

Lone parents, time-limited in-work benefits and the dynamics of work and welfare

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Abstract

In many OECD countries, welfare reforms have sought to increase employment among lone parents. Increasingly, the focus now is on securing sustained employment rather than have people cycle in and out of work, which by itself does not tend to alleviate poverty. But little is known about how policies can encourage retention. With rich administrative data on welfare spells and time in employment, and a multi-spell, multi-state duration model, this paper assesses the impact of two time-limited in-work benefits (“In-Work Credit” and the “Employment Retention and Advancement Demonstration”) that were aimed at lone parents and were piloted in different parts of Great Britain during the 2000s. We assess the impact of the policies on flows off and back on to welfare benefits, and show how conditioning receipt of the in-work benefits on part-time or full-time hours of work affects employment and hours-of-work dynamics. Our results suggest that both policies got more lone parents into work, and that hours of work effects are important: conditioning the policy on part-time hours allowed some people to cut back from full-time hours, and conditioning on full-time hours encouraged part-time workers to work more. The ERA programme had stronger effects on employment than IWC (on a similar group of lone parents), despite the smaller financial incentive given by ERA. Finally, the In-Work Credit incentives had a small effect on job retention, while there were sizeable impacts of the ERA programme on encouraging lone parents to remain in work.

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1 Introduction

In-work benefits or tax credits are well established as a policy instrument for increasing labour supply and tackling poverty. Much research has been on the experience of the EITC in the US, and the various in-work credits in the UK, both of which have been aimed principally at families with children, and a wide range of OECD countries have used in-work credits to some extent. For a typical in-work credit, eligibility depends only on current income and current family status and, conditional on those, can last indefinitely. But there is another sort of in-work credit, where the credit is time-limited and conditional on previous receipt of welfare (and with no, or only a limited, means-test, although this is a less important design feature). Such policies lie somewhere in between conventional in-work credits, and a conventional back-to-work bonus (we discuss the relevant literature in Section 2).

This paper provides evidence on the impact of two different targeted, time-limited, in-work benefits from the UK. For a given level of generosity, a targeted, time-limited in-work credit is clearly cheaper than a conventional in-work credit. By conditioning on previous receipt of welfare, it may be better targeted on low-skill, potential-low-wage, individuals than a conventional credit (where high-wage individuals can cut their hours worked to become entitled to an conventional in-work credit). But, for someone currently on welfare, the encouragement to labour supply provided by a time-limited in-work credit may be less than a permanent credit of the same weekly or monthly generosity.

The two specific policies in Great Britain had, usefully, different eligibility conditions. One was called “In-Work Credit” (we use “IWC” to refer to the specific policy in the UK, and “in-work credit” to refer to the generic policy), and the other was the Employment, Retention and Advancement Demonstration (ERA)¹ We give more details in Section 2, but IWC was worth £40 a week, and could be received by lone parents who had previously spent at least a year on welfare if they moved into work of 16 or more hours a week. A maximum of 52 weeks of payments could be made. The policy was introduced gradually across Great Britain (GB) over a four year period, rolled out by geographical areas, which naturally suggests the use of lone parents in areas where IWC was not in operation as a form of comparison group.²

The ERA demonstration was a randomised intervention which aimed to deliver the ‘next step’ in welfare-to-work policy. It had three target groups: unemployed lone parents who were on Income Support (IS; an out of work benefit with no need to search for work) and then volunteered for the New

¹Qualitative research which covers IWC includes Hosain and Breen (2007) and Jenkins (2008).

²This was the approach adopted in Brewer et al. (2009a)

Deal for Lone Parents (NDLP), lone parents working part-time and receiving Working Tax Credits (WTC), and long-term unemployed individuals over the age of 25 who were mandatorily assigned to the New Deal (ND25+). It is the first of these client groups that is of interest here as it corresponds most to the client group targeted by IWC. ERA was piloted in 6 districts; inflow into the ERA programme took place between 2003 and 2005, with the last people to join the programme moving off it in 2007.³

With rich administrative data on welfare spells and time in employment (described in Section 5), we assess both IWC and ERA within a common empirical framework. As we describe in Section 4, this involves selecting a group of lone parents of welfare from all areas of Great Britain and at all points in calendar time who would have met the eligibility conditions for ERA, and estimating on this sample a multi-spell, multi-state duration model. Whilst not being a full structural model, the model accounts for the way that the incentives inherent in the two programmes change over time for an individual, and allow for anticipation and post-programme effects, in a similar way to Card and Hyslop (2005) analysis of the Canadian SSP programme. (We also describe a variant, results of which are not yet available, that allows for programme non-participation). These models are particularly suited to analysing the impact of policies targeted at welfare recipients on subsequent time in work; they also allow some simulations of some what-if questions. For inference on our estimated policy effects, we follow Ham et al. (2010) and Ham and Woutersen (2009).⁴

Our results suggest that IWC increased the probability that potentially eligible lone parents left welfare, but that it had no discernible impact on job retention. Additionally, IWC led to higher employment rates due to leaving welfare for part-time work only, with no impact on employment of 30 hours or more. This may be rationalised by the fact that In Work Credit was one payment of £40 per week, conditional on working 16 or more hours. Compared to IWC, ERA had much stronger impacts on both welfare leaving and job retention. We find a large impact of potential eligibility for ERA on leaving welfare. Moreover there are sizeable retention effects. Once in full-time work, ERA receipt encourages staying in FT work. Importantly, part of the increase in full-time work due to the ERA programme is offset by decrease in part-time work.

2 Policy detail

IWC was available to lone parents in the UK who had been receiving welfare for a continuous period of 12 months or more;⁵ and stopped claiming welfare

³The main results from the experimental evaluation of ERA can be found at Dorsett et al. (2007). See also Dorsett (2013) who takes a similar approach to this paper but looks at the long-term unemployed without children.

⁴Standard errors on the effects in this current version of the paper only account for simulation error, not estimation error

⁵We use “welfare” throughout to refer to what are known in the UK as “out-of-work benefits”. The relevant benefits were Income Support, Jobseeker’s Allowance, Incapacity Benefit,

and moved into work of at least 16 hours per week. It was payable at a rate of £40 per week for up to 12 months (from July 2007, £60 a week in London). Payments stopped after 12 months, or if the lone parent stopped working (very short periods out of work were over-looked), or if the lone parent re-claimed welfare. Lone parents had to provide payslips as evidence that they were still in work; employers had no other role, and would not normally know whether their employees were receiving IWC. The payments were made weekly in arrears, and were not means-tested, nor taxable, nor did they count as income for the purpose of other means-tested welfare benefits or tax credits. Repeat claims of IWC were allowed, but only if a lone parent spent a further 12 months on welfare to regain potential eligibility. The government agency which operates welfare-to-work policies divides Great Britain into about 90 districts, and most pilots of welfare-to-work policies operate at the level of the district (“Jobcentre Plus districts”). Over a four year period – starting in 2004 – and in six steps, IWC was rolled out across all of Great Britain (see Appendix A).⁶

The ERA demonstration was a randomised intervention which aimed to deliver the ‘next step’ in welfare-to-work policy. It had three target groups: un-employed lone parents who were on IS and then volunteered for the New Deal for Lone Parents (NDLP; This is a voluntary programme that provided greater access to Personal Advisors, and access to some discretionary funds to assist in job search. See Dolton et al. (2006) for details and for an evaluation of its impact.), lone parents working part-time and receiving Working Tax Credits (WTC), and long-term unemployed individuals over the age of 25 who were mandatorily assigned to the New Deal (ND25+). It is the first of these client groups that is of interest here as it corresponds the most to the client group targeted by IWC (a subset of which can be identified as having previously participated in NDLP). Inflow into the ERA programme took place between 2003 and 2005, with the last people to join the programme moving off it in 2007. ERA specifically targeted retention by way of a retention bonus: a payment of £400 in each 17-week period, paid to clients in the programme group if they worked full-time (30 hours or more) for at least 13 weeks in the 17 week period. Participants were eligible for six such payments, which would cover a maximum period of two years.

IWC and ERA are by no means the only form of support for lone parents in the UK. The other welfare benefits and tax credit to which these lone parents might be entitled are as follows ⁷:

1. A non-means-tested child benefit, worth £17.45 a week for families with 1 child;

Employment and Support Allowance, Carer’s Allowance and Severe Disablement Allowance. Although precise details vary, entitlement to these benefits requires claimants NOT to be working (or to be working only a handful of hours a week) and to have a low family income. For more details on the UK benefit and tax credit system, see Browne and Hood (2012).

⁶Neither IWC nor ERA programme was introduced in Northern Ireland. Northern Ireland is therefore excluded from our analysis.

