Fiscal Studies (2001) vol. 22, no. 1, pp. 41–77

Comparing In-Work Benefits and the Reward to Work for Families with Children in the US and the UK

MIKE BREWER*

Abstract

The income transfer systems for low-income families in the US and the UK try both to reduce poverty and to encourage work. In-work benefits are a key part of both countries' strategies through the earned income tax credit and the working families' tax credit (and predecessors) respectively. But tax credits are only one part of the whole tax and welfare system. In-work benefits, taxes and welfare benefits combine in both countries to provide good financial incentives for lone parents to do minimum-wage work, but poorer incentives to increase earnings further. But direct comparisons of budget constraints hide important points of detail. First, not enough is known about what determines take-up of in-work benefits. Second, the considerable differences in assessment and payment mechanisms and frequency between EITC and WFTC mean that low-income families in the US and the UK may respond very differently to apparently similar financial incentives.

JEL classification: J22, H24, H31, I38.

---

*Institute for Fiscal Studies.
The views expressed are the author's own and not those of HM Treasury or of IFS. This study forms part of the research programme of the ESRC Centre for the Microeconomic Analysis of Fiscal Policy at IFS. The author is grateful to Richard Blundell, Hilary Hoynes, Michal Myck, Ian Walker, Robert Walker, Michael Wiseman, the editors of *Fiscal Studies* and two anonymous referees for comments and suggestions on earlier drafts. The article was written before the March 2001 Budget, so all financial comparisons are for fiscal year 2000 unless otherwise stated.

I. INTRODUCTION

The income transfer systems for low-income families in the US and the UK try both to reduce poverty and to encourage work. To help achieve these aims, both the US and the UK have used in-work benefits for more than two decades: the earned income tax credit (EITC) in the US and the working families' tax credit (WFTC) and its predecessors in the UK. The credits have very similar stated objectives, and both were introduced initially just for families with children. This reflects the fact that the unemployment trap tends to be worse for families with children than for families without children, as out-of-work benefits reflect family composition whereas wages do not. Over the past few years, there also seems to have been a common political desire between the two countries to reduce child poverty, and in-work benefits have been crucial in helping to achieve this.

In-work benefits, though, are only one mechanism used to transfer income to families with children. As discussed later, food stamps and temporary assistance for needy families (TANF) in the US provide support to low-income working and non-working families. In the UK, all families with children are entitled to the flat-rate child benefit, and families working less than 16 hours a week can claim income support or jobseeker's allowance. Both countries have a number of other means-tested programmes giving explicit or in-kind subsidies to low-income families with children for healthcare, housing and childcare.

In this paper, I compare directly the budget constraints for families with children in the US and the UK, considering in-work benefits together with the other elements of the transfer system and building on earlier comparisons by Walker and Wiseman (1997) and Blundell and MaCurdy (1998). Focusing on lone parents for simplicity and to aid comparability, this paper shows that the transfer systems in both countries produce good theoretical financial incentives for lone parents to take a minimum-wage job but poor incentives to increase earnings beyond that. In both countries, help with housing costs reduces the financial reward to work, and the means testing of help with childcare costs reduces the incentives for lone parents to increase earnings once they are in work.

But direct comparisons of budget constraints and estimates of the financial reward to work constructed using a tax and benefit model hide important points of detail. First, budget constraints do not illustrate the many operational differences between WFTC and EITC. I argue that these are significant, despite the similar aims of the two in-work benefits. In particular, the theoretical marginal withdrawal rates implied by the slope of a calculated budget constraint are a simplification of reality when, in practice, there are significant gaps between assessments of means-tested benefits and differences in the responsiveness of the tax system. In general, benefit tapers and taxes will have a financial effect eventually, but not necessarily immediately.[1] This means that the different assessment periods and payment mechanisms of EITC and WFTC may lead low-income families in the two countries — especially if credit-constrained — to react differently to apparently similar financial incentives. For example, we could expect labour supply responses to an in-work benefit that is paid annually (like EITC) to be different from responses to one that is paid fortnightly or monthly (like WFTC), particularly when the value of the benefit can represent over a quarter of total family income, as WFTC can do for many families. Second, to see how relevant theoretical financial work incentives are across the population, take-up of benefits needs to be studied alongside entitlement. What we know about take-up of in-work and welfare benefits in the UK and the US suggests that take-up rates may vary considerably between the two countries and that, within a country, they can vary between benefits and over time.[2]

This paper discusses these points in turn. Section II outlines the programmes providing financial support for low-income families in the US and the UK and makes direct financial comparisons between EITC and WFTC. Section III compares the theoretical budget constraints faced by lone parents in the US and the UK, showing the importance of in-work benefits in ensuring that work pays and indicating how housing and childcare subsidies in both countries affect the financial reward to work. It also reviews what we know about take-up rates and caseloads. Section IV explores the key operational differences between EITC and WFTC: the payment and assessment rules, including how each interacts with other parts of the transfer system. Section V concludes.

There are some important issues that this paper does not explore. One is the effectiveness of in-work benefits in increasing labour supply, the evidence for which is reviewed in Blundell (2000) and Hotz and Scholz (2001). My focus on lone parents when looking at the financial reward to work means that I do not consider the ambiguous work incentives that are provided by EITC and WFTC for couples. This paper also does not analyse the longer-term impacts of in-work benefits: individuals facing high marginal withdrawal rates will face poor incentives to increase earnings, so in-work benefits may reduce their incentive to accumulate human capital.[3] In-work benefits may similarly encourage people into the type of jobs that provide few opportunities for wage growth.[4] These two ideas suggest that the longer-term consequences of in-work benefits should be

[1]US studies talk about the *phase-out range* of a benefit where increases in income lead to reduced benefit entitlement; this is known as a *taper* in the UK, so I say that an in-work benefit is tapered away as income rises. Income is *disregarded* if it does not affect the value of a means-tested benefit or tax credit. The *marginal withdrawal rate* is the amount of benefit lost and tax paid when income increases at the margin.

[2]The *caseload* of a welfare benefit is the number of families claiming it; the *take-up rate* is the caseload as a proportion of the total number of eligible families.

[3]See, for example, Cossa, Heckman and Lochner (1999).

[4]Discussed further in Gottschalk (2000), Burtless (forthcoming) and Dickens (forthcoming).

considered in at least as much detail as their short-term impact upon participation and poverty rates.

II. A DESCRIPTION OF TRANSFER SYSTEMS IN THE US AND THE UK

1. Employment and Poverty Rates for Lone Parents in the US and the UK

The development of in-work benefits in the US and the UK reflects, in part, the labour market experiences of low-income families. This paper does not attempt a complete comparison of those here (see, for example, Blundell and Hoynes (2000) and Kaye and Nightingale (2000)) but instead highlights the main differences in employment and poverty rates for lone parents, anticipating the focus on them in Section III. Lone parents in the US and the UK are less likely to work full-time than other household types. But there are clear differences in the level and trend of lone parents' employment rates between the two countries: annual employment rates for lone mothers in the US rose by 9 percentage points between 1984 and 1996 to reach 82 per cent, rising by over 13 percentage points for those with young children (Blank, Card and Robins, 2000; Meyer and Rosenbaum, 2000). Employment rates in the UK, however, have remained at around 45 per cent over the past decade (Blundell and Hoynes, 2000).

Poverty comparisons are more difficult, as different definitions are used in the UK and the US. The most commonly used poverty standard in the UK — and the European Union — defines households as poor if they have incomes below 60 per cent of the national median income, adjusted for household size. In the US, there is an official poverty line, which was originally defined by estimating the cost of a minimal food budget but is now only uprated to take account of annual price changes. This makes the US poverty definition an absolute standard, whereas the UK's definition is a relative one.[5] Overall, the US has greater levels of poverty on a within-country relative-income measure, but on an absolute measure — such as the US official poverty line — the UK has greater poverty amongst children because living standards are lower: for example, Dickens and Ellwood (2000) estimate that the whole-population poverty rate in the US rose from 25 per cent in 1979 to 32 per cent in 1999, while in the UK it rose from 11 per cent to 26 per cent (both based on 50 per cent of mean income before taxes and housing costs, adjusted for family size).

But it is clear that working lone parents are increasingly likely to be in poverty in both countries: the US-defined poverty rate for working US lone mothers rose from 23 per cent in 1988 to 27 per cent in 1996, and in the UK the

---

[5]In 1999, the official US poverty standard for a couple with one child was \$13,423, and, for a family of four, it was \$16,895. Sixty per cent of median income net of housing costs was £8,788 and £10,503 for the same family types in the UK in 1998–99. The OECD's purchasing power parity conversion rate for the UK is 0.665 (so £1 = \$1.50).

percentage of working lone parents with less than half mean income rose from 14 per cent in 1979 to 31 per cent in 1995–96, peaking in 1990 at 35 per cent. Around a quarter of poor families with children in the US now have at least one full-time worker, up from a fifth in 1979. The UK, though, has seen the reverse trend: 46 per cent of poor children had at least one (full-time or part-time) working parent in 1995–96, compared with 57 per cent in 1979.[6] These trends have been accompanied by increased income inequality for families with children: in almost all states in the US, the gap between the richest and poorest fifth of families has grown significantly; a similar result is true for the UK (Link, Bibus and Lyons, 2000).

2. Financial Support for Low-Income Families in the US

Low-income families in the US can potentially receive financial support from food stamps, temporary assistance for needy families and the earned income tax credit. The Medicaid programme and federal housing support provide important in-kind transfers. Other smaller programmes provide assistance for low-income families (for example: childcare provision; school lunch programmes; supplemental food programme for women, infants and children; energy assistance; Head Start; and various training programmes).

Temporary assistance for needy families provides income support to low-income families in and out of work. TANF was created by the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), which abolished the old aid to families with dependent children (AFDC) programme and replaced it with a block federal grant to states. States now have considerable freedom to set the eligibility, generosity, work requirements and other TANF rules, making it difficult to characterise the system facing a typical low-income family in the US.[7] But most states provide a maximum credit to low-income families, subject to resource limits, time-limits and work or job-search requirements. The credit is then tapered away as income rises, perhaps after an initial disregard. For example, Florida provides a maximum monthly credit of $331 to a lone-parent family with two children. After a $200 disregard, the credit is tapered away at 50 per cent of extra income. Although much attention was given to the five-year time-limit when the TANF reforms were announced, it only applies to the use of federal funds: states are free to continue paying TANF to families if they use state funds, and in California, for example, working families can receive TANF payments indefinitely. Food stamps are available to low-income adults with and without children. They provide a monthly allowance

---

[6]US estimates from Bernstein and Hartmann (2000); UK estimates from Gregg, Harkness and Machin (1999).

