A cost-benefit analysis of Pathways to Work for new and repeat incapacity benefits claimants.

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A report of research carried out by the Institute for Fiscal Studies, University of Maryland and Policy Studies Institute on behalf of the Department for Work and Pensions

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The Authors

Stuart Adam is a senior research economist at the Institute for Fiscal Studies.

Antoine Bozio is a research economist at the Institute for Fiscal Studies.

Carl Emmerson is deputy director of the Institute for Fiscal Studies and programme director of their work on pensions, saving and public finances.

David Greenberg is a professor emeritus of economics at the University of Maryland Baltimore County and a Visiting Research Fellow of the Policy Studies Institute.

Genevieve Knight is a Principal Research Fellow at the Policy Studies Institute.

Glossary and abbreviations

ADF	Adviser Discretionary Fund
CMP	Condition Management Programme
CTB	Council Tax Benefit
CTC	Child Tax Credit
DLA	Disability Living Allowance
DWP	Department for Work and Pensions
FRS	Family Resources Study
HB	Housing Benefit
IB	Incapacity Benefit
IBPA	Incapacity Benefit Personal Adviser
IIA	Independence from Irrelevant Alternatives
Incapacity benefits	Incapacity Benefit or Income Support claimed on the grounds of disability
IS	Income Support
JSA	Jobseeker's Allowance
LA	Local authority
NatCen	National Centre for Social Research
NBD	National Benefits Database
NDDP	New Deal for Disabled People
OLS	Ordinary Least Squares

Pathways	The Pathways to Work programme
PCA	Personal Capability Assessment
PED	Pathways to Work Evaluation Dataset
PSI	Policy Studies Institute
RTWC	Return to Work Credit
SDA	Severe Disablement Allowance
SSP	Statutory Sick Pay
TAXBEN	Tax and Benefit Microsimulation Model
UMBC	University of Maryland Baltimore County
WFI	Work Focused Interview
WTC	Working Tax Credit

Summary

The Pathways to Work package of reforms ('Pathways', for short) is intended to encourage employment among people claiming incapacity benefits; that is, people claiming Incapacity Benefit (IB), Income Support (IS) on grounds of disability or Severe Disablement Allowance (SDA). The programme is a response to large increases in the numbers claiming incapacity benefits that occurred in the ten years up to 1995 and is part of the Government's strategy to reduce the numbers receiving these benefits from 2.74 million in 2005 to 1.74 million or fewer by 2015. Pathways was introduced on a pilot basis in three Jobcentre Plus districts in October 2003 and in a further four districts in April 2004. Since then, Pathways has been rolled out to additional districts. In April 2008, all new incapacity benefits claimants in Britain became eligible for Pathways.

Under Pathways, an individual aged between 18 and 60 making a claim for incapacity benefits must attend an initial Work Focused Interview (WFI) with an IB Personal Adviser (IBPA) eight weeks after making their claim. Failure to comply with this requirement can result in benefits sanctions, although these have been rare in practice. Most people remaining on incapacity benefits must attend five further WFIs. There are two groups of people for whom the five follow-up WFIs are not required: those with particularly severe medical conditions and those judged likely to return to work within 12 months without additional help. Claimants from both these groups can still participate on a voluntary basis. In non-Pathways areas, only the initial WFI is required.

Participation in the other provision available under Pathways is voluntary. These programme components include:

- The 'Choices' package offers a range of new and existing programme provision aimed at improving labour market readiness and opportunities. The two main programmes within Choices are the New Deal for Disabled People (NDDP) and the Condition Management Programme (CMP). The CMP, which is only offered to Pathways participants, is a new initiative, run in collaboration with local health providers, with the aim of helping individuals to manage their disability or health condition. Choices also covers smaller existing programmes including Workstep, Work Preparation, and Work Based Learning for Adults.

- The Return to Work Credit (RTWC) offers Pathways participants who find work of at least 16 hours a week a payment of £40 per week for up to a year if their gross annual earnings are no more than £15,000. The RTWC is only offered to Pathways participants.
- The Adviser Discretionary Fund (ADF) allows IBPAs to make awards of up to £300 per individual within a 12-month period to support activities or purchases to increase their chances of finding work. These funds are also available in non-Pathways areas but it was anticipated that their use would increase under Pathways.

Pathways is currently being evaluated by a consortium of research organisations using both quantitative and qualitative techniques to examine various aspects of the reforms. This report focuses on whether the benefits from Pathways exceeded its costs within the original seven Jobcentre Plus districts and on the extent to which the evidence from the initial seven pilot areas might also apply to the rest of Great Britain. The study is limited to new and repeat IB claimants. A similar study of existing IB claimants is set to be completed in 2009.

Key findings

Overall, the financial benefits of Pathways that we estimated significantly exceed the estimated financial costs, with net measured benefits both to Pathways participants and to the Exchequer. As with other cost-benefit studies of this kind, there are uncertainties around these estimates. Below, we discuss two of these, how long the policy's effects last and potential costs and benefits we do not measure.

The estimates of costs and benefits reported here are averaged over all individuals who made an enquiry about incapacity benefits, regardless of whether they ultimately claimed a benefit or took active part in Pathways. About 78 per cent of those making an enquiry became claimants.

- **Participation in Pathways' components.** The cost and benefits of Pathways depend on the extent to which individuals who made an enquiry about incapacity benefits ultimately participated in the programme's components. About 20 per cent of those who made an enquiry between April 2005 and March 2006 in the original seven Pathways pilot sites took part in at least one mandated work-focused follow-up interview, almost ten per cent received RTWC awards and a little over five per cent were referred to CMP. All these programme provisions were only available in Pathways districts. Pathways had a small to negligible effect on participation in the remaining programme components. Thus, it seems likely that the benefits from and costs of Pathways are mainly attributable to the follow-up WFIs, the RTWC and CMP.

- **Pathways' measured costs.** The average net cost of Pathways for individuals who made an incapacity benefits enquiry was £340. Expenditures on the additional staff needed at Jobcentre Plus offices accounted for almost 30 per cent of these costs, expenditures on CMP a little under 20 per cent and RTWC awards about 40 per cent. The cost of Pathways per enquiry is rather low because a fairly small percentage of individuals who made enquiries about incapacity benefits participated in the components of Pathways. The cost of a referral to CMP was a little over £1,000, on average, and the average RTWC award for those who received one was nearly £1,500 (compared to a maximum of £40 x 52 weeks = £2,080). The cost of Jobcentre Plus staff was £550 per person who attended at least one follow-up WFI. Although not all of the staff costs are attributable to people attending follow-up WFIs, most are.
- **Pathways' measured benefits.** In line with previous research, we find that Pathways increased the likelihood that individuals making an enquiry about claiming incapacity benefits would be in paid work 18 months later, and that it caused some individuals who would, in any case, have moved off incapacity benefits within 12 months to leave benefits somewhat more quickly. Pathways, thus, seems to have increased employment primarily among those who would have left incapacity benefits within a year even in the absence of the programme. It is not known how long the effects of Pathways last, however, so there is some uncertainty about the size of the benefits generated by the programme. If it is conservatively assumed that Pathways' effects continue for 70 weeks, the measured benefits are estimated to be £1,041 per person making an incapacity benefits enquiry, with £526 of this amount accounted for by increases in the disposable incomes of the individuals making enquiries about incapacity benefits and £515 accruing to the Exchequer. If, instead, it is more optimistically assumed that programme effects persist for 150 weeks, Pathways' benefits are estimated to total £2,023, with £935 accruing to individuals and £1,088 to the Exchequer. The increases in the disposable incomes of individuals are mainly attributable to the increased earnings that result from Pathways. In addition, when individuals enter employment because of Pathways, they receive tax credits and RTWC. The increases in income more than offset the reductions in Government benefit payments and increases in tax payments that also accompany earnings increases. Benefits to the Exchequer are attributable to a variety of sources, the most important of which are reductions in outlays on incapacity benefits payments, increases in tax receipts and increases in National Insurance contributions.
- **Pathways' net measured benefits to the Exchequer.** Combining the cost and benefit estimates discussed in the previous two bullet points implies that the Exchequer's budgetary position improved by £175 per incapacity benefits enquiry as a result of Pathways if programme effects lasted for 70 weeks (benefits of £515 less costs of £340) or by £748 per enquiry (£1,088 – £340) if programme effects continued for 150 weeks. This corresponds to a return to the Exchequer of £1.51 (£515/£340) for each pound invested in Pathways if programme effects lasted for 70 weeks or £3.20 (£1,088/£340) per pound invested if Pathways' effects lasted for 150 weeks.

- **Pathways' net measured benefits to society.** Net measured benefits for society as whole – that is, the sum of the net benefits that accrued to individuals making enquiries and the net effect on the Exchequer's budgetary position – are £701 (£526 + £175) if programme effects continued for 70 weeks or £1,683 (£935 + £748) if they continued for 150 weeks, implying returns of £3.06 or £5.95 respectively per pound invested.

Omitted costs and benefits

There are a number of potential costs and benefits that were not incorporated into the cost-benefit estimates reported above because they are difficult or costly to estimate and, in some cases, are not naturally measured in pounds. These include possible programme effects on the:

- work-related expenditures of Pathways participants;
- non-work time available to Pathways participants;
- benefit payments and employment status of non-Pathways participants;
- utilisation of the NHS;
- health status of Pathways participants;
- quality of life of Pathways participants;
- costs of administering (for the Government) and claiming/complying with (for individuals) tax and benefit payments;
- deadweight losses that result from taxes;
- reaction of the public to reductions in the incapacity benefits rolls.

Some of these omitted factors will have increased the benefits of the policy and others will have reduced them. However, any conclusions about the importance of the unmeasured costs and benefits of Pathways must ultimately be a matter of judgement

Further results

- The main set of results pertains to new and repeat incapacity benefits claimants. However, individuals who were already receiving incapacity benefits at the time Pathways was introduced could choose to participate in Pathways voluntarily, and some did so. Individuals who were already claimants at the introduction of Pathways were found to be more likely to have moved off incapacity benefits within 12 months after the programme had been implemented. These effects appear to have been quite small, however.

- One consideration that was not incorporated into the formal cost-benefit analysis is the possibility that individuals who did not receive incapacity benefits could, nonetheless, be indirectly affected by Pathways. This could occur, for example, if Pathways affected their local Jobcentre Plus office or their personal adviser, while those applying for jobs might have experienced greater competition in the labour market. These possibilities were examined for Department for Work and Pensions (DWP) benefit recipients who were not mandated onto Pathways and usually could not have participated in the programme. With one important exception, there was no statistically significant evidence of any effect of the programme on their likelihood of moving off whatever benefit they were receiving. The exception was for individuals receiving Jobseeker's Allowance (JSA) in Pathways sites that began operations in October 2003. These individuals were found to have been 3.5 percentage points less likely to move off benefit within six months after the programme had been implemented; however, a similar effect did not appear to occur in the sites that introduced Pathways in April 2004.
- The RTWC strengthens the financial incentive for claimants of incapacity benefits to move into work of at least 16 hours a week, though the importance of this incentive varies with individual circumstances and the fact that it is limited to those earning no more than £15,000 a year creates an incentive for some people to take lower-paid jobs than they otherwise would. A large number – possibly a majority – of those moving from Pathways into paid work did not receive the RTWC, although evidence suggests that many of these individuals did not meet the eligibility criteria. Many claims did not last for the full year, with the average length of claim being 36 weeks (70 per cent of a year). Incomplete take-up of the RTWC does not necessarily imply that it was failing to meet its objectives and measures to boost take-up could either increase or reduce the cost-effectiveness of the payment.

Wider relevance of the findings

As Pathways is being introduced for new claimants of incapacity benefits throughout Great Britain, it is useful to ask how relevant the findings described above, which pertain to only the original seven pilot sites, are to the remainder of the country.

- Excluding London, the original pilot areas appear broadly similar to the rest of Great Britain. This is true in terms of both the observed individual characteristics of those moving onto incapacity benefits (their sex, age, health and whether or not they are only in receipt of National Insurance credits) and the historic local authority (LA) average six-month cumulative exit rate from incapacity benefits.

- In contrast, considerable differences are found between those moving onto incapacity benefits in London, which is not represented among the original pilot sites and those moving onto incapacity benefits in both the original seven pilot areas and elsewhere in Great Britain. In particular, several areas of London have much lower historic cumulative six-month exit rates from incapacity benefits than is seen anywhere in the original seven pilot areas.
- The available evidence does not suggest that the effects of Pathways on the chances of new incapacity benefits claimants' leaving the benefit after six months would differ in the original pilot sites from the rest of Great Britain outside London. However, extrapolating the estimated effects of Pathways in the initial seven pilot areas to London – which accounts for around one-in-nine individuals moving onto incapacity benefits in Great Britain – would be questionable because many parts of London differ greatly from all of the original pilot areas in ways that are associated with differential programme effects.
- Extrapolating the findings on the effects of Pathways to the rest of Great Britain (outside London) is more difficult, to the extent that the programme introduced in the rest of Great Britain differs from the one that operated in the pilot sites. One important difference is that the scheme in the original pilot areas was operated by Jobcentre Plus, whereas the programme that is being extended to most of the rest of the country is, instead, being operated by the private and voluntary sectors. Pathways might also have different effects when operating in the context of the Employment and Support Allowance that is set to replace incapacity benefits for new claimants from October 2008.

Overall, the findings in this report provide a favourable impression of the benefits of the Pathways for those moving onto incapacity benefits and for the Exchequer. They suggest that the measured financial benefits of the programme exceed the measured costs, both for those making incapacity benefits enquiries and for the Exchequer and hence, for society as a whole. Moreover, with the exception of London, it appears likely that these findings can be generalised to the whole of Great Britain, at least to the extent that the model of Pathways which is rolled out in the remainder of the country is similar to the one that operated in the original pilot sites.

Considerable uncertainty surrounds our estimated net benefits, both because of uncertainty over how long the effects of Pathways persist and because of potentially large costs and benefits that we do not measure. However, Pathways was found to have positive net measured benefits, even when it was conservatively assumed that programme effects lasted for only 70 weeks. If its effects lasted longer, the net measured benefits would be larger. The unmeasured costs of the policy would have to outweigh the unmeasured benefits significantly if the programme were not to be beneficial overall.

1 Introduction

1.1 The policy background

The Pathways to Work package of reforms ('Pathways', for short) is aimed at encouraging employment among people claiming incapacity benefits; that is, people claiming Incapacity Benefit (IB), Income Support (IS) on grounds of disability or Severe Disablement Allowance (SDA). Based on proposals outlined in the 2002 Department for Work and Pensions (DWP) Green Paper *'Pathways to Work: helping people into employment'*, these reforms were introduced on a pilot basis in three Jobcentre Plus districts – Renfrewshire, Inverclyde, Argyll and Bute, Bridgend, Rhondda, Cynon and Taff and Derbyshire – in October 2003 (these areas are referred to as the 'October areas' in the remainder of this report). Four further districts – Essex, Gateshead and South Tyneside, East Lancashire and Somerset – became part of the pilot in April 2004 (and are referred to as the 'April areas'). Since then, Pathways has been rolled out to a further 14 districts to cover one-third of the country.

Since April 2008, all new incapacity benefits claimants in Great Britain have been subject to Pathways. Existing claimants are free to participate in Pathways on a voluntary basis, though mandatory participation for existing claimants is now being piloted in the original seven Jobcentre Plus districts. From October 2008, the new Employment and Support Allowance is set to replace incapacity benefits for new claimants. Key features are that it will have a revised medical assessment (the 'Work Capability Assessment') and that it will be more generous to those assessed to have the most severe disabilities. From 2009, existing claimants of incapacity benefits who are aged under 25 will also have to undertake the Work Capability Assessment and participate in Pathways (DWP, 2007b).

Pathways was introduced as a response to the large increase in the numbers claiming incapacity benefits. At the time of the 2002 Green Paper, there were roughly 2.7 million claimants – more than the combined number of unemployed people claiming Jobseeker's Allowance (JSA) and lone parents claiming IS. The overwhelming majority of people starting an incapacity benefits claim expect to work again (Woodward *et al.*, 2003). Many do – in 2004, almost 60 per cent left benefit within a year. However, for those who remain on benefit beyond this point, the chances of leaving declines markedly – 29 per cent are still claiming after another eight years (see the 2002 Green Paper for further details). A key aim of Pathways is to intervene early so as to reduce the incidence of prolonged benefit dependency.

1.2 Pathways

Under Pathways, an individual aged between 18 and 60 making a claim for incapacity benefits must attend an initial Work Focused Interview (WFI) eight weeks after making their claim. Failure to comply with this requirement can result in benefits sanctions, although these have been rare in practice. Most people remaining on incapacity benefits must attend five further WFIs. There are two groups of people for whom the five additional WFIs are not required: those with particularly severe medical conditions and those judged likely to return to work without additional help. However, they can still participate on a voluntary basis. WFIs are carried out by specially trained IB Personal Advisers (IBPAs). In non-Pathways areas, in contrast, only the initial WFI is required.

Those exempted on the basis of the severity of their medical condition are identified through the Personal Capability Assessment (PCA). Under Pathways, the aim is to fast-track this process to take place within 12 weeks of making the initial claim so that the results are available by the time of the second WFI, although in practice this is not often achieved (see Bewley *et al.*, 2007). Those with the most extreme forms of illness or disability are exempted from the PCA process itself in addition to the WFIs. Those exempted from further participation on the grounds that they are likely to return to work without the need for any assistance, are identified during the first WFI using a 'screening tool'. This consists of a questionnaire, the answers to which are used to rate the probability of an unassisted return to work within 12 months.

Participation in all other provision available under Pathways is voluntary. There are several elements:

- The **'Choices'** package offers a range of new and existing programme provision aimed at improving labour market readiness and opportunities. The two main programmes within Choices are the New Deal for Disabled People (NDDP) and the Condition Management Programme (CMP). The CMP is a new initiative, run in collaboration with local health providers, with the aim of helping individuals to manage their disability or health condition. A number of smaller existing schemes are also available. These include: Work-Based Learning for Adults (in England), Training for Work (Scotland), Programme Centres, Work Trials, Work Preparation, Workstep, Access to Work and some local schemes in particular areas. The CMP is only offered in Pathways areas, while the remaining components of the Choices package are available in non-Pathways areas. It was expected that Pathways participants would be encouraged to enrol in these programmes by their IBPAs during their WFIs and thus, that participation in them would increase, although in some cases the extent to which this was possible may have been constrained by the funding available for the programmes.
- The **Return to Work Credit** (RTWC) offers Pathways participants who find work of at least 16 hours a week, a weekly payment of £40 for a year if their gross annual earnings are no more than £15,000. The RTWC is only offered to Pathways participants.
- The **Adviser Discretionary Fund** (ADF) allows IBPAs to make awards of up to £300 per person within a 12 month period to support activities or purchases that increase the chances of finding work. These funds are also available in non-Pathways areas but it was anticipated that their use would increase under Pathways.

1.3 The evaluation of Pathways

The evaluation of Pathways is being carried out by a consortium of research organisations led by the Policy Studies Institute (PSI) and including the Institute for Fiscal Studies, Mathematica Policy Research, the National Centre for Social Research (NatCen), the Social Policy Research Unit and David Greenberg of the University of Maryland. The evaluation is multi-faceted and involves qualitative analyses, large-scale quantitative surveys, impact analyses, cost-benefit analyses and a literature review of relevant programmes in the USA. The evaluation has already resulted in a number of reports.[1] Of particular relevance to this report is Bewley, Dorsett and Haile (2007), which examined the effects of Pathways on employment, earnings and benefit receipt. Findings from their study provide a key input to the research reported here.

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[1] All aspects of the evaluation will be considered in a synthesis report to be produced following completion of the analysis for new claimants in the original seven Jobcentre Plus districts.

The focus in this report is on whether the benefits from Pathways exceeded its costs within the original seven Jobcentre Plus districts. The study is limited to new and repeat incapacity benefits claimants. A similar study of existing incapacity benefits claimants will be published in 2009.

The individual chapters of this report cover a number of different topics, but they are all relevant to determining the benefits and costs of Pathways. Because the topics vary, the data sources and methodologies do as well. Specifically, the following chapter provides estimates of the extent to which Pathways succeeded in increasing participation in the various components of Pathways. Chapter 3 presents an in-depth study of the RTWC. Estimates of the costs of Pathways are presented in Chapter 4, while Chapter 5 analyses the financial benefits of Pathways to participants and to the Exchequer. Chapter 6 reports the findings from the cost-benefit analysis. Because cost-benefit analyses always require a number of assumptions, the chapter investigates how robust the cost-benefit findings are to alternative assumptions. Chapter 7 looks at whether Pathways has indirect effects on those **not** mandated to participate in the programme – for example, IB claimants who could participate voluntarily and JSA recipients. Chapter 8 examines the extent to which Bewley, Dorsett and Haile's (2007) study of Pathways' effects on employment, earnings and benefit receipt – the programme's key potential benefits – might be germane to all of Great Britain. This is important because, like the rest of our study, their analysis is limited to the seven original Pathways districts. Conclusions from the various analyses are summarised in Chapter 9.

2 Participation in Pathways' components

2.1 Summary

Determining the cost of Pathways requires estimates of the utilisation of its components and estimates of payments provided by the programme (see Chapter 4). This chapter uses administrative data to examine the receipt of each of the components and financial incentives Pathways offers among individuals who became benefit claimants during the 2005/06 fiscal year.

Although several of the key components of Pathways (follow-up Work Focused Interviews (WFIs), the Return to Work Credit (RTWC) and the Condition Management Programme (CMP)) are only provided to programme participants, others (New Deal for Disabled People (NDDP), the smaller Choices programmes and the Adviser Discretionary Fund (ADF)) are also available to incapacity benefits claimants who are not Pathways participants but use of these resources was expected to increase among programme participants. Although for the first group of Pathways' components it is only necessary to estimate overall take-up, a difference-in-differences approach is used to compare take-up by claimants in the seven original Pathways sites with take-up by claimants in similar comparison sites in order to estimate Pathways' effect on the percentage of claimants that participated in each of the second group of components.

The take-up of Pathways' various components is of considerable interest in and of itself, as the extent to which Pathways influences employment, earnings and the receipt of incapacity benefits will likely reflect the degree to which its components are used by participants.[2]

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[2] In the case of follow-up WFIs, the RTWC and the CMP, this 'increase' (or 'effect') on participation is from zero to whatever the take-up rate is under Pathways. In the case of Pathways' remaining components, it is the difference between take-up with and without Pathways.

The key findings are as follows:

- Pathways' largest effect on participation, by far, is on the mandatory follow-up WFIs, with 25 per cent of those moving onto incapacity benefits between April 2005 and March 2006 taking part in at least one follow-up interview.[3] Many of the 75 per cent of the claimants who did not participate in a follow-up WFI were exempted, either because of the severity of their disability or because they appeared likely to return to work without the intervention. Others left incapacity benefits prior to when an interview was scheduled or failed to attend a scheduled interview.
- About 12 per cent of incapacity benefits claimants in the original seven Pathways sites received RTWC, which was only available to programme participants.
- Almost seven per cent of the incapacity claimants in the original seven Pathways sites were referred to CMP. Only Pathways participants were eligible for CMP.
- Pathways had only small effects on participation in the remaining programme components, which, as mentioned above, are also available to incapacity benefits claimants who are not Pathways participants. The largest of these effects was a 1.6 percentage point increase in participation in the NDDP and a 1.6 percentage point increase in ADF awards.
- Because Pathways' largest effects on participation relate to follow-up WFIs, the RTWC and the CMP, it seems likely that most of the effects of the programme on employment, earnings and the receipt of incapacity benefits resulted from these programme components.

2.2 Introduction

This chapter investigates the extent to which Pathways influences the receipt of the various components it encompasses. More specifically, for people who

[3] This 25 per cent figure, which is based on administrative data, differs from a survey of incapacity benefits recipients in which 79 per cent of the respondents stated that they *'remembered meeting specifically with an IBPA (or someone likely to have been an IBPA)'* (Bailey *et al.* 2007, p. 37). There are at least two reasons for this difference: First, the survey counted the initial WFI as well as follow-up WFIs in determining whether at least one WFI had been attended by respondents. Second, as indicated in the survey report (p. 37), although *'efforts were made in the survey interview to correctly identify as WFIs from the wide range of contacts that customers may have had with Jobcentre Plus staff…a higher proportion of customers attended a meeting with an IBPA according to survey data than was recorded in administrative records…There is thought to be under-recording in the administrative data but it is also likely that a proportion of the meetings picked up by the survey questions were not official WFIs….However, meetings with IBPAs identified in the survey are referred to as WFIs'*.

made an enquiry about claiming incapacity benefits in the 2005/06 fiscal year, and for people who actually became benefit claimants during the same period, it reports the percentage who participated in follow-up WFIs[4], the percentage who participated in each of the Choices components and the percentage who received an RTWC or ADF award. In addition, and more importantly, the chapter estimates the increases in these participation rates that were attributable to Pathways. We refer to this latter measure as 'Pathways' impact on participation'.

There are two reasons why estimating Pathways' impact on participation is importan:. First, it seems unlikely that Pathways will have much of an effect on employment and the receipt of incapacity benefits unless it increases the extent to which incapacity claimants participate in programme services (including WFIs[5]) and receive financial incentives. Second, as will be seen in Chapter 4, estimates of Pathways' impacts on participation in services and financial incentives play a critical role in determining the cost of the programme.

The next section of the chapter describes the data that we use to measure participation in each of Pathways' components and discusses a few measurement issues. The following section presents our findings. The chapter ends with some brief conclusions.

2.3 Data and measurement issues

The first step in our analysis is to determine the number of people who made enquiries about receiving incapacity benefits, the number who became claimants and the number who participated in each component of Pathways. To do this, we use administrative data from the Pathways database, which provides all the necessary information. A participation rate for a particular programme component is then computed by dividing the number of individuals participating in the component by the number of individuals making enquires or the number becoming claimants. Thus, two alternative measures of the participation rate are used. The first is the number of people participating in the component as a percentage of the number making enquiries and the second is the number participating in the component as a percentage of the actual number of claimants.

Our analysis is limited to the original seven Pathways sites and to the 12 months from April 2005 to March 2006. Note that some people who participated in a particular component of Pathways between April 2005 and March 2006 may have made an enquiry or become an incapacity benefit claimant prior to April

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4 Not all of those who made an enquiry ultimately became claimants during the 2005/06 fiscal year. This topic is further discussed below.

5 Because follow-up WFIs are the only mandated component of Pathways, it may also have an impact on the receipt of incapacity benefits by causing claimants to leave the benefit or not claim the benefit in order to avoid the interviews. This in turn, could increase employment.

2005. For example, an individual may have made an enquiry in January 2005, begun receiving benefits in March 2005 and found a job and received an RWTC award in June 2005. The first two events will be outside our 12-month observation window and not counted but the last event will be inside the window and will be counted. A second individual may have made an enquiry in January 2006, begun receiving incapacity benefits in March 2006 and received a RTWC award in June 2006. In this case, the first two events will be inside the 12-month window and counted but the last event will be outside the window and not counted. However, as long as Pathways had come close to reaching a steady state by April 2005, that is, as long as the programme population was neither growing very much nor shrinking appreciably over time in the research sites, which seems to be a reasonable approximation[6], the estimates of participation rates will not be greatly distorted. In a steady state there would be as many of the first type of individuals as the second, so participation rates would be accurately measured.

As indicated above, we need to measure not only the rate of participation in each of Pathways' components, but Pathways' impact on these rates. One way of viewing Pathways' impact on participation rates is that it is the difference between the participation rate that exists under Pathways and the rate that would exist in the absence of Pathways.

Three programme components – follow-up WFIs, the RTWC, and the CMP – are offered only to Pathways participants. Consequently, without Pathways there would be no participation in these components and the rate of participation (i.e. the take-up rate) that exists under Pathways is identical to Pathways' impact on participation. Thus, we use the rate of participation in these programme components as our measure of Pathways' impact on participation.

The remaining components of Pathways – the NDDP, Workstep, Work Preparation, Work Based Learning for Adults and ADF awards – are available to incapacity benefits claimants who are not Pathways participants as well as to claimants who are Pathways participants. On the one hand, one might expect participation in these programmes to increase because incapacity benefits claimants will be encouraged to participate during the follow-up WFIs. On the other hand, some individuals who otherwise would have participated may have left the incapacity benefits rolls or never become claimants in order to avoid the follow-up WFIs. We expected the first effect to dominate. However, Pathways only provided additional funding for the NDDP. So any increases in participation in Work Preparation, Work Based Learning for Adults and ADF awards amongst those who took part in follow-up WFIs would have to come at the expense of those who did not.

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6 For example, Department for Work and Pensions' (DWP's) Pathways to Work Performance Summary for June 2006 and May 2007 indicate that in March 2005 there were 7,182 Pathways starts and in March 2006 there were 6,900 starts in the seven original Pathways' districts.

To estimate impacts on participation in these components of Pathways, we use extracts from incapacity benefits administrative data. These data indicate whether or not an incapacity benefits claimant participated in each of the five programmes listed above.[7] The data do not, however, provide information on the personal characteristics of the claimants. Moreover, the data exclude some short-term incapacity benefits claimants – specifically, those who receive benefits for six weeks or less and, in addition, fall between two successive scans of new claimants. Because these people, who account for about 17 per cent of all new incapacity benefits claimants over a year, are presumably unlikely to participate in the programme components listed above as a result of Pathways, the estimates of programme impacts on participation may be slightly overstated. However, as will be seen, the estimated impacts are already very small.

Our impact estimates are based on claimants located in the seven original Pathways sites and in a set of non-Pathways comparison sites were carefully matched to the Pathways sites on the basis of their economic and social composition (see Bewley, Dorsett, and Haile (2007) for further discussion of the comparison sites). The analysis is based on two cohorts of claimants in each set of sites: a pre-Pathways cohort and a post-Pathways cohort. The pre-Pathways cohort became incapacity benefits claimants between 1 August 2002 and 31 July 2003, while the post-Pathways cohort became claimants between 1 August 2004 and 31 July 2005. The members of both cohorts were given up to 12 months to begin participating in the each of Pathways components being examined.[8] Thus, it was assumed that if Pathways had an impact on participation, it would occur within a year of becoming an incapacity benefits claimant.

To estimate Pathways' impact on participation, a simple difference-in-differences approach was used. This involved making the following computation:

$$\text{Impact} = (P^c_{\text{path,post}} - P^c_{\text{comp,post}}) - (P^c_{\text{path,pre}} - P^c_{\text{comp,pre}})$$

Where P^c is the percentage of a cohort that participates in a particular programme component such as NDDP, the subscripts path and comp respectively indicate whether the value of P^c is for claimants located in a Pathways' site or a comparison site and the subscripts post- and pre- respectively indicate whether the value of P^c pertains to individuals who became incapacity claimants before or after Pathways was rolled out. The first term in parentheses in the equation measures the difference between the participation rate in Pathways sites and the rate in the

7 'Participation' means that they at least started the programme or, in the case of the NDDP, registered for the programme. In the case of CMP, we know the number of people who were referred to the programme, not the number who actually started or completed the programme.

8 Although the first Pathways expansion phase commenced in October 2005, none of the comparison areas became expansion areas. The remaining expansion took place sufficiently late that it should not have affected our analysis.

matched comparison sites, while the second term adjusts for the possibility that the participation rate differed between the two sets of sites prior to the introduction of Pathways. This approach will provide an accurate estimate of Pathways' impact on participation if the only reason for a change in the difference between the two set of sites between the pre- and the post-Pathways periods is the introduction of Pathways. In other words, it is necessary to assume that participation rates in the components of Pathways did not change differentially between the programme and the matched sites except as a result of the introduction of Pathways.[9]

In using the results from the difference-in-differences approach, there is an additional assumption that must be maintained. As discussed above, the estimates of programme impacts on participation pertain to individuals who became incapacity benefits claimants between August 2004 and July 2005. These people are then observed over the 12 months following the beginning of their claim. So the earliest of these new claimants are observed between August 2004 and July 2005 and the most recent are observed between July 2005 and June 2006. The participation rates measure participation among new claimants during the 12 months between April 2005 and March 2006. Thus, there is some overlap between the time spans over which impacts are estimated and the period over which participation rates are measured but they do not perfectly dovetail. As a result, it is necessary to assume that programme impacts on participation remained constant over time.

To obtain accurate difference-in-differences estimates of impacts on participation, it is important that any difference in participation in Pathways sites and comparison sites for the pre-Pathways cohort (i.e. the value of ($P^c_{path,pre} - P^c_{comp,pre}$)) not be affected by the introduction of Pathways. However, it is possible that it was affected, especially in the sites in which Pathways was rolled out in October 2003. As previously indicated, the pre-Pathways cohort became incapacity benefits claimants between 1 August 2002 and 31 July 2003. So the earliest members of this cohort are observed between August 2002 and July 2003 and the most recent members are observed between August 2003 and July 2004. Although these people were not required to participate in Pathways, they could volunteer and a small fraction did so. Moreover, the very fact that Pathways was taking place in their Jobcentre Plus districts may have affected their behaviour even if they did not volunteer, and there is an indication in Chapter 7 that it was modestly influenced. These effects presumably took place after Pathways was introduced, and they only distort the impact on participation estimates if they took place while the pre-Pathways cohort was being observed. Thus, they are more likely to affect estimates of participation impacts for the October 2003 sites than for the April 2004 sites. To the extent that this bias exists, it should reduce the estimated impact on participation rates, by increasing $P^c_{path,pre}$. However, estimated impacts on participation rates are a bit larger in the October 2003 sites than the April 2004 sites, the opposite of what would be expected if the bias were large.

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[9] For further discussion of the differences-in differences approach, see Section 7.3.

2.4 Findings

Participation rates and Pathways' estimated impact on these rates are reported in Table 2.1. For each programme component, the table shows the percentage participation rate that we estimate would have existed in the absence of Pathways, the rate that actually existed in the presence of Pathways and the difference between these two values – that is, the percentage point impact of Pathways on participation. In the case of the three Pathways' components that are only available to programme participants (i.e. follow-up WFIs, the RTWC and the CMP), the programme's impact on participation is, of course, simply the participation rate in the presence of Pathways because there would have been no participation in these components in the absence of the programme.

Participation rates are presented in Table 2.1 for individuals in all seven of the original Pathways sites. In addition, they are also reported for a subset of these people: those who resided in the four areas where Pathways was introduced in April 2004. The reason for presenting separate values for the April sites is that the analysis of Pathways' effects on earnings, a key benefit of the programme, emphasises findings for these four sites, rather than findings that pertain to all seven sites (see Bewley, Dorsett and Haile 2007). Thus, as discussed further in Chapter 4, we use the participation rates in Table 2.1 to estimate costs for both the seven combined sites and for the four April sites alone.

Table 2.1 has two panels. The top panel reports participation as a percentage of all those individuals who made an enquiry about incapacity benefits between April 2005 and March 2006. For reasons discussed in Chapter 4, these are the estimates that are used in estimating the costs of Pathways. The bottom panel reports participation as a percentage of all those who actually became incapacity benefits claimants. This second group, which is obviously a subset of the first, excludes those individuals who did not follow up their enquiry and those who made an unsuccessful claim for benefits. By definition, individuals who do not become claimants do not participate in Pathways and hence, do not generate programme costs. Therefore, the values in the bottom panel are probably more readily interpreted than those in the top panel and hence, provide the focus of the discussion below. Because only 78.4 per cent of those making an enquiry in the seven original sites became claimants, the estimates for these sites in top panel are only 78.4 per cent as large as those in the bottom panel. For a similar reason, the estimates for the four April sites in the top panel are only 78.0 per cent as large as those in the bottom panel.

Table 2.1 Impact of Pathways on participation in services and on receipt of payments

Programme component	Seven original sites Per cent receiving service Without Pathways	With Pathways	Difference (impact)		Four April sites only Per cent receiving service Without Pathways	With Pathways	Difference (impact)	
Individuals making enquiries								
Follow-up WFI (at least one)	0.00	19.80	19.80	***	0.00	16.60	16.60	***
Choices Component								
Condition Management	0.00	5.23	5.23	***	0.00	4.30	4.30	***
NDDP	6.31	7.53	1.22	***	5.77	6.11	0.34	*
Workstep	0.13	0.11	–0.02		0.14	0.12	–0.02	
Work Preparation	0.20	0.24	0.04		0.13	0.14	0.01	
Work Based Learning for Adults	0.21	0.41	0.20	***	0.06	0.26	0.20	**
Payment award								
RTWC	0.00	9.54	9.54	***	0.00	7.80	7.80	***
ADF	3.47	4.69	1.22	***	2.45	3.25	0.80	***
Individuals becoming claimants								
Follow-up WFI (At least one)	0.00	25.37	25.37	***	0.00	21.28	21.28	***
Choices component								
Condition Management	0.00	6.71	6.71	***	0.00	5.52	5.52	***
NDDP	8.09	9.65	1.56	***	7.40	7.83	0.43	*
Workstep	0.16	0.14	–0.02		0.19	0.16	–0.03	
Work Preparation	0.26	0.31	0.05		0.17	0.18	0.01	
Work Based Learning for Adults	0.27	0.52	0.25	***	0.07	0.33	0.26	***
Payment award								
RTWC	0.00	12.22	12.22	***	0.00	10.00	10.00	***
ADF	4.46	6.01	1.55	***	3.16	4.18	1.02	***

Statistical significance levels are indicated as *** = 1%, ** = 5%, and * = 10%. Findings are based on a total of 247,123 observations in Pathways sites and the comparison sites.

Pathways' impact on participation in most of its components is small, although most of the impact estimates are statistically significant at conventional levels. The largest impact estimate by far is on follow-up WFIs, the programme's only mandatory component. Just over a quarter of the individuals who became incapacity benefits claimants in the seven original Pathways sites between April 2005 and March 2006 took part in at least one follow-up WFI during the following year. Still, nearly 75 per cent of these claimants did not participate in such an interview. There are a number of reasons for this, including being exempted because of the severity of their medical condition, being exempted because they were deemed likely to return to work without the need for follow-up WFIs,[10] exiting incapacity benefits prior to having a scheduled follow-up WFI, and failing to attend a scheduled WFI.

More than one in ten incapacity benefits claimants in the seven original Pathways sites received RTWC and more than one in 20 was referred to CMP. Both of these provisions were only available to Pathways participants.