⁷All amounts for 2006-7; there is more analysis of the financial work incentives facing lone parents in the UK in Brewer et al. (2007) and Brewer et al. (2009a)

2. A means-tested refundable child tax credit, worth £44.42 a week for families with 1 child and an income under £14,155 (and withdrawn at 37% after that);
3. At most one of the following:
 - (i) A means-tested refundable working tax credit, worth up to £63.55 but conditional on working 16 or more hours a week, and withdrawn at 37% for annual earnings above £5,220;
 - (ii) A means-tested welfare benefit (income support), worth £57.45 a week, but conditional on working less than 16 hours a week, withdrawn at 100% after a weekly earnings disregard of £15;
4. Housing benefit and council tax benefit (a benefit which offsets liability to the local tax in the UK, which is known as council tax), whose generosity depend upon the rent and council tax liabilities, and which are both withdrawn steeply once entitlement to welfare benefits has been fully withdrawn.

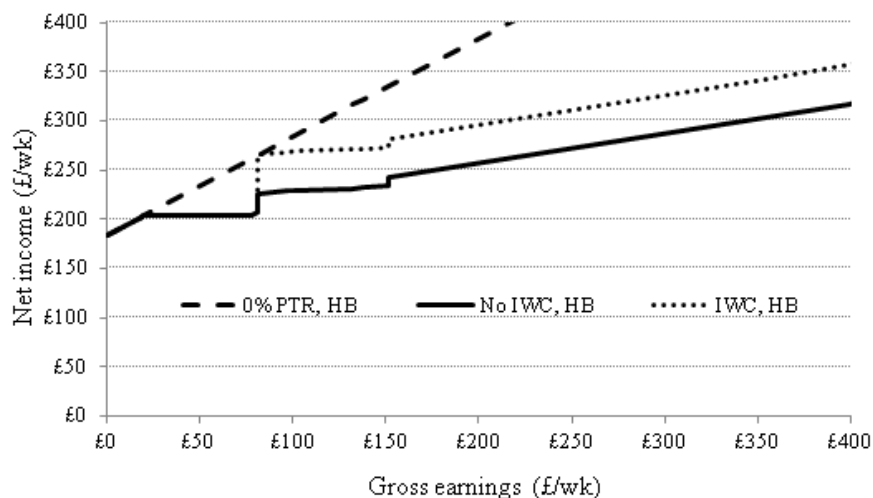
Figure 1 shows the relationship between gross earnings and net income after subtracting liability to all direct taxes and adding entitlement to all welfare payments and tax credits. The figure assumes an hourly wage of £5.05 (which was the national minimum wage roughly halfway through the data covered in this paper), and so weekly pre-tax earnings of £80.80 correspond to 16 hours a week work, which is a key threshold in the UK's tax credit and welfare system. The figure shows the relationship with and without IWC for a lone parent with one child, and who lives alone, paying and receiving a means-tested rebate on a modest rent.⁸ Without IWC, there is already a notch in the budget constraint at earnings levels which correspond to 16 hours work a week: at this point, lone parents lose entitlement to welfare benefit, but gain entitlement to (the more generous) regular in-work tax credits (*working tax credit*). IWC makes this notch considerably larger, bringing the average effective tax rate on low-earnings work close to zero, which Saez (2001) and Brewer et al. (2010) argue may well be optimal given what we know about lone parents' responsiveness to the financial payoff to work.

A very important point is that lone parents receiving welfare benefits had to fulfil extremely weak conditions in order to maintain eligibility, with no requirement to be working, or even to be looking for work, until their youngest children were aged 16.⁹

⁸The programme that supports renters in the UK, housing benefit, is an entitlement-based programme, which will rebate rents up to locally-determined rent ceilings. It is also available to those in-work, but it has a very steep withdrawal rate. Brewer et al. (2010) identify HB as the single-most important benefit in causing weak incentives to work in the UK. The vast majority of lone parents on welfare are entitled to HB.

⁹Welfare benefits for lone parents have since become less generous and it is now the case that lone parents whose youngest child is aged 5 or over have to look for work and accept reasonable job offers as a condition of receiving welfare benefits: see Avram et al. (2013) for evidence of this reform's impact.

Figure 1: Budget constraint with and without In-Work Credit



Note: Assumes rents of £60 a week that are fully met by Housing Benefit when on welfare.

3 Expected effects of IWC and ERA programmes

A considerable amount is known about conventional in-work credits, and how they affect labour supply, particularly for lone parents in English-speaking countries: see, for example, Brewer et al. (2009b) and references therein. Such research tells us that lone parents are relatively responsive on the extensive margin, leading some to argue that participation tax rates should be set at levels close to zero, or even negative, for such groups (Saez (2001); Brewer et al. (2010))¹⁰

Analysis of US welfare reform can clearly provide insights into the impact of time-limits (e.g. Grogger and Karoly (2005)), but the nature of the welfare experiments and their inherent incentives are rather different from those produced by IWC: debates about time-limits in the US have tended to be about the merits of time-limits on the whole of welfare payments (ie the AFDC or TANF programmes; see Moffitt (2003)) relative to a world where those programmes exist with no time-limits, rather than a time-limit on an in-work supplement relative to a world with no in-work supplement.

The most well-known of the targeted, time-limited, in-work credits is the Canadian Self-Sufficiency Project (SSP), a large-scale demonstration project in

¹⁰The few other targeted, time-limited in-work credits that have been operated in the UK have not been robustly evaluated. The Return to Work credit for people on disability benefits has been evaluated as part of a package of reforms (see Adam et al. (2008)), but the evaluation could not isolate the impact of the credit. For previous UK research on factors associated with lone parents' return to work, see Yeo (2007), D'Souza et al. (2008) and LaValle et al. (2008)

the 1990s which made use of random assignment (Card and Hyslop (2005, 2009) and references therein). The design of IWC has some similarities with SSP – both were available only to lone parents who had spent at least a year on welfare, and both programmes required lone parents to leave welfare and move into work to receive the payments. But SSP was conditional on work of 30 hours a week, rather than 16, and could be paid for 3 years, rather than 1. But it also had some features not found in IWC: first, if lone parents did not move into work within a year of being enrolled into the demonstration programme, then they could never receive SSP; second, once lone parents had received their first SSP payment, they would receive it for each of the next 36 months in which they were in full-time work: in periods out-of-work, no SSP was paid, but a lone parent did not need to spend 12 months back on welfare in order to receive more SSP payments.

Card and Hyslop (2005, 2009) set up a simple search model, and analyse how the SSP affects incentives and behaviour. The changes in incentives induced by IWC and ERA are slightly simpler, but, based on the considerations in Card and Hyslop’s papers, as well as past evidence from similar programmes, the following responses to IWC and ERA are likely:

- (i) IWC should make it more likely that a *potentially eligible* lone parent in a district operating IWC leaves welfare and starts a job of at least 16 hours a week. An income effect might reduce the gross earnings of such jobs or reduce the number of hours worked (but not below 16).¹¹
- (ii) ERA should make it more likely that an eligible lone parent leaves welfare and starts a job of at least 30 hours a week. An income effect might reduce the gross earnings of such jobs or reduce the number of hours worked (but not below 30).
- (iii) Having left welfare for a job, IWC should make it more likely that its recipients stay in work of at least 16 hours a week, but might (through an income effect) reduce moves to higher-earning jobs. This effect may decline gradually throughout the 52 week period of receipt, and may cease entirely when the 52-week time-limit of IWC payments is reached.
- (iv) Having begun to receive ERA payments, ERA should make it more likely that its recipients stay in work of at least 30 hours a week. This effect may cease entirely when the 6 payments have all been made or the individual ceases to be part of the ERA programme, which occurs after 33 months.
- (v) Having begun to receive ERA payments, ERA should make it more likely that a former ERA recipient who is currently not in work of 30 or more hours moves into work of at least 30 hours a week (provided not all 6

¹¹We define that a lone parent is potentially eligible for IWC if they have been receiving Income Support (IS) or Jobseeker’s Allowance (JSA) for at least 12 months and live in a Jobcentre Plus (JCP) district where IWC is being piloted; they would be eligible for IWC if they stopped claiming welfare, started a job of at least 16 hours per week and were living in a JCP district operating IWC at the time.

ERA payments have been made and the individual is still part of the ERA programme).

