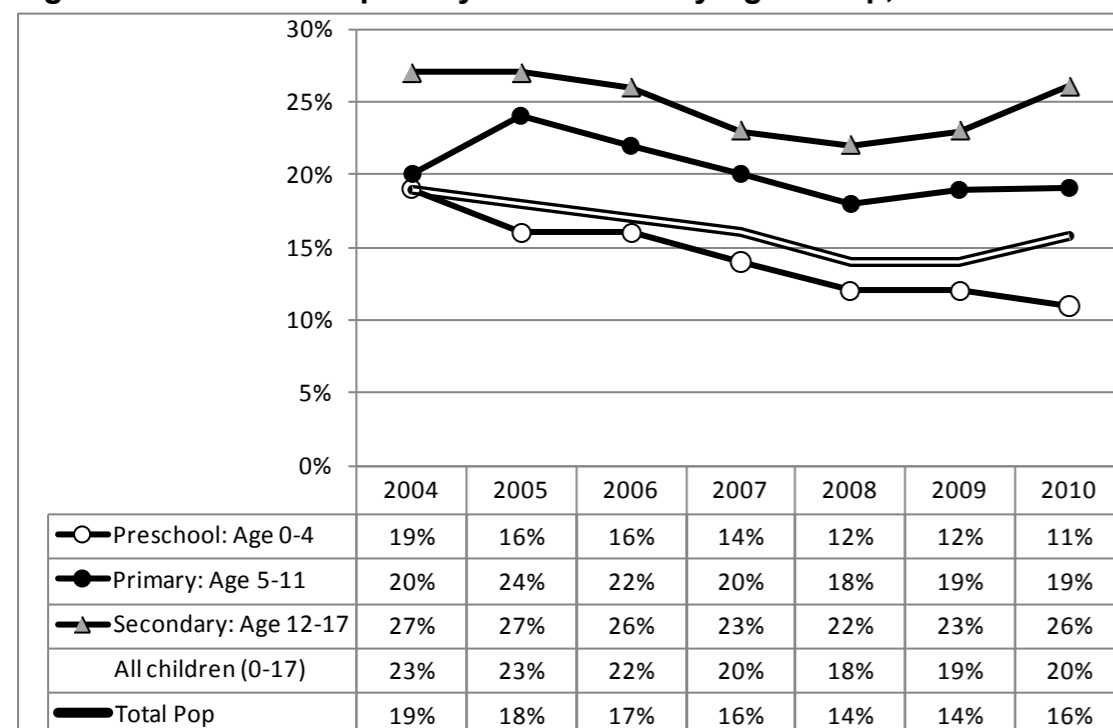
If there were no differences between the groups in terms of their location across the income distribution, we would expect 10 per cent of each group to be found in each income decile. This is not the case, however. It is clear that children are over-represented in the lower part of the income distribution (particularly in the bottom two deciles) and under-represented in the upper part of the income distribution. Almost 13 per cent of children are in each of the two lowest income deciles and only 7 per cent are in the top decile. Compared to the pattern for older adults, however, the departure from an even distribution across the deciles is not as strong for children. Older adults are highly concentrated in the third lowest income decile (23 per cent), with a very low representation in the top three deciles. If older adults were evenly distributed across the deciles, we would expect 30 per cent of them to be in the top three deciles, but the observed percentage is only 17 per cent.

### 2.3 At-risk-of-poverty and Age Group of Child

Although most of the detailed analysis in this chapter is based on the period 2004 to 2009, we add the figures for 2010 to Figure 2.2, so that we can see the longer-term trend. This figure shows the at-risk-of-poverty rate for children and for the total population for each year from 2004 to 2010. At-risk-of-poverty is defined as having a household equivalised income below 60 per cent of the median. Equivalised income adjusts for household size and composition (number of adults and children).

We can see from Figure 2.2 that the at-risk-of-poverty rate for both adults and children has tended to decline over time until 2008; remains relatively stable overall between 2008 and 2009 and then rises in 2010. The poverty rate for children (shown in the table in Figure 2.2) is higher throughout the period than for the total population. In 2010, 20 per cent of children are poor compared to 16 per cent for the total population.

**Figure 2.2: At-risk-of-poverty for Children by Age Group, 2004-2010**



Source: CSO SILC, 2004-2009, analysis by authors

What is striking in Figure 2.2 is the pattern by the age of the child. The at-risk-of-poverty rate is higher for older children than for younger children. The youngest group of children (aged 0 to 4) have an at-risk-of-poverty rate that is slightly lower than that of the overall population. For instance, in 2009 the overall at-risk-of-poverty rate was 14 per cent and it was 12 per cent for children aged 0 to 4. Children of primary-school age (5 to 11) had a higher poverty rate (19 per cent in 2009) and children of secondary-school age (12 to 17) had the highest at-risk-of-poverty rate (23 per cent in 2009).

Some of this pattern by age of child may be due to the fact that in adjusting for household size and composition (that is, the equivalence scale), a higher weight is given to children aged 14 and over (they receive the adult weight of 0.66) than to younger children (weight=0.33). This means that a household with children over age 14 would need to have a higher total income than a household where the children

are under 14 in order to be at the same equivalised income level. However, this does not account for the difference between pre-school and primary-school age children, as the same equivalisation weight is used for both groups.

#### 2.4 At-risk-of-poverty by Age Group of Child under Different Equivalence Scales

The purpose of equivalence scales is to adjust household income based on the 'needs' of households of different sizes. An important issue is to take account of the cost of children. However, for practical reasons (we need a universal scale for comparison) the scales used are simplified and cannot take full account of the variation in costs by age of children. A recent publication by the Department of Social Protection (2010) provides an extensive review of the various methods used to evaluate the cost of children as well as estimates of the cost of children across several age ranges. Among the studies reviewed in this report are Carney et al. (1994). These authors calculated the cost of providing a basic diet, a modest wardrobe, essential schooling costs and limited spending on recreation, outings, holidays and presents. Their results suggested that the costs associated with children were lowest for pre-school children (13 per cent of family income), rising to 30 per cent for children aged 17 to 18. A different approach was adopted by Coniffe, Nolan and Whelan (1999) using the 1994 Living in Ireland Survey data. The authors found that the additional income needed by a couple to maintain a certain standard of living was 13 per cent for a child aged less than 5 years and 23 per cent for a child between the ages of 5 and 15. On average, according to this study, 18 per cent additional income would be needed for a child up to the age of 15. While studies arrive at somewhat different estimates of the cost of a child, they are consistent in finding that the cost increases with the age of the child.

The choice of equivalence scale is important because it makes a difference to the comparison between age groups of children. Table 2.1 shows the adjustment that would be made under a number of different scale options. The per capita adjustment makes no allowance for economies associated with household size. Essentially, it assumes that two people living together would require as much income as two people living separately in order to afford the same standard of living. The national scale gives a full additional-adult weight (0.66) to children over age 14. A third alternative is the square root of household size, which does not distinguish between adults and children but does incorporate an adjustment for economies of scale.

**Table 2.1: Alternative Equivalence Scales to Control for Household Size and Composition**

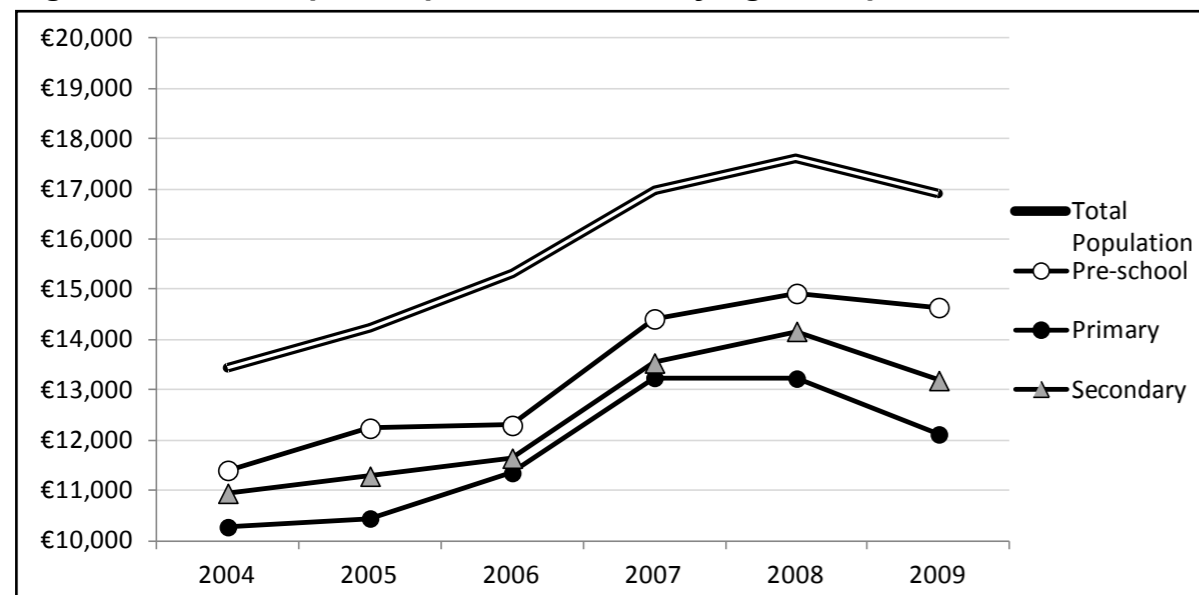
	National scale	Per capita scale	Square root of household size scale
One adult	1.00	1.00	1.00
Two adults	1.66	2.00	1.41
One adult, one child	1.33	2.00	1.41
Two adults, two children	2.32	4.00	2.00
Two adults, four children	2.98	6.00	2.45

Source: National scale; see Callan, Nolan et al, 1989, Chapter 5  
 Square root of household size scale: OECD 2008.

To control for the impact of different equivalence scales by age of child, Figure 2.3 shows the per capita disposable income by age group of child. Each household member (adult and child) is given the same weight, so we should not see a gap between primary and secondary school children driven by the use of a different adjustment.

Figure 2.3 shows that households with children have a lower disposable income per capita throughout the period than households generally. This is not surprising, as children generally do not have a source of income while most adults will have income from work, pensions or social welfare. The youngest children tend to be in higher-income households than the older children, but the position of the primary and secondary school children is reversed, compared to Figure 2.2. When we focus on per capita income, we see that children in primary school (aged 5 to 11) tend to be in households with a lower per capita income than children of secondary school (aged 12 to 17).

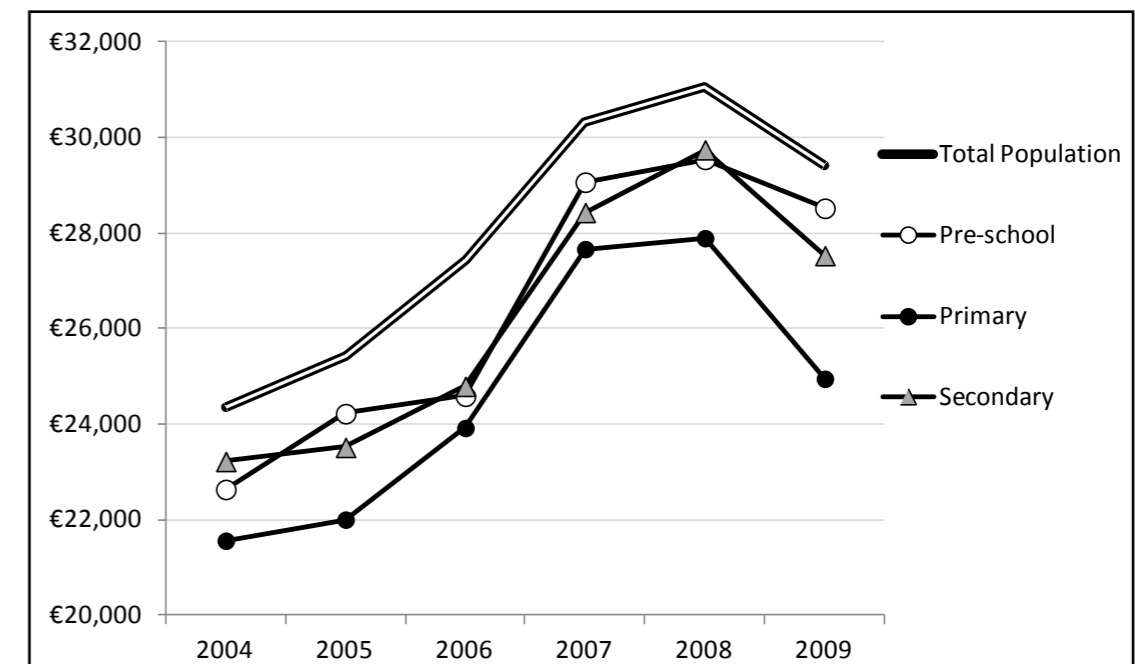
**Figure 2.3: Per Capita Disposable Income by Age Group of Child, 2004-2009**



Source: CSO SILC, 2004-2009, analysis by authors

Figure 2.4 shows the pattern by age group of child when the square root of household size is used to adjust for economies of scale. This scale has been used in some recent OECD publications (e.g. OECD, 2008). When this scale is used to adjust for household size and composition, no distinction is made between adults and children, or between children of different ages. The comparison between households adjusts only for household size. When we use this adjustment, as shown in Figure 2.4, children of all ages again have lower average disposable equivalised income than adults. As with the per capita adjustment, primary-school age children (5 to 11) emerge as likely to live in households with the lowest equivalised incomes while there is little difference between younger age children (0 to 4) and secondary-school age children (12 to 17).

**Figure 2.4: Disposable Household Income (adjusted using square root of household size) by Age Group of Child, 2004-2009**



Source: CSO SILC, 2004-2009, analysis by authors

The main driver of the pattern by age group of child is the number of brothers or sisters the child has. As shown in Table 2.2, primary-school age children are likely to be in households with a larger average number of children under age 18. This is because a certain proportion of pre-school age children will be firstborn children who, as yet, have no brothers or sisters. Similarly, a certain proportion of secondary-school age children will have brothers or sisters who are now over 18, and may be bringing additional income into the household. Thus, children in middle childhood are most likely to have brothers or sisters who are under age 18. This means that these children will, on average, live in households with a higher number of dependent children, so that the equivalisation scale that adjusts for household size will record a lower equivalised income for them.

**Table 2.2: Average Number of Children Under 18 in Household by Age of Child**

Child age	2004	2005	2006	2007	2008	2009	Total
0-4	2.1	2.2	2.3	2.3	2.1	2.0	2.2
<b>5-11</b>	2.5	2.6	2.7	2.6	2.5	2.4	2.5
<b>12-17</b>	2.3	2.2	2.3	2.2	2.2	2.2	2.2

Source: CSO SILC, 2004-2009, analysis by authors

To summarise the results of our analysis of different equivalence scales then:

- Using the national scale, which gives an ‘adult’ weight to children over age 14, older children will emerge as having the highest at-risk-of-poverty rate.
- Children in middle childhood are likely to have more brothers and sisters who are under age 18. So they will emerge as having a higher at-risk-of-poverty rate than younger children (some of whom will not yet have brothers or sisters).
- If we adopt an equivalence scale that gives equal weight to children of different ages, children in middle childhood (aged 5 to 11) will emerge as having the highest at-risk-of-poverty rate.

In the next section, we will turn to deprivation levels by age of child, using the national deprivation scale. Measures of deprivation are not affected by the choice of equivalence scale and, hence, the age of the child in the same way that income measures are.

## 2.5 Basic Deprivation and Age Group of Child

Basic deprivation in Ireland is measured using 11 items, as shown in Table 2.3. These items are measured at the household level and are based on the household being unable to afford them (‘enforced lack’). The table shows the percentage of the adults, all children and children in the three age groups who are deprived of each item, taking the average over the period 2004 to 2009.

For the adult population, the percentage lacking each item ranges from 2 per cent for ‘warm waterproof overcoat’ to 13 per cent for being able to afford to ‘replace worn-out furniture’. The pattern among children, although somewhat higher than among the total population, follows the same general ranking, ranging from 3 per cent to 18 per cent. The differences between adults and children are statistically significant for all of the items. However, the percentage of children who lack each item is very similar by age of child, and none of the differences by age of child is statistically significant. This suggests the absence of an age-specific pattern to basic deprivation among children over the 2004 to 2009 period.<sup>7</sup>

**Table 2.3: Nature of Deprivation (per cent lacking each Item) for Total Population and Children by Age Group of Child, 2004-2009 (percentages)**

Item	Adults	All children	Pre-school age 0-4	Primary age 5-11	Secondary age 12-17
	% Lacking Each Item				
Warm waterproof overcoat	2*	3	3	3	3
Protein meal	2*	4	4	3	3
Two strong pairs of shoes	3*	4	4	4	5
Presents for family, friends (annual)	3*	4	4	5	4
Keep home adequately warm	3*	5	6	5	4
Roast joint (or equiv) once a week	4*	5	7	5	5
New (not second-hand) clothes	5*	7	8	6	7
Go without heating in last year	5*	9	10	9	7
Family/friends for a meal or drink (month)	9*	15	15	14	15
Afternoon or evening out (last fortnight)	9*	15	15	16	15
Replace worn-out furniture	13*	18	18	19	17

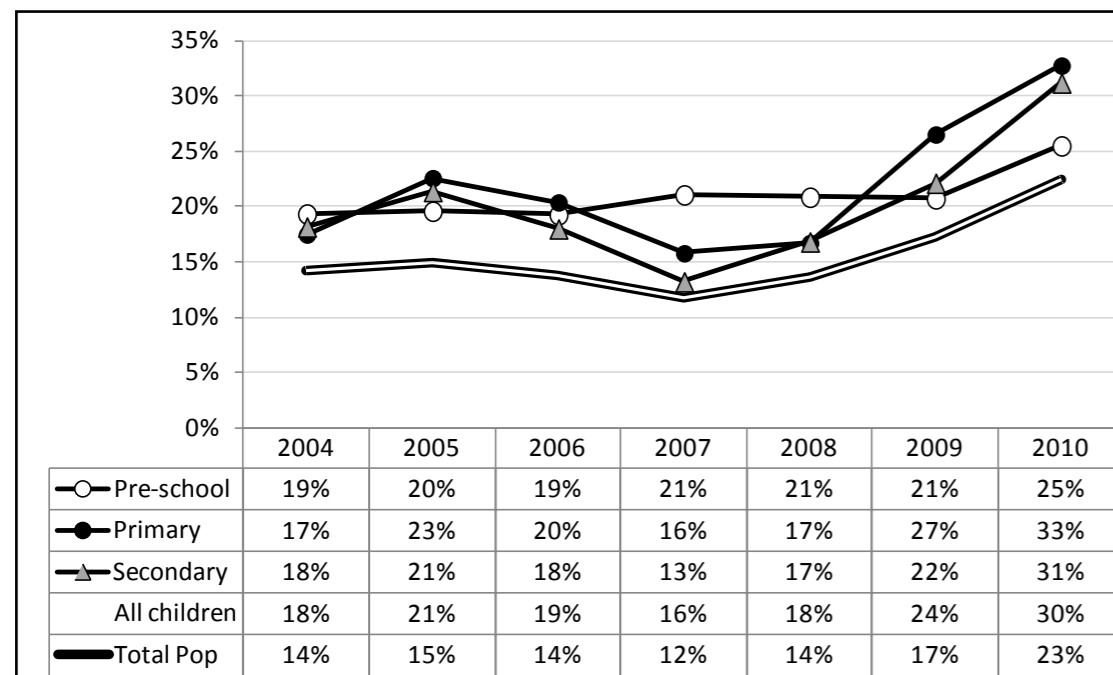
Source: CSO SILC, 2004-2009, analysis by authors

Note: \* indicates significant difference between adults and children.

<sup>7</sup> As we will see in the next figure, there were some differences across years in terms of which age group was more likely to lack 2 or more of the items. The results in Table 2.3 indicate that this is not due to systematic differences by age group in the percentage of children in households lacking any particular item.

Figure 2.5 shows the percentage of children in each of the three age groups who are deprived, according to the 11-item basic deprivation scale. This is the national deprivation scale, based on lacking 2 or more of the 11 items shown in Table 2.3. None of these items is specific to children. We see in this figure that throughout the period from 2004 to 2009 children were more likely than the general population to be in households experiencing basic deprivation. Also, in contrast to at-risk-of-poverty which tended to decline throughout the period, deprivation among children in the two older age groups (primary and secondary school age) increased after 2007 with the onset of the recession, although the rate remained flat for pre-school children. This may be linked to an association between economic security and the decision on the timing of fertility decisions, but without further analysis of the longitudinal data this remains a speculation. It is clear that there are differences between adults and children (especially school-age children) in the year-to-year fluctuations of basic deprivation rates. However, an explanation of possible reasons for these differences would require analysis that is beyond the scope of the present paper.

**Figure 2.5: Percentage of Children Lacking 2 or more Basic Items by Age of Child, 2004-2010**



Source: CSO SILC, 2004-2010, analysis by authors

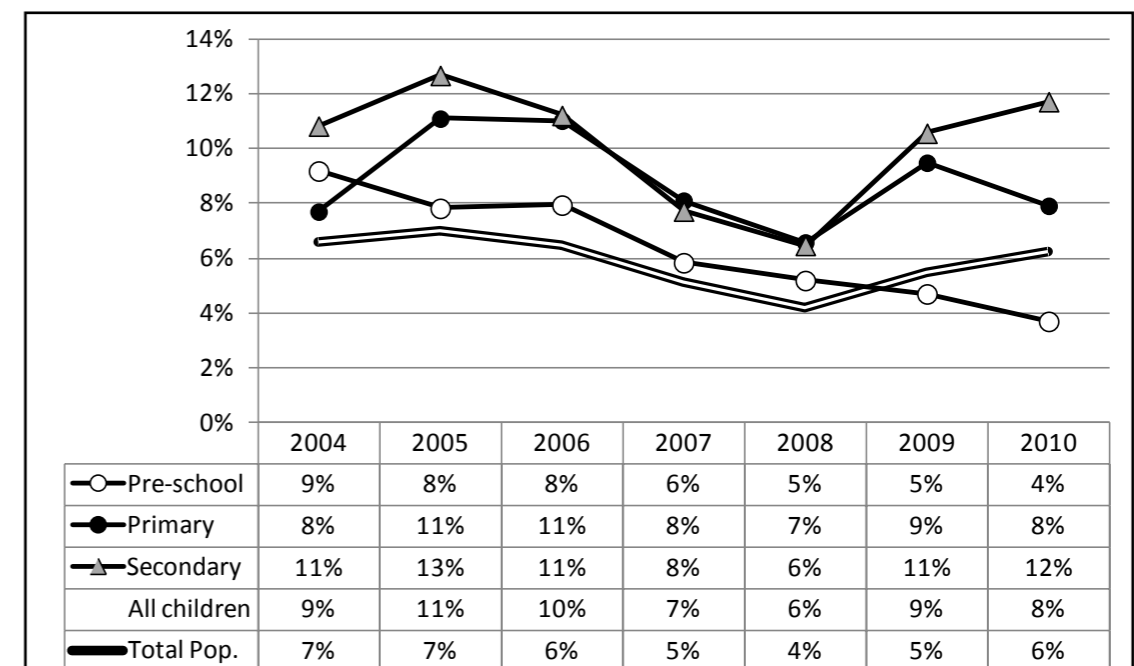
In contrast to at-risk-of-poverty, we do not see a clear pattern of deprivation by age of child. The biggest gap between age groups was in 2007, when pre-school age children had the highest rate of basic deprivation (21 per cent) and secondary school children had the lowest rate (13 per cent). This difference between pre-school and secondary school children was statistically significant. By 2009, however, primary school children had the highest level of basic deprivation (27 per cent,

again significantly higher than secondary-school age children) and there was little difference between children of pre-school and secondary school (21 to 22 per cent).<sup>8</sup>

**2.6 Consistent Poverty and Age Group of Child**

Consistent poverty means being both income poor (below the 60 per cent of median income poverty line) and deprived (lacking two or more of the basic deprivation items). Since consistent poverty involves both income poverty (at-risk-of-poverty) and deprivation, it will be affected by trends and patterns in both of these measures. Figure 2.6 shows that the consistent poverty rate among children was higher than among the general population throughout the period, with the exception of the youngest children in 2009 and 2010.

**Figure 2.6: Consistent Poverty by Age of Children, 2004-2010**



Source: CSO SILC, 2004-2010, analysis by authors

Consistent poverty among children declined between 2005 and 2008. Between 2008 and 2010 it continued to decline for the children of pre-school age, but rose for both groups of older children. By 2010, the consistent poverty rate for children of school age was 8 to 12 per cent. Among children of pre-school age, the consistent poverty rate (4 per cent) was below that of the general population (6 per cent).

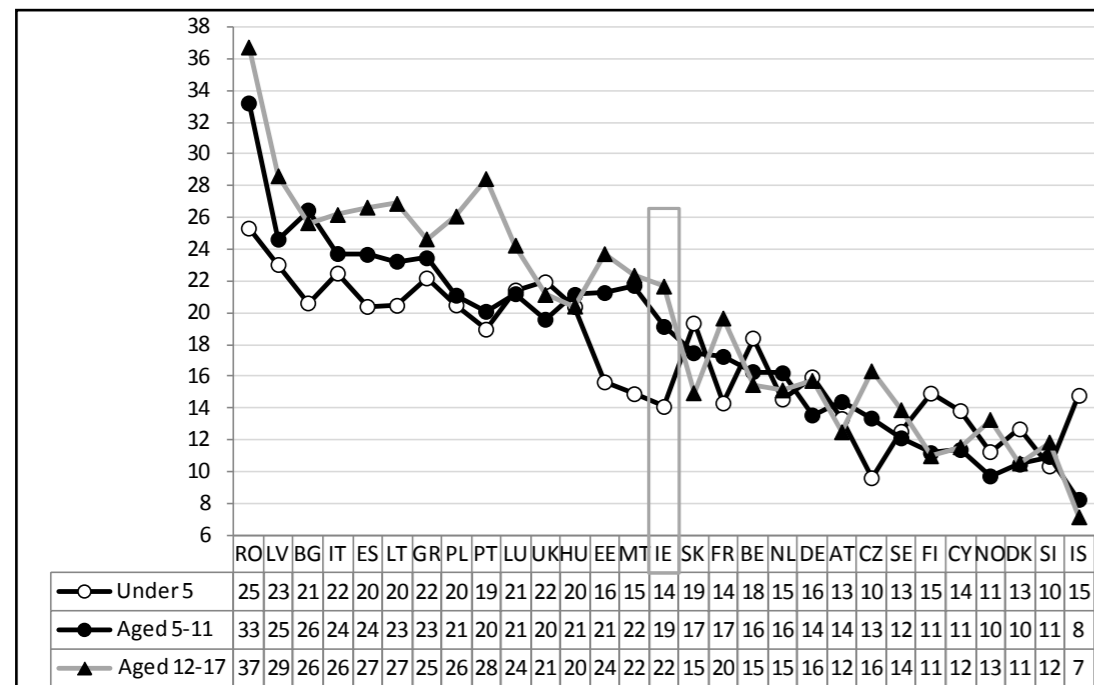
<sup>8</sup> We checked whether the pattern was different by age of child if we adopt an alternative threshold for basic deprivation. The differences are generally smaller (mostly within 2 percentage points) if we adopt either the 1+ or 3+ thresholds.