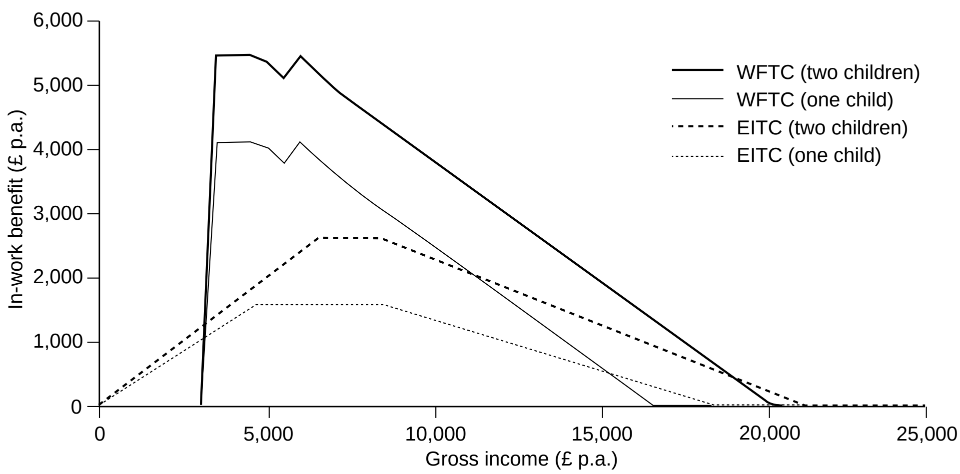
[7]Committee on Ways and Means (1998) describes the rules that the federal government imposes on states. Gallagher et al. (1998) provide a comprehensive description of the TANF rules in all states as of October 1997. The Welfare Rules database at the Urban Institute is an online database of the key parameters in states' TANF programmes.

that is tapered away as income rises, after allowances for housing and caring costs: a lone parent with two children is eligible for a maximum payment of \$335 a month, with a \$134 disregard followed by a 24 per cent taper on extra earnings, and a childcare expenditure disregard of up to \$200 per child (October 1999–September 2000 figures from US Department of Agriculture (1999)).

Food stamps and TANF are run by state welfare offices, but the earned income tax credit is a federally run programme.[8] Families apply for it when they file their annual tax returns; it is a refundable tax credit, meaning that awards in excess of tax liability are paid direct to the taxpayer, making it much more valuable than an extra tax allowance to families who pay little or no tax. Table A.4 in the Appendix contains the details, but, in brief, eligibility depends on having some earned income in a year and on the number of qualifying children (children can be aged up to 23 if in full-time education). Families with high levels of investment income cannot claim (akin to the resource limits in TANF). The amount of credit depends upon earnings and the number of qualifying children, with a much smaller EITC being available to people with no children. Married couples are assessed jointly, and the implications of this are discussed in Section IV(3). There are three regions in the credit schedule. In the phase-in region, the credit is equal to a percentage of income until the credit equals the maximum amount. There is then a flat region across which the maximum credit

FIGURE 1

EITC and WFTC Schedules, 2000



Notes: £1 = \$1.50. Assumes 2000 tax system in US. Assumes 2000 tax system in UK plus children's tax credit. Assumes two WFTC awards a year and minimum-wage work in UK, so eligible for 30-hour credit at gross annual income of £5,772 (52×30×£3.70).

[8]Hotz and Scholz (2001) provide a recent and comprehensive review of the operation and impact of EITC.

is received. In the phase-out region, the credit is tapered away to zero. Table A.4 has more detail of the present EITC and Figure 1 shows the credit schedule. When families file their 2000 tax returns, a family with two or more children will receive a maximum credit of $3,888 between incomes of $9,720 and $12,690, and the credit will not be fully tapered away until income reaches $31,152. Three-fifths of EITC claimants were estimated to be on the phase-out portion of the credit in 1998; 23 per cent were on the phase-in and 15 per cent on the plateau (Joint Committee on Taxation, 1998). The average EITC award for families with children in that year was $1,890. Around 15 per cent of total EITC expenditure offsets income tax liabilities, the other 85 per cent representing direct cash payments that are refunded to claimants (Internal Revenue Service, 2000b). About two-thirds of expenditure goes to lone parents (Committee on Ways and Means, 1996), and Hotz and Scholz (2001) find that more than half of EITC spending goes to families above the official US poverty line. In 1994, around a quarter of the total EITC claimed was over-claimed (General Accounting Office, 1997), mostly due to taxpayers falsely claiming that they have a 'qualifying child' (Hotz and Scholz, 2001).

EITC began in 1975 as a modest programme aimed at offsetting the social security payroll tax for low-income families with children. But it has become an important plank in the federal government's anti-poverty strategy, following major expansions in the Tax Acts of 1986, 1990 and 1993 (taking effect in 1987, 1991 and 1994–96 respectively), and it now costs almost as much as food stamps and TANF combined.[9] Table A.1 in the Appendix gives a timeline of developments in EITC and in in-work benefits in the UK, discussed below.

Individual states are free to supplement the federal EITC scheme with their own earned income tax credits. As of June 2000, 14 states did so, though neither Florida nor California (two of the three states with the highest federal EITC caseloads) has yet introduced a state EITC. Table 1 gives brief details of state-level EITCs, drawn from Johnson (1999 and 2000). Low-income families in work also have to pay federal and state income taxes and payroll taxes: Table A.2 in the Appendix summarises the main parameters of the federal taxes and Maag and Lim Rogers (2000) provide details of the state income taxes. Both the relatively large federal income tax allowances for dependants and the new $500 child tax credit mean that income tax liabilities are negligible for low-income families with children, but social security contributions, at 7.65 per cent of earnings, are more significant.

There are a number of means-tested programmes providing subsidised healthcare, housing and childcare, and all of these programmes will affect the budget constraints for low-income families. Medicaid — which has grown

[9]In 1999, EITC spending was $31.9 billion, compared with $16.7 billion spent on TANF and $19.0 billion on food stamps (cited in Hotz and Scholz (2001)).

TABLE 1

State-Level EITCs, June 2000

	Value of credit (% of federal EITC)	*Number of federal EITC claimants, 1997*
Refundable credits		
Colorado	10%	241,770
District of Columbia	10%	53,616
Kansas	10%	149,335
Maryland	10% (15% in 2001)	336,829
Massachusetts	10% (15% in 2001)	285,476
Minnesota	15% to 46%, depending on earnings	221,730
New York	20% (30% in 2003)	1,302,604
Vermont	32%	37,501
Wisconsin	4%/14%/43% for families with one/two/three children	260,311
Non-refundable credits		
Illinois	5%	765,955
Iowa	6.5%	153,575
Maine	5%	82,894
Oregon	5%	204,819
Rhode Island	26%	60,085

Sources: Johnson, 1999 and 2000.

substantially in scope over the past decade — and housing subsidies are in-kind subsidies available to low-income families (and, in the case of Medicaid, to some families with incomes up to 200 per cent of the official poverty line).[10] The two most important childcare programmes are the Child Care and Development Fund (CCDF) and the dependent care tax credit (DCTC).[11] As with TANF, states have considerable flexibility to design their own childcare subsidy programmes under the CCDF; most give childcare vouchers to low-income families, charging the families an income-related ‘co-payment’ (which could be zero). The CCDF is capped and, while there are requirements on states to spend a certain proportion of federal money on particular target groups, there is no obligation to serve all families who fall into these categories. Middle- and high-income families in the US can benefit from the DCTC, which is a non-refundable tax credit for employment-related costs relating to dependants, including childcare costs, but DCTC is of little benefit to low-income families with low or zero income tax liabilities. Anticipating the discussion of the UK system below, DCTC looks

[10]See Gruber (2000) for more details.
[11]Blau (2000) is a thorough review of the US federal childcare programmes.

similar to the UK's childcare tax credit, except that the childcare tax credit is paid as a refundable tax credit, making it worth more to low-income families.

3. Financial Support for Low-Income Families in the UK

Like the US, the UK uses more than one programme to support families with children.[12] Unlike the US, there is a universal transfer programme, called child benefit, which is worth £15 a week for the first child (£10 for subsequent children) and taken up by almost all families with children in the UK.[13] Low-income families working less than 16 hours a week are generally eligible for the means-tested jobseeker's allowance (income-based) (JSA(IB))or income support (IS). JSA(IB) and IS are worth the same for equivalent families — £128.35 a week for a lone parent with two children from November 2000 including child benefit — but JSA(IB) imposes job-search requirements; only couple families with long-term sickness or disabilities and lone parents can claim IS. JSA(IB) and IS have an earnings disregard of £10 (£15) a week for two-parent families (lone parents), followed by a 100 per cent withdrawal rate.

Neither JSA(IB) nor IS is available to parents working 16 or more hours a week: beyond 16 hours, families with children can receive support from the working families' tax credit.[14] The requirement to work 16 hours a week is a more restrictive work requirement than applies to EITC in the US, which requires only positive earnings over the past year. The amount of credit depends upon weekly earnings, hours worked, the number of qualifying children and savings (savings over £3,000 reduce the award; savings over £8,000 remove eligibility completely). Couples are assessed jointly. There are two regions in the credit schedule. The maximum credit is £104.35 a week for a lone parent with two children (see Table A.4 in the Appendix for full parameters and Figure 1 for a graph of the credit schedule; both refer to rates from June 2000). Beyond an after-tax income of £91.45 a week, the credit is tapered away at 55 per cent, with a small extra credit for families where someone works more than 30 hours a week. The credit is fully tapered away for a family with two children at a gross income of £385 a week. In August 2000, the average WFTC award was £76.86 a week. The average gross weekly income of claimants was £158 and the average number of hours worked weekly was 30.8. Fifty-one per cent of recipients were lone parents (Inland Revenue, 2000c).

---

[12]Discussed further by Brewer, Myck and Reed (2001), who focus on the additional support given to families with children compared with that given to those without.

[13]The rates given are as at November 2000, to be consistent with the US rates. These, and other UK figures, are taken from George et al. (2000), which provides a description of the UK's benefit system and is updated annually.

[14]From 2003, adults without children will be able to claim an employment tax credit, to be based on the WFTC (HM Treasury, 2000).

In addition, low-income households can receive help with rented housing costs through housing benefit (HB) and help with local taxes through council tax benefit. About four-fifths of lone parents and around two-thirds of couples on IS or JSA(IB) are also on HB. Working families are less likely to be on HB: it is estimated that around 12 per cent of all families on WFTC will also be on HB.[15] Some families on out-of-work benefits are eligible for help with mortgage interest payments.[16] Families on low incomes (all those on IS or JSA and those earning less than £14,300 gross) are eligible for in-kind health benefits (although these are of considerably less value than Medicaid). Families on out-of-work benefits are eligible for free school meals, which may be of more quantitative and qualitative importance.

Working low-income families will pay higher income tax and National Insurance contributions, in general, than the US equivalents.[17] Unlike the US, the UK tax system is based on individual assessment, with no allowances for dependants, although families with children will be able to claim a £520 non-refundable tax credit[18] from April 2001, phased out where there is a higher-rate taxpayer in the family (incomes over £32,785 in 2000).