- (vi) The existence of IWC or ERA may induce some lone parents who would otherwise have left welfare to remain on welfare for longer in order to become potentially eligible for IWC or ERA. We call such responses “anticipation effects”. (Card and Hyslop (2009) find evidence of such anticipation effects for lone parents in Canada who were potentially eligible for the Self-Sufficiency Project (SSP) programme if they remained on welfare for 12 months). For a lone parent who has been on welfare for less than 12 months and is considering delaying his exit from welfare in order to obtain eligibility for IWC, then the benefits would be the discounted value of up to £2,080 in IWC payments, and the direct costs would be the discounted value of the earnings (i.e. net of taxes paid and welfare lost) forgone during the period of delay. A more extreme response is that the existence of IWC or ERA may induce some lone parents who would not have claimed welfare at all to claim welfare in order to become potentially eligible for IWC or ERA.

Responses (i) to (v) are investigated in this paper; some evidence on the first sort of anticipation effect in (vi) for IWC is shown in Brewer et al (2009).

4 Empirical model

We are interested in the impact that IWC and ERA had on initial job entry rates, moves between part-time and full-time employment, and job exits and/or flow rates back on to welfare. Even though we have a supposedly ideal (randomised) comparison group for ERA, and we have a plausible identification strategy for IWC (based on a standard difference-in-differences design across space and time, using the gradual roll out of IWC across Great Britain), both IWC and ERA will, in principle, affect the the composition of lone parents who leave welfare for work, meaning that lone parents who left welfare for work in our comparison group (which in our case refers to lone parents in different districts, having accounted for district fixed effects by using pre-programme data) are not a valid control group for those who are receiving IWC or ERA payments (and are therefore in work). Accordingly, we follow Ham and Lalonde (1996), Eberwein et al. (1997) to estimate a model of transitions on and off welfare, and how these are affected by IWC and ERA.

In our model, we allow lone parents to be in one of 4 (exhaustive and mutually-exclusive) states:

- (i) Receiving out of work welfare benefits (“On welfare”)
- (ii) In work of between 16 and 29 hours per week (“In part-time work”)
- (iii) In work of 30 or more hours per week (“In full-time work”)

- (iv) Neither receiving welfare nor in work of at least 16 hours per week (“None of the above”)

Following Eberwein et al. (1997), we treat the initial state differently,¹² and so there are 5 initial states each with 3 destination states, or 15 different transitions. We model the probability of making a transition from state i to state j at time t as:

$$Pr(s_{t+1} = j | s_t = i) = \frac{U_{ij}}{\sum_k U_{ik}} \quad (1)$$

This is subject to the normalisation that $U_{ii} = 1$ for all i and where:¹³

$$U_{ij} = \exp(X'_{ij}\beta_{ij}) \quad (2)$$

Given a sequence of states, the log-likelihood for an individual is therefore:

$$\log L = \sum_t \sum_{i,j} \mathbf{1}[s_{t+1} = j, s_t = i] \log(Pr(s_{t+1} = j | s_t = i)) \quad (3)$$

We allow for the following policy effects to be included in the vector X_{ij} :^{14 15}

- (i) the probability of transiting from an interrupted spell of welfare to work of 16 or more hours a week depends upon an indicator for being potentially eligible for IWC
- (ii) the probability of transiting from an interrupted spell of welfare to work of 30 or more hours a week depends upon indicators for being potentially eligible for IWC or being in the ERA treatment group
- (iii) the probability of transiting from work of 16 or more hours a week to any other state depends on an indicator for receipt of IWC
- (iv) the probability of transiting from work of 30 or more hours a week to any other state depends on an indicator for receipt of ERA
- (v) the probability of transiting to work of 30 or more hours depends upon an indicator for being a former ERA recipient who is still eligible for further ERA payments.

¹²All individuals are initially observed on welfare, therefore we model the initial “interrupted state” as a separate state to following “fresh” spells on welfare.

¹³As discussed in Section 5, we had access to only a small set of explanatory variables: number of children, age of youngest child, adult’s age, calendar time, duration in current state, indicators for living in each of the pilot phases, as well as local unemployment rates. When the origin state is “on welfare”, these variables are allowed to change over time within a state; when the origin state was anything else than “on welfare”, the covariates other than “calendar time” and “duration” were held fixed according to the characteristics when the lone parent first moved into that state.

¹⁴Our current model assumes no anticipation effects and no post-programme impacts

¹⁵Given that the IWC payments were increased to £60 per week in July 2007, all effects of IWC are allowed to be different for those in London from July 2007 onwards.

Since potential eligibility for IWC and ERA depend upon calendar time and whether a lone parent is living a district operating IWC or ERA (and, for IWC, duration on welfare), these variables are also included as explanatory factors. Having done this, then, the estimated impact of being potentially eligible for IWC or ERA on the transitions off welfare and into work is coming from three sorts of variation:

- from variation in the transition rates between lone parents in pilot and non-pilot districts observed at the same time and with the same duration on welfare;
- from variation in the transition rates between lone parents in the same district and with the same duration on welfare but at different points in calendar time (so that one is observed when IWC or ERA are in operation, and one is not) ¹⁶;
- for IWC only: from variation in the transition rates among lone parents in the same area observed after the introduction of IWC but with different durations on welfare (we control for duration on welfare with a quadratic in the number of months, with a separate indicator for the first month of a spell).
- for ERA only: from variation in the transition rates among lone parents in the same area observed after the introduction of ERA but who are randomised into treatment and control groups.

As is standard in these models (in order to capture explicitly the process that gives rise to dynamic selection bias), the transitions are allowed to depend upon random effects. We assume this random effect, v , a vector of dimension 15, takes a discrete distribution (and so we can think of individuals as being one of M types where such that $Pr(v = v^m) = \pi^m$ and $\sum_{m=1}^M \pi^m = 1$). With unobserved heterogeneity, equation (2) is modified to:

$$U_{ij}|v = v^m = \exp(X'_{ij}\beta_{ij} + v^m_{ij}) \quad (4)$$

and the log-likelihood contribution for an individual becomes¹⁷:

$$\log L = \log \left\{ \sum_m \pi_m \prod_t \prod_{i,j} (Pr(s_{t+1} = j | s_t = i, v = v^m) \mathbf{1}_{[s_{t+1}=j, s_t=i]}) \right\} \quad (5)$$

¹⁶ Authors' note: Current specifications control for calendar time in months linearly. Future versions of this paper will control for this more flexibly

¹⁷ Authors' note: our initial results do not incorporate unobserved heterogeneity, but results due by late summer 2014 will.

5 Data and descriptive analysis

5.1 Data

The focus of this paper is on the impact of IWC and ERA on lone parents formerly on welfare. We make use of administrative data owned by the UK Department for Work and Pensions known as the Work and Pensions Longitudinal Study (WPLS). This consists of on spells on welfare benefits and payments of IWC and ERA, along with self-reported measures of hours worked per week that were reported to HM Revenue and Customs by lone parents who claim a tax credit. For those individuals who claim an out of work benefit, we observe a limited number of their characteristics. In particular, we observe where they are living (at the local-area level), the number of children they have, the age of their youngest child. We also observe their ethnicity, date of birth (so we know their age), and from the benefit records, we can observe whether they were claiming an disability benefit¹⁸ at the point they joined the sample, or in the 3 years previous to that. Given that we observe the local area, from 2004 onwards, we are able to map in the local unemployment rate that individuals face.¹⁹

To estimate the model, we turned the spell-based WPLS data into monthly, discrete-time data, by measuring the economic activity on the first day of each month. We use a set of simple rules to resolve inconsistencies and ensure that, in every month, each individual is in one and only one of the states listed.

Our population of interest is every lone parent who, since 1 May 2003 and whilst on welfare, volunteered to participate in the New Deal for Lone Parents programme.²⁰ This restriction essentially means that we examine the impact of IWC for those lone parents who would have been eligible for the ERA demonstration, which was open only to those in NDLP. We then follow these individuals through until either: the youngest child of the lone parent turns 15, or the lone parent loses their eligibility to claim Income Support (due to the age of their youngest child being too high)²¹, or December 2009, whichever is earliest. As discussed in Section 4, we treat the initial, interrupted, spell differently from subsequent spells on welfare. Our current results are estimated off 10,000 individuals, a sample produced by over-sampling participants in the ERA programme and over-sampling from areas operating IWC was introduced

¹⁸Either Incapacity Benefit, Employment and Support Allowance or Severe Disablement Allowance

¹⁹The level of geogrpahy that we map in local unemployment at is called the "Travel to Work Area" and is publicly available at www.nomisweb.co.uk

²⁰The UK tax credit system was significantly reformed in April 2003. Given our measure of employment and hours is based on records of those on tax credits, the earliest we observe an individual is May 2003

²¹Income Support (an out of work benefit, which does not require any form of job search) was previously claimable by lone parents with children aged under 16. A series of recent reforms have lowered the age of the youngest child at which a lone parent must instead claim Job Seeker's Allowance (an out of work benefit which requires a job search). See Appendix A of Avram et al. (2013) for details on the exact point that lone parents are no longer eligible for Income Support.

prior to the national roll-out.²² This sample of over 10,000 lone parents gives us 395,629 person-month observation points.

