

Experimental statistics from the 2013 MoJ /DWP /HMRC data share:

Linking data on offenders with benefit,
employment and income data

Joint statistical report from the Ministry of
Justice and the Department for Work and
Pensions

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Executive Summary

This report presents findings from work to share administrative data between the Ministry of Justice (MoJ), the Department for Work and Pensions (DWP) and Her Majesty's Revenue and Customs (HMRC).

Overview of the data-share

The data share updates and expands an initial data-share conducted in 2011.¹ It forms part of a series of ongoing annual data-shares between the departments with the aim of improving understanding of the links between offending, employment and benefits.

Analysis is based on 4.3 million offenders who have received at least one caution or conviction for a recordable offence in England and Wales between 2000 and February 2013 and who were successfully matched to at least one benefit and/or P45 employment record. All of these individuals' offending, benefit and P45 employment episodes are included in the data-share, providing a rich new data source.

Some caution should be exercised when interpreting findings from this data share. Notable issues include: the fact that results only relate to offenders who were successfully matched to benefit or P45 employment records, and therefore do not cover all offenders; the reliance on estimated prison spell dates for the periods pre 2008 and post June 2011; and the fact that P45 employment and P14 income data do not capture all employment and income. The 2008 recession and its impact on the labour market should also be borne in mind when interpreting results.

As understanding and use of the new data-share is increased, these findings may need to be updated, and therefore should be treated as provisional.

Feedback on this report or ideas for future analyses are welcome.

¹ Information and statistics from the 2011 data share are available at the following links:
www.gov.uk/government/uploads/system/uploads/attachment_data/file/217428/offending-employment-benefits-emerging-findings-1111.pdf
www.gov.uk/government/uploads/system/uploads/attachment_data/file/217412/impact-employment-reoffending.pdf

Key Findings

Out-of-work benefit status of working age offenders

An estimated 22% of all out-of-work benefit claims² open on 1 December 2012 were being claimed by people in the matched data who had been cautioned or convicted for a recordable offence³ at some point between 1 January 2000 and 1 December 2012. 4% of these benefits were being claimed by individuals who had at least one spell in prison during that period.

Just under a third of all working age offenders (aged 18 – 62) who were convicted/cautioned or released from prison in 2010/2011 were claiming out-of-work benefits two years before. This increased to 41% one month before, and 44% one month after. The proportion then decreases gradually to 39% two years after – 7 percentage points higher than 2 years before conviction, caution or release.

Offenders released from prison are more likely to be claiming benefits after conviction/caution or release, than other offenders - Over a half (54%) of offenders released from prison were claiming out-of-work benefits one month after, gradually decreasing to 42% two years after.

Two-thirds of working age offenders claimed at least one out-of-work benefit at some point in the two years following their conviction/caution or release from prison in 2010/2011. Offenders released from prison were more likely than all offenders to claim benefits in the two years following release; nearly 80% of offenders released from prison in 2010/2011 made at least one claim in that period. In particular, offenders released from prison were more likely to claim Jobseeker's Allowance (JSA), with 62% making at least one JSA claim at some point in the two year period.

P45 employment status of offenders

Only P45 employment is included in the data share – this will exclude self employment, cash-in-hand work and some lower paid jobs.

P45 employment rates remain relatively stable for adult offenders (aged 21-62) either side of caution/conviction or release from prison, with 38% of adult

² Out-of-work benefits include Jobseeker's Allowance, Employment and Support Allowance, Income Support, Incapacity Benefit, Passported Incapacity Benefit or Severe Disablement Allowance

³ Recordable offences are those that the police are required to record on the Police National Computer. They include all offences for which a custodial sentence can be given, plus a range of other offences defined as recordable in legislation. They exclude a range of less serious summary offences, for example television licence evasion, driving without insurance, speeding and vehicle tax offences

offenders in P45 employment⁴ both one year before and one year after caution/conviction or release. A prison spell appears to have a greater short-term impact on the P45 employment rate for adult offenders, which falls from 21% one month before sentence to 17% at release and 19% one month after release. However, one year after release P45 employment rates for adult prison leavers have recovered to 24%, the same level as one year before sentence.

Just over half (54%) of all working age offenders (not just adults) had at least one start in P45 employment at some point in the two years following their conviction/caution or release from prison in 2010/2011. Offenders released from prison were less likely than other offenders to start a period of P45 employment (36%).

Tracking the long term status of working age offenders shows an increase in the proportion of offenders in P45 employment from point of conviction/caution or release from prison in 2003/2004 to nine years after this point. 31% were in P45 employment at point of conviction/caution or release from prison, rising to 40% nine years after this point⁵.

Around a third (30%) of working age offenders who were convicted/cautioned or released from prison in 2003/04 had no recorded P45 employment⁶ over the next nine years (2004/2005 to 2012/2013), and a half spent under 2 years in P45 employment over the period. Conversely, a fifth (20%) of these offenders spent almost all of the next 9 years in P45 employment.

Offenders' median P14 income

Only P14 income is included in the data share - this will exclude income from self employment, cash-in-hand work and some lower paid jobs. The P14 income is gross income and includes income for part-year and part-time work – it does not only reflect full-time, annual income.

⁴The P45 employment information is derived from P45 forms sent to HMRC by employers. P45 employment does not cover all employment. Self-employment and cash-in-hand employment are not recorded in the P45 data. In addition, HMRC only required periods of employment to be notified via a P45 form if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year). Therefore not all lower paid jobs are included in the data, although some employers may still have reported these spells. Consequently, P45 employment figures under-record total employment and caution needs to be applied when interpreting these figures. Despite these limitations, P45 employment should provide a useful proxy of employment.

⁵ The higher proportion of working age offenders in P45 employment at point of conviction/caution or release from prison in 2010/2011 compared to in 2003/2004 could be due to the fact that there was a slightly lower proportion of young offenders in 2010/2011 than in 2003/2004. As younger people are less likely to be in P45 employment than the general population, this is likely to contribute to the differences in P45 employment levels between 2003/2004 and 2010/2011.

⁶ Caution needs to be applied when interpreting these figures, particularly for those showing with no recorded employment as P45 data does not include all employment types.

The median P14⁷ gross income for working age offenders one year after conviction/caution or release from prison in 2003/04 was £8,600⁸. This means that in 2004/2005, half of the offenders had P14 income under £8,600 and half had P14 income over £8,600.