### 2.7 Irish Income Poverty and Deprivation in European Perspective

At this point we turn to an examination of the poverty and deprivation rates among children in Europe, to see how Ireland compares. The measure of income poverty used in European analysis is slightly different to the national measure (at-risk-of-poverty) described above, using a different income equivalence scale, but the overall rate is very close to the national rate for Ireland. The EU equivalence scale, like the national Irish scale, gives a higher weight to children over the age of 14.

**Figure 2.7: Income Poverty in Europe (EU Measure) by Age of Child, 2009**



Source: Eurostat ([http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database)) (SILC 2009, ilc\_li02)

Note: To adjust for household size and composition, Eurostat uses the Modified OECD scale which attributes a weight of 1 to the first adult (aged 14+) and 0.5 to each subsequent adult and a weight of 0.3 to each child.

Figure 2.7 shows the income poverty rate across European countries by age of child. Ireland is towards the middle of the distribution in terms of the income poverty risk for children. Frazer and Devlin (2011) note that Ireland’s position relative to the EU average had tended to improve, at least up to 2008, but that it tended to lag behind the best-performing countries.

We can also see from the chart that there are several other countries which follow the Irish pattern by age of child, with the highest poverty rates among secondary-school age children and the lowest rates among pre-school children. In general, the countries with the highest average poverty rate for children tend to have the highest rates among children of secondary school age. These include several of the newer Member States, as well as Italy, Portugal, Spain and Greece.

The child income poverty rate in the UK, while higher than in Ireland on average, is very similar across the three age groups of children. The poverty rates for children in different age groups are also very similar in the Netherlands, Austria and Slovenia.

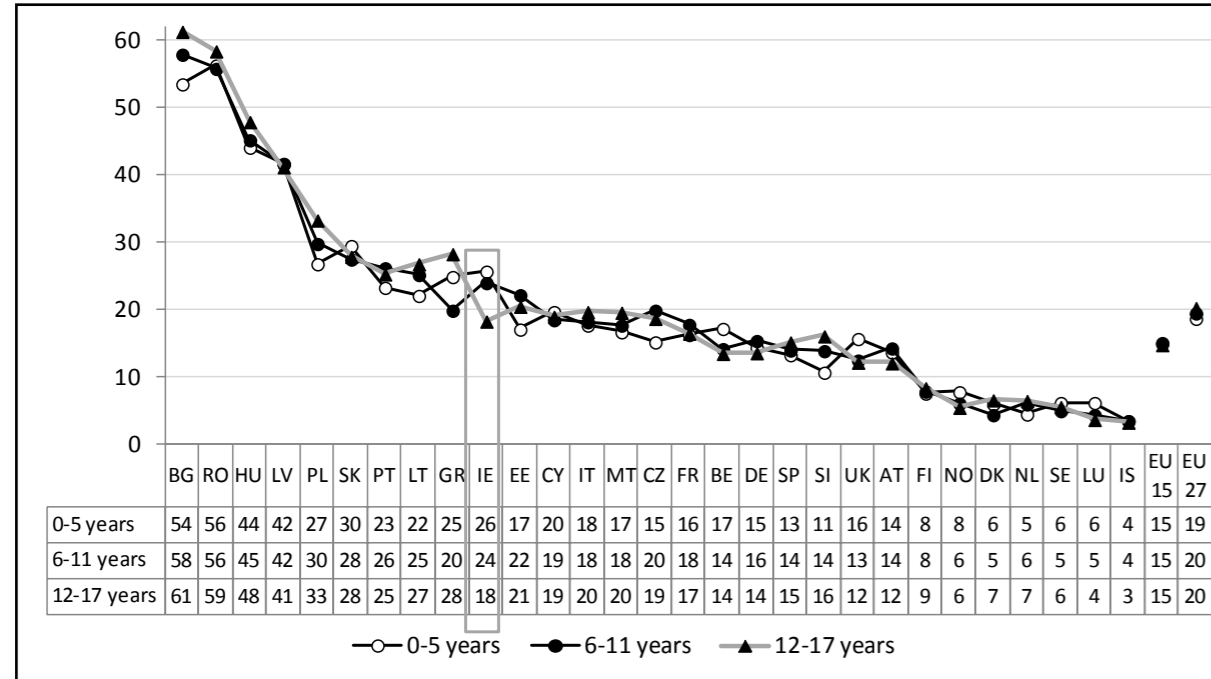
In the countries with lower child income poverty rates, the pattern by age group of child is less clear. In some cases (France, Czechoslovakia, Norway) it is highest for children of secondary school age. In other cases it is highest for pre-school age children (Slovakia, Belgium, Finland, Cyprus, Denmark and Iceland).

As noted above for Ireland, the number of children in the household is an important factor in accounting for the patterns by age group of child. The different patterns across Europe in poverty rates by age group of the child are likely to be associated with differences in family size.

The measure of deprivation used in European analysis is quite different from the Irish measure. According to the EU approach, material deprivation involves living in a household that lacks 3 or more of 9 basic items, and the European and Irish scales only have two items in common. While the set of items are very different, the European measure of material deprivation has exactly the same rate for the total population as the Irish measure of basic deprivation. It is therefore useful to compare the rate of material deprivation across countries to see where Ireland is located in a European context.

Figure 2.8 shows the patterns of material deprivation by age of child across European countries in 2009. The figures are based on the published EU figures, and so use the EU deprivation scales. The rate of material deprivation among children is high in Ireland relative to other countries in the EU 15, but is below the rate in most new Member States. While there is no clear pattern of deprivation across the age groups, we note that for just half of the countries the highest levels of deprivation are found for children aged 12 to 17, and then is equally shared between the two other age groups. A few countries, including Ireland, have a relatively large gap between children in different age groups. The figures in Ireland range from 18 per cent for pre-school age children to 25 per cent for children aged 12 to 17. It is interesting that the EU measures for Ireland in 2009 show the highest rate of income poverty but the lowest rate of basic deprivation for the oldest children. This suggests that the equivalence scales may be either ‘overcompensating’ for the higher costs associated with children in their mid to late teens, or making insufficient allowance for the costs associated with younger children.

**Figure 2.8: Material Deprivation in Europe (EU Measure) by Age of Child, 2009**



Source: Eurostat ([http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database)) (SILC 2009, [ilc\_sip8] Last update: 20-03-2012)

A detailed examination of this issue is beyond the scope of the present paper, but could be investigated further by combining data on income poverty (at-risk-of-poverty) and deprivation as well as further information on the ‘costs of children’ (Bargain, Donni and Gbakou, 2010).

**2.8 Economic Stress by Poverty Typology**

A useful check on the validity of measures of poverty and deprivation is to ask whether they are related to outcomes in the way we would expect. Since we would expect poverty to be associated with subjective economic stress, it is worth asking whether the Irish measures of income poverty (at-risk-of-poverty), deprivation and consistent poverty have a strong relationship to economic stress across different child age groups.

High economic stress is measured by four items, as shown in Figure 2.4: difficulty making ends meet, repaying debts (other than mortgage) a heavy burden, going into debt for ordinary living expenses, and housing costs a heavy burden. These four items can be used to construct a synthetic indicator of economic stress, where a high level of economic stress is recorded when households are experiencing at least two out of the four items.

**Table 2.4: Measures of Subjective Economic Stress on EU-SILC**

‘Concerning your household’s total monthly or weekly income, with which degree of ease or difficulty is the household able to make ends meet?’ Six possible answers were offered ranging from ‘very easily’ to ‘with great difficulty’. Households responding ‘with difficulty’ and ‘with great difficulty’ are considered to be experiencing economic stress.

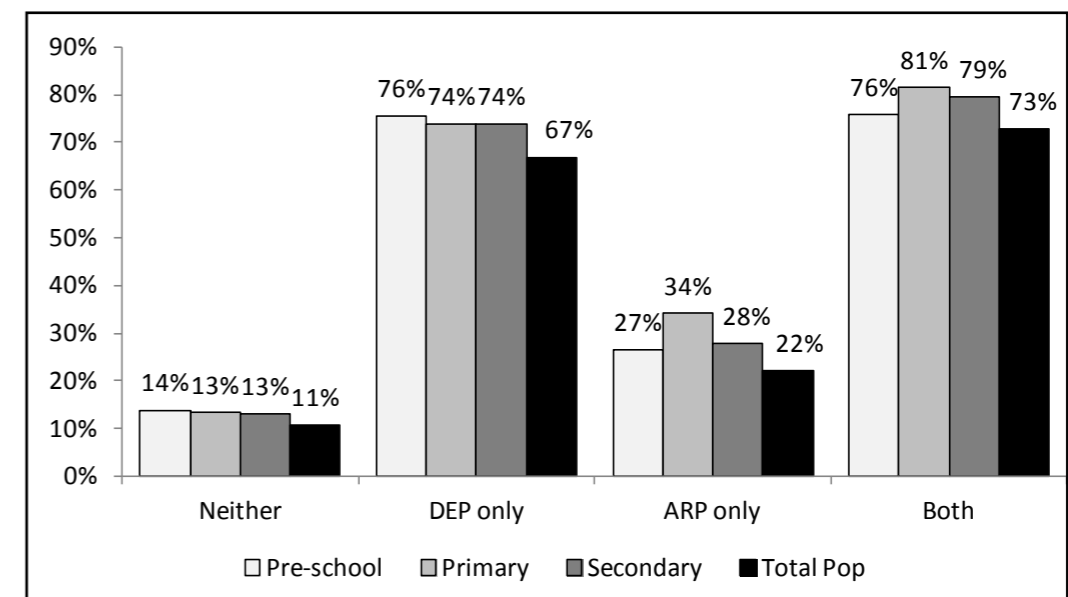
‘Do you make repayments of debts from hire purchases or loans other than mortgages or loans connected with the house and if so how much of a financial burden is the repayment(s)?’ Households responding ‘a heavy burden’ are considered to experience economic stress.

‘Has the household had to go into debt within the last 12 months to meet ordinary living expenses such as mortgage repayments, rent, food, Christmas or back-to-school expenses?’ Households answering ‘yes’ to this item are taken to be experiencing economic stress.

‘When you think of your household’s total housing costs including payments on mortgage or rent, insurance and service charges (refuse removal, regular maintenance and repairs etc.). Would you say they are ...?’ Three possible answers were offered from ‘not a burden at all’ to ‘a heavy burden’. Households responding ‘a heavy burden’ are considered to experience economic stress.

Figure 2.9 shows the percentage of persons in households experiencing high economic stress by poverty typology and by age of child. The poverty typology distinguishes four groups: those neither poor nor deprived, those at risk of poverty only (and not also deprived – shown as ARP-only in the chart), those deprived only (and not also at risk of poverty (shown as DEP-only in the chart) and those both at risk of poverty and deprived.

**Figure 2.9 High Economic Stress by Poverty Typology and Age of Child (%)**



Source: CSO SILC, 2004-2009, analysis by authors

The figure shows that the relationship between the poverty measures (at-risk-of-poverty, deprivation and consistent poverty) and high economic stress is just as strong for children as it is for households generally.<sup>9</sup> In fact, the level of economic stress tends to be higher in households with children, even when the household is neither income poor nor deprived (13 to 14 per cent vs. 11 per cent for all households).

There are some small differences between the different age groups of children. The level of stress associated with basic deprivation in the absence of income poverty (at-risk-of-poverty) is very similar across age group of child (74 to 76 per cent experience high economic stress). For the at-risk-of-poverty measure, however, the level of stress associated with being at-risk-of-poverty in the absence of deprivation is higher for households with children in middle childhood (34 per cent vs. 27 to 28 per cent for younger and older children).

Although there are some differences by age of child, which may be associated with the number of children in the household, the strong relationship between economic stress and both income poverty and basic deprivation for households with children is evidence that the national measures of income poverty (at-risk-of-poverty), deprivation and consistent poverty are 'working' equally well for households with children.

## 2.9 Summary

In this chapter we have focused on locating the poverty and deprivation risk of children with respect to other lifecycle groups and also on exploring differences between children of different age groups. In order to do this, we used the national and EU measures of poverty and deprivation. As noted in Chapter 1, however, the general deprivation measure may not capture specific aspects of deprivation to which children may be exposed. In the next chapter, using the special module on deprivation items for children in SILC 2009, we examine the child-specific deprivation indicators.

<sup>9</sup> The finding of a stronger relationship between economic stress and deprivation than between economic stress and being at risk of poverty is discussed in Watson and Maître, 2012.

## Chapter 3: Child-specific Measures of Deprivation

### 3.1 Introduction

In this chapter we discuss the measures of child-deprivation available in SILC 2009, showing (a) the percentage of children deprived according to each indicator and (b) a factor analysis of the dimensionality of the indicators to examine whether the items form a single 'child deprivation' factor.

We focus in this chapter on children aged 2 to 15, as this is the group for whom most of the childhood deprivation measures are gathered. As we will see, two of the items (school trips and place to do homework) will not be relevant to the very youngest children.

There have been a number of efforts at a single country level to establish a set of measures and indicators specifically designed to measure child deprivation. There are two distinct strategies. One approach is to ask the head of household to provide information on indicators of childhood deprivation, such as children's possessions, etc. An alternative strategy has been to survey children themselves, both to identify whether the relative importance attached to the different dimensions differs from an adult perspective and to pick up on intra-household differences in consumption and deprivation.

The first strategy was adopted in the Poverty and Social Exclusion Survey (PSE) in Britain. An initial survey elicited parents' views on the necessities of life for children Gordon et al. (2000); 27 of the 30 items/activities investigated were seen as a necessity by over 50 per cent of parents. These items were then included in the main PSE survey. A subset of nine of these child deprivation items was subsequently included in the Family Resources Survey from 2004 (McKay and Collard, 2004).

The second strategy was adopted in a recent Irish study (Swords et al., 2011). Children aged 9 and their parents were presented with a list of 49 items and activities and both children and parents were asked whether they were essential and whether it was something that the child lacked because the household could not afford it. There was broad agreement between parents and children on which items were essential. Nevertheless, on several items, parents were *less* likely than children to report that they wanted an item for their children but could not afford it

(e.g. three balanced meals, books, food and drink for friends, own money, shops close to home), although the differences tended to be small. On a number of other items, parents were *more* likely than children to report wanting an item for the child, but being unable to afford it (e.g. family holiday, restaurant meal, bank/post office account for saving). The differences between parents and children were larger where parents reported an enforced lack of an item but children did not report an enforced lack.

The addition of the SILC 2009 special module on deprivation gives the opportunity to explore in more detail the social and economic circumstances of children and relevant deprivation domains in terms of interaction with society, health (diet) and basic necessities. The strategy adopted here was to collect the information from the household respondent on goods and activities available to the children.

### 3.2 The Child-specific Items

Table 3.1 shows the child-specific items that are available on the 2009 SILC module. Note that the information is gathered from the household questionnaire respondent, typically (one of) the child's parents or guardians. Note also that the items are not generally asked specifically of each child. Three exceptions are the item on being able to participate in school trips or events, having a suitable place to do homework and having a space to play outside. These items are asked specifically with respect to each child. We assign the responses to the items to each child in the household. In the case of the general items, they are assigned to all children in the household. In the case of the items asked specifically with respect to each child, the response in respect of that child is attached to him or her. Strictly speaking, the correct interpretation of the results would be of the form 'children living in a household where a child lacks x'. To avoid awkward phrasing, however, we consider a child deprived of an item if any child in the household lacks it.

**Table 3.1: Child-specific Deprivation Items**

Name	Description	Base
Clothes	Does the child/children have some new (not second hand) clothes? (Yes; No because cannot afford; No, other reason)	Age 2-15
Shoes	Does the child/children have two pairs of properly fitting shoes, including a pair of all-weather shoes? (Yes; No because cannot afford; No, other reason)	Age 2-15
Fruit	Does the child/children eat fresh fruit and/or vegetables at least once a day? (Yes; No because cannot afford; No, other reason)	Age 2-15
Meals	Does the child/children eat three meals a day? (Yes; No because cannot afford; No, other reason)	Age 2-15
Protein	Does the child/children eat a meal with meat, chicken or fish (or vegetarian equivalent) at least once a day? (Yes; No because cannot afford; No, other reason)	Age 2-15
Books	Does the child/children have books at home suitable for his/her age? (Yes; No because cannot afford; No, other reason)	Age 2-15
Equipment	Does the child/children have outdoor leisure equipment (bicycle, roller skates, etc.)? (Yes; No because cannot afford; No, other reason)	Age 2-15
Games	Does the child/children have indoor games (educational baby toys, building blocks, board games, computer games etc.)? (Yes; No because cannot afford; No, other reason)	Age 2-15
Activity	Does the child/children participate in a regular leisure activity (swimming, playing an instrument, youth organisations, etc.)? (Yes; No because cannot afford; No, other reason)	Age 2-15
Party	Does the child/children have celebrations on special occasions (birthdays, religious events)? (Yes; No because cannot afford; No, other reason)	Age 2-15
Friends	Does the child/children invite/have friends to your house to play and/or eat from time to time? (Yes; No because cannot afford; No, other reason)	Age 2-15
Trip	Does <Name> participate in school trips and school events that cost money? (Yes, No-cannot afford; No-other)	School children
Homework	Does <Name> have a suitable place to study or do homework? (Yes, No-cannot afford; No-other)	School children
Outdoor	Does <Name> have an outdoor space in the neighbourhood where he/she can play safely (included here are household gardens)? (Yes, No-cannot afford; No-other)	Age 0-16
Doctor	Was there any time during the past 12 months when <Name> really needed to consult a GP or specialist but did not? [If not] What was the main reason for not consulting the GP or specialist?	Age 0-16
Dentist	Was there any time during the past 12 months when <Name> really needed to consult a dentist but did not? [If not] What was the main reason for not consulting the dentist?	Age 0-16

Source: SILC 2009, Manual

Most children are not lacking any of the child-specific items (Table 3.2). Over 90 per cent of children have the items, or can do the activities, apart from participating in school trips or events or participating in regular leisure activities (both 88 per cent).

**Table 3.2: Percentage who Have, who Lack because they Cannot Afford and who Lack Each Item for Other Reasons (children age 2-15)**

	Has/Does %	Lack because cannot afford%	Lack for other reason %
Eat fruit and vegetables	97.0	0.7	2.3
Have indoor games	99.3	0.4	0.2
Outdoor space to play	94.7	0.6	4.7
Eat 3 meals a day	99.1	0.5	0.5
Made required doctor visit(s)?	98.4	0.6	0.9
Made required dentist visit(s)?	99.1	0.6	0.4
Have parties or celebrations	98.1	0.9	1.1
Invite friends to play	94.8	1.1	4.1
Have books at home	95.9	1.0	3.1
Have outdoor leisure equipment	97.4	1.2	1.4
Suitable place for homework	97.0	1.5	1.5
Eat daily protein meal	97.9	1.9	0.2
New clothes	97.1	2.6	0.2
Properly fitting shoes	95.7	3.5	0.8
Afford to go on school trip	88.4	3.6	8.0
Participate in regular leisure activities	88.3	5.1	6.6

Source: CSO SILC, 2009, analysis by authors

For some of the child-specific items, the percentage of children who do not have, or cannot do, for reasons other than affordability is higher than the percentage deprived of the item. For example, 4.5 per cent of children do not have an outdoor space to play for reasons other than affordability, 3.6 per cent do not have books at home for reasons other than affordability and 7.3 per cent do not go on school trips for reasons other than affordability. This may be related to urban location, the age or interests of the child or the range of extra-curricular activities organised by the school.

The percentage of children experiencing an enforced lack is very low for the items, as shown in Table 3.2. It is below 1 per cent for seven items, (Fruit, Games, Outdoor, Meals, Doctor, Dentist and Party), between 1 and 4 per cent for another eight (Friends, Books, Equipment, Homework, Protein, Clothes, Shoes and Trip). There is only one item for which more than 5 per cent of children experience deprivation (being able to go on a school trip or event and participation in a regular leisure activity, 5.1 per cent).

These figures are considerably lower than the percentage of children living in households experiencing basic deprivation (27 per cent of primary-school children and 22 per cent of secondary-school children in 2009). There could be a number of reasons for this: parents may be diverting household resources towards their children in order to protect them; parents may be reluctant to admit that their children lack access to goods or activities that they would like to have or that their parents would like them to have; or the children in households experiencing basic deprivation are also deprived but the child-specific items are not sensitive enough to capture their deprivation. In Chapter 5 we will explore in more detail the association between household-level basic deprivation and the child-specific deprivation items. We will be particularly interested in whether those children experiencing child-specific deprivation are a subset of those in households experiencing basic deprivation.

### 3.3 The Child-specific Items by Age Group of Child

Table 3.3 shows that the pattern across items is very similar for primary-school age and secondary-school age children. The only differences that reach statistical significance are the higher percentage of secondary-school age children who cannot afford necessary dentist visits (1.6 vs. 0.2 per cent) or to go on school trips (6.3 vs. 2.0 per cent), and the higher percentage of primary-school age children who cannot afford new clothes (2.6 vs. 1.2 per cent). The difference in the pattern for dentist visits probably arises because primary school children (even if they are not covered by a medical card) are eligible for free dental services if referred by child or school health services. The pattern for clothes may reflect a greater importance attached to clothes as a way to 'fit in' among teenagers (Bradshaw and Main, 2010, p.46).

The youngest children (aged 2 to 4) are more likely to be in households where children (not necessarily these youngest children; it may be their older brothers or sisters) cannot afford to eat fruit and vegetables, an outdoor space to play and properly fitting shoes. The challenge with properly fitting shoes for the youngest children may be linked to the rapid rate of growth at this stage, so that children aged 2 to 4 need a larger shoe size about every four months (Wenger et al., 1983).

**Table 3.3: Percentage Experiencing Enforced Lack of Each Item by Age of Child**

Item	Pre-school (aged 2-4)	Primary (aged 5-11)	Secondary (aged 12-15)
Eat fruit and vegetables	1.9*	0.4	0.4
Have indoor games	0.6	0.3	0.5
Outdoor space to play	1.3*	0.4	0.6
Eat 3 meals a day	0.0	0.7	0.4
Made required doctor visit(s)?	0.6	0.5	0.9
Made required dentist visit(s)?	0.0	0.2	1.6*
Have parties or celebrations	0.9	0.9	0.9
Invite friends to play	1.2	0.7	1.5
Have books at home	0.6	1.4	0.6
Have outdoor leisure equipment	0.7	1.1	1.8
Suitable place for homework	0.4	1.6	1.5
Eat daily protein meal	1.0	2.5	1.5
New clothes	4.7	2.6*	1.2
Properly fitting shoes	6.2*	3.3	2.0
Afford to go on school trip	4.2	2.0*	6.3
Participate in regular leisure activities	6.3	5.4	3.8*

Source: CSO SILC, 2009, analysis by authors

Note: \* indicates significant difference between the age groups (N=476 for pre-school age children, 1,318 for primary school age children and 656 for secondary school age children).

### 3.4 Deprivation on Child-specific Items by Income Level

Table 3.4 shows how the pattern of deprivation varies by income level. The income measure is the household income fifth, adjusted to take account of household size and composition. The distribution (lowest fifth, second lowest, and so on) is calculated across households with children aged 2 to 15, rather than across the total population. This is done so that we capture the range of incomes available to households with children and so that we have a sufficient number of cases in each income group. The table shows the proportion of children in each income band experiencing an enforced lack (deprived) of each item. In general, the percentage of children deprived shows a sharp fall between the first and second income quintile and declines further as income rises towards the top quintile.

**Table 3.4: Percentage of Children aged 2 to 15 Experiencing Enforced Lack of Each Item by Income Band (quintiles)**

	Income Quintile (Fifth)				
	Lowest	Second Lowest	Middle	Second Highest	Highest
Fruit	3.2	0.3	0.0	0.0	0.0
Games	1.0	1.0	0.0	0.2	0.0
Meals	2.4	0.1	0.0	0.0	0.0
Party	2.9	0.7	0.3	0.5	0.0
Invite friends	4.2	0.9	0.3	0.0	0.0
Books	3.6	1.4	0.0	0.2	0.0
Equipment	4.0	1.5	0.1	0.0	0.7
Homework	4.6	2.1	0.0	0.0	0.5
Protein	7.0	2.5	0.0	0.0	0.1
New clothes	4.8	3.8	2.1	1.8	0.7
Shoes	8.1	5.3	2.3	2.0	0.0
Trip/event	9.0	1.8	4.2	1.9	0.0
Activity	12.4	8.5	4.0	0.8	0.0
Outdoor space	1.6	1.3	0.0	0.0	0.1
Doctor	1.3	1.0	0.2	0.1	0.7
Dentist	1.0	0.5	1.2	0.1	0.0

Source: CSO SILC, 2009, analysis by authors Note: Income bands are quintiles of the equivalised household income, based on the distribution of income across households with children aged 2 to 15.

The three items at the bottom of the table do not work as well as measures of child-specific deprivation. Together with Whelan and Maître (2012), we believe that these items are not suitable for use as part of a general index of childhood deprivation in Ireland. In the case of doctor visits, lower-income families will face less of a constraint due to cost because many of them will be eligible for free doctor visits under the General Medical System (medical card). A similar situation pertains to dental care, so that in Table 3.4 we see children in middle-income households more likely to be deprived of required dental care. Children in low-income households that are entitled to a medical card qualify for some dental services free of charge.