Appendix Table 3 shows the number of transitions for individuals in our sample. Over a third (36.1%) of the individuals have no observed transitions (remaining in the initial spell of welfare receipt). A quarter of individuals have one observed transitions, with a small percentage (7.3%) making 6 or more transitions in period that they are observed.

Appendix Table 4 compares the observed characteristics of individuals who are eligible for IWC and do not move into work of 16 or more hours, with those who are eligible for IWC and do move into work. Those who move into work have, on average, been on welfare for fewer months, are older, have an older youngest child and live in an area with a lower unemployment rate. Appendix Table 5 is the equivalent to Table 4 but for the ERA programme.

6 Results

We estimate the model using maximum likelihood estimation. The current results do not incorporate unobserved heterogeneity (as set out in equations 4 and 5) in them.²³ We can learn about the direction of the effects of the policies from inspecting the estimated coefficients of our model. The estimated results are in Appendix Table 4. In summary these results show:

- IWC potential eligibility makes transitions to part-time (and to some extent) full-time work more likely
- IWC receipt decreases the probability of transitions out of work
- IWC receipt make transitions from part-time work to full-time work less likely
- ERA potential eligibility makes transitions from welfare to full-time work more likely
- ERA potential eligibility also makes transitions from part-time work to full-time work more likely
- ERA receipt makes transitions away from full-time work less likely
- Amongst the other variables, lone parents are more likely to leave welfare for work (of any kind), and to stay in work, when their youngest child is older, they have fewer children, and there is a lower local unemployment rate. Men are more likely to move from welfare into full-time work, but are less likely to move into part-time work.

²²When we estimated the model, we therefore use weighted maximum likelihood which gives a weight inversely proportional to the probability of the individual being sampled from the data'.

²³Further updates to this paper will allow for unobserved heterogeneity

6.1 Estimates of the impact of IWC

The duration model can then be used to estimate the impact of IWC by simulating how outcomes would change in the absence of IWC. This is done by using the estimated coefficients and a set of random draws (corresponding to the error terms) to determine whether each transition is simulated to occur. The random draws were calibrated so that the set of draws is consistent with the observed behaviour under the baseline model. In order to understand the effect of the IWC and ERA policies, we simulate each individual’s sequence of transitions having set to zero the indicators for potential eligibility and receipt of IWC and ERA. We simulate the model 100 times (using a different set of calibrated errors in each simulation), and report the average effect across the 100 simulations. This method allows us to simulate outcomes both without only the “retention” effects (i.e., it turns off any link between IWC receipt and transitions out of work), and without all effects of the IWC programme.

First of all we are interested in the effect that the IWC incentives had on those individuals who were ever potentially eligible for it. As background, Figure 2 shows the economic status of individuals who are potentially eligible for IWC, from the first month that they are potentially eligible for the credit. This Figure therefore shows what happened to individuals’ economic status after becoming potentially eligible for IWC. While all individuals are all on welfare at the point they become potentially eligible for IWC, 12 months afterwards, 75% are on welfare, with 13% in part time work and 5% in full-time work (the remaining 7% are in “None of the above”). The proportion of people who are on welfare continues to decline as they are potentially eligible for IWC for longer.

Table 1 shows the simulated effect that the In Work Credit has on the proportion of individuals in each economic status, at different number of months after first becoming potentially eligible for IWC. The left panel of the table shows the simulated impact of the IWC retention effects, and the right panel the total impact of the incentives to both leave welfare and stay in work. We show whether these effects are statistically significant at conventional significance levels, although they only account for simulation error, and not for estimation error.²⁴ The right panel shows that the overall impact of IWC on employment is small, overall, IWC increases the proportion of potentially eligible individuals who are in part-time work by 1.2 percentage points measured 12 months after first being potential eligibility, rising to 1.6 percentage points measured 24 months after first being potentially eligible for IWC. There are also very small negative and insignificant effects of on full time work. Of the total impact of the IWC incentives on part time employment, 12 months after first becoming potentially eligible, about half the total effect can be explained by a lower probability of leaving work due to the IWC policy.

Therefore, there seem to be small retention effects of IWC, also the effects on leaving welfare of potentially eligibility to IWC are also small. The impact of IWC receipt on staying in work can be seen in Figure 3, which shows a survival graph for being in work (16 hours or more) for those individuals who

²⁴Note that the change in proportion in "None of the above" is excluded here.

Figure 2: Economic status since first potentially eligible for IWC

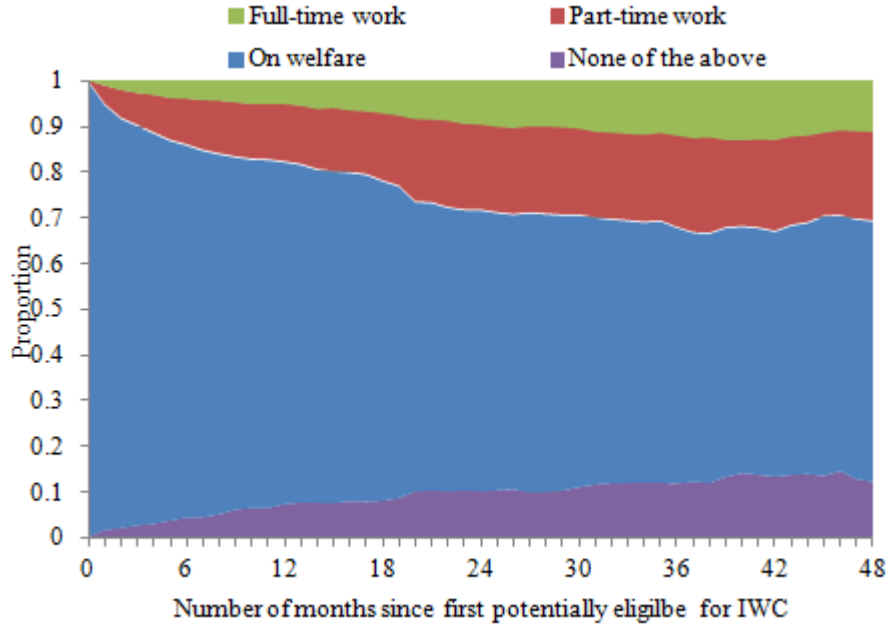
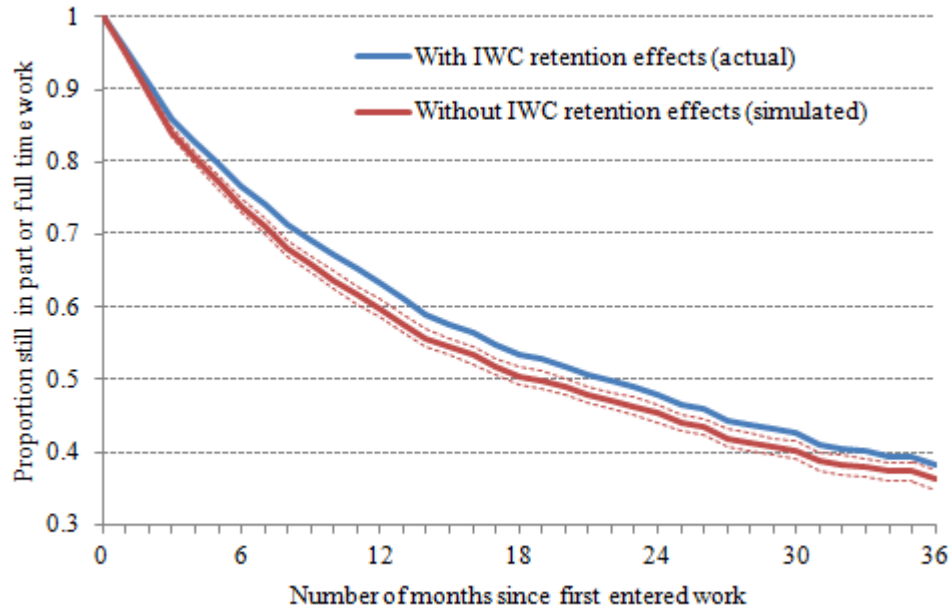


Table 1: Effect of In Work Credit on economic status for those potentially eligible

Months since first potent. eligible for IWC	Effect of IWC on economic status (ppt)					
	Retention effects			All effects		
	On welfare	PT work	FT work	On welfare	PT work	FT work
6	-0.002**	0.003***	0.000	-0.006***	0.009***	-0.001
12	-0.005***	0.006***	0.000	-0.009***	0.012***	-0.002
18	-0.006**	0.006***	0.001	-0.010***	0.013***	-0.001
24	-0.007***	0.009***	0.000	-0.011***	0.016***	-0.003
36	-0.008**	0.009**	0.002	-0.014***	0.020***	-0.002
48	-0.009**	0.007	0.000	-0.020***	0.023***	-0.006

Notes: *** denotes that the effect is significantly different from zero at the 1% level, ** at the 5% level, * at the 10% level. Standard errors only account for simulation error and not for estimation error.

