Micro-simulating child poverty in 2010 and 2020: an update

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Background and motivation

- Government's 2010 target: relative child poverty to be half its 1998 level.

  - poverty is: lives in a household with less than 60% of median household income BHC.

- Having missed interim target, child poverty rose between 2004 and 2006 to 2.9m children, compared with 2010 target of 1.7 million.

- Aim is for child poverty to be eradicated by 2020.

- This project simulates child poverty in 2010 and 2020.

- Supersedes earlier work in 2006, by accounting for

  - policy announcements since 2006

  - more recent data on household incomes and take-up rates

  - more recent economic and demographic projections

  - discrepancies between simulated and HBAI-measured child poverty

Results: child poverty under current policies

- For 2010, central forecast under existing policies is for 2.3 million children to be in poverty.
    - Would be lowest child poverty rate in the UK since 1985 and 0.6m below current (2006) level, but 0.6m above the 2010 target.
    - Reduction mostly reflects measures due to be implemented between 2007/8 and 2010/11.
    - If employment and earnings are lower than central assumptions, child poverty will be very slightly LOWER.

- For 2020, central forecast under existing policies is for 3.1 million children to be in poverty.
    - This would be nowhere near the 2020 target.

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Results: cost of meeting child poverty targets

- Of the packages we simulate would meet 2010 target, the cheapest is to increase the per-child element of the Child Tax Credit by about 30% (by £650/year to £2885/year).

  - Costs about £4.2 billion (2010 prices)

  - This may not be enough for the FRS/HBAI to show that the target has been hit.

- Compared with previous work, we now project that it is more costly per child to cut child poverty.

  - The children projected to be in poverty in 2010 are now projected to be in deeper poverty, on average.

- To meet the 2020 target solely through fiscal redistribution, benefits and tax credits would need to grow faster than earnings for a decade.

  - If 2020 target were 5%, the cost would be about £37bn (current prices) or £27bn GDP-adjusted.

  - If 2020 target were 10%, the cost would be £19bn (current prices) or £14bn GDP-adjusted (not in report).

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Outline of this presentation

- ## Our methodology

  - A brief overview
  - Matching simulated child poverty with HBAI-measured child poverty

- ## Child poverty in 2010

  - Accounting for uncertainty over the macroeconomic outlook
  - Forecasts and projections under current policies (including a brief look at material deprivation)
  - The cost of hitting the 2010 (relative income) target

- ## Child poverty in 2020

  - Our macroeconomic assumptions for 2020
  - Forecasts and projections under possible up-rating policies
  - The cost of reducing child poverty to 5% or 10% in 2020

- ## Conclusions

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Simulating child poverty: overview of method

1. 'Base data' on distribution of private income and household characteristics: 2005/6 & 2006/7 FRS.

2. Up-rate financial variables to 2010 and 2020 prices.

3. Re-weight data to reflect socio-demographic changes.

    - Give relatively more weight to household types due to become more common by 2010 or 2020. Includes adjustment for employment changes.

4. Estimate tax liabilities and benefit and tax credit entitlements.

5. Adjust incomes to reflect non-take-up (and non-reporting) of benefits and tax credits.

6. Construct measure of net income and thus income distribution.

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A robustness check: simulating the past (1)

- Compared to HBAI, our simulation technique under-estimates child poverty in 2006/7 by about 300,000.

- Similar story in previous years.

Source	Relative (BHC) income poverty in 2006		
	Children in poverty (millions)	Child poverty rate (%)	Median weekly income
HBAI	2.9	22.3	£378
Simulated	2.6	20.5	£379

- Simulated median income and poverty line no different from HBAI, so at least one of these two things is happening (relative to HBAI):

  1. We under-estimate the number of low-income households.

  2. We over-estimate the incomes of low-income households.

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# A robustness check: simulating the past (2)

- What might cause the difference between actual and simulated poverty?

  1. We estimate tax liabilities and benefit entitlements, but the HBAI series uses self-reported values.

  2. We use different grossing weights.

  3. We simulate the 2006 population using base data from both 2005 and 2006.

     - But our simulations and HBAI differ in previous years too, so not just a peculiarity with 2005 data.