The UK's long history of in-work benefits began with family income supplement (FIS) in 1971 (see Table A.1 in the Appendix). The working families' tax credit was introduced in October 1999 as a replacement to family credit (FC) and was fully phased in by April 2000. Although it owes much to its predecessor, two key differences are the generosity of WFTC and the payment mechanism. WFTC is more generous than FC in three ways: its credits, particularly those for young children, are higher; families can earn more before the credit is phased out; and it has a lower withdrawal rate.[19]

WFTC also significantly changed the system of support for childcare costs. Under FC, childcare costs up to £60 (£100) a week for families with one (two) children under 12 could be disregarded before the credit was phased out. Under WFTC, there is a separate childcare tax credit. This is more generous than the FC childcare disregard — providing a 70 per cent subsidy to the parent on costs of up to £150 a week for families with two or more children of any age — and is paid in addition to WFTC, rather than being an income disregard, making it worth more to those on the lowest incomes. This also means that families

[15]See Department of Social Security (2000a and 2000b) for out-of-work families and *Hansard* (2000) for WFTC claimants, but note that the latter estimate assumes that all families newly eligible for WFTC — very few of whom would be eligible for HB — claim WFTC.

[16]For loans taken out since October 1995, there is a 40-week qualifying period; for loans taken out before October 1995, there is an eight-week qualifying period followed by an 18-week period of a 50 per cent reduced rate.

[17]See Table A.3 for the main rates and Gale (1997) for an analysis of the whole UK tax system from a US perspective.

[18]A non-refundable tax credit reduces the annual tax bill by a certain amount. If the amount of tax due before the credit is less than the value of the credit, the excess value is lost.

[19]See Blundell et al. (2000) and Dilnot and McCrae (1999) for a more detailed comparison of WFTC and FC.

receiving the childcare tax credit can still receive support at higher incomes than those shown in Figure 1: a lone parent with two children claiming the maximum childcare tax credit will not have her credit fully tapered away until she reaches a gross weekly income of £660. The number of families claiming the childcare tax credit in August 2000 was 124,000, a 165 per cent increase on the number using the disregard in FC, but still only 11 per cent of the total WFTC caseload. One key difference from the US — where CCDF-eligible families can purchase childcare from relatives — is that the childcare tax credit does not subsidise paid childcare arrangements with unregistered childcare providers.

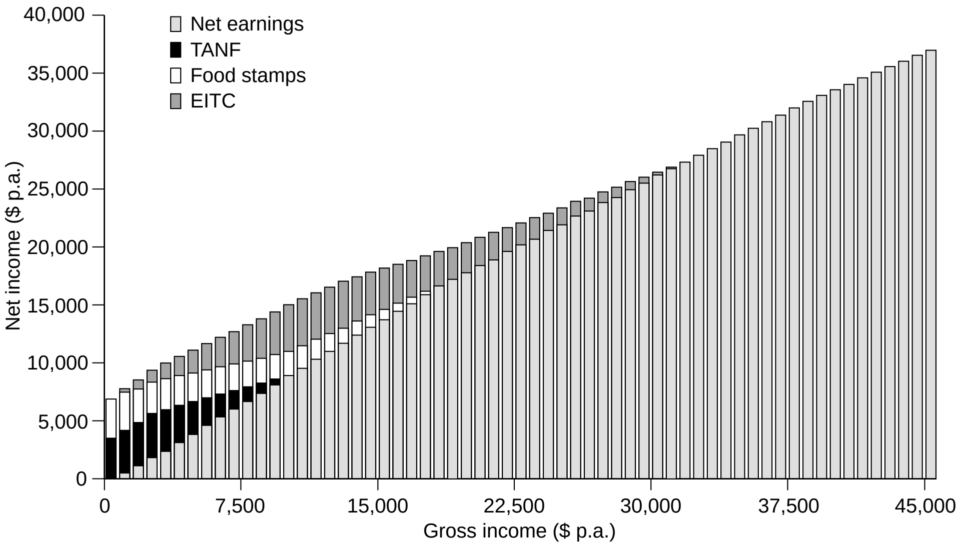
III. THE FINANCIAL INCENTIVE TO WORK FOR LONE PARENTS IN THE US AND THE UK

1. Total Financial Support for Lone Parents in the US and the UK

Figures 2 and 3 show the relationship between gross and net income for a lone parent with two children in the US and the UK respectively, broken down by

FIGURE 2

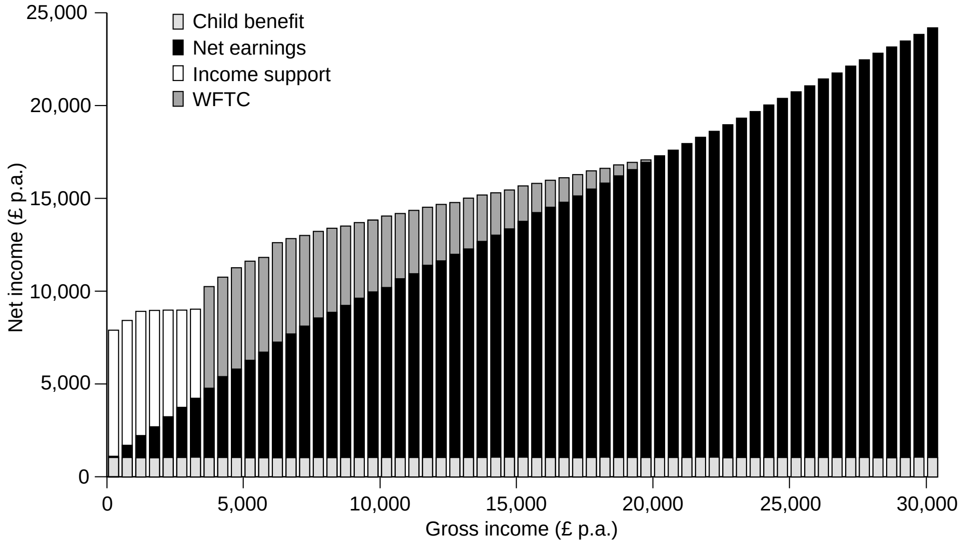
Gross and Net Incomes for Lone Parents with Two Children, US



Notes: Assumes 2000 federal tax system and Florida's TANF system. Ignores housing and childcare costs and subsidies. Assumes all TANF and food stamps requirements are met and that all income is earned.
Source: Author's calculations.

FIGURE 3

Gross and Net Incomes for Lone Parents with Two Children, UK



Notes: Assumes 2000 tax and benefit system plus children's tax credit. Ignores housing and childcare costs and subsidies. Assumes that all income is earned, two WFTC awards a year and minimum-wage work in UK, so that eligibility for WFTC and for the 30-hour credit occurs at gross annual income of £3,078 and £5,772 respectively.
Source: Author's calculations.

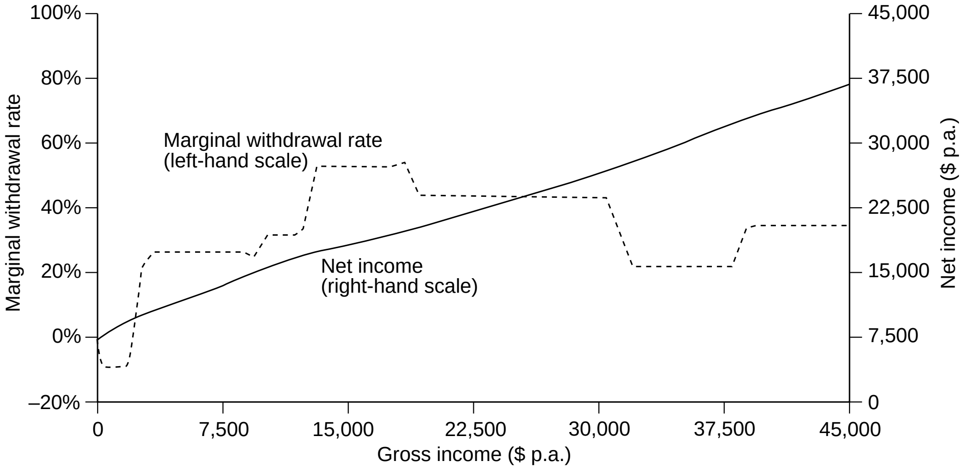
income source and assuming full take-up of all entitled benefits.[20] The focus is on lone parents, both to ease comparison and because lone parents make up over half the caseload of both EITC and WFTC.

Figure 4 shows the gross-income–net-income schedule for a lone parent with two children in the US together with marginal withdrawal rates (MWRs). Beyond incomes of around \$2,500, the –40 per cent marginal tax rate of EITC is completely offset by payroll taxes and tapers on welfare payments. Figure 5 shows the same for the UK. MWRs are higher, in general, in the UK, and there are discontinuities in the budget constraint at the points of eligibility for WFTC and the 30-hour credit.

[20]Assuming TANF payments in Florida, chosen partly as it seems to contain the median — or at least decisive — US voter. I am updating Walker and Wiseman (1997) and Blundell and MaCurdy (1998) — who both compare the budget constraint for low-income families in the UK and the US in 1996 — to reflect the reforms to TANF and WFTC since then. I have ignored employers' payroll taxes and National Insurance contributions in these graphs, mostly to avoid having to analyse incidence. Take-up rates are discussed below; if TANF time-limits reduce take-up, then the incentive to work will be greater than shown here.

FIGURE 4

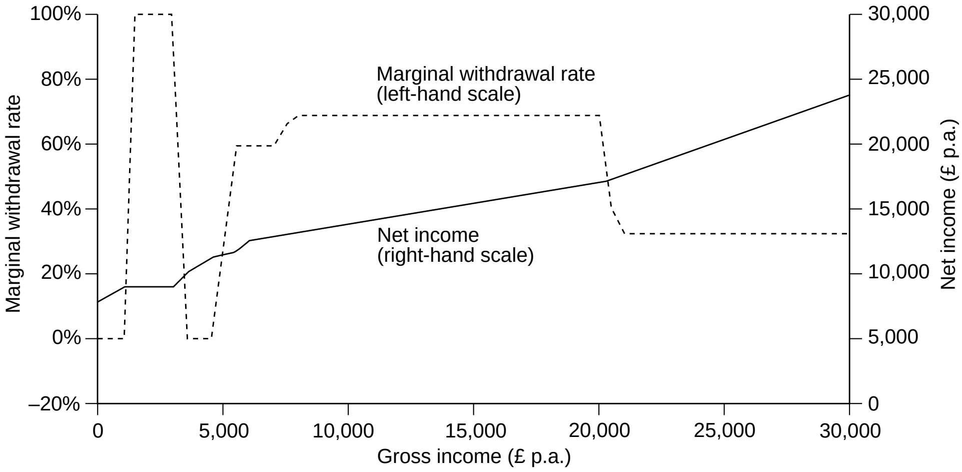
Marginal Withdrawal Rates and Net Incomes for Lone Parents with Two Children, US



Notes: As Figure 2. 'Marginal withdrawal rates' as drawn are actually average withdrawal rates over income increments of $750.
Source: Author's calculations.