As shown in Table 2.1, Pathways had little impact on participation in programmes that were also available to non-Pathways participants. For example, Pathways increased the participation rate for NDDP by less than two percentage points. Its impact on the receipt of ADF awards was of similar magnitude. Finally, participation rates for the Workstep, Work Preparation, and Work Based Learning for Adults programmes would have been very low in the absence of Pathways, and the programme did virtually nothing to increase these already low rates.[11] Given the limited funding available for these programmes and the fact that their funding was not increased under Pathways, these findings are unsurprising.

2.5 Conclusions

Participation in follow-up WFIs under Pathways was moderate and RTWC receipt and participation in CMP, the other two programme components that were only available to Pathways participants, was lower. At least, in part, because of limited funding, the effect of Pathways on the take-up of its pre-existing components appears to have been small or negligible. Thus, it seems likely that most of the costs of Pathways are attributable to these three programme components and that most of the benefits of Pathways emanate from those. Chapter 4 demonstrates that almost all of the cost of Pathways does indeed result from follow-up WFIs, the CMP and (especially) the RTWC.

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10 This screening was intended to exclude about a third of those not excluded because of the severity of their medical condition.

11 Although the estimated impact for the Workstep programme is negative, it is extremely small and does not differ statistically from zero.

3 The Return to Work Credit

3.1 Summary

A key part of Pathways is the Return to Work Credit (RTWC). This is a payment of £40 a week, payable for up to a year, which is intended to help encourage claimants of incapacity benefits to move off benefits and into paid work. The RTWC is a significant part of the Pathways package – for example, it represents about 40 per cent of the total Exchequer cost of Pathways (see Chapter 4 for more details). Given this significance, this chapter presents evidence intended to shed light on the impact of the RTWC.

Claimants of incapacity benefits often face weak financial incentives to move into paid work, not least because of the loss of Incapacity Benefit (IB) itself. The RTWC can strengthen these incentives but its importance depends on the individual circumstances of the claimant: whether £40 a week is a lot or a little depends on the claimant's earning power and whether they have other sources of income (such as a working partner). Moreover, the fact that the RTWC is available only if earnings do not exceed £15,000 a year, might lead some people to move into lower-paid work than they otherwise would, in order to meet this requirement.

Analysis of data on the number of Pathways participants and the number of RTWC recipients shows:

- a large number – possibly a majority – of those moving from Pathways into paid work do not receive the RTWC. However, evidence suggests that many of these individuals earn more than £15,000 a year and some work for less than 16 hours per week and therefore, do not qualify for the RTWC;
- many RTWC claims do not last for the full year, with the average length of claim being 36 weeks;
- incomplete take-up of the RTWC does not necessarily imply that it is failing to meet its objectives and measures to boost take-up could either increase or reduce the cost-effectiveness of the payment.

3.2 Introduction

As discussed in Chapter 1, a key part of Pathways is the RTWC. This is a payment of £40 a week, payable for up to a year, which is intended to help encourage incapacity benefits claimants to move off benefits and into paid work. Those who have been claiming incapacity benefits (or Statutory Sick Pay (SSP)) in a Pathways area for at least 13 weeks and then move directly into employment or self-employment are potentially eligible for the RTWC. The (additional) key qualifying criteria are that the individual must be employed for at least 16 hours a week, must be earning no more than £15,000 a year and must expect to remain in work for at least five weeks. The payment is not subject to either Income Tax or National Insurance contributions, and is not treated as income for the purposes of any means-tested benefit or tax credit.

The RTWC is a key part of Pathways – for example, the cost of RTWC payments represents 40 per cent of the total Exchequer cost of Pathways (see Chapter 4 for more details). Therefore, the cost-effectiveness of this component is potentially an important determinant of the cost-effectiveness of the overall reform package. This chapter helps to shed light on this issue by setting out two key factors: First, in Section 3.3, we describe the impact that the RTWC has on potential recipients' incentives to work. This is done by documenting the budget constraints faced by different example claimants of incapacity benefits both with and without the RTWC in place. Second, in Section 3.4, we report the numbers receiving the RTWC, and in particular how these relate to the numbers who are estimated to have moved into paid work. Section 3.5 concludes.

3.3 The RTWC and financial incentives to work

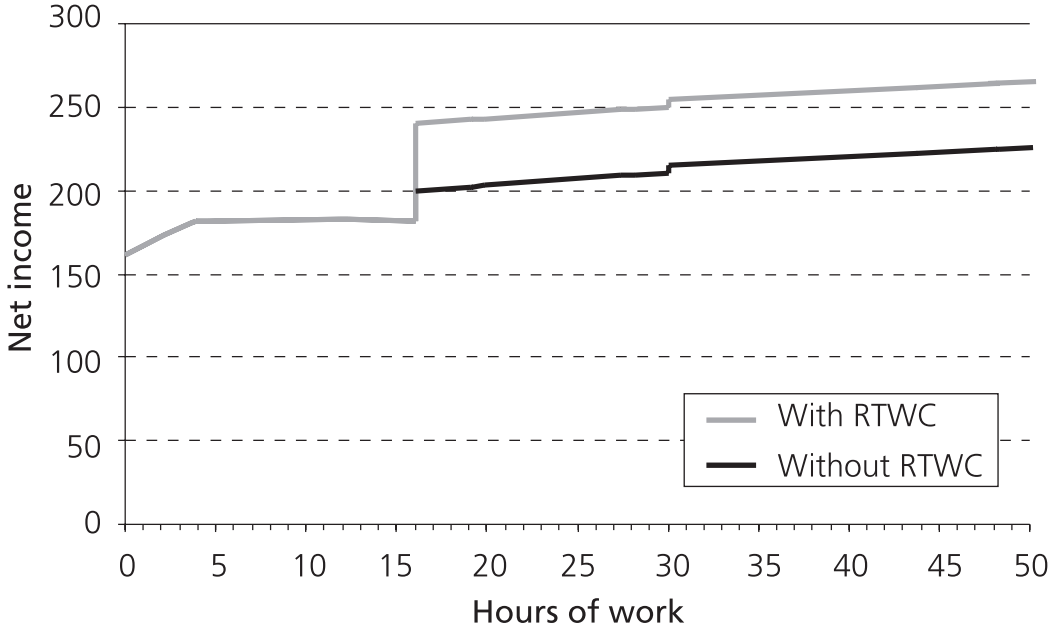
The RTWC is intended to increase the financial incentive for claimants of incapacity benefits to move into paid work. The impact of the RTWC on incentives is relatively straightforward: it provides a stronger financial incentive to be in receipt of an incapacity benefit for at least 13 weeks and then to work at least 16 hours a week (but no additional incentive to work for more than 16 hours per week) for an expected annual salary of no more than £15,000. These incentives could have a range of outcomes: First, they could lead to some individuals remaining on incapacity benefits for 13 weeks or longer who would otherwise have left benefits sooner. Second, they could lead to some individuals choosing to work 16 hours a week or longer who would otherwise have not. Third, they could lead to individuals expecting to earn no more than £15,000 a year when previously they would have expected to earn a greater amount.

What is not straightforward is the overall financial incentive to enter work – taking into account not just the RTWC but also other taxes, benefits and tax credits – faced by claimants of incapacity benefits. In this section we illustrate the impact of RTWC on financial work incentives by looking at examples of 'budget constraints' that claimants might face. A budget constraint depicts the relationship between

hours of paid work and net income after all taxes and benefits have been taken into account. Clearly this relationship will vary according to the specific circumstances of an individual claimant. It is impossible to show every conceivable variant, so here we merely show three illustrative examples.

Figure 3.1 shows the budget constraint created by the 2006/07 tax and benefit system for our first example person. This is a single person with no dependent children, who claimed IB after age 45, has been sick or disabled for at least a year but is still below State Pension Age; we assume that the individual receives no other non-means-tested benefits (such as Disability Living Allowance (DLA)) and has no savings or other private sources of income; they are paying £80 a week in rent and £13.88 a week in Council Tax (after the 25 per cent single resident discount) and would earn £5.05 an hour (the minimum wage from 1 October 2005 to 30 September 2006) and be contracted into the State Second Pension if they moved into work. The dark line shows the budget constraint in the absence of RTWC; the light line includes RTWC.[12]

Figure 3.1 Budget constraint in 2006/07 for example IB recipient: single individual without children, minimum wage



Note: See text for details.
Source: Authors' calculations using the IFS tax and benefit microsimulation model, TAXBEN.

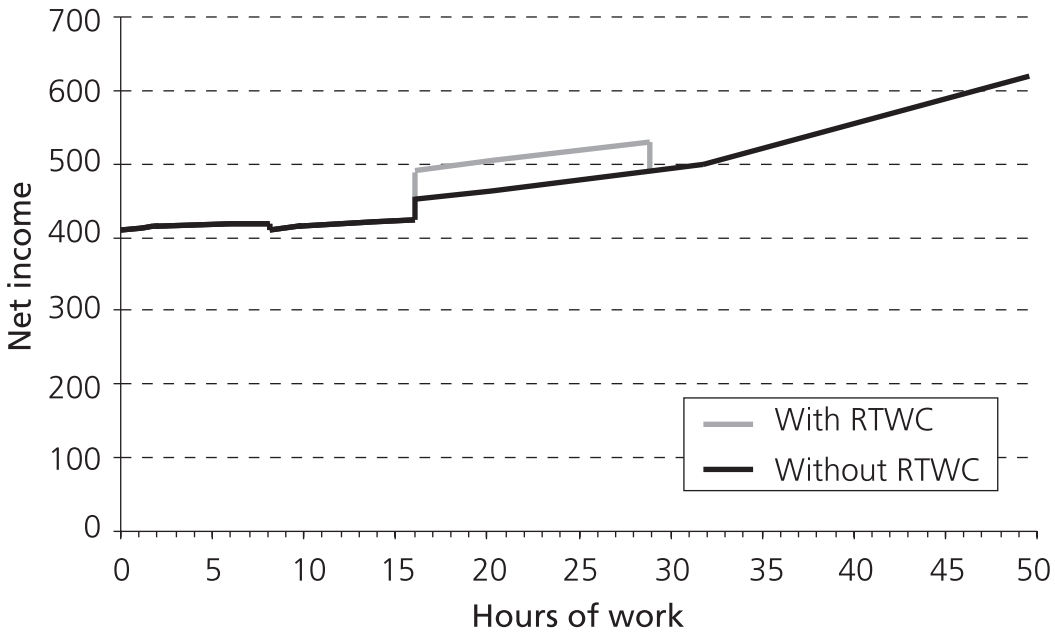
[12] Strictly, Figure 3.1 is shown assuming that the permitted work higher limit applies. In 2006/07 this applied for the first 26 weeks of work, and for a further 26 weeks if it could help improve capacity for full-time work. The budget constraint in fact looks little different when the permitted work lower limit applies. From 2007/08 onwards the permitted work higher limit applies for the first 52 weeks.

The figure shows that, out of work and receiving IB, the individual's net income would be £161.95 a week: this comprises £78.50 in IB, full Housing Benefit (HB) of £80 and £3.45 in Income Support (IS); the £13.88 Council Tax bill is exactly offset by £13.88 Council Tax Benefit (CTB).

The first four hours of work (approximately) are rewarded with net income of £5.05 an hour, because small earnings are disregarded for means-tested benefits and their income is too low to face Income Tax or National Insurance Contributions. Gross earnings beyond that yield little or no additional net income (the budget constraint is flat) because of Income Tax and (more importantly) withdrawal of IS and then HB and CTB. If the individual works 16 hours or more, however, two things happen: they lose entitlement to IB, but this is outweighed by gaining entitlement to Working Tax Credit (WTC). The incentive to work that this provides is significantly boosted if they also receive £40 a week in RTWC: at 16 hours, their net income is £199.68 without RTWC but £239.68 with RTWC, a 20 per cent increase. The RTWC is not subject to Income Tax or National Insurance contributions and does not count as income for means-tested benefits, so it simply shifts the budget constraint up by £40 for all work of 16 hours or more (until earnings reach £15,000 a year, which for this person would imply a 57-hour working week).

The case depicted in Figure 3.1 involved numerous assumptions about the individual's circumstances. To give a flavour of what effect this might have, Figure 3.2 shows the budget constraint (with and without RTWC) facing a very different individual: someone with a potential wage rate of £10 an hour, with a partner earning £288.46 a week (£15,000 a year) and two children (aged between one and 16), paying £120 a week rent and £21.15 a week Council Tax.

Figure 3.2 Budget constraint in 2006/07 for example IB recipient: higher-wage individual with working partner and two children



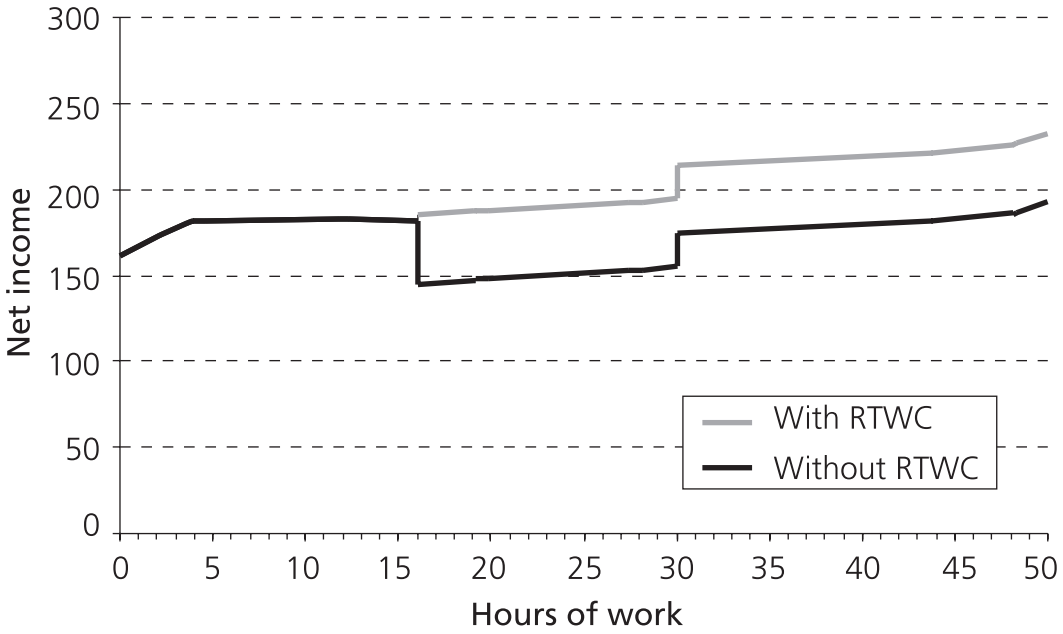
Note: See text for details.
Source: Authors' calculations using the IFS tax and benefit microsimulation model, TAXBEN.

Even when out of work and on IB, this individual has a net family income of £410.61 a week: his partner's earnings (net of Income Tax and National Insurance contributions), Child Benefit and Child Tax Credit (CTC), as well as IB and (partial) HB. At 16 hours, RTWC makes the difference between net income of £451.34 and £491.33, a much smaller proportionate difference (nine per cent) than in the previous example. And the RTWC does nothing at all to increase the incentive for this person to work full-time, since 29 hours of work would be enough to put their earnings above the £15,000 maximum for entitlement to RTWC. Indeed, this individual might reasonably decide to work part-time rather than full-time precisely in order to secure entitlement to the RTWC: net income at 20 hours' work including RTWC (£503.34) would actually be higher than that at 30 hours' work (£493.33).

These examples have assumed that the individual's health status remains unchanged (or is regarded as such for determining benefit entitlement) even when the individual moves into work, so that they remain entitled to disability premiums in means-tested benefits and tax credits, for example. But it is also possible that moves into work reflect improved health or even that financial incentives to work promote efforts towards rehabilitation.

Figure 3.3, therefore, shows the budget constraint facing our first example individual (as in Figure 3.1) if they are assumed to lose all disability-related entitlements at the same time as losing entitlement to IB. This would be the case if, for example, an improvement in health led immediately to them moving into paid work (for example if they were returning to a job that had been held open for them) or if they continued to receive IB between their health improving and moving into paid work.

Figure 3.3 Budget constraint in 2006/07 for example IB recipient: single individual without children, minimum wage, with no disability-related entitlements unless receiving IB



Note: See text for details.
Source: Authors' calculations using the IFS tax and benefit microsimulation model, TAXBEN.

Figure 3.3 shows a sharp fall in income at 16 hours of work, unlike the slight rise shown in Figure 3.1. This is because people without children must work 30 hours a week to qualify for WTC if they do not qualify on grounds of disability but only 16 hours if claiming on grounds of disability. Thus, an individual moving off IB and into paid work of 16 hours or more as their health improves loses their IB, but does not become entitled to WTC unless they work at least 30 hours a week. In this example, they would be worse off working part-time than when they were on IB. Receipt of the RTWC changes this, though it is still only work of 30 hours or more (which confers entitlement to WTC, albeit without the disability element) that shows any significant financial reward.

These examples are not intended as a comprehensive guide to work incentives facing IB claimants. Rather, they are intended to illustrate a few of the complexities that influence work incentives for this group, the variety of incentive patterns that can result and the impact that the RTWC might have in changing the options facing IB claimants.

3.4 Receipt of the RTWC

This section sets out the numbers estimated to receive the RTWC compared to both the number of participants in Pathways and the numbers estimated to move from Pathways into paid work (Section 3.4.1). It then goes on to examine data on the distribution of the length of RTWC claims (Section 3.4.2).

3.4.1 Numbers receiving the RTWC

Only a relatively small proportion of those moving onto incapacity benefits have gone on to receive the RTWC. As shown in Chapter 2 (Table 2.1), the number of individuals moving onto the RTWC between April 2005 and March 2006 as 12.2 per cent of the number mandated onto Pathways in the seven original pilot areas. In part, this low proportion will reflect the fact that not all of those who moved into incapacity benefits participated in Pathways – it was not compulsory for those whose medical condition was deemed particularly severe and those who were deemed likely to move into paid work anyway.

A similar statistic for those who were deemed to have entered Pathways can be derived from the most recent published DWP *'Pathways to Work Performance Summary'*. By the end of January 2007, as shown in column 3 of Table 3.1, out of the 427,290 individuals who had started receiving an incapacity benefit and were deemed to have entered Pathways, a total of 37,450 had received the RTWC. Note that this 'receipt rate' of 8.7 per cent will underestimate the final proportion who move onto the RTWC, since some of those mandated onto Pathways by January 2007 will move onto the RTWC at a later date. This is also consistent with the fact that the 'receipt rate' implied by Table 2.1 is greater than that suggested by the data presented in Table 3.1.

Table 3.1 Numbers moving onto Pathways, the RTWC or into paid work by end of January 2007, Pathways areas only

	All claimants	Existing claimants	New claimants	No job start recorded
	(1)	(2)	(3)	(4)
Pathways entrants	455,780	28,480	427,290	n/a
Of whom:				
Subsequent job entry recorded	67,410	7,660	59,760	n/a
Subsequent RTWC recipients	43,820	6,360	37,450	25,010

Source: Tables 1, 6 and 7 of Blyth, B. (2007).

The number of existing claimants of incapacity benefits who volunteered to participate in Pathways, and of these, the number who were recorded as having moved into paid work and the number who went on to receive the RTWC, are shown in column 2 of Table 3.1. Of the 28,480 existing recipients of incapacity benefits who chose to participate in Pathways by the end of January 2007, 6,360 – some 22 per cent – had already received the RTWC. The fact that this is much higher than the 8.7 per cent observed among those who participated in Pathways as a result of moving onto an incapacity benefit is consistent with at least three (not mutually exclusive) possibilities: First, that Pathways has a larger impact on the employment outcomes of those existing claimants who volunteered for the programme than those who participated as a result of moving onto an incapacity benefit. Second, that those who volunteered for the programme were disproportionately those who were more likely to move into paid work even in the absence of the programme. Third, those who did move into paid work having participated in Pathways as a result of moving onto incapacity benefits were less likely to receive the RTWC. The 6,360 existing claimants of incapacity benefits who received the RTWC represented 83 per cent of the number recorded as having moved into paid work (7,660). However, among new IB claimants who were deemed to have entered Pathways, the numbers who received the RTWC appear much lower relative to the numbers recorded as having moved into paid work. By January 2007 a total of 59,760 of those who had moved onto an incapacity benefit and who were deemed to have entered Pathways were recorded as having moved into paid work but only 37,450 of these individuals had received the RTWC. This suggests that among this group only 63 per cent of those who moved into paid work had actually received the RTWC.

In fact the true percentage is likely to be significantly below this as it seems that many individuals have moved into paid work but have not been recorded as doing so in the data. This is highlighted by the fact that of the 43,820 individuals who had received the RTWC, over half (25,010) did not show up in the employment data used by the Department for Work and Pensions (DWP) as having moved into paid work (but were then added into the numbers thought to have moved into paid work and, therefore, are included in the 67,410 figure). Under the assumption that all individuals who receive the RTWC have moved into paid work (i.e. that no payments are being made either fraudulently or due to a mistake by either the recipient or Jobcentre Plus), only 43 per cent of RTWC recipients who have moved into paid work are actually being identified in the raw data as having moved into paid work ((43,820–25,010)/43,820). If this level of underestimation is true among all those who had moved into paid work, regardless of whether or not they actually received the RTWC, the true number who had moved from Pathways into paid work would be 98,775 rather than 67,410 (i.e. (67,410–25,010)/0.43)). If one assumes that 85 per cent of these were individuals who were deemed to have entered Pathways as a result of being a new claimant of an incapacity benefit (i.e. 59,760/67,410), this would imply that a total of 87,566 individuals had moved from being mandated on Pathways into paid work. Of these, only 37,450 – or

43 per cent – had received the RTWC. (Note that this 43 per cent is not the same as the 43 per cent cited already.)

Of course, this low figure will partly reflect individuals who have moved into paid work but are not eligible for the RTWC since they are working less than 16 hours a week or earning more than £15,000 per year, or expect to be in paid work for less than five weeks or because they received an incapacity benefit for less than 13 weeks.

Using survey data, one can estimate the likelihood of individuals meeting the hours and earnings requirements to qualify for the RTWC. Amongst those making an enquiry about claiming an incapacity benefit who subsequently worked and declared both earnings and hours, 12 per cent worked less than 16 hours a week and a further 30 per cent earned more than £15,000. Since virtually none of these individuals both worked less than 16 hours a week and earned more than £15,000, only 58 per cent of those taking a job fulfil both of these RTWC criteria. As a result the take-up rate among those eligible for the RTWC is estimated to be around three-quarters (i.e. 0.43/0.58=0.74). Furthermore, the eligibility rules are stricter than what we can test with these data: some will not have received incapacity benefits for 13 weeks and others might not expect to work for more than five weeks. Both of these factors would tend to increase the estimated take-up rate further.[13]

Incomplete take-up is also likely to reflect individuals who were eligible for the RTWC not taking up their entitlement, either because they were not aware that they were eligible or because they believed that the costs of claiming outweigh the benefits. However, the costs of claiming might be expected to be low: the application form for the RTWC is a very simple two-page form[14] and these individuals have all successfully claimed an incapacity benefit in the fairly recent past (which, in addition to suggesting that they should not have any great difficulty completing the application form, might also suggest that they are not unwilling to claim the RTWC for reasons of stigma). This is supported by evidence from a qualitative

[13] A further potential bias is that these data are based on individuals who made an enquiry about incapacity benefits, not all of whom will have gone onto claim an incapacity benefit. If those who made an enquiry but did not claim and then moved into paid work were more (less) likely to meet the other RTWC criteria, we will be understating (overstating) the RTWC take-up rate.

[14] See www.jobcentreplus.gov.uk/JCP/stellent/groups/jcp/documents/websitecontent/dev_014728.pdf

study of RTWC recipients which found that *'the first* [RTWC] *application…was mostly a quick and easy process'*.[15]

3.4.2 Duration of RTWC claims

Individuals who move onto the RTWC do not automatically qualify for an award for the whole year. The claims process operates as follows:

- within five weeks of moving into paid work, individuals have to make a claim for the RTWC;
- after ten weeks, recipients have to present evidence of their earnings (or, if self-employed, that they are trading). If sufficient evidence is produced then the payment is extended through to 26 weeks;
- after 22 weeks recipients are automatically sent a new claim form and told that they must re-apply in order to continue to receive the payment for the final 26 weeks;
- in addition, recipients are supposed to inform Jobcentre Plus if they no longer comply with the qualifying criteria – for example, if they cease to work at least 16 hours per week or if their earnings rise above £15,000 per year.

Many recipients do not get the payment for the full year. Total expenditure on the RTWC in the seven original Pathways areas between April 2005 and March 2006 was £12.3 million, and this was shared among a total of 8,585 recipients. Since RTWC payments are always £40 per week, this means that recipients were qualifying for the payment for an average of 36 weeks (12.3m/(40 x 8,585), which is 70 per cent of a year). Under the assumption that RTWC recipients claimed for either 26 weeks or for a full year (i.e. that all recipients were able to provide the required documentation at week ten and that none informed Jobcentre Plus that they had become ineligible at any other point), this would imply that only 38 per cent of recipients received the RTWC for the full year and that 62 per cent had their claim stopped at the half-way point. For more than 38 per cent of recipients to receive the RTWC for a full year, some claims would have to have ceased before the halfway mark. Early internal DWP estimates suggest that 45 per cent of RTWC awards made up to February 2005 ended exactly at the halfway stage, which suggests that some claims did indeed end before this point (or that some ended between the 26-week and one-year points).

If the motivation for the RTWC was to provide a 12-month increase in the incomes of those who had moved from incapacity benefits into paid work, then low take-up rates would suggest that the policy was not as effective as it might be in meeting its objective. However, the motivation for the RTWC is to help encourage

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[15] Page 33 of Corden, A. and Nice, K. (2006), *Pathways to Work from Incapacity Benefits: A study of experience and use of Return to Work Credit*, Research Report No. 353,, London: Department for Work and Pensions (http://www.dwp.gov.uk/asd/asd5/rports2005-2006/rrep353.pdf).

incapacity benefit claimants to move off benefits and into paid work. Therefore, it is not necessarily the case that incomplete take-up of the RTWC (either initially or after 26 weeks) implies reduced effectiveness of Pathways. Those who moved into paid work but did not claim the RTWC presumably did not need this incentive – rather, they would have moved into paid work even in the absence of Pathways or else it was other components of the programme, such as Work Focused Interviews (WFIs) or the elements of the Choices package, that encouraged them to move into paid work. The same argument applies to individuals who remained in paid work for more than 26 weeks but only received the RTWC for a proportion of the time that they were eligible for it. Thus, not paying the RTWC to these individuals simply represents a saving to the Government.

On the other hand, if low take-up reflected widespread ignorance of the scheme (or high costs of claiming), then some of those who could have been persuaded to move off benefits and into paid work by the RTWC might not have been and low take-up does represent lower effectiveness.

Correspondingly, measures to boost take-up of the RTWC could increase or reduce the cost-effectiveness of the policy. Cost-effectiveness would be reduced if any increase in RTWC take-up reflected payments to individuals who would have moved into paid work without the RTWC and rather than an increased impact of Pathways on the labour market outcomes of other individuals. For the cost-effectiveness of Pathways to be preserved, any increase in RTWC take-up among those who would have entered paid work without the payment would have to be accompanied by a commensurate increase in the impact of Pathways on the numbers moving into paid work.

3.5 Conclusions

Since the RTWC is a key part of Pathways, the contribution that it makes to both the benefits and the costs of Pathways are potentially an important determinant of the cost-effectiveness of the overall reform package.

Claimants of incapacity benefits often face weak incentives to move into work, not least because of the loss of IB itself. The RTWC can strengthen these incentives but its importance depends on the individual circumstances of the claimant: whether £40 a week is a lot or a little depends on the claimant's earning power and whether they have other sources of income (such as a working partner). And the fact that the RTWC is available only if earnings do not exceed £15,000 a year might lead some people to move into lower-paid work than they otherwise would, in order to meet this requirement.

The analysis in this chapter has shown that a large number – possibly a majority – of those moving from Pathways into paid work do not receive the RTWC and not all of these fail to meet the hours and earnings eligibility criteria. In addition, many successful claims for the RTWC do not last for the full year. The average length of claim is 36 weeks (or 70 per cent of a year). However, the aim of RTWC is to

encourage claimants of incapacity benefits to move off benefits and into paid work. Therefore, limited take up of RTWC does not necessarily mean that it has failed to meet this aim. Those who moved into paid work but did not claim the RTWC, presumably did not need this incentive – rather, they would have moved into paid work even in the absence of Pathways or else it was other components of the programme, such as WFIs or the elements of the choices package, that encouraged them to move into paid work. Furthermore, any measures to boost RTWC take-up could potentially reduce rather than increase its cost-effectiveness. For the cost-effectiveness of Pathways to be preserved, any increase in RTWC take-up among those who would have entered paid work without the payment would have to be accompanied by a commensurate increase in the impact of Pathways on the numbers moving into paid work.

4 Cost analysis

4.1 Summary

Programme costs are of considerable importance for future planning and are obviously essential for conducting a cost-benefit analysis. This chapter provides estimates of the additional costs engendered by Pathways. That is, the costs are net of expenditures that would have occurred in the absence of Pathways, such as those resulting from initial, as opposed to follow-up, Work Focused Interviews (WFIs). These net cost estimates are averaged over everyone who made an enquiry at a Jobcentre Plus office about claiming incapacity benefits, even if they never participated in Pathways or even received incapacity benefits. This is necessary to make the cost estimates compatible with the benefit estimates presented in Chapter 5, which are also averages across everyone who made an incapacity benefits enquiry. The cost estimates pertain to the original seven Pathways sites, as do the benefit estimates.

A wide variety of administrative data, as well as the estimates from Chapter 2 of Pathways' effects on participation in the programme's components, are used in this chapter to estimate net costs that result from five different sources: (1) staff costs at Jobcentre Plus (the salaries and non-salary expenditures, including travel costs, office expenditures, the rental cost of office space and computer purchases and maintenance, associated with the staff time required to administer the screening tool and to conduct the follow-up WFIs); (2) the costs of the Choices components; (3) payments made to individuals through the Return to Work Credit (RTWC) and the Adviser Discretionary Fund (ADF); (4) costs resulting from fast-tracking Personal Capability Assessments (PCAs); and (5) indirect taxes, such as VAT, that result from Government expenditure on Pathways.

The key findings are as follows:

- The average net cost of Pathways per individual who made an incapacity benefit enquiry was £340. If these costs are adjusted to pertain only to individuals who became incapacity benefits claimants, they exceed £400.

- Staff cost at Jobcentre Plus offices in the original seven Pathways pilot sites was around £100 per individual who made an incapacity benefits enquiry, with about three-quarters of these costs attributable to staff salaries and the remainder resulting from various non-salary expenditures. Staff costs mainly result from the additional Incapacity Benefit Personal Advisers (IBPAs) who were needed to conduct the mandatory follow-up WFIs, but other additional personnel were needed as well. If staff costs were averaged over only people who attended at least one follow-up WFI, rather than over everyone who made an enquiry, they would be around £550.
- When averaged over all the individuals who made an incapacity benefits enquiry, the cost of Choices package is around £64, with about 80 per cent of this cost attributable to referrals to the Condition Management Programme (CMP). The cost of a referral to CMP is a little over £1,000, on average, but only about five per cent of those making an incapacity benefits enquiry were subsequently referred.
- A little over 40 per cent of the total cost of Pathways, £138 per Incapacity Benefit (IB) enquiry, resulted from payments to individuals, and almost all of this cost is attributable to the RTWC. Fewer than ten per cent of those making an incapacity benefits enquiry received a RTWC award but the average award for these people was £1,431.
- Accelerated PCAs resulted in a cost of around £3 per incapacity benefits enquiry.
- Indirect taxes were about £35 per IB enquiry.

4.2 Introduction

This chapter provides estimates of the costs of Pathways in the seven original Pathways pilot districts. Like the rest of the analysis in this report, it focuses on the costs for new and repeat incapacity benefits claimants. Because Pathways has now been rolled out to all new and repeat claimants, the cost estimates are of interest on their own. For example, they may help in planning for any further extensions of the policy. In addition, they are essential to the cost-benefit analysis, which is reported in Chapter 6.

The key objective of the cost analysis is to estimate the **additional** costs that result from Pathways ('net costs'), rather than the sum of costs resulting from Pathways and costs that would accrue even in the absence of Pathways ('gross costs'). For example, an initial WFI is required of most incapacity benefits claimants in non-Pathways areas, as well as in Pathways districts; but follow-up WFIs are required only in the latter. Gross costs would include the costs of all the WFIs that

occur, including the initial WFI; but net costs include only the costs of the follow-up interviews.[16]

Net costs are comparable to the benefit estimates used in the cost-benefit analysis, while gross costs are not. The reason for this, as will be seen in Chapter 5, is that the benefit estimates rely on estimates of the **net** effects of Pathways on employment, earnings and benefit receipt. That is, they rely on estimates of the differences between what employment, earnings and benefit receipt would have been in the absence Pathways and what they were in the presence of the programme. Estimates of net costs have an identical interpretation.

Because the estimates of benefits that are used in the cost-benefit analysis are averaged over everyone who made an enquiry at a Jobcentre Plus office about claiming incapacity benefits (see Chapter 5), costs are similarly averaged over all these people. This allows Pathways' costs and benefits to be appropriately compared. It means, however, that costs are averaged over people who never participated in Pathways, as well as individuals who did actively participate. There are a variety of reasons why some individuals who made enquiries did not participate in Pathways:

- some did not pursue their initial enquiry;
- some made an unsuccessful claim for incapacity benefits;
- some initially qualified for incapacity benefits, but left the rolls before actively participating in Pathways because they found employment or for other reasons;
- some initially qualified for incapacity benefits but failed their PCA before actively participating in Pathways. (Because fast-tracking PCAs is part of Pathways, they did participate in the programme, in a sense, by receiving an earlier PCA than they otherwise would have);
- some qualified for incapacity benefits but were deemed unlikely to work because of the severity of their disability or health problem and consequently were not required to participate in Pathways. (These people, who were also exempt from the PCA, could voluntarily participate in Pathways, but most did not);
- some qualified for incapacity benefits but were screened out of Pathways by the screening tool, which predicted that they were likely to find employment on their own within 12 months. (However, these people could volunteer for Pathways and in fact, as suggested in Chapter 3, had a strong incentive to do so just before taking a job because they would then qualify for the RTWC.)

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[16] Strictly speaking, the discussion in the text oversimplifies. The screening tool is administered during the initial WFIs in the Pathways areas but not in the non-Pathways areas. The cost of the extra staff time required to administer this tool, which is included in the estimates reported in this chapter, is a net cost.

Although their exact number is unknown, the groups listed above account for a substantial proportion of those who made an initial incapacity benefits enquiry (perhaps, as many as half[17]). It is apparent that most of them added little, if anything, to the costs of Pathways. However, Pathways may have influenced the behaviour of many of these people. For example, individuals who did not pursue their initial enquiry about incapacity benefits may have been dissuaded from doing so because they wished to avoid WFIs. Therefore, it was reasonable to use a broad sample in estimating the impacts of Pathways. Nevertheless, it should be recognised that if the costs of Pathways were averaged across only people who actively participated in the programme, they would appear considerably larger than the estimates used in the cost-benefit analysis. We return to this issue below.

Because we provide separate cost estimates for the different components of Pathways, it is also important to recognise that even individuals who actively participated in Pathways did not participate in all its components. For example, some people returned to work before ever participating in a follow-up WFI but did receive RTWC payments. Others participated in follow-up WFIs, which were mandatory for recipients of incapacity benefits who were out of work, but did not participate in the programmes included in the Choices package, such as New Deal for Disabled People (NDDP) and CMP, which were voluntary.

By averaging the costs of each component of Pathways over the same base group – all the individuals who made an enquiry about incapacity benefits, regardless of whether they actually participated in any component – the costs of the different components can be appropriately compared to one another, as well as to the benefits of Pathways. However, in this chapter we not only report the cost estimates we use in the cost-benefit analysis; we also try to provide some sense of the cost of each component of Pathways for those people who actually receive the service.

As with the participation rates presented in Chapter 2, the estimates of net costs reported in this chapter are estimated for all seven of the original Pathways districts and, in addition, are also estimated for just the four April districts.

Pathways entailed a number of different types of cost. For the purposes of this chapter, we divide costs into three major categories: staff costs (e.g. the cost of staff time required to administer the screening tool and to conduct the follow-up WFIs), the cost of the Choices components and payments made to individuals as a result of Pathways (e.g. RTWC payments). These three cost components are discussed in the following three sections of the chapter and estimates of the

[17] As discussed in Chapter 2, about 78 per cent of those who made an enquiry went on to become claimants. Hence 22 per cent of those making an enquiry did not become claimants (the first two points listed above). More than another ten per cent of those recorded as making enquiries became short-term claimants. The size of the remaining groups is not known but is thought to be appreciable.

costs of each are presented. Because Pathways attempted to fast-track PCAs, an additional section attempts to determine whether this resulted in any additional cost. The final section of the chapter pulls together the cost estimates presented earlier to provide an estimate of Pathways' total net cost per incapacity benefits enquiry. It also considers the implications of the programme's effects on indirect taxes such as VAT.

4.3 Cost of staff

The key additional personnel that were needed for administering Pathways were IBPAs who conducted the follow-up WFIs mandated by the programme. However, operating Pathways also required additional staff who filled other roles. These included supervisory personnel, Administrative Support Officers who set up WFI appointments and perform a number of other administrative tasks, Disability Employment Advisers, Work Psychologists, Financial Assessors, personnel that interacted with employers to help develop job openings for Pathways participants, staff that provided in-work support and individuals who were involved in appeals hearings that resulted from sanctions or when individuals were denied incapacity benefits. In addition to the field staff involved in administering Pathways, there were also central administrative personnel who oversaw the operation of Pathways in all the sites in which it was implemented. As well as salary costs, the additional staff needed for Pathways also engendered non-salary expenditures such as work-related travel costs, training, office supplies (e.g. stationery), the costs of conferences and (most importantly) overhead costs (for example, office space, telephones, computers and office furniture).

The staff costs that are reported in this section include estimates of the salaries paid to all the additional personnel that were required for Pathways and the non-salary costs that resulted from employing these people. These cost estimates pertain to the 12-month period from April 2005 to March 2006. With the exception of overhead costs, the estimates were obtained from administrative project expenditure data that became available in May 2006.[18] The administrative data list reimbursement amounts paid to each district in which Pathways is operating. The figures distinguish between salary (which includes Government payments for pensions and employer National Insurance contributions) and non-salary expenditures but do not break down salary expenditures by type of staff (e.g. IBPAs compared to other staff).[19] The figures are reported as aggregate sums. To estimate costs per incapacity benefits

[18] We are indebted to George Malcolm of Jobcentre Plus for providing us with these data and for his patience in helping us to interpret them.

