

Working Paper

# Provider-led Pathways to Work

## Net impacts on employment and benefits

by Genevieve Knight, Sergio Salis, Francesca Francavilla, Dragos Radu, Debra Hevenstone, Elisabetta Mocca and Brittainy Tousley

Department for Work and Pensions

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# Glossary of terms and abbreviations

BB	Bereavement Benefits
CMP	Condition Management Programme
Counterfactual	Term used in non-experimental analysis of programme impacts to represent the equivalent of the control in an experiment. The counterfactual is used to describe what would have happened in the absence of the programme.
DWP	Department for Work and Pensions
DLA	Disability Living Allowance
ESA	From 27 October 2008, the Employment and Support Allowance (ESA) replaced Incapacity Benefit (IB) and Income Support (IS) paid on incapacity grounds for new customers. ESA provides financial assistance as well as personalised support for people with limited capability for work to help them move into suitable work.
IB	Incapacity Benefit was the main benefit paid to people who were incapable of work as a result of a health condition or disability. Since 31 January 2011 no new IB claims have been accepted, with instead a claim for Employment and Support Allowance.
ICA (CA)	Invalid Carer's Allowance replaced by Carer's Allowance
Impacts	The estimated effect of a programme on an outcome, for example employment, relative to what would have occurred in the absence of the programme.
Incapacity benefits	This term includes Incapacity Benefit, Severe Disablement Allowance, Employment and Support Allowance and Passported Incapacity Benefit.
IS	Income Support. This is a non-contributory, income-assessed benefit available to people who are not required to work.
Jobcentre Plus	The work and benefit services delivery agency.
JSA	Jobseeker's Allowance. This is the main benefit for people of working age who are out of work, work less than 16 hours per week on average and are available for and actively seeking work.
NBD	National Benefits Database: a single database containing records of all benefit spells recorded by DWP, other than some of very short duration, from 1999 onwards [(see also WPLS)].

NDDP	New Deal for Disabled People was a programme of advice and practical support, to help people move from disability and health-related benefits into paid employment. New Deal for Disabled People ended on 31 March 2011.
Outcomes	Social and economic factors liable to be affected by a programme, such as employment and health.
PC	Pension Credit
PCA	The main test of entitlement to Incapacity Benefit was called the Personal Capability Assessment (PCA). This has been replaced by the Work Capability Assessment (WCA) for ESA claims.
PL Pathways	Provider-led Pathways to Work
PIB	Passported Incapacity Benefit
RP	Retirement Pension
RTWC	Return to Work Credit was an earnings supplement available to Incapacity Benefit recipients who moved into paid work. Payable at £40 per week for a maximum of 52 weeks, it was available to those who had been receiving incapacity benefits for at least 13 weeks (or less if receiving Statutory Sick Pay for 13 weeks prior to the claim), had found a job of not less than 16 hours, and did not receive earnings in excess of £15,000 per annum. It was payable for a maximum of twelve months.
SDA	Severe Disablement Allowance (SDA) was a benefit for people unable to work as a result of a long term severe illness or disability and who had not paid sufficient National Insurance contributions to qualify for Incapacity Benefit. From April 2001 no new claims for SDA could be made, individuals instead made a claim for IB. However, periodic reassessment of people in receipt of SDA may take place and in some cases this can lead to repeat claims being registered. The numbers of these are, however, very small. In most cases, unless otherwise stated, references to new/repeat IB claims include these.
WB	Widows Benefits
WCA	Work Capability Assessment, the test of entitlement to ESA (replaced the PCA for IB).
WFI	The Work Focused Interview involves a face-to-face interview with a Jobcentre Plus adviser.
WPLS	The Work and Pensions Longitudinal Study: administrative data held by DWP combining all benefit spells from approximately 2002 with data on employment spells derived from Her Majesty's Revenue and Customs (HMRC) tax information. The benefits data is slightly different from that in NBD in that it is consistent with DWP published statistics on benefits, whereas NBD reflects later revisions.

# Summary

A ‘Provider-led’ model of Pathways to Work, PL Pathways, was the final phase of Pathways to Work, an initiative aimed at improving labour market readiness and opportunities for people claiming benefits for health reasons, by providing tailored support to help them move into, or towards paid employment. Pathways to Work first started in October 2003 in a selection of Jobcentre Plus areas and was gradually extended to cover Britain over time. Pathways was delivered by Jobcentre Plus. In 2007, Pathways extended the programme of Pathways to Work to full coverage of Great Britain in two phases, December 2007 (phase 1) and April 2008 (phase 2), with a provider-led model where services were delivered by a mix of contracted private and third sector organisations rather than Jobcentre Plus. All new and repeat claimants to incapacity benefits<sup>1</sup> were required to participate in the mandatory elements of Pathways. PL Pathways ended in March/April 2011.

To deliver PL Pathways, DWP conducted a competitive tendering process and commissioned organisations to deliver the PL Pathways services in a set of Jobcentre Plus areas. The Department for Work and Pensions (DWP) used outcomes-based contracts to guide provider organisations towards delivering the desired results for people entering paid employment and sustaining jobs via the contract payments mechanism. The contracts between DWP and provider organisations required that providers give tailored, work-focused support with a personal action plan as well as carry out a series of work-focused interviews with clients. PL Pathways contracts stipulated that providers must offer some form of Condition Management Programme (CMP)<sup>2</sup>, though there was some freedom in how these programmes were designed and delivered. Customers could be referred to CMP and the other ‘Choices’ package elements where considered appropriate<sup>3</sup>.

In PL Pathways, following the initial Work Focused Interview (WFI) with Jobcentre Plus, customers were referred on to the local contracted provider, on a mandatory basis, to attend the further five WFIs at four week intervals (as long as they continued claiming incapacity benefits). In certain prescribed circumstances a WFI could be waived and the most severely ill and disabled were exempt from attending the five further WFIs. All new and existing customers who were waived or exempt or not part of the mandatory WFI process could participate voluntarily.

## The PL Pathways research

The PL Pathways evaluation research had several components. There was the impact analysis of PL Pathways (administrative data and surveys) represented by this report, an exploration of customer experience (surveys only), and qualitative research. Policy Studies Institute (PSI) carried out the impact study, while the National Centre for Social Research (NatCen) conducted the survey fieldwork

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<sup>1</sup> “Incapacity benefits” include Incapacity Benefit (IB), Severe Disablement Allowance (SDA), Employment and Support Allowance (ESA) and Passported Incapacity Benefit (PIB).

<sup>2</sup> Condition Management Programmes (CMPs) were established as part of the Pathways to Work pilot, as an innovative intervention designed to help people understand and manage health conditions in preparation for returning to work. In Jobcentre Plus areas they were usually run jointly with the National Health Service (NHS).

<sup>3</sup> Part of a range of services and financial measures (together known as the ‘Choices’ package) to support progress to paid work. The CMP, In-Work Support and Return to Work Credit (RTWC) were new measures introduced as part of Pathways to Work. These measures ran alongside previously established support: New Deal for Disabled People (NDDP), access to a Disability Employment Adviser, WORKSTEP, Access to Work and Residential Training Colleges.

and customer experience report. The qualitative research was carried out in collaboration between PSI, the Social Policy Research Unit (SPRU) and NatCen. These earlier PL Pathways evaluation research studies are published as DWP research reports (Nice *et al.* 2009, Hudson *et al.* 2010, Tennant *et al.* 2010, Nice and Davidson 2010, Hayllar and Wood 2011)<sup>4</sup>.

### Research design, data and statistical methods for estimating the net impacts

The main objective of this impact study was to assess whether PL Pathways helped more IB customers be off benefit or in work than would have done otherwise. The impact analysis research design used areas which did not have PL Pathways as comparison areas, providing the counterfactual to describe the outcome of not participating in PL Pathways.

The net impact compares the outcomes for individuals starting an incapacity benefits claim in four groups: before (2007) and after the PL Pathways start date (2008), within the PL Pathways areas and in comparison areas. The method compares the 'before and after' outcomes of those beginning claims in the PL Pathways Phase 1 areas with outcomes of those starting claims in the Jobcentre Plus areas (the comparisons). The statistical method of difference in differences (DiD) was used to formally apply the comparison group to the 'before after' research design to produce the net impact of PL Pathways. The intuition is that if PL Pathways has a positive impact, this should be reflected in an improvement in the outcomes for new claimants in the PL Pathways areas, which will not be seen in areas which were operating Jobcentre Plus Pathways throughout.

Jobcentre Plus Pathways pilot and expansion areas were used for the comparison areas. Matching was undertaken amongst these comparison areas to select appropriate individual comparison areas for each of the PL Pathways areas. The identified matched areas were used for the survey fieldwork and also to construct the comparison group in the administrative data.

Data on both administrative incapacity benefits claims and separate data with Her Majesty's Revenue and Customs (HMRC) employment records for these claims as well as survey data were used to estimate the net impacts. The survey impact analysis is based on two telephone surveys (with web follow up) conducted with 2007 and 2008 claimants, using samples of customers living in Phase 1 Provider-led Pathways (December 2007) and customers living in the matched comparison areas. After the matching of areas defined the PL Pathways-comparison area pairs, customers were drawn randomly from the sampling frame. On average, the interview was carried out 14 months after the claim for benefits. The response rate to the surveys was 64 per cent in 2007 and 67 per cent in 2008. All analysis was done using post-stratification weights. The survey employment history was used to construct the survey employment impact estimates. For technical reasons the main impact estimates presented here are based on outcomes up to six months from start of the claim. Other survey impact estimates measured at the time of interview are also reported.

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<sup>4</sup> Nice, K. (2009) *Pathways to Work from incapacity benefits: A review of research findings on referral practices and liaison with service providers*, DWP Working Paper 57, HMSO, Norwich.  
Hudson, M., Ray, K., Vegeris, S., Brooks, S. (2009) *People with mental health conditions and Pathways to Work*, DWP Research Report 593, HMSO, Norwich.  
Tennant, R., Kotecha, M. and Rahim, N. (2010) *Provider-led Pathways: experiences and views of implementation in phase 2 districts*, DWP Research Report 643, HMSO, Norwich.  
Nice, K., Davidson, J., Sainsbury, R. (2009) *Provider-led Pathways: Experiences and views of early implementation*, DWP Research Report 595, HMSO, Norwich.  
Hayllar, O. and Wood, M. (2011) *Provider-led Pathways to Work: the experiences of new and repeat customers in phase one areas*, DWP Research Report 723, HMSO, Norwich.

For the benefit and HMRC employment data, a set of incapacity benefits claims were extracted from the National Benefits Database. The analysis used data on all claims located in the PL Pathways and matched comparison areas between January and June for the years 2006, 2007, 2008, where the individual was aged between 18 and 59 years at claim start date. To define the benefit outcome, for these cases, all benefit records were attached to the set of incapacity benefits claims selected. To define the HMRC employment outcome, for those records defined in the benefits administrative data selection procedure, the HMRC employment data was linked using an anonymised identifier.

## Scope of the PL Pathways net impact analyses

The impact of PL Pathways was estimated for the whole group of IB claimants eligible for the Phase 1 PL Pathways, including those who never actively participated in PL Pathways services. This means that the impact reflects the whole system of PL Pathways including those eligible who did not actually undergo WFIs or other participation in services.

The impacts were estimated for those aged 18 to 59, for new or repeat<sup>5</sup> IB claimants eligible for PL Pathways from April to June 2008.

The impact study used the proportion off benefits<sup>6</sup> and the proportion in employment using survey and HMRC data as outcomes. Note that people may stop claiming benefit because of reasons other than employment, such as reaching pension age or being ineligible because of a change in health circumstances. Both survey employment and HMRC employment had significant measurement issues. An exploration of the measurement issues found that the HMRC employment impact was robust to the adjustments considered and hence preferred to the survey employment impact which was not reliable, but that the counterfactual level was probably overstated for HMRC employment. Sensitivity analyses were conducted using the adjusted figures.

The follow-up period reported on was six months after starting a claim that made a person eligible. Our original intention was to use a 12-month period, but this proved to have problems. The timing of the April to June cohort unfortunately limits the valid follow-up period to six months due to confounding of the research groups by those who exit subsequently reclaiming incapacity benefits soon after and also volunteers from the stock of existing claims (who hence could enter PL Pathways). In addition, at 12 months the benefit outcome did not pass the pre-programme test of the validity of the DiD method. The analysis showed that the outcomes of the April to June 2007 cohort used for comparison were affected beyond six months by some of them becoming eligible for Pathways, having left incapacity benefits and made a new claim, plus a proportion participating voluntarily.

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<sup>5</sup> The analysis includes only those who initiate a fresh claim during the reference period, referred to as new or repeat customers.

<sup>6</sup> Benefits means any type of benefits among Berevement Benefit (BB), Disability Living Allowance (DLA), ESA, IB, Carer's Allowance (CA), Income Support (IS), Jobseeker's Allowance (JSA), Pension Credit (PC), Passported Incapacity Benefit (PIB), Retirement Pension (RP), Severe Disablement Allowance (SDA) or Widow's Benefit (WB). Defines off benefit claimants as those who are not in receipt of benefit in that month. Different combinations of benefits were considered, for example disregarding DLA since it can be claimed whether in or out of work, but settled on a comprehensive set for simplicity. Analysis showed that excluding DLA made no difference to the analytical results.

Sensitivity analysis was conducted by exploring the impact of another group of eligible claimants from the earlier period of January to March 2008 as a guide to whether the changes arising in the main programme impacts in April to June might represent an improvement as PL Pathways services had longer to settle into place.

### PL Pathways net impacts

The PL Pathways impacts help to answer the question:

What difference did the PL Pathways make to outcomes for these IB claimants, which would not otherwise have happened?

The overall impacts represent average effects of PL Pathways, that is, effects averaged across all individuals participating in PL Pathways. The effects are likely to be different for different sub-groups, men and women for example, or those with physical or mental health issues, and some estimates for these are presented below. It is important to remember, however, that the effects will vary within these groups as well as between them.

The PL Pathways impact was to lower the proportion of benefit claimants by two percentage points. There was no satisfactory statistical evidence that the value of the impact of PL Pathways on employment was greater than zero<sup>7</sup>. However, there was some evidence that PL Pathways raised employment, and for HMRC employment it was estimated to raise employment by one percentage point. Both the survey and HMRC employment data had measurement issues which contributed to less certainty over their ability to reliably estimate the scale of employment impact.

Sensitivity analysis comparing the PL Pathways impact for the January to March group with that for the April to June group for the benefit exit rate found similar sized impacts. For both January to March and April to June groups, the PL Pathways raised the proportion off benefit by a statistically significant two percentage points, and tests confirmed that these impacts were not statistically different in size. For the proportion in HMRC employment the picture was more mixed. This is partly because the results for the employment outcome were less clear for the April-June group. HMRC employment had measurement issues and the evidence suggests there may have been a programme maturity effect raising the employment impact size in April-June to marginal statistical significance and a size of one percentage point. It is, however, not possible to exclude the possibility at conventional statistical levels that the PL Pathways HMRC employment impact was zero or very small and remained this size between January to June 2008.

To the limited extent that valid comparison can be made, the overall net impacts of PL Pathways and Jobcentre Plus Pathways appear to be comparable in scale.

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<sup>7</sup> Note that this analysis adopted the 95 per cent level of confidence for hypothesis testing. This level accords with general scientific practice.



## Subgroup net impacts of PL Pathways by gender, age and health condition

These subgroup impacts help give an understanding of how PL Pathways effects were distributed, for example whether the impacts were distributed fairly evenly or concentrated upon relatively few participants. Each of the results in this section reflects how the PL Pathways impact varied when calculated for those cases with the characteristic of interest. Although the tests for separate groups showed that within some groups the effect was significant, and in others not, the evidence does not allow us to conclude that the impact varied significantly between them.

PL Pathways had a statistically significant impact for men, but not for women, and for those who were less than 50 years but not for those aged 50 years and over. PL Pathways raised the proportion off benefit at six months after claim start for men and for those aged less than 50 by about two percentage points<sup>8</sup>. These variations in impact size for the subgroups were not statistically different from each other when tested. Therefore, it can be concluded that the impact for women and those aged 50 years or more were also two percentage points. The equivalent subgroup findings for HMRC employment and survey employment were not statistically significant, nor were they statistically different to each other.

For both those with mental health conditions and those with other health conditions, the impacts of PL Pathways on the proportion off benefit were a statistically significant two percentage points increase in the proportion off benefit at six months. The impact of PL Pathways on the proportion off benefit for those with a mental health condition was 2.4 percentage points and for other health conditions was 1.5 percentage points, however, testing indicated that these estimates were equivalent in size. The estimated counterfactual level off benefit for those with a mental health condition if PL Pathways did not exist was only half of that for other health conditions (9.2 per cent against 18.5 per cent), meaning that for those with a mental health condition the impact gained from PL Pathways led to a greater relative improvement in the proportion off benefit. For health conditions, as for other subgroups, the employment impacts for PL Pathways had no statistical significance at the conventional test level and they were not statistically different to each other in size.

There was some divergence between the subgroup results for PL Pathways and Jobcentre Plus Pathways. For gender and health condition, there was approximate consistency, however, for age, whereas the Jobcentre Plus Pathways had strongly different impacts for those aged less than 50 years and those aged 50 years and more, this was not evident for PL Pathways. An examination of the variation in service provision between PL Pathways and Jobcentre Plus suggests this is the potential source of the observed variation. If both subgroups had received the same services the difference in impacts might or might not have been observed. This is of particular importance if the programme examined involves flexibility in service provision, as is the case of PL Pathways, which has been described as a 'bundle of potential services'.

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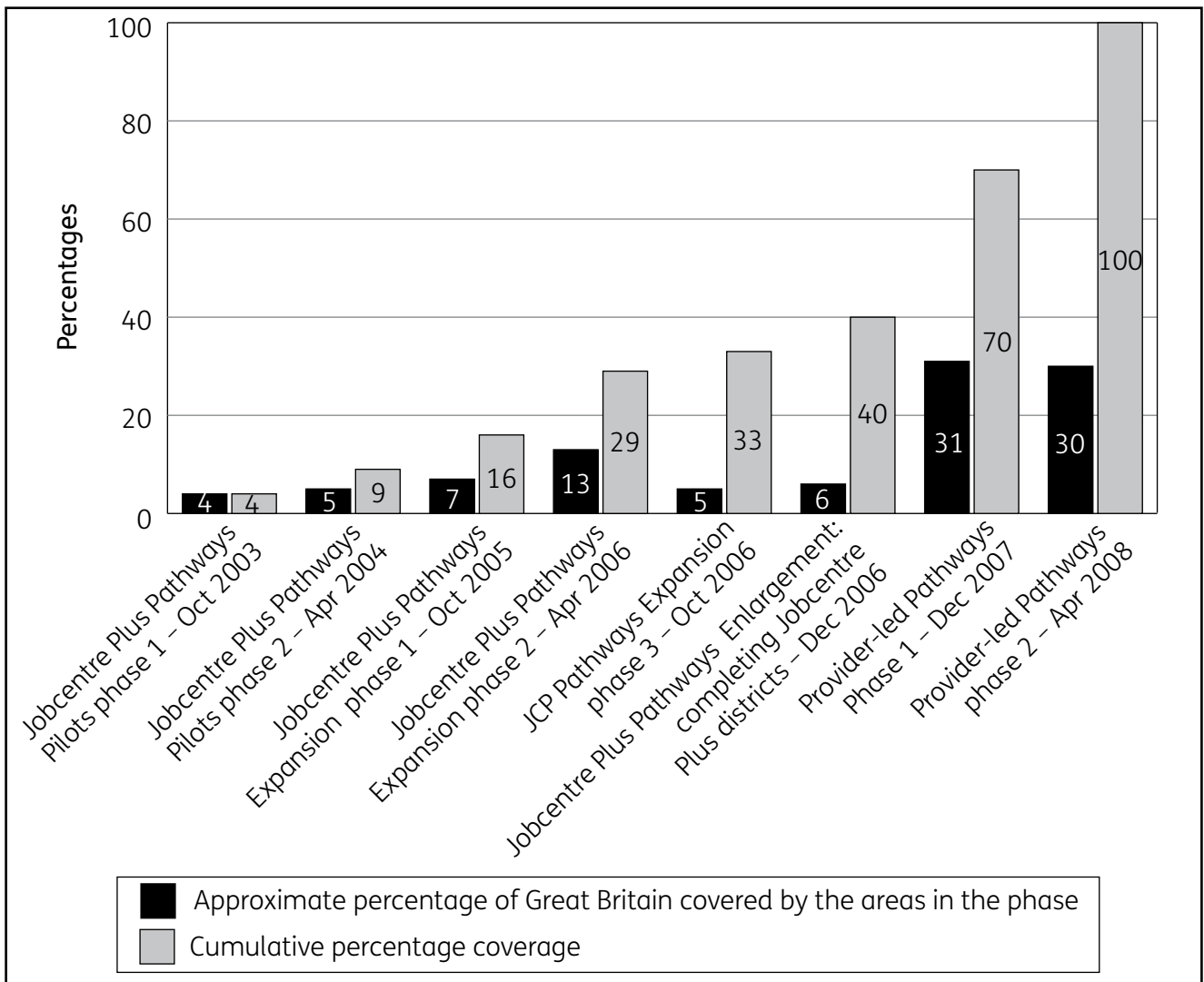
<sup>8</sup> This can be compared to the overall impacts which represent the average effects of PL Pathways on outcomes (that is, effects on a typical member of the programme group) were positive and around two percentage points in size, for off benefit and one percentage point for HMRC and survey measures of employment.

# 1 Introduction

This report presents the net impacts of Provider-led Pathways to Work (referred to as PL Pathways in this report) which establishes whether (and by how much) PL Pathways helped incapacity benefits customers move towards work. These net impacts were estimated by analysing administrative and survey data for those who started Incapacity Benefit (IB) claims which made them eligible for taking part in PL Pathways. The main outcomes considered are the proportion off benefit and the proportion in employment.

## 1.1 Provider-led Pathways to Work

**Figure 1.1 Pathways to Work phases, timing and associated coverage of Great Britain**



A 'Provider-led' model of *Pathways to Work*, PL Pathways was the final phase of *Pathways to Work*, an initiative aimed at improving labour market readiness and opportunities for people claiming benefits for health reasons, by providing tailored assistance to help them to move into, or towards, paid work. *Pathways to Work* was primarily aimed at incapacity benefits or Employment and Support Allowance (ESA) customers starting a new or repeat claim<sup>9</sup>.

Figure 1.1 shows how *Pathways to Work* was extended to cover Great Britain over time from October 2003 onwards. *Pathways to Work* first started in October 2003 in a selection of Jobcentre Plus areas, known as the 'pilot areas'. Subsequently, the 'expansion' phases took place, followed by the 'enlargement' also known as the 'extension'. In these areas, Pathways was delivered by Jobcentre Plus. Further information about Jobcentre Plus *Pathways to Work* and the associated evaluation research is in Appendix D. In 2007, *Pathways to Work* was extended to the remaining 31 areas<sup>10</sup> in Great Britain in two stages, December 2007 (phase 1) and April 2008 (phase 2), with a provider-led model where services were delivered by a mix of contracted private and third sector (voluntary, and not-for-profit) organisations rather than Jobcentre Plus. The areas and suppliers for PL Pathways are shown in Tables G.1 and G.2 of Appendix G.

*Pathways to Work* ended on 31 March 2011 in PL Pathways phase 1 areas and all areas operated by Jobcentre Plus, and ended on 27 April 2011 in PL Pathways phase 2 areas.

## 1.2 Outcomes-based contracting of provider services

For PL Pathways, the Department for Work and Pensions (DWP) used outcomes-based contracts to guide provider organisations towards delivering the desired results of people entering paid employment and sustaining jobs via the contract payments mechanism.

Providers were paid in three ways:

- a 'service fee' for taking people onto their caseloads;
- a job outcome payment when a client starts work; or
- a 'sustained employment' payment when a client maintains work for 26 weeks.

A minimum target for the number of job entries was stipulated in the Invitation To Tender and, as part of their bids, providers were asked to state the number of job entries they expected to achieve. The providers whose bids scored the highest based on quality and price were then awarded a contract.

DWP Contract Managers monitored the performance of providers against contractual and legislative requirements, and where necessary took appropriate action. They monitored management information and other feedback but could have direct contact with providers when necessary. Delivery of the programme was also aided by Jobcentre Plus Third Party Provision Managers (TPPM), who did not have a contract management function but a more hands-on role with the main liaison role between providers and Jobcentre Plus.

<sup>9</sup> Existing customers could participate on a voluntary basis. There was also a small scale pilot of mandatory participation for some existing customers – see Dixon, Mitchell and Dickens (2006) for a description of this.

<sup>10</sup> Note that the number of Jobcentre Plus districts has changed over time due to district boundary changes. This was accounted for in analysis.

Pathways to Work Providers were contracted to deliver:

- Five, monthly mandatory Work Focused Interviews (WFIs) from the third to the eighth month of the IB claim unless: the customer had been screened out or was exempt from these WFIs<sup>11</sup>, or a WFI had been waived. (Jobcentre Plus advised if a waiver had been applied or the customer was screened out or exempt);
- Tailored, work-focused support (including better-off calculations and promotion of in-work benefits such as Return to Work Credit (RTWC) and tax credits, and other work-focused support<sup>12</sup>;
- Referrals to Disability Employment Advisors and other specialist provisions ( WORKSTEP, Access to Work, Residential Training College) as appropriate;
- A Condition Management Programme (CMP) that focused on at least the three main types of condition that give rise to the majority of IB claims, i.e., muscular-skeletal, cardiovascular, and mild to moderate mental health problems. The programme was required to conform to Department of Health Clinical Governance standards and data protection requirements and similar standards within Scotland and Wales; and
- Prompt referral of the case to Jobcentre Plus for consideration of a benefit sanction where the customer has failed to attend or to participate. Jobcentre Plus would then establish if the customer had ‘good cause’ for non-participation and, if not, impose a sanction<sup>13</sup>.