FIGURE 5

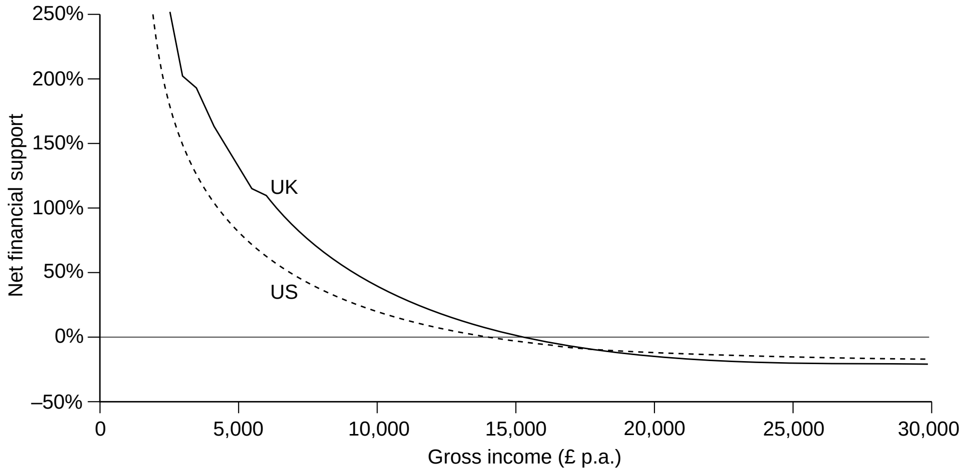
Marginal Withdrawal Rates and Net Incomes for Lone Parents with Two Children, UK



Notes: As Figure 3. 'Marginal withdrawal rates' as drawn are actually average withdrawal rates over income increments of £500.
Source: Author's calculations.

FIGURE 6

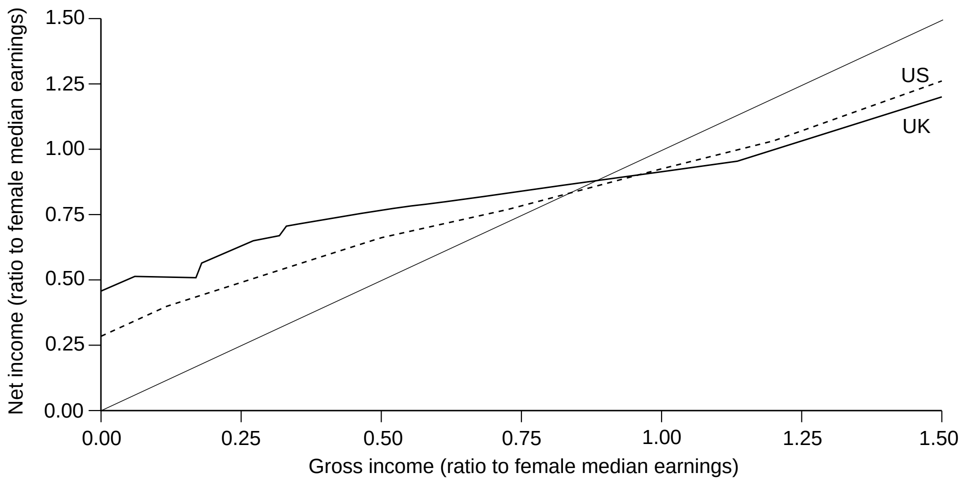
Net Financial Support as a Percentage of Gross Income for Lone Parents with Two Children, US and UK



Notes: As Figures 2 and 3. £1=$1.50.
Source: Author's calculations.

FIGURE 7

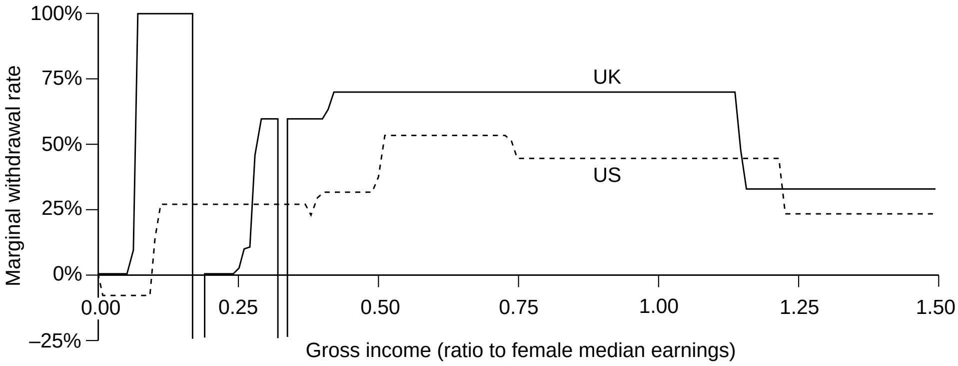
Net Income as a Fraction of Female Median Earnings for Lone Parents with Two Children, US and UK



Notes: As Figures 2 and 3. Median gross weekly female earnings in 2000 were $491 and £338 (sources: Bureau of Labour Statistics (2000) and Office for National Statistics (2000) respectively).
Source: Author's calculations.

FIGURE 8

Marginal Withdrawal Rates for Lone Parents with Two Children, US and UK



Source: Author's calculations.

Figure 6 compares net financial support in the US and the UK, having expressed both schedules in sterling (£1 = $1.50). Financial support is more generous at low incomes in the UK, but it falls at a faster rate as income increases, so that UK families pay more in income and payroll taxes than US families at medium and high incomes. Figure 7 directly compares the net income schedules on a common scale (following Walker and Wiseman (1997)), using incomes relative to median female weekly earnings.[21] Expressed relative to median earnings, Figure 7 confirms that the UK's transfer system for low-income families is more generous than the US's at low incomes but less generous above female median earnings. Figure 8 makes the same comparisons for marginal withdrawal rates. In both the US and the UK, entitlement to in-work benefits ends at income levels roughly equal to female median earnings, but marginal withdrawal rates are generally higher in the UK than in the US.

2. Work Incentives for Low-Income Families in the US and the UK

(a) Replacement Ratios and Average Withdrawal Rates

Table 2 shows implied replacement ratios and average withdrawal rates (AWRs) for a lone parent with two children under three work scenarios in 12 US states.

[21]US median female full-time gross weekly earnings in 2000Q3 were $491, 3 per cent lower than the UK figure of £338 in 2000 at $1.50 = £1. Sources: Bureau of Labour Statistics, 2000; Office for National Statistics, 2000.

Table 3 shows the AWRs for increasing work effort beyond part-time minimum-wage work.[22]

There is a strong financial incentive to do some work: in the 12 states listed in Table 2, a lone parent moving into part-time work will keep at least 70 per cent of her gross earnings. In Mississippi, she will see her income rise by 106 per cent of gross earnings through the combination of a high TANF disregard and EITC. A lone parent moving into a full-time minimum-wage job will keep a smaller proportion of her gross earnings, ranging from 66 per cent in Michigan to 101 per cent in Mississippi. But the budget constraint gives little extra incentive to move into a better-paid full-time job: replacement ratios for a full-time job at $9 an hour are very similar in most states to those at the minimum wage. Table 3 confirms that a lone parent moving from a full-time, minimum-

TABLE 2

Average Withdrawal Rates and Replacement Ratios for Lone Parents with Two Children Moving into Work under Three Work Scenarios in 12 US States

	Average withdrawal rate			Replacement ratio		
	Part-time, minimum wage	*Full-time, minimum wage*	*Full-time, $9/hour*	*Part-time, minimum wage*	*Full-time, minimum wage*	*Full-time, $9/hour*
Alabama	6%	7%	29%	54%	40%	33%
California	9%	19%	49%	67%	57%	55%
Colorado	17%	27%	41%	65%	54%	46%
Florida	6%	15%	36%	60%	48%	42%
Massachusetts	13%	20%	49%	68%	57%	54%
Michigan	23%	34%	46%	69%	59%	51%
Minnesota	9%	17%	47%	65%	54%	52%
Mississippi	–6%	–1%	23%	48%	36%	29%
New Jersey	23%	26%	44%	68%	56%	49%
New York	16%	21%	48%	69%	58%	54%
Texas	10%	6%	28%	56%	41%	34%
Washington	30%	31%	51%	73%	60%	55%

Notes: Average withdrawal rate is the percentage of earnings lost in forgone benefits and extra tax payments. Total income includes earnings, TANF benefit, cash value of food stamps, federal EITC and state tax credits less employee payroll taxes and federal and state income tax. Minimum wage was $5.15 in 1998. Assumes 4.3 weeks in a month. Assumes no childcare costs.
Source: Author's calculations from Table 2 of Acs et al. (1998).

[22]These tables are drawn from Acs et al. (1998), who model work incentives in 12 states accounting for the effects of TANF, food stamps, federal income tax, federal EITC, state-level income taxes and state-level earned income tax credits. Their data relate to 1997; the main changes since then have been expansion in some state EITCs. Meyer and Rosenbaum (2000) produce comparable figures for lone mothers between 1984 and 1996, considering taxes, welfare, Medicaid and employer benefits. Maag and Lim Rogers (2000) offer similar estimates for 13 states in 1999, although the focus is on generosity rather than work incentives.

TABLE 3

Average Withdrawal Rates for Lone Parents with Two Children Increasing Work Effort in 12 US States

	Compared with part-time, minimum wage		Compared with full-time, minimum wage
	Full-time, minimum wage	*Full-time, $9/hour*	*Full-time, $9/hour*
Alabama	8%	40%	58%
California	33%	69%	89%
Colorado	39%	52%	59%
Florida	28%	50%	63%
Massachusetts	28%	66%	87%
Michigan	47%	57%	63%
Minnesota	27%	66%	89%
Mississippi	7%	37%	55%
New Jersey	30%	53%	67%
New York	27%	64%	85%
Texas	0%	36%	57%
Washington	33%	60%	76%

Note: Average withdrawal rate is the percentage of *extra* earnings lost in forgone benefits and extra tax payments compared with the reference situation.
Source: Author's calculations from Table 2 of Acs et al. (1998).

wage job to a $9-an-hour job will only keep between 11 and 45 per cent of her additional earnings.

Tables 4 and 5 show the calculations for low-income families in the UK.[23] As in the US, lone parents have very good financial incentives to take some work but poor financial incentives to move beyond minimum-wage jobs. A lone parent with two children moving into part-time work will see her income rise by more than her gross earnings, thanks to WFTC — a more generous situation than in most US states. The AWR for full-time minimum-wage work is positive but low: a lone parent can keep 90 per cent of her earnings as she moves into full-time work at the minimum wage. The kink in the budget constraint comes around the point where a lone parent moves beyond minimum-wage work onto the WFTC taper: the AWR for moving beyond full-time minimum-wage work is around 70 per cent. As with the US, replacement ratios for full-time jobs at £6.50 an hour are similar to those for full-time jobs at the minimum wage.

[23]The figures are based on the 2000–01 tax and benefit system with the addition of the children's tax credit, which was due to be introduced in April 2001 at £442 a year but is now worth £520 a year after the March 2001 Budget (too late to affect these calculations).

TABLE 4

Average Withdrawal Rates and Replacement Ratios for Low-Income Families Moving into Work under Three Work Scenarios in the UK

	Average withdrawal rate			Replacement ratio		
	Part-time, minimum wage	*Full-time, minimum wage*	*Full-time, £6.50/hr*	*Part-time, minimum wage*	*Full-time, minimum wage*	*Full-time, £6.50/hr*
Lone parent						
One child	5%	11%	36%	58%	46%	40%
Two children	–2%	7%	33%	63%	52%	46%
Couple family						
One child	45%	34%	49%	76%	60%	53%
Two children	39%	30%	47%	78%	64%	57%

Notes: Average withdrawal rate is the percentage of earnings lost in forgone benefits and extra tax payments. Total income includes earnings, WFTC or IS and child benefit less employee National Insurance contributions and income tax. Assumes minimum wage of £3.70. Assumes 4.3 weeks in a month. Assumes no childcare costs. £6.50 is 75 per cent higher than £3.70, corresponding to $9.00 and $5.15 in the US examples.
Source: Author's calculations.