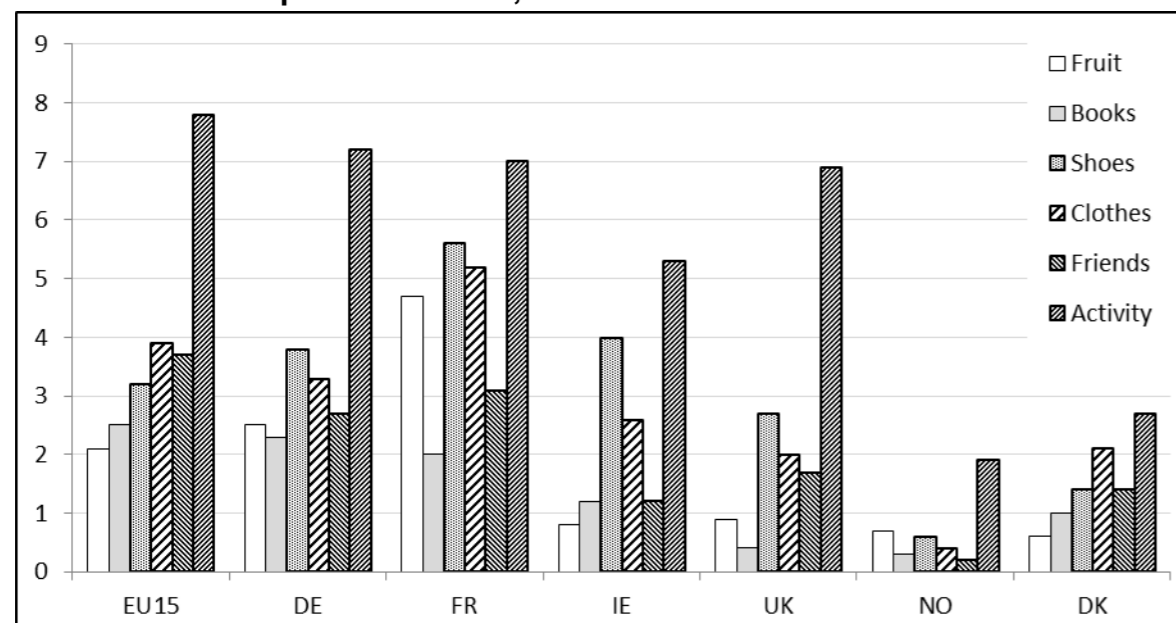
While the item on outdoor space follows the expected pattern by income quintile, the availability of outdoor space to play is strongly affected by urban/rural location, so it is less general than the other indicators.<sup>10</sup>

<sup>10</sup> Over 99 per cent of children living in rural areas (population <1,000) have access to an outdoor space to play, compared to 92 per cent of children in larger towns and cities.

### 3.5 Deprivation on Child-specific Items in Europe

Figure 3.1 shows the percentage of children who lack selected child-specific items in a number of EU 15 countries. These countries and items were selected to provide an overview of the range of patterns across the EU 15 countries.

**Figure 3.1: Percentage Lacking Selected Child-specific Items in Selected European Countries, EU-SILC 2009**



Source: Eurostat 2011, EU-SILC 2009 data: [http://epp.eurostat.ec.europa.eu/portal/page/portal/income\\_social\\_inclusion\\_living\\_conditions/data/ad\\_hoc\\_modules](http://epp.eurostat.ec.europa.eu/portal/page/portal/income_social_inclusion_living_conditions/data/ad_hoc_modules)

The percentage of children deprived on these six items (Fruit, Books, Shoes, Clothes, Friends, Activity) is somewhat lower in Ireland than the EU 15 average but higher than in Denmark and Norway. Children in Ireland are somewhat less likely than children in Germany, France and the UK to be deprived of these child-specific items. This is an unexpected finding, given the fact that the level of basic household-level deprivation, as measured by the EU items, is higher in Ireland than in these countries. It suggests that there may be differences between Ireland and other European countries in the distribution of resources within households. It is beyond the scope of the present paper to explore this issue, but it is one that is worthy of further research.

### 3.6 Level of Child-specific Deprivation

In order to move towards the analysis in the next chapter of risk factors for child-specific deprivation, we use the items to construct a scale. The details of scale constructing and testing are presented in Appendix 2. The resulting items are the 13 shown in the top panel of Table 3.4.

A summary scale was constructed by counting the number of items on which a child experienced deprivation (lacked due to inability to afford). As shown in Table 3.5, 87 per cent of children were deprived of none of these child-specific items; 13 per cent were deprived of one or more; 5 per cent were deprived of two or more and 2 per cent were deprived of three or more. Table 3.5 also shows the relationship to income level, measured as quintiles (fifths) of the household income distribution adjusted for household size and composition and calculated specifically for children. There is a clear relationship to income level. For instance, the percentage of children lacking one or more of these items is 30 per cent in the lowest income fifth and 14 per cent in the second-lowest income fifth but falls to 2 per cent in the highest income fifth. The average number of items lacked drops from 0.62 in the lowest income fifth to 0.02 in the highest income fifth.

**Table 3.5: Percentage of Child-specific Items Lacked because Cannot Afford by Income Quintile (children aged 2 to 15)**

Income group	Deprived of ... (%)				Average
	None	1 or more	2 or more	3 or more	N lacked
Lowest	70%	30%	15%	7%	.62
Second Lowest	86%	14%	5%	3%	.26
Middle	90%	10%	1%	1%	.12
Second Highest	94%	6%	0%	0%	.06
Highest	98%	2%	1%	0%	.02
Total	87%	13%	5%	2%	.22

Source: CSO SILC, 2009, analysis by authors

Table 3.6 shows the number of child-specific items lacked because the household cannot afford them by age of child. The pattern is very similar by age of child and most of the differences in the table are not statistically significant. The only exception is a suggestion that the youngest children may be slightly more likely to experience deeper levels of deprivation. They are significantly more likely to lack two or more of the child-specific items (7 per cent vs. 5 per cent) and to lack three or more (4 per cent vs. 2 per cent) items because the household cannot afford them.

**Table 3.6: Number of Child-specific Items Lacked because Household Cannot Afford Them by Age of Child**

Child age	Deprived of ... (%)				Average
	None	1 or more	2 or more	3 or more	number
Aged 2 to 4	87	13	7*	4*	.27
Aged 5 to 11	87	13	5	2	.23
Aged 12 to 15	89	11	5	2	.22

Note: \* indicates significant difference between the age groups (N=476 for pre-school age children, 1,318 for primary school age children and 656 for secondary school age children)

### 3.7 Summary

In this chapter we examined the 16 child-specific items available on the 2009 Deprivation Module of the SILC dataset. After testing, and following earlier analyses by Whelan and Maître (2012), we found that 13 of the items were suitable for use in a general scale measuring childhood deprivation. According to this scale, 13 per cent of children are deprived of one or more child-specific items. This is a much lower figure than the percentage of children in households experiencing basic deprivation, as we saw in the previous chapter. We will return to the issue of the relationship between basic and child-specific deprivation in Chapter 5. In the next chapter we continue our examination of child-specific deprivation by asking what characteristics of children and their families are associated with an increased risk of child-specific deprivation.

## Chapter 4: Risk Factors for Child-specific Deprivation

### 4.1 Introduction

In this chapter we highlight the most important factors associated with the risk of child-specific deprivation. We describe the overall differences between groups and then use a statistical model to separate the effects of characteristics that are related to each other. For instance, in Chapter 2 we noted that children in middle-childhood were more likely to have brothers and sisters who are under the age of 18. We would be interested in finding out whether any difference in child-specific deprivation by the age of the child was arising because of the number of children in the household or some other factor, such as whether the parents were employed.

We examine a range of child and family factors. These include age of the child, gender of the child and number of children in the household. As noted above, households with a larger number of children are likely to be under greater pressure to meet all of their needs from the income available.

We also control for the age and education of the mother. Since mothers of higher socio-economic status tend to defer childbirth, we may expect that children of younger mothers would be more likely to be deprived. However, this pattern may be fully accounted for by differences in education, in employment status and in income by mother's age.

Family type is also expected to be associated with child-specific deprivation. We know that lone mothers have a higher risk of both poverty and deprivation and we would expect that children of lone mothers would show higher levels of child-specific deprivation. We distinguish between lone mothers who have never married and lone mothers who were formerly married (i.e. divorced or separated mothers). In couple households, we distinguish between married and cohabiting couples. There is some literature suggesting that marriage affords a greater degree of protection to children (e.g. McLanahan and Sandefur, 1994; Manning and Brown, 2006), possibly because of a greater stability in the relationship between the parents (Bumpass and Lu, 2000). Given the growth in cohabiting parenthood in Ireland, it would be important to ask whether this has implications for the well-being of children.

Since disability is associated with an increased risk of poverty and deprivation, we examine the risk of child-specific deprivation by the disability status of the mother and of the father (where present).



Since work is one of the most important factors in protecting households from poverty, we examine the work status of the parents. The efficacy of work in reducing the risk of poverty is conditioned by the social class of the occupation. To examine the significance of social class, we explore differences in child-specific deprivation by the social class of the household reference person.

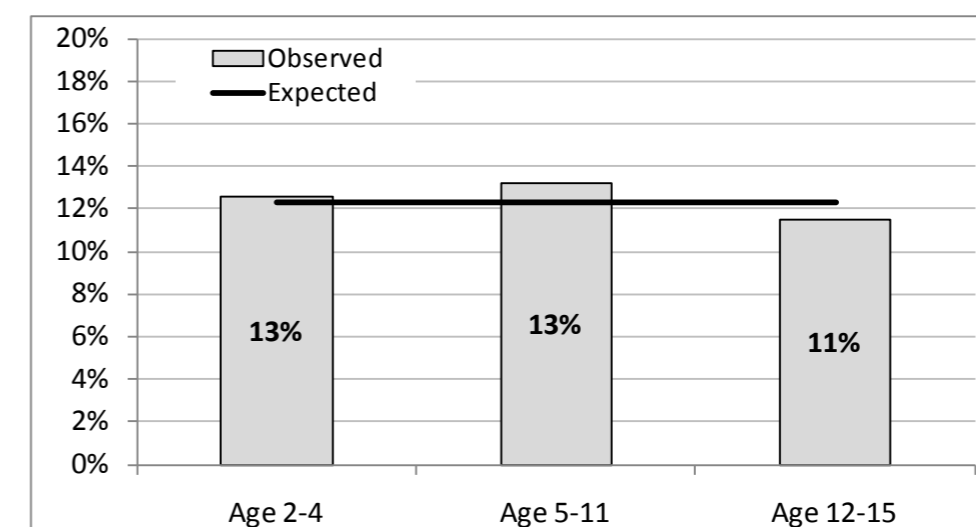
Finally, the total income available to the household will have implications for the standard of living the household is able to afford. We examine the risk of child-specific deprivation by the income level of the household. For this purpose, we divide income into quintiles (fifths), calculated on the basis of equivalised income across all households with children. Since households with children have slightly lower equivalised incomes than households generally (as seen in Chapter 2), the cut-off points for the income categories will be slightly lower than if they were calculated across all households.

In presenting the results, we show the overall differences between groups and then we show the expected difference if other factors were held constant. The expected differences are calculated based on a regression model to control for other characteristics so that the effect of each factor can be isolated (see Model 5 in Appendix Table A3.1). Essentially, the expected figures show how the risk of child-specific deprivation would be different for the 'average child', when the only change is in the characteristic being considered (such as age, mother's education and so on). The best way to explain this is to turn to the example in Figure 4.1, which shows differences in child-specific deprivation by age of the child.

#### 4.2 Child-specific Deprivation by Gender and Age of Child

There are no differences in the risk of child-specific deprivation by whether the child is a boy or a girl. In Figure 4.1 we turn to the pattern by the age group of the child. Turning first to the observed results before controlling for other factors, we see from Figure 4.1 that older children (aged 12 to 15) are slightly less likely to be deprived of the child-specific items (11 per cent) than younger children, but that there is almost no difference between children aged 2 to 4 and children aged 5 to 11 (both 13 per cent).

**Figure 4.1: Observed and Expected Differences in Level of Child-specific Deprivation by Age of Child**



Source: CSO SILC 2009. Analysis by authors (based on Appendix Table A3.1).

Note: Expected differences are the differences that remain after controlling for gender of the child, number of children in the household, age, education, nationality and marital status of the mother, disability status of the parents, whether the parents are in employment, social class of household and household income level.

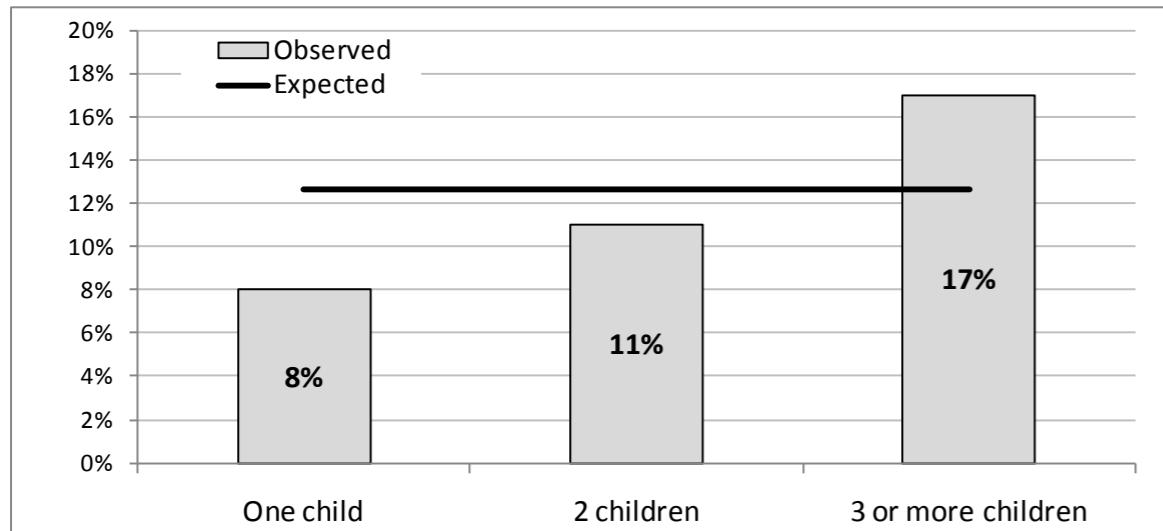
The expected pattern, shown by the line in the chart, is the level of child-specific deprivation we would expect if we control for other characteristics of the children and their households. These other characteristics are: gender of the child, number of children in the household, age, education, nationality and marital status of the mother, whether the parents are in employment, and social class of household. We see from Figure 4.1 that when we control for these other characteristics, there is no significant difference by age of the child. This is because the observed slightly lower rate of deprivation among older children is due to other characteristics of these households. The models in Appendix Table A3.1 suggest that the differences by age of child are not statistically significant when we control for number of children in the household.

#### 4.3 Child-specific Deprivation by Number of Children in Household

Figure 4.2 shows the percentage of children experiencing child-specific deprivation (lacking one or more of the 13 items) by the number of children in the household. This shows that the more children there are in the household, the higher the percentage of children who experience child-specific deprivation. Only 8 per cent of children in one-child households experience child-specific deprivation, compared to 11 per cent of children in two-child households and 17 per cent of children in households with three or more children. This is understandable, as households with more children must meet the needs of a greater number of people from a given income.<sup>11</sup>

<sup>11</sup> Additional analyses indicated that the *degree* of deprivation (as well as the *presence* of deprivation measured as lacking 2 or more items) is linked to number of children. The average number of items lacked among children in households with 1-2 children is 0.9 for basic deprivation and 0.2 for childhood deprivation. Children in households with three or more children lack 1.2 basic items, on average, and 0.4 child-specific items.

**Figure 4.2: Observed and Expected Differences in Level of Child-specific Deprivation by Number of Children in Household**



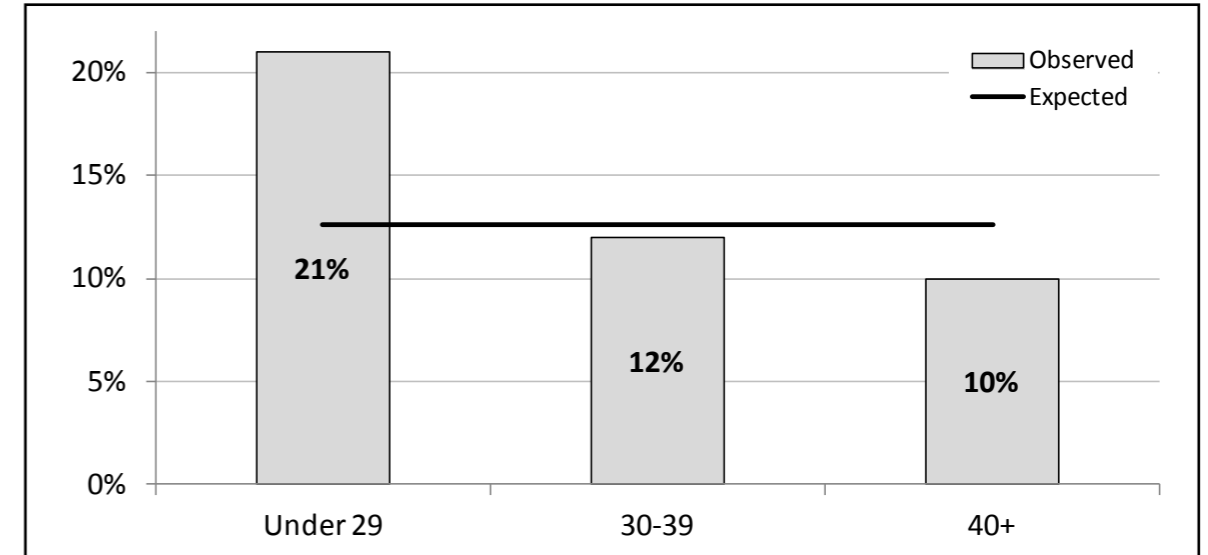
Source: CSO SILC 2009. Analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, age, education, nationality and marital status of the mother, disability status of the parents, whether the parents are in employment, social class of household and household income level.

When we control for other characteristics of the household, the difference in risk of child-specific deprivation between households with different numbers of children is no longer statistically significant. The analysis in Appendix Table A3.1 indicates that the risk remains significantly higher for children in households with three or more children until we control for social class and income. This means that part of the reason for the higher level of child-specific deprivation in larger households is due to the association between lower equivalised incomes and larger family size.

**4.4 Child-specific Deprivation by Age of Mother**

In Figure 4.3 we see that children of the youngest mothers (under the age of 30) have the highest risk of child-specific poverty (21 per cent), with only small differences between children of mothers in their thirties (12 per cent) and mothers aged 40 or over (10 per cent). Part of what is driving this pattern, however, is that the youngest mothers are more likely to be lone parents and to have lower levels of education. Controlling for these characteristics and other characteristics, there is no difference in the expected risk of child-specific deprivation by age of the mother, as shown by the dark line in the chart. This means that the observed differences between children of mothers of different ages are driven by differences between these mothers in family type and level of education.

**Figure 4.3: Observed and Expected Child-specific Deprivation by Age of Mother**

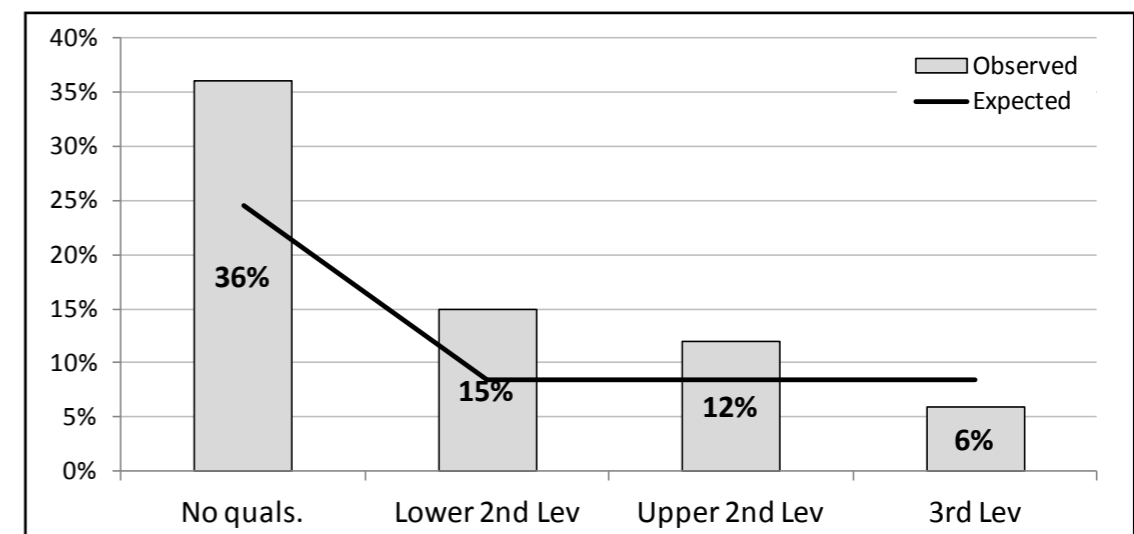


Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, education, nationality and marital status of the mother, disability status of the parents, whether the parents are in employment, social class of household and household income level.

**4.5 Child-specific Deprivation by Education Level of Mother**

Figure 4.4 illustrates the association between child-specific deprivation and the level of education of the mother. Before controlling for other factors, children whose mothers have no qualifications are at much higher risk of child-specific deprivation: over one-third of them are deprived compared to 15 per cent where the mother has lower second level qualifications (such as Junior Cert.), 12 per cent where the mother has higher second level qualifications (such as Leaving Cert.) and only 6 per cent where the mother has some post-second level education (certificate, diploma or degree).

**Figure 4.4: Observed and Expected Child-specific Deprivation by Mother's Education**



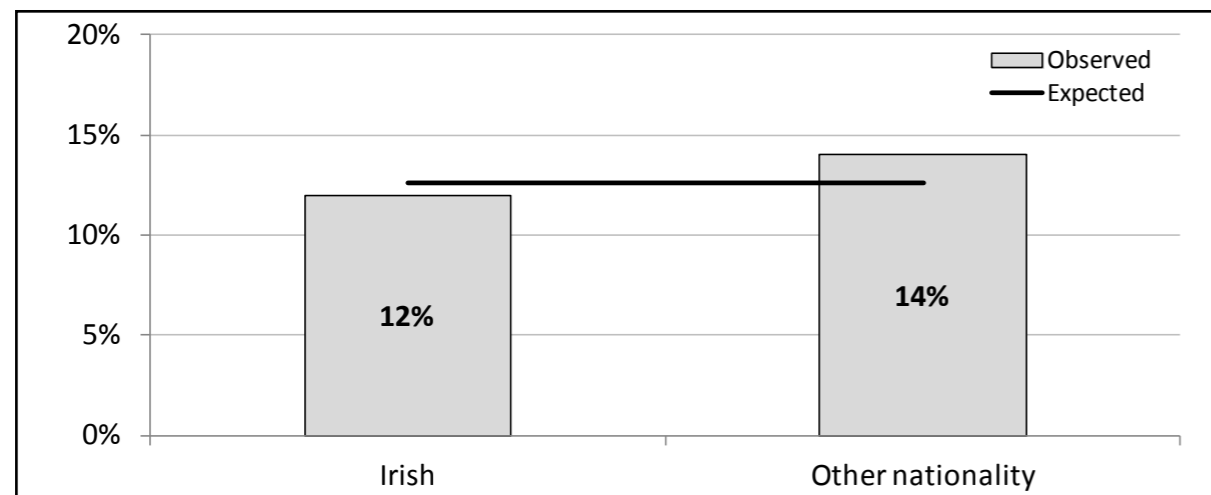
Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, age, nationality and marital status of the mother, disability status of the parents, whether the parents are in employment, social class of household and household income level.

When we control for other characteristics, the risk of child-specific deprivation remains significantly higher for children of mothers with no qualifications (about 25 per cent) but differences in the level of child-specific deprivation among children of mothers with higher levels of education (lower second level to third level) are no longer statistically significant. In fact, as can be seen in Appendix Table A3.1, when we control for age of mother and number of children, the differences by education level of mother are no longer significant. The exception is children of mothers with no qualifications, who continue to show higher levels of child-specific deprivation even when we control for family type, work status, social class and household income. This highlights the importance of a basic level of educational qualifications for the mother, even apart from the link between education and earnings.

#### 4.6 Child-specific Deprivation by Nationality of Mother

Figure 4.5 shows the level of observed and expected child-specific deprivation by nationality of the mother. This measure is based on whether or not the mother was born in Ireland, rather than on her citizenship. Overall, children of non-Irish mothers have a slightly higher risk of child-specific deprivation (14 per cent vs. 12 per cent). In the model, however, this difference is not statistically significant, even before controlling for parent’s employment situation, social class and income. When we control for other factors, then, the difference by nationality of the mother is not statistically significant.

**Figure 4.5: Observed and Expected Child-specific Deprivation by Nationality of Mother**

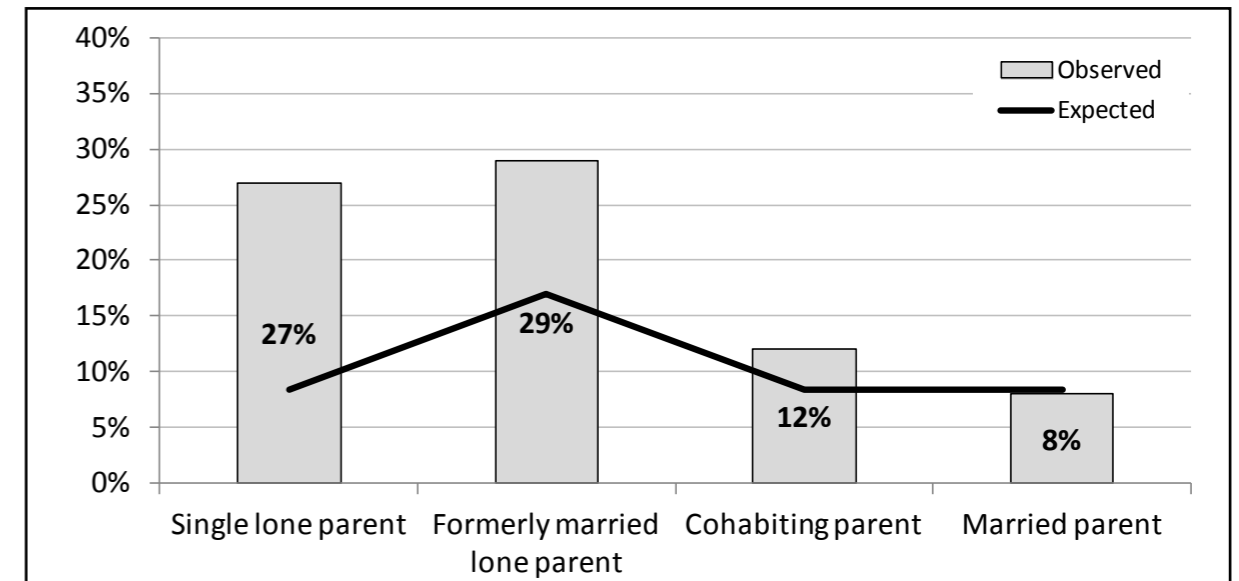


Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, family type, age and education of the mother, disability status of the parents, whether the parents are in employment, social class of household and household income level.

#### 4.7 Child-specific Deprivation by Family Type

Figure 4.6 shows the observed and expected level of child-specific deprivation by family type. We distinguish two types of lone parent household: never married lone parents and formerly married lone parents. We also distinguish two types of couple household: cohabiting and married couples. Figure 4.6 shows that children of lone parents (predominantly lone mothers) have a higher risk of child-specific deprivation. Before controlling for other characteristics, 27 per cent of children of never-married parents and 29 per cent of children of formerly married parents experience child-specific deprivation compared to 8 per cent of children of married couples. Before adding controls, we also observe a higher risk of child-specific deprivation for cohabiting couples (12 per cent) than for married couples.