### 1.3 Description of the PL Pathways programme for customers

All new claimants of incapacity benefits<sup>14</sup> were required to engage actively with *Pathways to Work*. Attendance and participation in WFI was a mandatory condition of continuing entitlement to the full amount of benefit payable<sup>15</sup>. In PL Pathways, following the Personal Capability Assessment (PCA)<sup>16</sup> (or from October 2008 the Work Capability Assessment (WCA)) and an initial WFI at Jobcentre Plus, customers were referred on to the local contracted provider, on a mandatory basis, to attend a further five WFIs at four-week intervals (as long as they remained on IB or ESA). The first provider interview was planned to occur at around week 13 to 17 of the claim.

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<sup>11</sup> Exemption could occur if a customer was exempt from the PCA for IB.

<sup>12</sup> In Jobcentre Plus Pathways, this included New Deal for Disabled People (NDDP).

<sup>13</sup> This is a penalty imposed by a decision maker. It is the removal of all or a proportion of benefit payment due to a customer’s non-compliance with conditions placed on benefit receipt.

<sup>14</sup> The incapacity benefits include IB, Severe Disablement Allowance (SDA), ESA and Passported Incapacity Benefit (PIB).

<sup>15</sup> In certain prescribed circumstances a WFI can be waived as is the case in the Jobcentre Plus Pathways regime. The most severely ill and disabled were exempt from attending the five further WFIs. Prior to October 2008, customers expected to return to work with little or no support were also screened out of further WFI attendance. All new customers who were waived or exempt or not part of the mandatory WFI process and existing IB customers could participate voluntarily).

<sup>16</sup> Pathways aimed to reduce the time customers spent on incapacity benefits before having to undertake the PCA so that, given the result of the PCA, customers could focus sooner on preparing for work. In Pathways areas the PCA was intended to generally occur by around week 12 to 13 of the claim.

The purpose of the initial Jobcentre Plus interview was for an adviser to tell the claimant about the operation of Provider-led Pathways, introduce the provider organisation, and explain the requirements that they would need to meet in order to fulfil their eligibility for benefit. The contracts between DWP and provider organisations required that providers give tailored, work-focused support with a personal action plan as well as carry out the series of work-focused interviews with clients. PL Pathways contracts stipulated that providers must offer some form of health management services equivalent to the CMP<sup>17</sup>, though there was freedom in how these programmes were designed and delivered by providers.

## 1.4 Overview of the PL Pathways evaluation research and publications

### 1.4.1 PL Pathways impact study

The main objective of this study is to assess whether PL Pathways helped more IB customers move into work or leave benefit than would have done otherwise.

This impact study is one of two quantitative studies that were commissioned as part of the evaluation of PL Pathways. The surveys for this impact analysis were conducted by the National Centre for Social Research (NatCen). The impact analysis was carried out by the Policy Studies Institute (PSI) using the data from these surveys as well as administrative data. There is a separate published report on customers' experiences of the programme in phase 1 areas (see Section 1.4.6 below).

This is the final study from the PL Pathways evaluation research commissioned by DWP in 2008. The other research in this evaluation is described below and interested readers can consult the appropriate references.

### 1.4.2 PL Pathways – Early Implementation Study (Nice *et al.* 2009)

This study provided some early feedback on the experiences of IB claimants who were directed to a PL Pathways provider, the staff of PL Pathways provider organisations, and the staff of Jobcentre Plus offices. The research contributed to understanding the effectiveness of the early implementation of Provider-led Pathways to Work. It reflected the phase 1 PL Pathways. The project involved interviews and focus groups in a sample of areas with managerial staff in provider organisations and Jobcentre Plus as well as front line personal advisers and a sample of clients. Staff selected for interviews included those likely to deal with any structural or contractual issues that arose in the early months of implementation.

### 1.4.3 Qualitative study exploring the influence of outcome-based contracting in PL Pathways (Hudson *et al.* 2010)

This research explored how outcome-based contracting was operating within PL Pathways and how this was having an influence on the delivery of the programme from numerous perspectives. The methodology aimed to capture the understandings, interpretations and perspectives of the different stakeholders to the programme, including DWP Contract Managers, Jobcentre Plus TPPMs,

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<sup>17</sup> CMPs were established as part of the Pathways to Work pilot, as an innovative intervention designed to help people understand and manage health conditions in preparation for returning to work. In Jobcentre Plus areas they were usually run jointly with the National Health Service (NHS). They were part of the Choices package in Jobcentre Plus areas.

managers and advisers from lead provider organisations and managers from sub-contracted provider organisations. There was an examination of the implications of outcome-based contracting for the different stakeholders involved and any potential tensions and contradictions amongst these different stakeholders, which may have affected how the programme was delivered. The research methods were primarily one-to-one, in-depth interviews.

### **1.4.4 PL Pathways: experiences and views of implementation in phase 2 districts (Tennant *et al.* 2010)**

This report presented findings of a qualitative study carried out in 2009 which explored experiences and views of the implementation of PL Pathways in phase 2 districts. In doing so, this study added to the findings from the early implementation study conducted in phase 1 districts. The study comprised in-depth interviews and group discussions with IB recipients, staff from provider organisations and staff from Jobcentre Plus.

### **1.4.5 PL Pathways: experiences and views of Condition Management Programmes (Nice and Davidson 2010)**

This research study was designed to provide an understanding of how CMP was operating in PL Pathways districts and explored the experiences of people supplying and using CMP services within the PL Pathways programme. CMPs were established as part of the Pathways to Work pilot, as an intervention designed to help people understand and manage their health conditions in preparation for returning to work. PL Pathways contracts stipulated that providers must offer some form of CMP, though there was freedom in how these programmes were designed and delivered. The research was carried out in four districts and generated data from the following key stakeholders: Pathways managers who oversee CMP provision, and managers within contracted out CMP provision; Pathways advisers who refer people to CMP; CMP practitioners and CMP clients.

### **1.4.6 PL Pathways: the experiences of new and repeat customers in phase 1 areas (Hayllar and Wood 2011)**

This research presents findings from the telephone survey (and the accompanying web-survey) of 3,095 new and repeat incapacity benefit customers in the Phase 1 areas of PL Pathways (December 2007) who claimed their benefits between April to June 2008. It reflects one of the two surveys and does not explore the similarly timed survey of non-PL Pathways customers carried out for comparison purposes and used for the impact analysis. Interviews were conducted in the period from June to mid-September 2009 (on average 14 months after their claim for benefits).

## 1.5 Report outline

**Chapter 2** gives an overview of the research design that underpins the analysis and the difference-in-differences (DiD) method used for the reported statistical impact estimates. It also briefly describes the data and gives an exploration of the measurement of employment and how this affects the impact when some adjustments are made.

**Chapter 3** contains some statistical tests of composition and pre-programme tests which are important to the validity of the DiD methods.

**Chapter 4** presents the net PL Pathways impact estimates.

The sub group impact results are presented in **Chapter 5**.

In **Chapter 6**, the sensitivity of the overall impacts is explored by comparing results for April to June 2008 with those of January to March 2008. In addition, comparisons with Jobcentre Plus Pathways impacts are made and the chapter culminates in a brief overview of conclusions.

### 1.5.1 Report statistical conventions

The report indicates whether the findings are statistically significant. When using these results, it is essential to consider whether an apparent impact is statistically significant and when quoting or reporting these results it is important that only results that are statistically significant are highlighted as indicating some conclusion about the result – for example, where a finding is not statistically significant a caveat needs to be made such as ‘This does not show a statistically significant change, however, may still indicate impacts moving in this direction’.

- All statistical significance testing is at the 95 per cent level unless stated otherwise.
- A Confidence Interval (CI) shows the **range of possible values** compatible with the observed data: the upper and lower bounds tell us how large or small the real impact might be. The confidence interval can be interpreted as the level of precision of the estimate, and the smaller the CI the greater the level of precision.
- A CI that includes zero embraces the value of no difference between the treatments, and so the PL Pathways outcomes are not significantly different from those of the comparisons.
- At the 95 per cent level, **one in 20 observed findings can fall outside the range of the CI and yet the hypothesis tested might be true**. This is because statistical error can still occur for estimates. A Type 1 statistical error is made in testing a hypothesis when it is concluded that an intervention is effective when it really is not – in this case, the CI around the estimate does not include zero even though there is in fact no underlying difference. This is sometimes referred to as a false positive, or more formally, a Type I error (the statistical rejection of a hypothesis that is true). Conversely, a Type II error or false negative is ‘failing to reject’ a hypothesis that is not true. In this case, there is a real underlying difference, but the confidence interval results include zero so that we cannot conclude this.
- Considering a lower confidence level, such as 90 per cent, increases the chances of a Type I error of concluding an intervention is effective when it really is not, but reduces the chance of a Type II error, of concluding that an intervention is not effective when in fact it is. In most cases the 95 per cent level of significance is the appropriate standard.

## 2 Data and research design

This chapter introduces the research design and identifies the underlying key research groups. It also sets out the rationale for the selection of the April to June cohort as the basis of the central estimate and gives an overview of the variety of data used to inform the statistical analysis of the net impacts. This is followed by a discussion of whether measurement issues in Her Majesty's Revenue and Customs (HMRC) employment data used for analysis are likely to have implications for the interpretation of the results.

### 2.1 PL Pathways research design and groups

The research design is based on a difference-in-difference (DiD) approach. This is an extension of the 'before and after' method of evaluation which is achieved by additionally comparing the 'before and after' of the comparison group.

The basic idea behind the research design is to compare 'before and after' outcomes of those beginning a claim in the Provider-led (PL) Pathways Phase 1 areas and Jobcentre Plus comparison areas **before** its introduction with outcomes<sup>18</sup> of those starting **after**. In the 'before and after' method<sup>19</sup>, the outcomes for participants after the introduction of PL Pathways are compared with outcomes for a similarly defined group in a baseline period before the programme or service started. The difference between the two outcomes is taken as the estimate of the effect of the programme or service.

The research design took advantage of the fact that PL Pathways had not been introduced to other areas. This allowed areas which did not have PL Pathways to be considered as comparison areas. These comparison areas could act as a counterfactual to describe the outcome of not undergoing PL Pathways. The comparison areas are used in the research design to reflect what would have happened in the absence of PL Pathways. Hence, the research design compares outcomes from those participating in PL Pathways Phase 1 and those not participating in PL Pathways as they were located in the other Jobcentre Plus Pathways to Work areas. In the PL Pathways areas, no Pathways programmes operated before PL Pathways, so this 'before and after' difference compares PL Pathways with no Pathways. In the comparison areas, Jobcentre Plus Pathways operated in both the before and after periods (see below for more information about the periods), and if all the assumptions of the DiD method are met then effectively this cancels out<sup>20</sup> (the fixed effect). Hence the impact resulting from the DiD method in this case is the impact of PL Pathways.

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<sup>18</sup> Outcomes considered in this report are the proportion in employment, the proportion off benefit, earnings in employment, health.

<sup>19</sup> This is also known as the 'fixed effects method'.

<sup>20</sup> For the Jobcentre Plus areas there is an assumption of no change in the Jobcentre Plus Pathways programme over time in the comparison group areas – see Section 2.1.1 for more discussion of the assumptions of the DiD method.



**Table 2.1 PL Pathways Phase 1: Summary of groups used in the impact analyses**

New/repeat claimants	Before PL Pathways (2007) Claimed between April – June 2007		After PL Pathways (2008) Claimed between April – June 2008	
	PL Pathways pseudo-eligible	Comparisons	PL Pathways eligible	Comparisons
Groups used in the analysis	1	2	3	4
	‘Before’ sample of pseudo-eligible IB claimants within the PL Pathways areas	‘Before’ sample of IB claimants eligible for Jobcentre Plus Pathways in comparison areas	‘After’ sample of eligible in PL Pathways areas	‘After’ sample of IB claimants eligible for Jobcentre Plus Pathways in comparison areas

Table 2.1 shows the four research groups with the before and after PL Pathways division in row two. In the first two columns, the two research groups in the before period of this analysis are described, which are those starting claims between April to June 2007 in the PL Pathways areas who could have been eligible for PL Pathways if it had been introduced (hence the label ‘PL Pathways pseudo-eligible’), and the ‘comparisons’. In the final two columns, the two research groups in the after period of analysis are shown, those who were eligible for PL Pathways by starting an incapacity benefits claim in a PL Pathways area, and the group which started a claim in a comparison area in the period April-June 2008. The analysis uses these four groups to define the net impacts.

**Figure 2.1 The four research groups in the PL Pathways analysis of DiDs**

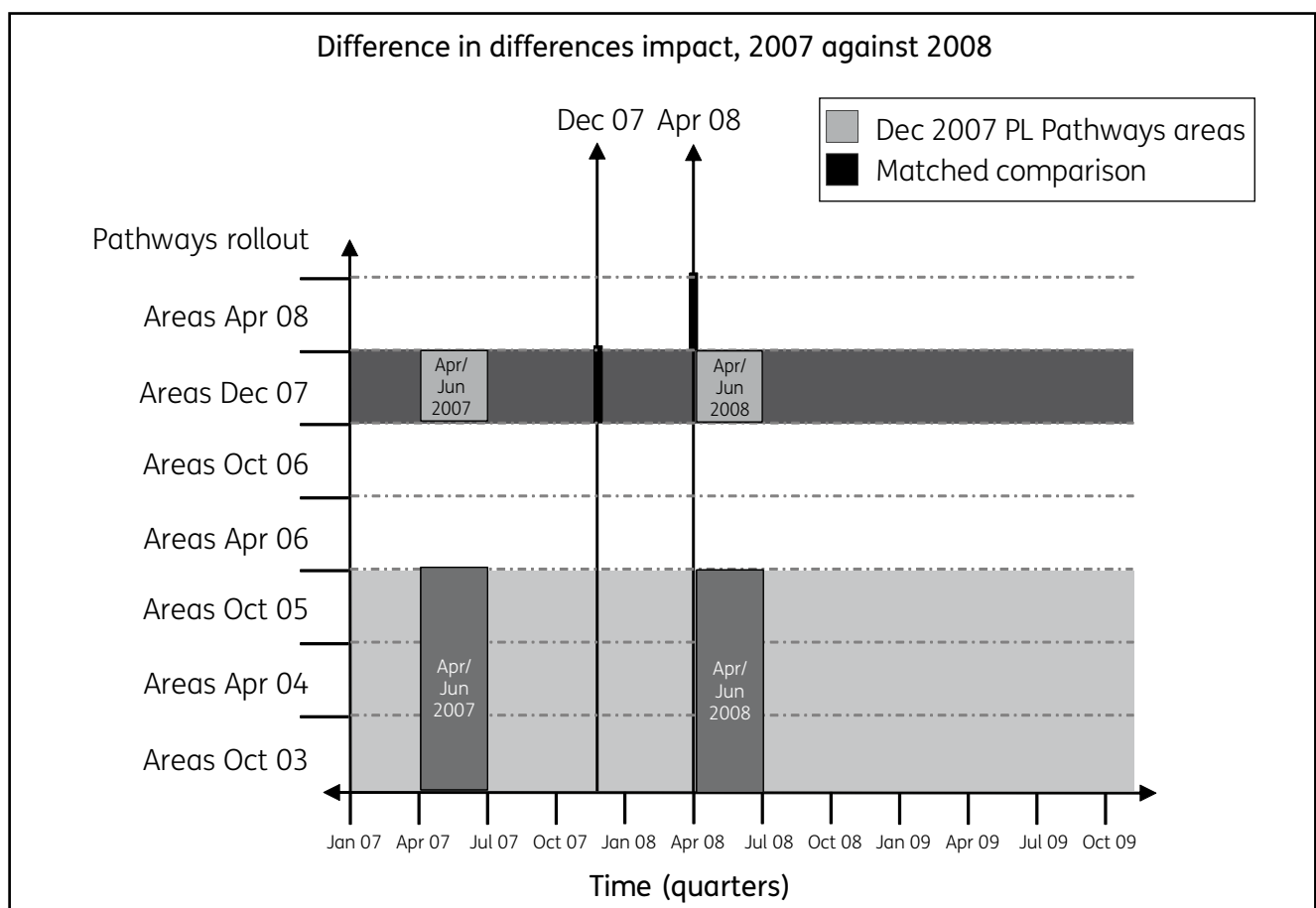


Figure 2.1 shows how the four research groups of the DiDs appear in the PL Pathways context, with more detail of the timing of the Pathways introduction in geographic areas and the comparison group formed using this. The horizontal timeline shows quarters from 2007 to 2009. The vertical axis shows the Pathways areas for each of the Pathways introductions (described in Section 1.1 and Figure 1.1). The vertical arrows placed along the timeline represent the juncture produced by the introduction of PL Pathways in areas, with a bold portion of the arrow indicating the areas where there is a distinct before and after the period formed. The dark grey shading indicates the PL Pathways areas, while the light grey shading indicates the comparison Jobcentre Plus areas. The four research groups are shown as shaded boxes where the PL Pathways areas have stripes and the comparison areas have spots, with the two boxes forming the before and after. The figure shows the comparison group coverage of Jobcentre Plus Pathways areas and the timing of their Pathways introduction. Note that the comparisons include the three Pathways introductions, the pilots, and two parts of the expansion (see Section 1.1). This aspect of the research design is further discussed in Section 2.2.1<sup>21</sup>. Figure 2.1 also shows that the 2007 ‘before’ PL Pathways areas have only six months until the introduction of PL Pathways affects the ‘pseudo eligible’ component of the DiD method, and the implications are that after six months those who reclaim and stock volunteers confound the ‘before’ group of the PL Pathways areas by taking part in PL Pathways (before-after and DiD validity assumes that the before group does not take part in PL Pathways). This conceptually limits the validity of the research design to a six-month follow-up period when using the 2007 year as the ‘before’ period<sup>22</sup>. This issue is further examined in Section 3.2, where the pre-programme tests are considered as there are also implications for these due to the use of the year 2007.

### 2.1.1 Statistical requirements for validity of the DiD method

The basic outline of the DiD method is set out above. The statistical aspects of this are now described in more detail.

The ‘before and after’ estimate is unaffected by characteristics of the participant group which are unchanging over time, since these ‘cancel out’ after differencing the before and after outcomes. Because of this feature, one does not need much information about the participant characteristics provided that it is reasonable to assume that they vary little over the period considered. This is usually a reasonable assumption if the ‘before’ and ‘after’ samples have been drawn in precisely the same way, and the time-gap is short. Additionally, any changes in observed characteristics can be adjusted statistically. However, the ‘before and after’ estimator has a considerable drawback in that it can be biased by other changes in circumstances that could have affected outcomes over the period in question. With labour market programmes, other types of change are often – indeed, usually – taking place in parallel with the programme being evaluated. In particular, economic and labour market conditions are continually changing, and these changes are often rapid, affecting the ease or difficulty of finding a job from month to month.

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<sup>21</sup> Note that while all PL Pathways Phase 1 areas were used in the analysis, only a selection of the Jobcentre Plus areas from the pilot and expansion areas were used in analysis – which the figure cannot show clearly.

<sup>22</sup> In analysis, the use of other earlier years prior to 2007 was considered but ruled out due to changes in the Pathways programme and other issues.

The 'DiD' method seeks to overcome this drawback of the 'before and after' method. It does so by adding to the evaluation a further parallel group that is **not** involved in the new programme or service – the comparison group. Since this group is chosen so that it is not affected by the programme or service, any change in comparison group outcomes over time can (usually) be attributed to changes in general economic or labour market conditions. The difference in outcomes over time for this non-participating group is, therefore, used to estimate the effect of these background changes.

The 'DiD' method requires a number of assumptions which must be satisfied to produce reliable impact estimates. These assumptions are of three main types:

- a. It is assumed that the composition of the samples does not change over the period of the comparisons in such a way as to affect the differences, either within or between the participant and non-participant groups. If extensive information on the characteristics of the groups is available for analysis, then any changes in composition can be statistically controlled. But it is important to remember that the only changes which can be controlled for are changes to observed characteristics (hence changes to unobserved characteristics remain unaccounted for). In the administrative data, information is relatively limited, but we enhance this by including variables which account for benefit or employment history and which have been shown to satisfactorily improve analysis<sup>23</sup>. This analysis is in Section 3.1.
- b. The changes in background conditions are assumed to affect the participant groups and the non-participant groups to the same extent. If they are affected to an appreciably different extent, then the 'DiD' method is invalid. An example where the assumption is problematic is when the participants are located in different areas from the non-participants, since there could be regional or local variations in economic or labour market conditions. More generally, this assumption is most likely to be satisfied when the participant and the non-participant groups are broadly similar, for instance so that all features are similar that could affect the response to changing economic conditions. This issue can be tested directly in an ideal situation.

Common trends occur when the outcomes for the comparison group track those of the treatment group in the period before PL Pathways. It can also be investigated (Heckman and Hotz, 1987) by estimating effects based on two periods of time that wholly pre-date the treatment. In this report, we term these pre-programme tests. If the treatment and comparison groups are affected equally by general economic conditions and other influences, such estimates should not be statistically significant. Details on the pre-programme tests conducted for these impact analyses are shown in Section 3.2 of this report. However, although the pre-programme test can establish that the treatment and comparison areas show common trends over the pre-programme period, it is possible that this no longer holds when the economy started to move into recession (the six-month follow-up period occurred during July 2008 – December 2008 and includes a UK recession). If a violation of the common trends occurred in the follow-up period due to the recession, then the PL Pathways impact would be under or overestimated.

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<sup>23</sup> Dolton *et al.* 2006 showed that using a benefit history variable based on Card and Sullivan 1988 which summarises the six previous quarters administrative data facilitates a much better job of balancing the pre-programme benefit receipt patterns than any survey variables, and that on this basis administrative data could be satisfactorily used instead of survey data. Knight *et al.* 2006 also used this variable and found it improved the impact specification when using administrative data. Although note that a more recent paper by Dolton and Smith (2011) shows that this does not necessarily capture all the factors which can be observed in surveys.

- c. It is assumed that, at the particular time periods over which the comparisons are being made, there are no other policy changes taking place which affect the participant group differently from the non-participating group. The assumption is satisfied if the other policy changes affect both the participant and comparison groups similarly. It is necessary to consider, and if possible test, how far these developments may impinge on the evaluation.

The pre-programme tests establish whether such policy changes affect the periods prior to 2007. There was one other key policy change affecting the incapacity benefits claimants during the periods over which the analysis is conducted. This was the introduction of the Employment and Support Allowance (ESA) in October 2008. ESA could be assumed to have affected the PL Pathways and comparison areas equally, and under this assumption the DiD method captures the PL Pathways impact without ESA affecting this. However, there is a possibility that ESA affected those starting claims to incapacity benefits in PL Pathways areas differently to those in the Jobcentre Plus areas. If this was the case, some of the impact of PL Pathways could include any impact of ESA that might have occurred.

## 2.2 Overview of data used

The study used carefully designed surveys to inform the impact analyses, as well as the Department for Work and Pensions (DWP) administrative data on benefits and HMRC data on employment records (Appendix E). Surveys were undertaken for each of the four research groups. The areas of PL Pathways Phase 1 were selected for the PL Pathways survey while the pilot and expansion Jobcentre Plus areas were selected for the comparison survey (more detail on the selection process is in Section 2.2.1). Those starting claims for Incapacity Benefit (IB) and Severe Disablement Allowance (SDA) between 1 April and 30 June 2008 were chosen as representing the timing that might best allow the research to measure impacts. This period strikes a balance between being early enough to give time to measure outcomes after the end of the period, while not being the very first months of PL Pathways operation and, therefore, allowing some months for PL Pathways programme operation to develop. The year 2007 was picked to establish the ‘before’ research data: the same three months of the year, April to June, were used to avoid any problems with seasonal influences (see Figure 2.1 earlier). Interviews were held on average 14 months after the claim start.

### 2.2.1 Matched comparison areas

The design of this PL Pathways analysis differs somewhat from that used for most other DiD analyses in the use of a detailed matching undertaken to select appropriate individual comparison areas for each of the PL Pathways areas<sup>24</sup>. This matching was applied for selecting the comparison areas where claimants were interviewed for the surveys, as well as for the construction of the comparison group in the administrative data analysis. This was undertaken to minimise the potential confounding issue of comparing local areas which had very different local labour market and other socio-demographic characteristics<sup>25</sup>. In the context of the research design, this matching should help improve the quality of the comparison group in reflecting what would have happened if PL Pathways did not occur.

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<sup>24</sup> Jobcentre Plus Pathways evaluations also used this type of matching of areas, although the detailed matching was undertaken separately and independently and was differently defined to that for PL Pathways.

<sup>25</sup> The DiD method requires the effect of such factors on changes in outcomes between the before and after period to be the same in the comparison areas as in the Pathways districts, i.e. the common trends assumption has to be valid. This is more likely to be the case if the two sets of areas are as similar as possible.

The pilot and expansion phase 1 Jobcentre Plus Pathways areas were used for the potential comparison areas. Pre-programme tests were used to select matched pairs of areas that seemed likely to perform well as comparison areas from amongst all these possible non-treatment areas. Each local authority district (LAD) in the Phase 1 (December 2007) PL Pathways areas was taken in turn and a pre-programme test<sup>26</sup> was run for each LAD within the original seven pilot areas (October 2003, April 2004) and the first phase of expansion areas (October 2005). Since there were 93 Phase 1 PL Pathways area LADs and 62 comparison area LADs in total, this resulted in  $93 \times 62 = 5,766$  separate tests. The pre-programme tests were based on those starting an IB claim in April to June 2006 or April to June 2007, both of which are periods that fall before the Phase 1 PL Pathways start date<sup>27</sup>. The outcome considered was IB claim status six months later. Estimation was based on data taken from the Work and Pensions Longitudinal Study Database (WPLS)<sup>28</sup>.

The results of the pre-programme tests can be thought of as impact estimates of a hypothetical (non-existent) intervention. As such, they should not be statistically significantly different from zero. Any statistically significant differences can be viewed as an estimate of the bias that would have affected impact estimates relying on these comparison areas over this period. The properties sought for the comparison areas were that they should:

- have a small (absolute) bias size;
- have a bias that was not statistically significant; and
- be large enough to be of practical use for the survey sample size needed (based on the observed historical number of new IB claimants in the LAD in 2006/07).

