

Did the Working Families' Tax Credit work?

Analysing the impact of tax credits on labour supply and programme participation

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Outline

- Evaluating the labour market impact of changes to tax credits (WFTC)
- Based on
 - Inland Revenue Working Paper 2 by Brewer, Duncan, Shepard, Suarez (forthcoming *Labour Economics*, December 2006)
 - Inland Revenue Working Paper 4 by Blundell, Brewer, Shepard
 - “Did Labour Make Work Pay?” by Brewer and Shepard, 2004, JRF
 - All summarised in IFS Briefing Note 69 (www.ifs.org.uk/bns/bn69.pdf)

The WFTC reform

- WFTC replaced Family Credit in October 1999
 - Refundable tax credit
 - Awards depend on hrs/wk, earnings of claimant & partner, capital, family structure & expenditure on formal, registered childcare
- Comparison with Family Credit
 - Lower withdrawal (“phase out”, “taper”) rate
 - More generous
 - New childcare credit
 - Change in administration
- Aims: relieve poverty, encourage work *and reduce stigma*
- Will not discuss child and working tax credits (2003 reform)

Budget constraints for lone parent (change in in-work support only)



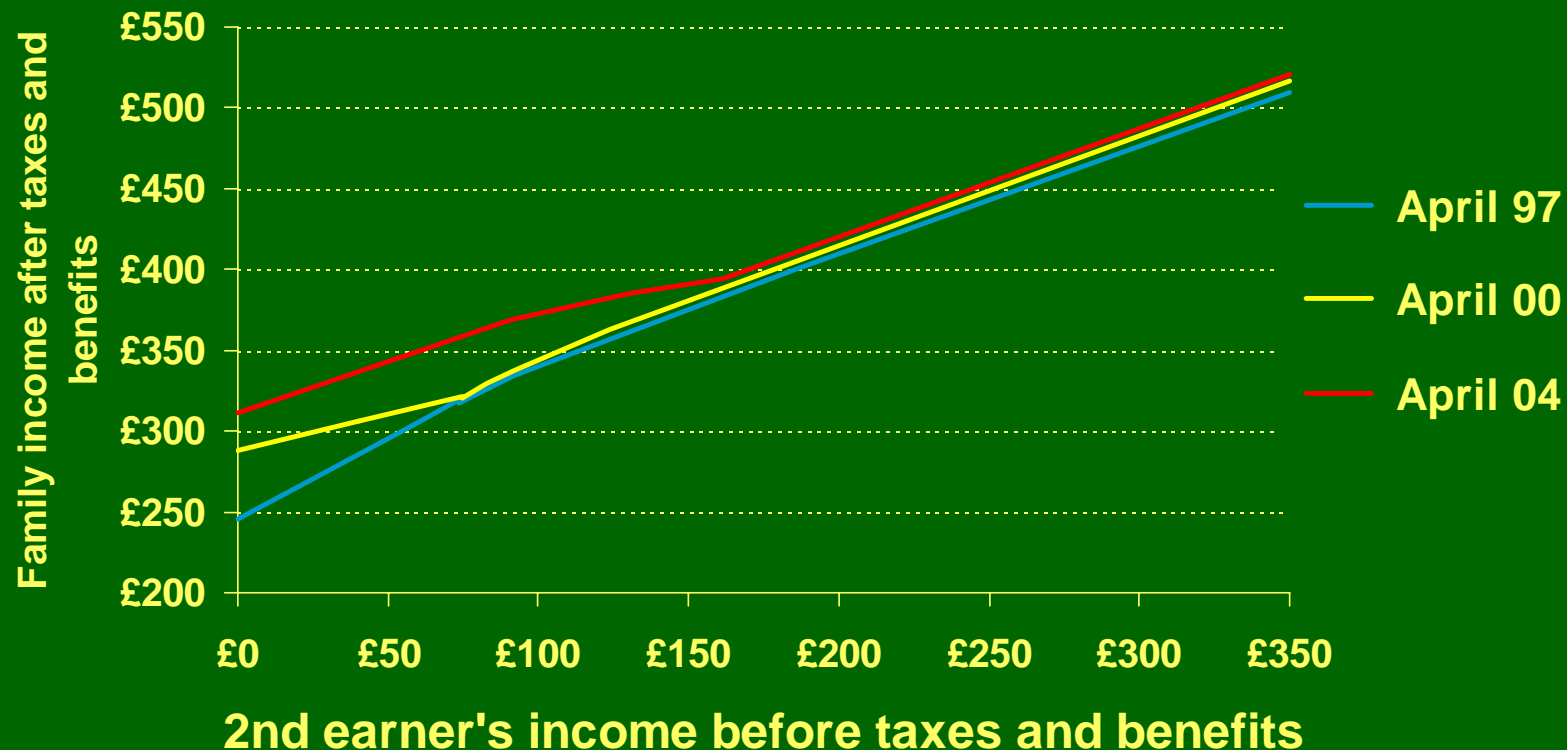
Assumes 2 children < 11, hourly wage of £5/hour, no childcare costs, no rent, no child support