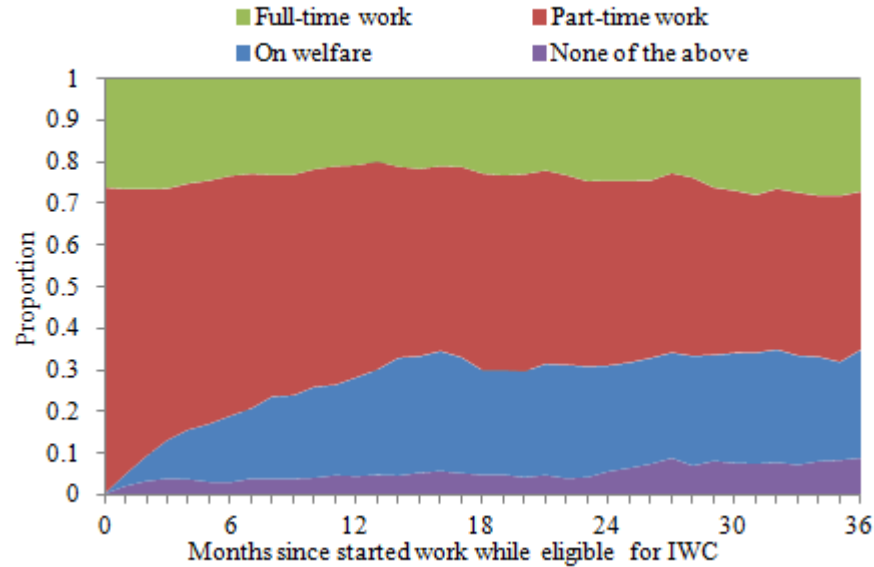
Figure 3: Retention effects of IWC: proportion still in work 16+ hours with and without IWC



entered work while eligible for IWC (i.e. those individuals who actually receive IWC payments). This is shown in blue. It also shows a simulated estimate of the survival probability of being in work without the retention effects of IWC, which is shown in red, where the dashed red lines are the 95% confidence interval around the simulated survival probability. It shows that 6 months after moving into work of at least 16 hours, while 76.7% of individuals who were receiving IWC are still in work, whereas in absence of the IWC payments, only 73.9% are estimated to be in work. After 12 months the equivalent percentages are 63.5% (with IWC) and 59.9% (in absence of IWC payments), although the difference between the two probabilities diminishes over time.

An alternative way to look at the impact of the In work credit policies is to track the economic status of those who receive IWC payments from the point they first receive them, and simulate how that differs in absence of the policies. Figure 4 tracks the actual economic status from first moving into work (and therefore receiving a IWC payment). Consistent with the data shown in Figure 3, the proportion in employment falls quickly after having moved into work. Table 2 shows the simulated effects of the IWC on those who receive IWC payments. The first row shows that, in absence of the policy, 7.4% of those who would have left welfare and moved into work would still have been on welfare

Figure 4: Economic status since moving into work of individuals who receive IWC payments



in the month that they actually moved into work. Within 6 months, in absence of IWC, 6.0% of those who actually would have been receiving In Work Credit payments would have been still on welfare, a combination of the fact that the potential eligibility for IWC payments means that those affected are more likely to leave welfare for work, and that, once in work, they are slightly more likely to stay in work. As has been shown before, for those who receive IWC payments, it only increases their probability of being in part-time work, not of being in full time work.

6.2 Estimates of the impact of ERA

We also simulate outcomes in the absence of the ERA programme. We simulate the model to estimate the impact of potential eligibility for ERA and receipt of ERA payments on economic status in the same way as previously described for estimating the effect of potential eligibility for ERA and receipt of ERA payments. Figure 5 shows, amongst those who are potentially eligible for ERA, the proportion of individuals in each economic status since they are first potentially eligible for ERA. 18 months after first month of potential eligibility for ERA, 18% of the potentially eligible population were in full-time work. It is instructive to see that the proportion of lone parents who are in full time work 18 months after first being potentially eligible for IWC was only 7%, which may not be sur-

Table 2: Effect of IWC on individuals who receive IWC payments

Number of months since first moved into work	Effect of IWC on economic status (ppt)		
	On welfare	PT work	FT work
0	-0.074***	0.067***	0.008***
6	-0.060***	0.065***	0.003
12	-0.048***	0.057***	0.000
18	-0.038***	0.043***	0.003
24	-0.028***	0.032***	0.004
36	-0.027**	0.026**	0.006

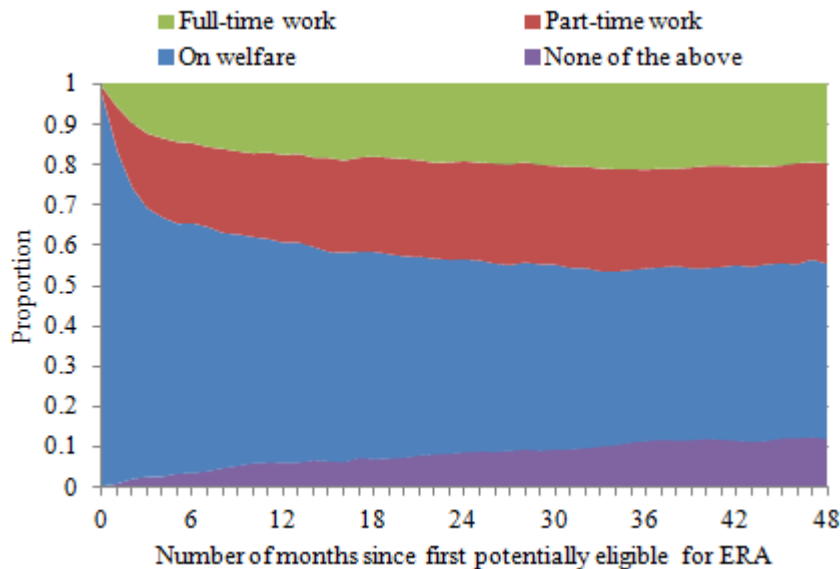
Notes: *** denotes that the effect is significantly different from zero at the 1% level, ** at the 5% level, * at the 10% level.

prising given that the ERA programme only paid the "retention bonus" of £400 per 17 weeks if they were in full-time work for at least 13 of the 17 weeks. Indeed, Table 3 shows the results of the simulated effect of ERA on economic status for those potentially eligible. Within 6 months of being first potentially eligible, the ERA programme increased full-time work by 5.8 percentage points, while it decreased the proportion in part-time work by 0.9 percentage points- therefore, it not only encouraged lone parents to leave welfare for full-time work, but it encouraged lone parents who would have moved into part-time work to take jobs with longer hours. The proportion of lone parents who are in full-time work due to the ERA programme actually increases over time (to 8.3 percentage points after 24 months) and the negative effect on ERA of part-time also gets larger (in absolute terms) over time, while the total effect on welfare remains relatively constant over time, at between 4.5 percentage points and 5.5 percentage points. Importantly, these effects are larger than those for In-Work Credit, despite the lower value (in weekly terms) of the ERA retention payments than IWC (although ERA is available for up to 24 months, while IWC payments are only paid for 12 months).²⁵

The left hand panel of Table 3 shows the impact of the receipt of ERA payments (through job retention effects) on economic status since first becoming potentially eligible for ERA. It shows that, after 6 months of first becoming potentially eligible, the incentive that ERA provides to stay in work does not have a large effect on lone parents' economic status. This is not surprising, as individuals must first move into full-time work before they actually receive the ERA payments. However, it shows that, in subsequent months and years, that the incentive of the ERA payment to keep individuals in full time work through job retention effects significantly increases the proportion in full time work. 24 months after first becoming potentially eligible, the incentives provided by ERA payments to remain in full-time work increase the proportion of lone

²⁵The different structure of the programmes may also encourage a larger initial response to the ERA programme than the IWC incentives, because, ERA payments were paid for up to 24 months, no payments were paid after 33 months since joining the programme. Therefore in order to get the full amount of payments, this would encourage lone parents to enter (full-time) within 9 months of becoming potentially eligible. For IWC, there was no such restriction.