[19] The Pathways cost model for new and repeat incapacity benefit claimants, which is used to project the future cost of Pathways, suggests that a little over a third of the salary cost of Pathways is attributable to salaries paid to IBPAs.

enquiry, it was therefore necessary to divide these figures by 78,600, the number of people who made such an enquiry during the same period.[20]

The amounts of the reimbursements for salary that were made to each Jobcentre Plus district are based on estimates of the number of additional workers of different types that each district required to operate Pathways for new and repeat claimants. These estimates, in turn, are based, in part, on the number of new and repeat incapacity benefits claimants who were expected to be added to the rolls each year and the follow-up WFIs that were expected to be conducted for these claimants. The number of additional workers who appear to have been needed in each salary classification is multiplied by the annual salary paid to a worker in that category and then summed across the categories to obtain an estimate of total expenditures on salary.

Although the resulting estimates are reasonable approximations, they may not be exact. It is possible, for example, that a given district may have been allotted funds that were sufficient to allow it to hire more staff than it actually needed to operate Pathways. If so, it could use some of these surplus staff to perform non-Pathways tasks that otherwise would have been insufficiently staffed. Alternatively, the district may not have been allocated sufficient staff to operate Pathways and hence, used staff that otherwise would have performed non-Pathways tasks. There is no strong evidence one way or the other as to whether too many/few staff to operate Pathways was provided to each district. Thus, we use the amounts reported in the administrative cost records.

As previously indicated, the cost study, like the estimates of Pathways' benefits, is limited to people who made an enquiry about incapacity benefits. However, the administrative cost records include expenditures on existing claimants (i.e. people who were receiving incapacity benefits when Pathways was rolled out) who voluntarily participated in Pathways, as well as on individuals who made an enquiry about incapacity benefits.[21] Existing claimants who participate voluntarily constitute only 3.5 per cent of the total number of people in these two groups, however.[22] To exclude the cost of dealing with existing claimants from total staff costs, the cost figures from the administrative records have been multiplied by 0.965 (1 – 0.035).

As mentioned above, the administrative cost records do not include the cost of overheads. However, DWP provided data on the rental value of the space occupied by Jobcentre Plus staff at four of the seven original Pathways pilot districts. The estimate of the annual cost of accommodation that is used in this study, £4,156,

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20 We are indebted to Deborah Pritchard of Department for Work and Pensions (DWP) for providing us with this figure.

21 The cost records do not include expenditures on continuing incapacity benefit claimants who have been recently mandated to participate in Pathways.

22 They account for an even smaller proportion of the total number of follow-up WFIs: only 2.4 per cent.

is calculated by averaging over the values for these four districts. In addition, standard figures exist that are used by DWP cost analysts to determine other overhead items. Although they are somewhat dated, they appear to be the best available estimates of overheads.[23] The overhead figures that are used in the study, which pertain to annual costs and are the same for each staff member regardless of position, are listed below:

Communications	£1,335
Accommodation	£4,156
Desks and pedestals	£1,000
Personal computers	£1,500
IT services	£1,700
Total	£9,691

To use these figures for the cost analysis, we first determined the average annual salary cost of a member of Pathways staff. To do this, we used the 2005/06 Pathways projection model for new and repeat incapacity benefits claimants. This model provides predictions of both the number of required staff and the total annual salary bill for these staff. We simply divided the second of these numbers by the first. The resulting estimate is £25,014. We then computed an 'overhead rate' of 0.3874 by dividing the total overhead amount of £9,691 by £25,014. Finally, the overhead rate was multiplied by the total salary cost figures from the administrative records to obtain total expenses on overhead.

Staff costs per incapacity benefit enquiry are reported in Table 4.1. Because they are based on the number of additional staff required to operate Pathways, rather than the total number of Jobcentre Plus staff who have responsibility for recipients of incapacity benefits, they are estimates of net cost, not gross costs. As previously mentioned, these estimates are reported separately for all seven of the original Pathways sites and for just the four April districts.

[23] Attempts to determine the source of these figures were unsuccessful so there is some uncertainty about them. However, they do not have very much effect on our estimates of total cost.

Table 4.1 Pathways net staff costs per IB enquiry (April 2005 – March 2006)

	Seven original sites	Four April sites only
Total field staff salaries	£68.99	£65.57
Central administrative staff salaries	4.29	4.29
Field staff overhead	26.69	25.37
Central administration staff overhead	1.72	1.72
Field staff travel and support	1.45	1.59
Central administrative staff travel and support	0.56	0.56
Other field office costs (e.g. conferences, IT)	1.59	1.74
Other central administrative office costs	1.91	1.91
Total	**£107.20**	**£102.75**

Total net staff costs appear rather modest, not much in excess of £100 per incapacity benefit enquiry. They are quite similar for the April districts and the seven original sites. Almost all the staff costs resulting from Pathways (89 per cent) are attributable to the salaries of the additional field staff required to deal with Pathways participants and the overhead costs generated by these staff.

An important reason why the staff costs of Pathways appear as low as they do is because they are averaged over everyone who made an enquiry about incapacity benefits between April 2005 and March 2006. As pointed out earlier, this is necessary to make the cost estimates comparable to the estimates of Pathways' benefits that appear in Chapter 5. However, only a minority of these people ever actually attended a follow-up WFI: some did not receive incapacity benefits, some were excused from participating in WFIs, some found jobs prior to an appointment for a follow-up WFI and some failed their PCA before their first follow-up WFI was scheduled. This is important because most of the work performed by the staff employed to run Pathways either directly involved administering repeat WFIs (e.g. the work of IBPA and Administrative Support Officers) or was triggered by the WFIs (e.g. the work of Disability Employment Advisers, Work Psychologists and individuals involved in appeal hearings). If the staff costs of Pathways were computed by averaging over only those people who had at least one follow-up WFI between April 2005 and March 2006 (15,560), rather than all the individuals who made enquires about Pathways during the 12-month period (78,600), they would be about five times larger than the estimates appearing in Table 4.1. Therefore, staff costs total around £550 per individual who participated in one or more follow-up WFIs.

4.4 Cost of Choices

The Choices package consists of a number of programmes that existed prior to Pathways. These include the NDDP, Work Preparation, Workstep and Work Based Learning for Adults. In addition, the package includes a new programme, CMP, which was introduced exclusively in Pathways sites when the Pathways pilots started. As indicated in Chapter 2, Pathways had virtually no effect on the take-up of Work Preparation, Workstep and Work Based Learning for Adults. In this section, therefore, we limit our efforts to estimating costs of NDDP and CMP resulting from Pathways.

The cost estimates for these two programmes include outlays for staff training, accommodation, travel and so forth. However, most of the costs resulted from paying staff salaries. Table 4.2 provides estimates of the costs of NDDP and CMP attributable to Pathways, as well as some additional pertinent information. We briefly describe each of the two programmes below and then interpret the figures appearing in the table.

Table 4.2 Net costs of Choices per IB enquiry (April 2005 – March 2006)

	Seven original sites	Four April sites only
New Deal for Disabled People		
Impact of Pathways on NDDP registration*	1.22	0.34
Average cost of NDDP per registrant	£804-£1062	£804-£1062
Average cost per incapacity benefit enquiry	£11.39	£3.17
Condition Management Programme		
Impact of Pathways on CMP referrals*	5.23	4.30
Average cost of CMP per referral	£1033.79	£1121.86
Average cost per incapacity benefit enquiry	£54.07	£48.24
Total cost of Choices	**£65.46**	**£51.41**

*In percentage points.

The NDDP is the major Government employment programme available to people claiming incapacity benefits. NDDP is delivered locally by 'Job Brokers', a mixture of voluntary, public and private sector organisations. Although Job Brokers vary enormously in size and in how they operate, most help clients with job search and attempt to increase clients' confidence in their ability to work. Many also attempt to develop clients' work-related skills and monitor clients' progress in jobs after they are placed, sometimes intervening when the client encounters problems on the job. Job Brokers receive a payment from the DWP for each client they register, for each client they place in a job and for each placed client who continues to work for at least three months.

Greenberg and Davis (2007) recently completed a cost analysis and a cost-benefit analysis of NDDP. Their cost analysis was based on detailed cost data that were collected from 19 Job Brokers in 2003. Their cost estimates pertain to both new and existing incapacity benefits claimants, as Job Brokers had no way of separating their costs for the two groups. Although there was some uncertainty concerning exact costs, they found that the cost of serving an average participant was between £804 and £1,062 in 2005 prices. They argue that the true cost is probably towards the bottom of this range.

Although the cost of dealing with an NDDP participant is fairly high, the amount spent on NDDP as a result of Pathways is small. The reason for this is that Pathways did not increase registration in NDDP by very much. As indicated in Chapter 2, around six per cent of those making an enquiry about incapacity benefits in the seven original Pathways' sites would have registered for NDDP in the absence of Pathways. Pathways increased this by just 1.22 percentage points (Table 2.1). Thus, as shown in Table 4.2, Pathways' impact on NDDP registration in the seven original sites resulted in a cost of between £9.81 (0.0122 x £804) and £12.96 (0.0122 x £1,062) per incapacity benefit enquiry. Because this range is not very wide, we simply use the mid-point of £11.39 for purposes of the cost analysis.

The increase was even smaller in the April Pathways sites because the impact on participation in NDDP in those areas was smaller, only about a third of a percentage point. Hence, in those areas, the cost was between £2.73 and £3.61, with a mid-point of £3.17.

The objective of CMP is to help move claimants of incapacity benefits into work by helping them to manage their health problem better in a work context. Arrangements to accomplish this vary somewhat. Most CMP participants are people with mental health or musculo-skeletal problems. These people also make up the bulk of people receiving incapacity benefits. After an initial assessment, a range of services are provided by occupational therapists, physiotherapists, psychologists, counsellors, and others. The exact services that are offered to an individual depends on their condition but can include coping skills, advice, information about exercise and confidence building. Services are sometimes arranged on a one-to-one basis and sometimes in a group or classroom setting. Greater costs are sustained in delivering the CMP in rural areas, where staff and participants incur travel costs and space to provide services must sometimes be rented, than in urban areas.

CMP is managed by the NHS and delivered by a mixture of NHS and private providers. The NHS is reimbursed for its expenditures on the basis of contracts negotiated with DWP. However, decisions about which individuals to refer to CMP are mainly made by IBPAs at Jobcentre Plus offices. The reimbursement amounts may be more or less than actual costs because they are based on projections of the number of people who will receive CMP services each year, projections that will inevitably be inexact. Thus, as discussed below, the cost estimates that we report here are based on actual expenditures.

Information on the costs of CMP between April 2005 and March 2006 has been supplied to us by the CMP project managers at the seven Pathways sites. Because all the individuals who are referred to CMP engender some costs, even if they do not actually receive the services offered or even undergo an initial assessment – for example, records must be transferred and appointments booked – we have obtained information on average costs per referral. However, a substantial proportion of individuals who are referred are also assessed and a large fraction of the latter actually does receive some services. In the one Pathways site for which we have the required information, 80 per cent of those referred were assessed and 70 per cent of those assessed continued with the programme.

As shown in Table 4.2, average costs per referral are nearly £1,034 in the original seven Pathways' sites.[24] This estimate is for both new and existing incapacity benefits claimants, as CMP operations do not differentiate between the two groups. However, between April 2005 and March 2006, most of those referred to CMP would have been new claimants. As seen in Chapter 2, only about five per cent of all those making an enquiry about incapacity benefits in the seven original Pathways' sites are subsequently referred to CMP. Thus, the cost of CMP per enquiry is only £54.08 (0.0523 x £1,034). The cost in the four April sites, which is computed similarly, is about £6 less.

4.5 Cost of payments to individuals

Pathways provides important financial support to a subset of its individuals. The forms of this support include the RTWC, the ADF, and cost reimbursements for travel to WFIs and to Choices programmes. In this section, we estimate the amount of these payments.[25] Table 4.3 provides summary information about these payments. The figures in this table for the seven original sites are similar to those for the April sites so our discussion again focuses on the former.

The RTWC is described in some detail in Chapter 3. Although the weekly RTWC payment of £40 can, in principle, continue to be received for up to a year, as seen in Chapter 3, a person who qualifies for the RTWC on average receives it for a

[24] The figure in Table 4.2 is a weighted average of cost per referral in the individual sites, with the weights consisting of the number of referrals in each site. The unweighted average of costs per referral is £1,052, with a standard deviation of £202: the values vary across the sites, but not greatly. CMP costs per referral have probably fallen over time as various improvements have been made, and may still be falling. For example, as there were no CMP service precedents, senior practitioners were initially heavily used. Over time, as experience developed, more junior staff were integrated into operations.

[25] Most of the costs of administering these payments is included in the estimates of staff costs that are reported in Section 4.3.

bit less than 36 weeks.[26] Thus, individuals who qualified for the RTWC received £1,431, on average.

Of all the people who made enquiries about incapacity benefits, only 9.54 per cent ultimately received RTWC payments. Thus, the RTWC payment per incapacity benefit enquiry was about £136 (0.0954 x £1,431).

The ADF provides funds that IBPAs can use to help support Pathways participants in job search or immediately after finding work. For example, the funds can be used for tools and uniforms, travel costs, child care and short work-related courses. As shown in Table 4.3 (estimated using data from the Pathways database), the average payment was £107.

Table 4.3 Net costs of payments to Pathways participants per IB enquiry (April 2005 – March 2006)

Type of payment	Seven original sites	Four April sites only
RTWC		
Impact of Pathways on receipt of RTWC*	9.54%	7.80%
Average payment per RTWC recipient	£1431.15	£1448.34
Average payment per enquiry	£136.49	£113.01
ADFs		
Impact of Pathways on receipt of ADF*	1.22%	0.80%
Average payment per ADF recipient	£106.91	£73.92
Average payment per enquiry	£1.30	£0.82
Reimbursed Pathways participants expenses (mainly travel costs to WFIs and Choices)		
Average payment per enquiry	£0.14	£0.13
Total cost	£137.93	£113.96

*In percentage points.

[26] As indicated in Chapter 3, this figure was computed by first dividing total RTWC expenditures in the seven original Pathways sites between April 2005 and March 2006 (£12,280,700) by the number of RTWC awards over the same period (8,585) and then dividing this figure by £40. The value for RTWC costs, which was obtained from Pathways' administrative project expenditure records, includes expenditures on RTWC awards made to both new and repeat incapacity benefit claimants and existing claimants who volunteered for Pathways. Thus, the value was divided by the total number of RTWC awards received by both groups. Because more than seven times as many new and repeat claimants received RTWC awards as volunteering continuing claimants, they presumably dominate the estimate of RTWC duration.

In Chapter 2, we found that only 4.69 per cent of those who made enquiries about incapacity benefits would have received an ADF award in the absence of Pathways and that Pathways increased this by just over one percentage point. Thus, Pathways increased ADF payments by only £1.30 (0.0122 x £107) per enquiry.

Pathways allows for reimbursement of certain expenses that participants incur as a result of the programme. These reimbursements mainly covered travel to WFIs and the Choices programmes. The amounts of these reimbursements are available in the same administrative project expenditure data that we used for computing staff costs. Thus, in determining the cost of reimbursing Pathways participants expenditures, we followed the same procedures as we used in estimating staff costs (see Section 4.3). As can be seen in Table 4.3, outlays to reimburse Pathways participants for their travel expenses were extremely small, only about 14 pence per incapacity benefit enquiry.

4.6 Cost of fast-tracking Personal Capability Assessments

As noted in Chapter 1, one goal of Pathways was to fast-track the PCA so that it took place within 12 weeks of the start of an incapacity benefits claim. Because, prior to the introduction of Pathways, some claimants left benefits after 12 weeks but before their PCA was scheduled (often not until around week 20), the number of PCAs increased to the extent that PCAs took place earlier. As a consequence, the cost of Pathways also increased. The increase in cost that is associated with fast-tracking the PCA is considered in this section.

About three-quarters of the claimants who undergo a PCA receive a full physical examination. This examination costs £44.61 per claimant. The remaining quarter of those who undergo a PCA is subject to only a scrutiny review, a paper review of the case, which costs £6. These values are identical in Pathways and non-Pathways areas. Hence, the costs of PCAs will only increase as a result of Pathways if a higher proportion of claimants receive examinations or scrutiny reviews in Pathways areas than in non-Pathways districts. However, in addition to examinations and scrutiny reviews, a Capability Report, which attempts to indicate what a claimant is able to do, is produced for most claimants who are examined in Pathways areas but not for claimants who are examined in the non-Pathways areas. The Capability Report, which is intended for use by IBPAs during WFIs, costs £8.34.

A recent analysis of PCA has been conducted by DWP (2007b). This analysis found that during the year prior to the introduction of Pathways, 33.7 per cent of the claimant population in the seven original Pathways districts were fully examined and another 11.1 per cent underwent scrutiny reviews.[27] These percentages were slightly smaller in the matched non-Pathways districts. In addition, Capability

[27] The analysis did not provide separate estimates for the April and the October Pathways sites.

Reports were produced for nearly 30 per cent of the claimants in Pathways districts. Using difference-in-differences methods similar to those described in Chapter 2, the DWP PCA analysis further found that Pathways increased the percentage of incapacity benefits claimants who underwent an examination by 3.0 percentage points and the percentage who were subject to a scrutiny review by 1.0 percentage points. By bringing forward the PCA, Pathways also increased the percentage of claimants who received a second PCA within one year of starting their claim by 0.6 percentage points (from 0.5 per cent).

Taking all these impacts of Pathways into consideration, the programme appears to have increased the costs of PCA examinations by £1.61 per claimant and the costs of scrutiny reviews by £0.06 per claimant. An additional cost of £2.47 per claimant arose because Pathways provided for Capability Reports. Thus, as a result of Pathways, PCA-related costs per claimant increased by a total of £4.14. However, only about 78 per cent of all those who make enquiries about incapacity benefits actually become claimants. Thus, if measured per enquiry, rather than per claimant, PCA costs that resulted from Pathways were only £3.23 (£4.14 x 0.78).

4.7 Total cost of Pathways

Table 4.4 summarises the average net costs of Pathways for each individual who made an incapacity benefit enquiry between April 2005 and March 2006. The total average cost was £314 in the seven original Pathways' sites and £271 in the four sites that rolled out Pathways in April 2004. Over 80 per cent of these amounts are attributable to staff salaries, the CMP, and (especially) RTWC payments.

Table 4.4 Net costs of Pathways per IB enquiry (April 2005 – March 2006)

Cost component	Seven original sites	Four April sites only
Staff		
Salaries	£73.28	£69.86
Other staff costs	33.92	32.89
Choices		
New Deal for Disabled People	11.39	3.17
CMPe	54.07	48.24
Accelerated PCAs	3.23	3.23
Payments to Pathways participants		
RTWC	136.49	113.01
ADF	1.30	0.82
Reimbursed Expenses	0.14	0.13
Total net costs	£313.82	£271.35

In interpreting these figures, it is important to bear in mind that they are averaged over everyone who made an incapacity benefit enquiry. About 22 per cent of those making enquiries never became a benefit claimant. If we adjust the total cost estimate for the seven original Pathways' sites by reasonably assuming that these people did not incur any costs whatsoever, the value would be slightly in excess of £400 (that is, £314/(1-.22) = £402).

More importantly, costs are as low as they appear because Pathways had only moderate effects on the proportions of those making enquiries who received WFIs, the Choices components and the various types of payments to Pathways participants. As previously discussed, the cost of many of the individual programme components was substantial for those who actually received the service or the payment award.

The cost estimates presented in Table 4.4 relate to the Government's cash outlays. But the true resource cost of the policy is not what the Government spends: it is the value of what the inputs used by the Government to provide Pathways could have produced if utilised in the private sector. There is a close relationship between these two: roughly speaking, the amount the Government might have to pay to use the inputs might be the remuneration they could command in the private sector. However, one important difference is VAT: some of the inputs have VAT charged on them, whereas others do not. This causes the cost of resources to the Government to differ in a way that does not reflect the underlying value of the resources themselves. Thus, for example, there is no VAT on the services of a Government employee but there is VAT on the services of an external contractor. This may be reflected in a higher cash outlay for services provided by the external contractor; but this extra VAT paid by the Government (to itself, ultimately) does not reflect a fundamentally higher resource cost to the economy of using the contractor, rather than the employee. If these two (otherwise identical, say) individuals were employed in the private sector, they might both produce goods or services worth the same amount. This resource cost could be measured by including or by excluding the VAT that would be added to this amount when the produce was sold. These measures would reflect the resource cost in market (i.e. VAT-inclusive) or producer (i.e. VAT-exclusive) prices, which are equally valid metrics as long as used consistently for measuring costs and benefits. Our slight preference is for market prices as this better represents the everyday notion of the value of a pound.

To measure the real resource cost, we deduct from the cash outlays in Table 4.4 an estimate of the VAT actually paid on the different components. On the assumption that inputs are paid the value of what they could produce elsewhere, this gives the real resource cost in producer (i.e. VAT-exclusive) prices. We then add on an estimate of the indirect taxes that would be charged on what these real resources could produce in the private sector. This is done by assuming that the indirect tax rate is 20.4 per cent, the average tax rate on expenditure taking into account varying VAT rates and excise duties (see Chapter 5 for more detail). By adding

indirect taxes to the real resource cost in producer prices, total costs are valued at market prices. These adjustments for indirect taxes are not needed for payments to Pathways participants since these represent a transfer of, rather than a use of, real economic resources and are, therefore, automatically expressed in market prices.

The final estimates of the overall costs of Pathways per IB enquiry are given in Table 4.5.

Table 4.5 Overall estimated costs of Pathways per IB enquiry (April 2005 – March 2006)

Cost component	Seven original sites	Four April sites only
Real resource costs in producer prices		
Staff		
Salaries	£73.28	£69.86
Other staff costs	26.80	25.98
Choices		
NDDP	11.02	3.07
CMP	52.71	47.03
Accelerated PCAs	3.13	3.13
Indirect taxes (market price adjustment)	34.78	31.11
Transfer payments		
Payments to Pathways participants		
RTWC	136.49	113.01
ADF	1.30	0.82
Reimbursed expenses	0.14	0.13
Total net costs (in market prices)	£339.65	£294.14

5 Estimating the financial benefits of Pathways

5.1 Summary

This chapter presents estimates of the financial benefits of Pathways for both individuals and the Exchequer. The analysis is done in three stages: First, we estimate how receipt of incapacity benefits, employment, hours of work and earnings, both with and without the policy, are related to observed individual characteristics. Second, we simulate these outcomes for a sample of individuals who have recently moved onto Incapacity Benefit (IB) and model their tax and benefit position in each of these different states. Third, we use the estimated impacts of Pathways on employment and benefit outcomes, combined with the tax and benefit positions associated with each of these outcomes, to estimate the impact of the policy on the finances of both individuals and the Exchequer under a variety of different assumptions as to how long the programme's impact might last.

The main findings are as follows:

- Where the policy effects are on an individual who would otherwise be in receipt of the long-run rate of IB, we estimate that Pathways increases their net family income by £5.49 per week on average (excluding any payments to Pathways participants). In addition, it saves the Exchequer £7.70 per week on average.

- Of this Exchequer gain, only £1.98 represents a reduction in spending on IB. There are significant additional contributions from increased income tax and National Insurance receipts and reduced payments of Income Support (IS), income-based Jobseeker's Allowance (JSA), Housing Benefit (HB) and Council Tax Benefit (CTB). This reflects the fact that the impact estimates suggest that the main effect of Pathways is not to move people off IB who would otherwise have stayed on it, but to move people who would have left IB without Pathways into employment instead of into unemployment or being economic inactive. In addition, increased employment means increased Working Tax Credit (WTC) payments, which far outweighs the reduction in Child Tax Credit (CTC) from increasing the incomes of those with children. Increased indirect taxes (predominantly VAT) on the sale of goods and services produced by individuals moving into work are also important.
- The total financial benefits of Pathways depend on how long the weekly impacts last. Cautiously assuming that the impacts persist for 70 weeks – since the impact is estimated to have started three to four months after IB claim, this corresponds to 19 to 20 months after the IB claim – the results imply that the overall benefit of Pathways is £1,041 per incapacity benefits enquiry, with individuals gaining £526 and the Exchequer gaining £515. Alternatively, if the impacts last for 150 weeks, then the overall benefit of Pathways is £2,023, with individuals gaining £935 and the Exchequer £1,127.

5.2 Introduction

Bewley *et al.* (2007) estimated the impact of the original seven Pathways pilots on affected individuals' benefit receipt, employment and earnings. This chapter estimates the financial implications of those impacts for the individuals concerned and for the Exchequer.

Estimating these financial implications is not as simple as it might appear. For both individuals and the Government, it depends on how the changes in circumstances affect overall tax and benefit payments. The complexity of the tax and benefit system and the wide variation in individual circumstances mean that such consequences can vary widely and simply looking at the tax and benefit position of a single 'representative' individual need not give a reliable picture. The average change in net Exchequer transfers (benefits plus tax credits less taxes paid) for affected individuals need not be close to the change in net transfers for the 'average' affected individual. Even for each affected individual, there is considerable uncertainty as to how they would be affected by the policy and again the change in net transfers averaged across different possible impacts need not match the change in net transfers associated with a single 'best guess' of the impact. Finally, we need to think about how the impact might vary over time. The costs of Pathways analysed in the previous chapter are incurred up front, but the benefits may last a long time; taking account only of the benefits that accrue up to a certain point in time and ignoring any longer-term benefits would, therefore,

understate the net benefits of the policy because there are no corresponding longer-term costs.

Ideally, therefore, we would like to calculate the complete time path of the tax and benefit position of each individual affected by the policy in the original seven pilot areas with and without the policy in place, taking full account of uncertainty around the estimated impact of the policy. Unfortunately, that is not possible. One problem is that data on individuals' outcomes of interest are available only for a relatively short period (and for some outcomes only at a single point in time) after they were subjected to the policy, so we must make assumptions as to the longer-term impact of the policy and see how different assumptions affect our estimates of the financial benefits of the policy. A second problem is that no dataset contains enough information both to estimate the impact of the policy on employment, earnings and benefit receipt and to calculate the full tax and benefit position of affected individuals.

The **Pathways to Work Evaluation Dataset** (hereafter PED) – not the administrative Pathways database but the surveys of individuals who made an enquiry about claiming and incapacity benefit collected by National Centre for Social Research (NatCen) – contains information on a sample of individuals who made an enquiry about claiming incapacity benefits in pilot and comparison areas both before and after the reform was implemented in the pilot areas. It has been used to estimate the impact of the reform on benefit receipt, employment, earnings and a self-reported measure of the extent to which health affects everyday activities (Adam *et al.*, 2006, and Bewley *et al.*, 2007). The policy was found to increase the proportion of those making an enquiry who were in employment and reduce the proportion who were receiving incapacity benefits (but there is evidence that these are not necessarily the same people). However, the PED does not contain enough information about claimants and their families to enable us to calculate their tax and benefit position: some characteristics (such as housing costs and any partner's private income) that are important in determining a family's net Exchequer transfer are not contained in the PED dataset.

The **Family Resources Survey** (FRS), contains all the information needed to calculate the net Exchequer transfer position from direct taxes, tax credits and benefits and is set up for use with the Institute for Fiscal Studies' tax and benefit microsimulation model (TAXBEN), which plays a major role in estimating Pathways' effects on taxes and benefit payments. However, the FRS cannot be used to evaluate the impact of the policy on employment or on exit from incapacity benefits since the sample size of new IB claimants in Pathways pilot areas and the comparison areas is extremely small.

To estimate the financial benefits of Pathways, therefore, we cannot use the policy's estimated impact on individuals subjected to the policy and observed in the PED; we must instead use what the PED can tell us about the impact of the policy to predict what its impact would be on similar individuals in the FRS for whom we can estimate net transfers. We use data from the PED to estimate how

the receipt of incapacity benefits, employment, hours of work and earnings, both with and without the policy, are related to individual characteristics observed in both the PED and the FRS. We then use the same characteristics to predict those outcomes for individuals in the FRS both with and without the policy. Together with other characteristics observed in the FRS (which we assume are unaffected by the policy), this allows us to estimate the effect of the policy on their tax and benefit payments. In Section 5.3, we describe and compare the two data samples used in this exercise. Section 5.4 presents the estimation of individuals' incapacity benefit receipt, employment, hours of work and earnings with and without their being subjected to the policy. Finally, the calculation of taxes and benefits and our estimates of the overall benefits of Pathways are presented in Section 5.5.

5.3 How different are FRS and PED?

The PED contains data for individuals moving onto incapacity benefits in the original seven pilot areas and matched comparison areas before and after Pathways was introduced in the pilot areas. As discussed in Chapter 1, the pilots began earlier in some of the areas (the 'October 2003 areas') than in others (the 'April 2004 areas'). In both cases, however, the 'post-policy' group for whom we predict outcomes, are individuals making an enquiry between August and November 2004 and interviewed at around the same time, as shown in Table 5.1.

Table 5.1 Dates of the outcome interview

	October 2003 areas		April 2004 areas	
	Pre	**Post**	**Pre**	**Post**
First date recorded	20 April 2005	2 March 2006	14 June 2005	26 February 2006
Last date recorded	19 October 2005	13 July 2006	28 October 2005	13 July 2006

From the original PED sample of 5,784, Bewley *et al.* (2007) removed 147 individuals for whom key information such as benefit and employment status was missing. We remove another 208 individuals by restricting the sample to the 18 to 59 age group, as they were the only individuals who were mandated to participate in Pathways, and remove a further eight individuals who report being employed for an hourly wage that seemed implausibly low (below £2) or high (above £30). Our final sample size, at 5,421, is thus some six per cent smaller than the original dataset. Unsurprisingly given this relatively small reduction, our reduced sample has very similar characteristics to the original sample.

The PED consists of a sample of individuals who were recorded as making an enquiry about claiming incapacity benefits in a specific period. The FRS is a random cross-sectional survey of the population and does not contain information about benefit enquiries or claim dates as such. Instead, subject to the same age and

hourly wage restrictions as described for the PED sample, we use a sample of individuals who recently moved onto IB by selecting individuals if they report that they receive IB and that they have been unable to work for less than a year. The FRS dataset has only a relatively small sample of such individuals in any one year, so we pool together ten years of data (FRS 1996/97 up to FRS 2005/06), appropriately uprating the data (earnings in line with average earnings growth, rents in line with average rents, etc.) to simulate April 2006 data corresponding to the timing of the outcome interviews for the post-policy groups as shown in Table 5.2[28]. Our selected FRS sample includes, as a result, 892 individuals.[29]

We predict outcomes for a sample of individuals in the FRS, using models of those outcomes estimated using individuals in the PED. In order to do this, we require that:

- the datasets record similar characteristics of individuals. This is because we can only model outcomes as depending on characteristics observed in both datasets and we would like the model to be as rich as possible;
- the FRS contains a sample of individuals who look similar to the sample of interest in the PED. The more similar the distributions of characteristics in the two datasets, the more reliable predictions will be (since there will be no need for excessive extrapolation), and the more results for the FRS sample will reflect likely results for the PED sample.

We next take a closer look at each of these considerations in turn.

5.3.1 The characteristics observed

The characteristics recorded in both the PED and the FRS that we use to model outcomes consists of age, sex, ethnicity, age left full-time education, experience, whether single, whether ever worked, whether any partner is in work, whether there are any children in the household and the number of children in the household.[30] A key omission is health. Both datasets contain information about individuals' health, but the information is different: the FRS has information on functional disabilities (difficulty doing particular things) whereas the PED has information on physical disabilities (problems with arms, eyes, mental health, etc.). The typology being different, they could not be matched properly. In particular, there was no direct counterpart in the FRS to the category of 'mental health problem' in the

28 For the FRS 1996/97 and 1997/98, only individuals unable to work in the last 28 weeks are selected. The information is not available for the 52 week threshold.

29 Three of our sample of 892 were removed from the analysis because they did not report the amount of IB received, precluding calculation of their tax and benefit position. However, the remainder of this section relates to the full 892.

30 In the modelling we also include age squared and allow the effects of age and sex to interact with some of the other variables.

PED, which proved important in the impact analysis of Pathways (see Section 5.2 of Adam *et al.*, 2006).

One concern would be that excluding details of individuals' health from our control variables could lead to a different estimate of the overall impact of Pathways on the key outcomes of interest. However, having carried out the estimations both with this smaller set of variables and with the larger set used in Bewley *et al.*, (2007), we find that the differences are minimal. Excluding details of individuals' health conditions does not, then, change our estimate of the overall impact of the policy. It is still possible that it could change our estimate of the financial benefits of the policy, however, if both the impact of the policy and other factors which affect net transfers are different for those with mental health conditions, for example.

5.3.2 The similarity of the samples

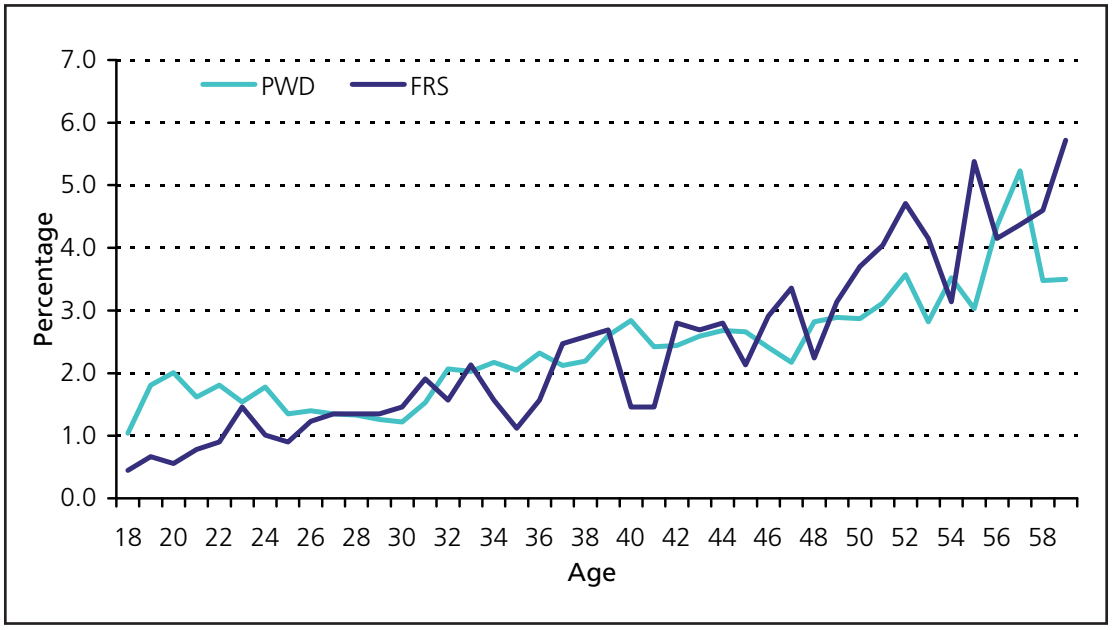
Table 5.2 compares the characteristics listed above for the two different samples.

Table 5.2 Background characteristics – comparison between PED and FRS

Characteristics	Sample mean	
	PED	FRS
Age	42.37	44.91
Female	47.5%	42.7%
Non white	4.9%	8.1%
Live with partner	52.5%	62.2%
Partner in work	32.7%	35.0%
Kids in the households	27.4%	19.7%
Age completed education	16.37	16.16
Left education before age 16	31.2%	39.9%
Left education at age 16	42.6%	39.8%
Left education after age 16	25.8%	19.8%
Ever worked	76.8%	80.9%
Sample size	5,421	892

The two samples are similar in many respects but differ in their sex composition (the PED has markedly more women), ethnicity (a higher proportion are white in the PED, perhaps suggesting that the areas in which pathways was piloted are less ethnically diverse than the country as a whole), family composition (the PED has more single individuals) and educational attainment (the PED has more educated individuals). Although the average age at which individuals left full-time education is slightly higher in the PED, a smaller proportion of individuals in PED completed their education before age 16. The distribution of ages in the two datasets is very similar, except for a higher density of younger individuals (age 18 to 22) in the PED, as shown in Figure 5.1.

Figure 5.1 Distribution of age in the FRS and PED samples



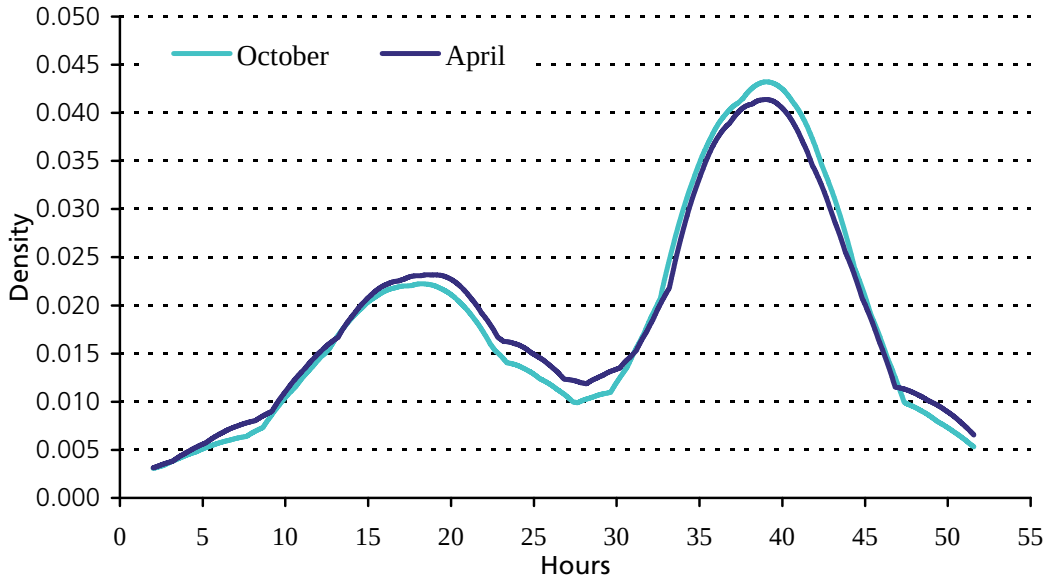
5.4 Estimating benefit and labour market outcomes

To estimate the net transfer from the Exchequer to those who recently moved onto IB, both with and without Pathways pilots in place, we need to construct a model to predict whether individuals move off IB, whether they move into work, their hours of work and earnings if in work and how each of these is affected by the policy. Even assuming that other characteristics that affect tax and benefit payments (such as housing costs and any partner's earnings) are unaffected by the policy, it is not feasible to model all these outcomes jointly.