**Figure 4.6: Observed and Expected Child-specific Deprivation by Family Type**



Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, age, education and nationality of the mother, disability status of the parents, whether the parents are in employment, social class of household and household income level.

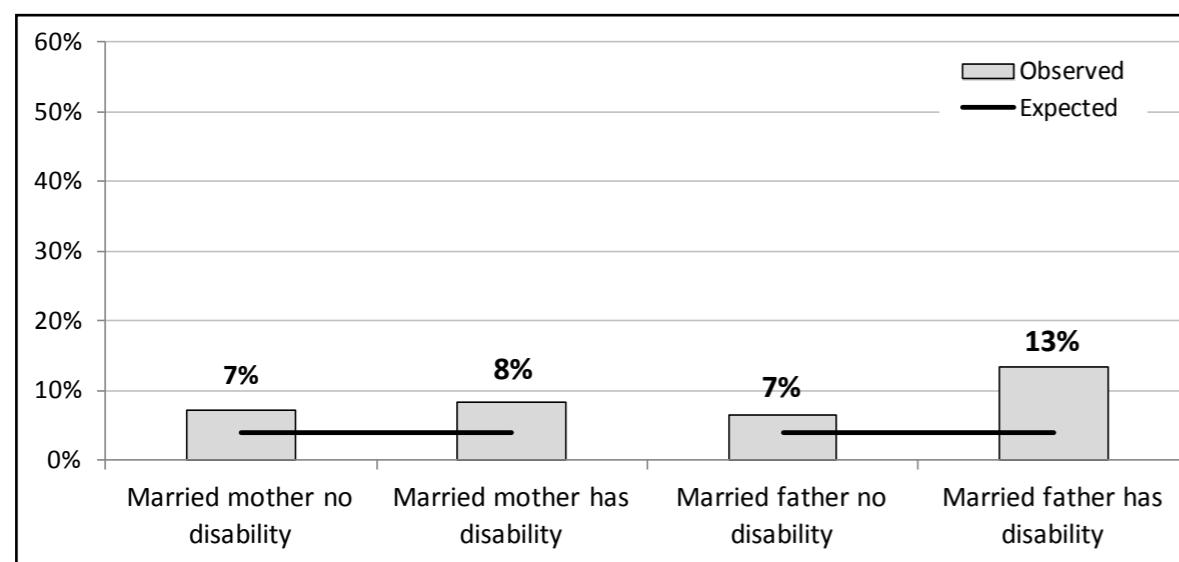
When we control for other characteristics, only the children of formerly married mothers show a significantly higher risk of child-specific deprivation, as shown by the dark line in Figure 4.6. The higher risk for children of cohabiting parents is no longer significant when we control for family size, age of mother and education of mother (see Model 2 in Appendix Table A3.1). The higher risk of children of never-married lone parents is no longer significant when we control for the work status of the mother (see Model 3 in Appendix Table A3.1). This points to the importance of work as a means of enabling lone parents to protect their children from deprivation. The risk remains higher for children of formerly married lone parents, even controlling

for parent’s work status, social class and income. This suggests that there may be something about the process of marital breakdown itself that makes it difficult for lone parents to protect their children.

#### 4.8 Child-specific Deprivation by Disability of Parents

Figure 4.7 shows the risk of child-specific deprivation by disability status of the parents for married couple households. We might expect that parental disability would result in a higher risk to children either through its impact on household income, because there are costs associated with disability itself that represent an additional claim on household income or because the limitations experienced by parents with a disability mean that they are less able to protect their children from deprivation.

**Figure 4.7: Observed and Expected Child-specific Deprivation by Disability, of Married Mothers and Married Fathers**



Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, age, education and nationality of the mother, disability status of the parents, whether the parents are in employment, social class of household and household income level.

As Figure 4.7 shows, disability of the mother in married couple households is associated with a very small increased risk of child-specific deprivation (8 per cent vs. 7 per cent), and disability of the father is associated with a larger increase in risk (13 per cent vs. 7 per cent for married fathers without a disability). The larger impact of father’s disability in married couple households is likely to be due to its consequences for total household income, since men’s earnings tend to be higher than women’s.

When we control for other characteristics, particularly for work status of the parents (see Appendix Table A3.1), the difference is no longer statistically significant. It would seem then that the impact of disability on child-specific deprivation is due to the fact that disability reduces the capacity of the parents to engage in employment. This effect is larger for fathers with a disability than for mothers with a disability. Preliminary analyses of lone mothers with a disability suggested a more sizeable impact of lone mother’s disability on child-specific deprivation, but the number of cases is too small to provide figures.

#### 4.9 Child-specific Deprivation by Work Status of Parents

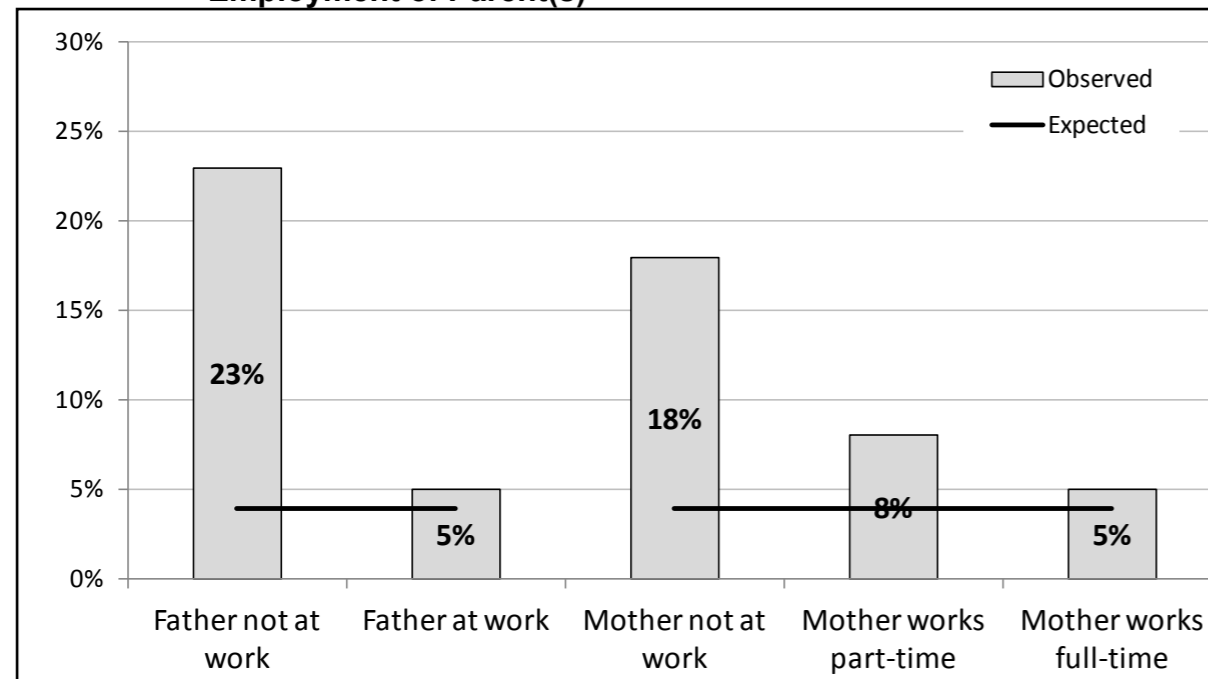
In Figure 4.8 we show the level of child-specific deprivation by whether the parents are in employment and whether the mother works full-time or part-time. Very few fathers work part-time. There are not enough cases to produce reliable results for this group separately, so we do not distinguish between full-time and part-time employment of fathers. However, in the vast majority of cases where the father is in employment, the work is full-time.

The importance of employment for the well-being of children is very clear. The risk of child-specific deprivation is higher where the father is not in employment (or is absent, 23 per cent). The risk is also higher where the mother is not in employment (18 per cent). Even part-time work by the mother substantially reduces the risk of child-specific deprivation (to 8 per cent) and it is reduced further (to 5 per cent) where the mother works full-time.

The observed patterns in the table for father’s employment will show a combination of the effects of employment with the effects of lone parenthood. This is because most lone parents are mothers, and where the father is absent the category ‘father not in employment’ is used in the figure.

We show the expected level of child-specific deprivation for couple households by employment situation of the parents, controlling for other factors. When we control for social class and income, the impact of employment of parents is no longer statistically significant, as shown by the dark line in Figure 4.8. This means that employment enables parents to protect children through the increase in total household income associated with it.

**Figure 4.8: Observed and Expected Child-specific Deprivation by Employment of Parent(s)**



Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, family type, age, education and nationality of the mother, disability status of the parents, social class of household and household income level.

Table 4.1 provides further insight on the income situation of married couple households with children by the work situation of the parents. Over two in five children in households where neither parent works are in the lowest income quintile (fifth). The percentage of children in the lowest income category is lower where *either* parent works. Since women’s earnings tend to be lower than men’s, in cases where only one parent works father’s work is more important than mother’s work in moving the household out of the lowest income category. Where only the father works, 12 per cent of children are in the bottom income category. The figure is higher where only the mother works: 39 per cent where the mother works part-time and 25 per cent where the mother works part-time. Where both parents work, fewer than one child in twenty is in the bottom income quintile. The fact that in two-earner households mother’s part-time work is just as effective as mother’s full-time work in moving the household out of the bottom income category suggests that mother’s choice of part-time work is conditional on achieving an adequate household income. This suggests that the mother’s decision to work part-time will depend on her being able to earn enough in a part-time job to ensure an adequate level of household income (Jacobsen and Rayack, 1996; see also discussion in Coakley, 2005)

**Table 4.1: Household Income quintile by Work Status of Married Parents**

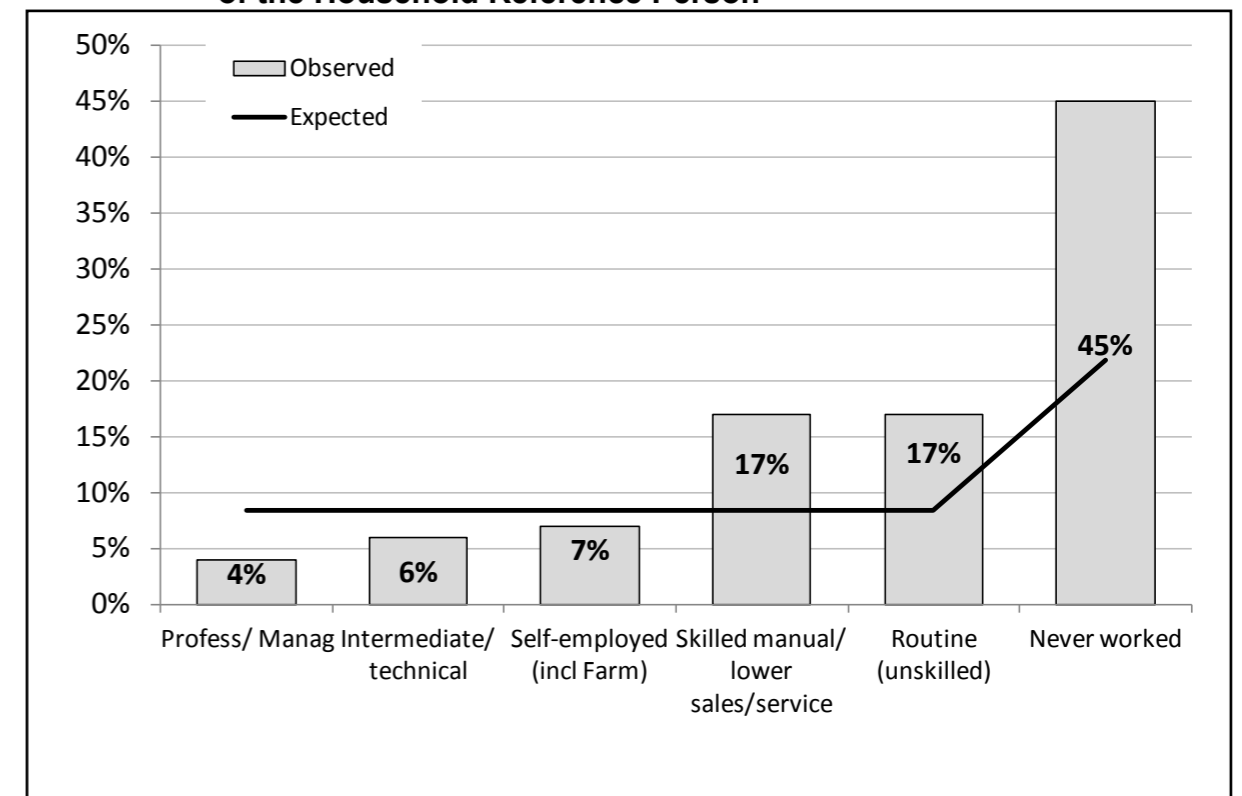
Parent employment	Household Income Quintile					Total
	Lowest	2	3	4	Highest	
Neither works	42%	26%	21%	9%	0%	100%
Mother only (PT)	39%	14%	12%	32%	2%	100%
Mother only (FT)	25%	3%	20%	21%	31%	100%
Father only	12%	28%	25%	21%	14%	100%
Both (mother PT)	2%	8%	23%	33%	34%	100%
Both (mother FT)	4%	5%	11%	26%	53%	100%

Source: CSO SILC 2009, analysis by authors  
 Note: Income quintiles are based on equivalised household disposable income with the quintiles calculated for children in the 2-15 age range.

**4.10 Child-specific Deprivation by Social Class**

Figure 4.9 shows the observed and expected risk of child-specific deprivation based on the social class of the household reference person (HRP). In couple households, the HRP could be either the father or the mother.

**Figure 4.9: Observed and Expected Child-specific Deprivation by Social Class of the Household Reference Person**



Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, family type, age, education and nationality of the mother, disability status of the parents, whether the parents are in employment and household income level.

The risk of child-specific deprivation is well below average where the HRP is in the professional/managerial and intermediate (mainly clerical) social classes or where the HRP is self-employed (4 to 7 per cent). The risk of child-specific deprivation is higher where the HRP is in the lower sales and service, lower technical (mainly skilled manual) or routine (unskilled manual) social class (17 per cent). This highest risk of child-specific deprivation, at 45 per cent, is found for children in households where the social class of the householder is unknown usually because the householder has never worked.<sup>12</sup>

Social class will be affected by the education level of the parents and will, in turn, influence the household income. Thus, it is not surprising that when we control for education, income and other characteristics, the differences between the social classes are much smaller. The risk of child-specific deprivation remains significantly higher for children in households where the HRP has never worked, but the other social class differences are no longer statistically significant.

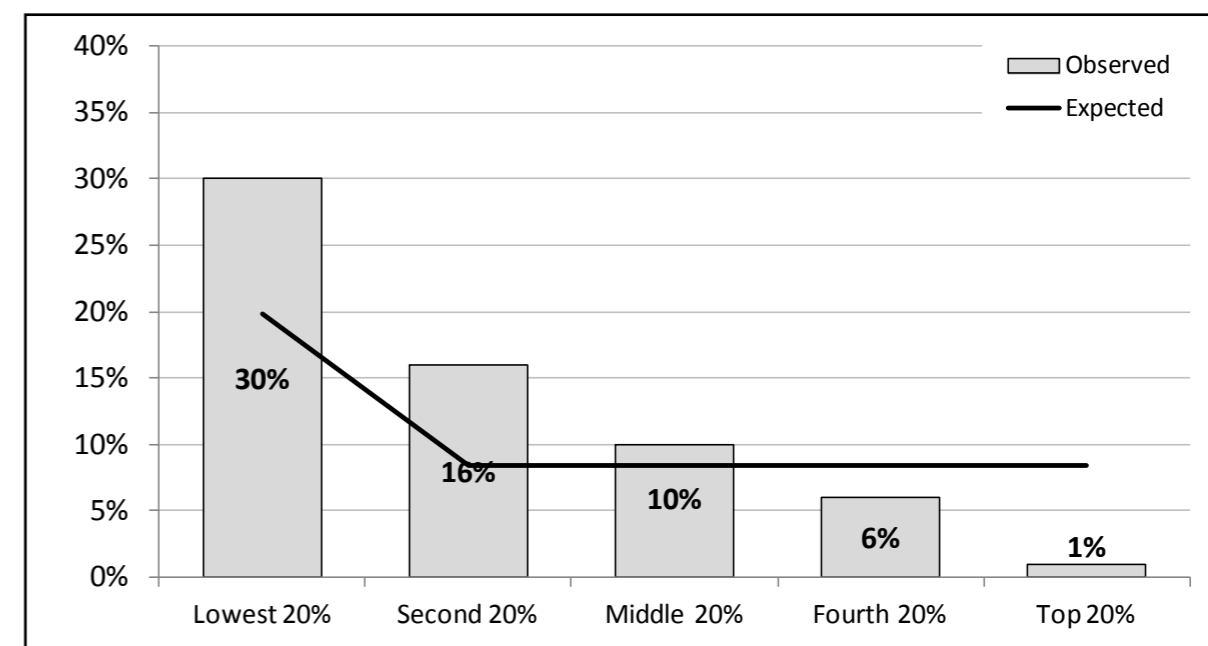
#### 4.11 Child-specific Deprivation by Household Income Level

Figure 4.10 shows the risk of child-specific deprivation by the income level of the household. The income is shown as quintiles (or fifths) of the income distribution across households with children, after adjusting for household size and composition. One-fifth of the children are in each of the income groups.

There is a clear decline in risk of child-specific deprivation as the income level increases, ranging from 30 per cent in the lowest quintile to one per cent in the top income quintile. The association with income is not as strong as we might expect. For instance, one-tenth of children in middle-income households are exposed to child-specific deprivation. However, this pattern is not unique to child-specific deprivation and is also found for basic deprivation. It can arise because income is an imperfect measure of the household's command over resources. Some households may have additional claims on current incomes, such as additional costs associated with disability or with accumulated debt, so that their standard of living is lower than we might expect based on income alone.

<sup>12</sup> This social class is strongly associated with non-working parents: in 87 per cent of cases where the social class of the household reference person is unknown, neither parent is in employment. Nearly half of the children in this social class are in the bottom income quintile.

**Figure 4.10: Observed and Expected Child-specific Deprivation by Household Income Quintile**



Source: CSO SILC 2009, analysis by authors (based on Appendix Table A3.1)  
 Note: Expected differences are the differences that remain after controlling for gender and age of child, number of children in the household, family type, age, education and nationality of the mother, disability status of the parents, whether the parents are in employment and social class of the household.

When we control for other factors, the expected risk of child-specific deprivation remains higher in the lowest income group, but there is no significant difference between the second to fifth income quintiles. This is because high income is associated with other characteristics of the parent – including education level of the mother – that are associated with better outcomes for children.

#### 4.12 Conclusions

In this chapter we focused on the risk factors for child-specific deprivation, considering characteristics of the child, the family, the mother and the household. We examined the overall differences in risk of deprivation and the expected risk, with other factors controlled.

Before controlling for other factors, we observed a high level of risk (over 20 per cent) for children of younger mothers (under age 29), children of mothers with no educational qualifications, children of lone parents, children of non-working fathers, children in households where the reference person never worked and children in the lowest income quintile.

We saw that, controlling for other factors, the risk of child-specific deprivation remains significantly higher in the following circumstances:

- where the mother has no educational qualifications
- in lone-parent households where the mother is divorced or separated
- where the household reference person never worked
- in the lowest income quintile.

In the next chapter we turn to a consideration of the relationship between child-specific and the other dimensions of deprivation (basic, consumption, housing facilities and housing/neighbourhood quality).

## Chapter 5: Child-specific Deprivation and Household Poverty

### 5.1 Introduction

We noted in Chapter 1 that an important concern with respect to childhood is that the measures of deprivation at household level may be inadequate for identifying children experiencing deprivation. This might arise because of factors which affect the distribution of resources within the household, apart from factors affecting total household resources. While the previous chapter provided an overview of the risk factors for childhood deprivation, this chapter examines in more detail the overlap between household poverty, deprivation and consistent poverty, on the one hand, and childhood deprivation on the other. In particular, we ask:

- How is child-specific deprivation related to the measures of poverty and deprivation at the household level?
- How much overlap is there between basic household deprivation and child-specific deprivation?
- How is child-specific deprivation related to at-risk-of-poverty, consistent poverty and economic vulnerability?
- How many children experience childhood deprivation but are in households not experiencing basic deprivation?
- On the other hand, how many children in households experiencing basic deprivation or consistent poverty are 'protected' from child-specific deprivation?
- Are there characteristics of households or children that are associated with these areas of 'non-overlap'?

As in the previous two chapters, we focus on children in the 2 to 15 age range, as this is the group for whom child-specific deprivation is measured.

### 5.2 Child-specific Deprivation and Dimensions of Deprivation

The SILC survey includes 42 items, measured at the household level, which can be used to construct indicators of deprivation (See Appendix Table A1.1 for the items associated with each dimension). Previous analyses of these items have identified a number of distinct dimensions of deprivation, based on enforced lack (because cannot afford) of these items (Whelan, Maître and Nolan, 2007). For instance, five distinct dimensions were identified by Whelan, Maître and Nolan, 2007) and we identify the same five dimensions here.

These are as follows:

1. basic deprivation – consisting of 11 items relating to food, clothing, furniture, debt, and minimal participation in social life
2. consumption deprivation – comprising 19 commonly-available lifestyle items including microwave, refrigerator, camcorder, satellite dish
3. housing facilities – a four-item index comprising basic facilities such as bath, toilet, central heating and hot water
4. housing/neighbourhood quality – a five-item index encompassing pollution, crime/vandalism, noise, and deteriorating housing conditions
5. health status of the HRP – comprises three items relating to overall evaluation of health status, having a chronic illness or disability and restricted mobility.

In the following, we explore the relationship between child-specific deprivation and these other dimensions of deprivation identified at the household level. Table 5.1 shows the Pearson correlation coefficient between child-specific deprivation and the dimensions of deprivation for the period from 2004 to 2009. Each dimension of deprivation is measured as the sum of the items in the scale. The correlation coefficient measures the strength of the relationship and ranges from 0 (no association) to 1 (the strongest possible association). As we can see, the highest correlation is with the basic deprivation dimension with a value of 0.643.

**Table 5.1: Pearson Correlations of Childhood Deprivation Score with Deprivation Dimensions, Income Poverty (ARP) and Overcrowding**

Measure	Correlation
Basic deprivation	0.643
Consumption deprivation	0.471
Housing deprivation	0.087
Environmental deprivation	0.130
Health of HRP	0.196
Income poverty at 60% of median	0.253
Overcrowding (2009 only)	0.134

Source: CSO SILC 2009, analysis by authors  
 Note: All coefficients significantly different from zero at  $p \leq .01$ .

This is followed by an association of 0.471 with consumption deprivation. The magnitude of the correlation then declines sharply to 0.196 for the health of the household reference person and to 0.130 and 0.087 for environmental and housing deprivation respectively.

The correlation with income poverty is relatively modest at 0.253. This modest association with income poverty is not unique to child-specific deprivation: the correlation between basic deprivation and income poverty is only 0.260.

The final figure in the table shows the correlation between child-specific deprivation and overcrowding for 2009. The 2009 SILC module had a number of additional variables available which are potential indicators of household deprivation. These were examined in some depth in another publication (Watson and Maitre, 2012). Overcrowding is measured as having more than one person per room in the dwelling. It is worth examining here because it had a sizeable relationship with low income for households consisting of younger adults and children. In these households, those with incomes below the 60 per cent poverty threshold were 20 times as likely to be living in overcrowded conditions as those with incomes 120 per cent of the median or above (Watson and Maitre, 2012, Table 6.3). Nevertheless, overcrowding has a relatively modest relationship with child-specific deprivation, as shown in Table 5.1, with a correlation of only 0.134.

We extend this analysis in Table 5.2 where we examine how much of the variation in child-specific deprivation is explained by deprivation and income poverty (at-risk-of-poverty) measured at the household level. This analysis shows that basic deprivation is the primary household-level variable influencing childhood deprivation. Consumption deprivation and income poverty have modest additional effects and the health of the HRP has a relatively low marginal effect.

**Table 5.2: OLS Regression of Childhood Consumption Deprivation on National Income, Deprivation and Poverty Measures (standardised coefficients)**

	Model 1 Beta	Model 2 Beta
Basic deprivation	0.643***	0.556***
Consumption deprivation		0.099***
Health of HRP		0.035*
Income poverty at 60% of median		0.061***
Adjusted R <sup>2</sup>	0.413	0.425

Source: CSO SILC 2009, analysis by authors  
 Note: \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .1$



We employ OLS regression with childhood deprivation as the dependent variable.<sup>13</sup> The beta coefficients in the table are the standardised coefficients, since we want to compare the overall effects of dimensions of deprivation and income, which are measured on very different scales.<sup>14</sup> Entering basic deprivation on its own (Model 1) we observe an R-square of 0.413. This can be interpreted as showing that basic deprivation ‘explains’ about 41 per cent of the variation in childhood deprivation. The second column (Model 2) shows the results when we add consumption deprivation, the health of the HRP and income poverty. The R-square rises modestly to 0.425 (or 42.5 per cent of the variation explained). Adding the housing and environmental dimensions would not produce any significant increase.

So far, we have seen that child-specific deprivation has a stronger relationship to basic deprivation than to the other dimensions of deprivation or to income poverty. For most of this chapter we focus on the overlap between child-specific deprivation and basic deprivation. Before doing so, however, it is worth examining the extent of the overlap between child-specific deprivation and the other dimensions of deprivation (consumption, housing, neighbourhood environment and health of HRP). We use the same thresholds as Whelan, Maître and Nolan (2007) to identify those who are deprived in terms of consumption, housing, neighbourhood and health status of the HRP. The thresholds are at least 4 of 19 items for consumption deprivation, at least one of four items for housing deprivation, at least two of five on the neighbourhood dimension and at least two of three on the health status of the HRP.

We see from Table 5.3 that 15 per cent of children aged 2 to 15 are exposed to consumption deprivation, 13 per cent are in households where the HRP has a health problem or disability, 12 per cent are in households experiencing neighbourhood environment problems and 8 per cent are in households lacking basic housing facilities.

The majority of children (aged 2 to 15) have no such experience of deprivation on any of these four dimensions (66 per cent). Just over one-fifth (22 per cent) are deprived on one dimension and just over one in ten (11 per cent) are deprived on two or more dimensions.

<sup>13</sup> The significance levels reported in this are calculated taking into account the clustering of individuals within households.

<sup>14</sup> The standardised coefficient shows the amount by which child-specific deprivation would increase (in standard deviation units) when the independent variable (e.g. basic deprivation) increases by one standard deviation unit.