The pre-programme tests identified the best subset of comparison areas using these conditions. In addition to this purely statistical exercise, further information was incorporated in an attempt to ensure that the comparison areas were similar in other characteristics to the PL Pathways areas they were matched to. This was done using the Office for National Statistics (ONS) index of similarity (see Appendix Section A.6 for information about this index, which is also known as the 'local authority corresponding areas')<sup>29</sup>.

The identified areas were then used in the survey fieldwork and to construct the administrative data comparison group for analysis. Note that because this was done using LADs, the comparison areas are not complete Jobcentre Plus districts.

## 2.3 PL Pathways surveys

This impact analysis is based on the two telephone (with web follow-up) surveys: of those who claimed IB or SDA between April and June 2007 and 2008; for customers living in Phase 1 Provider-

<sup>26</sup> See Section 2.1.1 (b) for discussion of pre-programme tests.

<sup>27</sup> Each test was conducted in the same way as the impact estimator using the research groups set out in Table 2.1, but the timing of the groups was 2006 and 2007 instead of the 2007 and 2008 used for the impacts.

<sup>28</sup> The WPLS Database was supplied by DWP to the Policy Studies Institute (PSI) for this stage of the work. The analyses for this report are conducted on extracts from the National Benefits Database (NBD).

<sup>29</sup> PSI produced the pre-programme test results while the National Centre for Social Research (NatCen), who conducted the Pathways surveys, then used the resulting bias estimates and pre-programme test results to complete the final stages of the comparison area selection in order to define the matched comparison areas.

led Pathways (December 2007) areas and customers living in the matched ‘comparison areas’. After the matching of areas defined in the PL Pathways – comparison area pairs, customers were drawn randomly from the sampling frame defined from the WPLS benefit records. On average, the interview was carried out 14 months after the claim for benefits (see Table A.2). Where correct contact information was available, the response rate to the surveys was 64 – 67 per cent. The survey methods are described in Appendix A. The survey data was always weighted for analysis using post-stratification weights, whose construction is set out in Appendix A. Only IB claims were used for the analyses in this report<sup>30</sup>.

The survey data on employment history is used in the analysis of impacts. However, there was some evidence that the work history collected during the survey interview suffered from recall problems for some respondents, as set out further in this discussion from Hayllar and Wood (2011, Appendix 1):

*‘... the work status at the time of the interview could be reasonably relied upon, but respondents’ recall of the month in which work began or ended some months earlier seemed prone to a degree of noticeable error when combined with the administrative data on benefits. Interviewers on the survey were briefed to encourage an estimated date to ensure that useful data was gathered from as broad a sample as possible, but there would be some inaccuracies and some contradictions.*

*The point where anomalies are noticed relates to the date at which respondents are known to have made a claim for benefits which led them to qualify for Pathways to Work. This information was provided by DWP from benefit records. In around 12 per cent of cases, work history data suggested that the respondent was in paid work at the time that administrative data suggests they made their claim. Whilst some of this may relate to Permitted Work (work of less than 16 hours per week that is allowed alongside a claim for IB) or work that was not declared to Jobcentre Plus, it seems likely that part of the explanation is recall error or a failure during the interview to highlight a significant period off work due to ill health (this might particularly have occurred where the respondent returned to the same place of work after a period on IB).’*

Because the survey data was compared to the benefit data, it is also possible that the randomly imputed dates applied between the six weekly scans of the live benefits system which are used to develop the DWP administrative database for analysis<sup>31</sup>, combined with some recall error as described above, contributed to some of the measurement differences.

The importance of the high share found to be in work at claim start for the employment impacts is explored with some additional adjustment of the data, by observing the sensitivity of the employment impacts for different processing rules, for both the HMRC and survey employment (see Chapter 6). The findings show that the survey employment impacts give a guide, but are not robust to the adjustments and suffer from lower sample sizes and greater statistical variation and hence

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<sup>30</sup> This excludes SDA claims because these were included in the 2007 PL Pathways survey, but not in the 2008 survey. Our analyses require both surveys to be used and so the SDA cases needed to be discarded. The number of SDA claims in the administrative data were found to be very small, (56 in the 2007 April to June cohort, 67 in the 2008 April to June cohort). The administrative data impact analyses were designed to support the survey data analyses, and to maintain consistency with the survey analyses, the administrative data analyses were also conducted only for IB claims.

<sup>31</sup> The way in which the NBD and WPLS are constructed means that exact dates of the end of benefit claims are not recorded, only that a claim closed between two successive six-weekly extracts from the live operating systems and that the end date, therefore, lies somewhere between these. For the purposes of analysis, end dates are randomly and uniformly distributed across this six-week period.

the HMRC employment impact findings are recommended over those of the survey. The analysis in Chapter 6 recommends that the HMRC employment impact is reliable even accounting for the measurement issues, but that the counterfactual HMRC employment rate might be too high and where this is to be used, then the adjusted estimates found in Table 2.2 can be used in sensitivity analyses. See Section 2.5 below for description of the HMRC employment data.

## 2.4 Administrative benefits data

The main administrative data on IB claims were extracted from the NBD. All claims located in the PL Pathways and matched comparison areas between January and June for the years 2006, 2007, 2008 were included, where the individual was aged between 18 and 59 years at claim start date.

For this set of claim records, all historical benefit claims and subsequent benefits claims were attached (i.e. not just those for IB). The historical records were used to define a set of control variables which help reflect the individual's benefit history in analyses<sup>32</sup>. The subsequent benefit claims were used to define the outcome of benefit claim or no benefit claim over the follow-up period of analysis.

The administrative database consisted of limited individual claim details (start and end date, stated health reason for IB claim, gender, area, age at claim start date), with one or more claims per individual. The sample, therefore, contained more than one claimant spell for some customers. These were counted as separate observations. However, most of the individuals in the sample made only one claim during the period being analysed (for more information on this see Table 3.4 and the discussion in Section 3.2).

## 2.5 HMRC employment data

To define the HMRC employment outcome, the selected benefit records were linked with HMRC employment data. Any linked HMRC records were added and were used to identify the HMRC employment outcomes. The historical records were used to define a set of control variables which help reflect the individual's employment history (constructed in a similar form to the benefit history variable).

It is important to outline the caveats around the HMRC employment data used here. The HMRC data is derived from the Pay As You Earn (PAYE) tax system, and specifically from the P45 forms which employers should send to HMRC when an individual starts or ends a job. The HMRC data omit self-employment, and will usually have only partial coverage of low-paid jobs where there is no liability for income tax or National Insurance contributions. The HMRC data for this analysis consists simply of the start and end dates of any employment spells. It is important to note, however, that in a significant proportion of cases, the exact dates are not known, and only the tax year in which the employment spell became known to HMRC is recorded. Appendix E gives more details about the HMRC employment data. The following section explores the measurement issue and makes recommendations for the interpretation of analysis results.

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<sup>32</sup> Dolton *et al.* 2006 showed that using a benefit history variable based on Card and Sullivan 1988 which summarises the six previous quarters administrative data facilitates a much better job of balancing the pre-programme benefit receipt patterns than any survey variables, and that on this basis administrative data could be satisfactorily used instead of survey data. Knight *et al.* 2006 also used this variable and found it improved the impact specification when using administrative data. Although note that a more recent paper by Dolton and Smith (2011) shows that this does not necessarily capture all the factors which can be observed in surveys.

## 2.6 HMRC employment measurement issues

In this section, the main PL Pathways impacts for survey employment and HMRC employment are explored with regard to potential measurement issues. This was done as the HMRC employment counterfactual might be considered high. For the HMRC employment data, workers with earnings that are below the taxable threshold or who are self-employed are not recorded in the HMRC data as having a job. Therefore, employment level estimates are generally thought to be understated by the HMRC<sup>33</sup>. The survey employment impacts use the survey work history and, as set out in Section 2.3, this seems to have some identifiable recall error, for spells and also for start and end dates<sup>34</sup>.

Table E.1 shows that at claim start a reasonably high proportion were recorded in HMRC employment and in survey employment. For example, in the PL Pathways areas in April to June 2007, the survey found 13 per cent were in work at the start of the claim, while the HMRC data found 27 per cent. HMRC employment could be expected to undercount since it does not include self-employment or low hours jobs, but this high HMRC employment counterfactual seems to contradict this. The survey suggested that in a number of cases the data might reflect failure to highlight a significant period off work due to ill health (this might particularly have occurred where the respondent returned to the same place of work after a period on IB)<sup>35</sup>. It is plausible that this affects the HMRC data to a greater extent, since employers will not send a P45 to HMRC recording the end of an employment spell if they expect an eventual return to work, but we have no means of checking this. Another consideration is that ‘permitted work’<sup>36</sup> is allowed, however, this scale is too high relative to official records<sup>37</sup> to be explained in this way.

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33 However, impacts measured in the employment data may or may not be affected by this, as bias in the impacts is introduced if the employment levels and the change in these for each of the research groups is not affected equally by the employment recording issues.

34 The analysis of the recall issue for employment spells in the survey uses the benefits data spell start and end dates as a benchmark, and so it is assumed that the benefit data is perfectly accurate for the start date of benefit and the end date of benefit and does not miss any short spells. The benefits data does miss out short spells on benefit if they fall within the scan windows of the live benefit system used to construct the data sets (six weekly scans for incapacity benefits and two weekly scans for Jobseeker’s Allowance (JSA)), and the end dates are imputed to a date between the scans if a claim is present in one scan and not present in the next.

35 Hayllar and Wood 2011, Appendix 1.

36 Generally, work is not allowed while you are getting IB. Under ‘Permitted Work’ rules some work is allowed within certain limits. Permitted Work can be done from the start of claim. Under the Permitted Work rules you can work for less than 16 hours a week on average, with earnings up to £95.00 a week for 52 weeks; work and earn up to £20 a week, at any time, for as long as you are receiving IB; do Supported Permitted Work and earn up to £95.00 a week for as long as you are receiving IB. Supported Permitted Work means work that is supervised by someone who is employed by a public or local council or voluntary organisation, whose job it is to arrange work for disabled people and this could be work done in the community or in a sheltered workshop. It also includes work as part of a hospital treatment programme.

37 DWP information <http://www.dwp.gov.uk/docs/foi-48-2011-permitted-work.pdf> indicates that 60,980 IB/SDA claimants had permitted work in January 2009. In February 2009, DWP information indicates that there were 2,603,540 incapacity benefits claimants which would suggest that there might be roughly two per cent in permitted work.  
[http://research.dwp.gov.uk/asd/asd1/stats\\_summary/Stats\\_Summary\\_Nov2009.pdf](http://research.dwp.gov.uk/asd/asd1/stats_summary/Stats_Summary_Nov2009.pdf)



**Table 2.2 The impact of PL Pathways on HMRC employment entry, April – June IB claimants, for 2007 against 2008**

April – June HMRC	Impact estimate (p.p. of IB claimants in HMRC employment at six months due to PL Pathways)	Counterfactual (% of IB claimants in HMRC employment at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)
<b>A: Unadjusted</b>						
6 months after IB claim start	1	26	3	0 : 2	0.13	1.53
<b>B: Adjusted to remove employment where benefit record and employment in that month</b>						
6 months after IB claim start	1	6	15	0 : 2	0.00	3.48
<b>C: Adjusted to remove employment where employment spell crosses the IB claim start date</b>						
6 months after IB claim start	1	8	14	0 : 2	0.00	3.01
<b>D: Adjustments B and C combined</b>						
6 months after IB claim start	1	3	40	1 : 2	0.00	4.34

Notes: The number of cases is always 119,794. p.p. is percentage points.

The survey employment and HMRC employment were adjusted in 3 ways:

1. Definition B: Adjusted to remove employment classification in that month where an individual is classified as being on benefit claim in that month (i.e. the benefit records start and end dates are assumed to be perfectly accurate and that employment could not start in that month if benefit claim was also occurring in that month).
2. Definition C: Adjusted to remove employment where the employment spell started on or before the IB benefit claim date and before the benefit end date (i.e. there could not be any return or continued employment that overlaps the IB claim start date, which also assumes that the benefit records start and end dates are perfectly accurate and that employment could not start earlier than the benefit claim date).
3. Definition D: A combination of both B and C.

**Table 2.3 The impact of PL Pathways on survey employment entry, April – June IB claimants, for 2007 against 2008**

April – June PL Pathways Surveys	Impact estimate (p.p. of IB claimants in HMRC employment at six months due to PL Pathways)	Counterfactual (% of IB claimants in HMRC employment at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)
<b>A: Unadjusted</b>						
6 months after IB claim start	3	14	18	0 : 5	0.07	1.81
<b>B: Adjusted to remove employment where benefit record and employment in that month</b>						
6 months after IB claim start	1	14	10	-1 : 4	0.30	1.04
<b>C: Adjusted to remove employment where employment spell crosses the IB claim start date</b>						
6 months after IB claim start	2	8	21	-1 : 4	0.17	1.37
<b>D: Adjustments B and C combined</b>						
6 months after IB claim start	1	7	17	-1 : 3	0.23	1.21

Notes: The number of cases is always 12,106 for six months outcomes and 12,105 for 12 months.

These definitions can be considered quite extreme adjustments in light of the data, for a number of reasons:

1. It is already known that the benefit administrative data used for analysis is in the case of incapacity benefits compiled from six weekly scans. Hence the end dates for benefit spells can vary over six weeks (more than a month) simply by the administrative benefits data construction.
2. The HMRC employment data does not capture all employment.
3. The HMRC employment data has known issues with the start and end date of spells for a variety of reasons.
4. For the survey work history data, recall of employment start/end dates around the time of the claim is suggested to be of lower accuracy due to the recall time (14 months between claim start and interview date, see the Section 2.3 discussion).
5. It is perfectly possible for somebody to have a short period on incapacity benefits without terminating their contract of employment, and to return to their original job – adjustment C removes any such cases.

The results of these adjustments on the PL Pathways impact six months after claim start are shown above in Table 2.2 for HMRC employment and Table 2.3 for survey employment. In the first column of Table 2.2, it can be seen that the impact estimate in percentage points never varies with these adjustments, and the impacts are all one percentage point. In column two it can be seen that the counterfactual estimate is altered by these adjustments, which is the percentage that are estimated would have been in employment without PL Pathways – and hence the impact expressed as a percentage increase shown in column three also varies substantially.

The unadjusted HMRC counterfactual employment measure A is high at 26 per cent, which might be reasonably assumed to be an overestimate, given that the proportion off benefit in administrative data only indicates that without PL Pathways 15 per cent were off benefits at six months after the IB claim, and this will include those who move off benefits without entering work. This figure probably includes a substantial number who were still recorded as being employed but off sick, as well as some doing Permitted Work. Moving to adjustment B, shown in the second row of estimates, it can be seen that not counting the employment record if there is a benefit record in the month leads to a large reduction in the counterfactual employment rate to only six per cent in HMRC employment. Adjustment C, in the third row, is only a slightly less dramatic fall to eight per cent HMRC employment. Undertaking both adjustments, in row four the measure D, would further reduce the HMRC employment rate to only three per cent. All of these may be underestimates of the employment rate.

Table 2.3 shows the equivalent adjustments made on the survey employment, with the table using the same format as Table 2.2. The lower precision of the survey estimates as well as the adjustment affecting the research groups in an uneven way leads to greater variation in the PL Pathways impact in percentage points, shown in the first column, so that it moves between one and three percentage points, all of which are within the confidence intervals for the various measures A to D. In contrast to the HMRC employment, the counterfactual employment rate without PL Pathways, shown in column two, is not changed in moving to adjustment B where employment in that month is removed if administrative benefit was claimed in that month. Also in contrast to the HMRC employment, the counterfactual survey employment rate falls slightly in adjustment C, but hardly at all in combining adjustment C with B, as shown in the final row D.

It is also interesting to note that the counterfactual employment rates in row C of the two tables are the same using either the HMRC or survey data, despite being so different on the unadjusted measure. We cannot necessarily conclude from this that these are the right figures to use. Examination of the detailed survey data reconciled against the HMRC records for individuals shows that there is not a complete overlap between the eight per cent employed according to the survey and the eight per cent with an HMRC spell.

### 2.6.1 HMRC employment measurement issues conclusion

It can be seen that the PL Pathways impact estimate in percentage points is robust to these adjustments in the HMRC employment. However, this is not the case for the survey employment, where the impact size is affected due to the changes falling differently upon the four research groups that make up the estimates. The counterfactual for HMRC employment is dramatically affected by the adjustments and large changes also occur for the survey employment counterfactual, but with a different pattern resulting from the adjustments to that found for HMRC. Unfortunately there is no comparable evidence that indicates the true scale of counterfactual employment rate. Further evidence might be needed with regard to the HMRC employment level measurement issues to resolve the counterfactual employment level. This sensitivity exercise can, however, conclude that the impact estimate in percentage points itself is relatively stable for these measurement issues for HMRC employment. In addition, the HMRC impacts are more resilient to the measurement issues than those of the survey and the HMRC employment has greater sample size and statistical reliability, leading the HMRC impact estimates to be recommended over survey employment.

Overall, this analysis suggests that in using the HMRC employment estimates, the impact is reliable – and this is the crucial estimate in assessing the costs and benefits of the intervention. However, the unadjusted counterfactual employment rate might be too high and where the counterfactual is to be used then these can be selected from the adjusted estimates shown in Tables 2.2. For those using the counterfactual, it is recommended that the unadjusted counterfactual estimate is initially used and then a sensitivity analysis conducted using the adjusted estimate.

# 3 Testing the impact methods validity

In this chapter, the plausibility of the research design is tested. Formal statistical tests are carried out. In Section 3.1, the characteristics of the research groups are examined. Section 3.2 gives the pre-programme tests of the common trends assumption for the difference in differences method.

## 3.1 Examining the plausibility of the difference-in-difference method

### 3.1.1 Describing the profile of Incapacity Benefit customers

**Table 3.1 Description of the characteristics of the Incapacity Benefit claimants**

	Administrative benefits data	Survey data, weighted
April – June 2007		
PL Pathways areas		
Female	44.55	44.55
Age (average, in years)	38.63	38.81
Under 30	28.85	28.85
30 – 39	21.80	21.80
40 – 49	24.94	24.94
50 – 59	24.41	24.41
Mental health condition	39.18	39.18
Cases	42,247	3,291
Comparison areas		
Female	44.00	44.00
Age (average, in years)	38.31	38.45
Under 30	29.77	29.77
30 – 39	21.96	21.96
40 – 49	24.49	24.49
50 – 59	23.78	23.78
Mental health condition	42.19	42.19
Cases	17,765	3,299

Continued

**Table 3.1 Continued**

	<b>Administrative benefits data</b>	<b>Survey data, weighted</b>
<b>April-June 2008</b>		
<b>PL Pathways areas</b>		
Female	44.47	44.48
Age (average, in years)	38.85	39.02
Under 30	28.23	28.23
30 – 39	21.69	21.69
40 – 49	25.36	25.36
50 – 59	24.72	24.72
Mental health condition	38.62	38.62
<b>Cases</b>	<b>42,427</b>	<b>3,093</b>
<b>Comparison areas</b>		
Female	43.79	43.79
Age (average, in years)	38.48	38.63
Under 30	29.55	29.55
30 – 39	20.82	20.82
40 – 49	25.62	25.62
50 – 59	24.01	24.01
Mental health condition	41.97	41.97
<b>Cases</b>	<b>17,355</b>	<b>3,211</b>

Notes: Administrative data variables are used (also to describe the survey population).

This section provides information about the characteristics of the new/repeat Incapacity Benefit (IB) claimants in the research groups set out in Table 2.1: that is for Provider-led (PL) Pathways customers and the comparison area customers, in April to June of 2007 and 2008.

Table 3.1 has four panels, one for each research group set out earlier in Table 2.1. In each panel, the first row shows the gender, with the next showing the average age, then the age categories, then the share with a mental health condition<sup>38</sup>. The first column shows administrative data, while the second column shows the weighted survey data. They are very similar because post-stratification weighting was used<sup>39</sup>. Overall, across the groups, there were slightly fewer women claimants than men. The average age was 38 to 39 years, the largest age category was those aged under 30 years. A mental health condition was the most common health reason for claiming IB.

<sup>38</sup> As for Jobcentre Plus Pathways evaluations, the main categories of the health condition for the Incapacity Benefit claim were aggregated into mental health or other. In the Jobcentre Plus Pathways analyses, this categorisation was used to explain variations without raising the number of categories too high (or number of cases too low) for subgroup analysis.

<sup>39</sup> No differences are statistically significant.

## 3.1.2 Comparing customer characteristics for the research groups

**Table 3.2 Comparing the characteristics in 2007 and 2008 and testing for statistically significant differences, PL Pathways areas**

PL Pathways areas	2007 %	2008 %	t-test 2007 vs. 2008, for PL Pathways areas	t-test PL Pathways vs Comparison areas, in 2007
Average age (admin. data) years	38.81 years	39.02 years		
Under 30	28.85	28.23		
30 – 39	21.80	21.69		
40 – 49	24.94	25.36		
50 – 59	24.41	24.72		
White ethnicity	85.02	83.89		***
HE degree/teaching qualification	16.17	16.95		
A or AS level	14.83	14.21		
O level, GCSE or CSE	32.37	30.82		***
Other qualifications	4.08	5.07	*	*
Kids under 16 in the household	26.77	25.91		
Living with partner/spouse	42.30	38.28	***	
Health problem:				
Depression	21.16	20.86		
Stress or anxiety	9.14	9.22		*
Problems with concentration	3.28	1.96	***	
Pain or discomfort	24.32	17.50	***	***
Dizziness/balance problems	1.45	0.98	*	
Problems due to alcohol or drugs	2.26	3.15	**	***
Problems with arms or hands	7.28	4.96	***	
Problems with legs or feet	15.18	12.20	***	
Problems with neck or back	20.25	15.56	***	**
Arthritis	10.60	11.06		
Difficulty with seeing	2.32	2.20		
Hearing difficulties	1.99	1.18	**	
Speech problems	0.32	0.13		
Skin conditions or allergies	1.20	1.46		
Chest or breathing problems	8.40	8.06		
Heart/blood pressure problems	9.74	8.67		**
Problems with stomach/digestion	7.07	8.03		
Mental health condition	6.12	6.66		
Learning difficulties	0.57	0.73		
Progressive illness (other)	5.47	5.95		
Other specific answer	14.21	11.20	***	*
Sample size	3,291	3,093		

Continued

Table 3.2 Continued

Comparison areas	2007	2008	t-test 2007 vs. 2008, for PL Pathways areas	t-test PL Pathways vs Comparison areas, in 2007
Average age (admin. data) years	38.45 years	38.64 years		
Under 30	29.77	29.55		
30 – 39	21.96	20.82		
40 – 49	24.49	25.62		
50 – 59	23.78	24.01		
Female (admin. data)	44.00	43.79		
White ethnicity	95.97	95.75		***
HE degree/teaching qualification	15.06	15.92		
A or AS level	14.70	15.67		
O level, GCSE or CSE	35.60	34.44		***
Other qualifications	4.97	5.44		
Kids under 16 in the HH	27.21	26.37		
Living with partner/spouse	42.24	40.69		*
Health problem:				
Depression	22.45	22.70		*
Stress or anxiety	10.65	10.12		
Problems with concentration	3.08	2.25	**	
Pain or discomfort	20.04	17.86	**	
Dizziness/balance problems	1.33	1.53		**
Problems due to alcohol/drugs	3.69	3.00		
Problems with arms or hands	8.24	6.13	***	**
Problems with legs or feet	15.77	13.20	***	
Problems with neck or back	17.81	16.50		
Arthritis	10.75	9.95		
Difficulty with seeing	1.87	1.84		
Hearing difficulties	1.47	1.63		
Speech problems	0.15	0.12		
Skin conditions or allergies	1.37	1.37		
Chest or breathing problems	8.23	8.27		
Heart/blood pressure prob.	8.21	7.39		**
Problems with stomach/digestion	7.36	7.33		
Mental health condition	6.78	7.53		
Learning difficulties	0.64	1.04		
Progressive illness (not above)	5.23	5.12		
Other specific answer	12.59	12.53		
Sample size	3,299	3,211		

Notes: Based on weighted survey data. Variables gender, age and health condition that was reason for IB claim are from administrative data. \*\*\* Differences are statistically significant at the one per cent level; \*\* Differences are statistically significant at the five per cent level; \* At the 10 per cent level. All figures are percentages except for average age.

Table 3.2 considers the weighted survey data only, and whether there is any statistical difference between the research groups across time (2007 against 2008) and area (PL Pathways against comparisons). The first half of Table 3.2 gives the differences in characteristics across 2007 and 2008 for the PL Pathways areas, while the second half gives this for the comparison areas. In columns one and two of Table 3.2 are the observed values for the years 2007 and 2008. In the third column, stars indicate whether the difference between the values is statistically significant in a hypothesis test. The number of stars indicates the level of statistical significance, with two stars indicating that the values in columns one and two are different at five per cent level of statistical significance: hence they are considered to be different. In column four, a similar test results format indicates the hypothesis test that the difference between the PL Pathways and comparison area values is zero: in this first panel, the values for the 2007 year for PL Pathways are tested against the comparison areas while in the second panel, the values for the 2008 year for PL Pathways are tested against the comparison areas.

In 2007, the proportions of specific health conditions, ethnicity and O level and other educational qualifications were different for PL Pathways areas and comparison areas, as indicated by the stars against these characteristics. In 2008, ethnicity, O levels, living with a partner and levels of specific health conditions differed between PL Pathways and comparison areas. These results show that there were some pre-existing differences between PL Pathways and comparison areas.

In Pathways areas, between 2007 and 2008, the concentration of those observed with other qualifications and living with a partner/spouse varied as well as the share with various specific health conditions. Between 2007 and 2008 in comparison areas, the type of health conditions were distributed differently as the proportions in the research group sub-samples changed across these years. These results show that the health condition composition of both the research groups differed between 2007 and 2008.

Overall, there was some evidence of pre-existing compositional differences between PL Pathways and comparison areas, and some compositional change over time. Controls were used (in the form of explanatory variables in the regressions for the analysis) to correct for these differences so that no potential difficulties are posed for the difference in difference analysis (see Section 2.1.1 (a)).