A natural approach would be to estimate a discrete choice model of the effect of Pathways on employment and IB receipt jointly and to estimate separate continuous models of hours of work (broadly a choice variable) and hourly wages (broadly an individual characteristic related to productivity), which together determine earnings, conditional on moving into work but taking into account that those observed moving into work may be a selected sample. However, this approach has two important disadvantages in the modelling of hours of work:

- it imposes the assumption that, conditional on employment, hours of work are not affected by the policy;
- hours of work are very badly predicted by linear (OLS) estimation, because the distribution of hours does not really look like a continuous choice. As shown in Figure 5.2, individuals tend to work either full-time (around 37-40 hours a week) or part-time (around 18-20 hours a week).

Figure 5.2 Estimated distribution of weekly hours (both cohorts)



Note: Estimates produced using a kernel.

For present purposes, however, we do not need to predict hours of work precisely. The net transfer to an individual depends on earnings and on their hours' category: benefit and tax credit entitlements depend on whether people work at least 16 or at least 30 hours but not on precise hours within those ranges. Rather than estimating continuous models of hours of work and hourly wage, therefore, an alternative which solves both of the problems above is to model discrete hours **category** (1 to 15, 16 to 29 or at least 30 hours per week) jointly with employment and IB receipt and to model earnings continuously for each hours category. This is our preferred approach and we examine the two parts of this estimation below.

5.4.1 Modelling employment, hours of work and benefit status

We model the probability of an individual experiencing each of six possible outcomes, with and without being subject to Pathways (the difference in probabilities being the policy effect):

1 Employed 1-15 hours a week, not receiving IB.

2 Employed 16-29 hours a week, not receiving IB.

3 Employed 30 or more hours a week, not receiving IB.

4 Employed 1-15 hours a week, receiving IB.

5 Not employed, receiving IB.

6 Not employed, not receiving IB.[31]

We model these six outcomes as a multinomial logit, which means imposing the independence from irrelevant alternatives (IIA) assumption. This assumption implies that adding another alternative does not affect the relative odds between the first alternatives.[32] Given the sample size involved, a multinomial probit, which does not impose this assumption, cannot be estimated (does not converge) with more than 4 or 5 outcome states.

Having estimated the model, we use it to predict the probability of each individual being in each state with and without the policy. Table 5.3 shows the means of the predicted probabilities (or equivalently, the predicted proportion of individuals in each state) for both the PED sample and the FRS sample.

Table 5.3 Predicted impact of Pathways at time of final interview

	PED sample			FRS sample		
	Policy (%)	No policy (%)	Impact (ppt)	Policy (%)	No policy (%)	Impact (ppt)
(1) 1-15 hours, no IB	3.9	2.2	+1.7	2.9	1.6	+1.3
(2) 16-29 hours, no IB	9.3	7.8	+1.4	8.2	6.9	+1.4
(3) 30+ hours, no IB	24.7	21.7	+3.0	22.2	19.3	+2.9
(4) 1-15 hours, IB	0.9	1.4	–0.5	1.3	1.9	–0.6
(5) Not employed, IB	42.7	44.3	–1.6	48.3	49.6	–1.3
(6) Not employed, no IB	18.4	22.6	–4.2	17.1	20.8	–3.6

[31] In principle there are two other possible combinations: receiving IB while working either 16-29 or 30 or more hours a week. A few individuals in PED do appear to be in these positions. However, all of these individuals also report having earnings above £85 a week, and the rules on permitted work while receiving IB make the combination of working 16 or more hours and earnings £85 a week almost impossible, and we suspect that these cases reflect recording errors in PED. Since there are so few cases, making separate outcomes difficult to model in any case, we assume they actually are not claiming benefit receipt.

[32] A classical example of IIA in practice is due to McFadden (1974): Consider commuters who initially choose with equal probability between commuting with a red bus or with a car. IIA implies that when adding a third alternative, for instance commuting with a blue bus, commuters should maintain the same odds ratio between commuting with a car or a red bus and therefore choose each transport possibility with a probability of one third.

This gives an overall employment effect of +5.7 percentage points for the PED sample (+1.7 +1.4 +3.0+ –0.5 = +5.7). This number can be compared to the effect found on both cohorts with the same methodology and data in Bewley *et al.* (2007) (+4.4 percentage points) and again on the same data when restricting the sample to the 18 to 59 age group (+5.3 percentage points).

Ideally, we would like to estimate the model separately for the October 2003 and the April 2004 areas – particularly given that the estimation may be biased for the October 2003 areas. Indeed Bewley *et al.* (2007) preferred estimates from just the April 2004 areas (with no age restriction). However, there is a trade-off involved in this: separate estimation for the two sets of areas significantly reduces the sample sizes and therefore, the precision of the estimation. If we restrict ourselves to the April 2004 areas with the age restriction, we find a policy effect on employment of +7.1 percentage points (compared with the +7.4 percentage points of the Bewley *et al.* estimation).[33] Table 5.3 also shows an overall effect on IB receipt of –2.1 percentage points (–0.5 + –1.6 = –2.1). When the model is applied to the FRS sample, the predicted effects are similar, but not identical, reflecting the differences shown in Section 5.3.2: an employment impact of +4.9 percentage points and an IB receipt impact of –1.9 percentage points. Appendices A.1 and A.2 show separate results for the October 2003 and April 2004 cohorts and results based on a model with four outcomes: employed/not employed, with and without receiving IB, i.e. excluding hours of work from the model.[34]

We would also ideally like to estimate how these impacts changed over time. Table 5.3 uses outcomes at the time of final survey interview (around 18 or 19 months after the initial IB enquiry). We can attempt to construct outcome measures for each month from IB enquiry to the final interview.[35] However, the information we have for a month-by-month analysis is much less precise: we have relatively robust recall data on employment histories for month eight up to month 18 (described in Section 5.1 of Bewley *et al.*, 2007), but no information from these data on benefit status month by month. We have imputed a benefit status month by month using the information on employment at each month and inferring the benefit status

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33 The Bewley *et al.* estimation has a larger sample size (104 extra observations) as it does not impose any age restriction.

34 The reduced number of outcomes allows more precise estimation of the model, but ignores the joint determination of employment and hours of work. Compared with the results in Table 5.3, the estimation with four outcomes shows the policy as leading to a slightly bigger increase in the probability of moving off IB and into work, but a slightly smaller reduction in the probability of staying out of work and off IB; the difference is accounted for by a bigger decline in the probability of moving into work while remaining on IB.

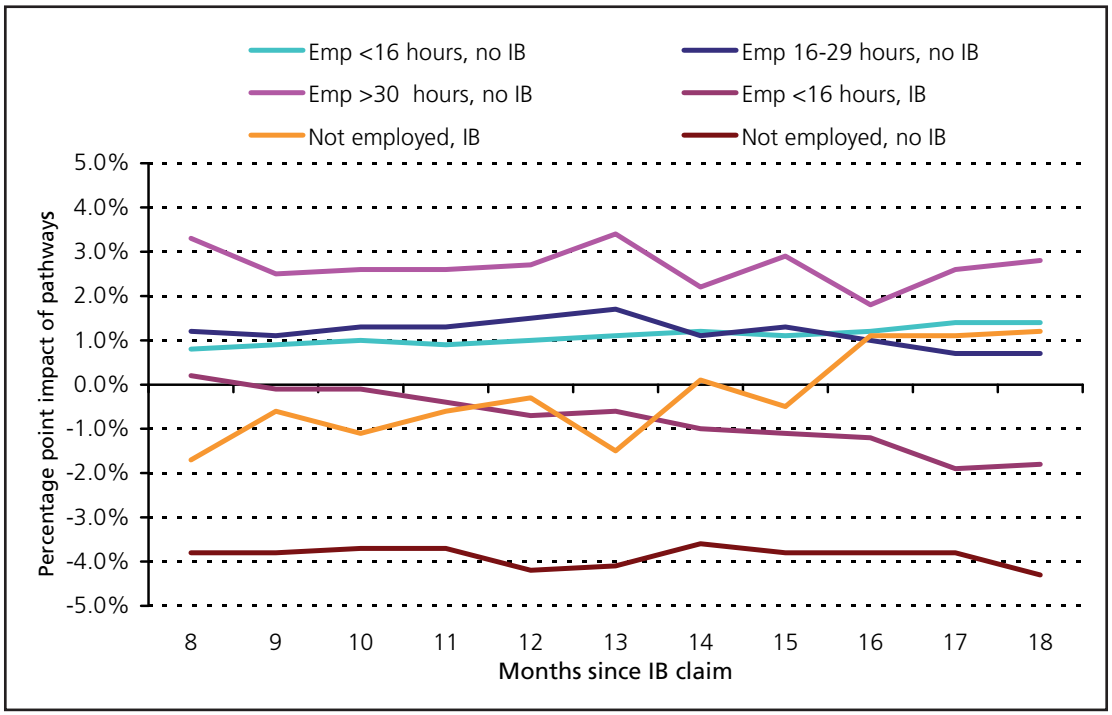
35 The final survey interview is the limit of our information on employment outcomes. The implications of different possible outcomes beyond this period are discussed in section 5.5.

from the one we observe at the last interview,[36] but even these assumptions leave substantial gaps in the data for many of the months.

For the months for which we have sufficient observations, the effect of the policy does not appear to have varied much, consistent with the results in Bewley, *et al.*, 2007). Figure 5.3 plots the difference in the means of the outcome probabilities predicted for the FRS sample. The figure shows that the policy substantially reduced the size of the group which is out of work and not on IB while increasing the number of people employed and not receiving IB. The strongest effect seems to come from the individuals in full-time employment. In general, the results look very similar to those estimated for the time of final interview. The estimates are relatively stable over time; the one marked trend is for an outcome that is very rarely observed – moving off IB and into work of less than 16 hours, which seems to be made initially less likely and then more likely by Pathways – and we are not confident that this represents a genuine trend rather than being an artefact of our imputation of outcomes for the early months. For our analysis we, therefore, use the estimates for the time of final interview reported in Table 5.3, assuming that once they appear these impacts are constant for the duration of Pathways' impact.

[36] The rules we applied are as follows: if the individual is working at the last interview and they are not on IB, we assume they have been on IB up to the point they have found a job. If the individual is not employed at the last interview and they are on IB, we assume they have always been on IB while out of work and off IB while in work. If the individual is employed and on IB at the last interview, we assume they have always been on IB. Finally, if the individual is not employed and not on IB, we assume that they have either never been on IB or left IB with its first employment spell and never been back on IB.

Figure 5.3 Difference in predicted probabilities (six outcomes), month by month estimate, FRS sample



5.4.2 Estimating weekly earnings

The aim here is to predict the earnings that each individual in our FRS sample would have, with and without Pathways in place, if they moved into work of 1-15, 16-29 or 30 or more hours per week. The simplest approach to doing this is to estimate a linear (OLS) regression for each hours category, regressing the (log) weekly earnings of individuals observed being employed in the relevant hours category in PED on the characteristics listed in Section 5.3.1, and then to use the estimated impacts of those characteristics on earnings to predict earnings for the FRS sample.[37,38] Potential biases in the OLS estimation and alternative approaches are discussed in Section A.3.

Figures 5.4, 5.5 and 5.6 compare the distributions of actual log earnings for individuals observed being employed in each hours category in the PED with the

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37 The earnings figure reported in the PED is net earnings. We compute the corresponding gross earnings figure using the Income Tax and National Insurance contributions system from the two fiscal years 2005/06 and 2006/07. As noted in Section 5.2, we remove from our sample individuals who report an hourly wage of less than £2 or more than £30.

38 The log earnings equation is used to predict log earnings. The natural estimator of actual earnings, the exponential of predicted log earnings, is biased; to obtain unbiased earnings predictions, we scale down (divide) the exponential of predicted log earnings by the exponential of half the variance of predicted log earnings (Greene 2002).

distribution of log earnings that a simple linear (OLS) regression predicts for the same group; for all individuals in the PED sample (whether employed in that hours category or not); and for all individuals in the FRS sample. It is striking that the predicted earnings distributions are much less dispersed than the actual earnings distributions. This is unsurprising. Because the background characteristics included in our regressions are not the only things explaining individuals' earnings, we fail to explain a large part of the observed variation in earnings. Predictions based purely on what our regressors do explain, therefore, do not display such variation. Using these predictions would yield inaccurate estimates of the benefits of Pathways: because the tax and benefit system is not linear in earnings, average net transfers for a group of moderate earners need not equal the average for some very high earners and some very low earners.

Figure 5.4 Distribution of actual and OLS central predictions of log weekly earnings if employed 1-15 hours

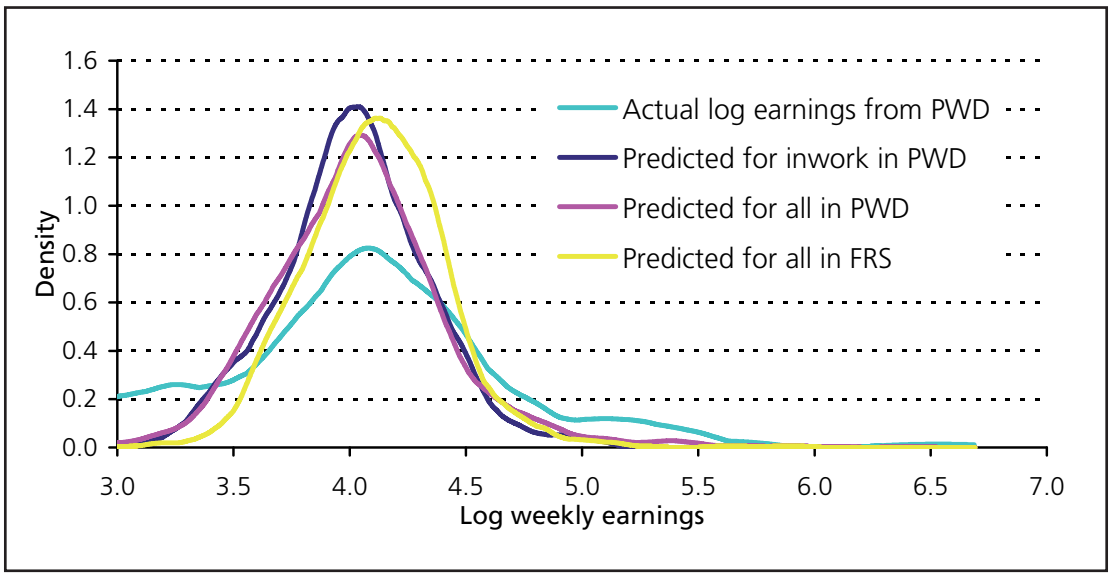


Figure 5.5 Distribution of actual and OLS central predictions of log weekly earnings if employed 16-29 hours

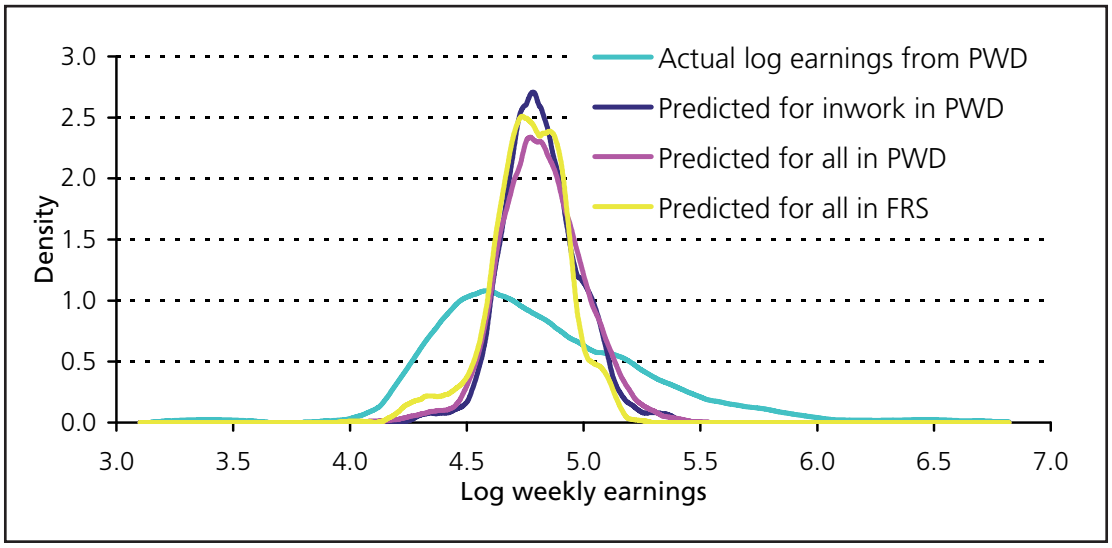
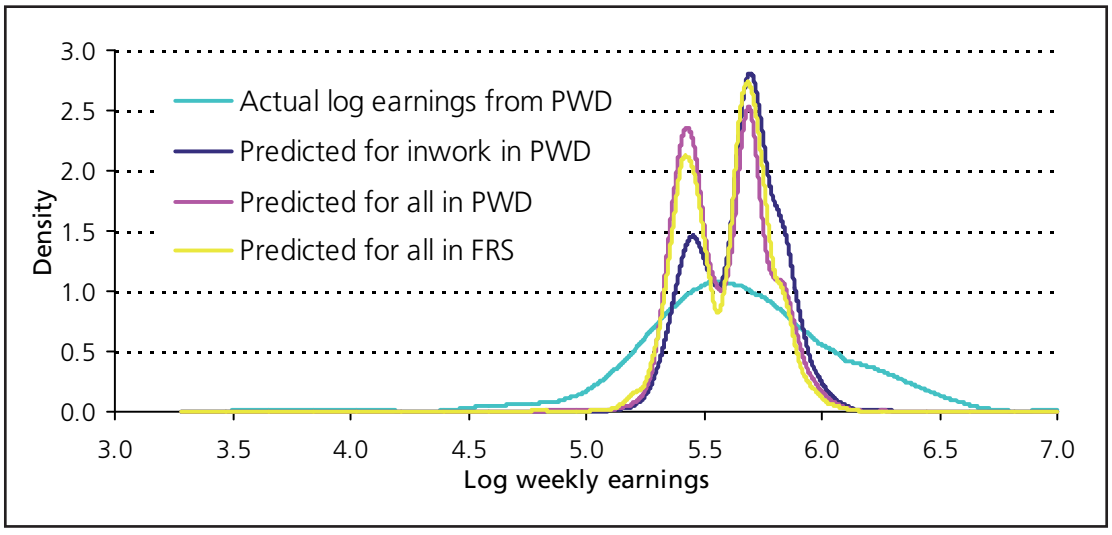


Figure 5.6 Distribution of actual and OLS central predictions of log weekly earnings if employed 30 or more hours



We solve this problem by adding random variation to our central prediction for each individual. To add the appropriate amount and distribution of random variation, we could add to each prediction a value drawn randomly from the residuals of the relevant regression. However, we improve upon this: to reflect more fully the uncertainty surrounding the earnings prediction for each individual, we take 100 random draws from the distribution of residuals for each individual, estimate the tax and benefit position in each case (i.e. 100 times for each individual) and then take the average of those to estimate the expected net transfer for each individual. Figures 5.7, 5.8 and 5.9 show the effect of adding this random variation on the distribution of predicted earnings.

Figure 5.7 Distribution of predicted earnings from OLS regression if employed 1-15 hours, with and without adding in residuals

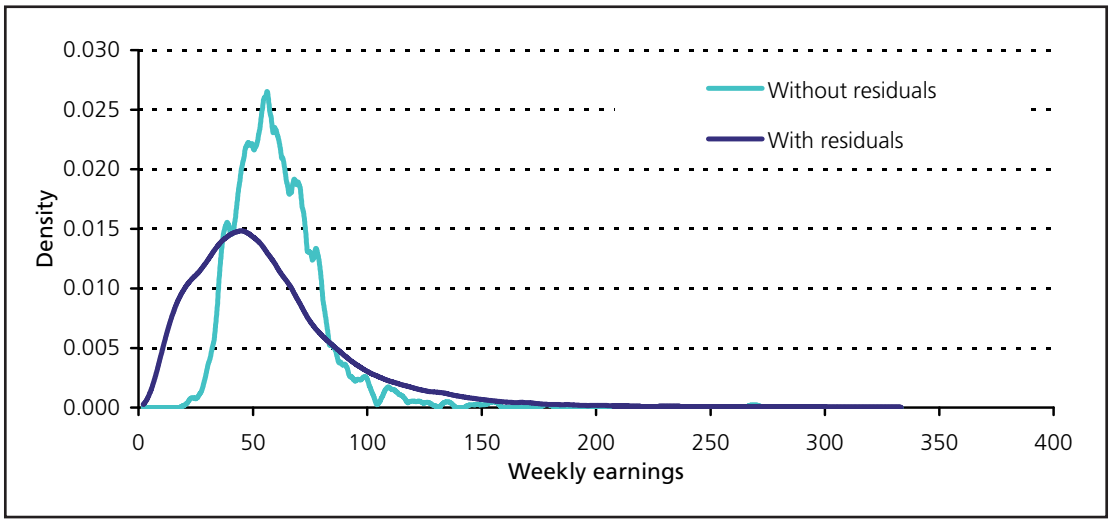


Figure 5.8 Distribution of predicted earnings from OLS regression if employed 16-29 hours, with and without adding in residuals

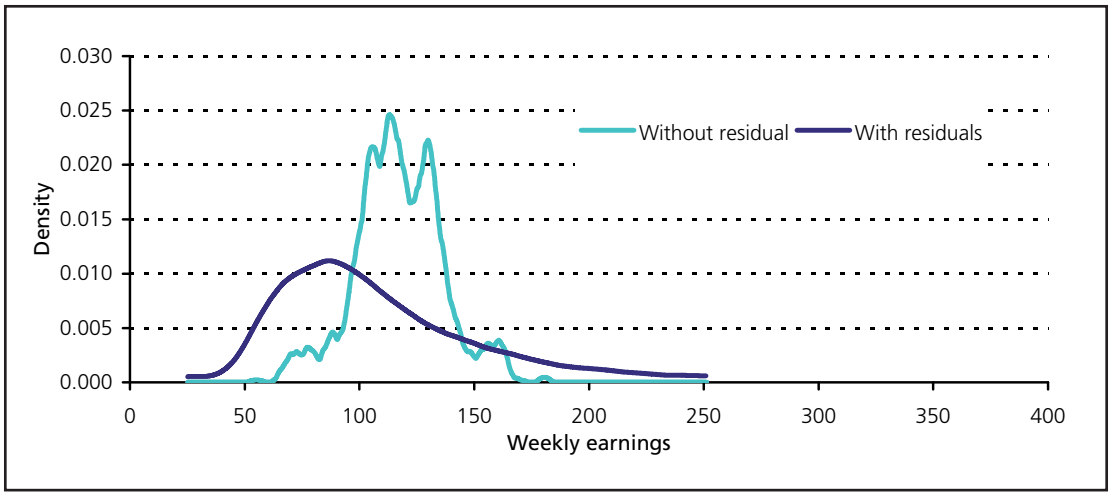
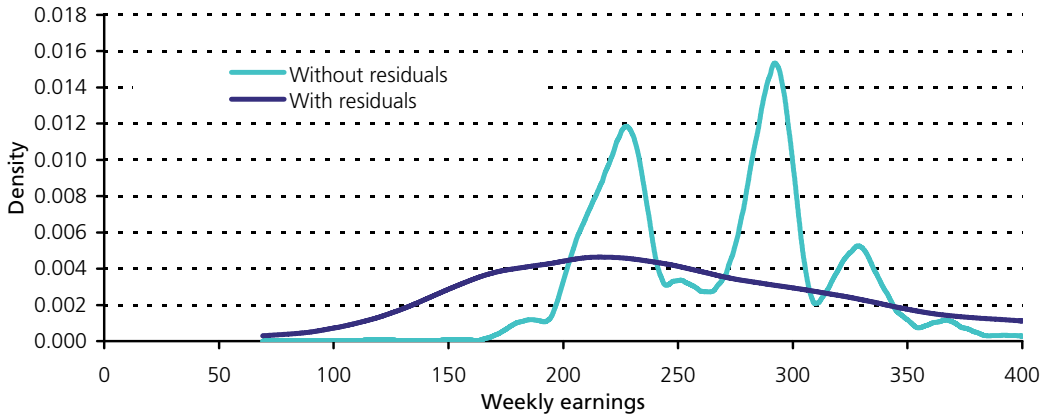


Figure 5.9 Distribution of predicted earnings from OLS regression if employed 30 hours or more, with and without adding in residuals



Source: Those employed for the relevant number of hours from the PED.

5.5 Results

Section 5.4 described how we predicted whether individuals observed claiming short-run incapacity benefits in the FRS would move off benefit, into employment, and (if in employment) at what hours and earnings, both with and without being exposed to Pathways. Having made these predictions, we calculate the personal tax liabilities and the benefit and tax credit entitlements appropriate to each individual's circumstances using the IFS tax and benefit microsimulation model, TAXBEN.[39] To do this, we assume that the outcomes modelled in Section 5.4 are the only characteristics affecting the individual's tax and benefit position that are affected by the policy – for example, that there is no impact on eligibility for Disability Living Allowance (DLA), that the individual remains disabled for the purposes of calculating entitlement to disability premiums in means-tested benefits and tax credits and that any partner's labour market status does not change. Modelling the impact on all these (and many other) outcomes simultaneously would be unfeasible.

One feature cannot be ignored, however. The FRS sample used contains individuals receiving short-run incapacity benefit when interviewed. But we are modelling possible positions they might end up in some months later and how they are affected by Pathways. By that time, they might have moved onto a higher rate of IB, meaning that they would lose more benefit and the Exchequer would save more, if they were to move off IB. The right rate of IB to use depends on how long after the individual became sick (claimed Statutory Sick Pay (SSP) or IB) we wish to

39 TAXBEN is described in Giles and McCrae (1995). For simplicity, we assume full take-up of benefits and tax credits.

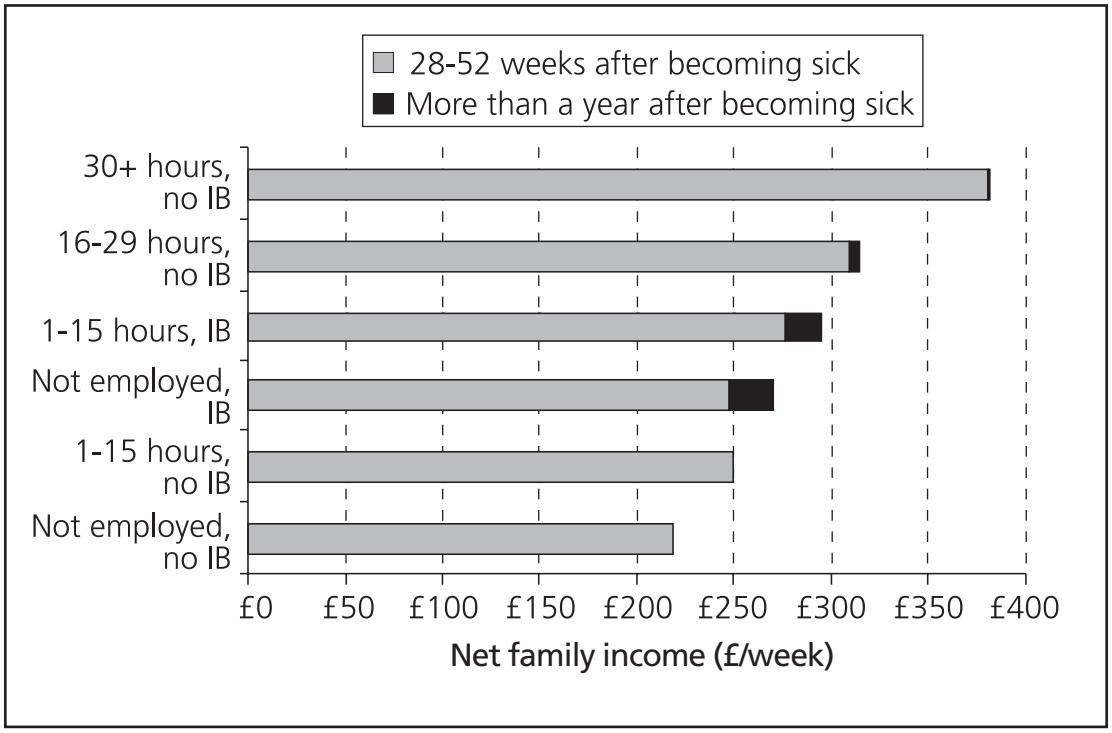
measure outcomes. This issue is discussed further below; but in what follows we present results for both the short-run (higher) rate of IB, which applies from weeks 28 to 52 of sickness, and the long-run rate, which applies after 52 weeks.

For each individual in the FRS sample we have predicted a probability of ending up in each of six employment/hours/IB receipt states. We calculate the tax and benefit position for each individual and therefore, their family's net income in each state.[40] Figure 5.10 shows what the average disposable family income would be across all individuals in each of the six states (excluding any payments to Pathways participants, particularly RTWC payments). Thus, for example, if all 889 individuals remained out of work and on IB (the fourth bar from the top in the chart), on average, their net family income would be £270 per week if at this point they were entitled to long-run IB; £247 per week if they were entitled to the short-run higher rate. If they all moved off IB and into work of more than 30 hours a week (the first bar from the top), their average net family income would be £381, or £380 if off IB less than a year after becoming sick.[41] Note that this does not mean that individuals who move off IB and into full-time work are typically £134 (i.e. £381–£247) per week better off as a result. The figures vary widely between individuals and some are far more likely than others to make this move, so individuals actually changing positions might experience very different financial consequences, even on average.

40 In fact, as discussed in Section 5.4.2, we make 100 different earnings predictions for each individual and calculate their tax and benefit position in each case. Here, and in all that follows, we take the mean of these 100 results for each individual.

41 This small difference arises because disability premiums in HB and CTB normally become payable after a year.

Figure 5.10 Average net family income (excluding RTWC) in each of six modelled states



As well as working out net family income for each individual in each state, we also calculate their entitlements to individual benefits and tax credits and their liability to individual taxes in each state. Applying each individual's predicted probability of being in each state with and without the policy in place, we estimate the impact of the policy on net family incomes and tax and benefit payments.

The results are shown in Table 5.4. Where the policy effects are felt more than a year after the individual became sick or disabled, we estimate that exposing a recent IB claimant to Pathways increases their net family income by £5.49 per week on average, excluding any payments to Pathways participants. In addition, it saves the Exchequer £7.70 per week on average. Only £1.98 of the Exchequer saving represents a reduced IB bill. Significant savings come from increased Income Tax and National Insurance receipts and reduced payments of IS, income-based JSA, HB and CTB, reflecting the fact that the impact estimates in Table 5.4 (as well as results elsewhere in this report and in Bewley *et al.*, 2007) suggest that the main effect of Pathways is not to move people off IB who would otherwise have stayed on it, but to move people who would have left IB in any case into employment instead of into unemployment or being economically inactive. Finally, increased indirect taxes (predominantly VAT) on the sale of goods and services

produced by individuals moving into work, are extremely important.[42,43] On the other side of the ledger, increased employment means increased WTC payments, which far outweighs the reduction in CTC from increasing the incomes of those with children.

The sum of these benefits to the individual and to the Exchequer is £13.20 per week. If third parties are unaffected[44], this represents the total measured financial benefit to society (gross of the costs discussed in Chapter 4 and excluding RTWC). This total benefit is the market value of the additional production in the economy: if we assume that individuals are paid the value of what they produce, Pathways increases the size of the economy by the earnings, plus employer National Insurance contributions and VAT, of the additional people that move into work. The tax and benefit implications of individuals' changed status determine only how resources are divided between the recent IB claimants and the Exchequer.

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42 We assume individuals' earnings (plus employer National Insurance contributions on those earnings) are equal to the value of the goods and services they produce. This will be true under certain market conditions. We also assume an average indirect tax rate of 20.4 per cent: this differs from the standard 17.5 per cent VAT rate both because of excise duties on fuel, alcohol and tobacco and because of reduced and zero rates of VAT. The average indirect tax rate of 20.4 per cent was calculated by applying the relevant VAT and duty rates to total expenditure in each consumption category as recorded in the 2005/06 Expenditure and Food Survey. An alternative methodology developed by Mendoza *et al.* (1994) and refined by Carey and Rabesona (2003), using total indirect tax revenues and total national consumption as recorded in the National Accounts, yields a very similar estimate of 20.6 per cent.

43 As with the cost analysis in Chapter 4, we measure the benefits of the policy in market (VAT-inclusive) prices. An alternative would be to measure everything in producer (VAT-exclusive) prices, in which case we would not add VAT on the value of production to the Exchequer benefits but would instead deduct a proportion of families' disposable income so as to reflect the income's purchasing power in VAT-exclusive terms. The effect of these adjustments would be to reduce both the benefits to the individual and the total benefits to the Exchequer by a common factor, namely 17.0 per cent (i.e. 0.204/(1 + 0.204)). The use of either market or producer prices is valid, provided it is applied consistently across both costs and benefits. We slightly prefer market prices because the concept corresponds to the everyday notion of the value of £1, it would seem slightly odd, for example, to scale down the value of the RTWC from £40 to reflect its 'true' purchasing power after VAT and excise duties are stripped out.

44 See Chapter 7 for the evaluation of indirect effects of Pathways.

Table 5.4 Financial benefits per person per week of impact

	28-52 weeks from start of incapacity	After a year from start of incapacity
Benefits to the individual*		
Increase in family disposable income	£5.80	£5.49
Total	**£5.80**	**£5.49**
Benefits to the Exchequer		
Reduced IB payments	£1.48	£1.98
Reduced IS/income-based JSA	£1.24	£1.23
Reduced HB	£0.72	£0.63
Reduced CTB	£0.32	£0.30
(Increased Tax Credits)	(-£1.25)	(-£1.27)
Increased Income Tax	£1.23	£1.19
Increased Employee NICs	£0.63	£0.63
Increased Employer NICs	£0.74	£0.74
Increased indirect taxes	£2.24	£2.24
Other	£0.05	£0.05
Total	**£7.39**	**£7.70**
Total benefit to society*	£13.20	£13.20

* To these must be added benefits to the individual of £137.93 (total, not per week) from payments to Pathways participants (RTWC, ADF, etc.). These are the same as counted for the cost analysis, so they cancel out when calculating the net costs and benefits to society, but they are important when separating out costs and benefits to individuals and to the Exchequer.

Source: Authors' calculations using the IFS tax and benefit model, TAXBEN, run for the April 2006 tax and benefit system on uprated data from the FRS 1996/97 to 2005/06 and variables estimated from the Pathways to Work Database as described in the text.

The total benefits of Pathways depend on how long these weekly impacts last: how long after an individual moves onto incapacity benefits Pathways starts having an effect; and how long after an individual is exposed to Pathways the individual's chances of being on benefits or in employment are no longer affected by the policy. The evidence from Bewley *et al.* (2007) suggests that Pathways has an impact quite quickly, perhaps from the third month after the individual moves onto incapacity benefits. As explained in Section 5.4.1, we assume that this impact is constant for as long as it lasts. The key question is, therefore, how long the impact of Pathways persists. We do not have a clear answer to this. Bewley *et al.* (2007) suggests that the impact on employment lasts until at least the final survey interview, implying an impact that lasts at least 70 weeks, but that is the limit of our data: we have no way of knowing whether the impact fades out immediately after that point or continues long afterwards.

We, therefore, use two baseline scenarios: a 'pessimistic' scenario in which the impacts last for 70 weeks and an arbitrarily chosen 'optimistic' scenario in which the impacts last for 150 weeks or almost three years. We also explore more extreme

cases: that the impacts last for only 40 weeks – as Bewley *et al.* (2007) suggests might be the case for the impact on benefit receipt – and that the impacts last for 250 weeks, close to five years.

Table 5.5 shows (the present value of) the total gross benefits of the policy to individuals, to the Exchequer and in total – now including the value to individuals of payments to Pathways participants, as estimated in Chapter 4 – for these different possible durations of impacts. We assume that the first 40 weeks of impacts are those for between 28 and 52 weeks after the individuals became sick or disabled (i.e. the left-hand column in Table 5.4) and that impacts beyond that are those for more than 52 weeks after the start of sickness/disability.[45] For our baseline case, we convert streams of weekly effects into a capital value using a 3½ per cent discount rate, as recommended in HM Treasury's 'Green Book' (2003) and in Boardman *et al.* (2006). In line with the recommendation of Boardman *et al.*, we also show the impacts using alternative low (one per cent) and high (five per cent) discount rates. Finally, Table 5.8 shows results from relaxing our assumption that nothing other than the outcomes modelled in Section 5.3 is affected by the policy. Specifically, it shows the benefits of Pathways if we assume that all individuals who move off IB and into work have sufficiently improved health that they are no longer eligible for disability premiums in means-tested benefits or tax credits. In reality, this is likely to apply to some individuals but not all, so the truth will lie somewhere between our baseline scenarios and this alternative extreme.

The choice of discount rate proves unimportant, since we are examining impacts after only a few years at most: the discount rate really matters when policies have costs and benefits spanning several decades or even longer (as with major infrastructure projects, environmental policies or educational interventions, for example). Assuming that no disability premiums are available for workers somewhat reduces the benefit of Pathways to individuals and increases the benefit to the Exchequer since it means reduced transfers to individuals who move off IB and into work. Total benefits are unaffected since, as noted above, such transfers affect only the distribution of gains between the individual and the Exchequer.

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45 This slightly understates the Exchequer benefits and overstates the individual benefits for people who moved onto IB from SSP (and are, therefore, mandated onto Pathways at the point that they move straight onto the short-run (higher) rate of IB, moving onto the long-run rate 24 weeks later) and it slightly overstates the Exchequer benefits and understates the individual benefits for people who did not move onto IB from SSP (and who, therefore, have 28 weeks on the short-run (lower) rate of IB before moving onto the short-run (higher) rate and then the long-run rate). However, we have no way of distinguishing these cases in the data.