Looking now at children who are exposed to child-specific deprivation, we see in the last column of Table 5.3 that multiple deprivation is a more common phenomenon for this group. Just over half of these children live in a household experiencing consumption deprivation (52 per cent) and for the other dimensions (housing facilities, neighbourhood environment and health of HRP) the rates are almost twice those of all children. Interestingly, there is a strong relationship between childhood deprivation and multiple deprivation as 65 per cent of the children exposed to child-specific deprivation are also deprived on at least one other dimension and 38 per cent on at least two dimensions.

**Table 5.3: Deprivation on Other Dimensions and Multiple Deprivation for All Children and Children Experiencing Child-specific Deprivation, 2009**

Dimensions	All children (age 2-15)	Children experiencing child-specific deprivation (age 2-15)
<b>Consumption deprivation (4+)</b>	15.1%	52.3%
<b>Housing facilities (1+)</b>	7.7%	12.9%
<b>Neighbourhood environment (2+)</b>	11.7%	22.7%
<b>Health status of the HRP (2+)</b>	12.6%	26.0%
<b>Any 1 or more dimensions</b>	33.4%	65.3%
<b>Any 2 or more dimensions</b>	11.4%	38.2%

Source: CSO SILC 2009, analysis by authors

Note: Figures show the percentage of all children and of children exposed to child-specific deprivation who are above the deprivation threshold on consumption deprivation, housing facilities deprivation, neighbourhood environment deprivation and health deprivation.

### 5.3 Child-specific Deprivation and Basic Deprivation

We now turn to a more detailed examination of the relationship between basic deprivation and child-specific deprivation. The basic deprivation dimension is the dimension that is used to construct the consistent poverty measure. Individuals are considered as deprived on the basic dimension when they are in households that lack at least 2 out of the 11 items. In Table 5.4 we show the distribution of childhood deprivation and basic deprivation. Almost 90 per cent of children aged between 2 and 15 live in households where no child is reported as experiencing child-specific deprivation. Seven per cent experienced enforced deprivation in relation to one item. Just under 3 per cent are deprived of two items and a similar proportion lack three or more items.

**Table 5.4: Distribution of Child-specific and Basic Deprivation**

	Childhood Deprivation	Basic Deprivation
<b>Number of items lacked:</b>	%	%
<b>0</b>	87.4	62.2
<b>1</b>	7.4	13.5
<b>2</b>	2.5	11.9
<b>3+</b>	2.7	12.4
<b>Total</b>	100.0	100.0
<b>N</b>	2,450	2,450

Source: CSO SILC 2009, analysis by authors

A comparison with the basic deprivation distribution shows that levels of basic deprivation are considerably higher for children, with close to 40 per cent being located in households that are deprived on at least one item and 12 per cent 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 (Middleton, Ashworth and Braithwaite, 1997). As a result, the basic deprivation index identifies almost twice as many such children potentially exposed to deprivation (24.3 per cent) as the child-specific deprivation index (12.6 per cent). This is despite the fact that the basic deprivation threshold is set at a higher level (two or more items) than the child-specific deprivation threshold (one or more items lacked). Clearly it would be unwise to assume *a priori* that basic deprivation is superior to child-specific deprivation in capturing the deprivation experience of children simply on the grounds that it identifies a larger proportion of children. On the other hand, it would also be unwise to conclude that children in households experiencing basic deprivation – even if they do not lack any of the child-specific items – are not negatively affected in some way by deprivation at the household level.

We now turn to the experience of child-specific deprivation by the level of basic deprivation (the number of basic items lacked). In Table 5.5 we see that less than 2 per cent of children in households that lack none of the basic items experience child-specific deprivation.

**Table 5.5: Risk of Enforced Deprivation on at least One Childhood Item by Basic Deprivation**

Basic Deprivation – number of items lacked	%
<b>0</b>	1.8
<b>1</b>	11.9
<b>2</b>	28.0
<b>3+</b>	52.4
<b>0-1</b>	3.6
<b>2+</b>	40.5
<b>Total</b>	100.0

Source: CSO SILC 2009, analysis by authors

This rises to 12 per cent for those who lack one basic item and to 28 per cent among those who lack two basic items. Finally the figure peaks at 52 per cent for basic deprivation scores of 3+. The final two rows focus on the basic deprivation measure (based on lacking 2+ items) that makes up one part of the consistent poverty measure. For those not deprived according to this criterion, the rate of child-specific deprivation is 4 per cent and for those above the threshold the figure increases tenfold to 40 per cent.

In Table 5.6 we look at the same relationship from a composition perspective. Of those children experiencing child-specific deprivation, 52 per cent are in households that report deprivation on 3+ basic deprivation items; 26 per cent are in households lacking two of the basic items; and 13 per cent are drawn from households experiencing an enforced lack of one basic item. Finally only 9 per cent of children who experience child-specific deprivation are located in households that lack none of the basic deprivation items. The threshold of 2+ basic items, used as part of the national consistent poverty measure, allows us to capture just over three-quarters of children in households experiencing child-specific deprivation.

**Table 5.6: Composition of Those Lacking at least One Child-specific Item by Basic Deprivation**

Basic Deprivation – number of items lacked	%
<b>0</b>	9.1
<b>1</b>	12.8
<b>2</b>	26.5
<b>3+</b>	51.6
<b>Total</b>	100.0
<b>0-1</b>	21.8
<b>2+</b>	78.2
<b>Total</b>	100.0

Source: CSO SILC 2009, analysis by authors

### 5.4 Child-specific Deprivation, At-risk-of-poverty, Consistent Poverty and Economic Vulnerability

In this section we directly address the issue of the extent to which household level measures of poverty and economic vulnerability succeed in capturing children who experience child-specific deprivation.<sup>15</sup> Economic vulnerability is intended to capture a group that is distinctive in its risk of falling below a critical resource level. It identifies a group that is at risk of poverty, deprivation, and economic stress, even if the household is not currently poor or deprived (Moisio, 2004; Whelan and Maître, 2005, 2010 – see Appendix 2 for further details). Like consistent poverty, it represents an approach to capturing the multidimensionality of poverty using a single index (Whelan and Maître, 2005, 2010).

The analysis reported in Table 5.7 compares risk of income poverty (at-risk-of-poverty), consistent poverty and economic vulnerability for those in childless households and those in households with children between the ages of two and fifteen. In each case the levels are significantly higher for those in households with children. The disparity is least for at-risk-of-poverty where the figure for those in households with children and those without children is one-third higher (16.7 and 12.3 per cent). Differentiation is sharpest for consistent poverty with the rate for households with children being double the rate of that for childless households (7.7 per cent vs. 3.3 per cent). Economic vulnerability occupies an intermediate position, with figures for those in households with children nearly two-thirds higher (27.6 per cent and 16.9 per cent).

**Table 5.7: Risk of Poverty and Economic Vulnerability by Presence of Children**

	No Children in Household	Children in Household
	%	%
<b>Income poverty (at-risk-of-poverty)</b>	12.3	16.7
<b>Consistent poverty</b>	3.3	7.7
<b>Economic vulnerability</b>	16.9	27.6

Source: CSO SILC 2009, analysis by authors

In Table 5.8 we look at the risk levels of child-specific deprivation broken down by poverty and economic vulnerability. Focusing first on income poverty (at-risk-of-poverty), we observe that the likelihood of child-specific deprivation rises from 8.3 to 32.1 per cent as one moves from the non-poor to poor category. For the consistently poor, who form a significantly smaller part of the relevant population,

<sup>15</sup> For a detailed description of the latent class methodology used for the economic vulnerability concept see Moisio (2004), Whelan and Maître (2005).

the corresponding figures are 9.0 and 51.1 per cent. Finally, for economic vulnerability where the group being identified is considerably larger than for income poverty the respective figures are 2.1 and 35.8 per cent.<sup>16</sup> In Table 5.8 we also report the odds ratios from a set of logistic regressions that summarise the magnitude of the foregoing relativities.<sup>17</sup> The odds of child-specific deprivation for the disadvantaged group relative to the non-disadvantaged group rises from 5.2 for income poverty to 10.6 for consistent poverty and finally to a high of 25.7 for economic vulnerability.

**Table 5.8: Risk of Enforced Deprivation on at Least 1 Child-specific Item by Poverty and Vulnerability**

	%	Odds Ratio	Nagelkerke R <sup>2</sup>
<b>Not income poor</b>	8.3		
<b>Income poor</b>	32.1	5.218***	0.112
<b>Not consistently poor</b>	9.0		
<b>Consistently poor</b>	51.1	10.643***	0.157
<b>Not economically vulnerable</b>	2.1		
<b>Economically vulnerable</b>	35.8	25.697***	0.357
<b>N</b>	2,450		

Source: CSO SILC 2009, analysis by authors  
 Note: \*\*\* p< .001, \*\* p< .01, \* p<.1

Each of the national indicators proves to have considerable power in identifying children experiencing child-specific deprivation. The odds of experiencing child-specific deprivation for a child in an income-poor household versus a child in a non-poor household are 5.2. The consistent poverty measure identifies a sub-set of the income-poor children who are exposed to a substantially higher risk of child-specific deprivation. In this case greater discrimination is achieved (odds are 10.6) by a more restricted focus. However, in the case of economic vulnerability a substantially sharper pattern of differentiation is achieved even when identifying a considerably larger disadvantaged sub-group. The economic vulnerability indicator identifies 27.6 per cent of children (compared to 16.7 per cent for income poverty (at-risk-of-poverty) and 7.7 per cent for consistent poverty), but the odds of child-specific deprivation are 25.6 for economically vulnerable children versus non-vulnerable children.

<sup>16</sup> 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 individuals to one class by 75.3 per cent. 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.

<sup>17</sup> Standard errors have been estimated in all analyses to take into account the clustering of individuals within households.

The combination of the strength of the association with child-specific deprivation and the relative sizes of the groups can be seen when we examine the percentage of children experiencing child-specific deprivation captured by each of the three indicators (Table 5.9). Those below the income poverty line comprise 46 per cent of those exposed to child-specific deprivation. For the consistent poor this figure falls to 35 per cent, with the greater discriminatory capacity being outweighed by the smaller size of the consistently poor group. For economic vulnerability the relevant figure rises to 88 per cent, reflecting both the sharper discriminatory power of the economic vulnerability indicator and the size of the vulnerable group.<sup>18</sup>

**Table 5.9: Percentage of Children Experiencing Child-specific Deprivation who are Income Poor, Consistently Poor or Economically Vulnerable**

	% of Children Exposed to Childhood Deprivation
<b>Threshold</b>	
<b>Income poverty at 60% of median income</b>	45.7
<b>Consistent poverty at 60% of median income</b>	35.1
<b>Economically vulnerable</b>	88.5

Source: CSO SILC 2009, analysis by authors

Clearly all three population measures prove to be powerful predictors of exposure to child-specific deprivation. The overall evidence, particularly that relating to economic vulnerability, suggests that those exposed to child-specific deprivation form a subset of those captured by the existing national poverty indicators. While just over half of those exposed to child-specific deprivation are not captured by the at-risk-of-poverty measure, eight out of ten of this group are picked up by the economic vulnerability measure. Adopting the economic vulnerability measure allows us to go beyond current income and identify a group with a multidimensional risk profile in relation to income poverty (at-risk-of-poverty), economic stress and, most particularly, basic deprivation. This measure captures almost 90 per cent of those exposed to child-specific deprivation.

Given the magnitude of the relationship, it is clear that the socio-economic factors associated with child-specific deprivation will inevitably 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 neither and both forms of deprivation and those affected by only one or the other.

<sup>18</sup> If we focus on those experiencing child-specific deprivation on two or more items we find 100 per cent are captured by the vulnerability measure.

**5.5 Patterns of Child-specific and Basic Deprivation: Overlap and Non-Overlap**

In Table 5.10 we document the distribution of combinations of basic and child-specific deprivation. We identify four groups, based on the cross-classification of basic and child-specific deprivation as follows:

- no deprivation: children experiencing *neither* deprivation according to the basic deprivation measure (lacking 2+ of the household-level basic deprivation items) *nor* the child-specific deprivation measure (lacking 1+ of the 13 child-specific items)
- multiple deprivation: children experiencing *both* deprivation according to the basic deprivation measure (lacking 2+ of the household-level basic deprivation items) *and* the child-specific deprivation measure (lacking 1+ of the 13 child-specific items)
- child-only deprivation: children experiencing deprivation according to child-specific deprivation measure (lacking 1+ of the 13 child-specific items), but not according to the basic deprivation measure (i.e. lacking none or one of the 11 basic items), and
- basic-only deprivation: children experiencing deprivation according to the basic deprivation measure (lacking 2+ of the household-level basic deprivation items) *but* not according to the child-specific deprivation measure (i.e. lacking none of the 13 child-specific items).

**Table 5.10: Child-specific and Basic Deprivation Typology (Percentages)**

	Child-specific Deprivation	
	Not Deprived	Deprived
<b>Basic deprivation</b>		
<b>Not deprived</b>	Neither: 72.9%	Child-specific Only: 2.8%
<b>Deprived</b>	Basic Only: 14.5%	Both: 9.8%

Source: CSO SILC 2009, analysis by authors  
Number of cases: 2450

While 73 per cent of children are not deprived according to either the child-specific or the basic deprivation measure, almost 10 per cent are multiply deprived. The number experiencing basic-only deprivation is just over 14 per cent. Finally only 3 per cent are exposed to child-specific deprivation only. Focusing solely on child-specific deprivation would lead us to miss out the 14 per cent of children who are exposed to basic deprivation but not to child-specific deprivation. Given research findings on the impact of household poverty on children, it would be a mistake to limit the focus to those children experiencing child-specific deprivation.

In Table 5.11 we show the relationship between the deprivation typology and the national indicators of poverty and social exclusion. Focusing first on income poverty (at-risk-of-poverty), we observe that for children classified as income poor, levels of basic-only and multiple deprivation are very similar, with respective figures of 24 and 25 per cent. Child-only deprivation remains a relatively rare phenomenon even among the income poor, with an observed rate of 7 per cent.

**Table 5.11: Childhood and Basic Deprivation Typology Risk Levels by Income Poverty, Consistent Poverty and Economic Vulnerability (percentage by column)**

Deprivation Typology	Income Poverty		Consistent Poverty		Economic Vulnerability	
	No	Yes	No	Yes	No	Yes
	%	%	%	%	%	%
Neither	79.2	44.3	79.8	0.0	97.9	17.6
Basic only	12.5	23.6	11.2	48.9	0.0	46.5
Child-specific only	1.7	7.4	3.0	0.0	2.1	4.2
Both	6.6	24.7	6.0	51.1	0.0	31.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: CSO SILC 2009, analysis by authors  
Number of cases: 2450

For those consistently poor, the risk level is close to 50 per cent for both basic-only and multiple deprivation, while by definition it is zero for the remaining categories. Finally for the economically vulnerable we find that 32 per cent are multiply deprived, 47 per cent experience basic deprivation only, 4.2 per cent child-only deprivation and 17.6 per cent neither.<sup>19</sup>

The foregoing suggests that the factors associated with child-specific deprivation overlap substantially with those shaping population patterns of poverty and social exclusion. Nevertheless, there may be additional factors which shape child-only deprivation. In Table 5.12 we provide an initial exploration of this issue by breaking down risk levels for the categories of the deprivation typology by quintiles of household income. Household income refers to disposable household income, adjusted for differences in size and composition (using the equivalence scales described in Appendix 1).

<sup>19</sup> Since consistent poverty is defined in terms of both income poverty and basic deprivation, children who do not experience basic deprivation cannot be consistently poor by definition. Thus none of the child-only deprived are consistently poor because of how consistent poverty is defined.

From Table 5.12 we can see that the probability of experiencing neither form of deprivation increases systematically as one ascends the income hierarchy.

**Table 5.12: Child-specific and Basic Deprivation Typology Risk Levels by Income Level (percentages)**

Deprivation Typology	Income Quintile				
	Lowest	2	3	4	Top
Neither	45.3	71.8	75.1	89.3	98.5
Basic only	26.6	13.3	18.3	5.7	0.6
Childhood only	5.9	3.1	1.5	1.7	0.0
Both	22.1	11.8	5.1	3.3	0.9
Total	100.0	100.0	100.0	100.0	100.0
N cases	554	543	507	410	436

Source: CSO SILC 2009, analysis by authors

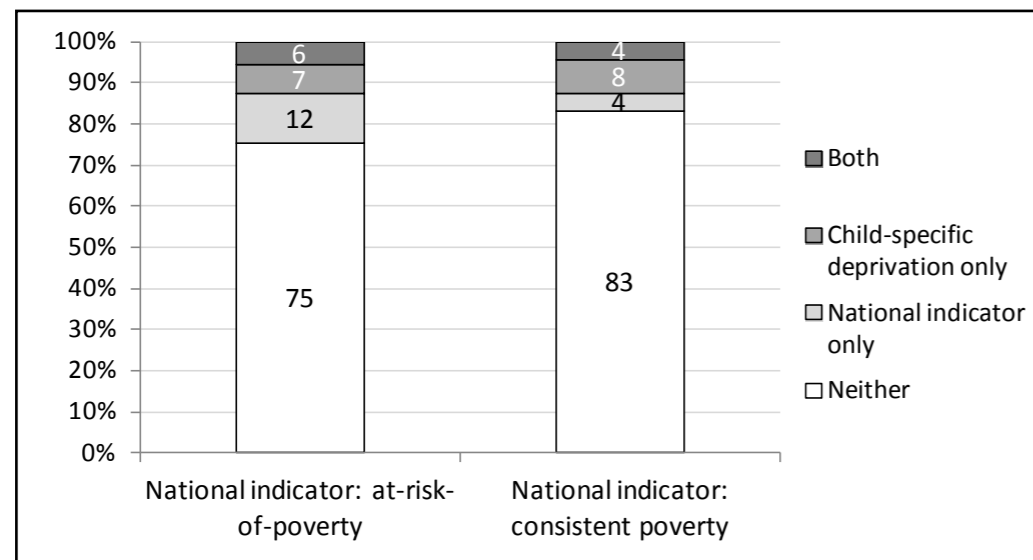
Note: Income is based on disposable household income adjusted for household size and composition (equivalised). Quintiles (fifths) of the income distribution across children are shown.

The lowest probability is observed for the bottom quintile where only 45 per cent of children experience neither basic nor child-specific deprivation. The figure increases sharply to 72 per cent for the second quintile and then rises steadily to 99 per cent for the top quintile. For the multiple deprivation category the reverse pattern is observed, with 22 per cent of those in the bottom income quintile experiencing both forms of deprivation. It then falls to 12 per cent 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. Over one-quarter (27 per cent) of children in the bottom quintile are experiencing basic deprivation. This falls to 13 per cent for the second quintile and gradually declines to less than 1 per cent in the top quintile. In contrast to the unambiguous role of income in these cases, for the child-only category it plays a more modest role. While no one in the top quintile experiences such deprivation, less differentiation is observed across the remaining quintiles. The highest rate of 6 per cent is observed in the bottom quintile, but the levels in the third and fourth quintiles are practically identical (1.5 and 1.7 per cent, respectively).

### 5.6 Overlap between Child-specific Deprivation and (1) Income Poverty (At-risk-of-poverty) and (2) Consistent Poverty

Following the same methodology used for both measures of deprivation (child-specific and basic deprivation), in Figure 5.1 we examine the extent to which children experiencing child-specific deprivation also experience income poverty and consistent poverty.

**Figure 5.1: Overlap between National Indicators (at-risk-of-poverty and consistent poverty) and Child-specific Deprivation**



Source: CSO SILC 2009, analysis by authors

Turning first to the left panel of the chart for the combination of income poverty (at-risk-of-poverty) and child-specific deprivation, we see that three-quarters of children do not experience either. We saw in the previous section that because the level of basic deprivation was higher than the level of child-specific deprivation, a higher proportion of children experienced basic-only than multiple deprivation. We see a similar pattern in terms of the relationship between child-specific deprivation and income poverty. Six per cent of children are both income poor and experience child-specific deprivation, while 12 per cent of children are in income poverty but do not experience child-specific deprivation. Seven per cent of children are not income poor, but experience child-specific deprivation only. The amount of non-overlap between income poverty and child-specific deprivation is greater than the

amount of non-overlap between basic deprivation and child-specific deprivation. As a result, the basic deprivation measure would capture a higher proportion of children experiencing child-specific deprivation (78 per cent, Table 5.6) than would the income poverty (at-risk-of-poverty) measure (46 per cent, Table 5.9).

The panel to the right in Figure 5.1 shows the relationship between child-specific deprivation and consistent poverty. The consistent poverty level among children in the 2 to 15 year age range is 8 per cent, lower than the 13 per cent who experience child-specific deprivation. Over eight in ten children experience neither consistent poverty nor child-specific deprivation; 8 per cent experience both consistent poverty and child-specific deprivation; 8 per cent experience child-specific deprivation only and 4 per cent experience consistent poverty only. Because the consistent poverty rate is lower than the child-specific deprivation rate, it would not be possible for consistent poverty to capture all of the children experiencing child-specific deprivation. Given the relative sizes of the groups (9 per cent consistently poor and 13 per cent deprived on the child-specific items), the most consistent poverty could capture would be about two-thirds of the children experiencing child-specific deprivation. In fact, it captures only about one-third of these children (Table 5.9).

### 5.7 Risk Factors for Child-specific and Basic Deprivation among Children

In Chapter 4 we identified a number of factors associated with an increased risk of child-specific deprivation overall, without distinguishing between those who did and did not also experience basic deprivation. Controlling for other factors, higher levels of child-specific deprivation are associated with low education of mother, lone parenthood following separation or divorce, workless households (where household reference person never worked), and low income. We now ask to what extent the same factors account for basic and child-specific deprivation among children.

The conclusions are based on a multinomial regression analysis, where we look at the odds of being in one of the three deprived groups (multiple, child-only and basic-only) in contrast to those children not deprived according to either measure. The results of this analysis are shown in Table 5.13, for children aged 2 to 15 years. The table shows the odds ratios and the significant effects are in bold.

**Table 5.13: Odds Ratios for Model of Overlap between Child-specific and Basic Deprivation (reference category=not deprived according to either measure)**

		Multiple (both)	Child-only	Basic-only
Child characteristics	Girl (Ref: boy)	0.98	0.89	0.94
	Aged 2 to 4 (Ref: age 12-15)	1.17	0.42	0.42
	Aged 5 to 11 (Ref: age 12-15)	1.25	0.79	0.97
Number of children	Two (Ref: one child)	1.81	0.41	1.84
	Three or more (Ref: one child)	2.74*	2.30	3.20*
Mother age	Under 29 (Ref: age 40+)	2.17	0.54	1.42
	Age 30-39 (Ref: age 40+)	1.55	0.58	1.28
Disability	Mother has disability (Ref: no disability)	2.22	1.37	2.71*
	Father has disability (Ref: no disability)	1.60	0.46	0.83
Mother education	No qualifications (Ref: 3rd level)	5.68*	1.34	1.62
	Lower 2nd Level (Ref: 3rd level)	1.58	0.60	2.37*
	Higher 2nd Level (Ref: 3rd level)	1.33	0.68	0.71
Family	Single lone parent (Ref: married couple)	1.89	5.54	1.84
	Formerly married lone parent (Ref: married couple)	2.29	7.89*	0.90
	Cohabiting couple (Ref: married couple)	0.83	4.99*	3.08
Mother nationality	Non-Irish (Ref: Irish)	1.02	1.03	1.26
Parent economic status	Father in employment (Ref: father not in employment)	0.39	0.83	0.35*
	Mother works full-time (Ref: mother not in employment)	1.04	0.13*	0.46
	Mother works PT (Ref: mother not in employment)	0.73	0.33	0.50
Social class of Household	Intermediate/Technical (Ref: Professional / managerial)	1.38	1.25	2.88*
Reference person	Self-employed/farmer (Ref: Professional / managerial)	0.88	3.65	1.14
	Manual/lower service (Ref: Professional / managerial)	2.62	5.59	3.13*
	Unskilled manual/service (Ref: Professional / managerial)	1.49	5.49*	2.48
	Never worked (Ref: Professional / managerial)	2.05	21.96*	1.69
Area	Rural (Ref: urban)	0.60	0.94	0.62
Income quintile	Lowest 20% (Ref: top 20%)	12.61*	2.54	2.72
	Second (Ref: top 20%)	5.96	1.18	1.97
	Middle 20% (Ref: top 20%)	4.46	1.54	2.15
	Fourth (Ref: top 20%)	3.11	4.04	1.68
Intercept		0.00	0.01	0.04

Source: CSO SILC 2009, analysis (multinomial logistic regression) by authors.

Note: \* indicates statistically significant at  $p \leq .05$ . Model controls for clustering at household level and is based on weighted data. 'Ref.' indicates the reference category, for which the odds ratio would be 1.00. A statistically significant odds ratio greater than 1.00 indicates a higher risk than the reference category. A statistically significant odds ratio

less than 1.00 indicates a lower risk than the reference category.

Turning first to characteristics of the child, there is no significant association between either age of child or gender of child and either measure of deprivation. The number of children in the household makes a difference, however. In Chapter 4 we saw that the risk of child-specific deprivation was not significantly associated with the number of children in the household when we control for other characteristics. In the present analysis, however, we do find an association. Table 5.13 shows that the risk of both multiple deprivation and basic-only deprivation increases for households with three or more children. However, children in these larger families do not have a higher risk of child-only deprivation when we control for other characteristics. If we focus solely on child-specific deprivation, then we would miss the increased risk in exposure to basic deprivation found among children in larger families.

Turning now to characteristics of the mother, there are marked similarities to the results found in Chapter 4. There is no significant association between the three risk categories and age of mother and nationality of mother once we take account of other characteristics. These findings are parallel to the results of Chapter 4.

In Chapter 4 we saw that children of mothers with no qualifications were more likely to experience child-specific deprivation. In the present analysis we again see an increase in risk for children of mothers with no qualifications. This is an increased risk of multiple deprivation, where the child is exposed to both child-specific and basic deprivation.

We also see an increased risk for children of mothers with the next level of educational achievement, but it affects basic deprivation rather than child-specific deprivation. Children of mothers with lower second level education show a higher risk of basic-only deprivation but not of either multiple deprivation or of child-only deprivation. This suggests that this slightly higher level of educational achievement by the mother is associated with an increased capacity to protect children from deprivation, even if the household as a whole does not entirely escape deprivation.

In Chapter 4 we saw that disability of the parents was not significantly associated with child-specific deprivation when we control for parent's employment situation.

With the more refined measure here, we see that mother's disability is associated with an increased risk of basic-only deprivation, but is not significantly related to either child-only or multiple deprivation. Father's disability is not significantly associated with deprivation when work status and income situation are taken into account.