**Table 3.3 The proportion no longer claiming IB for 2007 and 2008 in PL Pathways areas and comparison areas**

<b>Customers starting claims April – June</b>			
<b>Month after IB claim start date</b>	<b>Area</b>	<b>2007</b>	<b>2008</b>
1	PL Pathways	2.05	2.29
	Comparison	1.93	2.44
2	PL Pathways	6.33	6.53
	Comparison	7.23	7.61
3	PL Pathways	12.09	14.22
	Comparison	14.41	16.12
4	PL Pathways	17.68	21.37
	Comparison	22.22	23.87
5	PL Pathways	23.16	27.25
	Comparison	29.05	30.00
6	PL Pathways	27.80	31.97
	Comparison	33.79	34.46

Continued



**Table 3.3 Continued**

<b>Customers starting claims April – June</b>			
<b>Month after IB claim start date</b>	<b>Area</b>	<b>2007</b>	<b>2008</b>
7	PL Pathways	32.06	35.60
	Comparison	37.06	37.78
8	PL Pathways	36.32	38.52
	Comparison	39.84	40.51
9	PL Pathways	40.10	40.87
	Comparison	42.22	42.16
10	PL Pathways	43.03	42.42
	Comparison	44.00	43.46
11	PL Pathways	44.92	43.76
	Comparison	45.60	44.75
12	PL Pathways	46.22	44.65
	Comparison	46.98	45.61

The value of the DiD comparison group research design over that of ‘before – after’, discussed earlier in Section 2.1, is illustrated when observing the values for the research groups in Table 3.3. The off-benefit proportion (unadjusted<sup>40</sup>) for each of the research groups is shown in Table 3.3, for each of the months from the claim start until 12 months. The table shows that at six months after claim start, in PL Pathways areas the proportion no longer claiming benefit was 27.80 per cent in 2007 but rose to 31.97 per cent in 2008, however, the comparison area proportion also rose from 33.79 to 34.46 per cent between 2007 and 2008<sup>41</sup>. Hence, there was a general increase, and to calculate the change in benefit levels attributable to PL Pathways, the difference-in-differences (DiD) methods should be used in a regression context, with explanatory variables that help to remove these contextual influences.

In conclusion, it is necessary to account for variation in known characteristics and it would be helpful to use the comparison group to account for local trends. This is now tested more fully in the Section 3.2 pre-programme testing.

The analysis kept to the general rule of not using administrative data for controls for the survey, and also not using the employment history for benefit regressions (using only benefit history for benefit outcome regressions, employment history for employment outcome regressions). Only information defined prior to PL Pathways was used (with administrative variables from the claim start). There were some exceptions for the survey analyses, however, where some variables such as ethnicity that might be considered reasonably fixed were measured at interview<sup>42</sup>.

<sup>40</sup> Unadjusted for the differences in the composition – i.e. calculated without the explanatory variables needed and without a regression.

<sup>41</sup> This apparent difference of 3.5 percentage points reduces to 1.8 percentage points after the necessary regression adjustments including control variables (see Table 4.1).

<sup>42</sup> The survey variables level of highest academic/vocational qualification, whether married or living as married, whether any children living in the household and any of them aged between 16 and 18 years and in full-time education might be considered to be variable over time, yet no other measures were available other than at time of interview. They were found to be important controls however, so they were retained for the explanatory value.

Variables included in the administrative data analysis were: gender, age at time of qualifying IB claim start, mental health at time of qualifying IB claim start, history of claiming IB in the eight previous quarters, history of claiming Jobseeker's Allowance (JSA) in the eight previous quarters (if a benefit outcome regression) or history of Her Majesty's Revenue and Customs (HMRC) employment in the previous eight quarters (if an employment regression). Variables included in the survey data analysis were: gender, age at time of qualifying IB claim start, ethnicity, level of highest academic/vocational qualification, whether married or living as married, whether any children living in the household and any of them aged between 16 and 18 years and in full-time education, nature of main health condition at time of claim (survey). The impact results (and also the pre-programme test results) using these regressions reflect the effect of having taken out the differences due to these observed characteristics.

### 3.2 Pre-programme tests using administrative data on benefits and HMRC employment

This section presents the tests that were conducted to verify the common trend assumption outlined in Section 2.1.1 (b). This pre-programme test can reveal changes in outcomes that might be produced by other policies or divergent trends in the period before the introduction of PL Pathways. This can also be seen as a more general test of whether the baseline period used for DiD is stable<sup>43</sup>. If the comparisons between groups produce unstable results in the baseline period, then any subsequent estimates that use the baseline may be unreliable. Ideally, the results of the test are not statistically significant and are negligibly sized, i.e. close to zero.

Advance testing of the common trend was carried out in the survey design stage, as set out in Section 2.2.1, where the six-month outcome was tested to find local matched comparison areas. To validate whether the impacts calculated remained valid for these analyses, pre-programme tests were carried out for each of the outcomes. All pre-programme tests used administrative data to provide the necessary historical periods of similar research groups. It was not possible to test with the PL Pathways survey data as the historical periods needed were not available as these surveys were collected for 2007 and 2008 only. The pre-programme test applies the same research framework to earlier years (using the research group definitions set out in Table 2.1) and in this case 2006 is compared against 2007.

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<sup>43</sup> This approach was suggested as a general way of testing the DiD method by Heckman and Hotz (1989).

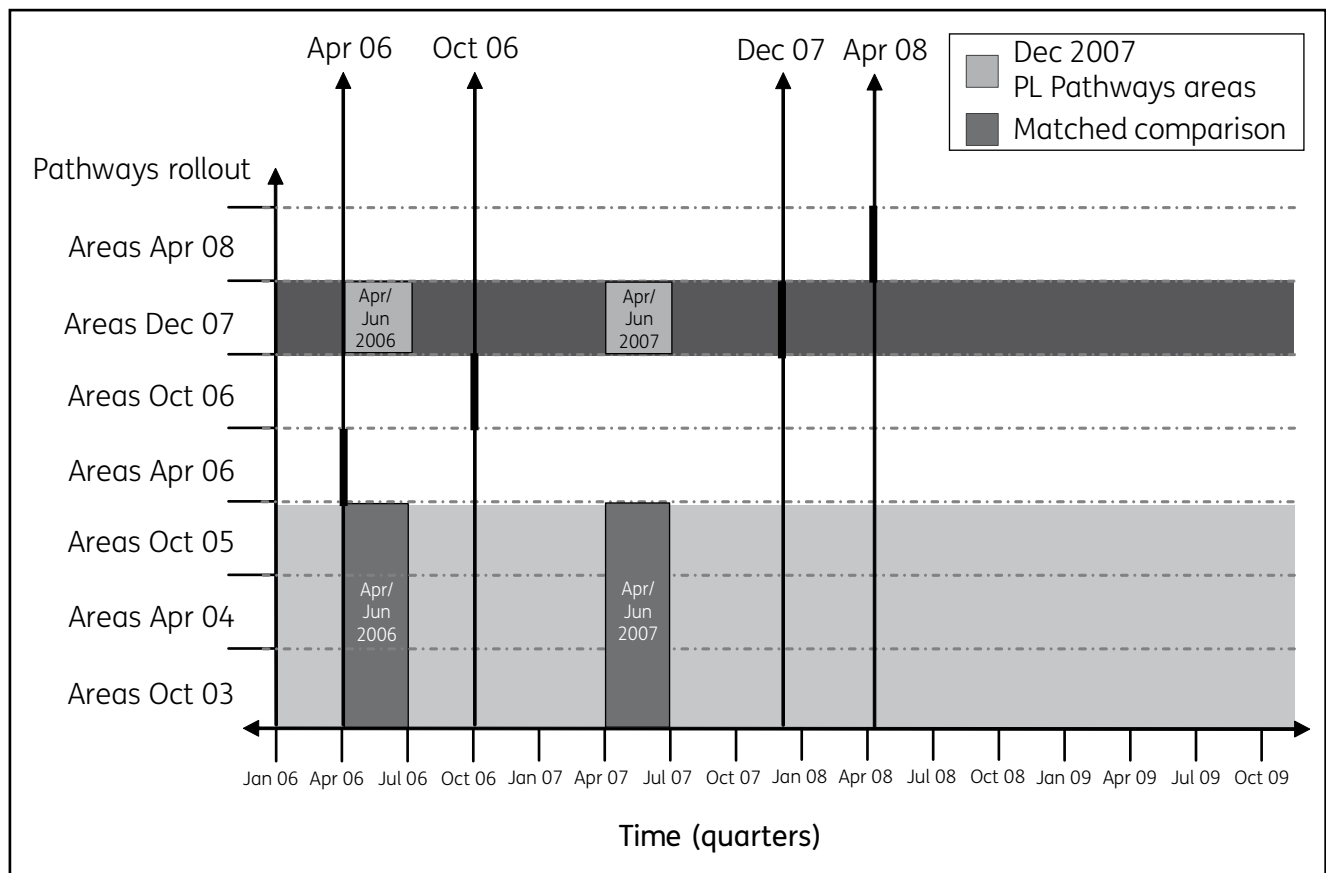
**Figure 3.1 Illustration of the PL Pathways pre-programme test**

Figure 3.1 illustrates the pre-programme test in the PL Pathways. The horizontal axis shows quarterly intervals of time from 2005 onwards to 2009, the vertical axis indicates the Pathways areas and phases of introduction; the paler shaded areas are the Jobcentre Plus areas that provided matched comparison areas for the PL Pathways areas, which are shaded dark grey; vertical lines also indicate where each Pathways phase started during the analysis period, with a bold section of the vertical line cutting across the relevant phase showing the start of Pathways in these areas. The four research groups are shown with the PL Pathways areas marked in stripes, with the matched comparison areas indicated by spots, and the box indicating the timing of the April to June claimants groups. The 2006 areas correspond to the 'before' and the 2007 areas represent the 'after' research groups. As can be seen from this figure, in the 2007 PL Pathways areas, the timing of the April to June cohort leaves only six months before the actual PL Pathways start. This conceptually limits the validity of considering longer follow-up periods, as after this date those who start a new claim (re-claims) or volunteers from the stock of historical claims can occur from amongst the 'before' groups, and these are then eligible for PL Pathways. We have considered the reclaim rate, shown in Table 3.4, and it is not negligible, and to this would need to be added a potentially large group of stock volunteers<sup>44</sup>. These factors together would lead to any impact estimates which included this group being biased downward in magnitude.

<sup>44</sup> The scale of volunteers starting PL Pathways services was quite high. Official DWP statistics show until July 2008 more than 20 per cent of all PL Pathways starts in Phase 1 areas in each month were volunteers, and after that the proportion of volunteer starts remained higher than 10 per cent until July 2009 (See Appendix I). Unfortunately, there are no figures available for the scale of the total PL Pathways areas stock of existing IB claims at the start date of PL Pathways.

**Table 3.4 IB/ESA reclaim rate**

		Percentage of the cohort reclaiming IB			April – June cohort				
		2001	2002	2003	2004	2005	2006	2007	2008
6 months after first IB claim	PL Pathways	3.05	2.90	3.13	3.01	2.78	2.37	2.90	3.46
	Comparison	3.23	3.36	3.37	3.18	2.89	2.93	3.44	3.90
12 months after first IB claim	PL Pathways	7.74	7.31	7.87	7.72	7.56	7.51	7.54	10.01
	Comparison	8.30	8.40	8.84	8.47	8.42	9.12	9.40	11.43

Note: Employment and Support Allowance (ESA) claims are also considered in the calculation of figures for IB reclaim in 2008.

### 3.2.1 Summary of pre-programme testing results: 2006 against 2007

**Figure 3.2 PL Pathways pre-programme test for off all benefits, over 12 months, 2006 against 2007**

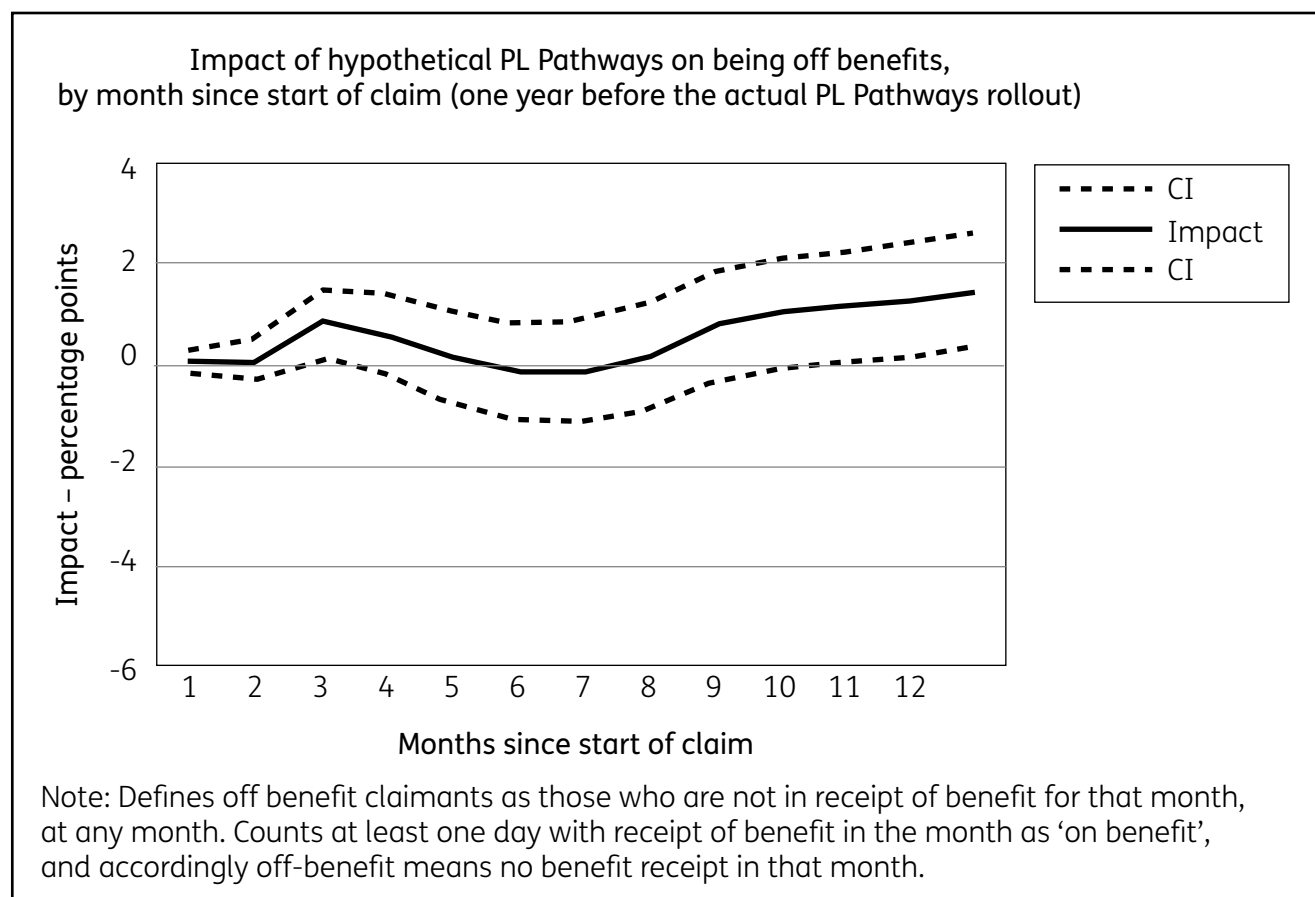
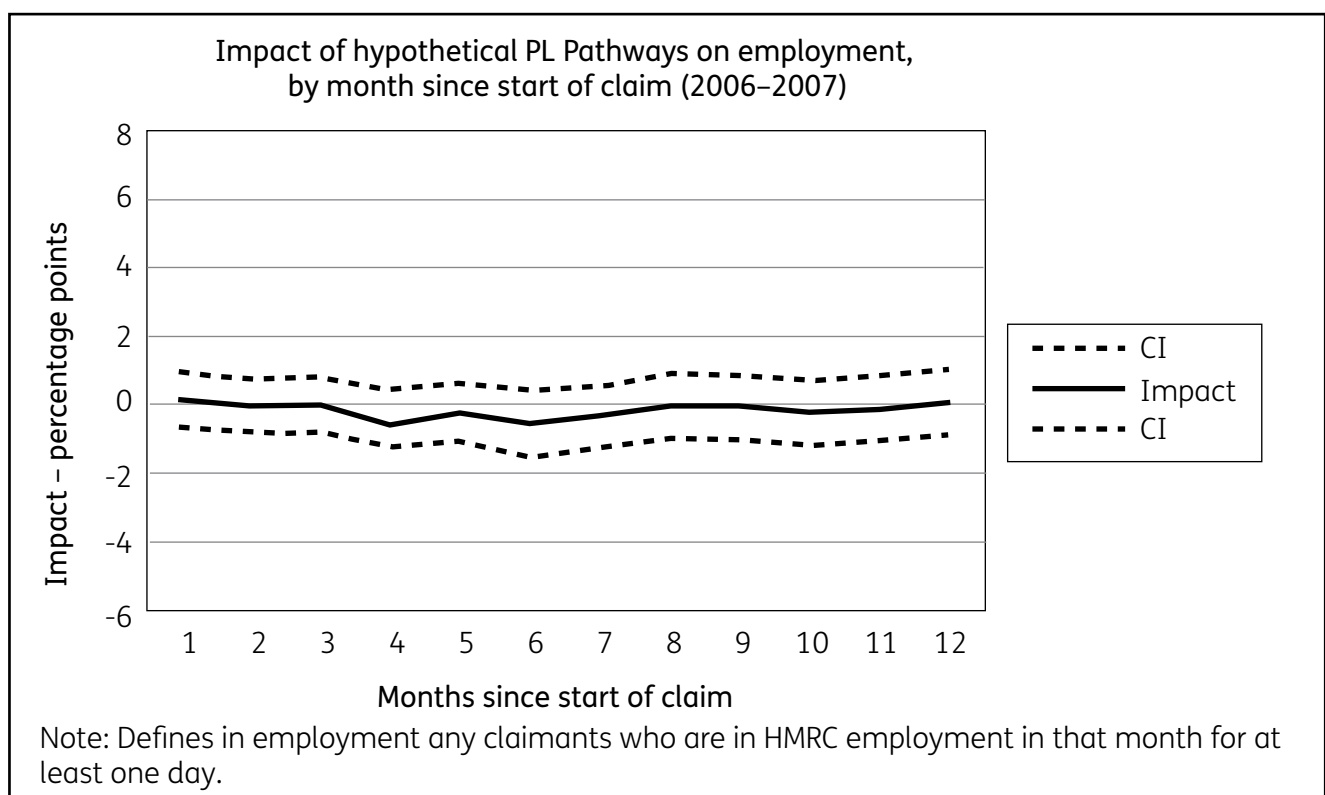


Figure 3.2 shows the test results for the outcome ‘off benefits’, with the percentage point impact plotted against time on the horizontal axis. The impact (indicated by the central line in the figure) is indeed statistically equivalent to zero as indicated by the 95 per cent confidence interval (the two dotted lines around the central line), for most of the follow-up period (calculated as the 12-month period after the start of the IB claim). At 12 months, there is, however, a statistically significant impact, as indicated by the upswing in the line and the dotted lines to be slightly above zero value. This is still only a small value, but does reduce the reliability of the 12-month estimate. This is likely to be related to the conceptual issue with the 12-month follow-up and reclaims/volunteers as discussed in Section 3.2, as the timing of the April to June cohort limits the valid follow-up period to six months.

**Figure 3.3 PL Pathways pre-programme test for HMRC employment entry, over 12 months, 2006 against 2007**



The HMRC employment outcome pre-programme test results are shown in Figure 3.3, in the same format as for Figure 3.2. The impact is indeed statistically equivalent to zero as indicated by the 95 per cent confidence interval (the two dotted lines around the central line), and the value hardly varies from zero for the follow-up period (calculated as the 12-month period after the start of the IB claim).

### 3.2.2 Summary of pre-programme test implications for the analysis

For the six-month impact both the outcomes off benefits and in HMRC employment satisfy the pre-programme test. The timing of the April to June cohort unfortunately limits the valid follow-up period to six months, due to reclaims/volunteers. Accordingly, the 12-month estimate is not included in tables in Chapter 4<sup>45</sup>, and discussion is limited to indications of the sign or scale relative to the six month impact.

<sup>45</sup> These results are given in Appendix H.

## 4 Net impact results

The impact of Provider-led (PL) Pathways was estimated for the whole group of Incapacity Benefit (IB)<sup>46</sup> claimants eligible for Phase 1 PL Pathways, including those who never actively participated. This means that the impact also reflects those who did not undergo Work Focused Interviews (WFIs) or other participation in services.

The main analyses reported here were conducted for new/repeat incapacity benefits claimants eligible for PL Pathways from April to June 2008. Chapter 6 includes some sensitivity analyses of another group of eligible PL Pathways claimants (January to March 2008). However, this period reflects the immediate start of the programme and is likely to be a period of programme instability which is unrepresentative of the impact of the programme when it is running satisfactorily (a period usually referred to as the 'steady state'). Accordingly, the sensitivity analysis is a guide to the changes arising in the impacts for April to June, and whether they might represent an improvement.

The evaluation used the outcome of the proportion not claiming benefits and two employment outcome measures, drawn from the surveys and Her Majesty's Revenue and Customs (HMRC) employment. Both of these employment estimates have some measurement issues and exploration of this issue is in Section 2.6. Both the survey employment data and HMRC employment data that have been used to estimate employment impacts miss some employment spells and some start and end dates (respectively due to recall error and to limited coverage and design). As a consequence, they may inaccurately measure the impacts on employment to an extent.

The analysis includes only those who initiate a fresh claim during the reference period, referred to as new or repeat customers. PL Pathways was applied differently to customers making 'new or repeat claims' and those already claiming incapacity benefits at the introduction date (the 'stock of claimants') were not included in analyses. The impacts are estimated for those aged 18 to 59. The follow-up period is six months after starting a claim that made a person eligible. As such, this is an evaluation of that part of the PL Pathways system during which the Jobcentre Plus stage occurs, the Personal Capability Assessment (PCA), and the first part of the provider contact and provider WFI services<sup>47</sup> are most likely to occur (see Section 1.2 which discusses the PL Pathways process of referral to providers from the Jobcentre Plus stage)<sup>48</sup>.

Each table of the results indicates the estimate of the counterfactual which shows the estimated level of increase in the proportion off benefit (or in HMRC employment or survey employment) above what it would have been in the absence of PL Pathways. The impact gives the additional change in the proportion off benefit (or in HMRC employment) that can be attributed to PL Pathways. For example, the estimate of the counterfactual shown in Table 4.1 indicates the expected level of benefits receipt had PL Pathways not been introduced was 14.9 per cent at six months after the start of the claim, compared to 16.7 per cent after the introduction of PL Pathways due to the 1.8 percentage point rise attributable to PL Pathways.

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<sup>46</sup> Other types of incapacity benefits were not included in the analyses (see Section 1.1 for a discussion of the range of incapacity benefits for which Pathways to Work applied).

<sup>47</sup> The process was also designed to have an earlier PCA (Work Capability Assessment WCA)) which would fall within this period, and may have contributed to the impact at six months after claim start.

<sup>48</sup> Note also that Return to Work Credit (RTWC) eligibility starts at 13 weeks and is also within this follow-up period.

The P-value and the t-test statistic indicate the statistical significance of the impact from zero. If the t-test indicates the impact is not statistically significant then direct statistical evidence of a PL Pathways effect has not been found. The confidence interval gives the range of possible values for the impact. Readers should refer to the guidance set out in the report statistical conventions in Section 1.5.1.

#### 4.1 The impact of PL Pathways on proportion off benefit at six months

**Table 4.1 The impact of PL Pathways on proportion off benefit, April – June IB claimants, for 2007 against 2008**

April – June	Impact estimate (p.p. of IB claimants off benefits at six months due to PL Pathways)	Counterfactual (% of IB claimants off benefits at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
6 months after IB claim start	1.8	14.9	12.1	0.9 : 2.8	0.00	3.72	119,794

Notes: Off benefit means any type of benefits among Bereavement Benefit (BB), Disability Living Allowance (DLA), Employment and Support Allowance (ESA), IB, Invalid care Allowance (ICA), Income Support (IS), Jobseeker’s Allowance (JSA), Pension Credit (PC), Passported Incapacity Benefit (PIB), Retirement Pension (RP), Severe Disablement Allowance (SDA) or Widow’s Benefit (WB). Defines off benefit claimants as those who are not in receipt of benefit for any of the days in that month. Counts at least one day with receipt of benefit in the month as ‘on benefit’, and accordingly off-benefit means no benefit receipt in that month.

Table 4.1 shows the estimate of net impact at six months after the claim start for the outcome of not claiming benefits.

The 95 per cent confidence interval indicates that the percentage point impact estimate ranged in value from 0.9 to 2.8. The impact is statistically different from zero. PL Pathways was estimated to have had a statistically significant net impact of 1.8 percentage points raising the proportion off benefits at six months after claim start.

## 4.2 The impact of PL Pathways on HMRC employment at six months

**Table 4.2 The impact of PL Pathways on HMRC employment entry, April – June IB claimants, for 2007 against 2008**

April – June	Impact estimate (p.p. of IB claimants in HMRC employment after six months due to PL Pathways)	Counterfactual (% of IB claimants in HMRC employment at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
6 months after IB claim start	0.7	25.5	2.7	-0.2 : 1.6	0.13	1.53	119,794

Note: Defines in employment any claimants who are in HMRC employment for at least one day in that month. p.p. is percentage points.

Table 4.2 shows that PL Pathways did not have a statistically significant impact on the HMRC employment rate six months after claim start. The impact was 0.7 percentage points with an associated confidence interval range of -0.2 to 1.6 percentage points, which includes zero and so the impact is not statistically different from zero at the 95 per cent level<sup>49</sup>. This does not show a statistically significant change, however, may still indicate positive impacts. Note that Section 2.6 concludes that despite the measurement error the impact for HMRC employment is reliable but the counterfactual HMRC employment seems overestimated and Table 2.2 gives alternative adjusted values for the counterfactual which can be used<sup>50</sup>.