- What can we do about it?

  1. Adjust the simulated poverty line so that simulated child poverty same as HBAI child poverty in 2006, and assume same adjustment necessary in future. Raises the simulated poverty line by about 2% or £4.40 per week.

  2. Adjust for non-reporting of benefits and tax credits in FRS. Growing evidence that FRS suffers from under-reporting of tax credit and benefit receipt.

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Child poverty in 2010: Macroeconomic assumptions

- Central assumptions (a recession):

  - Prices and nominal GDP grow in line with HMT assumptions.

  - Real earnings in 2010 the same as in 2007.

  - 2010 employment is 1.1m lower than HMT assumption about long-run employment rate.

  - Lone parent employment in 2010 same as 2006
    - Previous work used forecasts, all of which look too optimistic
    - Equivalent to assuming that welfare to work measures since 2006/7 offset by recession

- Pessimistic assumptions (bad recession):

  - Nominal GDP 1% lower than under central assumptions.

  - Real earnings in 2010 1% lower than 2007.

  - 2010 employment is 2.1m lower than HMT assumption about long-run employment rate.

- Employment changes are reflected using re-weighting. This means all workers equally likely to lose their job.
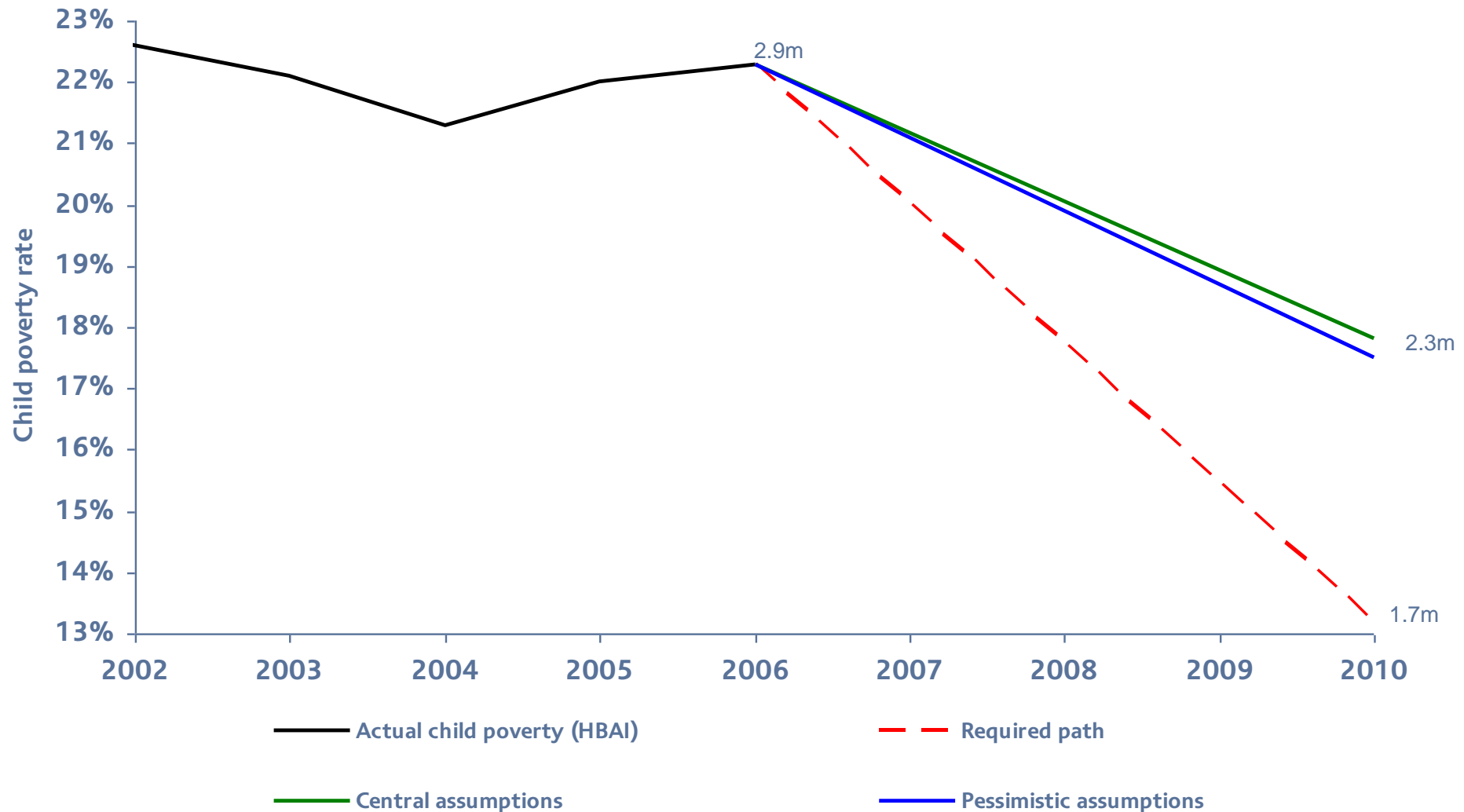
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Child poverty in 2010 under current policies (1)