A quarter of offenders had a P14 income less than £2,500 in 2004/2005 – this could be P14 income from low paid jobs, or more likely to be part-time and/or part-year P14 income. Conversely, a quarter of offenders had a P14 income above £17,800 in 2004/2005.

Offenders' median P14 income increased year on year from £8,600 in 2004/05 to £14,300 in 2011/2012 (eight years after conviction/caution or release from prison) after adjusting for the effects of earnings inflation. This increase will be partly related to the increase in age of the offenders. No direct general population comparison is available, however the Annual Survey of Hours and Earnings⁹, which calculates the figures on a different basis, shows that the median amount of earnings for UK employees aged 16 and over in 2011 was £21,100.

Offenders' median P14 income varies considerably depending on the characteristics and disposal/offence types of offenders. For example, offenders serving custodial sentences had the lowest median P14 income one year after release from prison in 2003/2004 at £5,100, whereas offenders who received a fine¹⁰ for a recordable offence had a median P14 income more than double this, at £11,400.

⁷ P14 income includes information on gross income derived from P14 forms sent to HMRC by employers. Income from self-employment or cash-in-hand jobs is not included. P14 income includes income for part-year and part-time work, so does not only reflect full-time, annual income. The P14 income records do not include all income as HMRC only required to be notified via a P14 record if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year). Despite these exclusions, the data should provide a useful proxy of income.

⁸ P14 income in the analysis has been adjusted to take into account the effects of earnings inflation over time. Income has been deflated using the Seasonally Adjusted Average Weekly Earnings - excluding bonuses, excluding arrears statistics from the Office for National Statistics, taking 2012/13 as the base year

⁹ See Annual Survey of Hours and Earnings, 2011 Revised Results for more details: www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-280145

¹⁰ The data-share only includes data on recordable offences that are recorded on the Police National Computer –only around a fifth of all fines given out by the courts are included in the PNC. This is because the PNC does not generally cover the less serious summary offences (such as TV licence evasion) which are more likely to receive a sentence of a fine.

Report Structure

The report includes:

- An overview of the data share
- An estimate of the proportion of total benefit claims in Great Britain that were made by individuals in the data share
- High level statistics presenting benefit and P45 employment status before and after date of conviction / caution or release from prison for working age offenders who were convicted / cautioned or released from prison in 2010/2011
- Longer time series: Benefit and P45 employment status over a nine year period for working age offenders convicted/cautioned or released from prison in 2003/2004
- P14 income levels for working age offenders;
- Further details of the data-share (data matching methodology for example).

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Chapter 1: Overview of the data-share

- **Introduction**

This is a joint report between the Ministry of Justice (MoJ) and the Department for Work and Pensions (DWP) on an analytical data sharing project between MoJ, DWP and Her Majesty's Revenue and Customs (HMRC).

The 2013 MoJ/DWP/HMRC analytical data share, builds on the one-off data share that was conducted in 2011, and has been created in order to continue to improve understanding of the links between offending, benefits and employment.

This report provides details of the data share as well as presenting experimental statistics on offenders' benefit, P45 employment¹¹ and P14 income¹² status. One of the aims of this report is to increase awareness and understanding of the data share, and to seek feedback from users.

We are still in the initial stages of realising the potential of the linked data. The matched data has been quality assured and cleaned, however, given the complexity of the data and the fact that we are still in the early stages of analyses, all findings in this report should be treated as experimental and provisional.

- **Background**

Given the lack of robust evidence on offenders' employment and benefit status, a one-off analytical data share was set up between MoJ, DWP and HMRC in 2011. The 2011 data share was a success and has been used extensively to support policy development, in addition to increasing understanding of the links between offending, benefits and employment.

Information and statistics from the 2011 data share are available at the following links:

¹¹ The P45 employment information is derived from P45 forms sent to HMRC by employers. P45 employment does not cover all employment. Self-employment and cash-in-hand employment are not recorded in the P45 data. In addition, HMRC only required periods of employment to be notified via a P45 form if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year).

¹² P14 income includes information on income derived from P14 forms sent to HMRC by employers. Income from self-employment or cash-in-hand jobs is not included. P14 income includes income for part-year and part-time work, so does not only reflect full-time, annual income. The P14 income records do not include all income as HMRC only required to be notified via a P14 record if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year).

www.gov.uk/government/uploads/system/uploads/attachment_data/file/217428/offending-employment-benefits-emerging-findings-1111.pdf

www.gov.uk/government/uploads/system/uploads/attachment_data/file/217412/impact-employment-reoffending.pdf

The 2013 data share builds on the one-off data share produced in 2011. The new data share will be repeated on an annual basis, and the coverage of the data share has significantly increased to include information on, for example, offenders' P14 income.

- **How was the data share created?**

Increasing understanding of offenders' benefit and employment status was, and is, a priority for both MoJ and DWP to better understand what works in reducing re-offending and welfare dependency. In the absence of available data sources, it was necessary to set up an analytical data share which joins together administrative data sources¹³ on offenders from MoJ to administrative data sources on benefit and P45 employment from DWP and HMRC.

Full consideration was given to the relevant legal and ethical issues before a decision was taken for this new ongoing data sharing project to proceed.

Projects which involve any sharing of personal and sensitive personal data within the meaning of the Data Protection Act 1998 need to be lawful, fair, justified and proportionate in order to comply with that Act and Article 8 of the European Convention on Human Rights. We are satisfied that this data sharing project and the terms on which it has been conducted meets these stringent standards. After considerable time and effort, an agreement was reached and full approval for an annual data share was obtained in February 2013.

Extreme care is taken by MoJ and DWP to protect the personal data and ensure individuals are not identified through the data sharing process. To this end a Data Sharing Agreement (DSA) and Privacy Impact Assessment (PIA) were agreed for the project. The DSA sets out in detail the terms on which the project is to proceed, including the safeguards to be put in place by MoJ, and DWP regarding the use and storage of data for the purposes of the project. In particular, DWP Operational Control team took responsibility for the data transfers which were done by personal delivery, access to the transferred data is restricted to named individuals and the shared data is anonymised at the earliest opportunity. The shared data can only be used for analytical purposes as set out in the DSA¹⁴.