Family type has a strong impact on child-only deprivation. In Chapter 4 we saw that lone parenthood following marital breakdown was associated with an increased risk of child-specific deprivation, even controlling for education, work situation and income. The findings in Table 5.13 show that this increased risk is particular to child-only deprivation. There is no increase in basic deprivation or multiple deprivation once we control for other characteristics. The second significant association with family type was not observed in Chapter 4. This is the association between cohabiting parenthood and an increased risk of child-only deprivation. Like formerly married lone parents, cohabiting parenthood is not linked to a greater risk of basic deprivation or multiple deprivation. These effects are quite large: children of divorced or separated lone parents have nearly eight times the risk of child-only deprivation as children of married parents while the figure for children of cohabiting couples is five times. Since we have controlled for income, and we find no corresponding increase in the risk of basic deprivation, the patterns suggest that it may be the distribution of resources within the household that is affected. Given research findings internationally that cohabiting relationships are less stable than married relationships (Bumpass and Lu, 2000), it may be the instability in the relationship between the parents that is the important factor here.

In Chapter 4 we found that the risk of child-specific deprivation was not significantly associated with parent's employment, when we control for social class and income. With the more refined categories of childhood deprivation used here, we do see some significant patterns. The results suggest that the employment of either parent is important in protecting children from deprivation. However, the impact is different depending on whether we focus on father's or mother's employment and also on the category of deprivation. Even controlling for income, mother's full-time employment is associated with a substantial reduction in the risk of child-only deprivation to about one-eighth the level in households where the mother is not in employment. Father's employment is associated with a reduction in the risk of basic-only deprivation to about one-third of the level in households where the father is not in employment. This suggests that mother's employment and father's employment may be associated with different patterns of intra-household distribution of resources. For a given level of income (which is controlled for in the model), mother's employment is more consequential in terms of child-specific goods and services while father's employment is more consequential in terms of adult and household level goods and services. It is worth noting that the effect of mother's part-time employment does

not have a significant impact on the categories of deprivation when we control for income level.

This pattern again indicates that the processes underlying the distribution of resources between adults and children in a household are complex and are probably conditioned by employment choices made by parents based on their earnings capacity. We might anticipate that father's employment would have a stronger effect, as men's earnings tend to be higher than women's. But this anticipated pattern was confirmed only for basic-only deprivation, when we control for broad income level. In the case of the numerically smaller category of child-only deprivation, mother's employment had a very substantial impact.

In Chapter 4 we saw that only those who had never worked had a significantly higher risk of child-specific deprivation than the professional/managerial social class once we controlled for differences in income. This pattern is also evident here. There is a very strong association between this social class and child-only deprivation (nearly 22 times as high as the professional/managerial class).

There are a number of other social class patterns evident when we examine the different types of deprivation affecting children, however, that were not significant in Chapter 4. Child-only deprivation is also higher in the unskilled manual/service social class (about five times the risk for the professional/managerial social class). Basic-only deprivation is significantly higher for the intermediate/technical and manual/lower service classes (about three times as high as for the professional/managerial social classes). This suggests that these social classes may be diverting resources away from household level and adult consumption in order to protect children from child-specific deprivation. There may be some other characteristics associated with employment in the intermediate/technical social class that enable parents to protect children from deprivation. Possible factors include the lower levels of work-family conflict associated with clerical occupations (O'Connell et al., 2010, Table A8.1). However, this explanation would not generally apply to manual/lower service occupations.

The final factor examined is the broad income category of the household. Children in households with incomes in the lowest income quintile have a risk of multiple deprivation that is over 12 times as high as that of children in the highest income households. None of the other patterns by household income is statistically significant. This parallels the findings of a higher risk of child-specific deprivation in the bottom income quintile that we saw in Chapter 4. However, it shows that this low level of income is also associated with basic deprivation at the household level.



## 5.8 Summary

We focused in this chapter on children aged 2 to 15, as this is the group for whom child-specific deprivation is measured in SILC 2009. We examined the association between child-specific deprivation and other dimensions of deprivation. The strongest association with child-specific association was found for basic deprivation (lacking 2 or more of 11 basic items). Basic deprivation is one of the three national poverty indicators and is used in the construction of the measurement of consistent poverty. There were weaker associations with consumption deprivation and considerably weaker associations with income poverty, the health of the household reference person, environmental deprivation and housing deprivation.

The analysis showed that the national measure of basic deprivation identifies a much larger group of children than the measure of child-specific deprivation. To a large extent, children experiencing child-specific deprivation are a subset of those in households experiencing basic deprivation. Almost eight in ten children exposed to child-specific deprivation (78 per cent) are in households that experience basic deprivation. Nevertheless, just over one-fifth of children exposed to child-specific deprivation (22 per cent) would not be captured by the national measure of deprivation. This is a small proportion of all children (2.8 per cent), but one which merits further study in order to understand the factors that lead to their exposure to child-specific deprivation in households where the overall standard of living is adequate.

We examined the risk factors associated with multiple deprivation (the combination of basic and child-specific deprivation) and identified a number of factors that distinguish children with this exposure from those experiencing neither form of deprivation. The risk of multiple deprivation was significantly higher in large families (three or more children), where the mother has no qualifications and in households with equivalised incomes in the bottom fifth.

Child-only deprivation refers to children exposed to child-specific deprivation in households not experiencing deprivation. As noted above, this is a small group of children (2.8 per cent). The risk factors associated with child-only deprivation were different and may indicate a disturbance in the intra-household distribution of resources which exposes children to child-specific deprivation in households with an adequate basic standard of living.

These risk factors include lone parenthood following divorce or separation, cohabiting parenthood, unskilled manual/service social class and households where the reference person never worked. Mother's full-time employment emerged as an important factor in protecting children from child-specific deprivation in households where resources are adequate to escape basic deprivation.

Basic-only deprivation refers to children who are not exposed to child-specific deprivation but who are in households exposed to basic deprivation (14.5 per cent of children). This may occur if resources are limited but available resources are directed towards meeting the needs of children at the expense of adult or household-level standard of living. The risk factors for basic-only deprivation were large family size (three or more children), mother's disability, mother's lower second level education, intermediate/technical social class and manual/lower service social class. Father's employment was an important factor in protecting children from basic-only deprivation. Households exposed to basic-only deprivation may have enough resources to avoid multiple deprivation (i.e. both basic and child-specific deprivation), but may be forced to sacrifice adult basic consumption in order to meet the needs of children.

## Chapter 6: Conclusion and Policy Implications

### 6.1 Introduction

In this chapter we draw together the results under a number of headings and indicate the main policy implications of the analysis:

- children in households experiencing income poverty (using the national measure of at-risk-of-poverty), deprivation and consistent poverty
- nature and prevalence of child-specific deprivation
- risk factors for childhood deprivation
- childhood deprivation and household poverty
- policy implications.

### 6.2 Income Poverty, Deprivation and Consistent Poverty among Children

In Chapter 2 we saw that children are over-represented in the lower half of the income distribution. As a result they have a higher rate of income poverty (at-risk-of-poverty) than adults and this pattern has persisted from 2004 to 2010. When we examine the pattern by age of child, we see that the at-risk-of-poverty rate is higher for children in the oldest age group (12 to 17) and is lower than the national figure for children in the youngest age group. The higher rate for older children is mainly due to the fact that the adjustment for household size and composition allows for the higher costs associated with children in their mid- to late teens, so that a higher level of household income would be needed to keep a household with teenage children above the poverty threshold. If we were to use the same adjustment for children of all ages, children in middle childhood (aged 5 to 11) would have the lowest adjusted household incomes. The main reason for this is that children in this age group are most likely to have brothers or sisters who are still of school age and who do not have an independent source of income. The youngest children are likely to have fewer brothers and sisters, on average. Some younger children will be firstborns, who as yet have no other brothers and sisters. On the other hand, some older children will have brothers and sisters who have left school and have their own source of income. This means that household income relative to the number of household members tends to be lowest for children in middle childhood.

Using the national measure of basic deprivation, based on enforced lack of 2 or more of 11 items, we see a higher deprivation rate for children than for adults. This pattern was observed throughout the period from 2004 to 2009 and also in 2010. There is no clear pattern by age of child, however, with different age groups showing higher deprivation rates in different years and no clear trend. In 2009 the basic deprivation rate was highest for children in middle childhood.

Consistent poverty, the national measure based on being both income poor and deprived, is higher for children than for adults. It is lowest for the youngest children (aged under 5), mainly because of the lower at-risk-of-poverty rate for this group.

By the standards of the 27 EU countries, child poverty rates in Ireland are towards the middle of the distribution: higher than in most of the EU 15 countries, but lower than in most of the newer member states.

### 6.3 Nature and Prevalence of Child-specific Deprivation

In Chapter 3 we turned to child-specific deprivation, based on the additional items in the SILC 2009 module. For this analysis we focused on children aged 2 to 15, because many of the child-specific items were not recorded for infants under age 2. Based on the special module in SILC 2009, we identified 13 items that formed a reliable indicator of child-specific deprivation. These include items capturing access to food, clothing, toys and leisure equipment, books, a place to do homework and the capacity to participate in regular social activities (inviting friends to play, celebrations, regular leisure activity, school trips or events.)

Using a scale based on these 13 items to measure child-specific deprivation, we find that 87 per cent of children in the 2 to 15 age range lack none of these 13 items, 13 per cent lack one or more and 5 per cent lack two or more. Child-specific deprivation was strongly associated with the income level of the household. The level of child-specific deprivation was similar for children in different age groups, but there was a suggestion that the youngest children experienced deeper levels of deprivation. The percentages of children lacking one or more items did not differ significantly by the age group of the child, but the youngest children (aged 2 to 4) were more likely to lack two or more items.

#### 6.4 Risk Factors for Child-specific Deprivation

In Chapter 4 we examined a range of risk factors for child-specific deprivation. Before controlling for other factors, we saw a high level of child-specific deprivation (over 20 per cent) for children of young mothers (under age 29), lone parents, non-working fathers, in households where the reference person never worked and in households with incomes in the bottom 20 per cent. On the other hand, the risk of child-specific deprivation was low (under 8 per cent) for children in one-child households, of mother's with third level education, of married parents, where either parent is in employment and in the top two income quintiles. We saw that there are no significant differences in the risk of child-specific deprivation by the gender or age of the child.

When we control for other characteristics, some of these patterns remain significant, but there is no significant difference in risk by family size or by age of the mother. Parental employment is no longer statistically significant when we control for social class and broad income group. The risk remains significantly higher for children of mothers with no qualifications, of formerly married lone parents, where the household reference person never worked and where household income is in the bottom quintile.

#### 6.5 Child-specific Deprivation and Household Poverty

In Chapter 5 we examined the association between child-specific deprivation and the national poverty indicators: income poverty (at-risk-of-poverty), basic deprivation and consistent poverty. Both the at-risk-of-poverty measure and the basic deprivation measure identify a higher proportion of children as poor than the children identified by the child-specific measure. Overall, 18 per cent of children aged 2 to 15 are income poor and 24 per cent experience basic deprivation, compared to 13 per cent who experience child-specific deprivation. On the other hand, fewer children are consistently poor (9 per cent).

In this chapter we examined the relationship between child-specific deprivation and the other dimensions of deprivation and income poverty. The strongest relationship to child-specific deprivation is found for basic deprivation. As a result, the basic deprivation measure would capture a higher proportion of children experiencing child-specific deprivation (78 per cent) than would the income poverty (at-risk-of-poverty) measure (46 per cent) or the consistent poverty measure (35 per cent).

The association between child-specific deprivation and the other dimensions of deprivation identified at the household level (consumption, health related, housing and environment) was also explored. The strongest relationship with child-specific deprivation was found for basic deprivation. When we control for basic deprivation, the association between child-specific deprivation and consumption deprivation, health-related deprivation and income poverty remain statistically significant. On the other hand, controlling for basic deprivation, there is no longer a significant association between housing deprivation and child-specific deprivation.

In this chapter we also examined the association between child-specific deprivation and economic vulnerability. Economic vulnerability is intended to identify a group that is particularly exposed to low income and deprivation, although they may not be currently at-risk-of-poverty or deprived. This group is identified using three indicators: at-risk-of-poverty, basic deprivation and perceived economic stress. In 2009, 28 per cent of children were in economically vulnerable households. Economic vulnerability is strongly associated with child-specific deprivation and almost nine out of ten children who are exposed to child-specific deprivation are in economically vulnerable households.

As noted above, the level of child-specific deprivation was considerably lower than the level of basic deprivation (13 per cent vs. 24 per cent in 2009). This could arise for a number of reasons. One possibility is that when household resources are limited, parents protect their children by diverting resources towards meeting their needs, perhaps at the expense of meeting their own (parents') needs. A second possibility is that there may be underreporting of child-specific deprivation, because parents may feel a sense of shame at being unable to provide adequately for their children. A third possibility is that children in households experiencing basic deprivation are lacking in things they would like to have but cannot afford, but that the items in the child-specific deprivation scale were not the right ones to capture this. For instance, children in poor households are likely to lack pocket money, access to public transport, and electronic and other equipment.

These possible explanations point to the importance of considering basic deprivation and child-specific deprivation separately in order to understand the interrelationship between them. They also imply that just because children are not experiencing child-specific deprivation, we cannot assume that they are not affected by household poverty. Some of the basic deprivation items affect adults specifically (such as an evening out and socialising with family and friends). However, most of the items will have implications for the well-being of children as well as adults (e.g. adequate food, heating).

### 6.6 Child-specific Deprivation and Basic Deprivation: Overlap

In Chapter 5 we also examined the cross-classification of child-specific and basic deprivation, using the following categories:

- no deprivation: children experiencing *neither* deprivation according to the basic deprivation measure (lacking 2+ of the household-level basic deprivation items) *nor* the child-specific deprivation measure (lacking 1+ of the 13 child-specific items)
- multiple deprivation: children experiencing *both* deprivation according to the basic deprivation measure (lacking 2+ of the household-level basic deprivation items) *and* the child-specific deprivation measure (lacking 1+ of the 13 child-specific items)
- child-only deprivation: children experiencing deprivation according to child-specific deprivation measure (lacking 1+ of the 13 child-specific items), but not according to the basic deprivation measure (i.e. lacking none or 1 of the 11 basic items), and
- basic-only deprivation: children experiencing deprivation according to the basic deprivation measure (lacking 2+ of the household-level basic deprivation items) *but* not according to the child-specific deprivation measure (i.e. lacking none of the 13 child-specific items).

We constructed a statistical model to see whether different risk factors accounted for membership in the different groups. Table 6.1 summarises the differences between multiple deprivation, child-only deprivation and basic-only deprivation in terms of the risk factors associated with children experiencing deprivation of these forms. In the table, a blank cell indicates no significant effect, while the significant odds ratio, rounded to whole numbers, are shown.

The main distinguishing characteristic of multiple deprivation is the strong association with low income and with mother’s low level of education. There is also an increase in risk associated with large family size (three or more children), but the size of the effect here does not distinguish multiple deprivation from basic-only deprivation.

The risk of child-only deprivation is strongly associated with family type, mother’s employment and social class. Child-only deprivation is more common among children of divorced/separated lone parents, where the parents are cohabiting rather than married, where the mother does not work, in the unskilled manual/service social class or where the household reference person never worked. The role of family type and mother’s work, in protecting children is very striking.

**Table 6.1: Risk Factors for Combinations of Basic and Child-specific Deprivation (odds ratios, compared to not deprived)**

Risk Factor	Multiple (Basic + Child)	Child-only	Basic-only
Number of children (3 or more vs. 1)	3		3
Mother has disability (vs. no disability)			3
Mother no qualifications (vs. third level)	6		
Mother lower 2 <sup>nd</sup> level education (vs. 3 <sup>rd</sup> level)			2
Lone parenthood (formerly married vs. married)		8	
Cohabiting couple (vs. married couple)		5	
Father not in employment (vs. father employed)*			3
Mother not in employment (vs. full-time work)		8	
Intermediate social class (vs. profess./manag.)			3
Manual/Lower service/sales (vs. professional/managerial)			3
Unskilled manual/service (vs. profess./manag.)		6	
Never worked (vs. profess./manag.)		22	
Low income (bottom fifth, vs. top fifth)	13		

\* Note: In the vast majority of cases where the father is in employment, the work is full-time

Basic-only deprivation – where children are protected from child-specific deprivation – is associated with a number of child and family characteristics, but the patterns are not as strong or distinctive as for multiple deprivation or child-only deprivation. The risks are increased in large families (three or more children), where the mother has a disability, where the mother has low levels of education, where the father is not in employment and in the intermediate and manual social classes. Some of the risk factors unique to basic-only deprivation are: mother’s disability, mother’s lower second level education, father’s non-employment and two of the intermediate social class groupings. In terms of social class, the odds of basic-only deprivation were higher for those in the intermediate service class (mainly clerical occupations) and in the skilled and semi-skilled manual and service classes. In terms of mother’s education, it was lower second level (rather than no education) that was significant for basic-only deprivation. A possible explanation is that households experiencing basic-only deprivation are in a somewhat better position with respect to resources than those experiencing multiple deprivation; and that these resources are directed towards making sure the children have an adequate standard of living.

## 6.7 Policy Implications

Child poverty and deprivation is of great concern to policy-makers, not only because children's current experience of poverty and social exclusion is unacceptable, but also because it has long-term negative consequences for children and contributes to the intergenerational transmission of poverty. The findings of this report have a number of implications for policy on social inclusion but also for policy on the well-being of children. The policy implications are discussed below under a number of headings.

### 6.7.1 Child poverty as a broader economic issue

The high rate of poverty and deprivation among children cannot be ignored from the perspective of child well-being. In 2010 one-fifth of children were living in households below the income poverty threshold and 30 per cent were in households experiencing basic deprivation. These figures have increased since the beginning of the recession. Given that child poverty has been shown to be associated with a number of negative outcomes in terms of educational achievement and later occupational performance, this issue is also relevant to longer-term economic planning such as ensuring that young adults are equipped to contribute to the 'Smart Economy'. International evidence suggests that a failure to address child poverty now is likely to lead to large costs in the future, associated with poorer health, lower educational achievement, and welfare dependence.

### 6.7.2 Child-specific deprivation

The findings of the report indicated that most children exposed to child-specific deprivation are a subset of the children in households experiencing basic deprivation. Therefore, children at risk are, for the most part, identified by the national household-level measures, particularly the measure of basic deprivation. Nearly eight in ten children experiencing child-specific deprivation would be captured by the basic deprivation measure.

However, the consistent poverty measure will identify only about one-third of these children and the at-risk-of-poverty measure would identify fewer than half of them. This means that the consistent poverty measure is too 'narrow' to adequately identify children whose living circumstances are adversely affected by a household's lack of resources. For more complete coverage, attention would need to be paid to children living in households experiencing basic deprivation as well.

The study highlighted that a substantial proportion of children living in households exposed to basic deprivation are protected from the effects of child-specific deprivation. This suggests that parents may be adopting strategies to divert available resources towards meeting the needs of children. It also suggests, however, that many parents may be 'doing without' (as captured by the basic deprivation indicator) in order to make sure that the children have what they need. There is scope to investigate the impact this may have on the financial stress experienced by parents (we already saw in Chapter 2 that under each of the national measures, the level of financial stress experienced by the householder was higher where there are children).

The fact that children in households experiencing basic deprivation are not deprived on the 13 items in the child-specific deprivation scale does not mean that they are unaffected: much research on the impact of poverty on children is based on household level measures rather than child-specific measures. We need to continue to focus on basic deprivation and adequate income at the household level.

### 6.7.3 Enabling parents to protect children

A number of findings in the report point to factors that enable parents to protect their children. The first is an adequate level of household resources. While current income is not the only resource available to households, it is likely to be particularly important for households with children in contrast to older households who may have accumulated savings or assets. We saw that the risk of multiple deprivation among children is 13 times higher in households in the bottom fifth of the income distribution than in the top fifth. The strong association between child-only deprivation and lower social class or long-term exclusion from the labour market (reference person never worked) may also reflect an inability to access adequate resources. In this context, levels of Child Benefit, Family Income Supplement, and One Parent Family Payments are important. Since the beginning of the recession, Child Benefit has been reduced substantially in real terms<sup>20</sup>. Compared to 2009, Child Benefit in 2012 was lower by 17 per cent in real terms for households with one or two children and lower by 22 per cent in real terms for households with four children. The maximum One Parent Family payment has also been reduced in real terms by seven per cent in the same period. While the income limits for Family Income Supplement were increased slightly in 2010, the capacity of unemployed or non-working parents to access employment is severely restricted due to high unemployment levels. The reductions in Child Benefit and One Parent Family payments are likely to have

<sup>20</sup> The Consumer Price Index for January and February 2012 is used here for 2012; the annual index is used for 2009-2011.

reduced the capacity of parents to protect their children from deprivation, particularly in a context of high unemployment where the capacity to make up the difference through earnings is very limited.

Another issue that emerged as important in protecting children from child-specific deprivation is employment, especially mother's paid work. The level of child-only deprivation (in the absence of basic deprivation) is eight times as high where the mother does not work compared to children of mothers who work full-time. While employment of the father is important in protecting the household from basic deprivation, employment of the mother is more consequential in terms of child-specific deprivation. These effects are separate from the broad level of income in the household. This means that mothers' access to resources is particularly important in protecting the welfare of children. Work is undeniably important in enabling a household to escape from poverty, and encouraging and enabling mothers to work for pay is an important component of enabling them to protect the interests of their children. The graduate withdrawal of One Parent Family payments as the parent's earnings rise is important in this respect. It enables lone parents to improve their economic resources through earned income without completely withdrawing the security of the One Parent Family payment. The earnings disregard has already been reduced by 13 per cent in real terms between 2009 and 2012. Careful consideration should be given to the impact of further reducing the earnings disregard, as announced in Budget 2012.

While acknowledging that any additional public spending on childcare is difficult in the current recession, the issue of affordable childcare which would enable mothers to work should remain very much on the agenda when the economy improves. The Free Pre-School year in the Early Childhood Care and Education (ECCE) Scheme, which was introduced in January 2010, is an important service in this regard. As well as providing children with the benefits of early childhood education, it has the potential to form the basis of a universal, affordable, childcare scheme for pre-school children.

Of course, the success of many of these policies designed to encourage and enable parents to work is contingent on an increase in employment. The importance for child welfare of increasing employment levels cannot be stressed enough.

#### **6.7.4 Mother's education**

We also identified a number of factors that place children at increased risk of child-specific deprivation in households that have an otherwise adequate basic standard of living. These include low education of the mother and family type. Children of mothers with no educational qualifications are six times as likely as children of mothers with third level education to be multiply deprived (that is, exposed to both child-specific and basic deprivation) and twice as likely to be in households characterised by basic-only deprivation, controlling for other factors controlled. This pattern is not due to current income levels, however, but may reflect a longer-term exposure to low levels of resources. It is significant that children of mothers with no qualifications are not at higher risk of child-only deprivation (i.e. child-specific deprivation in a household not experiencing basic deprivation). This suggests that when resources are adequate to move the household out of multiple deprivation, the needs of the children are placed first. Education and training policies are likely to be of benefit to mothers with low levels of education, including a second chance to obtain educational qualifications and training for the labour market.

#### **6.7.5 Support for families**

The relationship between family type and child-only deprivation suggests that a less stable relationship between the parents, including marital breakdown and cohabiting, may create difficulties in ensuring that children's well-being is protected. Children of formerly married lone parents are eight times as likely as children of married parents to experience child-only deprivation. The corresponding figure for children of cohabiting parents is five times. There is no corresponding increase in risk of basic deprivation for children of formerly married or cohabiting parents. While further investigation is needed to confirm this, a possible explanation is that the instability in the relationship between the parents may be linked to a pattern of intra-household distribution of resources which operates to the detriment of children. The households concerned may be experiencing particular stresses that distort the capacity of parents to provide adequately for their children. Given the magnitude of these effects, combined with the increasing prevalence of both marital breakdown and cohabitation, priority should be given to investigating the kinds of supports needed by children in these households.

### 6.7.6 Health and dental services

There was evidence in Chapter 3 that a very small proportion of children (fewer than 1 per cent in each case) were unable to make required visits to a doctor or dentist for reasons of affordability. In the case of dentist visits, the percentage was somewhat higher for children aged 12 to 15 and among children in the middle income quintile. While the numbers of children affected is small, this also implies that remedying any gaps in coverage of GP and dental care for children would not be very costly. Children in the lowest-income households are entitled to free GP visits through the GMS, and all pre-school and primary-school age children are entitled to free dental care when referred from child health service and school health service examinations. There appear to be some gaps for children of secondary-school age. As well as a general improvement in the availability of services and a reduction in the waiting times, consideration could be given to designing a system to ensure that children up to middle income levels have access to affordable dental care.

### 6.7.8 Identifying Children Exposed to Deprivation

The implications of these findings from the perspective of identifying children who are deprived are as follows:

- Most children who are exposed to deprivation (either basic or child-specific) are identified by the basic deprivation measure. The child-specific deprivation items in SILC 2009 identify a much smaller group.
- If a measure of childhood deprivation is required for national policy, therefore, we would recommend the basic deprivation indicator rather than the child-specific deprivation indicator.
- A further reason to take account of all children living in households at risk of poverty or experiencing basic deprivation – both measured at the household level – is that most research on the negative consequences of poverty for children is based on household-level measures of poverty. Even if a child is not directly deprived of child-specific goods and services, living in a household experiencing financial strain is likely to have an impact on children.
- While basic deprivation may not capture the specific experiences of deprivation encountered by children, the child-specific items included in SILC 2009 were not ideal for this purpose either. One reason for this is that it is very difficult to design a set of child-specific items that is general enough to apply to children in all age groups. This may partly explain why the child-specific items captured a smaller group than the basic deprivation items. Even though we had 13 items, they will differ in their suitability for children in different age groups. In particular, the items on participation in school events and a place to do homework are not relevant to preschool children.

### 6.7.9 Further Research

This report touched on a number of areas where further research is needed in order to understand childhood deprivation. One such area is the situation of children who are vulnerable to child-specific deprivation, although they live in households where the overall standard of living is adequate. As noted above, we were limited in what we could do on the SILC dataset by the relatively small number of such children identified. Another area is the impact of household poverty on the lives of children, particularly their development emotionally, socially and educationally. The *National Longitudinal Survey of Children in Ireland (Growing Up in Ireland or GUI)* with a wider range of indicators of child outcomes and narrower age groups, would be a better dataset than SILC on which to examine the factors that contribute to an increased level of risk for children. Although the GUI does not specifically measure deprivation *per se* among children, it does capture a wide range of outcomes, including educational and socio-emotional development. This would allow the identification of factors other than household poverty which put children at risk of unfavourable outcomes in these areas. This survey also has the advantage of collecting data directly from children themselves once they are old enough to be interviewed.