Table 5.5 Present value of total financial benefits per person: main estimates and variants

Duration of impact	Individual benefits	Exchequer benefit	Total benefits
With 3.5 per cent discount rate			
40 weeks	£367	£292	£659
70 weeks	**£526**	**£515**	**£1,041**
150 weeks	**£935**	**£1,088**	**£2,023**
250 weeks	£1,416	£1,763	£3,180
With one per cent discount rate			
70 weeks	£532	£523	£1,056
150 weeks	£963	£1,127	£2,090
With five per cent discount rate			
70 weeks	£522	£510	£1,041
150 weeks	£919	£1,066	£2,023
With no disability premiums for workers			
70 weeks	£459	£581	£1,041
150 weeks	£791	£1,232	£2,023

Source: authors' calculations using the IFS tax and benefit model, TAXBEN, run for the April 2006 tax and benefit system on uprated data from the FRS 1996/97 to 2005/06 and variables estimated from the Pathways to Work Database as described in the text.

Unsurprisingly, the key unknown affecting the overall benefits of Pathways is how long its impacts last. If the impact lasts twice as long, the gross benefits almost double, except that the estimated £138 gain to individuals from payments to Pathways participants does not vary with the assumed duration of the impact. Thus, if the impacts last for 150 weeks rather than 70 weeks, individuals gain £935 rather than £526 and the Exchequer gains £1,088 rather than £515; the total benefits are £2,023 rather than £1,041. Research into the longer-run impact of Pathways is the key to determining how large its benefits really are.

6 Assessing the costs and benefits of Pathways

6.1 Summary

This chapter first brings together the cost estimates from Chapter 4 and the benefit estimates from Chapter 5 to provide bottom line estimates of Pathways' net financial benefits (that is, its financial benefits less its costs). It then considers costs and benefits that were excluded from these estimates because they are difficult or costly to measure and, in some cases, are not naturally valued in pounds. Each of these potential programme costs and benefits are examined in the chapter with whatever available information could be brought to bear (e.g. responses to questions in the survey of new and repeat incapacity benefit claimants in the seven original Pathways' pilot districts and findings from previous relevant studies).

The key findings are as follows:

- Looking only at the financial costs and benefits that appear in Chapters 4 and 5, individuals who made enquiries about incapacity benefits were better off by £526 as a result of Pathways if programme benefits persist for only 70 weeks and by £935 if they persist for 150 weeks.
- The comparable net benefits for the Exchequer are £175 per enquiry and £748 per enquiry, respectively.
- Net benefits for society as whole – that is, the sum of the net benefits that accrued to people making enquiries and to the Exchequer – are £701 if programme benefits continue for 70 weeks and £1,683 if they persist for 150 weeks.
- A large number of factors that might potentially alter these findings are examined in this chapter. These include possible programme effects on the:
  - work-related expenditures of Pathways participants;
  - non-work time available to Pathways participants;
  - benefit payments and employment status of non-Pathways participants;

- utilisation of the NHS;
- health status of Pathways participants;
- quality of life of Pathways participants;
- costs of administering (for the Government) and claiming/complying with (for individuals) tax and benefit payments;
- deadweight losses that result from taxes;
- reaction of the public to reductions in the incapacity benefits rolls.

Some of these are almost certainly benefits of the policy, notably the reduction in the excess burden of taxation that Exchequer savings permit. Others are almost certainly costs, such as expenditures and loss of time associated with starting work. Still others are more ambiguous: the effects of Pathways on the health and quality of life of participants and on the benefit payments and employment outcomes of people not mandated to participate in Pathways, for example, could be either positive or negative. However, Pathways was found to have positive net measured benefits even when it was conservatively assumed that programme effects lasted for 70 weeks. If its effects lasted longer, the net measured benefits would be larger. The unmeasured costs of the policy would have to outweigh the unmeasured benefits significantly if the programme were not to be beneficial overall.

6.2 Pathways' measured net benefits

Comparing the £340 cost of Pathways per Incapacity Benefit (IB) enquiry estimated in Chapter 4 with the 'baseline' estimates of benefits of Pathways in Chapter 5, Pathways in the original seven areas had a net measured benefit to the Exchequer of £175 (£515 – £340) per IB enquiry if the impacts of the policy are assumed to last for 70 weeks or £748 (£1,088 – £340) if the impacts last 150 weeks.

In addition, we measured financial benefits to the individuals making enquiries; on average, these were £526 (70 week impact) or £935 (150 week impact).

This suggests an overall measured financial gain to society as a whole of £701 (70 weeks) or £1,683 (150 weeks).

These estimated costs and benefits are summarised in Table 6.1. The biggest cost of Pathways was the Return To Work Credit (RTWC); staff salaries and the Condition Management Programme (CMP) were also relatively costly elements. On the benefits side, the gains were quite evenly divided between Pathways participants and the Exchequer; and the Exchequer benefits were themselves a fairly even combination of savings in IB, Income Support (IS)/income-based Jobseeker's Allowance (JSA), Income Tax, National Insurance contributions and indirect taxes.

Table 6.1 Present value of total measured financial benefits per incapacity benefits enquiry

	Individual	Exchequer			Society		
Duration of impact	Benefit	Gross Benefit	Cost	Net Benefit	Gross Benefit	Cost	Net Benefit
70 weeks	£526	£515	£340	£175	£1,041	£340	£701
150 weeks	£935	£1,088	£340	£748	£2,023	£340	£1,683

Note: Assumes 3.5 per cent discount rate. See Chapters 4 and 5 for details.

6.3 Omitted costs and benefits

The cost-benefit analysis has so far considered only costs and benefits that could be directly estimated or inferred using micro-simulation techniques. There are other potentially important costs and benefits that cannot be obtained by using either of these approaches. The monetary values of these costs and benefits are unknown. Indeed, some are not even naturally valued in monetary terms.

Table 6.1 lists some of the costs and benefits that were omitted in computing the estimates that appear at the start of this chapter. This list is not intended to include all the possible benefits and costs that might result from Pathways; just those we feel are of the greatest potential importance. For each of the listed items, the table indicates the group that is most likely to be affected. The Exchequer and incapacity benefits claimants were considered above. 'Third parties' refers to everyone else (e.g. friends and relatives of Pathways participants, claimants of other benefits, other potential workers and the general public). The remainder of this chapter briefly considers each of the items listed in Table 6.2.

Table 6.2 Omitted costs and benefits

	Participants	Exchequer	Third parties
Work-related expenditures	✓		
Loss of non-market time	✓		
Changes in tax and benefit compliance costs	✓		
Changes in health status	✓		
Other changes in quality of life	✓		
Changes in tax and benefit administration costs		✓	
Changes in NHS utilisation		✓	
Indirect effects on benefit and employment outcomes			✓
Value placed on reductions in IB rolls			✓
Reductions in deadweight costs of taxation			✓

6.3.1 Omitted costs and benefits to Pathways participants

One effect of Pathways was to increase the number of participants who moved into paid work. In Chapter 5 we measured the benefit to individuals of moving into work as being the resulting increase in their disposable income. But moving into work can also entail significant work-related expenses, such as childcare and commuting costs, that we do not measure. Travel costs may be especially large for some disabled people.

Perhaps even more important than work-related expenses incurred, is the time that individuals must give up when they go to work. This time may be of considerable value to those relinquishing it, compared with the enjoyment or otherwise of time spent in work. Since these individuals chose to move into work, we can infer that they received some net benefit from doing so: they must have expected that the increase in income, plus any non-financial benefit they derived from working, would exceed the value of the time given up plus any work-related expenses incurred.[46] However, the benefit to the individual of moving into work would equal the increase in net income that we measure only if no work-related expenses were incurred and if time spent in work were as valuable to the individual as the non-market time they lost. At the other extreme, if the decision to move into work was a marginal one, that would imply that there was little benefit to the individual from doing so.[47]

The value of lost time is not only an issue for those moving into work. In particular, our analysis also ignored the time spent travelling to, and participating in, follow-up Work Focused Interviews (WFIs) (initial WFIs were compulsory in non-Pathways areas too so time taken for them was not an impact of the policy). This affected many more people than the number moving into work, although of course the time involved in attending a small number of WFIs is far smaller than time involved in taking a job.

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46 Inferring that those who move into work must be better off than if they did not do so does not, of course, imply that they are better off than in the absence of Pathways: that also depends on the other factors considered in this subsection.

47 Lost non-market time is difficult to value. There is at least some previous research that suggests that the value of this lost time is substantial, probably not less than a quarter of the increase in disposable income obtained by affected families and quite likely more (Bell and Orr, 1994; Greenberg, 1997, and Greenberg and Robins, 2008), possibly almost the entire value of the income gain. If the value of time was between 25 per cent and 100 per cent of the increase in disposable income, this would imply that the gain to individuals from moving into work was between zero and £395 (rather than £526) if Pathways' impacts lasted for 70 weeks and between zero and £701 (rather than £935) if Pathways' impacts lasted for 150 weeks. The value of time might be very different for different groups, however – it is thought to be higher for those with children than for those without, for example – and the studies cited above did not pertain to sick or disabled people.

Pathways caused some claimants to exit the IB rolls and also caused some to become entitled to other benefits or tax credits. For example, some former IB recipients became eligible for Working Tax Credit (WTC) after taking a job. A subset of these workers will later have lost their job and become entitled to JSA. In addition, new workers will usually be liable for Income Tax and National Insurance contributions. In order to receive a benefit or tax credit, individuals must submit a claim. They might also have to provide supporting evidence of eligibility, go through an appeals process, deal with errors such as tax credit overpayments or PAYE coding errors, or inform the relevant agency of a change in their circumstances. All of this takes time and effort and may be stressful. Anyone whose circumstances changed as a result of Pathways in such a way that they became – or stopped being – entitled to a benefit or tax credit might, therefore, have faced changed costs of claiming or complying with the system. To some extent various changes in entitlements and liabilities tend to offset each other; but the biggest costs are likely to be one-off costs associated with moving into a new situation, rather than ongoing costs of being in any particular position, and in that sense change in general is likely to increase rather than reduce costs. Nevertheless, it is hard to believe that these changes in compliance costs would be large relative to the measured gains and losses summarised in Section 6.3.1.

It is possible that Pathways had an effect on participants' health. This was not the direct motivation for Pathways – even the CMP delivered through the NHS was intended to help people manage their health condition better in a work context, rather than to improve the health condition itself – but health effects might nonetheless have arisen. These effects could be positive (if Pathways helps them to become more active, for example) or negative (if the stress of WFIs aggravates a health problem, say). We have no firm evidence of whether Pathways had any impact on participants' health. Pathways reduced (from 50 per cent to 39 per cent) the proportion of individuals who reported having a health condition or disability that affected their day-to-day activity 'a great deal' and there is some indication that Pathways slightly decreased the proportion who reported having a health problem that restricted their day-to-day activity at all, although the estimate of this latter effect does not approach conventional levels of statistical significance (see Bewley, Dorsett and Haile, 2007). But this is, at most, suggestive evidence: it is a self-assessed measure rather than an objective assessment and in any case changes could reflect a reduction in the extent to which a given level of health leads to difficulties in daily activities rather than any improvement in actual health.

In addition to affecting health status, Pathways could potentially affect participants' quality of life in a variety of other ways. Some of these operate through Pathways' effects on work: for example, work might be stressful and unpleasant or it could improve one's self-esteem or outlook on life. These non-financial costs and benefits of work were discussed above. But Pathways could also affect participants' quality of life more directly. For example, having to attend follow-up WFIs might be viewed as unpleasant, result in anxiety and make some Pathways participants less happy; or coping skills acquired through the CMP might increase levels of satisfaction.

The two waves of survey of new and repeat IB claimants provide some information about changes over time in the reported quality of life of Pathways participants after they entered the programme. Specifically, respondents were asked about their level of satisfaction with their home, the area where they lived, their friends and family, their financial situation, their control over their life and their life in general. There was a modest movement between the two survey waves on all these measures from both the satisfaction and dissatisfaction ends of the scale towards the middle (i.e. 'neither'), with slightly more movement away from the satisfaction end of the scale than from the dissatisfaction end.[48] These findings are far from definitive, but if Pathways was having very much of an impact on life satisfaction, then one might expect some movement towards the satisfaction end of the distribution between the two survey waves. If anything, the trend seems to have been in the opposite direction. The movement towards the middle could be explained by some Pathways participants' being anxious about the mandatory WFIs but becoming less so over time and others having high hopes for Pathways which were subsequently disappointed. Alternatively, it may have had nothing to do with Pathways, reflecting instead other changes in the lives of some Pathways participants (e.g. in health status).

6.3.2 Omitted costs and benefits to the Exchequer

Some of the unmeasured costs and benefits of Pathways for claimants discussed in the previous subsection have parallel costs and benefits for the Exchequer. Pathways' effects on the benefits and tax credits to which people were entitled (and the taxes for which they were liable) could potentially change the cost to individuals of claiming their entitlements or complying with their obligations. Those same changes also have implications for the cost to the Government of administering the tax and benefit system: processing claim forms, sending out payments, issuing tax codes and so on. As with the costs to individuals, Pathways will have many offsetting effects on these administrative costs and it is not clear whether the effect on the net benefits of Pathways is positive or negative. However, the cost per claimant of administering individual benefits is not large. For example, the costs of administering IB and IS are £2.01 and £3.29 per claimant per month, respectively (Greenberg and Davis, 2007, p. 44). The one-off costs of dealing with changes in circumstances of the kind caused by Pathways are likely to be larger than these average figures but are still unlikely to be a major part of the costs and benefits of Pathways.

NHS utilisation could also be affected by the programme. Pathways could potentially either increase or decrease the use of the NHS, resulting, respectively, in decreases or increases in programme net benefits. One reason for this might be changes in individuals' health status of the kind discussed above. But NHS utilisation might change even if health status did not. The use of NHS services could increase, for example, as part of participants' efforts to make themselves ready to work.

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48 We are indebted to Martin Wood for providing us with these estimates.

Alternatively, it could decrease if those participants who find jobs feel less need or simply have less time to avail themselves of NHS services. In addition, CMP could increase the ability of individuals who participate in this component of Pathways to cope with their health problems without using NHS services. People's experiences with the Pathways process itself (especially CMP) might make people more or less willing to use NHS services in future. Unfortunately, there is no direct evidence on how or even whether Pathways affected the utilisation of health services, beyond the findings described above regarding Pathways' effect on the extent to which individuals reported that their health condition affected their day-to-day activities. Whether these effects translated into a decrease in using NHS services is unknown.

6.3.3 Omitted costs and benefits to third parties

The driving force behind the measured benefits of Pathways was its impact on increasing the chances of those mandated onto Pathways moving off benefits and/or into paid work. But it is possible that Pathways also had an indirect impact on the benefit and employment outcomes of some people not mandated onto the policy. There are several possible reasons for this: First, incapacity benefits claimants who were not mandated onto Pathways (because they were existing claimants or outside the relevant age range) could participate in Pathways voluntarily and, therefore, benefit from it. Second, claimants of Department for Work and Pensions (DWP) benefits who were not mandated onto Pathways might either have gained from additional resources (such as staff training) provided to operate Pathways or suffered if resources (such as advisors' time) were diverted away from them to concentrate on Pathways participants. Third, some of the additional jobs taken by Pathways participants might have come at the expense of others competing for the same jobs. Note that this third effect could not be permanent: the number of jobs available is not fixed and in the long run firms would expand production to absorb the increase in labour supply. However, in the short-run, the increased competition for jobs could make a difference, particularly in areas where unemployment was high, because firms could not readily expand production and/or wages could not adjust downwards to induce employers to offer more jobs. This is potentially important because the cost-benefit findings that we emphasise in this report assume that Pathways' impacts persist for only 70 or 150 weeks.

Chapter 7 examines whether Pathways had an effect on the rate of benefit exit for people not mandated onto Pathways. To prefigure those results, there is some evidence that existing recipients of incapacity benefits (particularly those who could volunteer for Pathways) were slightly more likely to move off benefit within 12 months of Pathways' being implemented. However, JSA recipients in the October 2003 areas were around 3½ percentage points less likely to move off the benefit within six months of Pathways' being implemented, although this negative impact was smaller at 12 months and not apparent at all in the April 2004 areas. Recipients of most other benefits were unaffected.

Apart from their employment and benefit outcomes being indirectly affected by Pathways, the programme has two potential benefits to third parties that we have so far ignored: First, as shown in Bewley, Dorsett and Haile (2007), Pathways increased the number of incapacity benefits claimants leaving benefit and the number moving into work. If third parties value the reduction in IB rolls and increase in employment in and of itself – that is, beyond any tax savings they may receive – then this is a benefit of the programme, albeit one that is very difficult to measure. This benefit could accrue to friends and relatives of the individuals concerned or to members of the general public pleased to read about it in the newspapers. It seems unlikely that any such benefit is large, however.

Second, and perhaps more importantly, it is not clear that pounds gained or lost by Pathways participants should be treated as identical to pounds gained or lost by the Exchequer. Costs to the Government imply that taxes must be higher than they would otherwise be and benefits accruing to the Government imply that taxes can be lower than they would otherwise be. If the net benefits to the Exchequer that are reported at the start of this chapter result in correspondingly lower taxes, economic distortions that are caused by taxes would be reduced. For example, taxes on earnings reduce incentives to work and taxes on investment reduce incentives to invest. These distortions (usually called 'deadweight losses' or 'excess burden' by economists) result in losses in economic efficiency. The scope for reducing deadweight losses by using Exchequer savings to cut tax rates (or, equivalently, to increase valuable public spending without the need for additional distortionary taxes) is a potentially significant addition to the net benefits of the policy.[49]

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[49] For example, after reviewing a number of US studies, Boardman *et al.* (2006, pp. 428-429) conclude that the loss to the economy from each additional dollar of taxes that are collected in the US is on the order of 40 cents or 40 per cent. Less evidence is available for the UK but DWP economists have concluded that the efficiency loss from an additional pound of taxes in the UK is around 25 pence or 25 per cent (DWP, 2006). These percentages applied to the net Exchequer benefits shown in Table 6.1 would imply appreciable additional benefits. For example, applying the 25 per cent figure to the estimates of net Exchequer benefits in Table 6.1 implies that the additional benefit to taxpayers is £44 if the impact of Pathways is assumed to last for 70 weeks and is £187 if the impact continues for 150 weeks. Alternatively, the 40 per cent figure implies an additional benefit to taxpayers of £70 if the impact continues for 70 weeks or £299 if the impact of Pathways continues for 150 weeks. However, the size of deadweight costs is a controversial issue and estimates vary widely. Furthermore, each tax instrument has a different marginal excess burden, so the benefit to the economy would depend a great deal on which tax(es) were reduced: the gains in economic inefficiency from cutting stamp duties, for example, would be far greater than those from cutting council tax.

6.4 Conclusions

This chapter has discussed a large number of costs and benefits that Pathways might have but that we have not measured. One further issue in interpreting the cost-benefit findings should be mentioned. On average, incapacity benefits claimants have lower incomes relative to their needs than other individuals. If society values redistribution of income from rich to poor (either because an additional pound is more valuable to a poor person than to a rich person or because society cares about inequality of well-being itself) then gains and losses accruing to a low-income group such as Pathways participants should be valued more highly than gains and losses accruing to the rest of society as a whole. However, since Pathways produced net measured benefits both for Pathways participants and for the Exchequer, treating changes in the incomes of high and low income people identically is not a major issue in the cost-benefit analysis of Pathways.

To summarise, there is some uncertainty surrounding the net benefit estimates reported at the start of this chapter because of costs and benefits that we do not measure. Some of the omitted factors are almost certainly benefits of the policy, notably the reduction in the excess burden of taxation that Exchequer savings permit. Others are almost certainly costs, such as expenditures and loss of time associated with starting work. Still others are more ambiguous: the effects of Pathways on the health and quality of life of participants and on the benefit payments and employment outcomes of third parties, for example, could be either positive or negative. However, Pathways was found to have positive net measured benefits even when it was conservatively assumed that programme effects lasted for 70 weeks. If its effects lasted longer, the net measured benefits would be larger. The unmeasured costs of the policy would have to outweigh the unmeasured benefits significantly if the programme were not to be beneficial overall.

7 Estimated indirect impact of Pathways

7.1 Summary

Individuals not mandated onto Pathways might still have been affected by it. Those receiving an incapacity benefit and not mandated onto the programme were entitled to participate voluntarily, benefit recipients not taking part in the programme might have been affected indirectly via Pathways affecting their local Jobcentre Plus or their personal adviser, while those applying for jobs might have experienced greater competition in the labour market.

This chapter uses administrative data on benefit records to examine the cumulative off-flow rates from various Department for Work and Pensions (DWP) benefits both before the programme was implemented in the pilot areas and a set of specially chosen comparison areas in order to explore whether there have been indirect effects of Pathways:

The main findings are as follows:

- Those moving onto Incapacity Benefit (IB), who were mandated onto the programme (i.e. those potentially directly affected by Pathways), were found to have moved off earlier than they would otherwise have done. However, the cumulative off-flow after 12 months was not statistically significantly different from what it would have been in the absence of the programme. This suggests that Pathways has been successful in getting individuals who would have moved off IB within 12 months to move off benefit sooner than they otherwise would have done but has not been successful in getting individuals who would still have been in receipt of IB after 12 months to move off benefit within 12 months.
- Those already receiving IB, who were not mandated onto the programme but could choose to participate voluntarily, were found to be around 0.7 percentage points more likely to have moved off the benefit 3, 6, 9 and 12 months after the programme had been implemented. Similar impacts were found in the October 2003 and the April 2004 pilot areas and on both men and women.

- There is also some evidence that women already receiving Income Support (IS) or Pension Credit with a disability premium, who, again, could only have participated in Pathways voluntarily, were more likely to move off benefit within 12 months after the programme had been implemented. Since many of these individuals also claim IB, this finding is consistent with that above.
- Among those already receiving Severe Disablement Allowance (SDA), who also could only have participated in Pathways voluntarily, there was some statistically significant evidence that men in the April 2004 areas were more likely to move off benefit within 12 months after the programme had been implemented.
- For most of those DWP benefit recipients who were not mandated onto the programme, and in general could not have participated in Pathways voluntarily, there was no statistically significant evidence of any impact of the programme on their likelihood of moving off benefit.
- The main exception is men and women receiving Jobseeker's Allowance (JSA) in the October 2003 areas. They were both found to have been around 3½ percentage points less likely to move off benefit within six months after the programme had been implemented. This is consistent with either Jobcentre Plus in the October 2003 areas being less able to cope with the introduction of Pathways, perhaps because these areas had less notice of the programme than the April 2004 areas or with the labour market in the October 2003 areas less able to respond quickly to greater number of IB recipients seeking work.

7.2 Introduction

Prior to February 2005 only new claimants of IB and IS on grounds of disability who were aged between 18 and 59 were mandated onto Pathways. However the programme might have affected those not mandated onto the programme through at least three potential mechanisms[50]:

- First, individuals already receiving IB or IS on grounds of disability and those claiming SDA, could choose to participate in the programme voluntary. Those receiving IB or IS on grounds of disability who were aged under 18 or over 59 could also volunteer. Some of those aged 60 to 64 who were receiving Pension Credit could also choose to participate in some elements of the programme.

[50] A fourth possibility is that the introduction of Pathways might have affected individuals' decisions over whether or not to apply for different DWP benefits. For example, they might decide to apply for IB as a result of being attracted to the possibility of receiving Return to Work Credit (RTWC), or alternatively, they might decide not to apply because they do not want to have to participate in a compulsory Work Focused Interview (WFI). However, the analysis in this chapter requires the assumption that whether or not an individual moves onto a benefit is not affected by the programme.

- Second, any impact of the pilot on DWP advisers could, in turn, affect non-Pathways participants. For example, if the advisors became better trained, then it might become more likely that non-Pathways participants were able to move off benefits than they would have done in the absence of the pilot. Alternatively, it could be that the pilot led to DWP staff focusing on Pathways participants in a way that reduced the likelihood of non-Pathways participants moving off benefit.
- Third, to the extent to which individuals mandated onto Pathways become more likely to move into paid employment, it could then become harder for other benefit recipients to find suitable employment simply because they are applying for the same jobs. Economic theory suggests that this could happen in the short run if businesses could not easily expand production to absorb all of the increase in labour supply, if unemployment was high, or if wages could not adjust downwards to induce employers to offer more jobs (for example, because existing contracts cannot easily be renegotiated or because of a constraining minimum wage). This effect could be significant in the short run, though it could not be permanent: in the long run wages and the number of jobs available are not fixed and production would expand to absorb the additional labour supply.

This chapter presents the findings from analysis of the trends in cumulative off-flow rates from DWP benefits specifically looking for evidence of changes in benefit off-flow rates by individuals who were not mandated onto Pathways.

The methodology employed in this chapter is to compare differences in cumulative off-flow rates of various DWP benefits in Pathways areas before and after the programme was implemented to those that occurred in a similar set of comparison areas where the programme was not implemented. Under certain assumptions, this 'difference-in-differences' approach will yield an estimate of the causal impact of the pilot on the cumulative off-flow rates of each benefit. The difference-in-differences methodology, which was also used in Chapter 2,[51] is described in more detail in Section 7.3. The data used in this analysis relate to benefit spells that were active during the period from the beginning of September 2002 to the end of November 2004. Information is available on receipt of Attendance Allowance, Bereavement Benefit, Disability Living Allowance (DLA), IB, IS, Invalid Care Allowance (which was renamed Carer's Allowance on 1 April 2003), JSA, Pension Credit, Retirement Pension, SDA and Widow's Benefit.[52]

While cumulative off-flow rates of several of these benefits would not be expected to be affected by Pathways, for example, perhaps most obviously the Retirement

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51 There are important differences in the details of how the method is implemented in this chapter and Chapter 2. The way it is used in this chapter is described in Section 7.3.

52 For brief descriptions of these benefits, see Phillips *et al.* (2006) and for full details see Child Poverty Action Group (2006).

Pension, analysis of these benefits is included as a reality check on the findings for those benefits where a potential indirect impact is more plausible. Further details about these data, including descriptive statistics on how the cumulative benefit off-flow rates have varied over time by different areas and details of the background characteristics of claimants are described in Section 7.4. The results are presented in Section 7.5, while Section 7.6 concludes.

7.3 Methodology

Estimating the causal impact of any programme on any outcome of interest requires – either explicitly or implicitly – an assessment of what would have occurred in the absence of the programme. The methodology used to identify the indirect impact of Pathways is a difference-in-differences approach. This is implemented within a linear regression framework in order to take into account the set of background characteristics summarised in Section 7.4 (and Tables 7.1 and 7.2) and to subtract out any pre-programme differences in the outcome measures (in this case, whether or not benefit spells were still ongoing after different periods of time) between pilot and comparison areas, thereby allowing for any differences in the impact of unobserved characteristics that remain constant over time. A brief discussion of the methodology is provided here; for more details see, for example, Blundell and Costa Dias (2000).

The 'difference-in-differences' methodology involves comparing the difference in benefit spell durations in the pilot areas before and after the programme was introduced with the difference between benefit spell durations in the comparison areas before and after the programme was introduced. The advantage of this approach is that it 'differences out' any time-constant effect of factors that may be correlated with both the outcome of interest and whether a benefit spell occurred in the treatment group (i.e. in the pilot areas after the programme has been implemented). This is the case even if any such factors are unobserved: as long as any effect that they have on the outcomes being investigated does not change over time, this methodology subtracts them out. Not doing this would be potentially problematic as it could lead to biased estimates of the impact of the programme on the relevant outcome of interest.

As the samples in both the pilot and comparison areas are not a panel over time, but (typically) contain different benefit spells for the pre-programme and post-programme data, the assumption that any unobservables have no different impact over time relies on the impact of unobservables' not being cohort specific in a way that differs systematically between the pilot and comparison areas.

'Difference-in-differences', therefore, allows factors that are not observed to be controlled for (as long as their impact is constant over time). It also controls for changes over time in factors that are observed: in this case, the composition of

the data in terms of the observed background characteristics of benefit spells/recipients. The model can be written as follows:[53]

$$Y_i = \gamma X_i + \delta POST_i + \lambda PILOT_i + \beta POST_i * PILOT_i + \varepsilon_i \quad (1)$$

where Y_i denotes the outcome of interest (for example whether or not the benefit spell is still ongoing after six months) for benefit spell i and X_i denotes the observed characteristics of the benefit spell/recipient (those described in Tables 7.1 and 7.2). $PILOT_i$ is a dummy variable[54] indicating whether the benefit spell occurred in a Pathways pilot area or in one of the comparison areas, and $POST_i$ is a dummy variable indicating whether the benefit spell occurred before or after Pathways was actually implemented (regardless of whether the benefit spell occurred in one of the seven pilot areas or in one of the comparison areas). ε_i is an error term.

The term of particular interest is $POST_i*PILOT_i$ which is a dummy variable taking the value 1 for those benefit spells observed in one of the seven Pathways pilot areas after the programme was introduced and 0 otherwise. Hence, β is the main coefficient of interest. This measures the effect of being in an area subject to Pathways in a period in which the programme was in effect, controlling for all other observed factors. In addition it is net of any effect of being observed in the period after the programme was implemented that is constant across pilot and comparison areas (δ) and any effect of being in a pilot area that is constant over time (λ). Hence, it captures shifts in the outcome measure among those benefit spells in Pathways areas vis-à-vis those in the comparison areas that occurred after the programme was introduced. However, this can be interpreted as the causal impact of the intervention only under two assumptions: first, as discussed above, that the effect of unobserved characteristics on the outcomes of interest did not vary differentially between pilot and comparison areas over time; second, that the characteristics included in the regressions that are correlated with $POST_i*PILOT_i$ have a linear effect on the outcomes of interest as assumed in equation (1).

7.4 Data description

The data used in this chapter were taken from the National Benefits Database (NBD). This contains details of benefit claims since June 1999. However, not all benefit claims are included: for example, IS claims are extracted every two weeks while IB and SDA claims are extracted every six weeks. Therefore, some relatively

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53 This equation is estimated by Ordinary Least Squares regression. This method of implementing the difference-in-differences approach is based on the Wald estimator and has been described and used in a number of papers, including Ashenfelter (1978) and Heckman and Robb (1985).

54 A dummy variable is a variable which takes the value 0 or 1. In this case, PILOT=1 if the benefit spell occurred in a Pathways pilot area; PILOT=0 otherwise. Separate dummy variables are included for each of the local authorities observed in the data.

short spells are not observed at any point and, thus, will unfortunately not be in the data. Benefit claims that cease to be observed are assumed to have ended, and a benefit claim end date is assigned randomly over the period since the benefit claim was last observed.[55]

The extract of the NBD used in this chapter comprises receipt of the following DWP benefits: Attendance Allowance, Bereavement Benefit, DLA, IB, IS, Invalid Care Allowance (which was renamed Carer's Allowance on 1 April 2003), JSA, Pension Credit, Retirement Pension, SDA and Widow's Benefit. The data covered both benefit spells occurring in the seven Pathways pilot areas and those occurring in one of the carefully chosen comparison areas. Included in the data were all benefit spells that were ongoing at some point during the period from the beginning of September 2002 to the end of November 2004, with subsequent flows off benefit recorded up to the beginning of March 2007. Partly as a result of this, benefit claim start dates in the data run from 31 October 1947 (with the vast majority starting much later than this – for example 90 per cent of benefit start dates are after the 22 August 1988) through to 30 November 2004, while (estimated) benefit claim end dates run from 2 September 2002 to the 2 March 2007.

In addition to information on benefit claim start and end dates, other information in the NBD that is used in this analysis includes the individuals' sex, date of birth and local authority of residence. Benefit spells of the same individual can also be linked together. IB spells also specify whether the individual is in receipt of a payment or whether they are only receiving National Insurance credits, which can help individuals qualify for certain contributory benefits in the future. In addition, spells of both IB and DLA also contain some information on the individual's health problem (although only one health problem per benefit claim). IS and Pension Credit spells also indicate whether or not the individual is in receipt of the disability premium. Unfortunately, the data do not contain precise information on whether IS benefit spells are on the grounds of disability. This means that it is not possible to identify perfectly who would have been mandated onto Pathways since this applies to those claiming IS on grounds of disability (rather than those receiving the IS disability premium).

7.4.1 Benefit outcomes among those mandated onto the programme

In addition to looking at the impact of Pathways on the benefit claims of those not mandated onto Pathways, the data can also be used to investigate the impact on those who were mandated on the programme – i.e. it can be used to explore the direct impact of Pathways as well as the indirect impact. For the analysis of the direct impact – which has also been carried out in Bewley, *et al.* (2007) – only individuals aged between 18 and 59 (inclusive) who moved onto IB are examined. This is because, unfortunately, the data do not allow us to identify

[55] This measurement error in our dependent variable should not bias the estimates in our results, although it might cause greater imprecision.

which individuals moved onto IS on the grounds of disability, which was the only other group mandated onto Pathways at this time. (Note that this is not the same as being in receipt of the IS with a disability premium, which is payable once an individual has received IS on grounds of disability for one year.)

The post-programme period is defined as individuals who moved onto IB between 1 August 2004 and 30 November 2004.

Two potential pre-programme groups are defined: First the 'standard' control group which is defined as those moving onto IB immediately before the programme was implemented, which was the group used in the main quantitative evaluation of Pathways.[56] In the October 2003 areas this is defined as those moving onto IB between 1 September 2003 and 26 October 2003, while in the April 2004 areas it is those moving onto IB between 1 January 2004 and 4 April 2004 (inclusive). One potential problem with this control group is that they might have been indirectly affected by the programme, since their claim is likely to be ongoing after the implementation of the programme in the pilot areas. Therefore, an alternative 'lagged' control group is also examined. This is defined as those moving onto IB in a window exactly one year before the window used for the 'standard' control group (i.e. 1 September 2002 to 26 October 2002 or 1 January 2003 to 4 April 2003).

Constructing the data in this way means that the same individuals (although not the same benefit spells) can appear in both the post-programme and the pre-programme groups since they could have IB spells that begin in more than one window. Moreover, those individuals in comparison areas, which are used as controls for both October 2003 and April 2004 treatment areas, are included in the data twice. In the regression analysis, the results of which are presented in Section 7.4, the methodology allows for a lack of independence of different benefit spells of the same individuals.

Figure 7.1 shows the percentage still receiving IB by time elapsed since moving onto IB by each of the six groups outlined above. Individuals are only counted as having moved off IB if their current claim has ended and they have not begun another, as yet uncompleted, spell. All of the lines are upward sloping, which shows that IB recipients become more likely to have moved off the benefit over time. Four of the lines on the figure – those relating to the cumulative off-flow rates in both the pilot and the comparison areas during the two periods examined prior to the pilot being introduced (the two 'standard control' lines and the two 'lagged control' lines) – are very difficult to distinguish from each other. This is encouraging since it suggests that the pilot and comparison areas are similar, at least in terms of characteristics that determine movements off IB.

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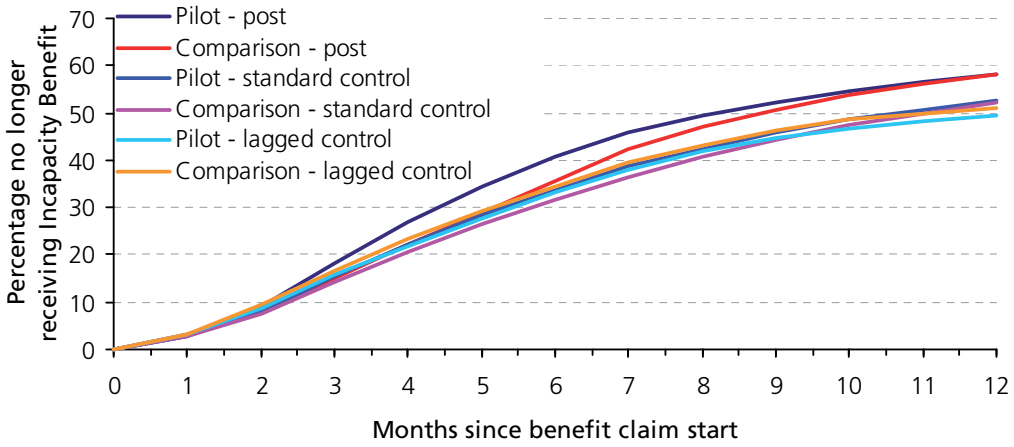
[56] Source: Adam, *et al.*, 2006 and Bewley, et al, 2007. One difference is that the survey data used in both of these studies comprised those who made an enquiry about claiming a disability benefit, whereas the administrative data used here (and also in Bewley, *et al.*, 2007) comprise those who made a successful claim.

Looking at the cumulative off-flow rates during the period after the programme was introduced in the pilot areas (the two 'post' lines) it can be seen that from the third month onwards, more individuals moved off IB in the pilot areas than in the comparison areas. After six months the difference is relatively large. Beyond month six, the cumulative off-flow rate in the comparison areas rises more quickly than that in the pilot areas, and by 12 months only very slightly more individuals had moved off IB in the pilot areas compared to the comparison areas. This suggests that Pathways has been successful in getting individuals who would have moved off IB within 12 months to move off benefit sooner than they otherwise would have done but has not been successful in getting individuals who would still have been in receipt of IB after 12 months to move off benefit within 12 months.

Figure 7.1 Percentage of those who moved onto IB no longer receiving, by month, area and time period



Note: Number of observations = 76,777. This is divided as follows: pilot – post 17,527; Comparison – post = 14,885; Pilot – standard control = 11,993; Comparison – standard control = 9,828; Pilot – lagged control = 12,444; Comparison – lagged control 10,100.

7.4.2 Benefit outcomes among those not mandated onto the programme

The primary purpose of this chapter is to investigate the possibility that Pathways might have affected, either positively or negatively, on benefit claimants who were not mandated onto the programme. In principle, both those who were claimants at the time Pathways was introduced and those moving onto benefits after Pathways was in operation, could have been affected. However, at least in some cases, Pathways could also have directly affected the latter group. For example, consistent with the evidence presented in Bewley, *et al.* (2007), the programme might lead to some individuals moving from IB into paid work instead of moving from IB onto JSA, which would affect the composition of those moving onto JSA. Our analysis of the indirect effects of Pathways is, therefore, restricted to only those benefit spells that were ongoing when Pathways was implemented. Specifically

the duration of benefit spells that were ongoing at particular points in time that related to when the programme was introduced in the October 2003 areas (27 October) and the April 2004 areas (5 April), are examined. For examining the impact of the October 2003 pilot, the post-programme sample is all benefit spells in the relevant pilot or comparison areas that started before 27 October 2003 that had not ended before this date. Differences in these outcomes are compared to those benefit spells in the same areas that began before 27 October 2002 that had not ended before that date. Similarly, for examining the impact of the April 2004 pilot, the post-programme sample is all benefit spells in the relevant pilot or comparison areas that started before 5 April 2004 that had not ended before that date and the pre-programme sample is the benefit spells in the same areas that began before 5 April 2003 that had not ended before that date.