Note: Results shown are those obtained without the non-reporting adjustment

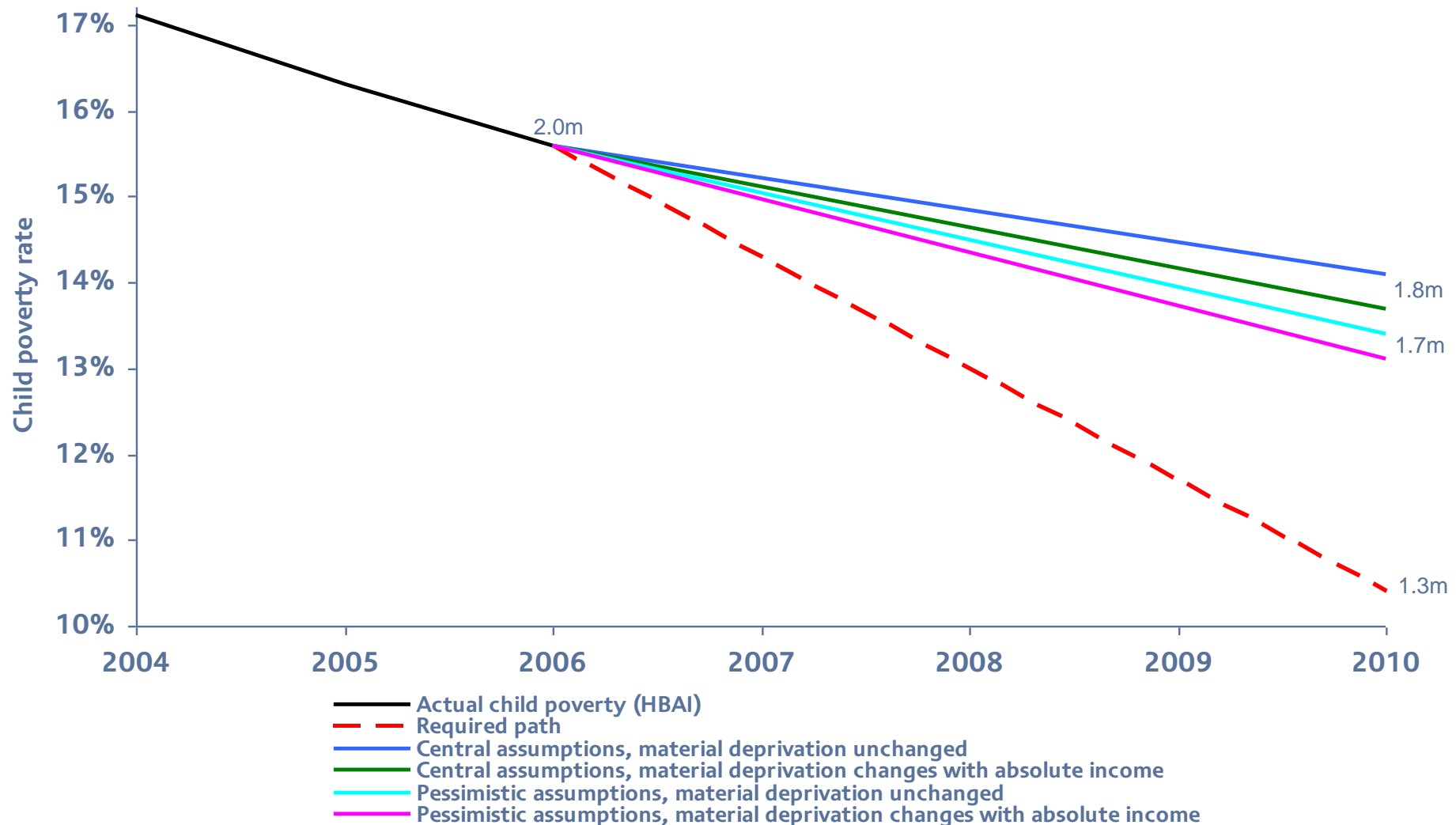© Institute for Fiscal Studies

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Child poverty in 2010 under current policies (2)

- Why is child poverty expected to fall between 2006 and 2010?

  – Earnings growth assumption means median income and poverty line do not move in real terms

  – Existing policy announcements for 2007/8 to 2010/11

    - Increases to per-child element of CTC; higher maintenance disregard for non-working lone parents; higher HB/CTB awards for those in work from October 2009; real rise in Child Benefit and tax credits due in April 2010 when RPI negative

- Why is child poverty slightly lower under the pessimistic assumptions?

  – Lower employment and lower earnings will impact some low-income households with children, but bigger impact on median household.

  – This is not to say that a worse recession makes the target easier to hit - impact on public finances makes it harder to find extra money to reduce child poverty.

- Even under central assumptions, children in poverty in 2010 more likely to be from workless households than in 2006.

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Child poverty in 2010: The combined relative income and material deprivation measure

- Defines a child as poor if household (BHC) income is less than 70% of the median and they are materially deprived.

- We provide two forecasts for this poverty rate in 2010:

  1. Assume that families' material deprivation scores are the same in 2010 as in the base data (2005 or 2006 FRS).

     – All changes in the poverty rate are due to changes in relative income poverty.

  2. Assume that material deprivation is related to absolute income.

     – We estimate this relationship using the base data.

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The combined relative income and material deprivation measure of child poverty in 2010 under current policies

Child poverty rate

2.0m

1.8m

1.7m

1.3m

Legend:
- Actual child poverty (HBAI)
- Required path
- Central assumptions, material deprivation unchanged
- Central assumptions, material deprivation changes with absolute income
- Pessimistic assumptions, material deprivation unchanged
- Pessimistic assumptions, material deprivation changes with absolute income

Note: Results shown are those obtained without the non-reporting adjustment

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4 policy options for hitting the 2010 target

1. Increase the per-child element of the Child Tax Credit.

2. Increase Child Benefit.

3. Increase the per-child element of the CTC and introduce a large family premium, to be paid in the form of higher Child Benefit for the third and subsequent children.