¹³ Administrative data refers to data primarily collected for the administration of a particular function (eg customs) or program (eg a government benefit).

¹⁴ For general information on data shares, please refer to the Information Commissioner's Office and MoJ website

- **How was the data matched?**

The basic concept of data matching¹⁵ here is that information about an individual who has multiple records in one or more administrative data sources is brought together under one personal identifier. The data were matched on several combinations of five demographic variables: forename, surname, date of birth, gender, and postcode.

The methodology used to match the data sources together was similar to the methodology used in the 2011 data share, which was quality assured by a methodologist from the Office for National Statistics. This approach resulted in a method which is suited to the quality and contents of the data sources.

Around three quarters of the total 6.5 million MoJ records included in the data share successfully matched to DWP /HMRC data. The main MoJ data source was the Police National Computer extract, but this data-share was also supplemented by court data to capture the less serious offences that are not included on the PNC. The analyses in this report only focus on the PNC data where 81% of the 5.2 million PNC records were successfully matched to DWP/HMRC data. We are confident in the data matching results, following testing that has been conducted to assess the representativeness of the matching.

Please note that the findings from the data-share are only based on individuals who were successfully matched to DWP / HMRC data. As a result, volumes (for example, of number of people starting prison sentences in a year) will be lower than published statistics from individual data sources.

Annex A provides further details.

- **Coverage of data share and information on data quality**

After the data matching, all personal identifiable information was removed, the data was anonymised and is used for analytical purposes only.

The 2013 data share includes information on the following individuals who were successfully matched to DWP and HMRC data;

- a) all individuals on MoJ's PNC extract who were cautioned or convicted for a recordable offence¹⁶ between 2000 to February 2013 and,
- b) Magistrates' court data on convicted offenders between 2008 to 2012 – the purpose of including the additional court data in this data share

¹⁵ Data matching may also be described a data integration, data linking, or record linkage

¹⁶ Recordable offences are those that the police are required to record on the Police National Computer and included in this publication. They include all offences for which a custodial sentence can be given plus a range of other offences defined as recordable in legislation. Please see the glossary for further details.

was to aim to improve understanding of offenders who are convicted for less serious offences (such as TV licence evasion) as these offenders are generally not included in the PNC.

In total, 4.8 million individuals from MoJ data were successfully matched to DWP/HMRC data and are therefore included in the data share. All of these individuals' offending, benefit and P45 employment episodes are included in the data share along with a variety of other information from a wide range of data sources from MoJ, DWP and HMRC.

The analyses in this report focus solely on the PNC data, where 4.3 million individuals from the PNC were successfully matched to DWP / HMRC data.

The data share has been produced using administrative data sources whose main purposes are not statistical. Therefore, as with any large scale recording system, the data are subject to possible errors with data entry and processing. Quality assurance procedures were applied to protect the integrity of the matched data including removal of duplicated entries, checks for completeness, and the cleansing of inconsistent data based on business intelligence.

The data share covers data from the following data sources. The data sources used for the compilation of this report are listed first. However, this list also includes a brief description of all data sources included in the data share, not just the data sources that were used for the experimental statistics in this report;

Data sources used for compilation of this report:

MoJ data on offenders

The criminal justice system data has been sourced from several systems including the:

- **MoJ extract of the Police National Computer (PNC)** which is the administrative IT system used by all police forces in England and Wales and the main data source on offenders in the data share;

The Police National Computer (PNC) is the police's administrative IT system used by all police forces in England and Wales and managed by the Home Office. As with any large scale recording system the PNC is subject to possible errors with data entry and processing. The Ministry of Justice maintains a database based on weekly extracts of selected data from the PNC in order to compile statistics and conduct research on re-offending and criminal histories.

The PNC largely covers recordable offences – these are all indictable and triable-either-way offences plus many of the more serious summary offences¹⁷.

¹⁷ See the Glossary for definitions of offences

However, unlike the court data used to produce Criminal Justice Statistics¹⁸ which covers all offences, the PNC does not generally cover the less serious summary offences such as TV license evasion and less serious motoring offences, which are more likely to receive a sentence of a fine (which account for a significant proportion of the cases dealt with in the magistrates' courts). Overall, the PNC records around half of all disposals (including cautions and convictions) dealt with by the courts. Coverage across all sentence types is generally very high with the exception of fines, where the PNC includes around a fifth of all fines given out by the courts. As a result, care must be taken when interpreting these findings, particularly for the analysis on offenders receiving a fine.

The PNC information in the data share includes key information on all convictions and cautions, including, but not limited to: offence dates, offence types, disposal dates, disposal types.

All figures derived from the Ministry of Justice's PNC database, and in particular those for the most recent months, are likely to be revised as more information is recorded by the police.

The PNC data included in the data share was taken from a snapshot produced in February 2013. Only primary offences and primary disposals¹⁹ are included in the data-share.

➤ **Prison and probation sentences**

Extra information on offenders sentenced to custodial or community sentences has been included in the data share – these are referred to as prison and probation spells (start and end dates of time in prison or supervised by probation).

The PNC only records information up to the point of caution or conviction – therefore it does not include when offenders sentenced to custodial sentences are released from prison, or when offenders sentenced to community sentences end their time on probation. As a result, the data share includes the following information on prison and probation spells:

- **Actual** prison and probation spells have been included in the data share for the period January 2008 to June 2011 as they were available from MoJ's data linking project²⁰. This information comes from the following data sources which have been linked together as part of the MoJ data linking project:

¹⁸ www.gov.uk/government/collections/criminal-justice-statistics-quarterly

¹⁹ See the Glossary for information on primary offences and primary disposals

²⁰ MoJ's data linking project was set up to improve the evidence base for MoJ – it is doing this by linking together MoJ administrative data sources on offenders, along with data sources from other Government Departments. The data linking project has successfully linked together a range of MoJ data sources on offenders for the period 2008 to 2011. The linked data is being updated to provide more recent data. Please use the contact details at the back of this report if you would like to find out more about the MoJ data linking project.

Prison data: Prison establishments record details for individual inmates on the prison IT system (Prison-NOMIS or LIDS).

Probation data: Several probation service IT systems from the probation trusts in England and Wales.

Information includes, but is not limited to, prison/probation sentence start and end dates, prison /probation trust name, and community sentence requirements.