Figure 5: Economic status since first potentially eligible for ERA



parents on FT work by 4.1 percentage points. This means, of the total effect on ERA on full-time work after 24 months (8.3percentage points), about half is caused by the lower incentive to leave full-time work. Job retentions of ERA also reduces the probability of being in part-time work by 1.5percentage points, implying that the ERA payments discourage lone parents from moving from full to part time jobs. (It also reduces the proportion leaving work for out of work welfare benefits). These retention effects persist, such that 36 months after first becoming potentially eligible (at which point the lone parent is no longer eligible for ERA payments), the retention effects of ERA increase the proportion in full-time work by 3.9 percentage points.

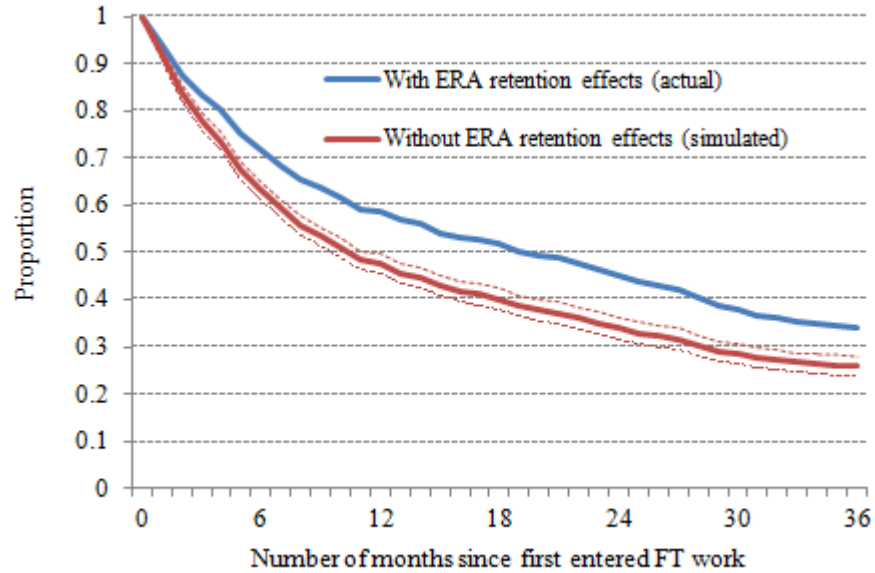
Table 3: Effect of ERA on economic status for those potentially eligible

Months since first potent. eligible for ERA	Effect of ERA on economic status (ppt)					
	Retention effects			All effects		
	On welfare	PT work	FT work	On welfare	PT work	FT work
6	-0.006***	-0.005**	0.014***	-0.046***	-0.009***	0.058***
12	-0.012***	-0.010***	0.027***	-0.050***	-0.019***	0.072***
18	-0.015***	-0.012***	0.036***	-0.052***	-0.020***	0.077***
24	-0.018***	-0.015***	0.041***	-0.054***	-0.023***	0.083***
36	-0.018***	-0.013***	0.039***	-0.047***	-0.019***	0.074***
48	-0.012***	-0.009**	0.028***	-0.029***	-0.013**	0.050***

Notes: *** denotes that the effect is significantly different from zero at the 1% level, ** at the 5% level, * at the 10% level.

The sizeable retention effects of the ERA programme are explored further in Figure 6. 12 months after having moved into work, only 59% of those who

Figure 6: Retention effects on those who moved into full time work while potentially eligible for ERA



moved into full-time work while potentially eligible for ERA were still in work. Our results suggest that in absence of the ERA payments, 11 percent fewer of the lone parents who received ERA payments would still be in full-time work. This gap between the proportion of those who ever received the ERA payments persists even after 24 months since moving into work, which is the maximum amount of time that ERA payments could be claimed for.

Finally, another way of looking at the effect of ERA is to look at the economic status of those who were potentially eligible for ERA payments and who moved into work. Table 4 shows the total effect of the ERA programme on these people. This shows that, at the point of moving into full-time work (the first row “0 months” in the Table), almost 40% of them would not be in full-time work at that point. This is another way of showing that potential eligibility for had a significant impact on leaving welfare for full time work. The fact that there remains a positive effect in the subsequent months indicates the significant retention effects of receiving ERA payments, although the total impact on the economic activity of the ERA programme on this “treated” group diminishes over time.

Figure 7: Economic status since moving into full-time work of individuals who received ERA payments

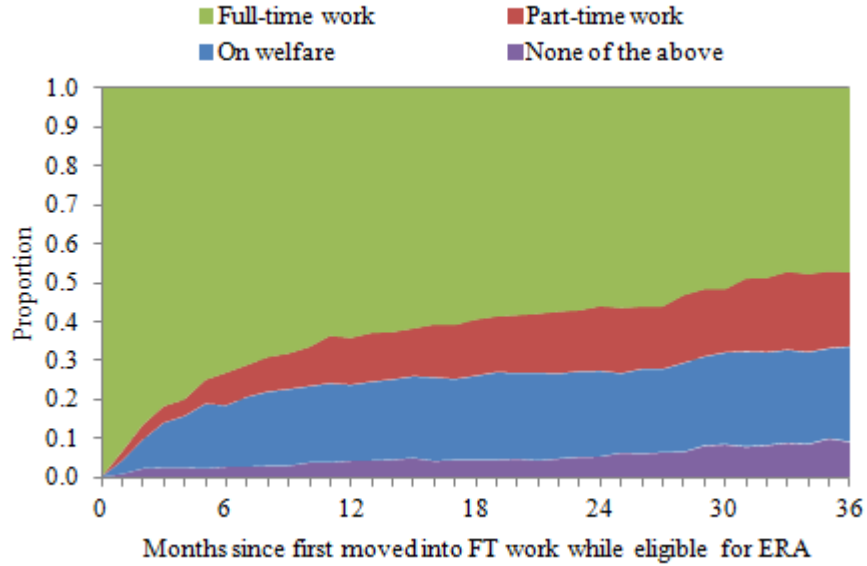


Table 4: Effect of ERA on individuals who receive ERA payments

Number of months since first moved into FT work	Effect of ERA on economic status (ppt)		
	On welfare	PT work	FT work
0	-0.332***	-0.062***	0.399***
6	-0.211***	-0.070***	0.304***
12	-0.178***	-0.073***	0.280***
18	-0.165***	-0.067***	0.265***
24	-0.150***	-0.064***	0.248***
36	-0.111***	-0.046***	0.181***

Notes: *** denotes that the effect is significantly different from zero at the 1% level, ** at the 5% level, * at the 10% level.

7 Conclusion

Conventional in-work benefits, such as Working Tax Credit in the UK and the Earned Income Tax Credit in the United States, are not time-limited. However, especially at a time when government budgets are under pressure, time-limited in-work benefits may be one option for governments to use in order to encourage lone parents into work. It is important to understand how time-limited benefits affect the dynamics of work and welfare; that is, the probabilities of both leaving welfare to go into work and the probability of remaining in work once individuals have started working. This paper seeks to evaluate the effect of two time-limited in-work benefits which were introduced in the UK in the 2000s on the economic activity of lone parents. These two benefits, known as “In-Work Credit” (IWC) and “Employment, Retention and Advancement Demonstration” (ERA) differed in both the amounts offered if they move into work, and the number of hours needed in order to qualify to receive them. Importantly, ERA was only paid upon moving into full-time work (of at least 30 hours per week), while IWC was payable conditional on working at least 16 hours per week.

Using rich administrative data on welfare spells and time (and number of hours) in employment, we assess both the IWC and ERA programmes within a common empirical framework. We use a multi-spell, multi-state duration model (similar to Ham and Lalonde (1996) and Eberwein et al. (1997)) to understand how both policies affect transitions into and out of work. By incorporating unobserved heterogeneity [which is not yet incorporated in the results in this version of the paper], we are able to model explicitly the process which gives rise to dynamic selection bias. Using a model which does not incorporate unobserved heterogeneity, the effects of incentives provided to lone parents to leave work and remain in work by the In-Work Credit are found to be only small. IWC is found to increase the probability of leaving welfare to enter part-time work a small amount (smaller than previous work evaluating IWC such as Brewer et al. (2011)), although we restrict interest to those who have been on the New Deal for Lone Parents programme, in order to be comparable to the ERA programme participants). We also find some small effects of IWC of job retention: the receipt of IWC reduces the probability of leaving work too.