TABLE 5

Average Withdrawal Rates for Low-Income Families Increasing Their Work Effort in the UK

	Compared with part-time, minimum wage		Compared with full-time, minimum wage
	Full-time, minimum wage	*Full-time, £6.50/hour*	*Full-time, £6.50/hour*
Lone parent			
One child	20%	51%	69%
Two children	20%	51%	69%
Couple family			
One child	20%	51%	69%
Two children	20%	51%	69%

Note: Average withdrawal rate is the percentage of *extra* earnings lost in forgone benefits and extra tax payments compared with the reference situation.
Source: Author's calculations.

The financial reward to work is generally lower in the UK for couples with children than for lone parents, as couples receive a higher out-of-work income but the same in-work income. Once in work, couples face the same incentives to increase earnings as lone parents. This paper does not present detailed figures for married couples in the US, but in those states that did not extend TANF payments to couples, they would clearly face a larger financial gain to work than lone parents.

(b) What Contribution Do In-Work Benefits Have in Making Work Pay?

The financial gain to work in both countries is obviously worse without in-work benefits. But there is a qualitative difference between the US and the UK. Tables 6 and 7 show the proportion of the financial gain to work that comes from in-work benefits. Without in-work benefits, the gain to work for lone parents moving into minimum-wage jobs in the US would be roughly halved. EITC forms a greater proportion of the gain to work for full-time minimum-wage jobs

TABLE 6

In-Work Benefits as a Percentage of the Gain to Work for a Lone Mother with Two Children under Three Work Scenarios in 12 US States

	Part-time, minimum wage	*Full-time, minimum wage*	*Full-time, $9/hour*
Alabama	42%	42%	23%
California	44%	49%	34%
Colorado	49%	53%	28%
Florida	42%	46%	26%
Massachusetts	51%	53%	36%
Michigan	52%	59%	32%
Minnesota	51%	54%	38%
Mississippi	38%	39%	22%
New Jersey	53%	54%	30%
New York	57%	60%	39%
Texas	44%	42%	24%
Washington	58%	58%	34%

Notes: As Table 2.
Source: Author's calculations from Table 5 of Acs et al. (1998).

TABLE 7

In-Work Benefits as a Percentage of the Gain to Work for Low-Income Families Moving into Work under Three Work Scenarios in the UK

	Part-time, minimum wage	*Full-time, minimum wage*	*Full-time, £6.50/hour*
Lone parent			
One child	113%	64%	24%
Two children	140%	82%	40%
Couple family			
One child	197%	86%	30%
Two children	233%	109%	50%

Notes: As Table 4.
Source: Author's calculations.

than for part-time work because the credit increases in value for gross incomes under $9,720. But in-work benefits form a substantially higher proportion of the gain to work for low-income families in the UK: indeed, WFTC awards can be greater than the financial gain to work for minimum-wage jobs (i.e. there would be a negative financial gain to part-time work without WFTC).[24] This difference is partly due to EITC and WFTC playing different roles in the overall structure of taxes and welfare payments. EITC has been explicitly designed so that it sits on top of other welfare benefits and tax payments, whereas WFTC is a more integral part of the UK's welfare benefit system, complementing income support and interacting with housing benefit.

(c) Childcare and Other In-Work Costs

The analysis above has ignored in-work costs, of which childcare will be the most important for lone parents. As Section II outlined, the systems for subsidising childcare vary within the US, and, with this huge variation in state CCDF rules, it is difficult to quantify how childcare subsidies affect the financial reward to work of lone parents in the US, let alone the difference between the US and the UK. In addition, the discretionary nature of childcare subsidies in the US means that many apparently eligible families do not benefit. Theoretically, childcare subsidy programmes increase the reward to work (unless mothers work in order to afford high-quality childcare), but the means testing of support reduces the incentive to increase earnings conditional on employment — the same pattern that is present in the budget constraint without childcare subsidies. In the UK, the childcare tax credit has the potential to increase significantly the income range over which a 69 per cent marginal withdrawal rate applies, although, as of February 2000, only 18,000 childcare tax credit claimants (15 per cent of the total) have childcare costs of £90 or more. (The maximum allowable costs are £100 for one child or £150 for more than one child.)

(d) The Effects of Housing Tenure on Work Incentives

Low-income families may be eligible for help with the cost of renting (in the UK and the US) or with mortgage interest payments (out-of-work families in the UK only). Tables 8 and 9 repeat Tables 4 and 5 to show the reward to work for low-income families claiming housing benefit and council tax benefit (CTB). These two benefits significantly reduce the financial incentive to work at low levels of earnings. Couple families on HB and CTB can only keep a fifth of gross earnings when moving into part-time minimum-wage work and less than a third of any further increases in earnings. Lone parents on HB and CTB moving into work

---

[24]Brewer (2000) shows the effect of WFTC on the budget constraint, replacement ratios and average withdrawal rates under the previous work scenarios.

TABLE 8

Average Withdrawal Rates and Replacement Ratios for Low-Income Families Receiving Housing Benefit and Council Tax Benefit Moving into Work under Three Work Scenarios in the UK

	Average withdrawal rate			Replacement ratio		
	Part-time, minimum wage	*Full-time, minimum wage*	*Full-time, £6.50/hr*	*Part-time, minimum wage*	*Full-time, minimum wage*	*Full-time, £6.50/hr*
Lone parent						
One child	57%	51%	59%	83%	71%	62%
Two children	56%	51%	58%	85%	75%	66%
Couple family						
One child	80%	76%	73%	93%	86%	75%
Two children	79%	75%	73%	94%	87%	78%

Notes: As Table 4 except this table includes effect of housing benefit and council tax benefit at average rents.
Source: Author's calculations.

TABLE 9

Average Withdrawal Rates for Low-Income Families Receiving Housing Benefit and Council Tax Benefit Increasing Their Work Effort in the UK

	Compared with part-time, minimum wage		Compared with full-time, minimum wage
	Full-time, minimum wage	*Full-time, £6.50/hour*	*Full-time, £6.50/hour*
Lone parent			
One child	44%	59%	69%
Two children	44%	59%	69%
Couple family			
One child	70%	69%	69%
Two children	70%	69%	69%

Notes: As Table 5. Average withdrawal rate is the percentage of *extra* earnings lost in forgone benefits and extra tax payments compared with the reference situation.
Source: Author's calculations.

face an average withdrawal rate of over 50 per cent on their total earnings (when taking a job, a lone parent not on HB will never face an average withdrawal rate above 51 per cent on total earnings). A similar result is true for those families receiving federal housing subsidies in the US: lone parents see income net of housing costs rise by less than a third when taking a part-time minimum-wage job. Subsequent increases of income to full-time minimum-wage work and then to full-time work at $9 an hour (each representing a 75 per cent increase in gross earnings) would lead to income increases of only 14 per cent and 7 per cent respectively.[25] But, as Section II showed, housing subsidies in the US are relatively less important amongst the population of low-income families than housing benefit is in the UK.

Section II described how families on out-of-work benefits in the UK can receive help with mortgage interest payments after a qualifying period of 26 or 40 weeks. This support contributes to the unemployment trap as there is no comparable support for working adults with mortgages, following the abolition of mortgage interest tax relief in April 1999. The average weekly payment to lone parents receiving help with mortgage interest was £41.68 in February 2000 (Department of Social Security, 2000a): this raises the AWRs for a lone parent with two children from –2/7/33 per cent to 54/39/52 per cent for the three work scenarios in Table 4 (and replacement ratios up from 63 per cent to 84 per cent for part-time minimum-wage work). But relatively few families are affected by this relatively severe unemployment trap: around 210,000 working-age households (with and without children) received help with mortgage interest payments in 1999, or 6.6 per cent of families on IS and 5.2 per cent of families on JSA(IB) (Department of Social Security, 2000a and 2000b).

3. What Do We Know about Take-Up Rates?

Actual budget constraints across the population depend upon whether low-income families receive the benefits to which they are entitled. The effect of in-work benefits and other transfers on work incentives and poverty will clearly be smaller the lower are take-up rates. It might also be expected that take-up is non-random, with families entitled to smaller amounts of in-work benefits less likely to claim.

As Figure 9 shows, the caseloads of in-work benefits have grown in both the US and the UK since their introduction, reflecting a steady increase in their generosity and thus the eligible population. The EITC caseload has tripled since its introduction in 1975, and the WFTC caseload is now 16 times higher than the FIS caseload in the same year (see Brewer (2000)). The EITC caseload is over 15 times greater than the WFTC caseload, although the two in-work benefits end their phase-outs at roughly the same income levels and the working-age population in the US is only around five times as great as that of the UK. Part of the reason for this will be the different eligibility rules: low-income families need to work 16 hours a week to get WFTC, a stricter work requirement than that for EITC. Another factor will be the differences in the distributions of pre-transfer earnings for low-income families.[26] Figure 10 presents changes in the

[25] These are the median values in Table 6 in Acs et al. (1998). The equivalent figures for the UK lone parent are 18 per cent and 15 per cent.

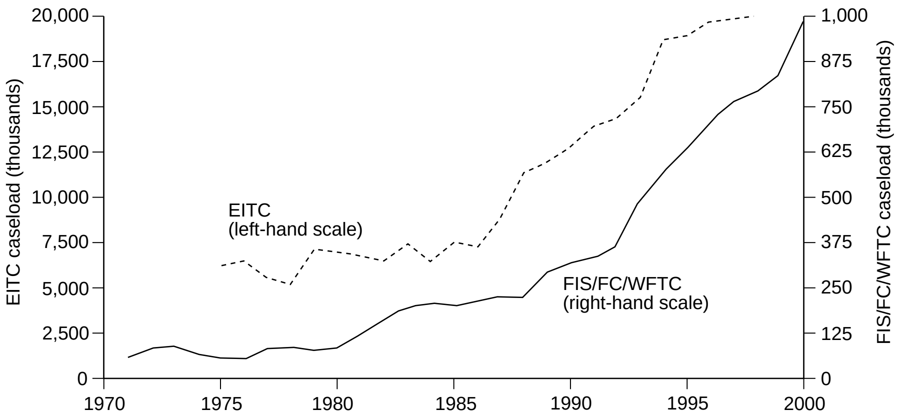
[26] Gosling and Lemieux (2000) present changes in the distribution of female wages in the US and the UK, but they do not isolate lone mothers.

expenditure per claimant, which has increased by far more in the UK than in the US, particularly in the past decade.