The results in Chapter 2 which examined the risks of income poverty (at-risk-of-poverty) and basic deprivation by the age group of the child suggest that the income equivalence scales may be under-compensating for the cost of younger children. In that chapter, we noted that children in the older age group (12 to 15) had a higher risk of income poverty, but without showing a higher risk of deprivation. On the other hand, the youngest children appeared to have the lowest risk of income poverty, but did not show systematically lower levels of basic deprivation. The equivalence scale, which is designed to adjust household income for the size and composition of the households, allows the full adult weight to children aged 14 and over and half that weight for younger children. The patterns in Chapter 2 suggested that this may not be the most appropriate 'allowance' to make for the cost of children. A possible modification of the equivalence scales in the light of research on the costs of children should be further investigated. Since it is designed to measure household income and has a great deal of information on household members, the SILC dataset would be an important resource for such research. It would need to be supplemented, however, by external information on how costs vary depending on the age of the child.

## Appendix 1: Technical Note on Data and Measurement

### A1.1 The SILC Data

This report analyses data from the Survey on Income and Living Conditions (SILC) for Ireland. The data are based on a voluntary survey of private households carried out by the Central Statistics Office (CSO). The SILC survey was initiated in 2003, with interviews in Ireland carried out only on a six-month period from June to December 2003. The survey was then carried out every year, with data collection taking place throughout the year. The SILC survey collects information on the income and living conditions of households as well as a large range of socio-demographic information about the household members, ranging from personal characteristics to personal income, living conditions, labour market position, education and health status.

For this report we are using five waves of the SILC, running from 2004 to 2009. In 2004, the total completed sample size is 5,477 households and 14,272 individuals, and in 2009 it is respectively 5,183 and 12,641. 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, 2010).

### A1.2 Unit of Analysis, Income, Poverty and Deprivation Measures

In this report the unit of analysis is the individual living in a private household. A household is defined as a person living alone or a group of people who live together in the same dwelling and share expenditures, including the joint provision of the essentials of living.

### A1.3 Income Measure

In the report the income measure that is used to derive income poverty measures is derived from the disposable household income. The measure is constructed as the sum of the income of every individual within the household across all sources, after income tax and PRSI contributions.

Within households all individuals are presumed to share the same standard of living, derived from the total household income. However as 'economic needs' are different across individuals (adult versus children, for example) within households and as economies of scale occur as the household size increases, it is important to adjust

for these differences to allow comparison between individuals. Therefore we use an 'equivalence scale' to adjust for differences in household size and composition. While a variety of equivalence scales are possible, we use the same 'National' equivalence scale as the CSO. This is the equivalence scale that has been adopted for monitoring poverty trends in Ireland and has been adopted in the *NAPinclusion* poverty measure.

This scale assigns a weight of 1 to the first adult in a household, a weight of 0.66 to each additional adult and of 0.33 to children. A child is defined as an individual aged less than 14 years. The household equivalised income is thus calculated as the total household income divided by the number of equivalent adults in the household. For example, in a household with two adults and two children, the 'equivalised' income would be the total household income divided by 2.33 (1+.66+.33+.33). The household equivalised income is then attributed to each individual within the same household.

In the report we are using two poverty measures: the at-risk-of-poverty measure and the consistent poverty measure.

### A1.4 At-risk-of-poverty (Income Poverty or ARP)

The at-risk-of-poverty measure identifies the population with an equivalised household income below a certain percentage (known as income poverty threshold or income poverty line) of the median income. Conventionally the income poverty threshold is set at 60 per cent of median income. However, in order to evaluate the sensitivity of the results to the choice of the income poverty threshold, occasionally throughout the report we present additional results with the 50 per cent and 70 per cent median income. The at-risk-of-poverty set at 60 per cent of median income is an official poverty measure used in Ireland and is also one of the key 'Laeken indicators' devised to study poverty across Europe.

### A1.5 Irish Dimensions of Deprivation

The SILC survey includes a wide range of questions relating to non-monetary indicators of deprivation. The Irish questionnaire includes some additional items that are not part of the EU-SILC core items. These deprivation questions relate to a large range of domains, from consumer durables, quality of housing and neighbourhood environment to aspects of participation in social life, health status and related issues. Most of the questions were posed to the person answering the household



questionnaire (the household respondent) and referred to the household as a whole. A small number of questions (3) were asked of all persons aged over 16 years. In the case of the questions posed to the household respondent, the responses have been allocated to all individuals within the household. When the questions were answered individually, the response of the household reference person (HRP) has been allocated to each individual in the household.

As described in Maître, Nolan and Whelan (2006) we reproduce below the list of relevant items in Table A1.1. A number of different formats were used in posing these questions. The first format consisted of asking the respondents a series of question about specific items: if (1) the household possessed/availed the items (2) did not possess/avail of because they could not afford it or (3) did not possess/avail for another reason. We reported the household as being deprived on a specific item if the household could not afford to have the items.

A different format of question was used in relation to the dwelling amenities (bath or shower, internal flush toilet, central heating, hot running water). It was simply asked of the household respondent if the household had or had not these amenities. In the negative, as these amenities constitute consensual basic facilities, we assume that the absence of any of these amenities was due to inability to afford them.

In relation to the quality and the environment of the dwelling, respondents were asked if their dwelling suffered any of the problems listed below such as leaking roof or dampness, not enough light, noise or pollution.

Finally, while the set of questions above were asked at household level, three items were asked of all persons aged 16 or over in the household. The responses of the household reference person were attributed to each individual in the household. The items refer to going without heating, being unable to afford an afternoon or evening out and lacking access to a car.

One simple way to measure deprivation consists in counting the number of deprivation items that individuals and households are lacking. This approach gives us an aggregate index running from 0 to 39, where 1 is added to the total score for each item lacking. As we can see from the list above, since several of the items are likely to be closely related, we might identify subsets of items that tend to occur together. Such analysis can be conducted through an exploratory factor analysis

of all the items presented above. In earlier work, Whelan et al. (2003) and Maître, Nolan and Whelan (2006), using respectively the Living in Ireland (LII) survey and the SILC, have identified several dimensions of deprivation, five for the LII and four for the SILC.

Focusing on the results from the 2003 SILC, Maître, Nolan and Whelan (2006) identified the following dimension:

- basic deprivation – consisting of items relating to food, clothing, furniture, debt and minimal participation in social life (see Figure 2.2).
- secondary deprivation – comprising mainly a range of consumer durables including a phone, PC, Video, CD, dish-washer etc.
- housing facilities – comprising basic facilities such as bath, toilet etc.
- neighbourhood environment – encompassing pollution, crime/vandalism, noise. This dimension also incorporates a couple of items relating to deteriorating housing conditions.

Analysis by Watson and Maître (2012) showed that the loading of the items across the various dimensions were stable across time. This is very important as it implies that the meanings of the dimension of deprivation are identical across the 2004 to 2009 period and are not affected by the recent cycle in the Irish economy as it moves from the end of the economic boom into recession. This is particularly relevant with respect to the basic deprivation dimension that is used in the consistent poverty measure, as this dimension and the subsequent consistent poverty measure has been revised in 2006 (see Maître, Nolan and Whelan, 2006) and adopted by the Irish government in 2007.

**Table A1.1: Deprivation Items from the SILC Questionnaire**

Household cannot afford ... Paying for a week’s annual holiday away from home in the last 12 months. <sup>C</sup> Eating meat chicken or fish (or vegetarian equivalent) every second day, if you wanted to. <sup>B</sup> Having a roast joint (or equivalent) once a week. <sup>B</sup> Buying new, rather than second hand clothes. <sup>B</sup> A warm waterproof overcoat for each household member. <sup>B</sup> Two pairs of strong shoes for each household member. <sup>B</sup> Replacing any worn-out furniture. <sup>B</sup> Keeping your home adequately warm. <sup>B</sup> Having friends or family for a drink or meal at least once a month. <sup>B</sup> Buying presents for family/friends at least once a year. <sup>B</sup>
Household cannot afford consumer items <sup>C</sup> Satellite dish, video recorder, stereo, CD player, camcorder, home computer Washing machine, clothes dryer, dish washer, vacuum cleaner, fridge, deep freeze Microwave, deep fat fryer, liquidiser, food processor, telephone (fixed line).
Household does not have ... <sup>H1</sup> Bath or shower Internal toilet Central heating Hot water
Dwelling or area has problems ... <sup>H2</sup> Leaking roof, damp walls/ceilings/floors/foundations, rot in doors, window frames. Rooms too dark, light problems. Noise from neighbours or from the street. Pollution, grime or other environmental problems.
Household Reference person ... Had to go without heating during the last 12 months through lack of money. <sup>B</sup> Cannot afford to have a morning, afternoon or evening out in the last fortnight for entertainment. <sup>B</sup> A car. <sup>C</sup>

Note: The superscripted letters indicate the dimension of deprivation with which each item is associated: B=Basic deprivation, C=consumption Deprivation, H1=Housing facilities, H2=Housing/Neighbourhood quality.

**A1.6 Consistent Poverty**

This indicator measures the proportion of the population that is at-risk-of-poverty and living in a household lacking 2 or more items of a list of 11 items from the basic deprivation index (see Table A1.2).

**Table A1.2: Basic Deprivation Items from the SILC Questionnaire**

<b>Basic Deprivation Items</b>
1. Two pairs of strong shoes
2. A warm waterproof overcoat
3. Buy new (not second-hand) clothes
4. Eat a meal with meat, chicken, fish (or vegetarian equivalent) every second day
5. Have a roast joint or its equivalent once a week
6. Had to go without heating during the last year through lack of money
7. Keep the home adequately warm
8. Buy presents for family or friends at least once a year
9. Replace any worn out furniture
10. Have family or friends for a drink or meal once a month
11. Have a morning, afternoon or evening out in the last fortnight for entertainment

**A1.7 EU Measure of Deprivation**

As part of the development of the Lisbon Strategy, the European Council established in 2001 a common set of European statistical indicators on poverty and social exclusion, known as the Laeken indicators. Initially most of these indicators relating to poverty and inequality were based on an income measure only. Since then, with the development of the recognition that poverty indicators based on income only cannot capture the complexity and the multidimensionality of poverty and social exclusion, the Social Protection committee has extended the list of poverty and social exclusion indicators with the adoption of the material deprivation indicator.

In section A1.5 we noted that the common EU-SILC that includes all EU member states has a more restrictive set of items than the Irish SILC and we present in Table A1.3 a comparative list of the items composing the Irish basic deprivation dimension used in the consistent poverty measure and the EU material deprivation indicator. The Irish measure includes 11 items while the EU one includes only 9 items.

**Table A1.3: List of Deprivation Items Used in the Irish and EU Deprivation Measure**

Irish Measure of Deprivation	EU Measure of Deprivation
Eat a meal with meat, chicken, fish (or vegetarian equivalent) every second day	Eat a meal with meat, chicken, fish (or vegetarian equivalent) every second day
Keep the home adequately warm	Keep the home adequately warm
Two pairs of strong shoes	Arrears (mortgage or rent, utility bills or hire purchase)
A warm waterproof overcoat	Inability to face unexpected financial expenses
Buy new (not second-hand) clothes	Inability to afford paying for one week annual holiday away from home
Have a roast joint or its equivalent once a week	a television set
Had to go without heating during the last year through lack of money	a washing machine
Buy presents for family or friends at least once a year	a car
Replace any worn out furniture	a telephone
Have family or friends for a drink or meal once a month	
Have a morning, afternoon or evening out in the last fortnight for entertainment	
Buy presents for family or friends at least once a year	

As we can see from Table A1.3, only 2 items are common across the two indicators: the inability to afford to eat meat, fish or a protein equivalent every second day and to keep the home adequately warm. Four of the 9 EU items are basic consumer durable goods (television, washing machine, car, telephone). Major differences exist also in terms of the threshold chosen. Indeed, in Ireland the deprivation threshold that identifies the population as deprived is when people are lacking at least 2 of the 11 items while the EU measure uses two different thresholds depending on the manner the deprivation indicator is used as detailed below:

- The EU defines material deprivation as lacking at least 3 of the 9 indicators.
- The EU defines severe material deprivation as lacking at least 4 of the 9 indicators.

This indicator is used in combination of other indicators to identify the population that is at-risk-of-poverty or socially excluded in the context of the Europe 2020 strategy. The choice of the items entering into the basic deprivation measure as well as the choice of the threshold have been explicitly tested and justified in the Irish case (see Maître, Nolan and Whelan, 2006; Whelan, Maître and Nolan (2007). Work on identifying improved indicators for use at the EU level is ongoing (Guio, 2009).

It is worth noting that the measurement of the item on 'unexpected expenses'

changed significantly between 2005 and 2006. In 2004 and 2005, the item wording was 'Can your household afford to pay unexpected required expenses (e.g. service/repair of a TV or washing machine)?' From 2006, a specific amount was introduced, and the wording 'without borrowing' was added: 'Can your household afford an unexpected expense of €875 without borrowing?' The amount was linked to the monthly income poverty threshold for a one-person household in year t-2, that is in 2004 for the 2006 survey; 2005 for the 2007 survey and so on. The amount increased to €900 in 2007, €985 in 2008 and €1,085 in 2009. Not surprisingly, there was a sharp increase in the percentage of the population unable to meet such expenses, from 21 per cent in 2004 and 23 per cent in 2005 to 38 per cent in 2006. By 2009, when incomes had fallen but the amount mentioned was linked to incomes at the peak of the boom in 2007, the percentage unable to meet unexpected expenses had increased to 49 per cent. This points to a potential problem in linking an item to the lagged poverty threshold.

## Appendix 2: Measurement and Analysis Techniques

### A2.1 Handling Missing Information on Child-specific Deprivation Items

There is an issue with missing information on several of the child-specific deprivation items. Information is available on fewer than 7 of the 13 items in 5.4 per cent of households with children in the 2 to 15 age range. From Table A2.1, we see that there is an association between missing information and the poverty and deprivation level of the household (measured with the household level items). To avoid any distortion in the reported rates of childhood deprivation, we imputed the level of child-specific deprivation for this 5.4 per cent of children. One method of imputation is to impute a value to the missing cases using information from related observations (Gelman and Hill, 2007, p.533). For the present purposes, this was done by calculating the expected level of child-specific deprivation based on the number of the 11 basic deprivation items lacked. Essentially, we took the modal value of child-specific deprivation for each level of basic deprivation and applied that to the missing cases.

**Table A2.1: Income Poverty (ARP), Basic Deprivation and Consistent Poverty among Children by Whether Child-specific Deprivation Items are Missing (children aged 2 to 15)**

Child deprivation items	Income Poverty	Basic Deprivation	Consistent Poverty	All Children
Not missing (available for 7 or more items)	18%	24%	9%	94.6%
Missing (available for fewer than 7 items)	26%	25%	10%	5.4%
<b>Total</b>	18%	24%	9%	100.0%

The imputation had a small impact on the mean level of child-specific deprivation. Before imputation, the mean level of child-specific deprivation was 12.1 per cent (with missing cases omitted). After imputation, the mean level was 12.6 per cent. The figure is slightly higher after imputation because those cases with missing information were more likely to be in poor households.

### A2.2 Analysis Techniques

Among the analysis techniques used in this report are factor analysis, ordinary least squares regression, logistic regression and multinomial logistic regression.

**Factor analysis:** is a technique used to check whether a list of items (such as the measures of child-specific deprivation) tend to cluster together so that they can be used to form a single scale. The factor loadings give an indication of the strength of the association between the item and the underlying scale. A loading close to 1 or -1 has a very strong association with the underlying scale.

**Ordinary Least Squares regression (OLS):** An OLS is also known as a simple or multiple linear regression. This is a statistical technique used to examine the strength of an association between something we believe to be a cause or predictor of an outcome, controlling for other characteristics. So, for instance, we could examine the extent to which income level is a cause or predictor of level of basic deprivation, controlling for other characteristics that may be related to income such as level of education. The regression coefficient (B) shows the amount by which the outcome (e.g. level of deprivation) would increase for a one unit increase in the predictor variable (e.g. unit of income).

More technically, if we consider the example of two variables  $x$  and  $y$  for which we have observations, the aim of the linear regression is to predict the value of one variable ( $y$ ) given the value of another variable ( $x$ ). The simplest mathematic formula is the bivariate linear regression for which the equation is  $y = \alpha + \beta x + \epsilon$ . A scatterplot can be used to illustrate the relationship between variables and if the relationship is linear we can draw a straight line passing through the plots to summarise this relationship. The values of  $y$  and  $x$  are plotted between two axis, an horizontal axis ( $x$ ) and a vertical axis ( $y$ ). In the model  $Y$  is called the dependent variable or the variable that we are trying to predict.  $X$  is called the independent variable or explanatory variable. The notation  $\alpha$  refers to the intercept (or constant) and is the value where the line cross the vertical axis ( $y$ ) when  $x$  equals 0. The notation  $\beta$  is the slope that is the ratio between the vertical change and the horizontal change along the line. The notation  $\epsilon$  is the error term (or unobserved); it includes all the other factors other than  $x$  that can affect  $y$ . If  $\epsilon$  were zero, all of the points would fall exactly on the line in the scatterplot, and there would be no 'scatter'.

OLS is appropriate when the outcome variable is a continuous measure, such as level of deprivation. It is not appropriate when the outcome has just two categories. This means that if we use a threshold and distinguish those below the threshold as not deprived and those above the threshold as deprived, we must use another analysis technique, such as logistic regression.

**Logistic regression:** is similar in intent to OLS, but is appropriate when the outcome has just two categories. It predicts the log of the odds of the outcome for a one unit increase in the predictor variable. To make the results easier to interpret, they are often presented in the form of odds. This means we would look at the impact of a predictor variable (e.g. level of education) on the odds of child-specific deprivation vs. not being deprived on the child-specific indicator. In this report, we use an alternative method of presenting the results in Chapter 4. We use the results of a logistic regression to calculate the expected percentage deprived for the ‘average child’ with all other characteristics controlled.

**Multinomial logistic regression:** A multinomial logistic regression is a logistic regression where the outcome variable has more than two outcomes as opposed to a binary logistic regression that has only two possible outcomes (e.g. not deprived/ deprived). In this report we use multinomial logistic regression to examine the factors associated with the four outcomes that result when we focus on the presence or absence of two different forms of deprivation (deprived on neither, child-only, basic-only and both). The coefficients show the impact of a one unit change in the predictor variable on the log of the odds of each outcome versus the reference outcome (‘deprived on neither’ is used as the reference outcome category in this report). As in the case of logistic regression, the results can be presented as odds ratios for ease of interpretation.

### A2.3 Constructing a Child-specific Deprivation Scale

Following Whelan and Maître (2012), we tested the suitability of the child-specific deprivation items to form a scale. We begin by checking the reliability of the items as components of the scale: the extent to which they are all indicators of the underlying domain of child-specific deprivation. We focused on the 13 items shown in Table A2.2.

Table A2.2 shows the reliability of a general childhood deprivation scale formed from the 13 items. The table shows the overall Cronbach’s alpha reliability coefficient and the reliability of the scale if each item were omitted. The first column shows the reliability coefficient based on analysing the items as two-category variables (not deprived vs. deprived), coded 0-1. This is the most commonly-used measure of reliability. The overall reliability is very satisfactory (0.82) and would not be improved substantially by dropping any of the items.

**Table A2.2: Reliability of Childhood Deprivation Items (household level)**

	Pearson corr.	Tetrachoric Correlations	
		Alpha (if item dropped)	Schmid-Leiman General Factor Loadings
Fruit	0.80	0.96	0.84
Games	0.81	0.96	0.82
Meals	0.81	0.96	0.77
Party	0.81	0.96	0.80
Friends	0.81	0.96	0.78
Book	0.81	0.96	0.82
Equipment	0.80	0.96	0.82
Homework	0.83	0.96	0.53
Protein	0.81	0.96	0.77
Clothes	0.81	0.96	0.76
Shoes	0.81	0.96	0.76
Trip	0.82	0.96	0.61
Activity	0.81	0.96	0.79
Alpha Reliability	0.82	0.96	
Omega-t (McDonald)			0.98
Omega-h (McDonald)			0.86

There is some debate in the literature regarding the most appropriate way to assess reliability for dichotomous items, that is, items with two response categories such as ‘deprived’ and ‘not deprived’ (Nunnally, 1970; Muthén and Christoffersson, 1981; Zinbarg et al., 2005; McDonald, 1999; Sijtsma, 2009). Using the tetrachoric

correlations is considered to be more appropriate in estimating associations between items that have two categories (Pearson, 1900). Tetrachoric correlations are based on asking what the correlation between the two items would be if they represented an underlying continuous, normally distributed variable (such as the probability of lacking each item). Since the tetrachoric correlations between the items will always be higher, the reliabilities under this second assumption will always be higher.<sup>21</sup> The second column shows the reliability (Cronbach's alpha) calculated on the tetrachoric correlations between the items. The overall reliability is 0.96 and would not be changed by dropping any of the items.

The third column of the table shows the results of another recommended measure of reliability Omega-t and Omega-h (e.g. Revelle and Zinbarg, 2009). It is based on an exploratory factor analysis to check whether the items form a single factor. The Omega h (Revelle and Zinbarg, 2009; McDonald, 1999) is a test of how well the items measure one construct (overall deprivation; see Revelle and Zinbarg, 2009, pp.149-152).<sup>22</sup>

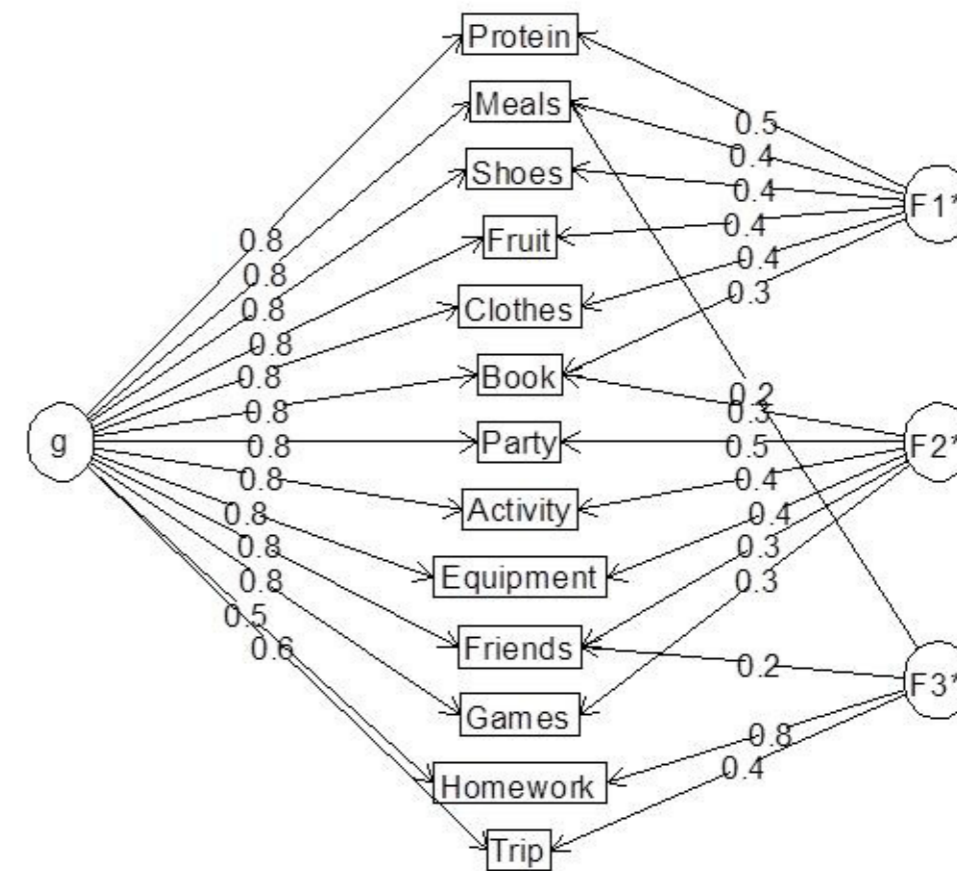
In order to estimate the omega reliability coefficient, an exploratory higher order factor analysis of the items (using the Schmid-Leiman solution<sup>23</sup>) is constructed. Omega is uniquely defined only for cases where three or more sub-factors are extracted; this is a requirement of the calculation of omega and the factors are not necessarily meaningful in themselves. The main goal is to test for the presence of a general factor that will explain most of the variation (Revelle and Zinbarg, 2009). The loadings are shown in Table A2.2 and Figure A2.1. The general childhood deprivation factor has an eigenvalue of 7.57, and the three sub-factors (loading on a subset of items) have much lower eigenvalues (1.11, 0.93 and 0.99, respectively for F1, F2 and F3), indicating that they explain only a very small proportion of the common variation in the items.

<sup>21</sup> Generally, the tetrachoric correlation will be larger and some statisticians (Nunnally, 1970, p.102) discourage the use of this coefficient for estimating reliabilities.

<sup>22</sup> The Omega-t would be appropriate if we expected general childhood deprivation to be composed of a number of sub-factors, for example deprivation related to food and deprivation related to social participation, all of which contributed to overall deprivation. It will always be higher than Omega-h. We rely on Omega-h here as the more conservative measure as we have no reason to posit specific subscales for the general childhood deprivation measure

<sup>23</sup> The Schmid-Leiman solution first identifies a number of sub-factors based on subsets of the items, rotates the factors to an oblique solution; factors the oblique solution to find a general higher order factor (g), and then residualizes g out of the group factors (Schmid and Leiman, 1957).

**Figure A2.1: Factor Structure of Items Measuring Child-specific Deprivation**



The three 'sub-factors' are not necessarily substantively meaningful – they must be extracted in order to estimate the omega statistic. As they explain very little of the covariance among the items, they are unlikely to be measuring a distinct construct (i.e. distinct from childhood deprivation). The first sub-factor captures deprivation related to food but also related to clothing and books; the second sub-factor captures deprivation related to activities and social participation (leisure activity, celebrations and inviting friends to play, equipment, games), but also access to books; the third sub-factor captures deprivation associated with lacking a place to do homework, but also school trips and inviting friends to play. Since the reliability of the general factor is high (.86), we are justified in treating the items an indicator of general childhood deprivation.

**Sensitivity Testing:** The results of the analysis shown in Table A2.2 show that the omission of any single item of the 13 items index would not contribute to any substantial increase in the overall reliability of the scale. This affirms the high level of consistency between the items forming the index. The fact that the reliability changes very little when any single item is dropped also suggests that the items are very similar in terms of their contribution to the underlying dimension of child-specific deprivation.

In the construction of the childhood deprivation measure, all 13 items are given equal weight. This means that, for instance, not being able to afford a school trip is seen as important as not being able to afford to have books or eating fruit. Given the very high percentages of children who do not experience an enforced lack of the items, prevalence weighting would make very little difference to the distribution of the scale.<sup>24</sup> However, it would create difficulties in terms of interpretation and in terms of clearly communicating the meaning of the threshold chosen.