Budget constraints for lone parent



Assumes 2 children < 11, hourly wage of £5/hour, no childcare costs, no rent, no child support

Budget constraints for a 2nd earner in a couple with children



Assumes 2 children < 11, hourly wage of £5/hour, no childcare costs, no rent, no child support, partner earns £300/wk

Scope of HMRC research

- “Labour market impact”
 - Work incentives
 - Labour market participation
 - Hours worked
 - Take-up of WFTC
 - Wages
 - Childcare use
- This talk addresses first three, using
 - Descriptive analysis of changes to work incentives
 - Natural experiment
 - Structural economic model

1. Measuring financial work incentives

- Incentive to work at all
 - Replacement rate: ratio of income out and in work
- Incentive to progress
 - Effective marginal tax rate: fraction of small rise in earnings lost to taxes and reduced transfers

Changes in replacement rates (April 97 – April 04)

	% whose replacement rate falls	% whose replacement rate rises	Mean change (ppts)
Lone parents	56.7	21.3	-2.9
Working parents in 1-earner couples	26.6	52.7	+1.8
Working parents in 2-earner couples	6.6	53.8	+3.3

Changes in effective marginal tax rates (April 97 – April 04)

	% whose EMTR falls	% whose EMTR rises	Mean change (ppts)
Lone parents	46.9	31.2	+0.3
Working parents in 1-earner couples	21.0	45.4	+5.2
Working parents in 2-earner couples	10.0	39.4	+6.1

2. Natural experiment: can policies explain changing employment?

- Compares changing employment outcomes of eligible population (parents) with non-eligible group (non-parents)
- Difficult to isolate impact of specific reform
 - instead, estimates impact of set of contemporaneous reforms

Difference-in-differences results

		Effect on lone parents' employment	Effect on employment of parents in couples
Gregg and Harkness (2003)	All reforms affecting lone parents between 1998 and 2002	+5 pts (lone parents)	N/a
Francesconi and van der Klauw (2004)	All reforms affecting lone mothers between 1998 and 2001	+4 pts in 1998 +7 pts by 2001 (lone mothers)	N/a
Leigh (2004)	All reforms affecting parents in autumn 1999	+1 ppt	+1 ppt
Brewer et al (2003)	All changes to taxes and benefits between April 1999 and April 2000	+3.4 pts (lone mothers)	-0.4 pts

A structural labour supply model

- Estimate model that approximates how people make decisions
 - Can then simulate impact of hypothetical reforms
- Assume people trade off money against hours in work
- Assume people have free choice of hours worked, given hourly wage
 - Much more appropriate for low-wage than high-wage

Technical bit

- Utility as quadratic function of hours worked and income
- Allow for:
 - Unobserved work-related costs
 - Childcare costs
 - Programme participation ('stigma') costs
- Observed and unobserved preference heterogeneity
- Data: Family Resources Survey, 1995/96 – 2002/03
 - 12,000 lone parents, 30,000 couples with children

Parameters (lone parents)

- Preferences for income
 - Increase with number of children, age of youngest
 - Decreasing in age and education attainment
- Distaste for work
 - Increases with number of children
 - Decreasing in age and education attainment
- Fixed costs of work
 - Higher with young kids
 - Vary by region
- Stigma costs
 - Vary with age of youngest
 - Increasing in age and education attainment
 - Rise after WFTC, then fall

Transition matrix: lone parents

Post-WFTC

Pre-WFTC		Non-participation	Part Time	Full Time	Total
	Non-participation	49.56	2.36	2.75	54.68
	Part Time	0.00	22.44	1.10	23.54
	Full Time	0.00	0.41	21.37	21.77
	Total	49.56	25.22	25.22	100.00

Change in participation 5.11

Change in hrs/wk (all) 1.78

Change in hrs/wk (workers) 0.75

Transition matrix: married women

Post-WFTC

Pre-WFTC		Non-participation	Part Time	Full Time	Total
	Non-participation	27.79	0.21	0.05	28.05
	Part Time	0.52	36.62	0.04	37.18
	Full Time	0.31	0.11	34.35	34.77
	Total	28.62	36.94	34.44	100.00

Change in participation (Overall) -0.57

(Partner working) -0.64

(Partner not working) 0.06

All reforms, 1999-2002

Change in participation (ppt)	WFTC	All reforms
Lone mothers	5.11	3.66
Mothers in couples	-0.57	-0.49
Father working	-0.64	-0.52
Father not working	0.06	-0.26
Fathers in couples	0.75	-0.40
Mother working	0.19	-0.55
Mother not working	2.11	-0.01

Conclusions

- WFTC raised labour supply of lone parents by over 5ppt, but other reforms reduced labour supply
- Smaller effect for couples
 - Decline in labour supply of women, increased labour supply from men in workless households
 - Non-WFTC reforms reduced labour supply
- “Natural experiment” result broadly agree for lone parents; less robust results for couples
- Structural model provides powerful tool for appraising potential tax changes affecting families with children