Generally, the prison start dates for January 2008 to June 2011 included in the data share include any time offenders spent in prison, including time in prison on remand – which would have been before the date they were convicted or sentenced. However, due to data quality issues, data was not available on remand²¹ dates for a small proportion of offenders who were remanded in custody. Therefore not all the prison spells will include time spent in prison on remand – which means, according to the data share, these offenders will be recorded as not being in prison, whereas in fact they were in prison as they were remanded in custody during their court case and therefore they were unable to be claiming benefits or be in P45 employment. This is likely to have a small effect on underestimating the proportion of offenders claiming benefits or in P45 employment shortly before their conviction date – therefore, care in particular should be taken when interpreting the analyses of benefit /P45 employment status one month before conviction/caution for offenders serving custodial sentences. The average time that prisoners sentenced to custodial sentences spend remanded in custody is 10 weeks²² therefore the benefit and P45 employment status of offenders should be more reliable 10 weeks before prison start.

- **Estimated** prison and probation spells – prison and probation spells have been estimated (using conviction/caution date and disposal length (ie; length of sentence)) from the PNC in the data share for the periods pre January 2008 and post June 2011²³. None of the estimated prison spells include time offenders spent in prison on remand as that information is not available in the PNC. This means that any analyses using prison/probation start and end dates for the periods pre 2008 and post June 2011 should be treated with caution –where possible, analyses in this report uses the more accurate prison and probation spells information.

In future, when the MoJ linked data is updated, the estimated prison and probation spells will be replaced by actual prison and probation spells. The actual prison spells data in the linked data does not include indeterminate sentences (ie; including prisoners given a life sentence).

²¹ The glossary has a definition and information on remand

²² Story of the prison population: www.gov.uk/government/publications/story-of-the-prison-population-1993-2012

²³ Estimated prison and probation spells were also needed for a small number of records between January 2008 and June 2011 for records where a match was not found between the PNC and prison / probation data.

Further details of the prison and probation data are available in the Offender Management Statistics publication: www.gov.uk/government/collections/offender-management-statistics-quarterly

DWP data sources

- **National Benefits Database** - The National Benefits Database contains information on all claims to DWP benefits made by individuals matched in the data-share. The data includes, but is not limited to, benefit type, start date and end date for each claim. This data is included to investigate the relationship between benefit history and offending.

HMRC data sources

- **P45 Employment** - The data share includes employment date information for matched individuals derived from P45 forms sent to HMRC by employers. P45 employment does not cover all employment. Self-employment and cash-in-hand employment are not recorded in the P45 data. In addition, HMRC only required periods of employment to be notified via a P45 form if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year). Therefore not all lower paid jobs are included in the data, although some employers may still have reported these spells. Consequently, P45 employment figures under-record total employment and caution needs to be applied when interpreting these figures. Despite these limitations, P45 employment should provide a useful proxy of employment. This data is included to investigate the relationships between employment and offending.
- **P14 Employment income:** The data share includes information on income for matched individuals derived from P14 forms sent to HMRC by employers. P14 income includes income for part-year and part-time work, so does not only reflect full-time, annual income. Income from self-employment or cash-in-hand jobs is not included. The P14 income records do not include all income as HMRC only required to be notified via a P14 record if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year). Despite these exclusions, the data should provide a useful proxy of income. This data is included to find out more about offender income levels.

Data sources included in the data-share that have not been used for the analyses included in this report:

MoJ data sources

It is planned that in future, the MoJ / DWP / HMRC data share will also include the following data from MoJ:

- **Re-offending cohorts:** The re-offending cohorts are produced from MoJ's extract of the Police National Computer, which is then linked to other sources. It contains a wide range of variables relating to criminal history and previous offences, as well the re-offending outcome. The inclusion of the re-offending cohorts in the data share will enable analysis on the impact of benefits /employment on re-offending to be consistent with the re-offending National Statistics. Further details on the re-offending statistics are available here: www.gov.uk/government/collections/proven-reoffending-statistics
- **Court data:** As mentioned above, the PNC data does not generally include convictions for less serious non-recordable offences (TV licence evasions etc) – which are the bulk of magistrates' court work. In order to get a complete picture of the benefit and P45 employment status of all offenders, (not just those that are included on the PNC) it is planned that in future the court data on offences and convictions for cases not included on the PNC will also be available for analysis in the data share, pending assessment of data quality. Court data on convictions in the magistrates' courts was matched to DWP /HMRC data.

DWP data sources

- **DWP Employment Programme data** - Information on employment programme support offered by DWP to individuals matched in the data share. The data includes information on the employment programme attended plus the start and end dates of their time on the programme. This data is included to investigate the employment support offered to offenders.
- **DWP Work Programme** - The Work Programme²⁴ dataset contains information on the time spent on the Work Programme by individuals matched in the data share. The Work Programme is an employment programme which offers support, working experience and training for two years to eligible individuals on Jobseekers' Allowance or Employment and Support Allowance. The data included in the data share covers the dates

²⁴ Information on the Work Programme is available: www.gov.uk/government/policies/helping-people-to-find-and-stay-in-work/supporting-pages/managing-the-work-programme

of time spent on the work programme, any job outcomes for individual and sustainment payments made to the provider in respect of any work outcomes achieved by the individual. The Work Programme data is included in the data share to evaluate the Employment and Re-offending Pilot co-commissioned by MoJ and DWP. The pilot looks at the effects of referring those serving sentences of 12 months or less who claim JSA to the Work Programme from day one of release.