Only individuals who were aged 16 or over and were not more than five years above the State Pension Age on the relevant date are considered. Individuals who moved onto IB or IS in the next 12 months (at a time when they were aged over 17 or under 60) are excluded from this part of the analysis since, had the programme been in place, they might have been mandated on to the programme. Ideally only individuals who moved onto IB or IS on **grounds of disability** would have been removed since those moving onto IS on other grounds would not have been mandated onto the programme. However, there is not sufficient information in the data to identify this group.

Potential impacts of the programme on the following eleven benefits are investigated: the Retirement Pension, IB, IS/Pension Credit with a disability premium, SDA, IS/Pension Credit without a disability premium, JSA, Invalid Care Allowance (which was renamed Carer's Allowance on 1 April 2003), DLA, Bereavement Benefits, Attendance Allowance (which in this case only includes men aged 65 to 69, since Attendance Allowance can only be received from age 65 and the analysis here only considers those aged less than five years above the State Pension Age) and Widow's Benefit (which could only be received by women).

Constructing the data in this way means that the same individuals, and in fact the same benefit spells, can appear in both the post-programme and the pre-programme groups since one spell can span from before, for example, October 2002 until after October 2003. Moreover, those individuals in comparison areas which are used as controls for both October 2003 and April 2004 treatment areas are, as before, included in the data twice. In the regression analysis, the results of which are presented in Section 7.4, the methodology allows for a lack of independence of benefit spells of the same individuals.

Figure 7.2 shows the percentage still receiving each benefit by time elapsed since the relevant date (27 October 2002, 27 October 2003, 5 April 2003 and 5 April 2004 respectively) for each of the 11 benefits listed above. Individuals are only counted as having moved off a benefit if their current claim has ended and they have not began another, as yet completed, spell on the same benefit.

In summary the graphs show that:

- Cumulative off-flow rates from **Retirement Pension** up to nine months were very similar in both the pilot and the comparison areas both before and after Pathways was implemented in the pilot areas. From nine to 12 months, they were slightly higher in the pilot areas than in the comparison areas; however, this is true both before and after Pathways was implemented in the pilot areas (Figure 7.2a). This is reassuring in that it is consistent with there being no evidence of an impact of the introduction of Pathways in the pilot areas on the cumulative off-flow rate among these individuals and we would not expect the cumulative off-flow rate from the Retirement Pension to be affected.
- Before Pathways was implemented, cumulative off-flow rates from **IB** were higher in the comparison areas than the pilot areas. However, after Pathways was introduced in the pilot areas there was no noticeable difference between the pilot and comparison areas (Figure 7.2b). This is consistent with the introduction of Pathways in the pilot areas increasing the cumulative off-flow rate among these individuals. The next section will examine whether this is robust enough to take into account the impact of changes in the background characteristics observed in the data.
- The cumulative off-flow rate among recipients of **IS/Pension Credit with a disability premium** was very similar in the pilot areas and the comparison areas, both in the period before Pathways was implemented and the period after Pathways was implemented (Figure 7.2c). The most striking feature of the pattern of cumulative off-flow rates is the large increase at six and 12 months seen in both the pilot and comparison areas, in the period before Pathways was implemented. This is due to the introduction of the Pension Credit in October 2003, which increased off-flow rates among recipients of IS/Pension Credit with a disability premium after six months among for those receiving benefits at 5 April 2003 and after 12 months among those receiving benefits at 27 October 2002.
- Cumulative off-flow rates from **SDA** were little changed in the pilot areas after Pathways was implemented, with a large fall seen in the comparison areas (Figure 7.2d). This is also consistent with the introduction of Pathways in the pilot areas increasing the cumulative off-flow rate among these individuals. The next section will examine whether this is robust enough to take into account the impact of changes in the background characteristics observed in the data.
- Cumulative off-flow rates from **IS/Pension Credit without a disability premium** were considerably lower after Pathways was implemented in the pilot areas, although a similar change was seen in both pilot and comparison areas (Figure 7.2e). This is consistent with there being no evidence of an impact from the introduction of Pathways on the cumulative off-flow rate among these individuals.

- There was a very different pattern of cumulative off-flow rates from **JSA** between the periods before and after the implementation of Pathways in the pilot areas. However, the change was very similar in both pilot and comparison areas (Figure 7.2f). Again this is consistent with there being no evidence of an impact of Pathways on the cumulative off-flow rate among these individuals.
- Cumulative off-flow rates from **Invalid Care Allowance** were higher after Pathways was implemented in the pilot areas, although a similar change was seen in both pilot and comparison areas (Figure 7.2g). Again, this is consistent with there being no evidence of an impact of Pathways on the cumulative off-flow rate among these individuals.
- Cumulative off-flow rates from **DLA** were slightly lower after Pathways was implemented in the pilot areas, although a similar change was seen in both pilot and comparison areas (Figure 7.2h). Again, this is consistent with there being no evidence of an impact of Pathways on the cumulative off-flow rate among these individuals.
- Cumulative off-flow rates from **Bereavement Benefit** differed both across time period and also across areas, and were highest in the comparison areas before Pathways had been implemented in the pilot areas and lowest in the comparison areas after Pathways had been (Figure 7.2i). This suggests the introduction of Pathways in the pilot areas was associated with a rise in the cumulative off-flow rate among these individuals. However, it is difficult to see how this could be caused by Pathways. Thus, the next section will examine whether it can be explained by the impact of changes in the background characteristics observed in the data
- Cumulative off-flow rates from **Attendance Allowance** were lower in the pilot areas than the comparison areas. However, this was true both after and before Pathways was implemented in the pilot areas (Figure 7.2j). Again, this is consistent with there being no evidence of an impact of Pathways on the cumulative off-flow rate among these individuals.
- Cumulative off-flow rates from **Widow's Benefit** were very similar in the pilot areas and the comparison areas in the period after Pathways was implemented. In the period before Pathways was introduced in the pilot areas, the cumulative off-flow rates were lower in both the pilot and the comparison areas, although for the cumulative off-flow rates from seven to ten months, it was lower in the pilot areas than in the comparison areas (Figure 7.2k). This suggests the introduction of Pathways was associated with a rise in the cumulative off-flow rate between months seven and ten among these individuals. Again, it is difficult to see how this could be caused by Pathways. Hence, the next section will examine whether it can be explained by the impact of changes in background characteristics observed in the data.

Figure 7.2 Percentage of benefit recipients moving off benefit, by month, area and period

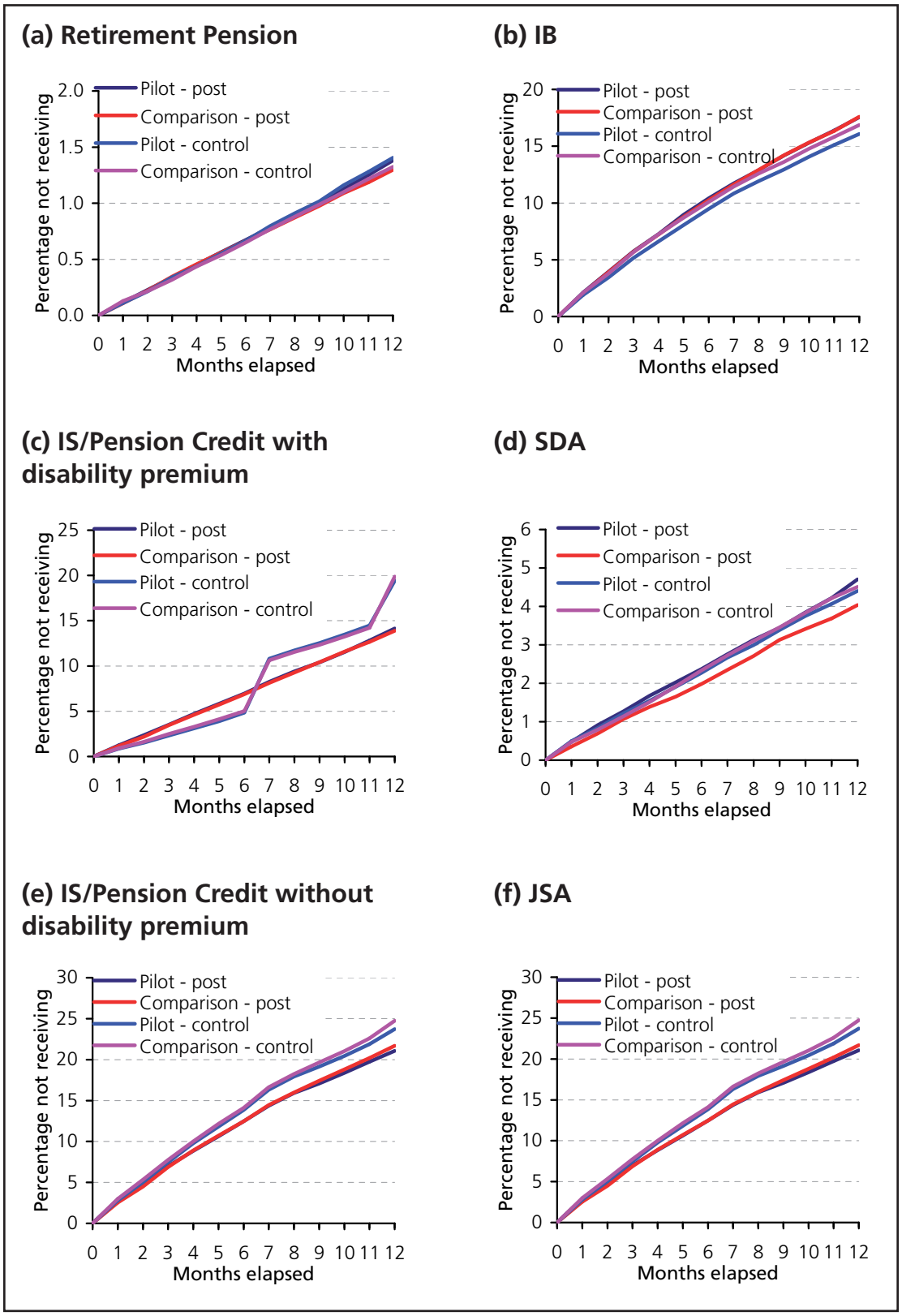
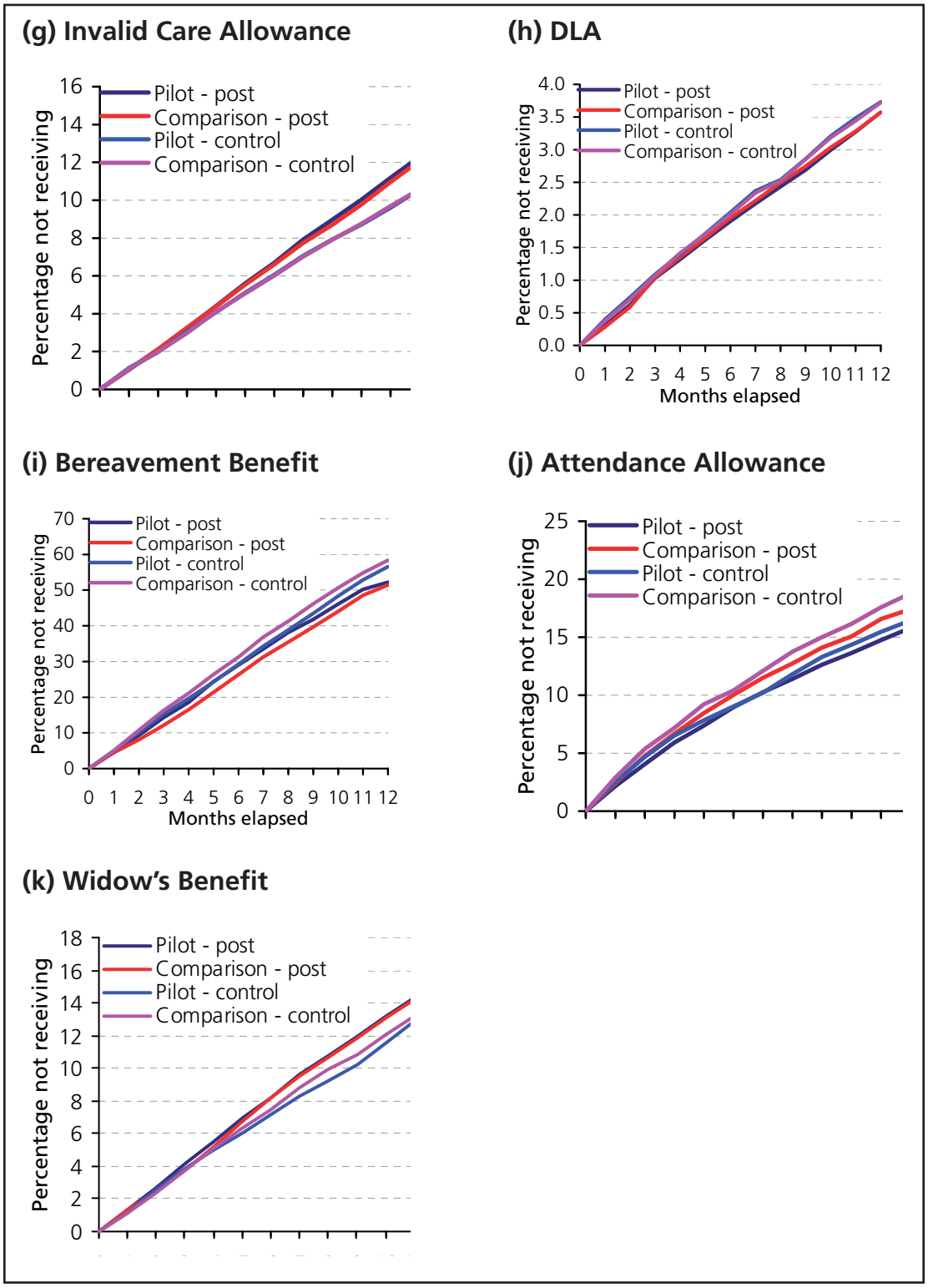


Figure 7.2 Continued



7.4.3 Background characteristics

The NBD contains details of the claimants' sex and dates of birth. All benefit spells have the date at which the spell started and for spells that ended up to the 2 March 2007, an estimated end date is known. IB spells also specify whether the individual is in receipt of a payment or whether they are only receiving National Insurance credits, which can help individuals qualify for certain contributory benefits in the future. Spells of both IB and DLA also contain some information on the individual's health problem (although only one health problem per benefit claim). IS and Pension Credit spells also indicate whether or not the individual is in receipt of the disability premium. Benefit spells of the same individual can also be linked together.

For those who moved onto IB during the three time periods set out in Section 7.4.1, the average value of these background characteristics is shown in Table 7.1, split by whether the individual resides in a pilot area or a comparison area. In terms of age, sex, whether they only qualify for National Insurance credits and whether the one recorded health problem is a mental health problem.[57] Individuals in the pilot areas are, on average, fairly similar to those in the comparison areas, although a slightly lower proportion of individuals in the pilot areas are women and a slightly higher proportion are in receipt of National Insurance credits only. In terms of the average length of claim, which by the construction of the data can only be observed for those whose claim was completed by the start of March 2007, the mean claim length among claims starting in the period just before the programme was introduced was slightly lower in the pilot areas than in the comparison areas (270 days compared to 284 days for the standard controls) and almost identical in the two areas one year before the programme was implemented (328.7 days compared to 328.9 days for the lagged controls). Among those observed in the period after the pilots were implemented in the pilot areas, the average claim length among completed claims was considerably lower in the pilot areas than in the comparison areas (218 days compared to 240 days).

[57] This has been classified as either being an Affective Disorder (Manic Episode, Depressive Episode, Recurrent Depressive Disorder, Persistent mood Disorder or an Unspecified Mood Disorder) or a Neurotic, Stress Related and Somatoform disorders (Phobic Anxiety Disorders, Other anxiety Disorders, Reaction to Severe Stress, Dissociative Disorders, Somatoform Disorders or Other Neurotic Disorders).

Table 7.1 Observed background characteristics of those moving onto IB, by area and time period

	Pilot	Comparison	Pilot	Comparison	Pilot	Comparison
	Post		Standard control		Lagged control	
Age at claim start	39.5	40.1	39.8	39.7	39.6	40.2
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	*(0.1)*	*(0.1)*
Percentage women	42.2	42.3	41.1	42.2	41.1	41.5
	(0.4)	*(0.4)*	*(0.4)*	*(0.5)*	*(0.4)*	*(0.5)*
Percentage IB credits only	44.7	44.3	45.1	43.2	44.5	42.5
	(0.4)	*(0.4)*	*(0.5)*	*(0.5)*	*(0.4)*	*(0.5)*
Percentage mental health problem	29.6	29.7	30.0	30.3	29.0	28.4
	(0.3)	*(0.4)*	*(0.4)*	*(0.5)*	*(0.4)*	*(0.4)*
Claim length (days)	218.3	239.8	270.1	283.7	328.7	328.9
(finished claims only)	*(1.7)*	*(1.9)*	*(2.6)*	*(2.9)*	*(3.5)*	*(3.9)*
Number of spells	*17,527*	*14,885*	*11,993*	*9,828*	*12,444*	*10,100*
Number of completed spells	*12,288*	*10,676*	*8,746*	*7,282*	*9,396*	*7,751*

Note: Standard error of mean shown in parentheses.

Table 7.2 provides a similar comparison for those who were already in receipt of IB on the dates set out in Section 7.4.2. Again, in terms of age, sex, whether they qualify for National Insurance credits only and whether the one recorded health problem is a mental health problem, individuals in the pilot areas are, on average, fairly similar to those in the comparison areas. Those in the pilot areas had, on average, been in receipt of IB for about two per cent longer than those in the comparison areas (5.2 years compared to 5.1 years at the date that the programme was implemented in the pilot areas and 4.9 years compared to 4.8 years one year before the programme was implemented in the pilot areas). Among those whose claim was completed by the start of March 2007, there was little difference in the completed average duration between those in the pilot areas and those in the comparison areas in the control period (1.66 years for both groups). However in the period after the programme was implemented, average completed durations were slightly lower in the pilot areas than in the comparison areas (1.25 years compared to 1.27 years).

For reasons of brevity, similar descriptives of background characteristics for the ten other broad types of benefit claim considered in the analysis are not presented in this chapter.

Table 7.2 Observed background characteristics of those already receiving IB, by area and time period

	Pilot	Comparison	Pilot	Comparison
	Post		Control	
Age at relevant date[a]	48.0	48.4	48.1	48.6
	(0.3)	*(0.3)*	*(0.3)*	*(0.3)*
Percentage women	39.1	39.2	38.6	38.4
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*
Percentage IB credits only	32.9	32.1	31.6	30.7
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*
Percentage mental health problems	26.6	25.6	25.5	24.6
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*
Days since claim start	1,910	1,876	1,795	1,759
	(2.9)	*(3.3)*	*(2.7)*	*(3.0)*
Days to (estimated) claim end	455	464	608	607
(finished claims only)	*(1.2)*	*(1.3)*	*(1.4)*	*(1.6)*
Number of spells	*214,860*	*171,136*	*212,380*	*169.213*
Number of completed spells	*80,235*	*65,289*	*92,929*	*75,468*

Note: Standard error of mean shown in parentheses. [a] Relevant date for the post group refers to the 27 October 2003 for those in the October areas and 5 April 2004 for those in the April areas. For the control group the relevant dates are 27 October 2002 and 5 April 2003 for those in the October and April areas respectively.

7.5 Results

This section presents the results from applying the difference-in-differences methodology set out in Section 7.3 to the data described in Section 7.4. Section 7.5.1 describes the estimated impact on benefit outcomes among those mandated onto Pathways, while Section 7.5.2 describes the estimated impacts on benefit outcomes among those not mandated onto the programme.

7.5.1 Evidence on the direct impact of Pathways: benefit outcomes among those mandated onto the programme

The estimated impact, using the difference-in-differences methodology set out in Section 7.3, of Pathways on those moving onto IB who were mandated onto the programme is shown in Table 7.3. Similar analysis, and results, to these are presented in Bewley, *et al.* (2007).The impact is estimated for the likelihood of being in receipt of IB three, six, nine and 12 months after the programme was implemented and the impact is broken down by both sex and area. The estimates in Table 7.3 are based on those who moved onto IB just before the programme was implemented.

The results reported in Table 7.3 suggest that the programme led to more individuals moving off IB after three or six months. There is no statistically significant evidence of any positive impact of the programme on cumulative off-flow rates after either nine or 12 months. Breaking down the impact on cumulative off-flow rates after six months reveals a statistically significant increase (at least at the ten per cent confidence level) in cumulative off-flow rates for both men and women in the April 2004 area (+2.7 percentage points and +3.5 percentage points respectively) and for men in the October 2003 areas (+4.1 percentage points) with no statistically significant increase among women in the October 2003 areas.

Table 7.3 Difference-in-differences estimate of impact of Pathways on exit rates of new claims of IB, by area and sex – standard controls

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	+2.1***	+2.7***	–0.2	–0.8	54,233
	(0.7)	*(0.8)*	*(0.9)*	*(0.9)*	
October 2003 areas	+2.0*	+2.1	–0.4	–1.2	21,748
	(1.0)	*(1.4)*	*(1.4)*	*(1.4)*	
April 2004 areas	+2.2***	+3.0***	–0.1	–0.5	32,485
	(0.8)	*(1.1)*	*(1.1)*	*(1.1)*	
Men					
All areas	+2.4***	+3.2***	+0.5	+0.0	31,464
	(0.9)	*(1.1)*	*(1.2)*	*(1.2)*	
October 2003 areas	+1.9	+4.1**	+1.2	–0.3	12,587
	(1.4)	*(1.8)*	*(1.9)*	*(1.8)*	
April 2004 areas	+2.7**	+2.7*	–0.0	+0.2	18,877
	(1.1)	*(1.4)*	*(1.5)*	*(1.4)*	
Women					
All areas	+1.7*	+1.9	–1.2	–1.9	22,769
	(0.9)	*(1.3)*	*(1.3)*	*(1.3)*	
October 2003 areas	+2.0	–0.7	–2.6	–2.5	9,161
	(1.5)	*(2.1)*	*(2.1)*	*(2.1)*	
April 2004 areas	+1.5	+3.5**	–0.2	–1.5	13,608
	(1.2)	*(1.6)*	*(1.7)*	*(1.7)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.1. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area), local authority dummies, whether IB claim is only for National Insurance credits and whether recorded health problem is a mental health problem. All controls interacted with sex.

Alternative estimates of the impact of Pathways on the benefit outcomes of those mandated onto the programme are presented in Table 7.4. These use the lagged rather than the standard set of controls. Using these earlier benefit spells as controls generally leads to larger central estimates of the impact of the programme.

Table 7.4 Difference-in-differences estimate of impact of Pathways on exit rates of new claims of IB, by area and sex – lagged controls

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	+3.8***	+6.3***	+3.0***	+1.4*	54,956
	(0.7)	*(0.8)*	*(0.9)*	*(0.9)*	
October 2003 areas	+5.1***	+5.4***	+1.5	+1.4	22,019
	(1.0)	*(1.3)*	*(1.4)*	*(1.4)*	
April 2004 areas	+3.0***	+6.8***	+3.8***	+1.4	32,937
	(0.8)	*(1.1)*	*(1.1)*	*(1.1)*	
Men					
All areas	+4.2***	+6.5***	+3.5***	+2.7**	31,957
	(0.9)	*(1.1)*	*(1.2)*	*(1.1)*	
October 2003 areas	+4.3***	+4.7***	+1.7	+2.4	12,740
	(1.4)	*(1.8)*	*(1.8)*	*(1.8)*	
April 2004 areas	+4.1***	+7.5***	+4.5***	+2.8*	19,217
	(1.1)	*(1.4)*	*(1.4)*	*(1.4)*	
Women					
All areas	+3.3***	+6.0***	+2.3*	–0.3	22,999
	(1.0)	*(1.3)*	*(1.3)*	*(1.3)*	
October 2003 areas	+6.2***	+6.3***	+1.3	+0.1	9,279
	(1.5)	*(2.0)*	*(2.1)*	*(2.1)*	
April 2004 areas	+1.5	+5.8***	+2.9*	–0.5	13,720
	(1.2)	*(1.6)*	*(1.7)*	*(1.7)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.1. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area), local authority dummies, whether IB claim is only for National Insurance credits and whether recorded health problem is a mental health problem. All controls interacted with sex.

One possible reason for this is that Pathways has a positive impact on those who moved onto IB in the pilot areas just prior to the programme becoming mandatory for new claimants. This might occur, for example, if existing claimants chose to take part in the programme voluntarily or if they benefited from their

adviser becoming better trained. If this was the case, the results produced using the standard controls would be expected to understate the true impact of the programme. The estimated impacts using lagged controls, like those using the standard controls, peak at around six months and then fade – by 12 months of benefit claim the higher cumulative off-flow rate in the pilot areas after the programme was implemented is only statistically significantly different from zero among men.

In summary, the results, looking at the impact of Pathways on those IB recipients mandated onto the programme, suggest that the programme led to individuals moving off IB earlier than they would otherwise have done but that by 12 months the cumulative off-flow rate was no different from what it would have been in the absence of the programme. This suggests that Pathways has been successful in getting individuals who would have moved off IB within 12 months to move off benefit sooner than they otherwise would have done, but has not been successful in getting individuals who would still have been in receipt of IB after 12 months to move off benefit within 12 months.

7.5.2 Evidence on the indirect impact of Pathways: benefit outcomes among those not mandated onto the programme

The estimated impact of Pathways on those already claiming Retirement Pension, who were not mandated onto the programme is shown in Table 7.5. These individuals would not have been able to volunteer to take part in Pathways, unless they were also claiming a disability benefit such as Pension Credit on grounds of disability. The estimates show that those recipients in the pilot areas after the programme had been implemented were not statistically significantly more or less likely to move off benefit. The very large sample sizes mean that this lack of statistical significance is due to small points estimates rather than large point estimates that are imprecisely measured. Breaking down the impact by area and sex also suggests little impact of the programme on cumulative off-flow rates from Retirement Pension. While it is fairly obvious that the programme would not have an impact on off-flows among this group (since the vast majority off individuals only move of this benefit when they die) the empirical finding of no evidence of any impact is reassuring, suggesting that the data and the methodology employed are not, in this case, providing an counterintuitive result.

Table 7.5 Difference-in-differences estimate of impact of Pathways on exit rates of existing Retirement Pension claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	–0.0	–0.0	–0.0	+0.0	873,596
	(0.0)	*(0.0)*	*(0.0)*	*(0.0)*	
October 2003 areas	–0.0	–0.0	–0.0	–0.0	332,574
	(0.0)	*(0.1)*	*(0.1)*	*(0.1)*	
April 2004 areas	–0.0	+0.0	–0.0	+0.0	541,022
	(0.0)	*(0.0)*	*(0.1)*	*(0.1)*	
Men					
All areas	–0.0	–0.0	–0.0	+0.0	419,317
	(0.0)	*(0.1)*	*(0.1)*	*(0.1)*	
October 2003 areas	+0.0	–0.0	–0.1	–0.1	159,816
	(0.1)	*(0.1)*	*(0.1)*	*(0.2)*	
April 2004 areas	–0.1*	–0.0	–0.0	+0.1	259,501
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	
Women					
All areas	–0.0	–0.0	–0.0	–0.0	454,279
	(0.0)	*(0.0)*	*(0.0)*	*(0.1)*	
October 2003 areas	–0.1**	–0.0	–0.0	–0.0	172,758
	(0.0)	*(0.1)*	*(0.1)*	*(0.1)*	
April 2004 areas	+0.0	+0.0	+0.0	–0.0	281,521
	(0.0)	*(0.0)*	*(0.1)*	*(0.1)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(a). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether observed in the pre- or post-time period (interacted with whether they were in an October area) or an April area and local authority dummies. All controls interacted with sex.

The estimated impact of Pathways on those already claiming IB who were not mandated onto the programme is shown in Table 7.6. Again, the impact is estimated for the likelihood of being in receipt of IB three, six, nine and 12 months after the programme was implemented, and the impact is broken down by both sex and area. The estimates show that those recipients in the pilot areas after the programme had been implemented were around 0.7 percentage points more likely to have moved off IB after three, six, nine and 12 months. It is plausible that this was caused by the programme – not least because individuals already claiming IB might have chosen to participate in Pathways, in which case they might have benefited directly from it. Similar overall impacts are found on both men and women.

Pathways was extended on 7 February 2005 to cover those who had been in receipt of IB for up to two years at the time Pathways was implemented for those moving into IB in that area (i.e. either October 2003 or April 2004). For the former group, this is unlikely to affect the estimates presented in Table 7.6. However, those receiving IB in the April 2004 areas could have been mandated onto the programme after ten months, which, in principle, could have an effect on their subsequent outcomes. However, the extent to which this was actually the case was somewhat mitigated since IBPAs had, until April 2006, to administer all first WFIs. Indeed the results in Table 7.6 are similar in the October 2003 and the April 2004 pilot areas, suggesting no obvious immediate effect of the extension to the stock.

Table 7.6 Difference-in-differences estimate of impact of Pathways on exit rates of existing IB claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	+0.6***	+0.8***	+0.6***	+0.7***	767,589
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	
October 2003 areas	+0.4***	+0.4***	+0.5***	+0.6**	366,771
	(0.1)	*(0.2)*	*(0.2)*	*(0.2)*	
April 2004 areas	+0.8***	+1.2***	+0.7***	+0.8***	400,818
	(0.1)	*(0.2)*	*(0.2)*	*(0.2)*	
Men					
All areas	+0.6***	+0.8***	+0.5***	+0.7***	469,322
	(0.1)	*(0.1)*	*(0.2)*	*(0.2)*	
October 2003 areas	+0.2	+0.2	+0.3	+0.5**	225,226
	(0.2)	*(0.2)*	*(0.2)*	*(0.2)*	
April 2004 areas	+0.9***	+1.3***	+0.8***	+1.0***	244,096
	(0.2)	*(0.2)*	*(0.2)*	*(0.2)*	
Women					
All areas	+0.6***	+0.9***	+0.6***	+0.6***	298,267
	(0.1)	*(0.2)*	*(0.2)*	*(0.2)*	
October 2003 areas	+0.6***	+0.8***	+0.9***	+0.8***	141,545
	(0.2)	*(0.3)*	*(0.3)*	*(0.3)*	
April 2004 areas	+0.6***	+0.9***	+0.5*	+0.5	156,722
	(0.2)	*(0.3)*	*(0.3)*	*(0.3)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(b). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area), local authority dummies, whether IB claim is only for National Insurance credits and whether recorded health problem is a mental health problem. All controls interacted with sex.

The estimated impact of Pathways on those already claiming IS or Pension Credit with a disability premium, who were not mandated onto the programme is shown in Table 7.7. The estimates suggest that the programme might have led to a small increase in the cumulative off-flow rate from these benefits, although many of the estimated coefficients are not statistically significantly different from zero. Since these claimants would have been allowed to participate in Pathways this could be due to a direct, rather than an indirect, impact of the policy.

Table 7.7 Difference-in-differences estimate of impact of Pathways on exit rates of existing IS/Pension Credit with disability premium claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	+0.2*	+0.2	+0.2	+0.5**	377,884
	(0.1)	*(0.2)*	*(0.2)*	*(0.2)*	
October 2003 areas	+0.2	+0.4*	+0.2	+0.7**	170,297
	(0.2)	*(0.2)*	*(0.3)*	*(0.4)*	
April 2004 areas	+0.2	+0.1	+0.3	+0.3	207,587
	(0.2)	*(0.2)*	*(0.3)*	*(0.3)*	
Men					
All areas	+0.2	+0.3	+0.2	+0.3	202,098
	(0.2)	*(0.2)*	*(0.3)*	*(0.3)*	
October 2003 areas	+0.2	+0.4	+0.1	+0.6	90,246
	(0.2)	*(0.3)*	*(0.4)*	*(0.5)*	
April 2004 areas	+0.2	+0.2	+0.2	+0.1	111,852
	(0.2)	*(0.3)*	*(0.4)*	*(0.4)*	
Women					
All areas	+0.2	+0.2	+0.1	+0.6**	175,786
	(0.1)	*(0.2)*	*(0.3)*	*(0.3)*	
October 2003 areas	+0.2	+0.4	+0.3	+0.8**	80,051
	(0.2)	*(0.3)*	*(0.4)*	*(0.4)*	
April 2004 areas	+0.2	+0.1	+0.4	+0.5	95,735
	(0.2)		*(0.3)*	*(0.3)*	*(0.4)*

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(c). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area) and local authority dummies. All controls interacted with sex.

The estimated impact of Pathways on those already claiming SDA, who were not mandated onto the programme, is shown in Table 7.8. Again, these individuals

would have been allowed to participate voluntarily in Pathways. The estimates show that those recipients in the pilot areas after the programme had been implemented were more likely to move off benefit, with the estimated co-efficient being statistically different from zero after 12 months (+0.5 percentage points). Breaking down the impact by area and sex reveals that the cumulative off-flow rate after 12 months was statistically significantly higher among men in the April 2004 areas after Pathways was in place (+1.1 percentage points). While the estimated effect on women was also positive it was not statistically significantly different from zero.

Table 7.8 Difference-in-differences estimate of impact of Pathways on exit rates of existing SDAclaims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	+0.0	+0.3	+0.2	+0.5**	98,468
	(0.1)	*(0.2)*	*(0.2)*	*(0.2)*	
October 2003 areas	–0.0	+0.1	–0.1	+0.3	43,217
	(0.2)	*(0.3)*	*(0.3)*	*(0.4)*	
April 2004 areas	+0.1	+0.4*	+0.4	+0.7**	55,251
	(0.2)	*(0.2)*	*(0.3)*	*(0.3)*	
Men					
All areas	–0.1	+0.2	+0.1	+0.6*	42,075
	(0.2)	*(0.2)*	*(0.3)*	*(0.3)*	
October 2003 areas	–0.2	+0.1	–0.4	–0.1	17,532
	(0.3)	*(0.4)*	*(0.5)*	*(0.5)*	
April 2004 areas	–0.0	+0.3	+0.4	+1.1**	24,543
	(0.2)	*(0.3)*	*(0.4)*	*(0.4)*	
Women					
All areas	+0.1	+0.3	+0.3	+0.5	56,393
	(0.2)	*(0.2)*	*(0.3)*	*(0.3)*	
October 2003 areas	+0.1	+0.1	+0.1	+0.6	25,685
	(0.3)	*(0.4)*	*(0.4)*	*(0.5)*	
April 2004 areas	+0.1	+0.4	+0.4	+0.4	30,708
	(0.2)	*(0.3)*	*(0.4)*	*(0.4)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(d). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area), local authority dummies and whether recorded health problem is a mental health problem. All controls interacted with sex.

The estimated impact of Pathways on those already claiming IS or Pension Credit without a disability premium, who were not mandated onto the programme, is shown in Table 7.9. These individuals would only have been able to participate voluntarily in Pathways if they were receiving IS or Pension Credit on grounds of disability (and it is, unfortunately, not possible to generate such an indicator in the data).

Generally, the estimates show that those recipients in the pilot areas after the programme had been implemented were not statistically significantly more or less likely to move off benefit. Breaking the results down by area and sex suggests that the programme might have led to an increase in the three month cumulative off-flow rate from these benefits among women in the April 2004 areas.

Table 7.9 Difference-in-differences estimate of impact of Pathways on exit rates of existing IS/Pension Credit without disability premium claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	+0.3**	+0.2	+0.1	+0.3	393,873
	(0.2)	*(0.2)*	*(0.2)*	*(0.3)*	
October 2003 areas	+0.0	+0.3	–0.2	+0.1	167,371
	(0.2)	*(0.3)*	*(0.3)*	*(0.4)*	
April 2004 areas	+0.5**	+0.0	+0.4	+0.4	226,502
	(0.2)	*(0.3)*	*(0.3)*	*(0.3)*	
Men					
All areas	+0.4	+0.4	+0.5	+0.8**	131,343
	(0.4)	*(0.4)*	*(0.4)*	*(0.4)*	
October 2003 areas	+0.1	+0.6	–0.1	+0.5	57,600
	(0.4)	*(0.5)*	*(0.5)*	*(0.6)*	
April 2004 areas	+0.6*	+0.2	+0.9	+1.0*	73,743
	(0.4)	*(0.5)*	*(0.5)*	*(0.5)*	
Women					
All areas	+0.3	+0.0	–0.0	+0.0	262,530
	(0.2)	*(0.3)*	*(0.3)*	*(0.3)*	
October 2003 areas	–0.0	+0.2	–0.3	–0.2	109,771
	(0.3)	*(0.4)*	*(0.4)*	*(0.5)*	
April 2004 areas	+0.5*	–0.1	+0.2	+0.1	152,759
	(0.3)	*(0.3)*	*(0.4)*	*(0.4)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(e). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area), and local authority dummies. All controls interacted with sex.

The estimated impact of Pathways on those already claiming JSA, who were not mandated onto the programme is shown in Table 7.10. These individuals would not have been able to volunteer to take part in Pathways. The estimates show that men and women in the October 2003 pilot areas after the programme had been implemented were 3.6 percentage points and 3.4 percentage points, respectively, less likely to have moved off JSA after six months. These are a sizeable difference, which might have been caused by the programme – for example, through it leading to a reduction in DWP resources being targeted towards this group or due to (potentially short-term) inflexibilities in the local labour market. The overall reduction in cumulative off-flow rates from JSA had diminished by nine months. No evidence of any difference in cumulative benefit off-flow rates was found among either men or women in the April 2004 areas.