4. Increase the per-child element of CTC and increase Working Tax Credit for couples with children.

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Costs of bringing child poverty to target in 2010 (1)
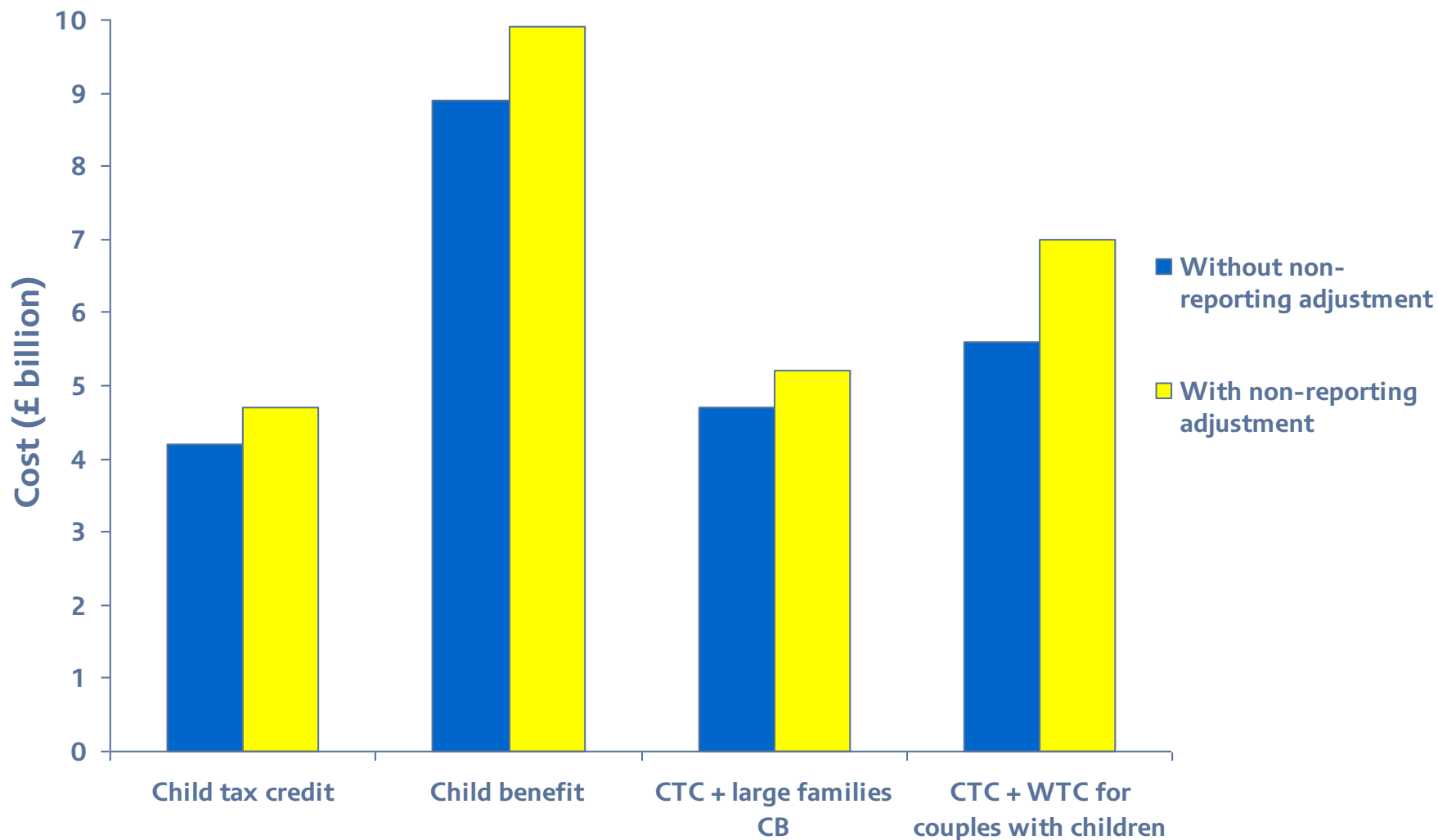
# Costs of bringing child poverty to target in 2010 (2)

- Cheapest option of those we looked at is to increase per-child element of the Child Tax Credit by about 30%.

  – Required increase of about £650/year, at total cost of £4.2 billion.

  – If the FRS does not get better at recording tax credit receipt, the required increase is £725/year, at total cost of £4.7 billion.

- We do not model feedback effects on labour supply or fertility.

- Projected cost has risen from £2.8 billion in our last update to previous work after Budget 2008.

  – Projected number of children in poverty under current policies has stayed similar…

  – …but those children are now projected to be further below the poverty line, on average.

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Child poverty in 2020: Macroeconomic assumptions

- Prices and nominal GDP grow in line with HMT assumptions.

- Real earnings grow by 2% per year between 2010 and 2020, in line with HMT assumption about long run productivity growth.

- We model 3 scenarios for the lone parent employment rate in 2020 – 65.6%, 70% and 73%.