Estimates of take-up rates for EITC are limited, with a recent survey concluding that 'we are lacking even the most basic information about the participation rate of the [EITC] since 1990' (Hotz and Scholz, 2001). The study

FIGURE 9

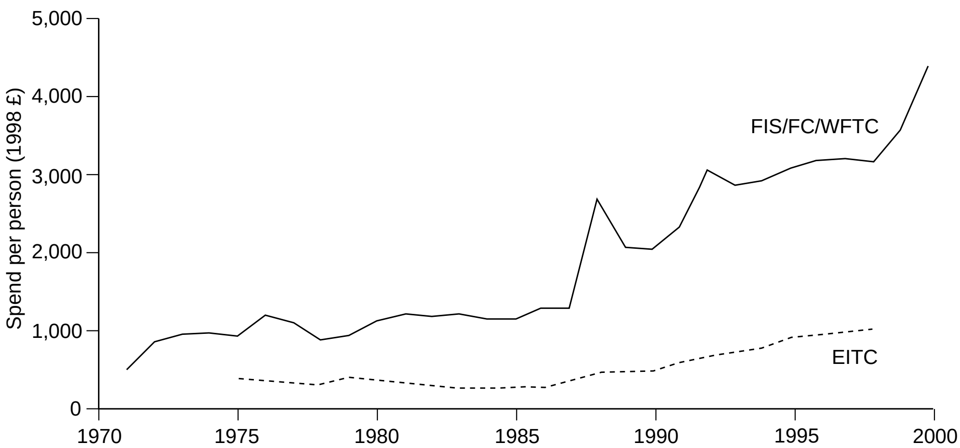
In-Work Benefit Caseloads in the US and the UK



Source: Author's calculations from Inland Revenue (2000c) and Committee on Ways and Means (2000).

FIGURE 10

Expenditure per Claimant on In-Work Benefits in the US and the UK



Note: £1=$1.65 in 1998.

Source: Author's calculations from Inland Revenue (2000c) and Committee on Ways and Means (2000).

cited, which used data from 1990, found that 81–86 per cent of eligible families claimed the credit, higher than estimates for welfare benefits (Scholz, 1994). But there have been significant increases in the credit since 1990, so it is likely that take-up rates have also changed if take-up is related to the size of the award. There are no estimates of take-up for WFTC yet, but government estimates are that 68 per cent of families eligible for family credit claimed it in 1998–99, corresponding to 76 per cent of total possible expenditure (Department of Social Security, 2000c).

Whilst the EITC caseload has risen, welfare and food stamps caseloads both fell dramatically during the 1990s, welfare caseloads falling from 14.1 million in 1993 to 6.9 million in 1999, and food stamps caseloads falling by 25 per cent between August 1996 and September 1998. Likely causes of these falls include the 1996 PRWORA reforms to TANF and the sustained strong US labour market throughout the 1990s, as well as the sustained increase in the real value of EITC over this period.[27] But there has been little or no attempt to see if take-up rates for welfare benefits have changed over the period — although this is no easy task now that there are very few standard rules or parameters for TANF payments across states. Modelling the time-limited nature of TANF payments will be key to any post-1996 analysis, and this will be very difficult since states have discretion to exempt particularly needy cases from the time-limits and to supplement federal funds with state funds. In practice, much may depend on the attitude of individual welfare offices. Past studies of take-up rates of welfare benefits are now slightly dated. Tables 15-1 to 15-3 in Committee on Ways and Means (1998) show how receipt of food stamps and AFDC overlapped among low-income families between 1984 and 1995, and Table 15-8 gives some estimates for take-up rates for food stamps between 1979 and 1992.

More is known about the take-up rates of welfare benefits in the UK: take-up of income support by lone parents is around 96 per cent of the eligible population (Department of Social Security, 2000c). Historically, the number of lone parents on income support has been closely linked to the number of workless lone parents, which is not surprising, as — unlike in the US — there have been no substantial statutory or attitudinal changes towards lone parents' eligibility for income support between 1988 and 1998.

IV. IS IT VALID TO COMPARE THEORETICAL BUDGET CONSTRAINTS?

So EITC and WFTC have apparent similarities: they are aimed at raising the gain to work for low-income families, both to encourage families into work and to alleviate poverty, and both programmes depend upon income, resources and the

[27]See Council of Economic Advisers (1999) and Zedlewski and Brauner (1999) for two studies amongst many that attempt to explain this phenomenon.

presence of children. Each is crucial to providing some financial incentives to work for low-income families. But the two in-work benefits differ significantly in their assessment periods and payment mechanisms, and this could lead to substantial differences in behaviour in response to apparently similar financial incentives. There are also many complexities of the TANF programmes that are not captured in a simple budget constraint.

1. Assessment Period and Payment Mechanism

EITC is closely linked with the US income tax system and is therefore paid annually in arrears, with the credit assessed on the past year's income. Applicants claim the credit when they file an annual tax return and they receive the award as a payable rebate of their annual income tax bill. WFTC, though, does not work in the same way as the income tax system in the UK: WFTC is a weekly award, assessed every 26 weeks on a snapshot of average weekly income. The assessment period is between seven weeks and four months, depending on the frequency of wage payments. The award is then paid at a fixed rate during the next 26 weeks, regardless of any changes in income or employment status (some changes in family circumstances trigger a reassessment of the award). Unlike means-tested benefits or income tax, there is no concept of being underpaid or overpaid during this 26-week period. There are three implications of these features. First, the long gaps between the assessment of in-work benefits will mean that marginal withdrawal rates calculated by a tax and benefit model will not apply to recipients in the very short run. Second, there should be different behavioural and economic effects between receiving an in-work benefit annually and receiving it fortnightly or monthly where families are myopic or credit-constrained. Third, in the UK, the difference between assessment and non-assessment periods introduces some short-run incentives to alter labour supply and manipulate earnings between periods.

(a) How Appropriate Are Theoretical Marginal Withdrawal Rates in the Very Short Run?

The theoretical marginal withdrawal rates implied by the structure of in-work benefits interacting with other parts of the tax and benefit system are a simplification when, in reality, there are significant gaps between assessments. Tapers and tax rates will have a financial effect eventually, but not necessarily immediately. Brewer (2000) discusses how these complications affect a simple inter-temporal model of labour supply, but, as an example, consider a lone mother in the UK receiving WFTC and housing benefit and earning enough to pay income tax and to be on the phase-out portion of WFTC.[28] In the

[28] This implies a gross income of over £140 a week and rent levels above the national average for social housing.

mathematical order in which the tapers are calculated, the lone parent would lose 32 per cent of any increase in gross earnings to income tax and National Insurance payments, then lose 55 per cent of the remainder to the WFTC taper and then lose 65 per cent of the remainder to the HB taper. The combined marginal withdrawal rate is 89 per cent.[29] But each of these tapers has a different responsiveness: HB awards adjust weekly and income tax and National Insurance contributions adjust monthly. By contrast, the WFTC award would not adjust until the end of the 26-week award period. So, in practice, a £10 increase in weekly earnings would lead to a £1.99 fall in HB the next week.[30] The extra £3.20 in income tax and National Insurance contributions would start to be collected the next month. The WFTC award would be reassessed within the next six months, and the award would then fall by 55 per cent of the increase in net income, or £3.74, leading to an overall increase in disposable income for the lone parent of £1.07. During this period of adjustment, which lasts up to six months, the lone parent would also be liable for any undertaxation or any overpayment of HB.

Similarly, a lone mother in the US would see TANF and food stamps payments fall one or two months after an increase in gross earnings, but she would not see the effect on her income tax payments and EITC until the next fiscal year-end.

(b) Frequency of Payment

There is a considerable difference between the two countries in the frequency of payments. EITC recipients can apply to have up to $1,400 worth of EITC paid in advance through the pay-packet, but only 1.1 per cent of recipients elected for this in 1998 (cited in Hotz and Scholz (2001)). Smeeding, Phillips and O'Connor (2000) characterise a number of reasons why this might be so: compliance cost (although this seems low); uncertainty over annual earnings, which raises the probability that recipients will have to pay back advance payments at year-end; employees' unwillingness to tell their employers they are receiving EITC; employers' unwillingness to participate; and a desire to receive annual payments for the 'enforced saving' aspects. Barrow and McGranahan (2000) find evidence of higher expenditure by EITC-eligible families compared with EITC-ineligible families on consumer durables in the month (February) when most EITC refunds are made. But there is little work on the relative importance of these factors, which could shed more light on how recipients treat EITC payments. With the low take-up of the monthly payment option, it is arguable that EITC acts 'more as an end-of-year reward than a real-time incentive for undertaking a few more hours of work' (Walker and Wiseman, 1997). Hotz and Scholz (2001) argue that

---

[29]The overall taper rate is calculated as 32% + 55%×(1–32%) + 65%×[1 – {32% + 55%×(1–32%)}] = 89.3%.

[30]The HB taper of 65 per cent applies to income after taxes and WFTC, and the award calculation incorporates the future changes in tax, National Insurance contributions and WFTC.

this delay between changes in earnings and changes in EITC payments means that EITC has a greater impact on participation than on hours worked. There is a substantial contrast here with the UK, where WFTC payments are paid either fortnightly (for non-earning recipients in a couple) or with wage payments. This may reflect the greater importance of WFTC payments as a proportion of total income: the calculations behind Figures 2 and 3 show that EITC represents under a quarter of total disposable income, but WFTC can represent over 40 per cent of total income for low-income parents. More frequent payment is consistent, too, with UK studies showing that predictability of income payments is the key to managing on a low income, with WFTC providing a fixed income stream over 26 weeks.[31]

(c) Short-Run Labour Market Dynamics

Because WFTC has a snapshot assessment period of earnings followed by a period when there is no consideration of earnings, individuals have an incentive to substitute labour supply between assessment periods and non-assessment periods to maximise their WFTC award. This distortion of behaviour has been little considered by the literature. Evidence from the Family Resources Survey — which can identify whether people on family credit are in an assessment period — is suggestive: the participation rate for women with working partners on FC during assessment periods is 21 per cent, but between the assessment periods, when the in-work benefits are really just a time-limited lump-sum transfer, this rises to 28 per cent (Blundell and Walker, 2000).[32] EITC does not give this incentive, although the fact that the marginal withdrawal rate of EITC varies with income does give a theoretical incentive for people to substitute labour supply between fiscal years, although it is not clear whether this is a real concern in practice.

2. Interactions with Other Parts of the Tax and Benefit System

There are differences in what counts as income when in-work benefits are assessed in the US and the UK, and in whether in-work benefits are counted as income for other means-tested transfers. Both EITC and WFTC generally disregard other transfer payments (i.e. WFTC disregards, amongst others, attendance allowance, child benefit, education maintenance allowance, housing benefit, council tax benefit, maternity allowance and statutory maternity pay; EITC disregards food stamps and TANF payments). But the credits treat tax

[31]Thomas and Pettigrew (1998), cited in Snape, Molloy and Kumar (1999), although this does refer to households surviving on out-of-work benefits only. Snape et al. (1999) also find that out-of-work families prefer to be paid benefits weekly or fortnightly to aid them in budgeting weekly. Wheatley (2001) cites examples of claimants who would prefer WFTC to be paid fortnightly rather than together with wages.

[32]The average withdrawal rate on extra earnings in non-assessment periods is 32 per cent, compared with 69 per cent in assessment periods.

payments differently: EITC is based on gross income but WFTC is assessed on income after income tax and National Insurance payments. Basing a means-tested award on net income ensures that marginal withdrawal rates never exceed 100 per cent, but equally it means that the impact of tax cuts on tax credit recipients is dulled. As Section III showed, marginal withdrawal rates for EITC recipients are still relatively low despite it being assessed on gross income, but this is because the rates of income tax and payroll tax, and the EITC phase-out rate, are low in the US compared with in the UK.