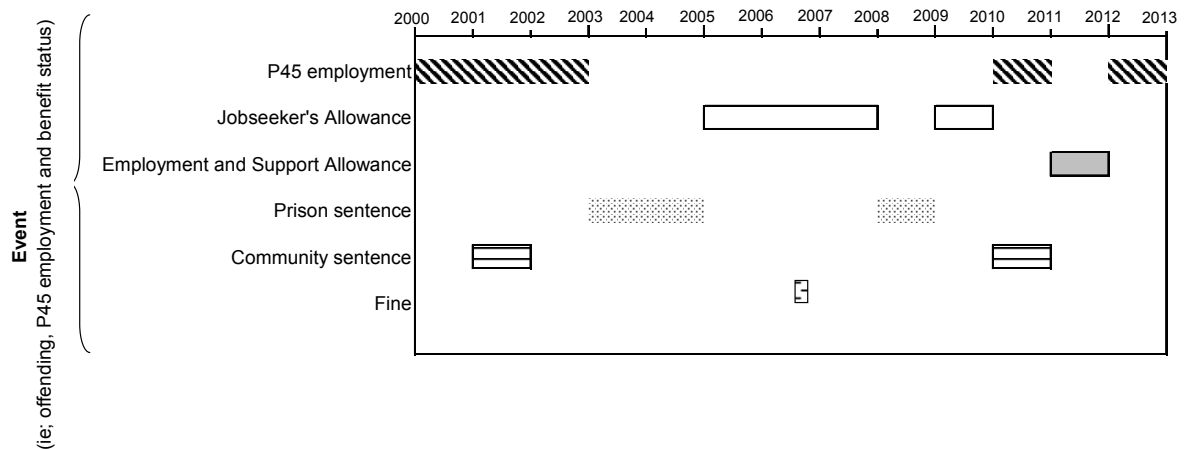
- **Housing Benefit and Council Tax Benefit:** Data on Housing Benefit claims by matched individuals is taken from monthly Housing Benefit and Council Tax Benefit caseload data held by DWP. The data share includes information on the dates of Housing Benefit and Council Tax Benefit spells, plus information on characteristics of the claim such as number of child dependants, whether the payment is made directly to the landlord, income and partner details. This data is included in the data share to get a fuller picture of the benefits received by offenders above those included in the National Benefits Database.

HMRC data sources

- **Tax Credits** - The data share includes data on tax credits received by matched individuals. Child Tax Credits and Working Tax Credits are included. Child Tax Credits are payments made to individuals responsible for children or young people. Working Tax Credits are paid to those on low income. The data includes information on eligibility for tax credits, periods of payment and further characteristics relevant to the claim (such as hours worked and whether the claim was a joint claim). This data is included in the data share to get a fuller picture of the benefits received by offenders above those included in the National Benefits Database.
- **Child Benefit Data:** HMRC data on Child Benefit claims made by matched individuals has been included in the initial data share. The impact of including this information in the data share is currently being assessed at the time of publication and will be removed from the dataset if it does not add any extra value.

The chart below illustrates, for one person in the matched data, the type of spell-based information that is held for all individuals in the matched data and how this enables us to look at the interactions between offending, P45 employment and benefits. The timeline runs along the top which shows that the data share includes offending, benefit and P45 employment information for offenders between 2000 and 2013. The different types of spells (the horizontal bars which show the start and end dates of each spell) are shown in rows. Please note this is a fictitious example.

An example, for one individual, of offending, P45 employment and benefit spell based information held



Annex B provides further details.

- **Differences between 2013 and 2011 data shares**

The 2013 data share largely updates, and expands on the 2011 data shares. The main differences between the data shares are as follows;

- The 2013 data share includes many more variables, and additional data sources to the 2011 data share. **Annex B** provides details of variables included.
- The 2011 data share was restricted to include individuals aged 16 or over on 1st January 2010. There is no age restriction on the 2013 data share.
- Some magistrates' court data are included in the 2013 data share to aim to improve understanding on offenders who are convicted for less serious offences (such as TV licence evasion) as these offenders are generally not included in the Police National Computer.
- There was a small improved change in data matching methodology in the 2013 data share, and the matched data was cleaned in a different way.

- **Notes on the analysis included in this report**

In addition to the caveats on data quality and limitations of the data share mentioned above, the following caveats on the analysis included in this report need to be taken into account:

- The findings in this report relate to the 4.3 million individuals in MoJ's PNC extract who were successfully matched to DWP/HMRC data. It is not possible to say whether the 0.9 million individuals in the PNC extract who were not matched to DWP/HMRC data were not matched because of either data quality issues (ie; a match could not be found in DWP / HMRC data due to incorrect spelling of names), or the fact that those individuals had never actually claimed any DWP benefits or been in P45 employment and therefore were not in the DWP/HMRC data. As a result, all the analyses use the number of individuals in the matched data as the denominator, rather than the number of overall offenders.
- All findings included in this report are estimates. In particular, the analyses in Chapter 2 on the proportion of overall benefit claims that are made by offenders is an underestimate, as this only includes individuals in the matched data.
- Counts of individuals given in the tables / report are counts of individuals in the matched data only, and generally are counts of working age individuals – as a result:
 - Counts do not match published MoJ statistics on the number of total offenders as they are not directly comparable (for example, the number of offenders released from prison in a given year).
 - Proportions should be used, rather than the counts provided in the tables / report. As the counts are for individuals in the matched data only, the findings in this report can not be used to say things like “X offenders were on benefits” as the data share does not cover all offenders, and therefore the counts are likely to be underestimates.
- Unless stated otherwise, all the analyses included in this report are based on offenders of working age (aged 16 - 64) throughout the whole period of the analysis – this is to ensure that offenders were eligible for claiming benefits or being in P45 employment during every year included in the analysis.
- Generally, the analyses focus on the trends in the benefit, P45 employment and P14 income status of a group of individuals over time – where for example Chapter 2 focuses on the benefit and P45 employment status of offenders two years either side of their conviction/caution date. Individuals sentenced to custodial sentences are treated differently in the analysis. It is not possible to use conviction/caution date for offenders sentenced to custodial sentences, as they would have been in prison serving their prison sentence after their conviction, and therefore unable to claim benefits or be in P45 employment. As a result, analyses on offenders sentenced to custodial

- Unless otherwise stated, the analysis is based on an individuals' first conviction/caution or release from prison in the reporting period. This is to ensure that the analyses are done on an individual level, rather than, for example, including the benefit status of individuals every time they were convicted/cautioned or released from prison in the reporting period.
- The PNC data included in the data share only includes the primary offence²⁵, and the most serious disposal²⁶ for that offence.
- These analyses do not specifically adjust for the fact that the offender may be in prison in the period included in the analyses, and therefore unable to claim benefits or be in P45 employment. As a result, changes in benefit or P45 employment levels, may be due to the fact that the offender is in prison.
- Care should be taken when looking at the benefit or P45 employment status of offenders in the weeks before the conviction/caution date or prison spell – this is because not all of the prison spells information included in the data share take into account time in prison on remand. Therefore, changes in levels of offenders claiming benefits or in P45 employment falling directly before the conviction/caution date, may be due to the fact that a proportion of the offenders are actually remanded in custody during that time – and therefore unable to claim benefits or be in P45 employment.
- Magistrates' or the Judiciary take into account the benefit and employment status when making their sentencing decision so care should be taken with interpreting the findings by disposal and offence type.
- The analyses in this report generally look at the benefit, P45 employment or P14 income status of a particular group of offenders over time (for example, offenders convicted/cautioned or released from prison in 2010/2011). This report does not include analyses tracking differences in overall benefit, P45 employment or P14 income status over time.