The HMRC employment impact had a slightly lower range than the off benefit impact and was about half the size.

## 4.3 The survey employment impact

The survey employment history was used to construct these impact estimates so that for all claimants the follow-up period was from start of the IB claim to six months later<sup>51</sup>. Employment of any hours of work was included in survey employment<sup>52</sup>.

<sup>49</sup> However, by constructing an 85 per cent confidence interval there is evidence of a statistically significant impact on HMRC employment.

<sup>50</sup> It is recommended that these are used in sensitivity analyses.

<sup>51</sup> This has greater conceptual validity than the measures which are for the time of interview (an average of 14 months later), which varies in the period considered across all cases and can only be established for an average time to interview spell. We do, however, include the time of interview estimates for several outcomes in Section 4.3.1 (and Appendix C).

<sup>52</sup> Table A.4 of Appendix A shows some of the survey variables, and the item Bactiv illustrates the sort of question format from which the employment variable is derived.



**Table 4.3 The impact of PL Pathways on survey employment (any hours)**

April – June	Impact estimate (p.p. of IB claimants in survey employment at six months due to PL Pathways)	Counterfactual (% of IB claimants in survey employment at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
6 months after IB claim start	2.6	14.0	18.4	-0.2 : 5.4	0.07	1.81	12106

Note: Defines in employment any claimants who are in survey employment for at least one day in that month.

Table 4.3 shows PL Pathways was not estimated to have had a statistically significant net impact on survey employment (any hours) at six months after claim start. The 95 per cent confidence interval indicates that the impact ranged in value from -0.2 to 5.4 percentage points, and the impact is not statistically different from zero<sup>53</sup>. The lower precision of the smaller survey sample results in the wider range of the confidence interval for this estimate relative to the HMRC employment impact. Caution is needed for this estimate as Section 6.3 concludes that survey employment is affected by adjustments for measurement error<sup>54</sup>.

### 4.3.1 Other survey impacts: earnings and health

The survey collected a range of other outcome estimates which only exist for the interview date, a period on average 14 months after claim start, which is not ideal as it does not align the individual follow-up periods under consideration<sup>55</sup>. We briefly give an indicative overview of these impacts as they can be of interest and value provided that they are carefully interpreted in this context<sup>56</sup>.

<sup>53</sup> The P-value of 0.07 indicates that there was weak evidence for a small positive employment impact which would be statistically significant for a 90 per cent confidence interval.

<sup>54</sup> It is recommended that these are used in sensitivity analyses.

<sup>55</sup> Measures which are for time of interview (an average of 14 months later), reflect variation in the time period considered across all cases and the impact estimates can only be established for an average time to interview spell (see Section 2.3). As previously discussed in Section 3.2.1, only the impacts to six months are conceptually valid for the difference-in-difference (DiD) methods for the April to June cohort, due to the start of PL Pathways and the IB reclaim and volunteer rate. The pre-programme tests conducted using the administrative data on HMRC employment were passed to 12 months, but did not extend beyond 12 months, hence results for these outcomes cannot be validated with these pre-programme tests, although they might give a guide to the validity. The issue of interview date and variation in time period for the impact could have been avoided in the survey data collection by using an event history question format for all key outcomes of interest for the impacts and ensuring that the period the history covered fully included the claim start date to the interview date.

<sup>56</sup> The estimates can be found in Appendix C.

The employment impact at interview date is of interest because it allows a breakdown of the hours worked. The impact at 14 months on average is statistically significant at the five per cent level of significance for all hours, 16 hours or more and also 30 hours or more, and it is positive and of a reasonable size indicating PL Pathways raising employment by three percentage points. This is in accordance with the general conclusion for the survey employment estimates at six-month follow-up, that the PL Pathways impact had raised employment to a slight extent (although there was not statistical confidence the impact was greater than zero in size and about three percentage points). The impact on earnings in work was not quite statistically significant<sup>57</sup>, but was small and positive<sup>58</sup>, however, this may be due in part to technical issues and as a result is not considered reliable, but only a guide. The self-reported health impacts of PL Pathways at 14 months were small and suggested improved health via fewer reported health problems but they were not statistically significant.

#### 4.4 Overview of the impact evidence

**Table 4.4 Summary of PL Pathways six-month impact estimates**

<b>April – June 6 months after IB start</b>	<b>Impact percentage points</b>	<b>Confidence interval (95%) for impact estimate</b>
Survey employment	3	-0.2 : 5.4
HMRC employment	1	-0.2 : 1.6
Off Benefit	2	0.9 : 2.8

Notes: Off Benefit means any benefits among BB, DLA, ESA, IB, ICA, IS, JSA, PC, PIB, RP, SDA or WB. Estimates at 0 decimal points, rounded (up). Defines off benefit any claimants who are not in receipt of benefit on any day in that month. Defines in HMRC employment any claimants who are in HMRC employment in that month for at least one day. Defines in survey employment any claimants who are in survey employment in that month for at least one day.

The impact estimate and confidence intervals of the benefit and employment measures are shown in Table 4.4 with percentage point level of precision. The confidence intervals indicate that the employment impact could have been zero, or up to two (HMRC employment) or five (survey employment) percentage points while the off benefit impact was between 1 and 3 percentage points. Section 2.6 explores the employment measurement error and concludes that using the HMRC employment impact gives more reliable impact estimates under adjustments.

<sup>57</sup> The P-value of 0.06 indicates that it is statistically significant for a 90 per cent confidence interval.

<sup>58</sup> The statistical estimation of earnings did not take account of an important technical issue that affects the earnings impact regression due to the endogenous subgroup (where the value of the Y variable is dependent on the value of the error term) formed by those who have entered work (a subset of the eligible group which is formed after PL Pathways claim start and is then not exogenous as PL Pathways can affect the group) and hence cannot be considered reliable. Another important issue is that the earnings estimate may reflect omission of other important variables which account for earnings variation, for example occupation, industry.

It is reasonable to conclude that the PL Pathways impact was two percentage points in size in lowering benefit claiming rates. There is no confirming statistical evidence that the value of the impact of PL Pathways on employment was greater than zero<sup>59</sup>. However, there may have been a small positive employment impact with the impacts significant at levels lower than the conventional 95 per cent level of significance. Additionally, the confidence interval for each of the employment estimates is not narrowly confined around zero. The survey and HMRC employment both have measurement issues which contribute to less certainty over their ability to estimate the scale of employment impact reliably. Accordingly, although there is not as much statistical confidence that the employment impact estimates were different from zero, both estimates indicate there may have been a small positive impact of PL Pathways raising employment.

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<sup>59</sup> Note that this analysis adopted the 95 per cent level of confidence for hypothesis testing. This accords with general scientific practice.

# 5 Impacts by gender, age and health basis for IB claim

Each of the results in this chapter reflects how the Provider-led (PL) Pathways impact varied by key characteristics of the customers. The chapter presents impacts of PL Pathways for men and women, for those under 50 years of age or those 50 years or more, and for mental health condition<sup>60</sup> or other health condition.

In estimating the impacts of training and employment programmes, analysts usually focus on the overall population of programme participants (see Chapter 4). However, subgroup impacts can also be of interest. Beyond the overall impacts which represent the average effects of PL Pathways, usually there is also an interest in how programme effects are distributed among the programme group – for example, on whether programme impacts are distributed fairly evenly among programme participants or concentrated upon relatively few of the participants, with effects on the remaining participants small or absent. Also, if the overall impact is not statistically significant, then subgroup analysis may be used to see whether there are some persons who are nevertheless helped. Additionally, there may be a ‘hard to help’ group or some other reason for a group which is of particular interest – for such a group, a subgroup impact would indicate how well PL Pathways meets the needs of this group for this outcome. This can be useful for considering whether a policy supports equality and diversity requirements.

These subgroups are defined on the basis of administrative benefits information on these variables, defined at the start of the incapacity benefits claim. This should mean that they can be reasonably said to be based on information not affected by PL Pathways, and hence are valid for generating subgroup impacts. All the dataset samples used have sufficient cases to support subgroup analyses. The number of cases is shown in the final column of the each table. Only Incapacity Benefit (IB) claimants were analysed, as elsewhere in this report<sup>61</sup>.

It is relevant to the interpretation of subgroup impacts to acknowledge the context of how each subgroup is distributed in the population. Earlier, Section 3.1 described IB claimants in PL Pathways areas in April to June 2008: there were slightly fewer women claimants than men, the largest age category was those aged under 50, and mental health condition was the most common health reason for claiming IB.

Each table of results shows similar information as for the impacts presented in Chapter 4. As for the overall impact, if the t-test indicates the impact is not statistically significant then there is not direct evidence found of a PL Pathways effect for that subgroup. For the subgroup impacts, an additional test is shown in the table. This t-test was conducted between each group (for example, men and women) of whether the difference in impact observed between the groups is statistically significant from zero. When considering subgroup impacts and their meaning, this test should be checked rather than the standard t-test to know whether the impacts found for each group were statistically different from each other (Bloom and Michalopoulos 2010)<sup>62</sup>. Readers should refer to the guidance set out in the report statistical conventions in Section 1.5.1.

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<sup>60</sup> Health condition recorded in administrative data as the reason for claiming incapacity benefits.

<sup>61</sup> Statistics for each subgroup are based on a single regression which includes IB claimants in both subgroups.

<sup>62</sup> See Brame *et al.* 1998 for the test formula.

## 5.1 The impact of PL Pathways for men and women: proportion off benefit, HMRC employment, survey employment

**Table 5.1 PL Pathways impact at six months for men and women**

April – June, six months after IB claim start	Impact estimate (p.p. of IB claimants off DWP benefits at six months due to PL Pathways)	Counterfactual (% of IB claimants off DWP benefits at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	t-test men v. women	Number of cases
<b>Off Benefit</b>								
Overall impact	1.8	14.9	12.1	0.9 : 2.8	0.00	3.72		119,794
Women	1.2	15.7	7.3	-1.2 : 3.5	0.33	0.98	0.80	53,107
Men	2.3	14.3	16.2	1.0 : 3.6	0.00	3.57		66,687
<b>HMRC employment</b>								
Overall impact	0.7	25.5	2.7	-0.2 : 1.6	0.13	1.53		119,794
Women	0.4	27.5	1.3	-1.2 : 2.5	0.73	0.34	0.38	53,107
Men	0.9	23.9	3.9	-0.2 : 2.1	0.11	1.58		66,687
<b>Survey employment</b>								
Overall impact	2.6	14.0	18.4	-0.2 : 5.4	0.07	1.81		12,106
Women	1.7	16.4	10.4	-5.0 : 8.5	0.62	0.50	0.44	5,788
Men	3.2	12.0	26.7	-0.6 : 7.0	0.10	1.63		6,318

Notes: Off benefits means any benefits among Bereavement Benefit (BB), Disability Living Allowance (DLA), Employment and Support Allowance (ESA), Incapacity Benefit (IB), Invalid Care Allowance (ICA), Income Support (IS), Jobseeker's Allowance (JSA), Pension Credit (PC), Passported Incapacity Benefit (PIB), Retirement Pension (RP), Severe Disablement Allowance (SDA) or Widow's Benefit (WB). Defines off benefit any claimants who are not in receipt of benefit on any day in that month. Defines in Her Majesty's Revenue and Customs (HMRC) employment any claimants who are in HMRC employment in that month for at least one day. Defines in survey employment any claimants who are in survey employment in that month for at least one day.

The impact of PL Pathways on the proportion off benefit for men and women is shown in the first panel of Table 5.1. Only the PL Pathways impact on men is statistically different from zero. The PL Pathways impact on the proportion off benefit for men was 2.3 percentage points, with the confidence interval indicating it is positive and could range from 1.0 up to 3.6 percentage points in size. The counterfactual benefit level for men was 14.3 per cent, indicating that without PL Pathways 14.3 per cent of those claiming incapacity benefits would have been off benefit six months after the start of their claim, but that PL Pathways raised this to 16.6 per cent. While there was no direct evidence of a statistically significant PL Pathways effect on being off benefit for women, a t-test of the difference in impact values for men and women shows that they were not statistically different from each other.

The impact of PL Pathways on HMRC employment for men and women is shown in panel two of Table 5.1. Neither impact was statistically different from zero. However, as for the overall impact, there was some weak evidence of a positive impact of PL Pathways on HMRC employment of 0.9 percentage points<sup>63</sup>, in this case only for men. This would be consistent with the positive subgroup impact for the proportion off benefit which was also found for men. The t-test of the difference in HMRC employment impact values for men and women shows that they were not statistically different from each other<sup>64</sup>.

The impact of PL Pathways on survey employment for men and women is shown in the final panel of Table 5.1. Neither impact was statistically different from zero at the conventional level of 95 per cent. As for HMRC employment, there was some indication of a positive impact of PL Pathways on survey employment of 3.2 percentage points<sup>65</sup>, in this case only for men. However, a test of the difference between the values of the men and women impacts for survey employment indicates that they were not statistically different from each other in size<sup>66</sup>.

Overall, while direct evidence of a PL Pathways impact on outcomes for women could not be found, there was little evidence that PL Pathways had a different impact on the outcomes of men and women.

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<sup>63</sup> The P-value of 0.11 indicates that the male HMRC employment impact would be statistically significant for a confidence level of 85 per cent.

<sup>64</sup> The t-test value is 0.38 and this is not statistically significant at the 95 per cent confidence level using a table of critical values for a two-tailed t-test.

<sup>65</sup> The P-value of 0.10 indicates that the male HMRC employment impact would be statistically significant for a confidence level of 90 per cent.

<sup>66</sup> The t-test value is 0.44 and this not statistically significant using a table of critical values for a two-tailed t-test.

## 5.2 The impact of PL Pathways for those aged up to 50 years or 50 years and more: proportion off benefit, HMRC employment, survey employment

**Table 5.2 PL Pathways impact at six months for those aged up to 50 years or 50 years and more**

April – June, six months after IB claim start	Impact estimate (p.p. of IB claimants off DWP benefits at six months due to PL Pathways)	Counterfactual (% of IB claimants off DWP benefits at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	t-test under 50 v. 50 years +	Number of cases
<b>Off Benefit</b>								
Overall impact	1.8	14.9	12.1	0.9 : 2.8	0.00	3.72		119,794
Under 50 years	2.3	14.5	15.7	1.2 : 3.5	0.00	4.07	1.23	90,600
50 years and over	0.4	16.2	2.2	-2.1 : 2.8	0.78	0.28		29,194
<b>HMRC employment</b>								
Overall impact	0.7	25.5	2.7	-0.2 : 1.6	0.13	1.53		119,794
Under 50	0.7	26.4	2.6	-0.3 : 1.7	0.19	1.30	0	90,600
50 years and over	0.7	22.6	3.3	-1.5 : 3.0	0.52	0.64		29,194
<b>Survey employment</b>								
Overall impact	2.6	14.0	18.4	-0.2 : 5.4	0.07	1.81		12,106
Under 50 years	3.4	12.6	27.1	0.1 : 6.8	0.04	2.01	0.47	8,138
50 years and over	-0.1	18.0	-0.5	-6.8 : 6.7	0.98	0.03		3,968

Notes: Off benefits means any benefits among BB, DLA, ESA, IB, ICA, IS, JSA, PC, PIB, RP, SDA or WB. Defines off benefit any claimants who are not in receipt of benefit on any day in that month. Defines in HMRC employment any claimants who are in HMRC employment in that month for at least one day. Defines in survey employment any claimants who are in survey employment in that month for at least one day.

The impact of PL Pathways on the proportion off benefit for those aged less than 50 years and those aged 50 years or more is shown in the first panel of Table 5.2. Only the PL Pathways impact on those aged less than 50 years was statistically different from zero. The PL Pathways impact on the proportion off benefit of those aged less than 50 years was 2.3 percentage points, with the confidence interval indicating it is positive and could range from 1.2 up to 3.5 percentage points in size. Testing indicates the impact values for being off benefit for those less than 50 and those 50 years or more were not statistically different from each other in size<sup>67</sup>.

<sup>67</sup> The t-test value is 1.23 which is statistically significant for critical values at the 80 per cent level in a two tailed test.

Neither the HMRC employment impacts nor survey employment impacts were statistically significant from zero for the under 50 years and 50 years and over<sup>68</sup>.

Taken together, these results suggest that the PL Pathways impact was not different for younger and older people for the proportion off benefit and employment measures.

### 5.3 The impact of PL Pathways for those with a mental health condition and for those with other health conditions as a reason for claiming IB

**Table 5.3 PL Pathways impact at six months for a mental health condition or other health condition**

April – June, six months after IB claim start	Impact estimate (p.p. of IB claimants off DWP benefits at six months due to PL Pathways)	Counterfactual (% of IB claimants off DWP benefits at month six if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	t-test mental health v. other	Number of cases
<b>Off benefit</b>								
Overall impact	1.8	14.9	12.1	0.9 : 2.8	0.00	3.72		119,794
Mental health condition	2.4	9.2	25.9	0.1 : 4.7	0.04	2.03	0.66	47,717
Other health condition	1.5	18.5	8.0	0.1 : 2.8	0.03	2.16		72,077
<b>HMRC employment</b>								
Overall impact	0.7	25.5	2.7	-0.2 : 1.6	0.13	1.53		119,794
Mental health	0.9	23.9	3.7	-1.2 : 3.0	0.19	1.30	0.38	90,600
Other health	0.5	26.5	1.9	-0.7 : 1.6	0.52	0.64		29,194
<b>Survey employment</b>								
Overall impact	2.6	14.0	18.4	-0.2 : 5.4	0.07	1.81		12,106
Mental health	1.6	8.4	19.0	-5.2 : 8.4	0.65	0.46	0.45	3,979
Other health	3.4	17.2	19.8	-0.3 : 7.0	0.07	1.80		8,127

Notes: Off benefits means any benefits among BB, DLA, ESA, IB, ICA, IS, JSA, PC, PIB, RP, SDA or WB. Defines off benefit any claimants who are not in receipt of benefit on any day in that month. Defines in HMRC employment any claimants who are in HMRC employment in that month for at least one day. Defines in survey employment any claimants who are in survey employment in that month for at least one day.

<sup>68</sup> For survey employment, the P-value of 0.04 for those under 50 years indicates that at a confidence level of 80 per cent this would be statistically significant.



The impact of PL Pathways on the proportion off benefit for those with a mental health condition and for those with other health conditions is shown in the first panel of Table 5.3<sup>69</sup>. There was a statistically significant PL Pathways impact on both those with a mental health condition and those with other health conditions. The PL Pathways impact on the proportion off benefit of those with a mental health condition was 2.4 percentage points, with the confidence interval indicating it was positive and could range from 0.1 up to 4.7 percentage points in size. The PL Pathways impact on the proportion off benefit of those with other health conditions was 1.5 percentage points, with the confidence interval indicating it was positive and could range from 0.1 up to 2.8 percentage points in size. The counterfactual off benefit level for those with other health conditions was 18.5 per cent, indicating that without PL Pathways 18.5 per cent of those claiming incapacity benefits with other health conditions would have been expected to be off benefit six months after the start of their claim, but that PL Pathways raised this to 20 per cent. There was a much lower counterfactual off benefit level for those with mental health conditions than those with other health conditions. The impact of PL Pathways for mental health conditions was higher at 2.4 percentage points than the impact for those with other health conditions at 1.5 percentage points. However, the impact size for those with mental health conditions was not substantially greater than it was for those with other health conditions as a t-test comparing these impacts indicates that they are not statistically different to each other in size<sup>70</sup>.

It should be noted that the range of the impact on the proportion off benefit indicated by the confidence interval is wider for mental health conditions than for the other subgroups considered, and this is likely due to the diversity of the health conditions within these categories. This means that statistically the data vary within the groups used to define the category and hence there is a much greater variation observed, and there is also much more likely to be unobserved differences remaining within and between the groups. This means that some caution should be adopted when considering this subgroup and the interpretation of the findings (more so than with the other subgroup impacts).

Neither the HMRC employment impacts nor survey employment impacts are statistically significant from zero for those with a mental health condition and those with another health condition<sup>71</sup>.

There was evidence that PL Pathways was equally effective in raising the proportion off benefit for both those with mental health conditions and other health conditions.

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<sup>69</sup> The definition of mental health and other health in the administrative benefits data is given in Section A.4 of Appendix A.

<sup>70</sup> The t-test value is 0.66 and using a table of critical values for the t-test for a two tailed test this is not statistically significant.

<sup>71</sup> For HMRC employment, the P-value of 0.19 for those with a mental health condition indicates that for a confidence level of 80 per cent this impact would be statistically significant. For survey employment, the P-value of 0.07 for those with other health condition indicates that at a confidence level of 90 per cent this impact would be statistically significant.

## 5.4 Summary of PL Pathways subgroup impacts

The findings indicate that:

- PL Pathways impacts had a statistically significant impact for men, but not for women, and similarly for those who were less than 50 years but not for those aged 50 years and over. However, when tested these variations in impact size were not statistically different from each other. PL Pathways raised the proportion off benefit at six months after claim start for men and for those aged less than 50 by about two percentage points<sup>72</sup>. The findings for HMRC employment and survey employment were not statistically significant, nor were they statistically different to each other.
- For both those with mental health conditions and those with other health conditions, the impacts of PL Pathways on the proportion off benefit were statistically significant with a positive two percentage point increase in the level off benefit at six months for both these subgroups. The impact of PL Pathways on the proportion off benefit for those with a mental health condition was 2.4 percentage points and for other health conditions was 1.5 percentage points, however, testing indicates that these estimates are equivalent in size. As the estimated counterfactual level off benefit for mental health if PL Pathways did not exist was only half that for other health conditions (9.2 per cent against 18.5 per cent), for those with a mental health condition the impact gained from PL Pathways led to a greater relative improvement in the proportion off benefit as there was more room to improve. For health conditions, as for other subgroups, the employment impacts for PL Pathways had no statistical significance at the conventional test level.

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<sup>72</sup> This can be compared to the overall impacts which represent average effects of PL Pathways on outcomes (that is, effects on a typical member of the programme group) were positive and around two percentage points in size, for off benefit and one percentage point for HMRC and survey measures of employment.

# 6 Discussion of the findings and conclusions

This chapter initially considers whether the findings are sensitive to the timing of the group selected for analysis. Then the results from this impact study are compared to earlier Jobcentre Plus findings. Finally, a brief review of the overall findings is provided.

## 6.1 Comparing the January to March 2008 and April to June 2008 PL Pathways impacts

The impact findings in this report reflect PL Pathways Phase 1 for April to June 2008. Analyses were also carried out for PL Pathways Phase 1 January to March 2008 to test the sensitivity of the April to June results. This is the period immediately after the start of PL Pathways and constitutes the first three months of PL Pathways service operation. The reason for considering January to March, is that it might give some guide to whether the PL Pathways impacts found for the April to June group were seasonal, or whether they show programme maturity (as the programme runs for longer, the impact can be expected to differ over time, usually it might be expected to improve). Only administrative data can be considered for this group, as the survey only covered the April to June group.

The full results for this sensitivity analysis are given in Appendix B. Both the administrative benefit and Her Majesty's Revenue and Customs (HMRC) employment pre-programme tests were passed at six months after claim start, as shown in Figures B.1 and B.2. The impact size was around the value of zero and the confidence interval shows that the impact is statistically equivalent to zero. These findings support the use of the difference-in-difference (DiD) method for these outcomes.

Comparing the PL Pathways impact on the proportion off benefit for the January to March group with that for the April to June group, there is some consistency. The percentage point impact on the proportion off benefit at six months after claim start is statistically significant for both the January to March and April to June groups, and is positive. Reducing the precision of the impacts, at six months after claim start they are both two percentage points (a t-test of the impacts indicates that they are not statistically different from each other in size<sup>73</sup>). For the employment rate, comparing the PL Pathways impact for the January to March group with that for the April to June group, the picture is more mixed. This is partly because the results for the employment outcome were less clear for the April to June group already. At six months after claim start, the April to June HMRC employment impact was not statistically significant from zero and about one percentage point in size. However, the January to March findings were also not statistically significant and would suggest that there was if anything a slightly negative PL Pathways impact on HMRC employment at six months after claim start. This provides little evidence supporting a positive impact on HMRC employment as there was no statistically significant finding for either the January to March or April to June groups. HMRC employment had measurement issues and it is more common to observe a programme maturity effect that would raise the impact between January to March and April to June and hence this suggests the employment impact possibly grew in size and reached marginal statistical significance, but remained small.

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<sup>73</sup> See Brame *et al.* 1998 for the formula. The t-test value is 1.01 and using a table of critical values for the t-test for a two tailed test this is not statistically significant.

## 6.2 Comparing the net impacts of Jobcentre Plus Pathways and Provider-led Pathways

In this section, the PL Pathways impacts are compared with those reported for earlier impact studies of Jobcentre Plus Pathways to Work.

Table 6.1 collates the impacts from the various sources with sets of three rows for each outcome, which indicate the impact for each type of outcome, the follow-up period and the counterfactual. For example, the first three rows give the impact on the proportion claiming Incapacity Benefit (IB) for each Pathways evaluation, with follow-up periods varying between five to six months for the different evaluations, together with the estimated counterfactual for the benefit claiming rate that would have existed without the programme. There are limits to the comparability of figures in Table 6.1, due to the fact that earlier impact studies did not use all the same data types or data sources or produce all the same impacts with regard to the follow-up period (sometimes only the peak was reported) or the outcome measure. However, the statistical method and even the specifications are mostly the same across these evaluations which would help to ensure that the results were comparable.

Unfortunately, for the outcome ‘off IB’, the PL Pathways evaluation found no pre-programme test which was passed and hence the PL Pathways results are not statistically valid (therefore, we did not report this impact in Chapter 4). However, the impact was similar in scale and measured at similar follow-up times after the IB claim start, so Table 6.1 shows there is some weak consistency exhibited.

