In the Eye of the Storm: Britain's Forgotten Children and Families

Methodological Briefing Note

Introduction

This document provides a brief summary of the methods used to produce the analysis in the report *In the Eye of the Storm.* A more detailed account of the methodology is available in the technical annex document online at:

http://www.landman-economics.co.uk/docs/Eye_of_the_Storm_Technical_Annex.docx

Chapters 1-3: defining vulnerable families, and trends in the number of vulnerable families up to 2008

The analysis of vulnerable families uses a household dataset for England, Scotland and Wales[1] called the Families and Children Study (FACS), a survey collected for the UK Government between 1999 and 2008. The analysis in Chapters 2 and 3 of *In the Eye of the Storm* uses data from each year of FACS between 2003 and 2008.

The UK Cabinet Office produced a report in 2007 called *Families at Risk* which used FACS to estimate the number of *vulnerable* families in Britain 2004. Seven dimensions of vulnerability were analysed in *Families at Risk*, namely:

1. **Worklessness** – no parent in the family is in work;
2. **Housing** – the family lives in poor quality and/or overcrowded housing;
3. **Qualifications** – no parent in the family has any academic or vocational qualifications;
4. **Mental health** – the mother has mental health problems;
5. **Illness/disability** – at least one parent has a limiting long-standing illness, disability or infirmity;
6. **Low income** – the family has low income (below 60 percent of the median)
7. **Material deprivation** – the family cannot afford a number of food and clothing items.

In the Eye of the Storm updates the Cabinet Office vulnerability measures to 2008 (the last wave of the FACS data before the survey was abandoned). The FACS data contains **grossing factors** which can be used to produce estimates of the number of families with each vulnerability – and with (for example) five or more vulnerabilities – in England, Scotland and Wales based on the number of vulnerable families in the FACS sample.

[1] Note that FACS does not include data for Northern Ireland.

Chapter 4: The impact of tax and benefit changes on vulnerable families, 2010-2015

This chapter estimates the impact of changes to the financial position of families in the 2008 FACS survey resulting from changes to taxes, benefits and tax credits which have been introduced (or are scheduled to be introduced) between May 2010 and May 2015, including both the changes announced by the previous Labour Government which were scheduled to take effect between 2010/11 and 2014/15, and the changes introduced by the Coalition Government after coming to office in May 2010.

The tax and benefit changes are assessed relative to a scenario where the 2010-11 tax and benefit system was simply kept in place with tax thresholds and benefit and tax credits adjusted for Retail Price Index (RPI) inflation (for tax thresholds and non-means-tested benefits) and the Rossi Index (for means-tested benefits), and with eligibility rules unchanged.

All the cash figures for the distributional impact of the tax and benefit systems are presented in April 2012 prices. The figures for distributional effects as a percentage of income are calculated as a percentage of 'baseline' income if the April 2010 tax and benefit system had still been in place in April 2012, uprated using the RPI and Rossi indices as described above.

A detailed description of the modelled tax and benefit reforms is included in the technical annex document at:

http://www.landman-economics.co.uk/docs/Eye_of_the_Storm_Technical_Annex.docx.

The main changes are:

- Changes to **income tax** (e.g. the real terms increase in the tax-free personal allowance).
- Changes to **National Insurance contributions** (increase in the Primary Threshold and also increases in the contribution rates below and above the Upper Earnings Limit).
- The increase in **VAT** from 17.5% to 20%.
- Changes in the **uprating formula** for benefits and tax credits which replace RPI uprating with the **Consumer Prices Index** (CPI) which is less generous than RPI in most cases.
- Changes to **Housing Benefit** which make it less generous.
- Reduction in the generosity of **Council Tax Benefit**.
- The freezing of **Child Benefit** in cash terms for three years from 2011 onwards.
- The movement of the **Incapacity Benefit** caseload onto Employment and Support Allowance.
- Changes to **other non-means-tested benefits** (principally the replacement of Disability Living allowance with Personal Independence Payment).

- Changes to **other means-tested benefits and tax credits** coming into effect up to Autumn 2013 including Income Support, income-based Jobseekers Allowance, Employment and Support Allowance, and the Child Tax Credit and Working Tax Credit.
- The **benefit cap** of £500 per week for families with children not claiming DLA or WTC.
- The introduction of **Universal Credit** in 2013, which replaces IS, income-based JSA and ESA, Housing Benefit and tax credits. The rules used in the modelling of Universal Credit are taken from a series of briefing notes published by the Department for Work and Pensions in late 2011 and early 2012[2].