Since 1991, EITC awards have not counted as income in other parts of the US tax and welfare system.[33] States are prohibited from counting EITC awards in food stamps, supplemental security income and Medicaid assessments. EITC awards did not count as income when assessing AFDC awards but, since 1997, states have been permitted to count EITC payments as income when assessing TANF payments. By contrast, WFTC awards do count as income in assessments of housing benefit and council tax benefit awards.[34] As Section III showed, this makes it more important to consider the entire budget constraint either when comparing the generosity of WFTC and FC or when calculating marginal and average withdrawal rates.

3. Eligibility Rules

Both WFTC and EITC affect the financial incentive to form a couple because they provide the same level of support to families with the same (combined) income, regardless of the number of adults. This so-called 'marriage non-neutrality'[35] is an inevitable feature of any system with joint assessment and non-proportional tax rates. Eissa and Hoynes (1999 and 2000) discuss this in more detail, including the financial incentives to marry given by the US federal tax system. They note that EITC provides a *positive* marriage incentive for very-low-income couples (i.e. those with joint incomes of less than $9,720), a neutral one over the maximum plateau and a negative one at higher incomes. Hotz and Scholz (2001) conclude that 'much less attention has been paid in the literature to the impacts of the EITC on marital status compared to other assistance programs'; the same can be said for WFTC in the UK, but as a small step, I can say that WFTC only ever gives a negative financial incentive to form a couple.

Brewer (2000) discusses how the recognition of marriage in the US system implies differences in how the credits treat unmarried couples. He also looks at

[33]When introduced, EITC payments *did* count as income in AFDC calculations; the 1991 reform therefore increased the value of EITC to families with low earnings, especially when taken alongside the reform in the same year that removed the requirement for claimants to earn more in a year than they received in AFDC payments.
[34]This was also the case under family credit. Giles, Johnson and McCrae (1997) illustrate the effect of the interaction of HB and FC on the gain to work for tenants in the social sector.
[35]A US phrase, as the US tax system depends upon marital status; I use 'couple' to mean 'married couple' in the US and 'married or cohabiting couple' in the UK.

differences in the definition of ‘children’: WFTC uses the usual definition in the UK’s welfare system of a child under 16 or a child under 19 but in full-time education, but EITC uses a far broader definition of all children under 19 and children under 24 in full-time — including higher — education.

V. CONCLUSIONS

The goals of income transfer systems in the US and the UK for low-income families are both to reduce poverty and welfare dependency and to encourage work, and both countries have made in-work benefits a key part of their strategy. But in-work benefits are only one mechanism used in the US and the UK to transfer income to low-income families, and, once all transfers are considered, the budget constraint for a lone parent looks quite different from the in-work credit schedule.

The financial incentives to work for lone parents implied by the budget constraint have similar patterns in both countries: there are good financial incentives to take a minimum-wage job but poor incentives to increase earnings beyond that. Without in-work benefits, there would be a substantial unemployment trap for low-income families in the UK, but the situation would not be quite as severe without EITC in the US. Subsidies for housing costs and childcare costs can substantially reduce the financial reward to work in both countries. Although I have not analysed the issue in detail, other studies have suggested that an extension of high marginal withdrawal rates may have long-term implications for workers’ human capital accumulation and earnings growth. An extension of this literature to include more explicit comparisons between the US and the UK would seem fruitful.

I have discussed two factors that could limit the comparability of financial work incentives between the US and the UK. First, little is known about parents’ take-up of in-work and other welfare benefits. Second, although similar in aims, there are significant differences in how WFTC and EITC are assessed and paid, and these have implications for short-run work incentives and labour market dynamics. In particular, it should be expected that an in-work benefit that is paid annually will lead to different behavioural responses amongst WFTC and EITC recipients from one that is paid fortnightly or monthly. Also, different impacts on poverty should be expected over the short run, especially when the value of the benefit can represent over a quarter of total family income.

APPENDIX

TABLE A.1

Timeline of Developments in In-Work Benefits in the US and the UK

	US	*UK*
1971		Family income supplement (FIS) introduced as a means-tested in-work benefit.
1975	Earned income tax credit (EITC) introduced with maximum credit of $400.	
1987	Increase in EITC generosity and credit rate to restore the 1975 real value.	
1988		FIS replaced by family credit (FC) with increased generosity and lower marginal withdrawal rates (most instances of MWRs > 100% were removed). 24 hours' work a week needed to qualify.
1991	Increase in EITC generosity. Separate rate for two or more children. Requirement that applicants earn more than they receive in welfare benefits removed. EITC no longer counted in means-tested programmes' income calculations.	
1992		Qualifying conditions reduced to 16 hours' work a week.
1993	Substantial increase in EITC generosity, particularly for families with two or more children. EITC for workers without children introduced.	
1995		Extra credit for working more than 30 hours a week.
1996	PRWORA reformed AFDC/TANF.	
1999		Working families' tax credit replaces FC, with increased generosity, longer phase-out portion and more generous support for childcare.
2000		Increase in generosity. Credit paid through wage-packet.

TABLE A.2

US Federal Individual Income Tax Parameters for Families with Children for 2000

Tax rates	
If annual taxable income is:	*Then income tax equals:*
Heads of households	
\$0–\$35,150	15% of taxable income
\$35,150–\$90,800	\$5,272.50 + 28% of the amount over \$35,150
\$90,800–\$147,050	\$20,854.50 + 31% of the amount over \$90,800
\$147,050–\$288,350	\$38,292 + 36% of the amount over \$147,050
Over \$288,350	\$89,160 + 39.6% of the amount over \$288,350
Married couples filing jointly	
\$0–\$43,850	15% of taxable income
\$43,850–\$105,950	\$6,577.50 + 28% of the amount over \$43,850
\$105,950–\$161,450	\$23,965.50 + 31% of the amount over \$105,950
\$161,450–\$288,350	\$41,170.50 + 36% of the amount over \$161,450
Over \$288,350	\$86,854.50 + 39.6% of the amount over \$288,350
Tax allowances	
Head of household	\$6,450
Married couple filing jointly	\$7,350
Deductions	\$2,800 per dependant
Child tax credit	\$500 per child
Social security tax (payroll tax)	
If annual gross income is:	*Then social security tax equals:*
\$0–\$72,600	7.65% of income
Over \$72,600	\$5,553.90 + 1.45% of the amount over \$72,600

Notes: Taxable income is income less allowances less deductions. The child tax credit reduces tax liability by \$500 per child. The overall effect is that a lone parent with two children pays no federal income tax on an annual income of up to \$18,717.
Source: Various Internal Revenue Service forms and tables for 2000.

TABLE A.3

UK Income Tax Parameters for Families with Children for 2000

Tax rates	
If annual taxable income is:	*Then income tax equals:*
£0–£1,520	10% of taxable income
£1,520–£28,400	£152 + 22% of the amount over £1,520
Over £28,400	£6,065.60 + 40% of the amount over £28,400
Tax allowance	
Individual	£4,385
Children's tax credit	£520 per family with children under 16 (from 2001)
National Insurance contributions	
If weekly income is:	*Then weekly contributions are:*
£0–£76	Nothing
£76–£535	10% of income over £76
Over £535	£45.90

Notes: Taxable income is income less the allowance. Married couples file separately. The children's tax credit reduces tax liability by £520 where there are children in the family, but the value is reduced if there is a higher-rate taxpayer.
Source: Various Inland Revenue publications.

TABLE A.4

Detail of Operation of EITC and WFTC

	Earned income tax credit (2000)	*Working families' tax credit (from June 2000)*
Eligibility		
Eligibility	Must have positive earnings in past year and annual investment income under $2,350. Married couples need to file a joint tax return; unmarried couples file separately. Parents need to have a 'qualifying' child (either theirs or their spouse's, or any other child who was cared for all year). 'Children' are under 19, or under 24 and a student, or permanently and totally disabled. Where a child potentially qualifies two unmarried adults for EITC, only the adult with the highest income can apply (this includes multiple-tax-unit households).	Must work more than 16 hours a week, have dependent children (under 16 or under 19 and in full-time education), have less than £8,000 capital. Couples need to claim jointly; need not be married. Extension to those without dependent children proposed alongside an integrated child credit.

Table continued opposite

	Earned income tax credit (2000)	*Working families' tax credit (from June 2000)*
Structure		
Value of basic credit	Credit is annual and is a fraction of annual income up to a maximum level of $353/$2,353/$3,888 for families with 0/1/2+ children.	Credit is weekly. Basic credit of £53.15 plus possible 30-hour credit of £11.25 plus credits for each child at £25.60, or £26.35 for 16- to 18-year-olds. Childcare tax credit is supplementary to this.
Tapering	Phase-in threshold applies a 7.65%/34%/40% credit (for 0/1/2+ children) to income until maximum credit reached. Beyond threshold of $12,690 ($5,770 for no children), tapered at 7.65%/15.98%/21.06% (for 0/1/2+ children) so that EITC runs out at $10,380/$27,413/$31,152.	Beyond threshold of £91.45, tapered at 55%.
Interaction with other parts of tax and benefit system		
Definition of income	Gross earnings, or 'modified adjusted gross income' if it is higher and claimant is on the taper ('modified adjusted gross income' is income minus standard deductions for tax purposes). Self-employed: same definition of 'income' as for other tax liabilities.	Net income (i.e. income after income tax and National Insurance). Self-employed: same definition of 'income' as for other tax liabilities.
Exclusions from the definition of income	TANF and food stamps are not taxable.	Child benefit, education maintenance allowance, statutory maternity pay, maternity allowance, attendance allowance, maintenance payments, housing benefit and council tax benefit awards.
Treatment of awards as income	Federal law prohibits EITC from being treated as income for purpose of Medicaid, supplemental security income, food stamps and low-income housing. Since 1991, EITC did not count for AFDC assessment; states can now count EITC when determining TANF awards.	Awards count as income for housing benefit and council tax benefit purposes.

Table continued overleaf

	Earned income tax credit (2000)	*Working families' tax credit (from June 2000)*
Assessment and payment mechanism		
Assessment	Assessed at year-end on past year's income.	Assessed on average weekly income in 'assessment period' prior to claim. Length of assessment period depends on frequency of claimant's earnings: seven weeks for weekly payments, eight weeks for fortnightly, 16 weeks for four-weekly, four months for monthly. Estimated earnings used for new workers.
When payable	Annual award is a refund on annual tax liability, with any excess paid as a lump sum. Families have to file by 15 April each year. Up to $1,418 can be paid in advance through the wage-packet for claimants who have federal income tax withheld from wages. Few elect for this option.	Weekly award fixed for 26 weeks (unless family status changes). Paid through wage-packet unless non-earner in couple elects to receive it or unless self-employed. Timing of payments aligned with timing of wages, so if worker paid monthly in arrears, credit will be paid monthly in arrears. Non-earners paid fortnightly.
To whom paid	Married couples who claim EITC have to file a joint tax return. Their EITC reduces the joint tax liability. They nominate who receives the payable part of the credit. See 'Eligibility' above for other rules on who can claim in non-married couples.	Couples decide who receives it. If couple cannot agree, then Inland Revenue will probably pay to the main carer (George et al., 2000).