²⁵ Where more than one offence is considered in a court case or cautioning occasion, the offence that attracted the most severe sentencing outcome is deemed to be the primary offence and other offences also dealt with in that case are ignored in the data share.

²⁶ Disposals are another way of expressing the sentences/decisions made by the courts. The most serious disposal only is included in the data share.

- As previously mentioned, the data share only includes information on P45 employment and P14 income. Therefore not all employment or income is captured in the data share. As a result, it must not be deduced that offenders who are not in P45 employment are un-employed.
- The analyses takes account of all benefit and P45 employment spells matched to the relevant offenders in the data share. There are some instances in the data of benefit and P45 employment spells that start before a prison spell and end throughout or after the prison spell if the person spends time in prison²⁷. We have included any such spells in this analysis to allow a full view of the recorded benefit or P45 employment status of these individuals.
- Some P45 employment spells have estimated start or end dates²⁸ which have been included in the analyses. Therefore caution needs to be used with the P45 employment. During data cleaning some P45 employment spells with estimated start and end dates were removed, these were spells where we had particular concern over whether they did start or end in the tax year allocated.
- P14 income is gross income and includes income for part-year and part-time work, so does not only reflect full-time, annual income. Income from self-employment or cash-in-hand jobs is not included.
- P14 income data for 2012/2013 is incomplete and should therefore be treated with caution. Chapter 3 provides more details.
- Tax years are used as the reporting periods in the report given that the analyses focus on benefit, P45 employment and P14 income status. Tax years run from the 6th April to the 5th April; so tax year 2003/2004 refers to the year 6th April 2003 to 5th April 2004.
- Where possible, comparisons to the general population have been included.
- As all findings have been estimated, figures have been rounded as appropriate.
- These are high level statistics only and should not be used to imply any causal links between offending, benefits and employment.

²⁷ Where prisoners were on benefits or in P45 employment on the day of release, it is likely that the P45 employment or benefit spell spanned their time in prison. This data is from 2010/11 and predates a change in the process for the closure of benefit claims for prisoners. Prior to 2012 it was a prisoners' responsibility to report their change of circumstances and close their benefit spell. From February 2012 DWP introduced a process to proactively close benefit claims when individuals entered prison

²⁸ P45 employment start and end dates are estimated by DWP/HMRC when the exact start or end date of a P45 employment spell is not known, other than the date was in a particular tax year.

See the detailed methodology notes in each chapter and **Annexes A and B** for further details.

- **Content of report**

This report focuses on providing information on the data share and presenting experimental statistics on offenders' out-of-work benefits, and P45 employment / P14 income status.

It was decided to focus on these areas in this initial report to update and expand on the statistics included in the November 2011 publication. We wanted to publish these headline results and provide an overview of the data share, at the earliest opportunity, to increase understanding of the links between offenders' benefit, employment and income status as well as seek feedback on this report or ideas for future analyses. Due to the complexity and scale of the data share, it was not possible to also analyse and publish the other information included in the data share at this time.

We welcome any feedback on this report, or ideas for further analyses.

Please use the contact details at the back of this report if you would like to discuss the data share, or have any feedback on this publication or future analyses.

There is also a **Glossary** section which provides brief definitions for the terms used in this report.

Chapter 2: Experimental statistics on the benefit and P45 employment status of offenders

Summary

Out-of-work benefit status of working age offenders

An estimated 22% of all out-of-work benefit claims²⁹ open on 1 December 2012 were being claimed by people in the matched data who had been cautioned or convicted for a recordable offence³⁰ at some point between 1 January 2000 and 1 December 2012. 4% of these benefits were being claimed by individuals who had at least one spell in prison during that period.

Just under a third of all working age offenders (aged 18 – 62) who were convicted/cautioned or released from prison in 2010/2011 were claiming out-of-work benefits two years before. This increased to 41% one month before, and 44% one month after. The proportion then decreases gradually to 39% two years after – 7 percentage points higher than 2 years before conviction, caution or release.

Offenders released from prison are more likely to be claiming benefits after conviction/caution or release, than other offenders - over a half (54%) of offenders released from prison were claiming out-of-work benefits one month after, gradually decreasing to 42% two years after.

Two-thirds of working age offenders claimed at least one out-of-work benefit at some point in the two years following their conviction/caution or release from prison in 2010/2011. Offenders released from prison were more likely than all offenders to claim benefits in the two years following release; nearly 80% of offenders released from prison in 2010/2011 made at least one claim in that period. In particular, offenders released from prison were more likely to claim Jobseeker's Allowance (JSA), with 62% making at least one JSA claim at some point in the two year period.

²⁹ Out-of-work benefits include Jobseeker's Allowance, Employment and Support Allowance, Income Support, Incapacity Benefit, Passported Incapacity Benefit or Severe Disablement Allowance

³⁰ Recordable offences are those that the police are required to record on the Police National Computer. They include all offences for which a custodial sentence can be given, plus a range of other offences defined as recordable in legislation. They exclude a range of less serious summary offences, for example television licence evasion, driving without insurance, speeding and vehicle tax offences

P45 employment status of offenders

Only P45 employment is included in the data share – this will exclude self employment, cash-in-hand work and some lower paid jobs.

P45 employment rates remain relatively stable for adult offenders (aged 21-62) either side of caution/conviction or release from prison, with 38% of adult offenders in P45 employment³¹ both one year before and one year after caution/conviction or release. A prison spell appears to have a greater short-term impact on the P45 employment rate for adult offenders, which falls from 21% one month before sentence to 17% at release and 19% one month after release. However, one year after release P45 employment rates for adult prison leavers have recovered to 24%, the same level as one year before sentence.