**Table 6.1 Comparing overall impacts found for Jobcentre Plus Pathways and PL Pathways**

Pathways impacts	Pilot areas	Expansion	Expansion	PL Pathways
	Apr 04	Oct 05	Apr 06	
Off IB	6.3**	6.0**	6.5**	6.1**
Follow-up period (months) peak	5	5	6	6
Counterfactual #	20	25	30	29.4
On JSA	NA	2.6**	2.5**	2.0**
Follow-up period (months) peak		4	5	5
Counterfactual		7	8	9.4
Off IB, SDA and JSA		4.0**	4.0**	3.6**
Follow-up period (months)		6	6	6
Counterfactual		78	80	72
Off ALL benefits	NA	NA	NA	1.8**
Follow-up period (months)				6
Counterfactual				14.9
Off ALL benefits	NA	NA	NA	1.1**
Follow-up period (months)				12
Counterfactual				23.4
Survey employment any hours (interview week)	7.4*	NA	(-0.9)	3.48**
Follow-up period (months)	18		16	14

Continued

**Table 6.1 Continued**

Pathways impacts	Pilot areas	Expansion	Expansion	PL Pathways
	Apr 04	Oct 05	Apr 06	
Counterfactual	29.7		25.8	17
Survey Employment any hours (month 6)	NA	NA	NA	2.6*
Counterfactual				14
Survey Employment any hours (month 12)	NA	NA	NA	3.1**
Counterfactual				15.2
HMRC Employment (month 6)	NA	NA	NA	0.7
Counterfactual				25.5
HMRC Employment (month 12)	NA	NA	NA	1.0*
Counterfactual				24.9

Notes: stars indicate t-test at \*\* five per cent l.o.s \* 10 per cent l.o.s.

Sources for Jobcentre Plus evaluation estimates are cited numbers in the text or taken from figures in Bewley *et al.* 2008. For the PL Pathways measure of the proportion off IB, the pre-programme test does not support the validity of this impact analysis. The PL Pathways figures for On IB and On Jobseeker's Allowance (JSA) are not reported elsewhere. For PL Pathways, Off IB/Severe Disablement Allowance (SDA)/JSA also includes Employment and Support Allowance (ESA). Off all benefits includes: Bereavement Benefit (BB), Disability Living Allowance (DLA), ESA, IB, Invalid Care Allowance (ICA), Income Support (IS), JSA, Pension Credit (PC), Passported Incapacity Benefit (PIB), Retirement pension (RP), Severe Disability Allowance (SDA) or Widow's Benefit (WB). In the reports from which these figures were sourced the impact was for 'proportion off benefit' but the presented counterfactual was for 'proportion on benefit' but here to ensure consistency of the measures the counterfactual has been converted to the proportion off benefit.

For impacts on 'On JSA'<sup>74</sup>, the PL Pathways impact study found two percentage points impact for being on JSA, it was statistically significant and peaked at a similar time (five months) to the earlier Jobcentre Plus impact studies. This reflects the fact that movement between benefits after the initiation of the IB claim takes up a share of those who leave IB (and hence the proportion off all benefits can be of interest). It also indicates that PL Pathways can be attributed with a reasonable increase in JSA claims, and similarly for Pathways in Expansion areas. Again, the PL Pathways evaluation found no pre-programme test which was passed for the JSA entry outcome, and hence the PL Pathways results are not statistically valid (therefore, we did not report this impact in Chapter 4).

In line with the findings for 'Off IB' and 'On JSA', the combined measure 'Off IB, SDA and JSA' showed similar impacts for PL Pathways and Jobcentre Plus Pathways, all showing an impact of around four percentage points.

Survey employment of any hours observed in the interview week exhibited broad variation across the studies. One statistical source of the variation was likely to be the differing 'average time to interview' which forms the 'follow-up period' for such an impact. As discussed earlier in the report, such impacts do not align the start date for all cases, and hence the follow-up periods vary across all cases. Interestingly, the counterfactual for these survey employment measures from other Jobcentre Plus impact studies is 26 to 29 per cent at on average 18 and 16 months follow-up and this is higher than for the PL Pathways survey employment at 17 per cent when 14 months on

<sup>74</sup> While an important outcome if 'on IB' is used since many exit to move to other benefits, it is not reported separately in Chapter 4, since the off benefit measure in this report accounts for movement off all benefits.

average follow-up, but is in accordance with the HMRC employment counterfactual for PL Pathways of 25 per cent at 12 months (in considering the counterfactual employment level, see the earlier discussions about HMRC employment and also Section 6.3). This suggests that the statistical issues related to the follow-up period contribute to the variation in counterfactual survey employment measured. The PL Pathways surveys were carried out at shorter follow-up periods and hence the PL Pathways employment rate could be expected to be lower (there is less time to be observed entering employment).

In conclusion, to the limited extent that valid comparison can be made, the net impacts of PL Pathways and Jobcentre Plus Pathways appear to be comparable in scale.

### 6.2.1 Comparing the subgroup impact findings on proportion off benefit for Jobcentre Plus Pathways and PL Pathways

**Table 6.2 Comparing findings on proportion off benefit with Jobcentre Plus Pathways**

	PL Pathways	Jobcentre Plus Pathways
Men and Women	Only the impact for men is statistically significant from zero in size. No statistically significant differences in impact size between men and women.	No statistically significant differences in impact size between men and women; similar size of impact for men and women; statistically significant impacts for men and for women. The impacts were consistent with the findings for men and women in the Pilot areas impact study (Bewley <i>et al.</i> 2008: 56).
Some consistency of results between PL Pathways and Jobcentre Plus Pathways.		
Under 50 years and 50 years and over	Only the impact on those aged less than 50 years is statistically different from zero. Testing indicates that the impacts of those aged less than 50 and those 50 years and over are not statistically different in size.	Those aged less than 50 years had a stronger impact, and Pathways was more effective for them but there was a statistically significant impact for both those aged less than 50 years and those aged more than 50 years. There were statistically significant differences between the two age groups in the impact of Pathways on combined benefits receipt from month six to month eight, of 3.0 to 3.8 percentage points for those younger compared to older. This finding was consistent with the Pilot areas impact study (Bewley <i>et al.</i> 2008: 65)
Divergence of results between PL Pathways and Jobcentre Plus Pathways.		
Mental health condition and Other health condition	There was a statistically significant impact for both those with a mental health condition and those with other health conditions. However, the impact size for those with a mental health condition was not statistically different to that of other health condition.	The impact of Pathways was greater in size for those with a mental health condition, and there was a statistically significant impact for both those with a mental health condition and those with other health conditions. There was no evidence that Pathways was more effective in reducing the proportion on benefit for either group. This was consistent with the Pilots impact study, where the impact was found to be similar in size (Bewley <i>et al.</i> 2008: 71).
Consistency of results between PL Pathways and Jobcentre Plus Pathways.		

Note: The Jobcentre Plus findings are for 'Off IB, SDA and JSA'.

Table 6.2 summarises the results of the subgroup impacts analysis for the Jobcentre Plus Pathways to Work expansion areas impact study (Bewley *et al.* 2008) for proportions on administrative benefit<sup>75</sup> for up to eight months follow-up after claim start, and compares these with the Jobcentre Plus Pathways Pilot impact study subgroup impacts.

These PL Pathways subgroup impact findings for the Jobcentre Plus Pathways to Work evaluations are mostly consistent. However, whereas Jobcentre Plus Pathways had strongly different impacts for younger and older age groups, PL Pathways had no conclusive evidence that the impacts differed by age group. Additionally, the PL Pathways impacts were in accordance with the Pathways Expansion impact study findings for health condition subgroup impacts, but the Pathways Expansion findings were in contrast to those of the Pathways Pilots. For this latter finding, it seems PL Pathways continued the pattern of impacts found for mental health and other health conditions in the Pathways Expansion. This pattern of variation may be indicative of results that have changed over time for the PL Pathways and Jobcentre Plus Expansion relative to that of the Pilots. This suggests that PL Pathways continued what was concluded in the expansions impact study to be possibly a more effective provision delivery for those with mental health conditions that may have arisen as a result of learning from the Pilot Pathways<sup>76</sup>.

### 6.2.2 Discussion of the divergent subgroup impact findings

There are a number of possible reasons for the divergence in impact for the younger and older age subgroups under PL Pathways provision to that of Jobcentre Plus. This is because it is often unclear as to whether differences in programme impacts on different subgroups are attributable to intrinsic differences between the groups or because they were treated differently under the programme. This difference in impacts might or might not have resulted had the two subgroups received the same services. This is especially important if the programme being examined involves flexibility in what is actually provided, as is the case with PL Pathways, which has been described as a ‘black box’ or a ‘bundle of potential services’.

### 6.2.3 PL Pathways services

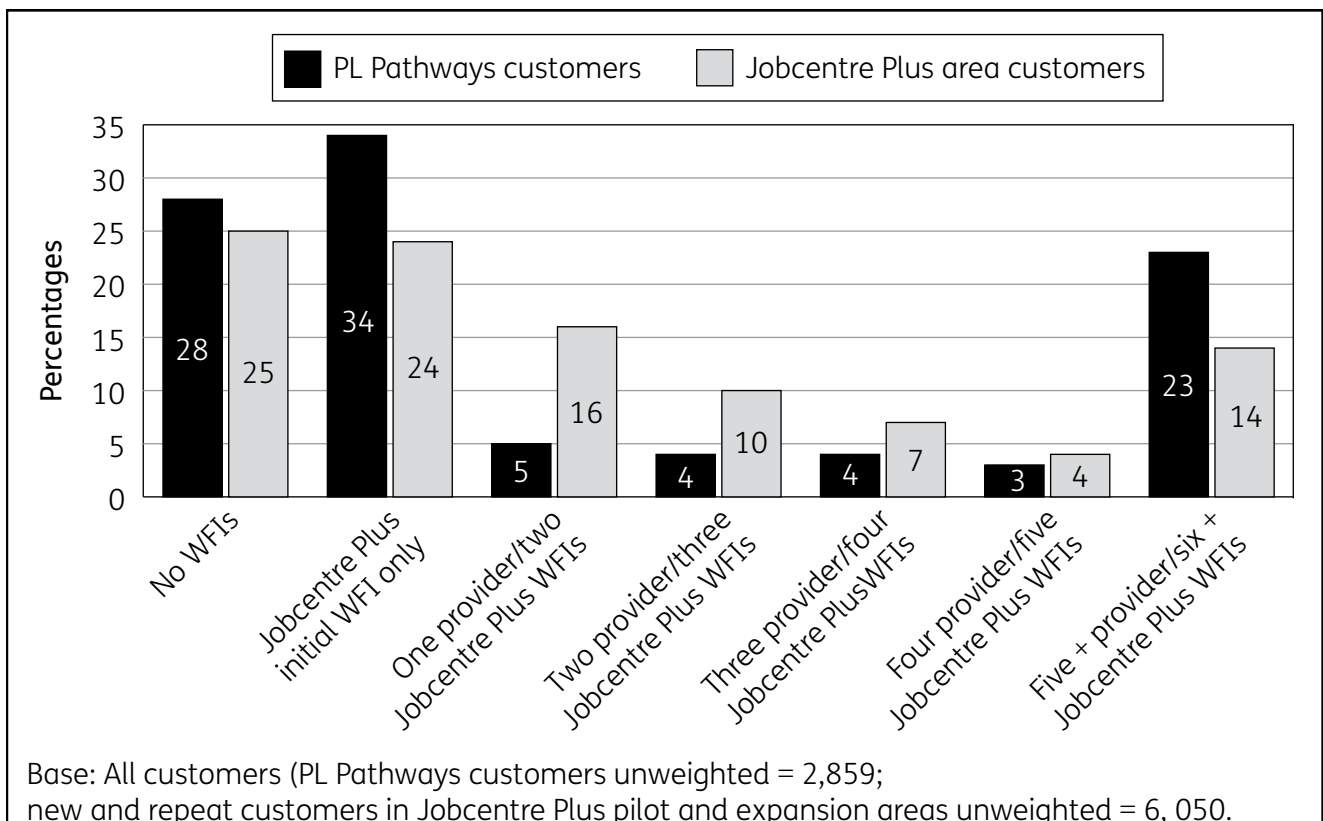
These subgroup findings seem most likely to be derived from the service delivery and the pattern of effectiveness of the Pathways provision. There is evidence that the receipt of services differed distinctly between PL Pathways and Jobcentre Plus areas, and also that the receipt of services was higher for PL Pathways but that this was associated with lower work outcomes. This might accordingly affect the impacts observed for PL Pathways and Jobcentre Plus Pathways.

75 The benefit measure was defined by Bewley *et al.* as off IB, SDA and JSA. Note that the benefits included in the off benefit reported here includes off BB, DLA, ESA, IB, ICA, IS, JSA, PC, PIB, RP, SDA or WB.

76 Bewley *et al.* (2006: 75) concluded this drawing on qualitative evidence which suggested that within the original pilot areas, some Personal Advisers encountered particular difficulties in helping customers with mental health conditions and felt that more training would be beneficial (Knight *et al.*, 2005). They also noted ‘... The effectiveness of the Condition Management Programme (CMP) may also have improved over time as lessons were learned from the roll-out in the pilot areas. Certainly the qualitative evidence suggested that initially a portion of referrals were inappropriate, and as a large proportion of those referred to the CMP had a mental or behavioural disorder, improvements in its operation could be expected to have a more pronounced impact on this group of customers (Barnes and Hudson, 2006). If the experience gained in implementing Pathways in the pilot areas resulted in improved provision from the outset in the expansion areas, this might, to some extent, explain the divergence between areas in the effectiveness of Pathways for those with a mental health condition (Bewley *et al.* 2006:75).’

The PL Pathways impact study only considers outcomes to six months after claim start. During this period, the process design suggests that the first Jobcentre Plus Work Focused Interview (WFI) should take place between weeks 8-13 of the claim<sup>77</sup>, with an earlier<sup>78</sup> Personal Capability Assessment (PCA) at week 12, and once referred on to the provider at this WFI, the five mandatory WFIs should occur at monthly intervals during the time at the provider. Hence, this first six months mostly covers the period during which customers are with Jobcentre Plus and might have their first WFI (recall the PL Pathways process described in Section 1.2), and perhaps have received their referral to the provider, and then have had the first one or a few of their provider WFIs. It is not entirely clear how long the average time to the provider WFI was, but qualitative evidence suggests that ‘... the time interval between referral and first provider interview ranged from between two and eight weeks ...’ (Nice *et al.* 2009: 67). As well as a variety of patterns of timing of services, there was a variety of patterns for actual services received as attendance at WFI did not occur for everyone, for a variety of reasons. Department for Work and Pensions (DWP) administrative data statistics indicate that for the PL Pathways April to June 2008 group 44.2 per cent had an initial Jobcentre Plus WFI (Hayllar and Wood 2011: 22) while around 10 per cent could have had the initial WFI waived ((Hayllar and Wood 2011: 23), however, the survey suggests a higher share (68 per cent) had the first Jobcentre Plus WFI (Hayllar and Wood 2011: 22). Qualitative evidence suggests that it was possible to have a provider WFI without having had a Jobcentre Plus WFI (‘... where people had not had a work-focused interview at Jobcentre Plus, most said that either the provider or Jobcentre Plus had sent out a letter to them detailing that an appointment had been made with the provider’ Nice *et al.* 2009: 67).

**Figure 6.1 Comparing the number of WFIs attended by customers in PL Pathways and Jobcentre Plus areas**



<sup>77</sup> There is no official data on the dates when the PCA took place.

<sup>78</sup> Prior to Pathways, the PCA generally took place after the first six months of the claim.



There is survey evidence that the receipt of Pathways services differed distinctly between the PL Pathways and Jobcentre Plus areas, even for the Jobcentre Plus services: ‘The pattern of attendance at multiple WFIs in Provider-led Pathways areas is distinct from that observed in the Jobcentre Plus led areas’ (Hayllar and Wood 2011: 32). This pattern can be seen in Figure 6.1. In other PL Pathways evaluation evidence, the services receipt pattern was linked to ‘parking’ by providers of groups of customers who are harder to help:

*‘... It is also possible that the apparent higher level of attendance masks ‘parking’ by Providers of groups of customers who are harder to help. This could occur where customers continue to be asked to attend meetings, but these are cursory and do not lead to significant assistance. This concern was raised by earlier qualitative work<sup>79</sup> ...’*

(Hayllar and Wood 2011: 32).

The design of PL Pathways where the services were delivered by private contracted provision after initial Jobcentre Plus provision may have altered the targeting behaviour or effectiveness of the Pathways services provision (by either Jobcentre Plus staff or providers, or both). One scenario is that Jobcentre Plus staff behaviour was affected by the competitive pressures relating to the introduction of private provision stage of PL Pathways and hence they felt under performance pressure and this altered how the service was delivered. There was some qualitative evidence supporting this, as it was found that ‘... Jobcentre Plus advisers felt the loss of their caseloads keenly ...’ (Nice *et al.* 2009: 5) and ‘... there was some concern amongst advisers that their role in Pathways would at some point be phased out and their jobs would be at risk ...’ (Nice *et al.* 2009: 18). The provider services provision itself could also be the source of the impact difference. The PL Pathways survey evidence showed that high provider WFI services were associated with lower work outcomes in PL Pathways areas (Hayllar and Wood 2011:105), which qualitative evidence had linked to ‘parking’.

#### **6.2.4 Statistical and methodological considerations**

For age subgroups there may be variation in the incidence of these subgroups, and how the local labour market conditions and opportunities might vary for these both within the local areas and over time. Compositional differences have been accounted within the regression context using explanatory variables<sup>80</sup>. The DiD method should account for this variation where it is fixed, but might be less successful if there was a differential effect for some of the analysis groups. This analysis additionally controlled for locality by using comparison areas that were matched to the PL Pathways areas, although this can only account for observed differences in the variables that were used to define the matches (pre-programme test on the proportion off benefit at six months, Office for National Statistics (ONS) index of similarity, size of area). Exploring the issue of the local labour markets effects further, the size of the of the PL Pathways Phase 1 was about 30 per cent of Great Britain (Figure 1.1) and the districts were quite diversely situated and with a variety of local labour market conditions (Appendix G). It seems very unlikely that for such a diverse range of areas covering such a great part of Britain that a particular age group might be differentially affected due to labour market opportunities only for the PL Pathways areas in the manner observed for the PL Pathways subgroup impacts.

In conclusion, these divergent subgroup findings for the younger and older age groups seem to be derived from the programme provision and the pattern of effectiveness of the Pathways provision in the PL Pathways areas contrasting with that of the Jobcentre Plus Pathways.

<sup>79</sup> Hudson *et al.* 2010 and Tennant *et al.* 2010.

<sup>80</sup> This included the health condition variables.

### 6.3 Overall conclusions on PL Pathways impacts

The context of this analysis period for these PL Pathways results is the six months immediately after claim start, during which customers are with Jobcentre Plus and might have their first WFI, PCA and perhaps undertake the transfer to the providers and have a few provider WFI (see Section 1.2). In addition, the impacts reflect the whole PL Pathways system, including those who never actively participated in WFI or services.

The overall impact representing the average effect of PL Pathways on outcomes (that is, effects on a typical individual claiming incapacity benefits) was positive and around two percentage points in size for the proportion off benefit. There was a smaller not clearly statistically significant impact on HMRC employment of one percentage point.

The subgroup impact findings indicate no uniform evidence of a differential impact of PL Pathways for the proportion off benefit for men and women, nor for those who were less than 50 years and those aged 50 years or more. PL Pathways was estimated to have raised the proportion off benefit at six months after claim start for these groups by about two percentage points. There was more consistent evidence that PL Pathways raised the proportion off benefit to an equivalent extent for both those with mental health conditions and those with other health conditions, again by two percentage points. For all subgroups, there was no conclusive evidence of a PL Pathways impact on employment, as the findings for HMRC employment and survey employment were not statistically significant, nor were they statistically different to each other but there was possibly a small positive impact which was not well detected due to measurement issues.

The overall net impacts of PL Pathways appeared to be comparable in scale to those found for Jobcentre Plus Pathways. There was some divergence between the subgroup results for PL Pathways and Jobcentre Plus Pathways. For gender and health condition, there was approximate consistency, however, for age, whereas the Jobcentre Plus Pathways had strongly different impacts for those aged less than 50 years and those aged 50 years and more, this was not evident for PL Pathways. An examination of the variation in service provision between PL Pathways and Jobcentre Plus suggests this is the potential source of the observed variation.

# Appendix A

## PL Pathways survey design and weighting

This report is based on two surveys of samples of Provider-led (PL) Pathways customers and ‘comparison area’ customers drawn randomly from the sampling frame defined from the National Benefits Database (NBD). The samples included incapacity benefits starts in 93 Provider-led Pathways local authorities (PL Pathways Phase 1 areas – December 2007 PL Pathways rollout) and 62 comparison local authorities (Jobcentre Plus Pathways pilots and Phase 1 expansion areas).

On average, the interview was carried out 14 months after the claim for benefits (See Table A.2). A telephone approach was adopted as a cost-effective means of generating the required number of cases for the intended impact assessment. An interviewer-administered approach provides advantages over postal approaches for a population where basic skills problems are known to be prevalent. An accompanying web-survey was used to enable customers who did not want to take part by telephone to provide information. The web survey was a shortened version of the telephone survey, developed predominately to capture data from customers sufficient for an impact assessment of the PL Pathways process.

Telephone was the primary mode of contact for the samples. However, where there was no contact with the selected sample members on the telephone numbers provided by the Department for Work and Pensions (DWP) or where an interview could not be conducted, for instance for reasons connected with their health condition, letters were sent to invite them to participate in a web survey. A small proportion of selected sample members took part in the web survey (it is likely that the address information as well as the telephone information provided by DWP was incorrect in many cases). The questionnaire used consisted of some of the key measures collected in the telephone survey. Variable names are consistent between the two separate data sets unless there was a change to the question in order for it to work in the self-completion context.

The pre-PL Pathways sampling frame includes those who started an Incapacity Benefit (IB) or Severe Disablement Allowance (SDA) claim between 1 April and 30 June 2007 in any of the 93 PL Pathways or 62 comparison areas. The post-PL Pathways sampling frame includes those who started an IB claim between 1 April and 30 June 2008 in either a PL Pathways or comparison area. The sampling frame customers were further constrained to be aged 18 to 59 at the time of the claim. Contact information was supplied by DWP from central records.

Where correct contact information was available, the response rate to the surveys was 67 per cent in 2007 and 64 per cent in 2008 – see Table A.3.

**Table A.1 PL Pathways survey cases and detailed outcomes**

Survey	Cases	Detailed outcomes
Pre-PL Pathways telephone data	6,493 cases	<ul style="list-style-type: none"> <li>• 6,298 cases full interview with sample member (outcome=110)</li> <li>• 156 cases full interview with proxy respondent (for instance due to communication or recall difficulties) (outcome=120)</li> <li>• 38 cases partial interview with sample member, all interviews went as far as the end of Block F (outcome=210)</li> <li>• 1 case partial interview with proxy respondent (outcome=220)</li> </ul>
Pre-PL Pathways web data	145 cases	
Post-PL Pathways telephone data	6,183 cases	<ul style="list-style-type: none"> <li>• 5,958 cases full interview with sample member (outcome=110)</li> <li>• 150 cases full interview with proxy respondent (for instance due to communication or recall difficulties) (outcome=120)</li> <li>• 74 cases partial interview with sample member, all interviews went as far as the end of Block F (outcome=210)</li> <li>• 1 case partial interview with proxy respondent (outcome=220)</li> </ul>
Post- PL Pathways web data	169 cases	

Note: the outcome codes in the table are those recorded in the survey dataset to distinguish the different cases.

**Table A.2 Length of time between qualifying claim and survey interview**

	Average number of months between qualifying claim and interview	
	Pre-intervention	Post-intervention
PL Pathways areas:		
Mean	14.40	14.15
Minimum	13.41	12.78
Maximum	17.41	18.19
Cases	3,286	3,077
Comparison areas:		
Mean	14.52	14.16
Minimum	11.14	12.78
Maximum	17.21	17.86
Cases	3,295	3,208

Notes: Based on unweighted survey data. Two outliers from PL Pathways post-intervention areas (Telephone survey) who had only 8.5 and 9.5 months since IB claim were excluded 26 values were missing for web survey respondents. 28 (26+2) observations represent 0.2 per cent of the whole sample.

**Table A.3 Survey response rates**

	April – June 2007 claimants survey	April – June 2008 claimants survey
Total sampled	15,998	15,999
Opt-outs	633	720
Per cent of total sampled	4%	5%
Poor contact information	5,649	5,466
Per cent of total sampled	35%	34%
Ineligible	84	137
Per cent of total sampled	1%	1%
Total in-scope for fieldwork	9,632	9,676
Non-contact	820	628
Per cent of in-scope for fieldwork	9%	6%
Refusal	1,147	1,533
Per cent of in-scope for fieldwork	12%	16%
Other unproductive	1,164	1,308
Per cent of in-scope for fieldwork	12%	14%
Achieved	6,493	6,183
Per cent of total sampled	41%	39%
Per cent of in-scope for fieldwork	67%	64%

Note: This is the full fieldwork information for the PL Pathways surveys.

## A.1 Choice of the comparison areas

Comparison areas were selected from amongst Jobcentre Plus Pathways areas which had already had Pathways start since 2003.

Potential comparison areas are those local authority (LA) Districts that were within the seven Jobcentre Plus Districts where Pathways was piloted and the Jobcentre Plus Districts where Pathways was expanded in October 2005. The criteria to choose the comparison areas among the potential comparators were the following:

1. A difference-in-differences (DID)-based pre-programme test was run for each PL Pathways area against each potential comparison area. The comparison area that showed the lowest absolute bias was chosen;
2. The comparison area had to show the closest Office for National Statistics (ONS) similarity score to the PL Pathways area;
3. The significance of differences found in the test results was also considered;
4. Selection of comparison areas was made with reference to their size.

The same comparator area could be chosen for more than one PL Pathways area, provided that it was of sufficient size to provide a large enough sample.

## A.2 Random sampling of survey respondents

Survey respondents for the pre- and post-PL Pathways surveys were drawn from sampling frames designed in the past. The random sample for the pre-PL Pathways survey was drawn in the following way.