### A2.4 Economic Vulnerability

The concept of economic vulnerability is drawn from a statistical technique based on latent class analysis. In the current analysis we use three measures of disadvantage where we distinguish people’s poverty status based on the 50, 60, and 70 per cent of the median income poverty line. The second measure is the basic deprivation index that is being deprived on two or more items. The third measure is a subjective measure of economic stress that differentiates between those living in households experiencing ‘great difficulty’ or ‘difficulty’ in making ends meet and all others. The purpose of the latent class analysis is to identify a cluster 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 (Moisio, 2004; Whelan and Maître, 2010)

<sup>24</sup> Between 0.4 per cent and 5.1 per cent are deprived on any of the items (Table 3.1).

## Appendix 3: Detailed Logistic Regression Table

**Table A3.1: Odds Ratios from Logistic Regression Models for Child-Specific Deprivation**

		Model 1	Model 2	Model 3	Model 4	Model 5
Child characteristics	Female	0.88	0.96	0.90	0.92	0.97
Child age	Age 2-4	1.12	1.18	1.11	1.09	1.20
(Ref=12-15)	Age 5-11	1.10	1.14	1.14	1.16	1.16
N children (Ref=1)	Two	1.36	1.29	1.24	1.24	1.12
	Three or more	2.28*	2.34*	2.23*	2.10	1.77
Mother age	Under 29		2.06	1.69	1.27	1.48
(Ref 40+)	30-39		1.21	1.13	1.14	1.15
Disability	Mother		2.06*	1.63	1.39	1.43
	Father		1.76	1.27	1.26	1.27
Mother educ.	No quals.		5.30*	4.36*	3.95*	3.46*
(Ref=3rd level)	Lower 2nd		1.49	1.17	0.99	0.85
	Higher 2nd		1.50	1.50	1.36	1.26
Family type	Single LP		3.62*	1.99	1.97	1.92
	Formerly married LP		5.73*	2.83*	3.12*	3.03*
(Ref=married)	Cohabiting		0.80	0.81	0.85	0.88
Mother nationality	Non-Irish		0.81	0.86	0.89	0.91
Parent econ. Stat.	Father works			0.33*	0.44	0.59
(Ref: both work FT)	Mother works full-time			0.50	0.56	0.77
	Mother works part-time			0.47*	0.56	0.72
Social class	Intermediate				1.14	1.14
(Ref=1)	Self-employed/farmer				1.74	1.26
	Manual/lower service				3.10	2.47
	Unskilled manual/service				2.27	1.84
	Never worked				4.94*	3.91*
Income (fifths)	Lowest 20%					7.37*
Ref=Top	Second					4.18
	Middle					3.46
	Fourth					3.68
Intercept		0.09	0.02	0.08	0.04	0.01

Note: Models were estimated on weighted data with robust standard errors to adjust for clustering and weighting. Statistically significant (at p<=.05) figures are indicated by “\*”

## References

- Bane, M.J. and Ellwood, D.T. (1986) 'Slipping into and out of poverty: the dynamics of spells', *The Journal of Human Resources*, XXI(1):2-23.
- Bargain, O., Donni, O. and Gbakou, M. (2010) 'The Measurement of Child Costs: Evidence from Ireland', Working Paper 10/06, Combat Poverty Research Working Paper Series, Dublin: Combat Poverty Research Working Paper. Retrieved from <http://www.cpa.ie/publications/workingpapers.htm>
- Bobonis, G.J. (2009) 'Is the Allocation of Resources within the Household Efficient? New Evidence from a Randomized Experiment', *Journal of Political Economy*, 117(3):453-503.
- Bolger, K.E., Patterson, C.J., Thompson, W.W. and Kupersmidt, J.B. (1995) 'Psychosocial adjustment among children experiencing persistent and intermittent family economic hardship', *Child Development*, 66:1107-1129.
- Bradshaw, J. and Main, G. (2010) 'PSE Measures Review Paper: Children's Deprivation Items, Poverty and Social Exclusion in the UK: The 2011 Survey', Working Paper Series 7, Bristol: University of Bristol.
- Bradshaw, J., Williams, J. and Middleton, S. (2010) 'The Necessities of Life for Children', Working Paper 2, Poverty and Social Exclusion Survey of Britain, Bristol: University of Bristol.
- Brooks-Gunn, J. and Duncan, G.J. (1997) 'The Effects of Poverty on Children', *The Future of Children*, 7(2):55-71.
- Bumpass, L. and Lu, H. (2000) 'Trends in cohabitation and implications for children's family contexts', *Population Studies*, 54:29-41.
- Callan, T., Layte, R., Nolan, B.T., Watson, D., Whelan, C.T., Williams, J. and Maître, B. (1999) *Monitoring Poverty Trends*, Dublin: Stationery Office/Combat Poverty Agency.
- Callan, T., Nolan, B.T. and Whelan, C.T. (1994) 'Who Are the Poor?', In B.T. Nolan and T. Callan (eds), *Poverty and Policy in Ireland* (pp. 63-77), Dublin: Gill and Macmillan.
- Callan, T., Nolan, B. and Whelan, C.T. (1993) 'Resources, Deprivation and the Measurement of Poverty', *Journal of Social Policy*, 22(2):141-172.
- Carney, C., Fitzgerald, E., Kiely, G. and Quinn, P. (1994) 'The Cost of a Child, A Report on the Financial Cost of Raising a Child in Ireland', Combat Poverty Agency Research Report Series 17, Dublin: Combat Poverty Agency. Retrieved from [http://www.cpa.ie/publications/TheCostOfAChild\\_1994.pdf](http://www.cpa.ie/publications/TheCostOfAChild_1994.pdf).
- CSO (Central Statistics Office) (2011), Survey on Income and Living Conditions (SILC) 2010.
- CSO (Central Statistics Office) (2010), Survey on Income and Living Conditions (SILC) 2009.
- Coakley, A. (2005) 'Mothers, Welfare and Labour Market Activation', Combat Poverty Working Paper 2005-04, Dublin: Combat Poverty Agency. Retrieved from [http://www.cpa.ie/publications/workingpapers/2005-04\\_WP\\_MothersWelfare&LabourMarketActivation.pdf](http://www.cpa.ie/publications/workingpapers/2005-04_WP_MothersWelfare&LabourMarketActivation.pdf)
- Conniffe, D., Nolan, B. and Whelan C.T. (1999) 'Household Composition, Living Standards, and "Needs"', ESRI Working Paper 106, Dublin: Economic and Social Research Institute.



Department of Social Protection (2010), *A Policy and Value for Money Review of Child Income Support and Associated Spending Programmes*, Dublin: Stationery Office.

DWP (Department for Work and Pensions) (2007) *Opportunity for all*, London: DWP.

Duncan, G., Ludwig, J. and Magnuson, K. (2007) 'Reducing Poverty through Pre-School Interventions', *The Future of Children*, 17(2):143-160.

Duncan, G.J. (1984) *Years of Poverty, Years of Plenty*, Ann Arbor: Institute for Social Research, University of Michigan.

Duncan, G. J., Yeung, W.J., Brooks-Gunn, J. and Smirth, J.R. (1998) 'How much does childhood poverty affect the life chances of children?', *American Sociological Review*, 63(4-6):423.

Duncan, G.J., Brooks-Gunn, J. and Klebanov, P.K. (1994) 'Economic deprivation and early childhood development', *Child Dev.*, 65:296-318.

Duncan, G. and Rodgers, W. (1991) 'Has children's poverty become more persistent?', *American Sociological Review*, 56:538-550.

Dunne, A. et al. (2007) *A Social Portrait of Children in Ireland*, Dublin: The Stationery Office. Retrieved from ([http://www.socialinclusion.ie/documents/children\\_socialportrait.pdf](http://www.socialinclusion.ie/documents/children_socialportrait.pdf)).

European Commission (2010) *Europe 2020: A European strategy for smart, sustainable and inclusive growth*, Brussels: European Commission.

European Council (2010) *European Council 17 June 2010 Conclusions* (EU Coco 13/10), Brussels: European Council.

Frazer, H. and Devlin, M. (2011) 'An Assessment of Ireland's Approach to Combating Poverty and Social Exclusion among Children from European and Local Perspectives', Combat Poverty Working Paper 2011-03, Dublin: Social Inclusion Division of the Department of Social Protection.

Fusco, A., Guio, A.-C. and Marlier, E. (2010) 'Income Poverty and Material Deprivation in European Countries,' Eurostat Methodologies and Working Papers, Luxembourg: Eurostat.

Gelman, A. and Hill, J. (2007) 'Data Analysis Using Regression and Multilevel/Hierarchical Models' (R.M. Alvarez, N.L. Beck and L.L. Wu, eds) *Policy Analysis*, 625: 625, Cambridge: Cambridge University Press.

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. (2009) *What Can Be Learned from Deprivation Indicators in Europe?* Luxembourg: Office for Official Publications of the European Communities.

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

Holzer, H.J., Duncan, G.J. and Ludwig, J. (2007) *The Economic Costs of Poverty in the United States: Subsequent Effects of Children Growing Up Poor*, Madison, WI.

Jacobsen, J. P. and Rayack, W L. (1996) 'Do Men Whose Wives Work Really Earn Less?', *The American Economic Review*, 86(2) Papers and Proceedings of the Hundredth and Eighth Annual Meeting of the American Economic Association, San Francisco, CA, January 5-7, 1996 (May, 1996), 268-273.

Jarjoura, G.R., Triplett, R.A. and Brinker, G.P. (2002) 'Growing up poor: Examining the link between persistent childhood poverty and delinquency', *Journal of Quantitative Criminology*, 18:159-187.

Kerrins, L., Greene, S. and Murphy, S. (2011) 'Going Without: Measuring Child Poverty and Social Exclusion in Ireland', Combat Poverty Agency Working Paper 11/08, Dublin: Department of Social Protection.

Layte, R., Maître, B., Nolan, B and Whelan, C.T. (2006) *Day in Day Out: Understanding the Dynamics of Child Poverty*, Dublin: Institute of Public Administration/Combat Poverty Agency.

Layte, R., Nolan, B. and Whelan, C.T. (1998). *Explaining Poverty Trends in Ireland During the Boom*, Dublin: Economic and Social Research Institute.

Lundberg, S. and Pollack, R. (2007) 'The American Family and Family Economics', Berlin: IZA Discussion Paper No. 2715.

Lundberg, S., Pollack, R. and Wales, T. (1997) 'Do husbands and wives pool their resources? Evidence from the UK Child Benefit', *Journal of Human Resources*, 32(3):463-80.

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

Maître, B., Nolan, B. and Whelan, C.T. (2006) 'Reconfiguring the Measurement of Deprivation and Poverty in Ireland', Policy Research Series 58, Dublin: Economic and Social Research Institute.

Manning, W.D. and Brown, S. (2006) 'Children's Economic Well-Being in Married and Cohabiting Parent Families', *Journal of Marriage and Family*, 68(2):345-362.

McDonald, R.P. (1999) *Test theory: A unified treatment*, Hillsdale: Erlbaum.

McKay, S. and Collard, S. (2004) 'Developing deprivation questions for the Family Resources Survey', Working Paper 13, London: DWP.

McLanahan, S. and Sandefur, G. (1994) *Growing Up With a Single Parent: What Hurts, What Helps*, Cambridge, MA: Harvard University Press.

McLeod, J.D. and Shanahan, M.J. (1996) 'Trajectories of poverty and children's mental health', *Journal of Health and Social Behavior*, 37:207-22.

Middleton, S., Ashworth, K., Braithwaite, I. (1997) *Small Fortunes; Spending on Children, Childhood Poverty and Parental Sacrifice*, York: Joseph Rowntree Foundation.

Moisio, P. (2004) 'A Latent Class Application to the Multidimensional Measurement of Poverty', *Quantity and Quality*, 38:703-717.

Muthén, B. and Christofferson, A. (1981) 'Simultaneous factor analysis of dichotomous variables in several groups', *Psychometrika*, 46(1):407-19.

Nolan, B. and Whelan, C.T. (2007) 'On the multidimensionality of poverty and social exclusion', In J. Micklewright and S. Jenkins (eds), *Poverty and Inequality: New Directions*, Oxford: Oxford University Press.

Nolan, B. and Whelan, C.T. (2011) *Poverty and Deprivation in Europe*, Oxford: Oxford University Press.

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

Nolan, B., Gannon, B., Layte, R., Watson, D. Whelan, C.T. and Williams, J. (2002) 'Monitoring Poverty Trends in Ireland: Results from the 2000 Living in Ireland Survey', ESRI Policy Research Series 45, Dublin: Economic and Social Research Institute.

Nunnally, J.C. (1970), *Introduction to Psychological Measurement*, New York: McGraw-Hill.

O'Connell, P.J., Russell, H., Watson, D. and Byrne, D. (2010) *The Changing Workplace: A Survey of Employees' Views and Experiences*, Dublin: National Centre for Partnership and Performance.

OECD (2008), *Growing Unequal? Income Distribution and Poverty in OECD Countries*, Paris: OECD. Retrieved from [www.oecd.org/els/social/inequality/](http://www.oecd.org/els/social/inequality/) / [www.oecd.org/els/social/inegalite](http://www.oecd.org/els/social/inegalite)

Office for Social Inclusion (2007) *National Action Plan for Social Inclusion, 2007-2016*, Dublin: The Stationery Office. Retrieved from <http://www.socialinclusion.ie/documents/NAPinclusionReportPDF.pdf>.

Pantazis, C., Gordon, D. and Levitas, R. (eds) (2006) *Poverty and social exclusion in Britain: the millennium survey*, Bristol: Bristol Policy Press.

Pearson, K. (1900) 'Mathematical Contribution to the Theory of Evolution. VII. On the Correlation of Characters not Quantitatively Measureable', *Philosophical Transactions of the Royal Society of London*, 195A:1-47.

Rainwater, L. and Smeeding, T. (2005) *Poor Kids In A Rich Country: America's Children In Comparative Perspective*, New York: Russell Sage Foundation.

Revelle, W. and Zinbarg, R.E. (2009) Coefficients alpha, beta, omega and the GLB: Comments on Sijtsma, *Psychometrika* 74(1):145-154, DOI: 10.1007/S11336-008-9102-z.

Ridge, T. (2002) *Childhood poverty and social exclusion: from a child's perspective*, Studies in Poverty, Inequality and Social Exclusion, Bristol: The Policy Press.

Ringen, S. (1988) Direct and indirect measures of poverty, *Journal of Social Policy*, 17:51-366.

Russell, H., Maître, B. and Nolan, B. (2010) 'Monitoring Poverty Trends in Ireland 2004-2007: Key Issues for Children, People of Working Age and Older People', ESRI Research Series, 17, Dublin: Economic and Social Research Institute.

Schmid, J.Jr. and Leiman, J.M. (1957) 'The development of hierarchical factor solutions', *Psychometrika*, 22:83-90.

Sijtsma, K. (2009) 'On the Use, the Misuse, and the Very Limited Usefulness of Cronbach's Alpha', *Psychometrika*, 74(1):107-120, DOI: 10.1007/s11336-008-9101-0.

Swords, L., Greene, S., Boyd, E. and Kerrins, L. (2011) *All You Need is ... Measuring Children's Perceptions and Experiences of Deprivation*. Dublin: Children's Research Centre, Trinity College Dublin.

Thomas, D. (1990) 'Intra-Household Resource Allocation: An Inferential Approach', *The Journal of Human Resources*, 25(4):635-664.

Tomlinson, M. and Walker, R. (2009) *Coping with Complexity: Child and Adult Poverty*, London: Child Poverty Action Group.

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

Watson, D. and Maître, B. (2012) 'Technical Paper on Poverty Measurement to Inform the Review of the National Poverty Target', Technical Paper Series, Dublin: Social Inclusion Division, Department of Social Protection.

Wenger, D.R., Mauldin, D., Morgan, D., Sobol, M.G., Pennebaker, M. and Thaler, R. (1983) 'Foot growth rate in children age one to six years', *Foot Ankle*, 3(4):207-10.

Whelan, C.T., Layte, R. and Maître, B. (2002) 'Multiple deprivation and persistent poverty in the European Union', *Journal of European Social Policy*, 12(2):91-105.

Whelan, C.T. (2007) 'Understanding the Implications of Choice of Deprivation Index for Measuring Consistent Poverty in Ireland', *Economic and Social Review*, 38(2):211-234.

Whelan, C.T. and Maître, B. (2010) 'Protecting the Vulnerable: Poverty and Social Exclusion in Ireland as the Crisis Emerged', *Economic and Social Review*, 41(4):501-525.

Whelan, C.T. and Maître, B. (2012 forthcoming) 'Identifying Childhood Deprivation: How Well do National Indicators of Poverty and Social Exclusion in Ireland Perform?' *Economic and Social Review* (An earlier version appeared as Working Paper 2011-21, Dublin: Geary Institute, University College Dublin).

Whelan, C.T. and Maître, B. (2005) 'Economic Vulnerability, Social Exclusion and Social Cohesion in an Enlarged European Community', *International Journal of Comparative Sociology*, 46(3):215-239.

Whelan, C.T., Maître, B. and Nolan, B. (2007) 'Multiple Deprivation and Multiple Disadvantage in Ireland: An Analysis of EU-SILC', ESRI Policy Research Series 61, Dublin: Economic and Social Research Institute.

Whelan, C.T., Layte, R., Maître, B., Gannon, B., Watson, D. and Williams, J. (2003) 'Monitoring Poverty Trends in Ireland. Results from the 2001 Living in Ireland Survey', Policy Research Series 51, Dublin: Economic and Social Research Institute.

Williams, J. and Whelan, C.T. (2011) 'Prevalence of relative income poverty and its effect on outcomes among 9-year-olds', Paper presented at Growing Up in Ireland Annual Conference, Dublin, December 1, 2011.

Williams, J., Greene, S., Doyle, E., Harris, E., Layte, R., McCoy, S., McCrory, C., Murray, A., Nixon, E., O'Dowd, T., O'Moore, M., Quail, A., Smyth, E., Swords, L. and Thornton, M. (2009) *Growing Up in Ireland: The Lives of 9-Year-Olds*, Dublin: Office of the Minister for Children and Youth Affairs.

Zinbarg, R.E., Revelle, W., Yovel, I. and Li, W. (2005). 'Cronbach's  $\alpha$ , Revelle's  $\beta$ , and McDonald's  $\omega^2$ : their relations with each other and two alternative conceptualizations of reliability', *Psychometrika*, 70(1):123-133, DOI:10.1007/s11336-003-0974-7.

## Glossary

**At-risk-of-poverty thresholds:** Income thresholds derived as proportions of median income. These are based on the household income adjusted for household size and composition (referred to as equivalised income). A household at-risk-of-poverty has an adjusted (or equivalised) income below 60 per cent of the median adjusted household income. The at-risk-of-poverty rate takes account of household income from all sources, number of adults and number of children in the household.

**At-risk-of-poverty or exclusion:** This EU measure combines the number of people who experience at-risk-of-poverty or severe material deprivation or low work intensity. This measure is the basis for the Europe 2020 poverty target. In cases where people experience more than one of these indicators, they are counted only once. The Irish version of this measure is the combination of at-risk-of-poverty and basic deprivation.

**Basic deprivation:** People who are denied – through lack of income – at least **two items or activities on this index / list of eleven** are regarded as experiencing relative deprivation. This is *enforced deprivation* as distinct from the personal choice not to have the items. 11 basic items are used to construct the deprivation index:

- unable to afford two pairs of strong shoes
- unable to afford a warm waterproof overcoat
- unable to afford new (not second-hand) clothes
- unable to afford a meal with meat, chicken or fish (vegetarian equivalent) every second day
- unable to afford a roast joint or its equivalent once a week
- without heating at some stage in the last year through lack of money
- unable to afford to keep the home adequately warm
- unable to afford to buy presents for family or friends at least once a year
- unable to afford to replace any worn out furniture
- unable to afford to have family or friends for a drink or meal once a month
- unable to afford a morning, afternoon or evening out in the last fortnight for entertainment.

The indicator of basic deprivation was developed by the Economic and Social Research Institute using data from the Survey on Income and Living Conditions. See Maitre B, Nolan B and Whelan C (2006) *Reconfiguring the measurement of deprivation and consistent poverty in Ireland*, Dublin: ESRI, for further information on the indicator.

**Consistent poverty:** This is a measure of poverty used in the *National Action Plan for Social Inclusion 2007-2016 (NAPinclusion)* that takes account of the household's living standards as well as the household size, composition and total income.

Now a household is consistently poor if the household income is below the at-risk-of-poverty threshold (see above) and the household members are deprived of **at least 2 out of the 11 items** on the basic deprivation list.

**Correlation:** A correlation between two variables refers to a statistical relationship of dependence between these two variables. This relationship of dependence can be measured by a correlation coefficient. There are many correlation coefficients and the most known is the Pearson correlation coefficient which measures the strength of the linear relationship between two variables.

**Cronbach's alpha:** Cronbach's alpha is a measure of reliability (i.e. internal consistency). It informs us how closely related a set of items are as a group.

**Deprivation:** See definition for basic deprivation about for measure of deprivation used in the *NAPinclusion*.

**Discrimination:** Generally used to refer to unfair treatment of a person on the basis of his/her membership of a particular group, in terms of, for example, gender, nationality, disability or race.

**Economic vulnerability:** A measure of the economic situation of a household based on whether it is at-risk-of-poverty, experiences enforced basic deprivation and has difficulty making ends meet.

**Employment rate:** The employment rate is the proportion of the working-age population that is working.

**Equivalence scales:** A set of relativities between the needs of households of differing size and composition, used to adjust household income to take into account the greater needs of larger households. In Ireland the national scale attributes a weight of 1 to the first adult (aged 14+) and 0.66 to each subsequent adult and a weight of 0.33 to each child. International comparisons such as the one done by Eurostat uses the Modified OECD scale which attributes a weight of 1 to the first adult (aged 14+) and 0.5 to each subsequent adult and a weight of 0.3 to each child.

**EU-SILC:** European Union Statistics on Income and Living Conditions; this is a voluntary household survey carried out annually in a number of EU member states allowing comparable statistics on income and living conditions to be compiled. In Ireland, the Central Statistics Office (CSO) has been conducting the survey since 2003. The results are reported in the Survey on Income and Living Conditions (SILC). Any data as compiled by Eurostat and any reference to the questions or questionnaire in the household survey are here referred to as 'EU-SILC'.

**EU 15:** Member States of the European Union prior to the accession of 10 new member states on 1 May 2004, i.e. Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, United Kingdom.

**EU 25:** Member States of the European Union after the accession of 10 new member states on 1 May 2004, i.e. EU 15 plus Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia.

**EU 27:** Member States of the European Union since 1 January 2007, namely EU 25 plus Bulgaria and Romania.

**European Socio-Economic Classification (ESeC):** The ESeC is an occupationally based classification but has rules to provide coverage of the whole adult population. The information required to create ESeC is:

- occupation coded to the minor groups (i.e. 3-digit groups) of EU variant of the International Standard Classification of Occupations 1988 (ISCO88 (COM))
- details of employment status, i.e. whether an employer, self-employed or employee
- number of employees at the workplace
- whether a worker is a supervisor
- economic sector (agriculture or other industries).

**Factor analysis:** Factor analysis is a statistical technique to see whether a number of variables of interest (such as deprivation items) are linearly related to a smaller number of unobservable factors (such as dimension of deprivation).

**Household:** A household is usually defined for statistical purposes as either a person living alone or a group of people (not necessarily related) living at the same address with common housekeeping arrangements – that is, sharing at least one meal a day or sharing a living room or sitting room.

**Household equivalent (or equivalised) income:** Household income adjusted to take account of differences in household size and composition by means of equivalence scales.

**Inactive:** The inactive population is the working-age population that is not in the labour force.

**Labour force participation:** The labour force participation rate is a measure of the proportion of the working-age population that engages actively in the labour market, either by working or looking for work.

**Life expectancy:** The number of years that a person could expect to live on average, based on the mortality rates of the population in a given year.

**Lone parent:** A parent who has primary custody of a dependent child and is not living with the other parent.

**Material deprivation (EU):** This indicator is one of the European Commission's common indicators on social protection and social inclusion. It measures the proportion of the population lacking at least 3 out of the following 9 items:

- arrears on mortgage or rent payments, utility bills, hire purchase instalments or other loan payments
- capacity to afford paying for one week's annual holiday away from home
- capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day
- capacity to face unexpected financial expenses [set amount corresponding to the monthly national at-risk-of-poverty threshold of the previous year]
- household cannot afford a telephone (including mobile phone)
- household cannot afford a colour TV
- household cannot afford a washing machine
- household cannot afford a car
- ability of the household to pay for keeping its home adequately warm.

**Mean:** The average value (for example, the average income in a sample obtained via household survey).

**Median:** The value that divides a sample in half (e.g. the income level above and below which half the people in a sample fall).

**Planning region:** The eight regions into which Ireland has been divided for certain planning and administrative purposes.

**Poverty gap:** The shortfall in incomes for those who fall below the at-risk-of-poverty threshold.

**Poverty and Social Exclusion:** These terms are defined broadly in the *National Action Plan for Social Inclusion 2007-2016* as follows: 'People are living in poverty if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources people may be excluded and marginalised from participating in activities which are considered the norm for other people in society.' The two concepts are very similar when used in Irish policy-making but poverty is sometimes used in the narrower context to refer to low income (or wealth). On the other hand, social exclusion is almost always used in the broader sense, to refer to the inability to participate in society because of a lack of resources that are normally available to the general population.

**Quintile:** One-fifth of a sample divided into five equal parts to show how income, for example, is spread throughout the population; each quintile represents where a person's or household's income is located, ranging from the bottom quintile (lowest fifth or 20 per cent) to the top quintile (highest fifth or 20 per cent).

**Risk-of-poverty:** A term used at EU level to denote whether a household falls below the 60 per cent of median income threshold.

**SILC:** In Ireland, the Central Statistics Office (CSO) is responsible for carrying out the EU-SILC survey. It often produces data and analysis in accordance with Irish national poverty targets, indicators and related issues. These results are reported in the Survey on Income and Living Conditions (SILC). Any data or analysis that are sourced specifically from the CSO are here referred to as 'SILC'.

**Social welfare transfers:** Cash receipts paid from various social welfare schemes received by the individual or household.

**Urban/rural location:** In EU-SILC each country is divided into eight levels based on population density. These areas are further grouped into urban and rural areas as follows:

**Urban:** cities, suburbs of cities, mixed urban/rural areas bordering on the suburbs of cities, towns and surrounding areas with populations of 5,000 or over (large urban); mixed urban/rural areas bordering larger towns; and towns and surrounding areas with a population of 1,000 to 5,000 (other urban).

**Rural:** mixed urban/rural areas, and rural areas.

**'Working poor':** A household below the at-risk-of-poverty threshold (for example 60 per cent of median equivalised income) even though some of its members are in paid work.