Just over half (54%) of all working age offenders (not just adults) had at least one start in P45 employment at some point in the two years following their conviction/caution or release from prison in 2010/2011. Offenders released from prison were less likely than other offenders to start a period of P45 employment (36%).

Introduction

This chapter uses the matched MoJ, DWP and HMRC data to examine the benefit and P45 employment status of offenders.

The following statistics are provided:

- The benefits claimed as at 1 December 2012 for all offenders in the matched data who had been cautioned or convicted for a recordable offence as recorded on the Police National Computer (PNC) at some point between 1 January 2000 and 1 December 2012 (Table 1.1).
- The benefit and P45 employment status of offenders convicted/cautioned or released from prison in 2010/2011 either side of their conviction/ caution or release. In addition to the overall results for all offenders, the following breakdowns are provided: age, disposal type, offence type, gender and ethnicity.

Further tables are provided in **Annex C**.

³¹ The P45 employment information is derived from P45 forms sent to HMRC by employers. P45 employment does not cover all employment. Self-employment and cash-in-hand employment are not recorded in the P45 data. In addition, HMRC only required periods of employment to be notified via a P45 form if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year). Therefore not all lower paid jobs are included in the data, although some employers may still have reported these spells. Consequently, P45 employment figures under-record total employment and caution needs to be applied when interpreting these figures. Despite these limitations, P45 employment should provide a useful proxy of employment.

Methodology

Benefits claimed by offenders on 1 December 2012

The first section of this chapter looks at the benefits claimed by individuals in the matched data on 1 December 2012 and compares this to the general benefit population.

To produce statistics on the general benefit caseload, we have taken the full caseload in Great Britain as of 1 December 2012 from DWP data on the general benefit population as held on the National Benefits Database. The benefit caseload on a specific day is all claims that were open on that day; that is, the claim started on or before that day and ended on or after that day. The National Benefits Database has 100% coverage; that is, all relevant DWP benefit claims are included.

The offender data used covers all those individuals in the matched data with an open benefit spell on 1 December 2012 who had a conviction/caution between 2000 and 1 December 2012 that was recorded on the Police National Computer (PNC). This will be an under-estimate of the total volume of benefit claims by individuals in the data share as:

- The Police National Computer covers convictions/cautions in England and Wales only. (not the whole of Great Britain)
- Not all offences are recorded on the Police National Computer; for example, less serious summary cases are excluded.
- A match with DWP or HMRC data could not be found for all offenders on the Police National Computer. This may be because the individual did not have a DWP or HMRC record, but may also be because there was insufficient information to allow the records to be linked (**Annex A** provides further details about the coverage of the match).

We have restricted the analysis to individuals who were 16 or over on 1 December 2012. As we are looking at convictions/cautions for recordable offences between 1 January 2000 and 1 December 2012, this analysis will include those in the matched data who were under 16 at the time of the conviction/caution, but over 16 on the 1 December 2012. This is to ensure that the analysis is restricted solely to those eligible for working age or pension age benefits on the chosen caseload date.

The analysis includes all those convicted/cautioned between 1 January 2000 and 1 December 2012 and includes:

- individuals who have had recent convictions/cautions;
- individuals who were convicted early in this period but have not committed an offence since;
- individuals convicted/cautioned for multiple offences in this period.

Benefit and P45 employment status of working age offenders

The second section of this chapter looks at the benefit and P45 employment status of working age offenders in the two years either side of their conviction/caution or release from prison.

We have taken a cohort of working age offenders from the data share who:

- were convicted or cautioned in the 2010/2011 tax year and received a non-custodial sentence;
- served a custodial sentence and were released from prison in the 2010/2011 tax year.

No restrictions have been made on the length of sentence for those released in the 2010/2011 tax year, so some offenders included in this group may have started serving their sentence at some period prior to April 2010. The 2010/2011 tax year has been chosen as it is the most recent year for which we can track the offenders for a full two years following the conviction/caution or release from prison.

Where an offender has more than one relevant offence in the 2010/2011 tax year, we have taken the first. All figures are presented for both all offenders and just those who served a custodial sentence, where the custodial sentence related to the first relevant offence in the year. This will not include all custodial sentences that took place in 2010/2011, the following will be excluded:

- If a person committed an offence within 2010/2011 prior to the offence that related to the custodial sentence, the earlier offence will be taken.
- Any individual sentenced to a custodial sentence who was convicted in 2010/2011 but released after 5th April 2011 are also excluded.

The key statistics presented in this chapter look at benefit and P45 employment status one month, one year and two years either side of conviction/caution or release from prison in 2010/2011. For offenders who did not receive a custodial sentence, the date they were convicted/cautioned is used to both track benefit and P45 employment status before and after conviction/caution. For offenders who did receive a custodial sentence, this analysis tracks their benefit and P45 employment status for the two years prior to their conviction/caution and the two years following their release from prison.

Caution needs to be applied when interpreting the figures in the weeks leading lead to the conviction. Due to data quality issues, it is estimated that time on remand is not included for a small proportion of offenders who were remanded in custody. Therefore not all the prison spells will include time spent in prison on remand – which means, according to the data share, these offenders will be recorded as not being in prison, whereas in fact they were in prison as they were remanded in custody during their court case and therefore they were unable to be claiming benefits or be in P45 employment. This is likely to have a small effect on underestimating the proportion of offenders claiming benefits or in P45 employment shortly before their conviction date – therefore, care in particular

should be taken when interpreting the analyses of benefit /P45 employment status one month before conviction/caution for offenders serving custodial sentences. The average time that prisoners sentenced to custodial sentences spend remanded in custody is 10 weeks³² therefore the benefit and P45 employment status of offenders should be more reliable 10 weeks before prison start.

To ensure that all individuals included in the cohort are of working age, and therefore able to be in P45 employment or on working age benefits during the two years either side of the period we are looking at, we have made the following age restrictions:

- For offenders who received a non-custodial sentence, we have restricted the analysis to those who were aged between 18 and 62 at the time of conviction/caution if they received a non-custodial sentence;
- For offenders who did receive a custodial sentence, we have taken those who were 18 or over at the time of conviction sentence, and were 62 or under on release from prison.

This restricts the cohort to offenders who were 16 or over two years before their conviction/caution and 65 or under two years after their conviction/ caution or release from prison. The same age restriction has been applied to both genders.