Sources: For WFTC — George et al. (2000) and Inland Revenue (2000a and 2000b). For EITC — Internal Revenue Service (1999a, 1999b and 2000a) and Committee on Ways and Means (1998).[36]

REFERENCES

Acs, G., Coe, N., Watson, K. and Lerman, R. I. (1998), *Does Work Pay? An Analysis of the Work Incentives under TANF*, Occasional Paper no. 9, Washington, DC: Urban Institute.

Barrow, L. and McGranahan, L. (2000), 'The effects of the earned income tax credit on the seasonality of household expenditures', *National Tax Journal*, vol. 53, no. 4, part 2, pp. 1211–43.

Bernstein, J. and Hartmann, H. (2000), 'Defining and characterising the low-wage labour market', in K. Kaye and D. S. Nightingale (eds), *The Low-Wage Labour Market: Challenges and Opportunities for Economic Self-Sufficiency*, Washington, DC: Urban Institute.

[36]Hotz and Scholz (2001) summarise the parameters of EITC since 1975.

Blank, R. M., Card, D. E. and Robins, P. K. (2000), 'Financial incentives for increasing work and income among low-income families', in D. Card and R. M. Blank (eds), *Finding Jobs: Work and Welfare Reform*, New York: Russell Sage Foundation.

Blau, D. M. (2000), 'Child care subsidy programs', in R. Moffitt (ed.), *Means-Tested Transfer Programs in the U.S.*, Chicago: University of Chicago Press, forthcoming. http://www.nber.org/books/means-tested/index.html.

Blundell, R. (2000), 'Work incentives and in-work benefit reforms: a review', *Oxford Review of Economic Policy*, vol. 16, pp. 27–44.

—, Duncan, A., McCrae, J. and Meghir, C. (2000), 'The labour market impact of the working families' tax credit', *Fiscal Studies*, vol. 21, pp. 75–103.

— and Hoynes, H. (2000), 'In-work benefit reform and the labour market', in R. Blundell, D. Card and R. B. Freeman (eds), *Seeking a Premier League Economy*, Chicago: University of Chicago Press, forthcoming. Download from http://www.nber.org/books/bcf/benefit12-6-00.pdf.

— and MaCurdy, T. (1998), 'Labour supply: a review of alternative approaches', Institute for Fiscal Studies, Working Paper no. 98/18.

— and Walker, I. (2000), 'Working families' tax credit: a review of the evidence, issues and prospects for further research', mimeo, Institute for Fiscal Studies.

Brewer, M. (2000), 'Comparing in-work benefits and financial work incentives for low-income families in the US and UK', Institute for Fiscal Studies, Working Paper no. 00/16.

—, Myck, M. and Reed, H. (2001), *Financial Support for Families with Children: Options for the New Integrated Child Credit*, Commentary no. 82, London: Institute for Fiscal Studies.

Bureau of Labour Statistics (2000), *Usual Weekly Earnings of Wage and Salary Workers, Third Quarter 2000*. Download from http://stats.bls.gov/newsrels.htm.

Burtless, G. (forthcoming), 'The employment experiences and potential earnings of welfare recipients', in S. H. Danziger and D. H. Weinberg (eds), *Fighting Poverty: What Works and What Doesn't*, Cambridge, MA: Harvard University Press.

Committee on Ways and Means (various years), *Green Book: Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means*, Washington, DC: US House of Representatives Committee on Ways and Means.

Cossa, R., Heckman, J. L. and Lochner, L. (1999), 'Wage subsidies and skill formation: a study of the earned income tax credit', mimeo, University of Chicago. http://lily.src.uchicago.edu/papers/labor.html.

Council of Economic Advisers (1999), *The Effect of Welfare Policy and the Economic Expansion on Welfare Caseloads: An Update*, Washington, DC: Executive Office of the President.

Department of Social Security (2000a), *Income Support Quarterly Enquiry*, London: Government Statistical Service.

— (2000b), *Housing Benefit and Council Tax Benefit Quarterly Enquiry*, London: Government Statistical Service.

— (2000c), *Income Related Benefits Estimates of Take-Up in 1998/9*, London: Government Statistical Service.

Dickens, R. (forthcoming), 'Caught in a trap? Wage mobility in Britain: 1975–1995', *Economica*.

— and Ellwood, D. (2000), 'Whither poverty in Great Britain and the United States? The determinants of changing poverty and whether work will work', in R. Blundell, D. Card and R. B. Freeman (eds), *Seeking a Premier League Economy*, Chicago: University of Chicago Press, forthcoming. Download from http://www.nber.org/books/bcf/poverty12-5-00.pdf.

Dilnot, A. and McCrae, J. (1999), *Family Credit and the Working Families' Tax Credit*, Briefing Note no. 3/99, London: Institute for Fiscal Studies. http://www.ifs.org.uk/labmarket/wftc.pdf.

Eissa, N. and Hoynes, H. W. (1999), 'Good news for low-income families? Tax-transfer schemes and marriage', mimeo, University of California, Berkeley. http://elsa.berkeley.edu/users/hilary/.

— and — (2000), 'Explaining the fall and rise in the tax cost of marriage: the effect of tax laws and demographic trends 1984–1997', mimeo, University of California, Berkeley.

Gale, W. (1997), 'What can America learn from the British tax system?', *Fiscal Studies*, vol. 18, pp. 341–69.

Gallagher, L. J., Gallagher, M., Perese, K., Schreiber, S. and Watson, K. (1998), *One Year after Federal Welfare Reform: A Description of State TANF Decisions as of October 1997*, Washington, DC: Urban Institute.

General Accounting Office (1997), 'Earned income credit', Testimony before the Committee on Ways and Means, GAO/T-GGD-97-105.

George, C., Allirajah, D., Donnelly, C., Fitzpatrick, P., Frobisher, F., Hynes, B., Mitchell, S., Robinson, S., Simmons, D., Stagg, P., Tait, G., Thurley, D. and Turville, P. (2000), *Welfare Benefits Handbook 2000/2001*, London: Child Poverty Action Group.

Giles, C., Johnson, P. and McCrae, J. (1997), 'Housing benefit and financial returns to employment for tenants in the social sector', *Fiscal Studies*, vol. 18, pp. 49–72.

Gosling, A. and Lemieux, T. (2000), 'Labour market reforms and changes in wage inequality in the UK and US', in R. Blundell, D. Card and R. B. Freeman (eds), *Seeking a Premier League Economy*, Chicago: University of Chicago Press, forthcoming. Download from http://www.nber.org/books/bcf/reforms12-5-00.pdf.

Gottschalk, P. (2000), 'Work as a stepping stone for welfare recipients: what is the evidence?', in K. Kaye and D. S. Nightingale (eds), *The Low-Wage Labour Market: Challenges and Opportunities for Economic Self-Sufficiency*, Washington, DC: Urban Institute.

Gregg, P., Harkness, S. and Machin, S. (1999), 'Poor kids: trends in child poverty in Britain, 1968–96', *Fiscal Studies*, vol. 20, pp. 163–87.

Gruber, J. (2000), 'Medicaid', in R. Moffitt (ed.), *Means-Tested Transfer Programs in the U.S.*, Chicago: University of Chicago Press, forthcoming. http://www.nber.org/books/means-tested/index.html.

Hansard (2000), *Official Report 20 March 2000*, col. 441W, London: The Stationery Office.

HM Treasury (2000), 'Tackling poverty and making work pay: tax credits for the 21st century', *The Modernisation of Britain's Tax and Benefit System*, London.

Hotz, V. J. and Scholz, J. K. (2001), 'The earned income tax credit', in R. Moffitt (ed.), *Means-Tested Transfer Programs in the U.S.*, Chicago: University of Chicago Press, forthcoming. http://www.nber.org/books/means-tested/index.html.

Inland Revenue (2000a), *Working Families' Tax Credit Application Form April 2000*, Form WFTC1, London.

— (2000b), *Working Families' Tax Credit April 2000: Notes on Applying*, Form WFTC6, London.

— (2000c), *Working Families' Tax Credit Quarterly Enquiry, August 2000*, London: Government Statistical Service.

Internal Revenue Service (1999a), *1999 1040 Instructions*, Washington, DC.

— (1999b), *Exemptions, Standard Deduction, and Filing Information*, Publication 501, Washington, DC.

— (2000a), *Earned Income Credit*, Publication 596, Washington, DC.

— (2000b), *Statistics of Income Bulletin*, Publication 1136, Washington, DC.

Johnson, N. (1999), *A Hand Up: How State Earned Income Tax Credits Help Working Families Escape Poverty, 1999 Edition*, Washington, DC: Center on Budget and Policy Priorities.

— (2000), *A Hand Up: How State Earned Income Tax Credits Help Working Families Escape Poverty in 2000: An Overview*, Washington, DC: Center on Budget and Policy Priorities.

Joint Committee on Taxation (1998), *Present Law and Analysis Relating to Individual Marginal Effective Tax Rates*, JCS-3-98, Washington, DC: US Government Printing Office.

Kaye, K. and Nightingale, D. S. (eds) (2000), *The Low-Wage Labour Market: Challenges and Opportunities for Economic Self-Sufficiency*, Washington, DC: Urban Institute.

Link, R. J., Bibus, A. and Lyons, K. (2000), *When Children Pay: US Welfare Reform and Its Implications for UK Policy*, London: Child Poverty Action Group.

Maag, E. and Lim Rogers, D. (2000), *The New Federalism and State Tax Policies toward the Working Poor*, Occasional Paper no. 38, Washington, DC: Urban Institute.

Meyer, B. D. and Rosenbaum, D. T. (2000), 'Making single mothers work: recent tax and benefit policy and its effects', National Bureau of Economic Research, Working Paper no. 7491.

Office for National Statistics (2000), *New Earnings Survey 2000*, London: The Stationery Office.

Scholz, J. K. (1994), 'The earned income tax credit: participation, compliance and anti-poverty effectiveness', *National Tax Journal*, March, pp. 59–81.

Smeeding, T. M., Phillips, K. R. and O'Connor, M. (2000), 'The EITC: expectation, knowledge, use and economic and social mobility', mimeo, Center for Policy Research, Syracuse University.

Snape, D., Molloy, D. and Kumar, M. (1999), *Relying on the State, Relying on Each Other*, Research Report no. 103, London: Department of Social Security.

Thomas, A. and Pettigrew, N. (1998), *Attitudes towards Methods of Paying Benefits*, DSS In-House Report no. 51, London: Department of Social Security.

US Department of Agriculture (1999), *Food Stamps*, Form FNS-313, Washington, DC.

Walker, R. and Wiseman, I. (1997), 'The possibility of a British earned income tax credit', *Fiscal Studies*, vol. 18, pp. 401–25.

Zedlewski, S. R. and Brauner, S. (1999), 'Declines in food stamp and welfare participation: is there a connection?', Urban Institute, Discussion Paper no. 99-13.