Chapters 5-6: The impact of cuts to public spending on the living standards of vulnerable families

Section 5 estimates the benefits which vulnerable families received from public spending in 2008, using a model developed by Tim Horton and Howard Reed for a TUC research report, *Where the Money Goes: How We Benefit From Public Services* (published in 2010). The model combines data from HM Treasury for the tax year 2007/08 on the extent of public sector expenditure on various public services with information from a range of household-level data sets (e.g. the UK Family Resources Survey, Living Costs and Food Survey and British Household Panel Survey) on which households receive and use particular services and how much they use them. Public services are broken down into eight broad categories as follows:

- **Health** – NHS services including hospital services, GPs, and subsidy for dental services, optical services and prescriptions
- **Social care** – public subsidy for social care services provided or funded by local authorities.
- **Transport** – public subsidy for road building and maintenance, rail operators and infrastructure, subsidised bus services and other publicly funded transport infrastructure spending.
- **Housing** – subsidy to newbuild social housing and the maintenance of existing public and social housing stock, and the implicit subsidy to below-market rents in the social housing sector.
- **Early years** – public funding for nursery places, Sure Start childrens' centres, etc.
- **Schools** – state schooling up to year 11 (16 year olds).
- **Further education and higher education** – sixth form schooling and FE colleges, and public subsidy for universities and other HE provision, and adult learning.

[2] See http://www.dwp.gov.uk/policy/welfare-reform/legislation-and-key-documents/welfare-reform-act-2012/welfare-reform-draft-regulations/universal-credit-briefing/

- **Other** – other public services where information exists that allows us to allocate spending according to service use (for example police services, welfare-to-work services and culture and recreation spending).

As with the tax-benefit modelling in Chapter 4, FACS is used as the main dataset for this model. Service use data from other surveys is 'matched in' according to the characteristics (e.g. income level, number of children, age of adults, region etc.) of families in FACS compared with families in the datasets which contain data on public service use.

Chapter 5 shows the figures for **total** public spending on all public services which can be allocated according to service use (about 70% of total public spending), whereas Chapter 6 shows the impact of **spending cuts** over the 2010-2015 Parliament. Excluding debt interest payments and the benefit and tax credit spending covered in Section 4, overall real terms spending on UK public services is scheduled to fall by £53 billion in real terms between 2010 and 2015, but the cuts are more severe for some categories of public spending than others. For example, health spending is largely protected from cuts, whereas spending on higher education is set to fall by 25% in real terms. The Government's Autumn 2010 Spending Review document is used to estimate spending cuts by function and these cuts are combined with the information on the level of public spending (from Section 5) to produce distributional analysis of the impact of the spending cuts on each category of vulnerable family. Basically, the more likely a family is to use a particular type of public service, the worse they lose out from cuts to that service.

Chapter 7. The impact of the overall "fiscal package": Tax and benefit changes and other public spending changes combined

This chapter combines the modelling of the tax and benefit changes (from Chapter 4) and the modelling of the cuts to other public spending (from Chapter 6) to show the full impact of the austerity measures being enacted in the current parliament on family living standards.

Chapter 8. Estimating the change in the number of vulnerable families between 2008 and 2015

This chapter estimates the change in the number of vulnerable families between 2008 (the final year of the FACS data) and 2015 (the end of the current parliamentary term). The chapter also estimates the change in the number of vulnerable families between 2008 and 2010 so that we can establish how much of the increase in vulnerability occurs specifically between 2010 and 2015.

The first part of the chapter estimates the change in the number of families who are vulnerable on each individual vulnerability measure (e.g. worklessness, poor quality or overcrowded housing, etc.) The methodology for doing this varies according to each vulnerability, as follows:

- **Workless families**: this is estimated using a model of the relationship between the number of households with no-one in work in the UK and the UK's headline unemployment rate over the period 1996 to 2011.
- **Low income**: this is estimated using the same model that is used to estimate the distributional impact of the tax and benefit changes between 2010 and 2015 for individual families in FACS. An upward adjustment is also made to take account of the increase in workless families between 2008 and 2015, because workless families are more likely to be on low incomes.
- **No qualifications, Limiting long-standing illness, disability or infirmity, and maternal depression:** these are estimated using extrapolation of the trends in FACS between 2003 and 2008.
- **Material deprivation and poor quality or overcrowded housing:** these are estimated using regression models of the determinants of material deprivation and poor quality or overcrowded housing and using the results from the models to predict how many extra families will be deprived and/or in poor quality housing by 2015.

The second part of Chapter 8 uses a model of the relationship between each vulnerability measure and underlying family characteristics (such as region, age of respondent and partner (if any), number and age of children, housing tenure and income level) to simulate *which* families in the 2008 FACS would be most likely to experience changes in vulnerability if the sample were 'projected forward' first to 2010 and then to 2015. For the vulnerability indicators where we project an increase in vulnerability, the model identifies the families who are not currently vulnerable who are most likely to become vulnerable and changes their vulnerability status so that the overall number of vulnerable families in the grossed-up FACS sample matches our projected estimate of vulnerability for 2010 and 2015. For the vulnerability indicators where we project a *decrease* in vulnerability (e.g. no qualifications) the model does the opposite; it identifies the families who are currently vulnerable who are most likely to become non-vulnerable and changes their vulnerability status so that the grossed-up FACS sample matches the *reduction* in vulnerability for 2010 and 2015.

This technique is used to estimate the change in the number of families with different numbers of vulnerabilities (no vulnerabilities, one vulnerabilities, two vulnerabilities, and so on… all the way up to all seven vulnerabilities). The full results are shown in Table 8.2 (for numbers of families) and Table 8.3 (for numbers of children).