1. A target of 12,000 individuals was first set (3,000 each in PL Pathways and comparison areas, for 2007 and 2008 starts);
2. To achieve this accounting for telephone number matching, opt-out rates, survey response and margin of safety, it was decided to draw a random sample of 26,000 individuals (6,500 in each survey group).
3. 13,000 individuals were randomly sampled from PL Pathways areas and the number of people found in each area identified;
4. For each comparison area a random sample of people was drawn whose size corresponded to the number of people found in the correspondent PL Pathways area (when a comparison area was used for more treated areas, the size of the sample for the comparison area was the total number of people in these treated areas). Where the number of people in the comparison area was lower than that in the correspondent PL Pathways area, all individuals were selected. The remaining cases were evenly spread among comparison areas with sufficient numbers.

## A.3 Sampling frame issues

When matching survey respondents to individuals in the sampling frames constructed in 2010, it was noted that some people were not found in the sampling frames. Furthermore, for some people the information on the treatment status (whether in a PL Pathways or comparison area) differed between survey and sampling frame. It was discovered that this was due to the fact that the original sampling frames included people whose treatment status was defined by an IB or SDA claim ended (not started) in either a PL Pathways or comparison area. The sampling frames were reconstructed to account for this problem. These revised sampling frames included only people who started an IB or SDA claim in either a PL Pathways or comparison area as this eligibility criterion is consistent with previous Pathways impact analyses.

The consequences of revising the sampling frames for the survey analysis are:

1. Some survey respondents were excluded from the surveys (48 and 48 individuals from the pre- and post-PL Pathways survey, respectively) because they did not start their IB or SDA claim in either a PL Pathways or comparison area;
2. The treatment status of remaining respondents had to be redefined based on where people lived at the start of the IB or SDA claim (in the pre-PL Pathways survey, five people who were reported as starting their IB/SDA claim in a comparison area actually started it in a PL Pathways area, and six people who were reported as starting their IB/SDA claim in a PL Pathways area actually started it in a comparison area; in the post-PL Pathways survey, 14 people who were reported as starting their IB/SDA claim in a comparison area actually started it in a PL Pathways area, and six people who were reported as starting their IB/SDA claim in a PL Pathways area actually started it in a comparison area).

## A.4 Weighting of survey data

Post-stratification weights were constructed to ensure that the achieved survey samples (pre- and post-PL Pathways surveys) are representative of the correspondent populations from which respondents were drawn (revised pre- and post-PL Pathways sampling frames). For each of the two surveys, post stratification weights were constructed for the strata identified by the combination of the following dummy variables:

- Female
- Mental health condition
- Age 18 to 29
- Age 30 to 39
- Age 40 to 49
- Age 50 to 59 – whether claimed in a PL Pathways area.

Post-stratification weights were constructed for all survey respondents (IB and SDA claimants) and sent to the National Centre for Social Research (NatCen) to be used for their report (Hayllar and Wood, 2011).

Post-stratification weights were recalculated for only those survey respondents that claimed IB. These weights were used for the impact analysis. Table A.5 below shows that the weights constructed restored the representativeness of survey respondents.

**Table A.4 Definitions of administrative data variables used**

ICDGRP	ICD 10 Diagnosis Group
1	Certain Infectious and Parasitic Diseases
2	Neoplasms
3	Diseases of the blood
4	Endocrine, Nutritional and Metabolic Diseases
5	Mental and Behavioural Disorders
6	Diseases of the Nervous System
7	Diseases of the Eye and Adnexa
8	Diseases of the Ear and Mastoid Process
9	Diseases of the Circulatory System
10	Diseases of the Respiratory System
11	Diseases of the Digestive System
12	Diseases of the Skin and Subcutaneous Tissue
13	Diseases of the Musculoskeletal system and Connective Tissue
14	Diseases of the Genitourinary System
15	Pregnancy, Childbirth and the Puerperium
16	Certain Conditions Originating in the Perinatal Period
17	Congenital Malformations and Deformations
18	Symptoms, Signs and Abnormal Clinical and Laboratory findings
19	Injury Poisoning and other consequences of external causes
20	DXRT (Deep x-ray treatment)

Continued

**Table A.4 Continued**

ICDGRP	ICD 10 Diagnosis Group
21	Hospital investigations, treatment, observation
22	Contact with or carrier of Infectious Diseases
23	Artificial Limb Damage
24	Radiotherapy, Chemotherapy (with cytotoxic drugs)
25	Aquired absence of limb
26	Presence of cardiac and vascular implants and grafts
27	NYD (Not Yet Diagnosed)
28	Surgical Treatment
29	Terminally ill
30	Other/not yet diagnosed (derived)

Age (age at claim start date)

Health (mental health = ICDGRP5, other health condition = all other codes)

**Table A.5 The characteristics of survey respondents and the population of incapacity benefits customers**

Proportion in each category	Unweighted survey data	Administrative data	Weighted survey data
<b>2007 Pre-intervention</b>			
<b>PL Pathways areas:</b>			
Female	49.38***	44.55	44.55
Age (mean, in years)	41.44***	38.63	38.81
Under 30	22.00***	28.85	28.85
30 – 39	18.11***	21.80	21.80
40 – 49	27.41***	24.94	24.94
50 – 59	32.48***	24.41	24.41
Mental health condition	31.84***	39.18	39.18
Base	3,291	42,247	3,291
<b>2007 Pre-intervention comparison areas:</b>			
Female	46.86***	44.00	44.00
Age (mean, in years)	41.74***	38.31	38.45
Under 30	19.85***	29.77	29.77
30 – 39	19.92***	21.96	21.96
40 – 49	26.98***	24.49	24.49
50 – 59	33.25***	23.78	23.78
Mental health condition	34.04***	42.19	42.19
Base	3,299	17,765	3,299

Continued



**Table A.5 Continued**

Proportion in each category	Unweighted survey data	Administrative data	Weighted survey data
2008 Post-intervention			
PL Pathways areas:			
Female	47.63***	44.48	44.48
Age (mean, in years)	41.38***	38.85	39.02
Under 30	21.21***	28.23	28.23
30 – 39	19.27***	21.69	21.69
40 – 49	28.48***	25.36	25.36
50 – 59	31.04***	24.72	24.72
Mental health condition	33.17***	38.62	38.62
Base	3,093	42,426	3,093
2008 Post-intervention comparison areas:			
Female	47.21***	43.79	43.79
Age (mean, in years)	41.69***	38.48	38.63
Under 30	21.05***	29.55	29.55
30 – 39	18.03***	20.82	20.82
40 – 49	27.50**	25.62	25.62
50 – 59	33.42***	24.01	24.01
Mental health condition	34.07***	41.97	41.97
Base	3,211	17,355	3,211

Notes: \*\*\* Difference (between unweighted survey and admin data) statistically significant at the one per cent level; \*\* At the five per cent level.

## A.5 The PL Pathways survey questionnaire

Both the pre-pilot and post pilot surveys are similar. The post-PL Pathways questionnaire contains an additional module of questions for customers in PL pathways areas which asks them about their experiences of being on the PL Pathways programme, and the services they use.

Table A.6 Selected survey variables

Variable name	Variable label/description	Value labels	Available in pre- or post-questionnaire only
Outcome	Final outcome code for case	110 full interview with named person 120 full interview with proxy person 210 partial interview with named person 220 partial interview with proxy respondent	
Intdate	Interview date		
KUseAdmn	Flag for whether customer agreed for their survey data to be linked to DWP admin data	1 Yes 2 No 3 It depends -8 Don't know outcome	
Kage	Interview checked age of respondent at last birthday		
Bactiv	Respondent's current main (work related) activity	1 Paid work as an employee (including for an agency or as a contractor)	
bactiv2 to bactiv9	Respondents previous main (work-related) activities	2 Self-employed work (intending to make a profit) 3 A work trial (or preparation for a job) 4 Voluntary or unpaid work (not including domestic work) 5 Off work temporarily (e.g. on extended leave or sick from employee or self-employed work) 6 Or were you not in work? -1 Item not applicable	
Bactoth	Respondents current other main (i.e. non-work-related) activity	1 Looking for paid work 2 A vocational or work-related course 3 A government programme or course	
Bactoth2 to Bactoth9	Respondents previous other main (i.e. non-work-related) activity	4 Another education or training course 5 Caring for a sick or disabled adult or child 6 Looking after the home or family 7 Or something else? 8 SPONTANEOUS: Inpatient in hospital (or nursing home) 9 SPONTANEOUS: Off sick/health problem was main focus 10 SPONTANEOUS: Retired 11 SPONTANEOUS: Claiming benefit 95 COMPLEX SPELL consisting of different things for short periods) 96 SPONTANEOUS AND DESPITE PROMPTING: Unable to remember -1 Item not applicable	

Continued

**Table A.6 Continued**

<b>Variable name</b>	<b>Variable label/description</b>	<b>Value labels</b>	<b>Available in pre- or post-questionnaire only</b>
FdoneN	Registration with an NDDP Job Broker	1 Yes 2 No -9 Refusal -8 Don't Know	Pre-PL Pathways only Questions and whole block F dropped early into Pre-Pilot interviewing (data only available for 100 cases)
KeligDB2 Benefit receipt – varies between pre- and post-PL Pathways	KeligDB2 Housing or Council Tax Benefit KeligDB3 Child Benefit KeligDB4 Disability Living Allowance KeligDB5 Statutory Sick Pay KeligDB6 Income Support KeligDB7 Jobseeker's Allowance or JSA KeligDB8 National Insurance Credits for Incapacity KeligDB9 Other KeligD10 DO NOT READ OUT: NONE	Dichotomous variables 1 (Has condition) 0 (Does not have this condition) -1 (Not applicable)	Pre PL Pathways only
Kelg3D Benefit receipt – varies between pre- and post-PL Pathways	Current benefits received at time of interview Kelg3D1 Housing or Council Tax Benefit Kelg3D2 Child Benefit Kelg3D3 Disability Living Allowance Kelg3D4 Statutory Sick Pay Kelg3D5 Income Support Kelg3D6 Jobseeker's Allowance or JSA Kelg3D7 National Insurance Credits for Incapacity Kelg3D8 Employment and Support Allowance or ESA Kelg3D9 Carer's Allowance Kelg3D10 Other Kelg3D11 DO NOT READ OUT: NONE	Dichotomous variables 1 (Has condition) 0 (Does not have this condition) -1 (Not applicable)	Post-PL Pathways only

Continued

Table A.6 Continued

Variable name	Variable label/description	Value labels	Available in pre- or post-questionnaire only
GImpNow	Whether respondent has current health condition	1 Yes 2 No -9 Refusal -8 Don't know -1 Item not applicable	
GSever	Severity of current health condition (limitation on everyday activities)	1 A great deal 2 To some extent 3 A little 4 Not at all -9 Refusal -8 Don't know -1 Item not applicable	
GImpCl	Whether current main health condition is the same one as that at time of claim for benefit	1 Yes 2 No -9 Refusal -8 Don't know -1 Item not applicable	
GCLam	IF (GImpNow = No OR GImpCl = No)  Whether had a health condition or disability that affected everyday activities at time of claim for benefit	1 Yes 2 No -9 Refusal -8 Don't know -1 Item not applicable	
GSeverCL	IF (GCLam= Yes OR GImpCL= Yes) THEN  Severity of health condition (limitation on everyday activities) at time of claim	1 A great deal 2 To some extent 3 A little 4 Not at all -9 Refusal -8 Don't know -1 Item not applicable	
GHltPast	Self-assessment of health at time of claim	1 Very good 2 Good 3 Fair 4 Bad 5 Very bad -9 Refusal -8 Don't know -1 Item not applicable	
GTrend	Self-assessment of change in health since time of claim	1 Been getting better 2 Been getting worse 3 Stayed about the same 4 Or has it been changeable -9 Refusal -8 Don't know -1 Item not applicable	

**Table A.7 Survey variables: Main current health, secondary current health**

Variable name/variable label/description	Value labels
<b>Main current health condition type (coded from verbatim response)</b>	Dichotomous variables
gimped1 Depression	
gimped2 Stress or anxiety	1 (Has condition)
gimped3 Fatigue or problems with concentration or memory	0 (Does not have this condition)
gimped4 Pain or discomfort	-1 (Not applicable)
gimped5 Dizziness or balance problems	
gimped6 Problems due to alcohol or drug addiction	
gimped7 Problems with arms or hands	
gimped8 Problems with legs or feet	
gimped9 Problems with neck or back	
gimped10 Arthritis	
gimped11 Difficulty with seeing	
gimped12 Difficulty with hearing	
gimped13 Speech problems	
gimped14 Skin conditions or allergies	
gimped15 Chest or breathing problems	
gimped16 Heart or blood pressure problems	
gimped17 Problems with bowels, stomach, liver, kidneys or digestion	
gimped18 Mental health condition	
gimped19 Learning difficulties	
gimped20 Progressive illness not covered above	
gimped95 Other specific answer not codeable above	
gimped96 Other vague or irrelevant answer	
gimped98 Refused	
gimped99 Don't know	
<b>Secondary current health condition (coded from verbatim response)</b>	Dichotomous variables
gimpod1 Depression	
gimpod2 Stress or anxiety	1 (Has condition)
gimpod3 Fatigue or problems with concentration or memory	0 (Does not have this condition)
gimpod4 Pain or discomfort	-1 (Not applicable)
gimpod5 Dizziness or balance problems	
gimpod6 Problems due to alcohol or drug addiction	
gimpod7 Problems with arms or hands	
gimpod8 Problems with legs or feet	
gimpod9 Problems with neck or back	
gimpoe10 Arthritis	
gimpoe11 Difficulty with seeing	
gimpoe12 Difficulty with hearing	
gimpoe13 Speech problems	
gimpoe14 Skin conditions or allergies	
gimpoe15 Chest or breathing problems	
gimpoe16 Heart or blood pressure problems	
gimpoe17 Problems with bowels, stomach, liver, kidneys or digestion	
gimpoe18 Mental health condition	
gimpoe19 Learning difficulties	
gimpoe20 Progressive illness not covered above	
gimpoe21 Other specific answer not codeable above	
gimpoe22 Other vague or irrelevant answer	
gimpoe23 Refused	
gimpoe24 Don't know	

**Table A.8 Survey variables: Main health at time of claim**

Variable name/Variable label/description	Value labels
Main health condition type at time of claim (coded from verbatim response)	Dichotomous variables
GHBED1 Depression	1 (Has condition)
GHBED2 Stress or anxiety	0 (Does not have this condition)
GHBED3 Fatigue or problems with concentration or memory	-1 (Not applicable)
GHBED4 Pain or discomfort	
GHBED5 Dizziness or balance problems	
GHBED6 Problems due to alcohol or drug addiction	
GHBED7 Problems with arms or hands	
GHBED8 Problems with legs or feet	
GHBED9 Problems with neck or back	
GHBED10 Arthritis	
GHBED11 Difficulty with seeing	
GHBED12 Difficulty with hearing	
GHBED13 Speech problems	
GHBED14 Skin conditions or allergies	
GHBED15 Chest or breathing problems	
GHBED16 Heart or blood pressure problems	
GHBED17 Problems with bowels, stomach, liver, kidneys or digestion	
GHBED18 Mental health condition	
GHBED19 Learning difficulties	
GHBED20 Progressive illness not covered above	
GHBED95 Other specific answer not codeable above	
GHBED96 Other vague or irrelevant answer	
GHBED98 Refused	
GHBED99 Don't know	

## A.6 ONS Index of similarity (The National Statistics 2001 Area Classification for Local Authorities: corresponding authorities)

To measure similarity between authorities the Squared Euclidean Distance (SED) has been used, which is based solely on the 42 variables used in the main classification. Therefore, corresponding authorities could be geographically far apart, e.g. Salford and Gateshead or Isle of Wight and Scarborough. In this context, the range is defined as the range between the two most similar authorities and the two most dissimilar authorities.

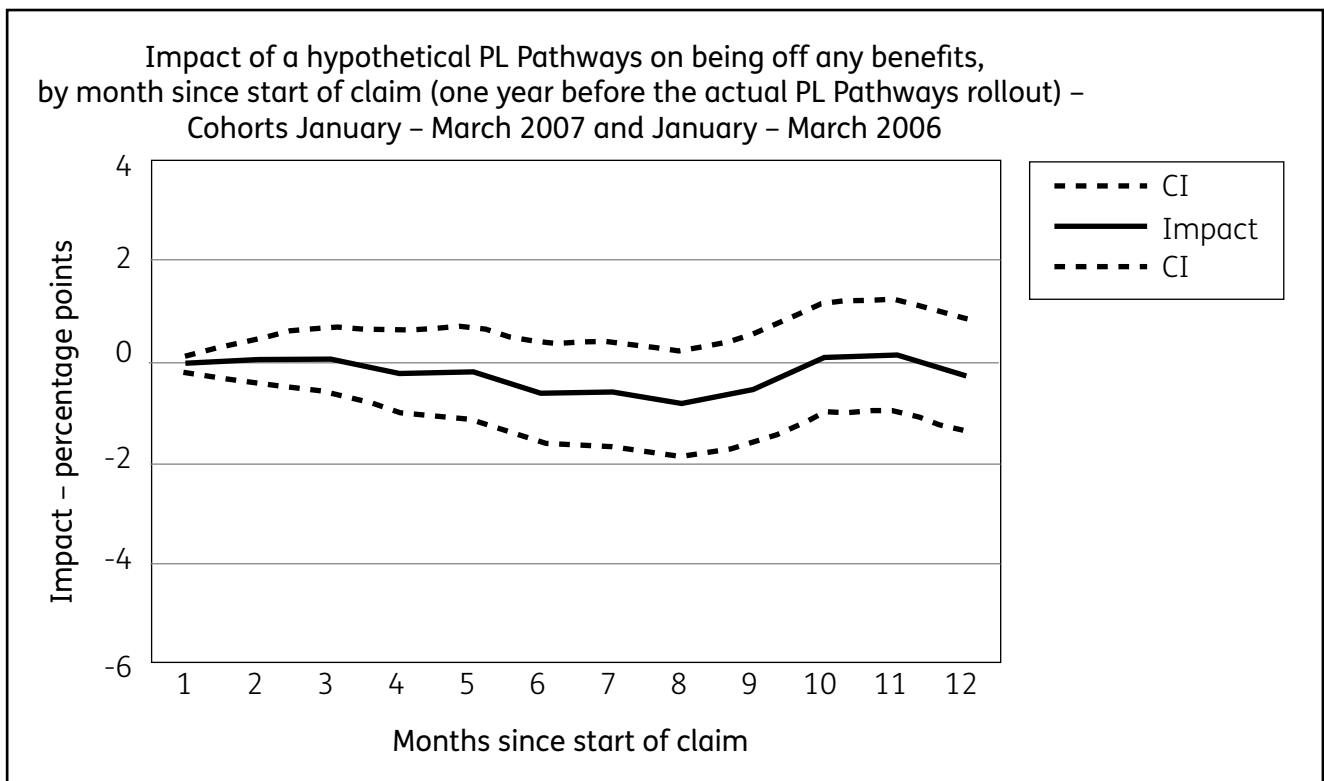
Two authorities are considered to be: **Extremely similar** if they have an SED of less than one per cent of the range between the two most similar authorities and the two most dissimilar authorities; **Very similar** if they have an SED of less than 2.5 per cent of the range; **Similar** if they have an SED of less than five per cent of the range; **Somewhat similar** if they have an SED of less than 10 per cent of the range; **Not similar** if they are more than 10 per cent of the total range apart are considered. The table of **Corresponding authorities** shows the authorities which are most similar to a particular authority.

[http://www.statistics.gov.uk/about/methodology\\_by\\_theme/area\\_classification/la/corresponding\\_las.asp](http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/la/corresponding_las.asp). The methods are set out fully here: [http://www.statistics.gov.uk/about/methodology\\_by\\_theme/area\\_classification/la/methodology.asp](http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/la/methodology.asp)

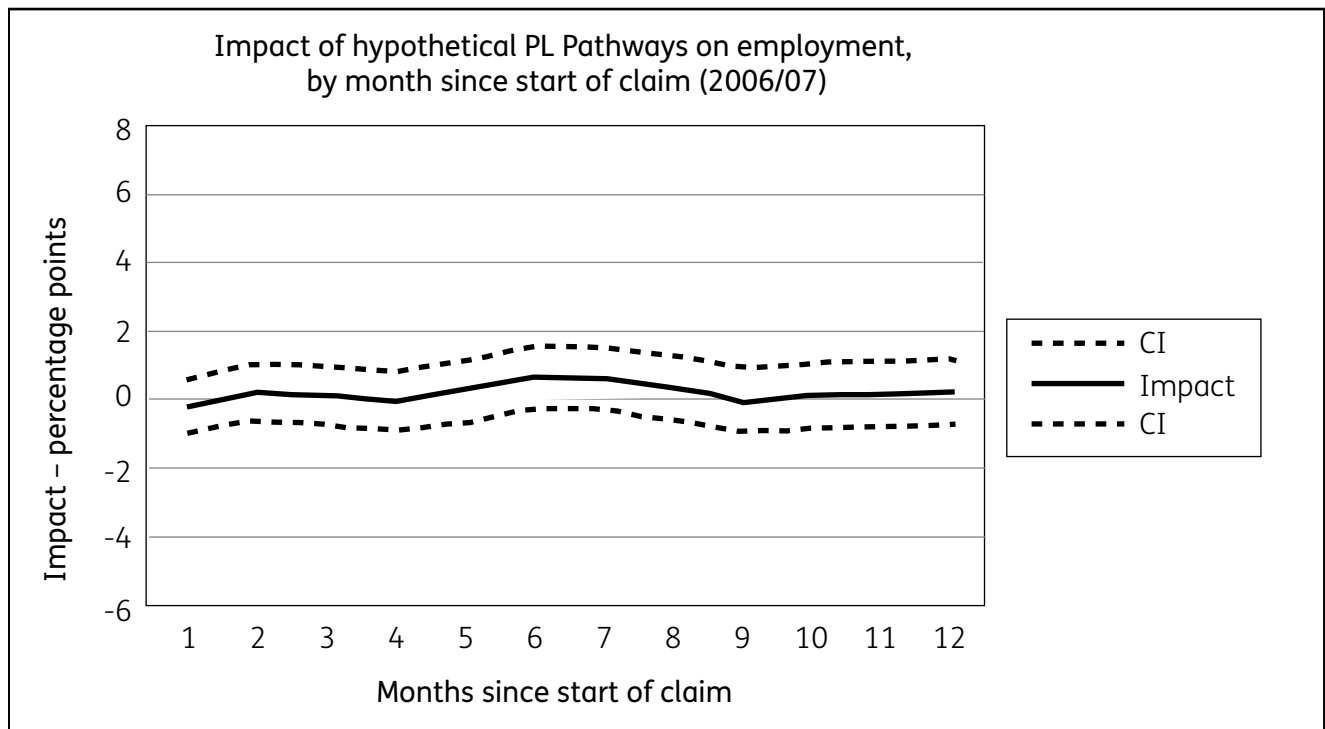
# Appendix B

## January to March administrative data cohort net impacts and pre-programme test

Figure B.1 PL Pathways pre-programme test for off benefits, over 12 months, 2006 against 2007: January – March



**Figure B.2 PL Pathways pre-programme test for in HMRC employment, over 12 months, 2006 against 2007: January – March**



**Table B.1 The impact of PL Pathways on proportion off benefit, January – March IB claimants, for 2007 against 2008**

January – March	Impact estimate (p.p. of IB claimants off DWP benefits at six or 12 months due to PL Pathways)	Counterfactual (% of IB claimants off DWP benefits at month six or 12 if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
6 months after IB claim start	2.5	16.2	15.4	1.6 : 3.5	0.00	5.12	119,128
12 months after IB claim start	2.2	23.6	9.3	1.1 : 3.3	0.00	4.02	119,128

Note: DWP benefits means Bereavement Benefit (BB), Disability Living Allowance (DLA), Employment and Support Allowance (ESA), Incapacity Benefit (IB), Invalid Care Allowance (ICA), Income Support (IS), Jobseeker’s Allowance (JSA), Pension Credit (PC), Passported Incapacity Benefit (PIB), Retirement Pension (RP), Severe Disablement Allowance (SDA) or Widow’s Benefit (WB).



**Table B.2 The impact of PL Pathways in HMRC employment, January – March IB claimants, for 2007 against 2008**

<b>January – March</b>	<b>Impact estimate (p.p. of IB claimants in HMRC employment at six or 12 months due to PL Pathways)</b>	<b>Counterfactual (% of IB claimants in HMRC employment at month six or 12 if PL Pathways was not rolled out)</b>	<b>Impact to counterfactual ratio (%)</b>	<b>Confidence interval (95%) for impact estimate</b>	<b>P-value</b>	<b>t-test (absolute value)</b>	<b>Number of cases</b>
6 months after IB claim start	-0.4	27.0	-1.3	-1.2 : 0.5	0.43	0.80	119,128
12 months after IB claim start	0.4	26.3	1.7	-0.5 : 1.4	0.36	0.92	119,128

# Appendix C

## Survey impacts at the time of interview on average 14 months after claim start

### C.1 The impact of PL Pathways on employment (survey)

**Table C.1 Estimate of the impact of PL Pathways on work outcomes at time of interview**

<b>April – June survey</b>	<b>Impact estimate (p.p. of IB claimants in work at 14 months due to PL Pathways)</b>	<b>Counterfactual (% of IB claimants in work at on average month 14 if PL Pathways was not rolled out)</b>	<b>Impact to counterfactual ratio (%)</b>	<b>Confidence interval (95%) for impact estimate</b>	<b>P-value</b>	<b>t-test (absolute value)</b>	<b>Number of cases</b>
In paid work, any hours	3.5	17.0	20.6	0.5 : 6.4	0.02	2.31	12,577
In paid work, 16 hours or more	3.0	13.6	22.1	0.2 : 5.8	0.04	2.08	12,452
In paid work, 30 hours or more	2.7	8.4	32.1	0.3 : 5.1	0.03	2.18	12,452

Notes: Based on weighted survey data. \*\*\* Statistically significant at the 1 per cent level; \*\* Statistically significant at the five per cent level; \* Statistically significant at the 10 per cent level.