In comparison to the IWC policy, the effect on leaving welfare and entering work of potential eligibility for ERA are large and significant. ERA increased the proportion of those potentially eligible for the payments who are in full-time work by almost 6 percentage points within 6 months of first becoming potentially eligible for ERA, effects which become larger in magnitude up to 24 months after first becoming potentially eligible for the payments. Part of this effect comes due to higher retention in full-time for those who receive the payments: receipt of the ERA payments led to significantly lower probability of leaving full-time work. Moreover, receipt of the ERA payments significantly decreased the probability that individuals would be in part-time work, implying that the fact that the payment was conditional on working 30 hours or more per week led to some lone parents moving into (and staying in) full time work instead of part-time work.

While we find that ERA had strong effects on both moving into work and, once there, on staying in work, it is unclear at the moment why this programme was more effective at incentivising work than the In-Work Credit policies, especially since IWC was a larger weekly payment than the ERA payments. We will seek to update this analysis to incorporate unobserved heterogeneity into our model in order to account for process which leads to dynamic selection bias. Moreover, one reason why policymakers may care about job retention, and therefore encouraging lone parents into long term work (rather than short spells of work, cycling on and off out-of-work welfare benefits) may be the extent to which lone parents are able to develop the skills needed to command a higher wage in the labour market. Future work should consider examining the effect of these in-work benefit policies on wages and earnings to supplement the evidence existing on employment and hours of work.

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A Appendix

A.1 Further details of the IWC and ERA policies

In-Work Credit was rolled out in 6 phases (the names refer to the Jobcentre Plus districts; there are around 90 of these districts in Great Britain)

- Phase 1 (April 2004): Bradford; North London; South-East London.
- Phase 2 (October 2004): Cardiff & Vale; Central London; Dudley & Sandwell; Edinburgh, Lothian & Borders; Lancashire West; Leeds; Leicestershire; Staffordshire; West London.
- Phase 3 (April 2005): Brent, Harrow & Hillingdon; City & East London; Lambeth, Southwark & Wandsworth; South London.
- Phase 4 (October 2005): Bedfordshire & Hertfordshire; Berkshire, Buckinghamshire & Oxfordshire; Essex; Hampshire & the Isle of Wight; Kent; Surrey & Sussex.
- Phase 5 (January 2008): North East London, Birmingham and Solihull.
- National roll-out (April 2008): all other parts of Great Britain.

In July 2007, IWC payments were increased to £60 a week in London.

The ERA programme was introduced in 6 Jobcentre Plus Districts: South East Wales, Derbyshire, East London, Gateshead, Manchester and Renfrewshire. Randomisation into the ERA programme occurred between December 2003 and November 2004.

A.2 Supplementary tables

Table 5: Number of observed transitions

<i>Number of transitions</i>	<i>Number</i>	<i>Proportion</i>
0	3,601	36.01%
1	2,371	23.71%
2	1,319	13.19%
3	1,029	10.29%
4	577	5.77%
5	404	4.04%
6 or more	699	6.99%
Total	10,000	100.00%

Table 6: Characteristics of IWC potentially eligible individuals who do and do not move into work, measured at period of first potential eligibility

<i>Characteristic</i>	Eligible for IWC, not move into PT/ FT work		Eligible for IWC, move into PT/ FT work	
	<i>Mean</i>	<i>Std. Dev.</i>	<i>Mean</i>	<i>Std. Dev.</i>
Months in current spell of welfare	52.44	48.14	39.59	37.75
Age	31.88	7.90	31.22	7.48
White	0.76	0.43	0.75	0.43
Age of youngest child	5.70	3.67	5.19	3.45
unemployment rate	6.96	1.97	6.26	1.84
Number of children	1.79	0.98	1.68	0.87
London	0.28	0.45	0.26	0.44
Female	0.96	0.20	0.97	0.17
IWC Phase area 1	0.07	0.26	0.09	0.29
IWC Phase area 2	0.13	0.34	0.19	0.39
IWC Phase area 3	0.09	0.28	0.10	0.30
IWC Phase area 4	0.17	0.38	0.24	0.42
IWC Phase are 5	0.12	0.33	0.06	0.24
IWC area: national roll out	0.42	0.49	0.32	0.47
Number of individuals	4165		1553	

Table 7: Characteristics of ERA potentially eligible individuals who do and do not move into FT work, measured at period of first potential eligibility

<i>Characteristic</i>	Eligible for ERA, not move into FT work		Eligible for ERA, move into FT work	
	<i>Mean</i>	<i>Std. Dev.</i>	<i>Mean</i>	<i>Std. Dev.</i>
Months in current spell of welfare	43.06	46.01	31.29	41.56
Age	30.82	8.11	31.65	7.69
White	0.82	0.39	0.74	0.44
Age of youngest child	5.38	3.88	5.71	4.10
Unemployment rate	5.62	1.10	5.41	1.61
Number of children	1.65	0.87	1.66	0.84
London	0.24	0.43	0.24	0.43
Female	0.96	0.19	0.96	0.20
Number of individuals	998		486	

Table 8: Results from multi-state multi-spell duration model

	Coefficient	Standard Error	T-stat
<i>Welfare to part-time work (interrupted)</i>			
Potentially eligible for IWC next month	0.017	0.057	0.3
Potentially eligible for IWC next month (and in London post July 2007)	0.382	0.246	1.56
Duration in current spell	-0.039	0.003	-13.91
Duration squared	0.000	0.000	8.72
Duration cubed	0.000	0.000	-6.99
Age	0.006	0.003	2.07
Female	1.219	0.120	10.13
White	-0.128	0.047	-2.69
Number of children	-0.066	0.020	-3.3
Age of youngest child	0.010	0.006	1.61
Claimed dis. benefit in 3 years pre joining NDLP	-0.013	0.059	-0.22
Claimed when joined NDLP	-0.710	0.132	-5.39
Local unemployment rate	-0.039	0.012	-3.28
<i>Welfare to full-time work (interrupted)</i>			
Potentially eligible for IWC next month	-0.104	0.090	-1.15
Potentially eligible for IWC next month (and in London post July 2007)	0.253	0.282	0.9
Potentially eligible for ERA next month	0.574	0.358	1.6
Duration in current spell	-0.045	0.005	-9.9
Duration squared	0.000	0.000	5
Duration cubed	0.000	0.000	-3.56
Age	-0.012	0.005	-2.45
Female	-0.392	0.095	-4.12
White	-0.466	0.068	-6.86
Number of children	-0.071	0.033	-2.17
Age of youngest child	0.069	0.009	7.29
Claimed dis. benefit in 3 years pre joining NDLP	-0.089	0.096	-0.92
Claimed when joined NDLP	0.246	0.158	1.56
Local unemployment rate	-0.025	0.019	-1.27
<i>Welfare to "None of the above" (interrupted)</i>			
Duration in current spell	-0.017	0.004	-4.54
Duration squared	0.000	0.000	1.83
Duration cubed	0.000	0.000	-1.17
Age	-0.020	0.005	-4.35
Female	-0.193	0.113	-1.71
White	-0.148	0.066	-2.23
Number of children	0.122	0.026	4.61
Age of youngest child	0.006	0.009	0.61
Claimed dis. benefit in 3 years pre joining NDLP	-0.307	0.092	-3.33
Claimed when joined NDLP	-0.440	0.194	-2.27
Local unemployment rate	-0.004	0.016	-0.23

	Coefficient	Standard Error	T-stat
<i>Welfare to part-time work (fresh)</i>			
Potentially eligible for IWC next month	0.265	0.112	2.35
Potentially eligible for IWC next month (and in London post July 2007)	0.276	0.289	0.95
First period in spell	-0.766	0.141	-5.43
Duration in current spell	-0.054	0.020	-2.68
Duration squared	0.001	0.001	1.19
Duration cubed	0.000	0.000	-1.14
Age	0.011	0.005	2.18
Female	1.126	0.237	4.75
White	-0.193	0.083	-2.33
Number of children	-0.341	0.040	-8.45
Age of youngest child	0.034	0.011	3.1
Claimed dis. benefit in 3 years pre joining NDLP	-0.232	0.104	-2.23
Claimed when joined NDLP	-0.501	0.260	-1.93
Local unemployment rate	-0.042	0.019	-2.2
<i>Welfare to full-time work (fresh)</i>			
Potentially eligible for IWC next month	0.008	0.174	0.05
Potentially eligible for IWC next month (and in London post July 2007)	-0.045	0.406	-0.11
Potentially eligible for ERA next month	0.408	0.640	0.64
First period in spell	-0.656	0.173	-3.8
Duration in current spell	-0.070	0.025	-2.84
Duration squared	0.001	0.001	0.61
Duration cubed	0.000	0.000	0.09
Age	-0.029	0.008	-3.83
Female	-1.329	0.142	-9.35
White	-0.508	0.104	-4.87
Number of children	-0.097	0.053	-1.82
Age of youngest child	0.045	0.015	3.05
Claimed dis. benefit in 3 years pre joining NDLP	-0.317	0.143	-2.22
Claimed when joined NDLP	0.402	0.271	1.49
Local unemployment rate	-0.022	0.027	-0.81
<i>Welfare to "None of the above" (fresh)</i>			
First period in spell	-0.761	0.175	-4.35
Duration in current spell	-0.036	0.021	-1.77
Duration squared	0.000	0.001	0.3
Duration cubed	0.000	0.000	0.11
Age	-0.009	0.007	-1.32
Female	-0.436	0.172	-2.54
White	-0.384	0.097	-3.98
Number of children	-0.098	0.045	-2.2
Age of youngest child	-0.020	0.014	-1.48
Claimed dis. benefit in 3 years pre joining NDLP	0.021	0.111	0.19
Claimed when joined NDLP	-0.615	0.310	-1.99
Local unemployment rate	-0.016	0.023	-0.71