- We assume total employment in 2020 consistent with HMT assumption about long run employment level.
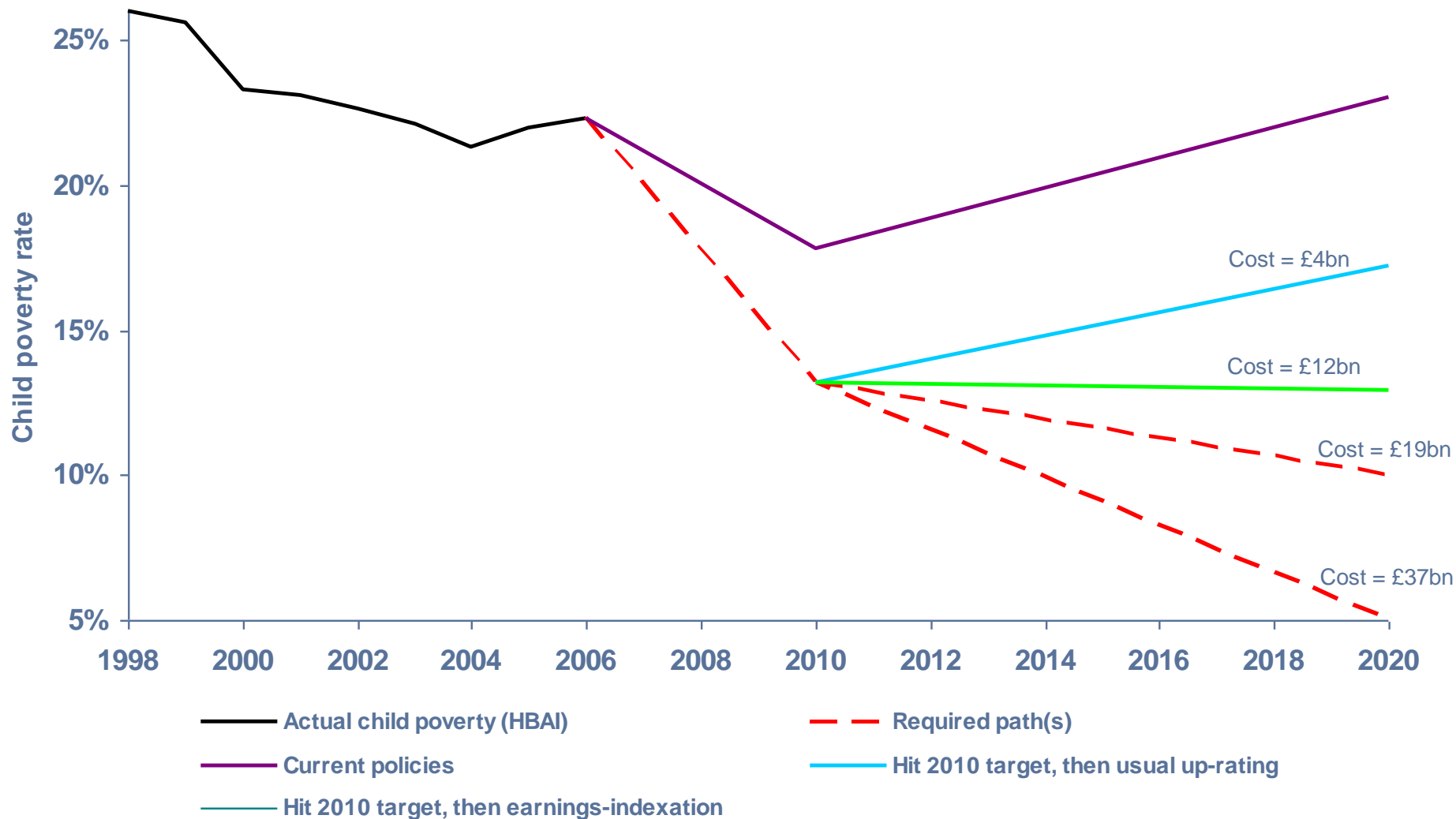
Child poverty in 2020

Conclusions

- Hitting the 2010 target would cost over £4bn with child tax credit increases – a very large one-year package by historical standards.

- Achieving a child poverty rate of 5-10% in 2020 solely through fiscal redistribution would be very costly – at least £19bn.

- Uncertainties are particularly large:

  – Rapidly changing outlook for the macro-economy.

  – Current inability of the FRS to record all tax credit and benefit receipt.

  – High density of the income distribution around the poverty line.

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