Table 7.10 Difference-in-differences estimate of impact of Pathways on exit rates of existing JSA claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	–1.3***	–1.7***	–0.6*	–0.5	203,841
	(0.4)	*(0.4)*	*(0.4)*	*(0.4)*	
October 2003 areas	–1.9***	–3.6***	–1.3**	–1.6***	89,247
	(0.8)	*(0.8)*	*(0.8)*	*(0.8)*	
April 2004 areas	–0.9	–0.2	–0.1	+0.5	114,594
	(0.6)	*(0.5)*	*(0.5)*	*(0.5)*	
Men					
All areas	–1.7***	–1.7***	–0.5	–0.4	154,305
	(0.5)	*(0.5)*	*(0.5)*	*(0.4)*	
October 2003 areas	–2.5***	–3.6***	–1.3*	–1.2*	68,580
	(0.9)	*(0.9)*	*(0.9)*	*(0.9)*	
April 2004 areas	–0.9	–0.0	+0.1	+0.3	85,725
	(0.6)	*(0.6)*	*(0.6)*	*(0.5)*	
Women					
All areas	–0.3	–1.8**	–1.0	–0.6	49,536
	(0.8)	*(0.8)*	*(0.7)*	*(0.7)*	
October 2003 areas	+0.0	–3.4***	–1.4	–2.9***	20,667
	(1.3)	*(1.3)*	*(1.2)*	*(1.1)*	
April 2004 areas	–0.6	–0.7	–0.7	+1.1	28,869
	(1.1)	*(1.0)*	*(0.9)*	*(0.8)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(f). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area) and local authority dummies. All controls interacted with sex.

The estimated impact of Pathways on those already claiming Invalid Care Allowance (which was renamed Carer's Allowance on 1 April 2003), who were not mandated onto the programme is shown in Table 7.11. These individuals would not have been able to volunteer to take part in Pathways. The estimates show that recipients in the pilot areas after the programme had been implemented were not statistically significantly more or less likely to move off benefit. Breaking down the impact by area and sex also suggests little impact of the programme on cumulative off-flow rates from Invalid Care Allowance.

Table 7.11 Difference-in-differences estimate of impact of Pathways on exit rates of existing Invalid Care Allowance claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	–0.1	–0.0	+0.2	+0.3	157,140
	(0.2)	*(0.2)*	*(0.3)*	*(0.3)*	
October 2003 areas	–0.5**	–0.5**	–0.4	–0.3	69,737
	(0.3)	*(0.4)*	*(0.4)*	*(0.5)*	
April 2004 areas	+0.2	+0.4	+0.7*	+0.7	87,403
	(0.2)	*(0.3)*	*(0.4)*	*(0.5)*	
Men					
All areas	–0.4	–0.6	–0.3	+0.3	43,165
	(0.3)	*(0.5)*	*(0.6)*	*(0.6)*	
October 2003 areas	–1.0**	–1.2*	–0.9	–0.4	19,895
	(0.5)	*(0.7)*	*(0.8)*	*(0.9)*	
April 2004 areas	+0.2	–0.1	+0.1	+0.8	23,270
	(0.5)	*(0.6)*	*(0.8)*	*(0.9)*	
Women					
All areas	–0.1	+0.2	+0.4	+0.3	113,975
	(0.2)	*(0.3)*	*(0.3)*	*(0.4)*	
October 2003 areas	–0.4	–0.2	–0.2	–0.2	49,842
	(0.3)	*(0.4)*	*(0.5)*	*(0.6)*	
April 2004 areas	+0.2	+0.5	+0.9*	+0.7	64,133
	(0.3)	*(0.4)*	*(0.5)*	*(0.5)*	

Note: Invalid Care Allowance was renamed Carer's Allowance on 1st April 2003. Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(g). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area) and local authority dummies. All controls interacted with sex.

The estimated impact of Pathways on those already claiming Disability Living Allowance, who were not mandated onto the programme, is shown in Table 7.12. These individuals would not have been able to volunteer to take part in Pathways. The estimates show that those recipients in the pilot areas after the programme had been implemented were not statistically significantly more or less likely to move off benefit. The very large sample sizes mean that this lack of statistical significance is due to small points estimates rather than large point estimates that are imprecisely measured. Breaking down the impact by area and sex also suggests little impact of the programme on cumulative off-flow rates from DLA.

Table 7.12 Difference-in-differences estimate of impact of Pathways on exit rates of existing DLA claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	–0.0	–0.1	–0.1	–0.0	609,283
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	
October 2003 areas	–0.1**	–0.2**	–0.2*	–0.2	287,801
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	
April 2004 areas	+0.1	+0.0	+0.0	+0.1	321,482
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	
Men					
All areas	–0.1	–0.1	–0.1	+0.0	323,307
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	
October 2003 areas	–0.3**	–0.3**	–0.3**	–0.4*	154,407
	(0.1)	*(0.1)*	*(0.2)*	*(0.2)*	
April 2004 areas	+0.0	+0.0	+0.1	+0.4*	168,900
	(0.1)	*(0.1)*	*(0.2)*	*(0.2)*	
Women					
All areas	+0.0	–0.0	–0.0	–0.1	285,976
	(0.1)	*(0.1)*	*(0.1)*	*(0.1)*	
October 2003 areas	–0.0	–0.1	–0.0	–0.0	133,394
	(0.1)	*(0.1)*	*(0.2)*	*(0.2)*	
April 2004 areas	+0.1	+0.0	–0.0	–0.1	152,582
	(0.1)	*(0.1)*	*(0.2)*	*(0.2)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(h). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre or post time period (interacted with whether they were in an October area or an April area) and local authority dummies. All controls interacted with sex.

The estimated impact of Pathways on those women already claiming Bereavement Benefit, who were not mandated onto the programme is shown in Table 7.13. These individuals would not have been able to volunteer to take part in Pathways. The estimates show that generally, although with the notable exception of men in the April 2004 areas, that there is no statistically significant evidence of an impact on cumulative off-flow rates from Bereavement Benefits.

Table 7.13 Difference-in-differences estimate of impact of Pathways on exit rates of existing Bereavement Benefit claims, by area and sex

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Overall impact					
All areas	+3.2***	+4.4***	+4.4***	+1.9*	15,060
	(1.0)	*(1.2)*	*(1.2)*	*(1.0)*	
October 2003 areas	+2.9*	+4.1**	+1.0	–1.3	5,700
	(1.7)	*(1.9)*	*(1.8)*	*(1.6)*	
April 2004 areas	+3.1**	+4.5***	+6.2***	+3.8***	9,360
	(1.2)	*(1.5)*	*(1.5)*	*(1.3)*	
Men					
All areas	+1.8	+7.7***	+5.5***	+5.2***	5,629
	(1.6)	*(2.0)*	*(2.0)*	*(1.8)*	
October 2003 areas	+0.2	+4.8	–3.4	–0.3	2,186
	(2.7)	*(3.1)*	*(3.1)*	*(2.8)*	
April 2004 areas	+2.3	+9.3***	+10.7***	+8.5***	3,443
	(2.0)	*(2.6)*	*(2.6)*	*(2.3)*	
Women					
All areas	+4.0***	+2.5*	+3.8***	–0.0	9,431
	(1.3)	*(1.5)*	*(1.5)*	*(1.2)*	
October 2003 areas	+4.5**	+3.6	+3.8	–1.9	3,514
	(2.1)	*(2.4)*	*(2.3)*	*(1.9)*	
April 2004 areas	+3.5**	+1.6	+3.6*	+1.0	5,917
	(1.6)	*(1.9)*	*(1.9)*	*(1.5)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(i). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area), and local authority dummies. All controls interacted with sex.

Evidence of an impact on men in the April 2004 areas is very curious: after six and nine months the cumulative benefit off-flow rate is found to be substantially higher in the pilot areas after the programme has been implemented (+9.3 percentage

points after six months and +10.7 percentage points after nine months). Rather than being due to an increase in the exit rate from Bereavement Benefit in the pilot areas, the result is actually driven by a larger fall in the exit rate in the comparison areas than in the pilot areas (as shown in Figure 7.2(i)). The implausibility of a differential trend of this magnitude being a causal impact of the programme suggests that it would have occurred in the absence of the programme and has been caused by a different factor.

The estimated impact of Pathways on those men aged 65 to 69 already claiming Attendance Allowance, who were not mandated onto the programme, is shown in Table 7.14. These individuals would not have been able to volunteer to take part in Pathways. The estimates show that those recipients in the pilot areas after the programme had been implemented were not statistically significantly more or less likely to move off benefit.

Table 7.14 Difference-in-differences estimate of impact of Pathways to Work on exit rates of existing Attendance Allowance claims, men aged 65 to 69, by area

	Exit from benefit after:				
	3 months	**6 months**	**9 months**	**12 months**	**Sample size**
Men					
All areas	–0.1	+0.9	+0.4	+1.1	7,182
	(1.2)	*(1.5)*	*(1.7)*	*(1.8)*	
October 2003 areas	+1.2	+1.0	+1.8	+1.0	3,052
	(1.8)	*(2.2)*	*(2.5)*	*(2.7)*	
April 2004 areas	–1.0	+0.9	–0.5	+1.3	4,130
	(1.5)	*(2.0)*	*(2.2)*	*(2.4)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(j). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area) and local authority dummies.

The estimated impact of Pathways on those women already claiming Widow's Benefit, who were not mandated onto the programme is shown in Table 7.15. These individuals would not have been able to volunteer to take part in Pathways. While there is no statistically significant evidence of any impact on cumulative off-flow rates in the April 2004 areas, in the October 2003 areas it is 1.2 percentage points higher after nine months. As with Bereavement Benefit it is difficult to see how this could be a causal impact of Pathways.

Table 7.15 Difference-in-differences estimate of impact of Pathways to Work on exit rates of existing Widow's Benefit claims, by area

	Exit from benefit after:				
	3 months	6 months	9 months	12 months	Sample size
Women					
All areas	+0.3	+0.3	+0.6*	–0.1	61,272
	(0.3)	*(0.3)*	*(0.4)*	*(0.4)*	
October 2003 areas	+0.3	+0.3	+1.2**	–0.1	26,048
	(0.4)	*(0.5)*	*(0.6)*	*(0.6)*	
April 2004 areas	+0.3	+0.3	+0.2	–0.2	43,256
	(0.3)	*(0.4)*	*(0.5)*	*(0.5)*	

Note: Standard errors clustered at the individual level shown in parentheses. Sample size refers to the number of unique clusters (individuals), for overall number of benefit spells see note to Figure 7.2(k). Standard errors in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Controls for duration of benefit claim (linear and squared), age (five-year age bands), whether they hit the State Pension Age in the respective window, whether observed in the pre- or post-time period (interacted with whether they were in an October area or an April area) and local authority dummies.

7.6 Conclusions

This chapter has examined cumulative off-flow rates from various DWP benefits both before and after Pathways was implemented in pilot areas and a set of specially chosen comparison areas. For those mandated onto the programme, any differences in the trend would, were certain assumptions to hold, be the direct impact of the programme. However, evidence that Pathways appeared to have an impact on exits from Bereavement Benefit amongst men in the April 2004 areas – something there is no reason to believe that Pathways should cause – suggests that a degree of caution is needed in interpreting our findings as necessarily reflecting a causal impact of the policy.

Those who moved onto IB, who were mandated onto the programme, were found to have moved off earlier than they would otherwise have done, with cumulative benefit off-flow rates after three and six months being statistically significantly higher than they would have been in the absence of the programme. However, the cumulative off-flow after 12 months was no different from what it would have been in the absence of the programme.

Those who were not mandated onto the programme might still have been affected by it. This could most obviously be due to their volunteering to take part in the programme. Alternatively, other indirect effects could arise. For example, benefit recipients might find that their Jobcentre Plus adviser becomes better trained or conversely, has less time to spend with them, as a result of the programme. Alternatively, they might find it harder to find paid work if greater numbers of

those mandated onto the programme are subsequently moving into the labour market.

The results suggest that those already receiving IB, who were not mandated onto the programme but could participate voluntarily, were around 0.7 percentage points more likely to have moved off the benefit three, six, nine and 12 months after the programme had been implemented. Similar impacts were found in the October 2003 and the April 2004 pilot areas and on both men and women. There is also some evidence that women already receiving IS or Pension Credit with a disability premium, who, again, would only have participated voluntarily, were more likely to move off benefit after the programme had been implemented. Since many of these individuals also claim IB, this finding is consistent with that above.

Among those DWP benefit recipients who could not have participated in Pathways to Work (either through compulsion or voluntarily), for most there was no statistically significant evidence of any impact of the programme on their likelihood of moving off benefit. The one exception is men and women receiving JSA in the October 2003 areas. The results suggest that they were both around 3½ percentage points less likely to move off benefit within six months after the programme had been implemented. This is consistent with either Jobcentre Plus in the October 2003 areas being less able to cope with the introduction of Pathways to Work, perhaps because these areas had less notice of the programme than the April 2004 areas, or with the labour market in the October 2003 areas less able to respond quickly to the greater number of IB recipients seeking work.

8 Estimating the nationwide impact of Pathways to Work

8.1 Summary

The impact of Pathways as applied in the initial seven pilot areas might not be the same across the whole of the Great Britain as it was in these initial areas. This is not least because these initial areas were not necessarily chosen randomly: for example, the first three pilot areas were selected on the basis of having a relatively high number of individuals receiving incapacity benefits. If the characteristics of those moving onto incapacity benefits in these areas differ from the characteristics of those moving onto incapacity benefits elsewhere in the country and these different characteristics are associated with a larger or smaller impact of Pathways, the impact of the programme in the pilot areas will not be the same as that elsewhere in the country.

This chapter uses administrative data on Incapacity Benefit (IB) claims from the whole of Great Britain, including the initial areas in which Pathways was piloted, to examine both the extent to which individuals in the initial pilot areas differ in terms of observed characteristics from the rest of Great Britain and the extent to which these observed characteristics are associated with a higher or lower average estimated impact of Pathways, as it was implemented in the initial seven pilot areas, on the likelihood of an IB claim having ended after six months. These estimates are used to extrapolate what, under certain assumptions, the impact of Pathways to Work programme as applied in the initial seven pilot areas on this outcome, would have been in those parts of Great Britain where the programme was not piloted.

The main findings are as follows:

- There is evidence that the impact of Pathways, as implemented in the initial seven pilot areas, on the likelihood of an individual's not being in receipt of IB after six months varies by certain background characteristics. Specifically, the programme is estimated to have had a slightly larger impact on:
  - those moving onto receipt of National Insurance credits (i.e. who did not meet the contribution conditions for receiving IB);
  - those residing in local authorities (LAs) that in the past have had lower cumulative rates of exit from IB after six months.
- Outside London, the original pilot areas are found to be broadly similar to the rest of Great Britain. This is true both in terms of the observed individual characteristics of those moving onto IB (their sex, age, health and whether or not they are only in receipt of National Insurance credits) and also in terms of the historic LA average six month cumulative exit rate from IB.
- In contrast, considerable differences are found on average between those moving onto IB in London and those moving onto IB in both the original seven pilot areas and elsewhere in Great Britain. For example, individuals moving onto IB in London are considerably more likely to be in receipt of only National Insurance credits, as opposed to also receiving a payment of IB. In addition, the historic average LA cumulative six month exit rates from IB within London are typically much lower than that seen in the pilot areas. Problematically for this study, several areas of London have much lower historic cumulative six months exit rates from IB than is seen anywhere in the original seven pilot areas.
- Under the additional assumption that all of the characteristics with which the impact of Pathways varies, which also differ between the original seven pilot areas and the area(s) for which the impact of the programme is to be estimated, are taken into account in the analysis, it is possible to estimate what the impact of Pathways as applied to the initial seven pilot areas would have been outside these areas. With the exception of London, the available evidence gives no reason to suggest that the impact of Pathways, as implemented in the initial seven pilot areas, on the likelihood of those moving onto IB not being in receipt of the benefit after six months, would be significantly different in the rest of Great Britain from what it has been in these initial pilot areas. However, an extrapolation of the estimated impact of the programme that was implemented in the initial seven pilot areas to London would be questionable. This is because the evidence suggests that many parts of London are very different from all of the original pilot areas in ways that are associated with a differential impact of the programme. Therefore, what the impact of Pathways might be in London – which accounts for around one-in-nine individuals moving onto IB in Great Britain – remains uncertain. However, the estimates in this chapter give no evidence that would suggest the impact of Pathways, as applied in the initial seven pilot areas in London, would be smaller than that seen in these initial pilot areas.

A crucial caveat is that the methodology used in this chapter rests on the assumption that there are no elements not taken into account which are correlated with the impact of Pathways that also vary across the country. Otherwise the extrapolation of estimates of the programme based on pilot areas to the rest of the country, would be invalid. For instance, if different areas implemented the policy differently, it might well be that the figures obtained for the pilot areas do not represent the effect of this differently implemented policy in the rest of the country. In that case, the roll out would involve, in some sense, a different policy than that implemented in the original pilot areas. Similarly, the impact of the national roll-out of Pathways might well differ from the results presented in this chapter because the policy being extended nationwide differs from that implemented in the original pilot areas. For example, across the 40 per cent of the country covered by Pathways before the end of 2006 – including all of the original pilot areas – the scheme was operated by Jobcentre Plus, whereas the programme that is being extended to the rest of the country (in October 2007 and April 2008) is to be operated by the private and voluntary sectors.

8.2 Introduction

Pathways to Work might have a different impact on claimants of incapacity benefits in the areas where the programme was initially piloted from what it would have had on claimants elsewhere in Great Britain. This could be the case for at least three reasons:

- First, the impact of Pathways to Work might differ by individual characteristics and the prevalence of these characteristics might be higher or lower in the pilot areas than in the rest of the country. For example, if the programme had a smaller impact on the outcomes of those moving into incapacity benefits with mental health problems and a smaller proportion of new claimants of incapacity benefits in the areas where the programme was being piloted had mental health problems, the impact of the programme in the pilot areas would be larger than the impact nationwide.
- Second, the impact of the programme might vary by the underlying success of the local Jobcentre Plus organisation in terms of getting those receiving incapacity benefits to return to work. For example, if the programme had a larger impact on the outcomes of those covered by organisations that would otherwise have been less successful, and the pilot areas comprised organisations that would have been relatively successful even without Pathways, then the impact of the programme in the pilot areas would be smaller than the impact nationwide.
- Third, the impact of the programme might vary by the characteristics of the local labour market. For example, if the programme had a larger impact on the outcomes of those in areas where there were greater employment opportunities for those with some health problems, and the pilot areas typically had better employment opportunities for those with some health problems, the impact of the programme in the pilot areas would be larger than the impact nationwide.

Differences between the nationwide impact of Pathways and that seen in the pilot areas would only arise to the extent to which the pilot areas differ from the rest of Great Britain in ways that are associated with a greater or smaller impact of Pathways. If the characteristics of the pilot areas did not differ from the rest of the country or if the impact of Pathways did not vary by any of the characteristics that did vary between the pilot areas and the rest of the country, the impacts that occurred in the pilot areas would also occur nationwide.

Had the pilot areas been chosen at random, it might be reasonable to assume that the characteristics of these areas were similar to the rest of country and, therefore, that the impact of Pathways would be the same in these pilot areas as it would be in the rest of Great Britain. However, this was not the case: for example the first three pilot areas were selected on the basis of having a relatively high number of individuals receiving incapacity benefits. Therefore, rather than make the questionable assumption that the impact of the programme outside the initial pilot areas would have been the same as that found in the pilot areas, the analysis presented in this chapter estimates what, under certain assumptions, the impact across the rest of Great Britain would have been.

Specifically, this chapter presents the findings, from analysis, of the extent to which the initial seven pilot areas differ from the rest of Great Britain in terms of the observed characteristics of those moving onto IB and the extent to which these observed characteristics are associated with a higher or lower average impact of Pathways on the likelihood of a new IB claim ending within six months. These estimates are used to extrapolate what the impact of Pathways, as implemented in the initial seven pilot areas, on this outcome of interest would be in parts of Great Britain where the programme was not initially piloted. The key additional assumption required here is that all of the characteristics with which the impact of Pathways varies, which also differ between the original seven pilot areas and the area(s) to which the impact of the programme is to be extrapolated, are taken into account in the analysis. The methodology for doing this is described in more detail in Section 8.3.

The data used in this analysis are administrative data on spells of IB across the whole of Great Britain, including the original seven pilot areas. Further details about these data and, in particular, differences in observed characteristics between the initial seven areas in which Pathways was piloted and the rest of Great Britain, can be found in Section 8.4.The results are presented in Section 8.5, while Section 8.6 concludes.

8.3 Methodology

To assess how the impact of the Pathway to Work programme in the rest of the country might differ from that in the initial seven pilot areas, the effect in the pilot areas is estimated using a difference-in-differences methodology. This is implemented within a linear regression framework in order to take into account

the set of background characteristics summarised in Section 8.4 and to subtract out any pre-programme differences in the outcome measures between pilot and comparison areas, thereby allowing for any differences in the impact of unobserved characteristics that remain constant over time.

The methodology employed is very similar to that used in Chapter 7, which looks at the indirect effects of the programme (see Section 7.3 for a brief discussion of the methodology used there). The only difference is that the impact of the programme is now allowed to vary with a larger set of background characteristics. Once this has been done, any evidence of variation in the impact of the programme across different groups is then used to assess the extent to which the impact of the programme might vary in the rest of Britain from the pilot areas.

The model that is estimated can be written as follows:[58]

$$Y_i = \gamma X_i + \delta POST_i + \lambda PILOT_i + \beta POST_i*PILOT_i + X_i * (\delta 2\ POST_i + \lambda 2\ PILOT_i + \beta 2\ POST_i*PILOT_i) + \varepsilon_i \quad (1)$$

where Y_i denotes the outcome of interest for IB spell i (in this case whether or not the recipient is still receiving IB after six months) and X_i denotes the observed characteristics of the benefit spell/recipient (for example the sex and age of the recipient). $PILOT_i$ is a dummy variable[59] indicating whether the benefit spell occurred in a Pathways to Work pilot area or in one of the comparison areas and $POST_i$ is a dummy variable indicating whether the benefit spell occurred before or after Pathways was actually implemented (regardless of whether the benefit spell occurred in one of the seven pilot areas or in one of the comparison areas). ε_i is an 'error term' capturing variation in Y_i not captured by the other explanatory variables.

The total impact of the programme will not only depend on β, the coefficient of the interaction term $POST_i*PILOT_i$, but also on $\beta 2$, the vector of coefficients on the interaction between the term $POST_i*PILOT_i$ and the observed characteristics of the benefit spell/recipient with which the impact of the programme is being allowed to vary.

Once these coefficients have been estimated, it is straightforward to predict the estimated impact of the programme across individuals with different observed characteristics as it simply depends on β, $\beta 2$ and the characteristics associated with the benefit spell for which the impact of the programme is to be estimated.

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58 This equation is estimated by Ordinary Least Squares regression. This method of implementing the difference-in-differences approach is based on the Wald estimator and has been described and used in a number of papers including Ashenfelter (1978) and Heckman and Robb (1985).

59 A dummy variable is a variable which takes the value 0 or 1. In this case, PILOT=1 if the benefit spell occurred in a Pathways to Work pilot area; PILOT=0 otherwise. Separate dummy variables are included for each of the LAs observed in the data.

This could be done, for example, by taking all those moving onto IB in the whole of Great Britain in a particular time period, rather than just those moving onto IB in the pilot areas.[60] The key additional assumption is that all of the characteristics with which the impact of Pathways varies, which also differ between the original seven pilot areas and the area(s) to which the impact of the programme is to be estimated, are taken into account in the analysis (in that they are included in X_i). Unfortunately, this assumption is not testable.

8.4 Data description

The data used in this chapter were taken from the National Benefits Database (NBD), which is described in Section 7.4. The extract of the NBD used in this chapter comprises IB spells from the whole of Great Britain. The data included all new IB spells that began during selected time periods[61], with subsequent flows off benefit recorded up to the beginning of March 2007. Any subsequent moves onto, and off, IB are also included in the data. In addition to information on IB claim start and end dates, other information in the NBD that is used in this analysis includes each individual's sex, date of birth and LA of residence. The data contain some information on individuals' health (although only one health problem is given per benefit claim) and also indicate whether individuals are in receipt of a payment of IB or whether they are only receiving National Insurance credits, which can help individuals qualify for certain contributory benefits in the future. IB spells for the same individuals are linked together. Only individuals who were aged between 18 and 59 (inclusive) were retained in the analysis because those moving onto IB outside these age ranges were not mandated onto Pathways in the initial seven pilot areas.

8.4.1 Variation in background characteristics of IB claimants

Key to this analysis is the extent to which the characteristics of those in the initial seven pilot areas differ from those in the rest of the country since, even if the impact of Pathways does vary by individual characteristics, if individual characteristics do not vary across the country then the average estimated impact of the programme would also not vary.

Table 8.1 compares the observed background characteristics of those moving onto IB in the seven pilot areas to other areas in Great Britain. The initial pilot areas are found to be very similar to the rest of the country for most of these individual

60 Since it is not straightforward to estimated standard error of the estimated impact analytically it is instead computed using bootstrapping with 1,000 repetitions. For a description of the bootstrapping method, see for example Efron and Tibshirani (1993).

61 Specifically, September 2001 to October 2001, January 2002 to March 2002, August 2002 to November 2002, January 2003 to March 2003 and August 2003 to December 2004 (all dates are inclusive).

characteristics, except that the percentage only moving onto receipt of National Insurance credits is slightly lower in pilot areas than in the rest of Great Britain (44.5 per cent compared to 48.4 per cent).

Table 8.1 Descriptive background statistics of those moving onto IB between 1 August 2004 and 30 November 2004, by area

	Original seven pilot areas	Rest of Great Britain, not London	All Great Britain, not London	London	All Great Britain
Aged 45 or over	38.4	38.1	38.0	33.6	37.5
	(0.3)	*(0.1)*	*(0.1)*	*(0.3)*	*(0.1)*
Female	42.3	42.1	42.1	43.1	42.2
	(0.3)	*(0.1)*	*(0.1)*	*(0.3)*	*(0.1)*
Mental health problem	29.6	29.8	29.8	28.0	29.6
	(0.3)	*(0.1)*	*(0.1)*	*(0.3)*	*(0.1)*
NI credits only	44.5	46.8	46.6	62.7	48.4
	(0.3)	*(0.1)*	*(0.1)*	*(0.3)*	*(0.1)*
Number of spells	*32,398*	*156,438*	*173,942*	*21,970*	*195,912*

Note: Mental health problem has been classified as either being an Affective Disorder (Manic Episode, Depressive Episode, Recurrent Depressive Disorder, Persistent mood Disorder or an Un-specified Mood Disorder) or a Neurotic, Stress Related and Somatoform disorders (Phobic Anxiety Disorders, Other anxiety Disorders, Reaction to Severe Stress, Dissociative Disorders, Somatoform Disorders or Other Neurotic Disorders).

Note: Standard error of mean shown in parentheses.

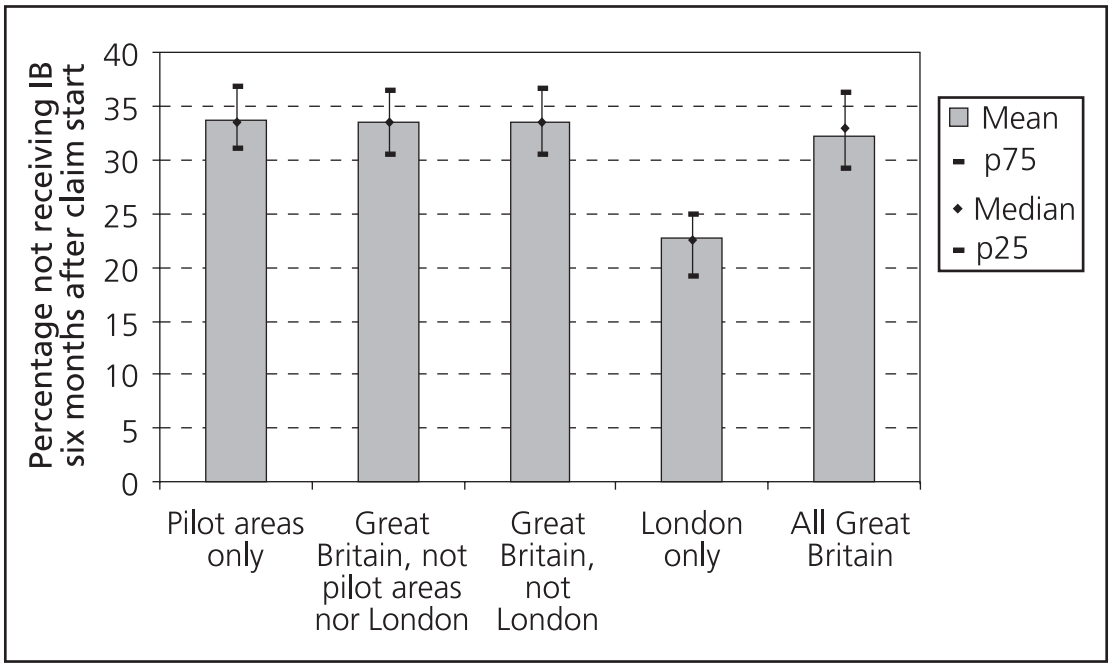
One area of Great Britain where the average characteristics of those moving onto IB are found to differ significantly from those in the seven pilot areas (and indeed from the rest of the country) is London. Those moving onto IB in the capital are found, on average, to be considerably younger (33.6 per cent are aged 45 or over compared to 38.0 per cent across the rest of Great Britain) and much more likely to have moved onto only receipt of National Insurance credits rather than an actual payment of IB (62.7 per cent compared to 46.6 per cent across the rest of Great Britain). They are also found to be slightly less likely to be recorded as having a mental health problem (28.0 per cent compared to 29.8 per cent across the rest of Great Britain). This suggest that, if the impact of Pathways varies by either the age of the claimant or whether or not they are only moving onto receipt of National Insurance credits, the overall impact of the programme in London could differ from that found in the original seven pilot areas. This could also have a reasonably significant impact on the overall impact of Pathways across Great Britain since around one-in-nine of those moving onto IB do so in London (21,970 spells out of 195,912 in Table 8.1).

8.4.2 Variation in past cumulative exit rates from IB by LA

The approach taken in this chapter allows the impact of Pathways on those moving onto IB to vary by observed characteristics and then examines whether the distribution of these characteristics in the original seven pilot areas is similar to that in the rest of Great Britain. One potential problem with this approach is that the impact of the programme could vary by unobserved characteristics that also vary across the country. In order to try to capture at least some of these characteristics, the impact of the programme is allowed to vary by the average cumulative exit rate from IB in each LA. This rate is computed with a two-year lag before the introduction of Pathways in order to capture characteristics unaffected by the programme. The attraction of using the LA exit rate from IB is that it is likely to be a neat summary of how the unobserved characteristics of individuals affect the success of the local Jobcentre Plus and how local labour markets differ from area to area in terms of their effects on exit rates among those moving onto IB.

The variation in average LA six month cumulative exit rates among those moving onto IB in a recent time period is shown in Figure 8.1. Areas are weighted by the number of individuals moving onto IB between 1 August 2004 and 30 November 2004, the period over which the impact of the programme is measured. As was the case with the individual characteristics presented in Table 8.1, with the exception of London, the pilot areas are found to be similar to the rest of Great Britain (for example, the median LA six month cumulative exit rate in the original pilot areas is exactly the same as that seen across the rest of Great Britain, excluding London). As with the individual characteristics, London is, on average, very different from both the pilot areas and the rest of Great Britain. For example, after six months, the mean LA cumulative exit rate among those moving onto IB in London was just 23.0 per cent as compared to 34.0 per cent in the original seven pilot areas and 33.0 per cent in the rest of Great Britain. In fact, the 75th percentile of the LA six month exit rate in London (25.0 per cent) is substantially lower than even the 25th percentile of the LA cumulative six month exit rate elsewhere in Great Britain (30.5 per cent).

Figure 8.1 Variation in the distribution of LA IB cumulative six month exit rates, by area of Great Britain



8.5 Results

This section presents the results from applying the methodology set out in Section 8.3 to the data described in Section 8.4. Section 8.5.1 describes the estimates of how the impact of Pathways on those moving onto IB in the original seven pilot areas varies by the characteristics associated with the benefit claim or claimant. Section 8.5.2 presents the findings from extrapolating the impacts found in the pilot areas to other parts of Great Britain.

8.5.1 Evidence of the impact of Pathways to Work programme varying by individual and LA characteristics

The estimated impact, using the difference-in-differences methodology set out in Section 8.3, of Pathways on those moving onto IB who were mandated onto the programme is shown in Table 8.2. The impact is estimated for the likelihood of being in receipt of IB six months after the programme was implemented. This outcome is chosen since, as described in Chapter 7 on indirect effects (and in particular Table 7.3), the evidence suggests that, if anything, the impact of Pathways on the percentage of those moving onto IB who are still in receipt of the benefit is strongest at this point and it is natural to look for evidence of variation in the impact of the programme by background characteristics when that overall impact is found to be strongest.

The estimates presented in columns 1, 2 and 3 are based on using those who moved onto IB just before the programme was implemented as controls, while those in columns 4, 5 and 6 use those who moved onto IB one year before the programme was implemented as controls. Using those who moved onto IB just before the programme was implemented as controls is consistent with the estimates of the impact of Pathways in the initial seven pilot areas that have been produced using data from a specially designed large-scale telephone survey (see both Adam, *et al.* (2006) and Bewley, *et al.* (2007)). However, Bewley, *et al.* (2007) also use administrative data to examine the impact of the programme in these areas and present evidence which suggests that using those moving onto IB immediately before the pilots began as controls is invalid and that it is, instead, preferable to use those who moved onto IB one year before the pilots began.

Columns 1 and 4 of Table 8.2 present the estimated impact when this impact is not allowed to vary by any background characteristic. These show that the overall estimated impact of Pathways is to increase the likelihood of an individual moving onto IB having moved off that benefit after six months by either 2.3 percentage points or 6.0 percentage points depending on whether the 'standard controls' (column 1) or the 'lagged controls' (column 4) are used.

The results presented in columns 2 and 5 of Table 8.2 allow the impact of Pathways to vary by age (specifically whether or not the individual was aged 45 or over when the IB claim began), sex, whether or not they are recorded as having a mental health problem and whether the individual moves onto receipt of a payment of IB or only National Insurance credits. These estimates suggest that, if anything, the impact of Pathways on the likelihood of an individual who moves onto IB still being in receipt of that benefit after six months is stronger for those who (at least initially) only moved onto receipt of National Insurance credits (rather than an actual payment of IB).

Table 8.2 Estimated variation in the impact of Pathways on the likelihood of those moving onto IB not being in receipt of IB after six months, by background characteristics

Impact of programme interacted with	Six month exit rate Standard controls (sample size = 54,192)			Six month exit rate Lagged controls (sample size = 54,299)		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	+2.30**	+1.17	+1.28	+5.99***	+3.82**	+3.40**
	(1.13)	*(1.77)*	*(1.68)*	*(1.11)*	*(1.59)*	*(1.55)*
Aged 45 and over	n/a	–1.20	–1.17	n/a	–1.22	–1.28
	n/a	*(1.53)*	*(1.54)*	n/a	*(1.93)*	*(1.94)*
Female	n/a	–1.10	–1.11	n/a	–0.53	–0.56
	n/a	*(1.82)*	*(1.82)*	n/a	*(1.78)*	*(1.79)*
Mental health problem	n/a	+2.23	+2.18	n/a	+3.03	+2.93
	n/a	*(1.88)*	*(1.87)*	n/a	*(2.02)*	*(2.03)*
NI credits only	n/a	+3.12*	+2.91*	n/a	+4.35**	+4.19**
	n/a	*(1.66)*	*(1.65)*	n/a	*(1.96)*	*(1.92)*
LA six month exit rate	n/a	n/a	–0.88***	n/a	n/a	–0.67***
(less average in pilot areas)	n/a	n/a	*(0.23)*	n/a	n/a	*(0.22)*
Joint test on all coefficients	4.13**	1.87	3.77***	28.94***	7.03***	8.17***
(p-value)	*(0.05)*	*(0.11)*	*(0.00)*	*(0.00)*	*(0.00)*	*(0.00)*
Joint test on interactions	n/a	1.51	3.52***	n/a	1.66	2.90***
(p-value)	*n/a*	*(0.21)*	*(0.01)*	*n/a*	*(0.17)*	*(0.02)*

Note: Standard errors in parentheses, clustered at the LA level to allow for lack of independence between benefit spells in the same area. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively. Coefficients (and standard errors) reported above relate to those on the interaction between the background characteristic interacted with whether they are observed in a pilot area after the introduction of the policy. The characteristics are also included interacted with both whether or not they are observed in a pilot area and whether or not they are observed in a post-time period. Other controls included: whether they hit the State Pension Age in the relevant window, whether the IB claim is only for National Insurance credits (interacted with sex), whether recorded health problem is a mental health problem (interacted with sex), the LA six-month exit rate (interacted with sex) and age (five year age bands, all interacted with sex). Mental health problem has been classified as either being an Affective Disorder (Manic Episode, Depressive Episode, Recurrent Depressive Disorder, Persistent Mood Disorder or an Unspecified Mood Disorder) or a Neurotic, Stress Related or Somatoform disorder (Phobic Anxiety Disorder, Other Anxiety Disorder, Reaction to Severe Stress, Dissociative Disorder, Somatoform Disorder or Other Neurotic Disorder).

The results presented in columns 3 and 6 also allow the impact to vary by the average percentage of those moving onto IB who had moved off benefit after six months observed in the same LA in the recent past (before Pathways had been implemented in any of the pilot areas). As explained in Section 8.3.2, this

measure is likely to be a summary of factors that are associated with higher or lower exit rates among those moving onto IB, including unobserved characteristics of individuals in each area, the success of the local Jobcentre Plus and features of the local labour market. These estimates suggest that, if anything, the impact of Pathways on the percentage of claimants not receiving IB after six months is stronger for those who move onto IB in LAs with relatively low rates of exit from IB after six months in the past. In other words, if anything, Pathways is increasing the percentage of IB claimants who have moved off benefit after six months by more in the areas that, at least in the past, tended to have a higher percentage of individuals still in receipt of IB.

The estimates are consistent with the variation in the impact of Pathways by the percentage of new claimants not receiving IB after six months in that LA in the past being fairly sizeable. For example, the difference between the 25th percentile and the 75th percentile of the percentage of new claimants not receiving IB after six months in that LA among those in the initial seven pilot areas is 5.8 percentage points (36.9 per cent less 31.1 per cent, as reported in Figure 8.1). Multiplying this by the estimated coefficient in column 6 of Table 8.2 of –0.67 suggests that difference in historic LA cumulative six-month off-flow rates from IB is consistent with a difference in estimated impact of Pathways of 3.9 percentage points. This is relative to an estimated average impact of the programme in the pilot areas of +6.0 percentage points (column 4 of Table 8.2).

The test statistics presented in the bottom of Table 8.3 suggest that, when tested jointly, the interactions between individual and LA characteristics (columns 3 and 6) and the impact of Pathways are highly statistically significant.