C.2 The impact of PL Pathways on earnings (survey)

**Table C.2 Estimate of the impact of PL Pathways on monthly net earnings at time of interview (£)**

April – June survey	Impact estimate (change in earnings at on average 14 months due to PL Pathways)	Counterfactual (earnings level at on average month 14 if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
On average 14 months after claim start	27.7	140.68	19.7	-1.4 : 56.75	0.06	1.866	12577
Monthly net earnings at time of interview (£)							

Notes: Based on weighted survey data. \*\*\* Statistically significant at the one per cent level; \*\* Statistically significant at the five per cent level; \* Statistically significant at the 10 per cent level.

C.3 The impact of PL Pathways on health (survey)

**Table C.3 Estimate of the impact of PL Pathways on self-reported health at time of interview: health problems affecting day-to-day activities or health problems affecting day-to-day activities a great deal**

April – June survey	Impact estimate (p.p. change in health problems affecting day to day activities after on average 14 months due to PL Pathways)	Counterfactual (% of IB claimants off DWP benefits at on average month 14 if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
On average 14 months after claim start	-0.4	72.9	-0.6	-3.4 : 2.6	0.8	0.24	12,462
Health problem affects day-to-day activities							
Health problem affects day-to-day activities a great deal	-1.1	43.2	-2.5	-4.4 : 2.3	0.5	0.62	12,462

Notes: Based on weighted survey data. \*\*\* Statistically significant at the one per cent level; \*\* Statistically significant at the five per cent level; \* Statistically significant at the 10 per cent level.

**Table C.4 Survey employment in each of the research groups**

<b>Work status at interview</b>	<b>2007 %</b>	<b>2008 %</b>
<b>PL-Pathways areas:</b>		
In paid work last week	25.32 (n=825)	20.51 (n=638)
Of which, in paid work for 16 hours per week or more	85.15 (n=669)	82.61 (n=508)
Of which, in paid work for 30 hours per week or more	59.39 (n=460)	54.93 (n=332)
Of which self-employed	18.56 (n=163)	21.36 (n=141)
In paid work for 16 hours + (overall)	21.03	16.55
In paid work for 30 hours + (overall)	14.67	11.01
Self-employment rate (overall)	4.70	4.37
Sample size	3,214	3,008
<b>Comparison areas:</b>		
In paid work last week	29.29 (n=963)	21.42 (n=710)
Of which, in paid work for 16 hours per week or more	86.97 (n=802)	84.19 (n=577)
Of which, in paid work for 30 hours per week or more	59.98 (n=547)	52.18 (n=348)
Of which self-employed	19.33 (n=202)	23.15 (n=169)
In paid work for 16 hours + (overall)	24.77	17.67
In paid work for 30 hours + (overall)	17.08	10.95
Self-employment rate (overall)	5.66	4.95
Sample size	3,231	3,124

Notes: Based on weighted survey data. Telephone survey only.

# Appendix D

## Jobcentre Plus Pathways to Work

This is a brief overview of Jobcentre Plus Pathways (pilot and expansion) evaluation research and reference to the earlier research publications from their evaluation.

The Pathways to Work package of reforms ('Pathways', for short) was aimed at encouraging employment among people claiming incapacity benefits; that is, people claiming Incapacity Benefit (IB) or Income Support (IS) on the grounds of disability. Based on proposals outlined in the 2002 Department for Work and Pensions Green Paper *Pathways to Work: helping people into employment*, these reforms were first introduced on a pilot basis for new claimants in seven Jobcentre Plus districts and were subsequently extended to cover over a third of the country. National roll-out through Provider-led (PL) Pathways was in two phases: December 2007 and April 2008. Existing claimants were free to participate in Pathways on a voluntary basis. In addition, mandatory participation for some existing claimants was piloted in the original seven Jobcentre Plus districts.

The main elements of Pathways to Work were:

- A series of mandatory Work-Focused Interviews (WFIs) for those able to work but likely to need help
- A 'Choices' package offering a range of new and existing programme provision aimed at improving labour market readiness and opportunities.
- Improved financial incentives in the form of a Return to Work Credit (RTWC) customers who find work of at least 16 hours per week a weekly payment of £40 for a year if their gross annual earnings are below £15,000. Existing customers engaged in an activity linked to finding work can receive a Job Preparation Premium of £20 per week.

### D.1 The evaluation of Pathways to Work evidence

The evaluation of Pathways to Work was carried out by a consortium of research organisations led by the Policy Studies Institute and including the Institute for Fiscal Studies, Mathematica Policy Research, the National Centre for Social Research, the Social Policy Research Unit and David Greenberg of the University of Maryland. The evaluation was multi-faceted and involved qualitative analyses, large-scale quantitative surveys, impact analyses, cost-benefit analyses and a literature review of relevant programmes in the USA. It focused on evaluating separate phases of the introduction of Pathways – the effect on new claimants in the original seven pilot areas, the effect on existing claimants in the original seven pilot areas and the effect on new claimants in areas of the country to which it was expanded (the expansion).

The Jobcentre Plus-led Pathways pilots evaluation was undertaken in the original seven pilot districts, where it was extended to include research with existing as well as new customers. Evaluation was also carried out in the Jobcentre Plus 'expansion' districts (an additional 14 districts, bringing the total, once boundary changes are taken into account, to 19). A number of evaluation reports were published, including those relating to qualitative research with IB customers and Personal Advisers (PAs) and focused qualitative studies which examined different aspects of Pathways, such as PA roles and practices, Condition Management Programmes (CMPs) and RTWC; there are also reports on early and final quantitative evidence on the impact of Pathways. See the list of reports in the Reference list under the title *Jobcentre Plus Pathways to Work evaluation research*.

# Appendix E

## HMRC employment data

### E.1 The HMRC employment data

The following is an excerpt from the SWP ‘WPLS P45/6 employment data documentation metadata version 1.3’ which describes Her Majesty’s Revenue and Customs (HMRC) employment data used for these analyses.

The HMRC P45/6 data is from an administrative system developed by the HMRC for their purposes. Data is collected via P45 and P46 forms returned by an employer when an individual joins or leaves an employment scheme. An employment scheme can be paid employment. However, it can also cover other taxable payments made by employers such as occupational pensions.

The data does **not** cover all employees as there is no requirement to supply a P45 or P46 if the individual is below Pay As You Earn (PAYE) tax thresholds and is not going to be claiming new tax credits through the employer. However, some employers send in **all** details regardless and HMRC then put them on the system.

There are six categories of payments that can be recorded on the PAYE system via P45/6 forms:

- PAYE (i.e. wages for PAYE employment)
- Occupational Pensions
- Jobseeker’s Allowance (JSA)
- Incapacity Benefit (IB)
- Tax Credits
- Student Loans.

We receive details of P45 spells, and each P45 spell may belong to one or more of these categories. However, we cannot identify from the data we receive which of the categories apply for a particular P45 spell.

Occupational pension and benefit spells are marked on the dataset for analysts to remove as desired. See 2.5.20-22 (pensions) and 2.5.8 (benefits) for more information.

HMRC have informed the Department for Work and Pensions (DWP) that a spell cannot exist for Student Loans or for the majority of Tax Credit payments without it also existing for PAYE employment, and that, therefore, any spell on the P45/6 data which is not identified as occupational pension or benefit can be assumed to be employment.

Known errors in HMRC

6AprilYYYY start date	Job known to have started in a specific tax year (starting on 6AprYYYY), or possibly in an earlier year, but actual date not known. NB see Section 4.2 for code to explicitly identify 6 April starts.
5AprilZZZZ end date	Job known to have ended in a specific tax year (ending on 5AprZZZZ) but actual date not known. NB see Section 4.2 for code to explicitly identify 5 April ends.

6AprilXXXX end date	6 April each year has a higher frequency of end dates than would normally be expected due to seasonal and in-month patterns. It is believed that these are due to keying errors, with 6April being entered as an end date where in fact 5April should be entered.
1 day jobs (i.e. start date is one day before end date)	HMRC receive a P45 giving the end date of a job, but cannot identify the correct record that this should amend to, hence start date is unknown. HMRC staff enter the real end date and impute a start date of one day before the end date.
Specific known dates	<p>There are certain dates which are known to have a higher frequency of employment ends than would normally be expected due to seasonal and in-month patterns.</p> <p>It has been suggested that these are automatically generated end dates for unclosed employments. The dates that appear to be anomalous are:</p> <p>29Mar03, 07Jan06, 08Jan06, 08Feb06, 12Feb06, 15Feb06, 13Feb06, 14Feb06, 13Apr06, 25Sep06.</p>

## E.2 The PSI HMRC data specification request

- 1) Take the most updated P45\_YYMM\_db2 file (database 2, including all current and former DWP customers): P45\_1005\_db2 (6th April 1998 to 26th May 2010) if possible, the most recent release otherwise. Please let us know the name of the P45\_YYMM\_db2 file selected.
- 2) In the P45\_YYMM\_db2 file selected at 1) keep all records for the following variables:
  - 2.5.5 Employment start and end dates
  - 2.5.6 Start/end reason
  - 2.5.7 Record\_flag
  - 2.5.8 Benflag
  - 2.5.9 Extract
  - 2.5.10 Date\_of\_extract
  - 2.5.11 Date\_of\_download
  - 2.5.12 First\_enddate
  - 2.5.13 First\_realend
  - 2.5.14 CCORCID
  - 2.5.15 Match
  - 2.5.20 OCCPENFLAG
  - 2.5.21 OP\_EXTRACT
  - 2.5.22 FIRST\_OP\_EXTRACT

Save this as a new database.

- 3) In the dataset obtained at 2) remove all spells which are flagged as
- JSA spells (2.5.8 Benflag coded 1 or 2)
  - IB spells (2.5.8 Benflag coded 3).  
(Therefore, only records with Benflag≠. should be kept.)
  - Occupational pension spells (2.5.20 OCCPENFLAG coded 1, 2, 3, 4, 6 or 7) (Therefore, only records with OCCPENFLAG coded 5 or 8 should be kept)

Save this as a new database.

### E.3 Processing that DWP carried out on the HMRC data used for these analyses prior to PSI receiving it

DWP advised Policy Studies Institute (PSI) that the data it received had been processed before PSI received it. Unfortunately, PSI was not given access to unprocessed HMRC employment data and we cannot assess how this processing affected the HMRC employment outcome used in analysis. We can say that it appears there were fewer HMRC employment spells received than would have been received without the processing; and that the imputed start and end dates are not necessarily how they would have appeared with PSI processing. All of these might affect the HMRC employment outcome measured in these analyses.

#### E.3.1 DWP processing of HMRC data before sending it to PSI

##### *Employment spells excluded if the start date was missing*

The PSI specification asked for employment starts between 6th April 1998 and 26th May 2010. Anyone with a missing employment start date has, therefore, been immediately excluded from the analysis using this criteria.

##### *6 April employment starts excluded from the data*

The reason DWP do not include 6 April start dates but randomise end dates is because DWP do not actually use the end dates when defining an outcome but DWP do use the start dates so could not use a randomised start date.

##### *5 April/6 April employment end dates randomly assigned*

Of the 6,280,330 records that DWP have sent to you, 1,238,537 have a randomly assigned employment end date. The employment end date is randomised to be in between the latest of the employment start date and 6 April in the tax year of the employment end date and the earliest of the employment end date and the extract date i.e. all randomised employment end dates are in the same tax year as the original 5/6 April employment end date.

##### *Concurrent employment spells which start on the same day and end on a different day*

Where this situation arises the spell with the longest duration has been kept.



### E.3.2 How PSI would have done the processing steps

#### *Employment spells excluded if the start date was missing*

If an employment spell had no start date but an end date, then PSI would have kept the employment spell and imputed a randomised start date within the applicable tax year. We would use the random draws from a distribution, using the shape of the actual date distribution for known start dates to select this distribution.

#### *6 April employment starts excluded from the data*

If an employment spell had a 6 April start date then it would have kept the employment spell and imputed a randomised start date within the applicable tax year.

#### *5 April/6 April employment end dates randomly assigned*

As for the DWP processing, all PSI randomised employment end dates would be randomised start dates in the same tax year as the original 5/6 April employment end date. It is not clear that we would have used the same form of randomisation, since DWP indicate their randomisation is based on the CCORCID identifier value, but this would not be the randomisation that we would use. We would use the random draws from a distribution, using the shape of the actual date distribution for known end dates to select this distribution.

#### *Concurrent employment spells which start on the same day and end on a different day*

PSI processing would keep all employment spells. An outcome variable would indicate whether employed on a particular day or not, regardless of spell number.

## E.4 Proportion of cases in employment at IB claim start

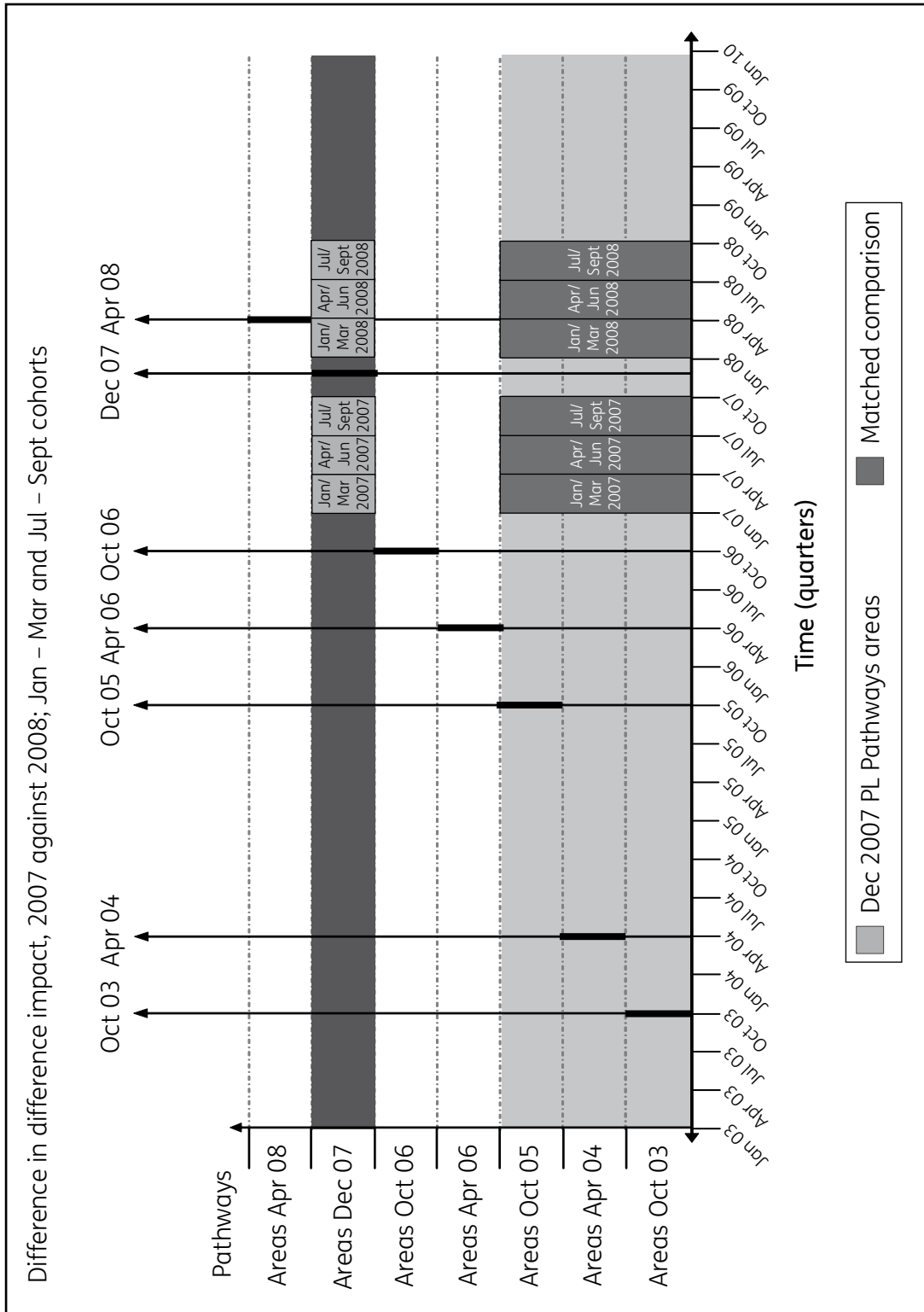
**Table E.1 Proportion of cases in employment at IB claim start**

	HMRC employment	Survey employment, weighted
<b>April – June 2007</b>		
PL Pathways areas % in emp at claim start date	26.76	12.90
Cases	42,247	3,291
Comparison areas % in emp at claim start date	28.25	16.39
Cases	17,765	3,299
<b>April – June 2008</b>		
PL Pathways areas % in emp at claim start date	26.04	12.08
Cases	42,427	3,093
Comparison areas % in emp at claim start date	28.54	13.82
Cases	17,355	3,211

# Appendix F

## Illustration of the PL Pathways research design, other cohorts

**Figure F.1** Illustration of the PL Pathways research 2007 and 2008, for quarterly entrant groups January – September



# Appendix G

## PL Pathways districts and contracts

**Table G.1 Provider-led Pathways Jobcentre Plus districts**

<b>Provider-led Pathways phase 1 districts December 2007 Rollout</b>	<b>Provider-led Pathways phase 2 districts April 2008 Rollout</b>
Birmingham and Solihull	Bedfordshire and Hertfordshire
Black Country	Cambridgeshire and Suffolk
Central London	Cheshire, Halton and Warrington
City and East London	Coventry and Warwickshire
Devon and Cornwall	Gloucester, Wiltshire and Swindon
Edinburgh Lothian and Borders	Hampshire and Isle of Wight
Forth Valley Fife and Tayside	Kent
Greater Manchester East and West	Leicestershire and Northamptonshire
Lambeth, Southwark and Wandsworth	North and North East London
Lincolnshire and Rutland	North East Yorkshire and the Humber
Norfolk	South London
North and Mid Wales	Surrey and Sussex
Nottinghamshire	Thames Valley (Berkshire, Buckinghamshire and Oxfordshire prior to April 2009)
South East Wales	The Marches
West Yorkshire	West London
West of England	

**Table G.2 List of organisations for Provider-led Pathways**

Supplier	District(s)
<b>Phase 1 Provider-led Pathways December 2007</b>	
A4e	Cornwall and Devon, West Yorkshire, North and Mid Wales and South East Wales.
Seetec Business Technology Centre Ltd	Black Country.
The Shaw Trust	Greater Manchester East and West, Norfolk.
TNG Ltd	Lincolnshire and Rutland.
Triage Central Ltd	Forth Valley, Fife and Tayside.
Work Directions UK Ltd	Birmingham and Solihull, Central London, City and East London, Edinburgh Lothian and Borders, Lambeth, Southwark and Wandsworth and Nottinghamshire.
<b>Phase 2 Provider-led Pathways to Work April 2008</b>	
Employability – InTraining (previously Carter and Carter)	Cheshire and Warrington*, North East Yorkshire and the Humber*
Action for Employment (previously Instant Muscle)	Surrey and Sussex*
Reed in Partnership	Cambridgeshire and Suffolk, North and North East London, South London, West London
Remploy	The Marches
Royal British Legion Industries	Kent, Surrey and Sussex*
Shaw Trust	Bedfordshire and Hertfordshire, Berkshire, Buckinghamshire and Oxfordshire, Hampshire and the Isle of Wight
TNG	Cheshire and Warrington*
Working Links	Coventry and Warwickshire, Gloucester, Wiltshire and Swindon, Leicestershire and Northamptonshire, North East Yorkshire and the Humber*, West of England

Notes: \*Cheshire and Warrington, North East Yorkshire and the Humber and Surrey and Sussex are customer choice districts with two suppliers delivering the Pathways to Work programme.<sup>81</sup>

<sup>81</sup> Source: <http://webarchive.nationalarchives.gov.uk/20100515192520/http://dwp.gov.uk/supplying-dwp/what-we-buy/welfare-to-work-services/notices-to-providers/notice-to-providers-plpsuppliers.shtml>

# Appendix H

## PL Pathways 12-month outcome findings

The 12-month follow-up period did not pass the pre-programme test and hence the impact results are not statistically valid. The timing of the April-June cohort, leaves only six months before the actual Provider-led (PL) Pathways start in the 2007 PL Pathways areas and limits the validity of considering longer follow-up periods, as after six months those who start a new claim (re-claims) or volunteers from the stock of historical claims are eligible for PL Pathways treatment. The results are presented for information and should be interpreted in this context.

**Table H.1 The impact of PL Pathways on proportion off benefit, April – June IB claimants, for 2007 against 2008**

April – June	Impact estimate (p.p. of IB claimants off DWP benefits after six or 12 months due to PL Pathways)	Counterfactual (% of IB claimants off DWP benefits at month six or 12 if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
6 months after IB claim start	1.8	14.9	12.1	0.9 : 2.8	0.00	3.72	119,794
12 months after IB claim start	1.1	23.4	4.7	0.0 : 2.2	0.05	1.99	119,794

Note: DWP benefits means Bereavement Benefit (BB), Disability Living Allowance (DLA), Employment and Support Allowance (ESA), Incapacity Benefit (IB), Invalid Care Allowance (ICA), Income Support (IS), Jobseeker’s Allowance (JSA), Pension Credit (PC), Passported Incapacity Benefit (PIB), Retirement Pension (RP), Severe Disablement Allowance (SDA) or Widow’s Benefit (WB).

**Table H.2 The impact of PL Pathways on HMRC employment entry, April – June IB claimants, for 2007 against 2008**

April – June	Impact estimate (p.p. of IB claimants in HMRC employment after six or 12 months due to PL Pathways)	Counterfactual (% of IB claimants in HMRC employment at month six or 12 if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
6 months after IB claim start	0.7	25.5	2.7	-0.2 : 1.6	0.13	1.53	119,794
12 months after IB claim start	1.0	24.9	3.9	0.0 : 1.9	0.04	2.04	119,794

**Table H.3 The impact of PL Pathways on survey employment<sup>82</sup>**

April – June	Impact estimate (p.p. of IB claimants in survey employment after six or 12 months due to PL Pathways)	Counterfactual (% of IB claimants in survey employment at month six or 12 if PL Pathways was not rolled out)	Impact to counterfactual ratio (%)	Confidence interval (95%) for impact estimate	P-value	t-test (absolute value)	Number of cases
6 months after IB claim start	2.6	14.0	18.4	-0.2 : 5.4	0.07	1.81	12,106
12 months after IB claim start	3.1	15.2	20.2	0.2 : 6.0	0.04	2.07	12,105

Note: One observation missing at 12 months due to item non-response.

<sup>82</sup> Defined using the survey work history.

# Appendix I

## PL Pathways official statistics on starts

Start Month	Total	Phase 1		Total	Phase 2	
		Mandatory	Voluntary		Mandatory	Voluntary
Dec 07	14,710	3,700	11,010	0	0	0
Jan 08	12,180	8,070	4,110	0	0	0
Feb 08	12,160	8,910	3,250	0	0	0
Mar 08	11,220	8,130	3,090	0	0	0
Apr 08	11,820	8,860	2,960	10,170	780	9,390
May 08	10,960	8,220	2,740	9,860	5,540	4,320
Jun 08	10,630	7,890	2,740	11,550	7,020	4,530
Jul 08	13,220	10,180	3,040	14,320	9,270	5,050
Aug 08	15,690	12,910	2,780	14,890	10,470	4,420
Sep 08	9,460	8,050	1,420	9,570	7,220	2,340
Oct 08	11,030	9,100	1,930	11,530	8,800	2,720
Nov 08	9,450	7,980	1,460	10,220	8,040	2,190
Dec 08	10,600	8,800	1,790	11,550	9,290	2,260
Jan 09	10,900	9,330	1,580	10,870	9,030	1,840
Feb 09	10,230	9,010	1,220	10,050	8,520	1,530
Mar 09	11,470	10,060	1,410	11,960	10,220	1,740
Apr 09	10,730	9,590	1,130	10,380	8,800	1,580
May 09	9,980	8,850	1,130	9,230	7,860	1,370
Jun 09	10,000	8,780	1,220	9,250	7,700	1,560
Jul 09	10,120	9,000	1,120	9,490	7,870	1,620
Aug 09	8,980	8,050	940	9,180	7,730	1,460
Sep 09	7,670	7,040	630	7,260	6,200	1,060
Oct 09	8,910	8,070	840	9,260	7,960	1,300
Nov 09	9,240	8,170	1,080	9,350	7,910	1,440
Dec 09	6,400	5,210	1,190	7,930	6,280	1,650
Jan 10	3,970	2,820	1,160	5,240	3,660	1,580
Feb 10	3,970	2,770	1,200	5,480	3,180	2,300
Mar 10	4,460	3,060	1,400	5,640	3,560	2,090
Apr 10	4,420	3,050	1,370	5,240	3,190	2,050
May 10	4,180	2,930	1,250	4,920	3,200	1,720
Jun 10	4,540	3,040	1,500	5,310	3,370	1,950
Jul 10	4,250	2,980	1,270	5,310	3,590	1,720
Aug 10	3,800	2,840	970	5,140	3,910	1,230
Sep 10	2,380	2,000	380	3,230	2,570	660
Oct 10	2,870	2,180	690	4,010	3,100	910
Total	306,620	239,650	66,970	267,370	195,820	71,540

Source: DWP Official Statistics supplied by Gary Gifford, DWP.

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Pathways to Work was originally introduced in 2003 and the programme was delivered by Jobcentre Plus on behalf of the Department for Work and Pensions. The programme was subsequently extended nationally and part of its delivery was contracted out to private companies and third sector organisations. The programme in these areas was commonly known as Provider-led Pathways to Work.

The purpose of this research was to assess whether Provider-led Pathways helped more incapacity benefits customers move into work or leave benefit than would have done in the absence of this programme. The impact analysis is based on administrative data (Incapacity Benefits claims and HMRC employment records) and data collected from two large-scale telephone surveys with 2007 and 2008 incapacity benefit claimants living in Provider-led Pathways areas and in matched comparison areas which did not have the Provider-led Pathways to provide the counterfactual of not participating in this programme. On average, interviews were conducted 14 months after the claim for benefits. This impact study is the last published evidence from the wider evaluation of the Provider-led Pathways programme.

If you would like to know more about DWP research, please email:  
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