	Coefficient	Standard Error	T-stat
<i>Part-time work to welfare</i>			
Potentially eligible for IWC next month	-0.134	0.093	-1.44
Potentially eligible for IWC next month (and in London post July 2007)	0.010	0.293	0.03
First period in spell	-0.015	0.096	-0.16
Duration in current spell	-0.107	0.017	-6.42
Duration squared	0.004	0.001	3.76
Duration cubed	0.000	0.000	-3.18
Age	-0.009	0.005	-1.81
Female	-0.577	0.174	-3.31
White	0.215	0.071	3.01
Number of children	-0.072	0.034	-2.11
Age of youngest child	-0.030	0.010	-3.02
Claimed dis. benefit in 3 years pre joining NDLP	0.369	0.082	4.48
Claimed when joined NDLP	-0.352	0.214	-1.65
Local unemployment rate	0.026	0.016	1.62
<i>Part-time work to full-time work</i>			
Potentially eligible for IWC next month	-0.402	0.146	-2.76
Potentially eligible for IWC next month (and in London post July 2007)	0.084	0.394	0.21
Potentially eligible for ERA next month	0.307	0.582	0.53
First period in spell	0.117	0.151	0.77
Duration in current spell	-0.003	0.019	-0.16
Duration squared	-0.001	0.001	-1.52
Duration cubed	0.000	0.000	2.01
Age	-0.003	0.007	-0.44
Female	-0.822	0.215	-3.82
White	-0.229	0.088	-2.58
Number of children	-0.069	0.047	-1.46
Age of youngest child	0.022	0.014	1.64
Claimed dis. benefit in 3 years pre joining NDLP	0.400	0.120	3.32
Claimed when joined NDLP	-0.217	0.279	-0.78
Local unemployment rate	-0.015	0.023	-0.68
<i>Part-time work to "None of the above"</i>			
Potentially eligible for IWC next month	-0.058	0.103	-0.57
Potentially eligible for IWC next month (and in London post July 2007)	-0.071	0.302	-0.24
First period in spell	0.005	0.108	0.05
Duration in current spell	-0.095	0.019	-4.95
Duration squared	0.004	0.001	3.32
Duration cubed	0.000	0.000	-3.23
Age	-0.022	0.005	-3.98
Female	0.943	0.387	2.44
White	0.308	0.079	3.9
Number of children	-0.075	0.038	-1.99
Age of youngest child	0.002	0.011	0.21
Claimed dis. benefit in 3 years pre joining NDLP	0.121	0.099	1.21
Claimed when joined NDLP	0.046	0.230	0.2
Local unemployment rate	-0.017	0.017	-0.99

	Coefficient	Standard Error	T-stat
<i>Full-time work to welfare</i>			
Potentially eligible for IWC next month	-0.403	0.152	-2.64
Potentially eligible for IWC next month (and in London post July 2007)	0.292	0.375	0.78
Potentially eligible for ERA next month	-0.521	0.786	-0.66
First period in spell	-0.040	0.130	-0.31
Duration in current spell	-0.107	0.021	-5.17
Duration squared	0.002	0.001	1.65
Duration cubed	0.000	0.000	-0.28
Age	-0.007	0.007	-0.94
Female	-1.102	0.121	-9.09
White	-0.094	0.092	-1.03
Number of children	-0.024	0.049	-0.49
Age of youngest child	-0.081	0.013	-6.22
Claimed dis. benefit in 3 years pre joining NDLP	-0.132	0.134	-0.99
Claimed when joined NDLP	0.414	0.216	1.91
Local unemployment rate	0.038	0.025	1.51
<i>Full-time work to part-time work</i>			
Potentially eligible for IWC next month	-0.024	0.168	-0.14
Potentially eligible for IWC next month (and in London post July 2007)	0.127	0.434	0.29
Potentially eligible for ERA next month	-0.829	1.039	-0.8
First period in spell	-0.269	0.179	-1.51
Duration in current spell	-0.087	0.025	-3.42
Duration squared	0.003	0.001	2.08
Duration cubed	0.000	0.000	-1.66
Age	-0.001	0.008	-0.1
Female	-0.013	0.202	-0.06
White	-0.281	0.102	-2.75
Number of children	-0.085	0.059	-1.45
Age of youngest child	-0.040	0.016	-2.5
Claimed dis. benefit in 3 years pre joining NDLP	-0.011	0.149	-0.08
Claimed when joined NDLP	-0.289	0.292	-0.99
Local unemployment rate	0.071	0.028	2.56
<i>Full-time work to "None of the above"</i>			
Potentially eligible for IWC next month	-0.320	0.174	-1.83
Potentially eligible for IWC next month (and in London post July 2007)	0.606	0.410	1.48
Potentially eligible for ERA next month	-0.750	0.989	-0.76
First period in spell	0.115	0.173	0.66
Duration in current spell	-0.022	0.026	-0.87
Duration squared	-0.002	0.001	-1.54
Duration cubed	0.000	0.000	1.85
Age	-0.008	0.009	-0.89
Female	-0.248	0.192	-1.29
White	0.208	0.118	1.76
Number of children	-0.021	0.062	-0.34
Age of youngest child	-0.040	0.017	-2.36
Claimed dis. benefit in 3 years pre joining NDLP	0.249	0.145	1.72
Claimed when joined NDLP	-0.444	0.320	-1.39
Local unemployment rate	-0.032	0.028	-1.13

	Coefficient	Standard Error	T-stat
<i>"None of the above" to welfare</i>			
First period in spell	1.111	0.077	14.38
Duration in current spell	-0.175	0.020	-8.95
Duration squared	0.006	0.001	4.64
Duration cubed	0.000	0.000	-3.21
Age	0.003	0.004	0.72
Female	-0.177	0.119	-1.49
White	0.065	0.065	0.99
Number of children	-0.156	0.031	-5.03
Age of youngest child	-0.062	0.009	-6.98
Claimed dis. benefit in 3 years pre joining NDLP	0.192	0.079	2.42
Claimed when joined NDLP	-0.001	0.192	-0.01
Local unemployment rate	0.004	0.015	0.27
<i>"None of the above" to part-time work</i>			
First period in spell	0.851	0.125	6.78
Duration in current spell	-0.197	0.033	-5.93
Duration squared	0.010	0.002	4.48
Duration cubed	0.000	0.000	-3.83
Age	0.002	0.007	0.25
Female	2.497	0.535	4.67
White	0.288	0.107	2.68
Number of children	-0.144	0.049	-2.97
Age of youngest child	0.006	0.013	0.44
Claimed dis. benefit in 3 years pre joining NDLP	-0.370	0.153	-2.41
Claimed when joined NDLP	0.215	0.336	0.64
Local unemployment rate	-0.007	0.024	-0.29
<i>"None of the above" to full-time work</i>			
Potentially eligible for ERA next month	-0.227	1.057	-0.21
First period in spell	0.442	0.172	2.57
Duration in current spell	-0.293	0.046	-6.33
Duration squared	0.011	0.003	3.71
Duration cubed	0.000	0.000	-2.53
Age	0.005	0.011	0.5
Female	0.573	0.321	1.78
White	-0.458	0.134	-3.41
Number of children	-0.061	0.072	-0.85
Age of youngest child	0.041	0.021	1.98
Claimed dis. benefit in 3 years pre joining NDLP	0.231	0.205	1.13
Claimed when joined NDLP	0.195	0.381	0.51
Local unemployment rate	0.002	0.038	0.06

Regressors included in estimation but omitted from the table are: area dummies for each phase area, in calendar time (linear and quadratic terms), time dummies for each phase area and London, unemployment rate missing indicator and a constant.