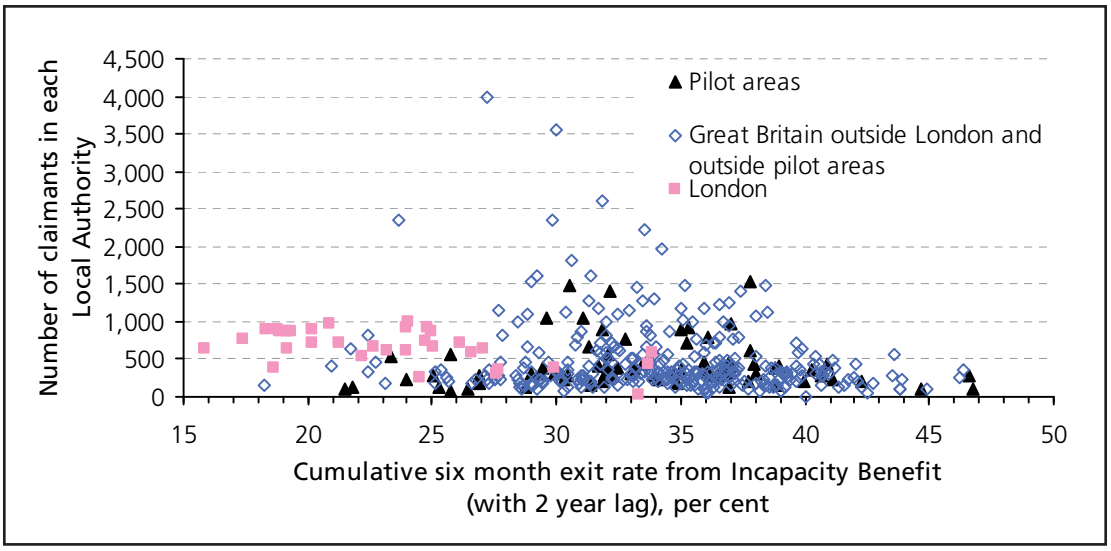
8.5.2 Estimates of the impact of Pathways across Great Britain

Using the evidence on variation in the estimated impact of Pathways in the original seven pilot areas to predict the impact of the programme across the rest of Great Britain should be done with care. This is even more so given that the impact of Pathways is found to vary by the historic average LA cumulative six-month exit rates among those moving onto IB (as reported in Table 8.3) and this LA cumulative six-month exit rate is very different in London from that seen in the original seven pilot areas (as shown in Figure 8.1). Therefore, before presenting the results from extending the estimated impact of Pathways as applied to the initial seven pilot areas to the rest of Great Britain this section first presents further evidence on differences between those individuals moving onto IB in London and those moving onto IB elsewhere in the country.

Figure 8.2 contains a plot of the distribution of exit rates at six month for each LA in Great Britain (on the x-axis) against the relevant size of the area as measured by the number of individuals moving onto IB (on the y-axis). The original pilot areas are denoted by the dark triangles, London by the lighter squares, and the rest of Great Britain by empty diamonds. What is clear from this figure is that many LAs in London have much lower percentages of individuals typically moving off IB after

six-months than is observed in any of the areas where the programme was initially piloted. In contrast the areas where the programme was piloted are, at least in this dimension, largely representative of the rest of Great Britain. Moreover, since around one-in-nine of those moving onto IB are in London, it is not a sufficiently small area that this discrepancy can be safely ignored. (In contrast, the one area that is not a pilot area and not in London which lies far on the left of the distribution of exit rates observed in the pilot areas in Figure 8.2 makes up less than 0.1 per cent of those moving onto IB in the relevant time period.)

Figure 8.2 Distribution of LAs by exit rate at six months and number of IB claimants



The evidence presented in Figure 8.2 would cast doubt on the robustness of extrapolating the estimated impact of Pathways on those moving onto IB in the pilot areas to London. This is because doing so would involve extending the variation in estimated impact of the programme by the historic cumulative six month exit rate from IB by LA (shown in Table 8.3) outside the range observed within Pathways pilot areas.[62] Therefore, rather than extending the estimated impact of Pathways in the original seven pilot areas to the whole of the rest of Great Britain, the results presented below focus on extending the estimated impact to the rest of Great Britain excluding London.

The results are presented in Table 8.3. Column A reports the results using the standard controls and only allowing the impact of the programme to vary by individual characteristics and not LA characteristics. These results, therefore, relate to the estimates of the impact of the programme in the pilot areas that were presented in column 2 of Table 8.2. Column B uses standard controls and allows the impact of the programme to vary by the historic LA cumulative six-month

62 This is known as a lack of common support. See for instance Heckman, Lalonde and Smith (1999) or Lechner (2000).

exit rate from IB. Therefore, these results relate to the estimates of the impact of the programme in the pilot areas that were presented in column 3 of Table 8.2. Column C also uses standard controls but does allow the impact of Pathways to vary by the observed characteristics in the data in a more flexible way, which is described in more detail below. Columns D, E and F repeat columns A, B and C but instead use lagged controls and these results are, therefore, based on the estimates of the impact of the programme that were presented in columns 5 and 6 of Table 8.2 respectively.

When the estimated impact of the programme is restricted so that it can only vary by individual characteristics (columns A and D) there is very little difference between the estimated impact in the pilot areas (row 1) and the rest of Great Britain excluding London (row 2), with this small difference not being statistically significant in either case. For example, taking the lagged controls, the estimated impact in the original seven pilot areas is an increase in the percentage not in receipt of IB six months after moving onto the benefit of 6.0 percentage points, with a standard error of 1.05 percentage points. Extrapolating this estimated impact to the rest of Great Britain, excluding London, would give an estimated impact of 6.1 percentage points, again with a standard error of 1.05 percentage points. As a result the central estimate of the impact of the programme across the whole of Great Britain, excluding London, is little different from that in the pilot areas (row 3). The estimated impact of the programme in London is slightly higher than that in the original seven pilot areas. This is because the impact of Pathways on the likelihood of having moved off IB after six months is found to be slightly higher for those who are only in receipt of National Insurance Credits rather than an actual payment of IB (columns 2 and 5 of Table 8.2) and those in London were found to be relatively more likely to be in this situation (Table 8.1). However, it is still the case that the estimated impact in London is not statistically significantly different from that estimated in the original seven pilot areas.

Table 8.3 Estimated impact of Pathways on the likelihood of those moving onto IB not being in receipt of IB after six months, by area, choice of controls and specification

	Standard controls			Lagged controls		
	Without LA exit rate	With LA exit rate	All inclusive	Without LA exit rate	With LA exit rate	All inclusive
	(A)	(B)	(C)	(D)	(E)	(F)
(1) Pilot areas only	+2.31	+2.74*	+2.50	+5.97***	+5.40***	+5.67***
	(1.43)	*(1.48)*	*(1.60)*	*(1.05)*	*(1.06)*	*(1.14)*
(2) Great Britain excluding London and pilot areas	+2.38*	+2.66**	+2.60*	+6.07***	+5.75***	+5.80***
	(1.44)	*(1.34)*	*(1.44)*	*(1.05)*	*(0.95)*	*(0.98)*
(3) Great Britain excluding London	+2.37*	+2.67**	+2.59*	+6.06***	+5.72***	+5.79***
	(1.44)	*(1.33)*	*(1.43)*	*(1.05)*	*(0.95)*	*(0.97)*
(4) London	+2.88*	+12.57***	+6.56	+6.75***	+13.62***	+8.52
	(1.59)	*(3.88)*	*(8.76)*	*(1.20)*	*(2.64)*	*(5.97)*

Note: Standard errors estimated by bootstrapping with 1,000 repetitions, with each individual, rather than each benefit spell, being counted as the block. Standard errors clustered at the LA level to allow for lack of independence between benefit spells in the same area. Standard errors are in parentheses. Statistical significance denoted by ***, ** and * for the 1%, 5% and 10% levels respectively.

Allowing the estimated impact of Pathways to vary by the historic LA cumulative six-month exit rate from IB, changes the picture slightly (columns B and E). As before the estimated impact found for the rest of Great Britain outside the pilot areas but excluding London (row 2) and, therefore, the estimated impact across the whole of Great Britain except for London (row 3), are very similar to those found for the original seven pilot areas (row 1). For example, taking the lagged controls the estimated impact in the original seven pilot areas is an increase in the percentage not in receipt of IB six months after moving onto the benefit of 5.4 percentage points, with a standard error of 1.06 percentage points. Extrapolating this estimated impact to the rest of Great Britain, excluding London, would give an estimated impact of 5.8 percentage points, also with a standard error of 0.95 percentage points. Again, these differences are not statistically significant. However, extending the estimated impact from the pilot areas to London (row 4) gives much larger – perhaps implausibly large – estimated impacts. This is due to the estimated impact of the programme being higher in LAs with lower historic cumulative six-month exit rates from IB (columns 3 and 6 of Table 8.2) and LAs in London typically having considerably lower cumulative six-month exit rates than in any of the pilot areas or the rest of Great Britain (as shown in Figure 8.1 and Figure 8.2).

The methodology employed in this chapter will only correctly measure what the impact of Pathways as applied to the initial seven pilot areas would have been in other areas under the assumption that the impact of the programme does not vary

by any characteristics that are not taken into account that also varies across the country. Unfortunately, the administrative data used in this analysis only contains a relatively limited set of background information. Even so the estimates presented in columns A, B, D and E of Table 8.3 only allow the impact of Pathways to vary by the characteristics observed in the data in a fairly restrictive way: namely the individuals sex, whether or not the individual is aged 45 or over, whether or not they are recorded as having a mental health problem, whether they are only in receipt of National Insurance credits as opposed to also receiving a payment of IB, and the historic average cumulative six-month exit rate from IB seen in their LA.

Columns C and F present the results with a more flexible specification and, therefore, should be seen as the preferred results. Specifically, the policy impact is now allowed to vary by the five-year age band within which the individual lies (and whether or not they hit the State Pension Age in the next six months) rather than simply allowing it to vary by whether or not they are aged 45 or over; and rather than only allowing the impact of the policy to vary by the historic average cumulative six-month exit rate from IB seen in their LA, it is also allowed to vary by its square.[63] Furthermore, the variation in the impact of the policy by all of these characteristics, and those set out in Table 8.2, is allowed to be different by sex. So, for example, the impact of Pathways is allowed to vary by whether or not they are recorded as having a mental health problem and the historic average cumulative six-month exit rate from IB seen in their LA in a way that differs between men and women.

Despite this much more flexible specification for how the impact of Pathways is allowed to vary by the observed characteristics, the interpretation of the results presented in columns C and F is little changed from those presented in columns A, B, D and E. It is still the case that estimated impact of the policy across Great Britain, excluding London is not statistically different to that measured in the original seven pilot areas. Furthermore, extrapolating the estimated impact to London, which as above would be highly questionable, would still lead to a higher estimated impact in London albeit, not as implausibly high as previous estimates might suggest.

8.6 Conclusions

This chapter has examined the possible nationwide impact of Pathways as applied in the initial seven pilot areas on cumulative off-flow rates from IB after six months. This has been done by estimating the impact in the original seven pilot areas in a way that allows the estimated impact to vary by both individual and LA level

63 Adding a cubic term did not, on visual inspection, lead to a large change in the estimated relationship. The inclusion of both a cubic and a quadratic term was found to lead to extremely large predicted impacts of the policy for those areas (such as many LAs in London) with a lower historic average cumulative six-month exit rate from IB than seen in any of the original seven pilot areas.

characteristics and then using data from the rest of Great Britain to extrapolate these estimated impacts to other parts of the country.

Some evidence is found that the impact of Pathways does indeed vary by certain background characteristics. In particular, the likelihood of an individual not being in receipt of IB after six months, which on average is increased by the programme, is found to be increased by more for IB claimants who are only in receipt of National Insurance credits relative to those who are in receipt of an actual payment. The impact is also found to be larger in LAs where the cumulative exit rate from IB in the past has typically been lower.

The initial seven pilot areas are, on average, found to be similar to those in the rest of Great Britain outside London in terms of their age, sex and health. One slight exception is that a slightly lower proportion of those moving onto IB in the pilot areas are only in receipt of National Insurance credits (as opposed to an actual payment of IB) than in the rest of the Great Britain. In contrast, a much higher proportion of those moving onto IB in London are only in receipt of National Insurance credits than in the original pilot areas. Those moving onto IB in London are also, on average, somewhat younger than those moving onto IB either in the original seven pilot areas or elsewhere in Great Britain.

In addition, cumulative exit rates from IB after six months in London have, in the past, typically been much lower than in the original pilot areas. This is not just true on average – most individuals moving onto IB in London are in LAs that have had lower historic cumulative exit rates from IB after six months than is observed in any of the LAs within the initial seven pilot areas. Given that the evidence suggests that the impact of Pathways does vary by this LA level characteristic, this is problematic for using the estimates of the impact of the programme in the pilot areas to assess what the impact might be in London.

Under the additional assumption that all of the characteristics with which the impact of Pathways varies, that also differ between the original seven pilot areas and the area(s) to which the impact of the programme is to be estimated, are taken into account in the analysis it is possible to estimate what the impact of Pathways as applied to the initial seven pilot areas would have been outside these areas. Overall the evidence presented in this chapter gives no reason to suggest that the impact of Pathways as applied in the initial seven pilot areas would be significantly different in the rest of Great Britain, but outside London, to what it has been in the original seven pilot areas. Unfortunately, extrapolating the estimated impact of the programme in the pilot areas to London – which is about one-ninth of those who move onto IB in Great Britain – is not appropriate since the evidence suggests that many parts of London are considerably different from all of the original pilot areas in ways that are associated with a differential impact of the programme. However, the estimates in this chapter give no evidence that would suggest the impact of Pathways in London would be smaller than that seen in the initial seven pilot areas.

A crucial caveat is that the methodology used in this chapter rests on the assumption that there are no elements not taken into account which are correlated with the impact of Pathways that also vary across the country. Otherwise the extrapolation of estimates of the programme based on pilot areas to the rest of the country would be invalid. For instance, if different areas implemented the policy differently, it might well be that the figures obtained for the pilot areas do not represent the effect of this differently implemented policy in the rest of the country. In that case the roll-out would involve, in some sense, a different policy to that implemented in the original pilot areas. Similarly, the impact of the national roll-out of Pathways might well differ from the results presented in this chapter, not least because the policy being extended nationwide differs from that implemented in the original pilot areas. For example, across the 40 per cent of the country covered by Pathways before the end of 2006 – including all of the original pilot areas – the scheme was operated by Jobcentre Plus, whereas the programme that is being extended to the rest of the country (in October 2007 and April 2008) is set to be operated by the private and voluntary sectors.

9 Conclusions

9.1 The measured costs and benefits of Pathways

This report examines whether the financial benefits generated by Pathways for those moving onto incapacity benefits are larger or smaller than the programme's costs. The key conclusion is that the Pathways' measured benefits exceed the measured cost of the programme for the individuals affected by the programme, for the Exchequer and for society as a whole. There are potentially significant costs and benefits of Pathways that we do not measure but the unmeasured costs would have to outweigh the unmeasured benefits significantly if the programme were not to be beneficial overall.

The estimated costs and benefits of Pathways are summarised in Table 9.1. Assuming conservatively that the effects of Pathways lasted for 70 weeks, it was found that the programme's net financial benefits for society as a whole are £701 per enquiry about incapacity benefits. This figure is based on estimated financial benefits of £1,041 and estimated costs of £340. The estimates imply that for every pound invested in Pathways, society reaps benefits of £3.06 (£1,041/£340).

Table 9.1 Present value of total measured financial benefits per incapacity benefits enquiry

	Individual	Exchequer			Society		
Duration of impact	Benefit	Gross Benefit	Cost	Net Benefit	Gross Benefit	Cost	Net Benefit
	£	£	£	£	£	£	£
70 weeks	526	515	340	175	1,041	340	701
150 weeks	935	1,088	340	748	2,023	340	1,683

Note: Assumes 3.5 per cent discount rate. See Chapters 4 and 5 for details.

Of the £701 in net social benefits estimated to have been generated by Pathways under the 70-week-impact assumption, £526 resulted from an increase in the average disposable income of individuals who made an enquiry about incapacity

benefits and the remaining £175 is attributable to a net improvement in the Exchequer's budgetary position. The return to the Exchequer was £1.51 (£515/£340) for each pound invested in Pathways. The increases in the disposable incomes of individuals are mainly attributable to earnings in the additional employment that result from Pathways. In addition, when individuals enter employment because of Pathways, they may receive Working Tax Credit (WTC) and Return to Work Credit (RTWC) awards. These increases in income from earnings, tax credits and the RTWC more than offset the reductions in state benefits and increases in tax payments that also accompany moves into employment (and moves off Incapacity Benefit (IB)). As indicated in Chapter 5, benefits to the Exchequer came from a variety of sources, the most important of which are reductions in outlays on IB payments and increases in tax receipts.

As shown in Table 9.1, the assessed net financial benefits of Pathways are highly sensitive to assumptions about the length of time over which programme effects continue. If it is assumed somewhat more optimistically, that Pathways' effects persist for 150 weeks, rather than for only 70 weeks, programme financial benefits increase to £2,023 per incapacity benefit enquiry but programme costs remain at £340. Thus, social net benefits increase to £1,683 with £935 accruing to individuals and £748 to the Exchequer. Hence, under the 150 week assumption, the return to the Exchequer for each pound invested would be over £3 (£3.20 = £1,088/£340) and the return to society as a whole would be nearly £6 (£5.95 = £2,023/£340).

These estimates of Pathways' benefits and costs are averaged over a sample of individuals who made enquiries at Jobcentre Plus offices about claiming incapacity benefits. Many of these people did not receive any of the services or financial payments provided by the programme. However, as seen in Chapter 2, estimates that are based on administrative data indicate that the percentage of those making enquiries about incapacity benefits who actually participated in the various components of Pathways was fairly low:

- about 20 per cent took part in least one follow-up Work Focused Interview (WFI);
- a little under ten per cent received an RTWC award;
- about five per cent were referred to the Condition Management Programme (CMP)[64];
- Pathways had an effect of one per cent or less on participation its remaining components.

Over 80 per cent of the programme's estimated costs of £340 per incapacity benefit enquiry are attributable to Jobcentre Plus staff salaries (mainly due to follow-up WFIs), the CMP and (especially) RTWC payments. It also seems likely that

[64] The corresponding participation rates for those who actually became IB claimants are 25 per cent, 12 per cent and seven per cent, respectively.

most of the benefits of Pathways emanate from these programme components. Given the substantial impact that Pathways had on benefit exits, the relatively low rates of participation in Pathways' components suggest that some of the effect of Pathways on employment may have occurred among people who did not participate in follow-up WFIs or Choices programmes or receive payments. In particular, it is quite possible that some individuals who made enquiries about incapacity benefits left the benefit rolls soon after entering them or never entered them in the first place, in order to avoid the mandatory follow-up WFIs. Thus, the introduction of mandatory follow-up WFIs might have had an effect even on those who did not attend them.

As discussed in Chapter 2, there are a number of reasons why participation in the components of Pathways was not higher among those making enquiries about incapacity benefits. One important factor is that about 22 per cent of those making enquiries did not subsequently become incapacity benefit claimants. Equally important, except for the follow-up WFIs, participation in Pathways' various components was voluntary. In addition, many individuals who did become claimants were exempt from the mandatory follow-up WFIs because of the severity of their medical condition or because they were deemed likely to return to work without the need for follow-up WFIs.[65] Moreover, some claimants left incapacity benefits before a follow-up WFI would have happened. Indeed, it is quite possible that some individuals who made enquiries about incapacity benefits left the benefit rolls soon after entering them or never entered them in the first place, precisely in order to avoid the mandatory follow-up WFIs. Given the substantial impact that Pathways had on benefit exits, the relatively low participation rates reported above suggest that some of the effect of Pathways on employment may have occurred among people who did not participate in the various components of Pathways. Thus, the introduction of mandatory follow-up WFIs might have had an effect even on those who did not attend them.

9.2 Omitted benefits and costs

There is some uncertainty surrounding the net benefit estimates reported in Table 9.1 because of costs and benefits that were omitted from our estimates.

One potentially important effect of Pathways that is ignored in our estimates of costs and benefits is the programme's indirect effects on the benefit payments and employment status of individuals not mandated onto Pathways. Our estimates of the benefits of Pathways are based on the programme's effects on benefit exit and employment outcomes for those making an enquiry about incapacity benefits; but others could also see these outcomes affected, for several reasons. Existing claimants of incapacity benefits could volunteer to participate in Pathways and might, therefore, have been affected by it. They, and claimants of other benefits,

[65] This screening was intended to exclude about a third of those not excluded because of the severity of their medical condition.

might also have found that their Jobcentre Plus adviser became better trained or, conversely, that their adviser had less time to spend with them as a result of Pathways. Alternatively, they might have found it harder to find paid work if greater numbers of those mandated onto the programme were competing for the same jobs. Chapter 7 presented evidence that existing recipients of incapacity benefits (who could volunteer for Pathways) were slightly more likely to move off benefit within 12 months of Pathways' being implemented. However, Jobseeker's Allowance (JSA) recipients in the October 2003 areas were around 3½ percentage points less likely to move off the benefit within six months of Pathways' being implemented, although this negative impact was smaller at 12 months and not apparent at all in the April 2004 areas. Recipients of most other benefits were unaffected.

Other potentially important costs and benefits omitted from our estimates include:

- **Increases in work-related expenditures and losses of non-market time attributable to increases in employment.** Although Pathways mandates follow-up WFIs, it does not force individuals to take jobs. Hence, it seems unlikely that costs resulting from work-related expenditures and losses of non-market time among those who entered employment as a result of Pathways exceeded their increases in disposable income. Nonetheless, these costs could be sizeable, potentially offsetting a large fraction of the income gain that these individuals experienced.
- **Pathways' effects on quality of life.** Pathways could have either positive or negative effects on the quality of life, which would respectively increase or decrease the net benefits to participants. For example, attending WFIs might have been a stressful and unpleasant experience, or the CMP might have helped people to develop valuable coping skills.
- **Reductions in the 'deadweight costs' of taxation.** Net revenue raised for the Exchequer has an additional value because it allows tax rates to be lower than they otherwise would be, not only returning money to households but also reducing the economic inefficiency that taxes cause.
- **Pathways' effects on NHS utilisation.** Changes in NHS utilisation do not affect claimant net benefits, but they do influence the Exchequer's budgetary position and social net benefits. NHS utilisation could have either increased (for example, because of stress caused by WFIs or as part of participants' efforts to make themselves ready for work) or decreased (for example, if becoming more active improved participants' health conditions or if those who moved into work as a result of Pathways became less likely to use NHS services because of time constraints).

These unmeasured costs and benefits were assessed in Chapter 6 using whatever relevant information existed. For example, surveys of respondents found that Pathways reduced the likelihood that claimants reported having a health condition

that affected their day-to-day activities 'a great deal' but had little impact on their reported level of satisfaction with their lives. However, any conclusions about the unmeasured costs and benefits of Pathways must, ultimately, be a matter of judgement because, by definition, they were not valued.

9.3 Wider applicability of the findings

As Pathways is being introduced throughout Great Britain, it is important to consider the relevance of the findings in this report, which rely on data from to only the original seven pilot sites, to the remainder of the country. Excluding London, the original pilot areas are broadly similar to the rest of Great Britain. This is true in terms of both the observed individual characteristics of those moving onto incapacity benefits (their sex, age, health and whether or not they are only in receipt of National Insurance credits) and the historic local authority (LA) average six-month cumulative exit rate from incapacity benefits.

In contrast, considerable differences are found between those moving onto incapacity benefits in London (which is not represented among the original pilot sites and which accounts for around one-in-nine individuals moving onto incapacity benefits in Great Britain) and those moving onto incapacity benefits, both in the original seven pilot areas and elsewhere in Great Britain. Specifically, several areas of London have much lower historic cumulative six-month exit rates from incapacity benefits than is seen anywhere in the original seven pilot areas.

The available evidence does not suggest that the effects of Pathways on the chances of new incapacity benefits claimants' leaving the benefit within six months would be different in the original pilot sites from the rest of Great Britain outside London. This would not necessarily be the case, however, if the programme introduced in the rest of Great Britain differed from the one that operated in the pilot sites. In fact, there is good reason to suspect that the policy being extended nationwide differs in important respects from the one implemented in the original pilot areas. One reason for this is that the scheme in the original pilot areas was operated by Jobcentre Plus, whereas the programme that is being extended to most of the rest of the country is instead being operated by the private and voluntary sectors. Pathways might also have different effects when operating in the context of the Employment and Support Allowance that is set to replace incapacity benefits for new claimants from October 2008.

9.4 Concluding remarks

The overall findings in this report provide a favourable impression of the benefits of the Pathways for those moving onto incapacity benefits and for the Exchequer. They suggest that the measured financial benefits of the programme exceed the measured costs both for those making incapacity benefits enquiries and for the Exchequer and hence, for society as a whole. Moreover, with the exception of London, it appears likely that these findings can be generalised to the whole of

Great Britain, at least to the extent that the model of Pathways which is rolled out in the remainder of the country is similar to the one that operated in the original pilot sites.

Considerable uncertainty surrounds our estimated net benefits, both because of uncertainty over how long the effects of Pathways persist and because of potentially large costs and benefits that we do not measure. However, Pathways was found to have positive net measured benefits even when it was conservatively assumed that programme effects lasted for only 70 weeks. If its effects lasted longer, the net measured benefits would be larger. The unmeasured costs of the policy would have to outweigh the unmeasured benefits significantly if the programme were not to be beneficial overall.

Appendix A Methodological variants and checks done in the estimation of the cost-benefit analysis

This appendix details methodological variants and checks done in the estimation of the cost-benefit analysis presented in Chapter 5.

A.1 Employment and benefit receipts estimation for different cohorts

Separate results for the October 2003 and April 2004 cohorts are shown in Tables A.1 and A.2. The results do differ between the two cohorts. However, perhaps because of the lack of precision in producing these point estimates with much smaller sample sizes, the results match those in Bewley *et al.* less closely, and indeed, in some cases look rather strange: for example, in both areas the policy seems if anything to be increasing the proportion of individuals who are out of work and receiving Incapacity Benefit (IB). This is not the case for the pooled results in Table 5.3 or in the Bewley *et al.* estimation or when separate estimation is done for the two cohorts using four outcomes instead of six (see Section A.2). It would seem perverse to assess the costs and benefits of the policy on the basis of its having almost the opposite effect on the target group than intended and than is suggested by more robust estimation. Our preferred approach is, therefore, to use the pooled cohort results.

Table A.1 Predicted impact of Pathways at time of final interview: October 2003 areas only

	PED sample			FRS sample		
	Policy (%)	No policy (%)	Impact (ppt)	Policy (%)	No policy (%)	Impact (ppt)
(1) 1-15 hours, no IB	3.0	1.9	+1.1	1.9	1.2	+0.7
(2) 16-29 hours, no IB	8.7	6.7	+2.0	7.5	5.7	+1.8
(3) 30+ hours, no IB	23.8	22.1	+1.7	21.7	20.1	+1.6
(4) 1-15 hours, IB	1.2	1.0	+0.3	1.5	1.1	+0.3
(5) Not employed, IB	43.9	43.6	+0.3	49.5	49.1	+0.5
(6) Not employed, no IB	19.4	24.8	–5.3	18.0	22.8	–4.9

Table A.2 Predicted impact of Pathways at time of final interview: April 2004 areas only

	PED sample			FRS sample		
	Policy (%)	No policy (%)	Impact (ppt)	Policy (%)	No policy (%)	Impact (ppt)
(1) 1-15 hours, no IB	4.8	2.4	+2.4	3.6	1.7	+1.9
(2) 16-29 hours, no IB	11.3	8.2	+3.0	8.7	6.1	+2.6
(3) 30+ hours, no IB	24.4	21.9	+2.4	22.4	19.6	+2.8
(4) 1-15 hours, IB	0.8	1.6	–0.8	1.2	2.3	–1.1
(5) Not employed, IB	44.3	43.3	+1.0	47.6	45.2	+2.4
(6) Not employed, no IB	14.5	22.6	–8.1	16.5	25.1	–8.5

A.2 Results from a multinomial logit estimation of benefit receipt and employment but not hours of work

Table A.3 Pooled cohorts, four outcomes

	FRS sample			PED reduced sample		
	Policy (%)	No policy (%)	Difference (ppt)	Policy (%)	No policy (%)	Difference (ppt)
Employed, no IB	31.7	25.5	+6.1	36.8	30.1	+6.6
Not employed, IB	48.3	49.1	–0.8	42.8	44.1	–1.3
Not employed, no IB	17.1	20.6	–3.5	18.5	22.5	–4.1
Employed, IB	2.9	4.8	–1.9	2.0	3.3	–1.3

Table A.4 October cohort, four outcomes

	FRS sample			PED reduced sample		
	Policy (%)	No policy (%)	Difference (ppt)	Policy (%)	No policy (%)	Difference (ppt)
Employed, no IB	29.2	24.8	+4.4	34.1	29.0	+5.1
Not employed, IB	49.5	49.0	+0.6	43.9	43.6	+0.4
Not employed, no IB	18.0	22.8	–4.8	19.5	24.8	–5.3
Employed, IB	3.3	3.5	–0.2	2.5	2.7	–0.1

Table A.5 April cohort, four outcomes

	FRS sample			PED reduced sample		
	Policy (%)	No policy (%)	Difference (ppt)	Policy (%)	No policy (%)	Difference (ppt)
Employed, no IB	33.0	24.1	+9.0	39.5	30.7	+8.8
Not employed, IB	47.6	43.1	+4.5	44.5	42.5	+2.0
Not employed, no IB	16.5	23.9	–7.4	14.6	22.1	–7.6
Employed, IB	2.8	8.9	–6.1	1.4	4.6	–3.2

A.3 Estimation of earnings

The Ordinary Least Squares (OLS) regression approach used in the estimation of earnings in Chapter 5 fails to take into account two potentially important issues:

- First, there is a selection effect: those individuals actually observed being employed (in a particular hours' category) may be unusual in terms of their unobserved characteristics and this might bias the estimation. In particular, we might expect that the people who move into work are typically those with relatively high earning potential for their age, education level, etc. However, a simple OLS model would make predictions for **everyone** based only on the earnings of workers and would, therefore, overestimate the likely earnings of the FRS sample, which contains both kinds of individual.

- Second, the policy itself may have an impact on the earnings individuals could command if they moved into work (in a particular hours category). Pathways might make people more productive or better able to cope with their health problem. If so, it might increase the hourly wage they command or persuade them to take jobs with longer hours than they otherwise would have (though note that if Pathways pushes them into a different hours category, this will be picked up in the discrete choice estimation described in the previous section). On the other hand, the additional income provided by the Return to Work Credit (RWTC) might persuade people to take lower-paid jobs than they otherwise would. In any case, a simple OLS model that pooled individuals across pilot and comparison areas before and after the introduction of Pathways, without taking explicit account of which groups were subject to Pathways, would yield a single set of earnings predictions (averaged over all these groups) both with and without the policy, leading to an underestimate of the benefits of Pathways if the policy increased earnings or an overestimate of the benefits of Pathways if the policy reduced earnings.

The obvious solution to the second of these problems would be to take explicit account of the policy in the model by including an indicator for whether each individual in the Pathways to Work Evaluation Dataset (PED) is observed in a pilot area after Pathways was introduced, in the same way as in the discrete choice model described above. The coefficient on this indicator variable would reflect the effect of Pathways on earning potential, allowing us to make predictions for the Family Resources Survey (FRS) sample as if all individuals were subject to the policy. However, this would still leave the problem of selection bias.

The standard solution to the selection issue is to estimate a Heckman maximum likelihood sample selection model.[66] This entails finding a variable (an 'instrument') that predicts whether an individual is observed being employed (in the relevant hours category) but, conditional on their being employed (in that hours category), is uncorrelated with earnings.

To the best of our knowledge, the only plausible candidate for an instrument is being subject to the policy: whether an individual is subject to Pathways helps to predict whether they will move into work (in a particular hours category), as evidenced by the non-zero impact estimates reported in the previous section. However, for this to be a valid instrument, we would have to assume that Pathways did not affect the earnings an individual would receive if they moved into work (in a given hours category). Thus, to deal with the first issue (selection effects), we would have to assume away the second issue (impact of the policy on earnings).

There, thus, appear to be two somewhat unsatisfactory ways forward: we could assume that there is no selection bias and estimate OLS models using a treatment indicator to identify the effect of the policy on earnings; or we could assume that the policy has no effect on earnings and estimate Heckman selection models

66 Heckman (1979), Greene (1981).

using a treatment indicator as an instrument for moving into work (in the relevant hours category).

In fact, the problem is even more intractable than just suggested. In addition to the classical selection issue discussed above, there is also a policy selection issue: individuals who move into work (in a particular hours' category) **as a result of the policy** might have different earning potential from **both** those who would have moved into work anyway **and** those who would not move into work even with Pathways. Thus, even if we had another instrument for moving into work and estimated Heckman selection models using this other instrument and including the treatment indicator as an ordinary regressor, we would still not be able to identify whether the coefficient on the treatment indicator reflected the impact of Pathways on earnings or a pre-existing difference in the earning potential of those who moved into work as a result of the policy. Treating earnings differences as an effect of Pathways when in fact they were a policy selection effect would induce the opposite bias to that from ignoring a genuine effect of the policy: we would overestimate the benefits of Pathways if there was a seemingly positive impact of the policy on earnings and underestimate the benefits of Pathways if there was a seemingly negative impact of the policy on earnings.

Thus the available alternatives to a simple OLS regression appear to be:

- an OLS regression with a treatment indicator as a regressor, assuming that individuals who move into work (in a particular hours category) as a result of Pathways have the same earnings potential (conditional on observed characteristics) as both those who do not move into work and those who would have moved into work even without the policy. Under this alternative, the coefficient on the treatment indicator would be interpreted as the effect of Pathways on earning potential. If the assumption is correct, this would allow us to recognise any impact of Pathways in increasing (reducing) earnings power as increasing (reducing) the benefits of the policy. However, if the assumption is wrong, then we might overestimate the potential earnings available for moving into work and therefore, overestimate the benefits of the policy (the classic selection problem) or we might wrongly count as a benefit (cost) of the policy something that is really caused by the policy moving unusually high- (low-) earning individuals into work (the policy selection problem);
- a Heckman selection model using being subject to Pathways as an instrument for being employed (in a particular hours category), assuming that Pathways has no effect on earning power beyond its effect on moving people into work (in a particular hours category). If the assumption is correct, we do not need separate earnings predictions with and without the policy and our earnings predictions would not be biased by the possible unrepresentativeness of those observed moving into work. However, if the assumption is wrong, then the instrument is invalid.

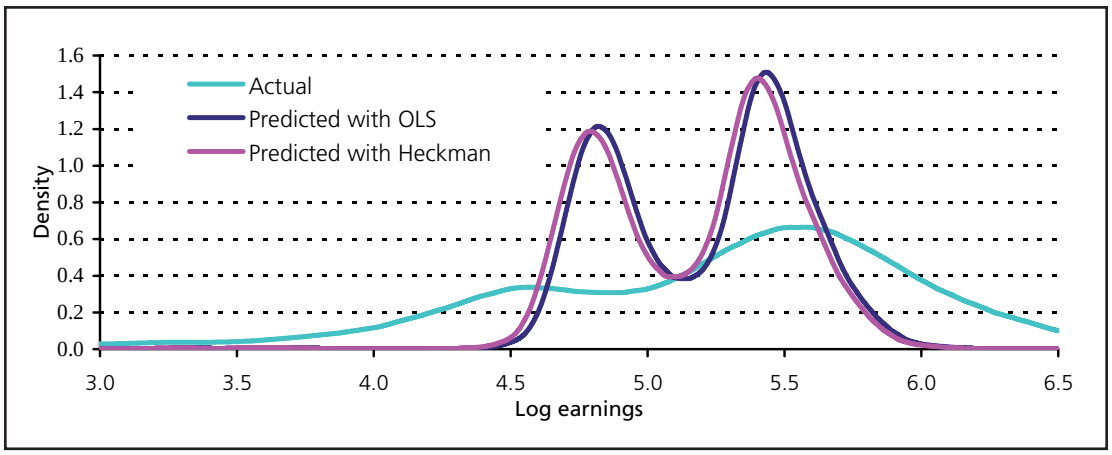
We experimented with both these approaches, unsatisfactory though they seem. The coefficient on an indicator for whether an individual made an enquiry in the pilot areas after Pathways was introduced proved not statistically significant in all three regressions, as shown in Table A.6.

Table A.6 Coefficient of the policy effect in the earnings equations

	Those who are employed:		
	Less than 16 hours	**Between 16 and 30 hours**	**More than 30 hours**
Coefficient	+0.085	–0.013	+0.003
Standard error	0.230	0.109	0.064

Figure A.1 compares the log earnings distribution predicted (before adding random variation) by the simple OLS model and by a Heckman selection model with the treatment indicator used as an instrument in the first stage estimation, alongside the distribution of actual log earnings for individuals observed being employed in PED, pooling all hours categories. Predicted log earnings are marginally higher for the OLS estimation than for the Heckman estimation, suggesting that (under the assumptions of the Heckman model) those who did not move into work might if anything command slightly lower earnings (conditional on their observed characteristics) than those who did move into work. However, the difference is very small, corresponding to around three per cent higher earnings on average; the coefficient on the selection effect (lambda) in the second stage regression is 0.02 with a standard error of 0.19, meaning that (at conventional levels of statistical significance) we cannot reject the hypothesis that there is no selection (i.e. that there is no difference in the earning potential of those who move into work and those who do not, once we control for their observed characteristics).

Figure A.1 Distribution of actual log earnings and those predicted by OLS and Heckman selection models (without adding residuals)



Hence, we find no firm evidence that Pathways affects earnings, under the assumption of no selection effects; and no firm evidence of sample selection bias, under the assumption of no policy effect. This not necessarily evidence that neither source of potential bias is a problem: the assumptions are not convincing – indeed, each assumes the other away – and it is perfectly possible that both issues create bias in our results. However, we have no way of disentangling the different issues, and the results do demonstrate that even arbitrarily making heroic assumptions to sanction one model or the other would not make a big difference to the results. The most prudent course is, therefore, the simplest: to use the straightforward OLS model, without accounting for either selection effects or any impact of the policy on earning potential.

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