We have considered benefit status based on all benefits administered by DWP and included a separate breakdown for the main out-of-work benefits: Jobseeker's Allowance (JSA), Employment and Support Allowance (ESA), Income Support (IS) and Incapacity Benefits³³ (IB). Since the introduction of ESA in October 2008, many claimants have had their IB claims reassessed and have been moved from either single IB claims or joint IB/IS claims onto ESA. To separate out these changes from changes in the claiming patterns of offenders, we have combined the figures for these benefits.

Individuals may qualify for more than one DWP benefit at any given time so the figures for individual benefits given throughout this chapter cannot be added together to give the total claimant figures. It is also possible for someone to claim benefits whilst in P45 employment; for example, if they only earn a low income or work limited hours. Consequently, figures for the total number of people claiming benefits and the total number of people in P45 employment cannot be combined to give the total either.

³² Story of the prison population: www.gov.uk/government/publications/story-of-the-prison-population-1993-2012

³³ Throughout this chapter, Incapacity Benefits refer to Incapacity Benefit, Passported Incapacity Benefit and Severe Disablement Allowance.

Results

Benefits claimed by working age offenders

On 1 December 2012, there were 26.5 million active benefit spells in Great Britain³⁴ – these are benefit spells that opened on or before 1 December 2012 and ended on or after this date. Of these, 1.8 million (7%) were claimed by people in the matched data who had been cautioned or convicted for a recordable offence in England and Wales at some point between 1 January 2000 and 1 December 2012. 290,000 (1%) were made by those who had been in prison at some point during this period.

As not all offenders are included in the matched data, please note that these are likely to be under-estimates for the total number of individuals in the matched data claiming benefits on 1 December 2012. We have not made any adjustments to estimate the volume of additional claims not covered by the data match. Further information on the matching methodology is provided in **Annex A**.

Table 1.1: Number of individual benefit spells open on 1 December 2012 (for individuals who were 16 or over on this date)

Type of benefit ³⁵	Total number of benefit claims ³⁶	No. of claims by individuals in the matched data	% of claims by individuals in the matched data	No. of claims by individuals in the matched data with at least one prison spell	% of claims by individuals in the matched data with at least one prison spell
Jobseeker's Allowance (JSA)	1,451,000	408,000	28%	84,000	6%
Employment and Support Allowance (ESA)	1,455,000	335,000	23%	78,000	5%
Disability Living Allowance (DLA)	3,033,000	306,000	10%	48,000	2%
Income Support (IS)	1,190,000	242,000	20%	27,000	2%
Incapacity Benefit (IB)	810,000	139,000	17%	24,000	3%
Retirement Pension (RP)	12,869,000	127,000	1%	9,000	-
Carers Allowance (CA)	1,064,000	85,000	8%	9,000	1%
Pensions Credit (PC)	2,519,000	74,000	3%	8,000	-
Severe Disablement Allowance (SDA)	217,000	13,000	6%	1,000	-
Attendance Allowance (AA)	1,723,000	11,000	1%	1,000	-
Passported Incapacity Benefit (PIB)	45,000	6,000	14%	1,000	1%
Bereavement Benefit (BB)	69,000	3,000	4%	-	-
Widows Benefit (WB)	39,000	1,000	2%	-	-
All Claims	26,483,000	1,750,000	7%	290,000	1%
Out-of-work benefits	5,168,000	1,144,000	22%	214,000	4%

" - " denotes less than 0.5% for percentages and fewer than 500 for volumes

³⁴ As an individual can claim more than one benefit at a time, the total number of individuals claiming benefits on 1 December 2012 will be lower than this.

³⁵ For more information on these benefits, see glossary

³⁶ Total benefit claim figures for the general population are given for Great Britain. The information on individuals in the data share cover convictions and cautions between January 2000 and February 2013 in England and Wales only.

Around half of all benefit claims made in the general population are for retirement age benefits (Retirement Pension and Pension Credit) whilst the majority of individuals included in the data share are of working age. As a consequence, the breakdown of benefit types differs between those who had been convicted or cautioned for a recordable offence at some point between 1 January 2000 and 1 December 2012 and the general benefit population: individuals in matched data who are, or were, offenders were in receipt of 7% of all open benefit claims, but were in receipt of 22% of all the claims to out-of-work benefits. No direct comparison is available, however 15% of individuals between the ages of 10 and 52 in England and Wales in 2006 were estimated to have had at least one conviction for a recordable offence³⁷. This is an underestimate as excludes cautions and is not a direct comparison.

28% of all Jobseeker's Allowance claims on 1 December 2012 were made by individuals in the matched data who had been convicted or cautioned for a recordable offence at some point between 2000 and 1 December 2012; the equivalent figures are 23% for Employment and Support Allowance, 20% for Income Support and 17% for Incapacity Benefit. By comparison, only 1% of the 12.9 million Retirement Pension claims in Great Britain were made by people in the matched data who had been convicted or cautioned for a recordable offence over this period.

1% of all the active benefit claims, and 4% of all out-of-work benefit claims were made by individuals in the matched data who had been in prison at some point between 1 January 2000 and 1 December 2012.

Benefit and P45 employment status of working age offenders

This section looks at the benefit and P45 employment status of 487,000 working age offenders included in the data share who were either released from prison or convicted/cautioned for a recordable offence in the 2010/2011 tax year, including 54,000 offenders who were released from prison in this year.³⁸ The analysis is carried out an individual level; where an offender had multiple relevant offences in 2010/2011, we have taken the first. This may not have been each individual's only or most serious offence in the year.

For those who received a custodial sentence for their first offence in 2010/2011, this section looks at their benefit and P45 employment status in the two years either side of the conviction/caution date. For those who received a custodial

³⁷ See "Conviction histories of Offenders between the ages of 10 and 52": www.gov.uk/government/uploads/system/uploads/attachment_data/file/217474/criminal-histories-bulletin.pdf

³⁸ This analysis uses the first relevant conviction, caution or release from prison for each individual in the 2010/11 tax year. Consequently, these figures do not include all those who were released from prison in 2010/11, only those released from prison who had not been convicted or cautioned of an earlier offence within 2010/11 for which they did not receive a custodial sentence. See the Methodology section for further details.

sentence, we look at their benefit and P45 employment status in the two years before the start of the prison sentence, and the two years following their release from prison.

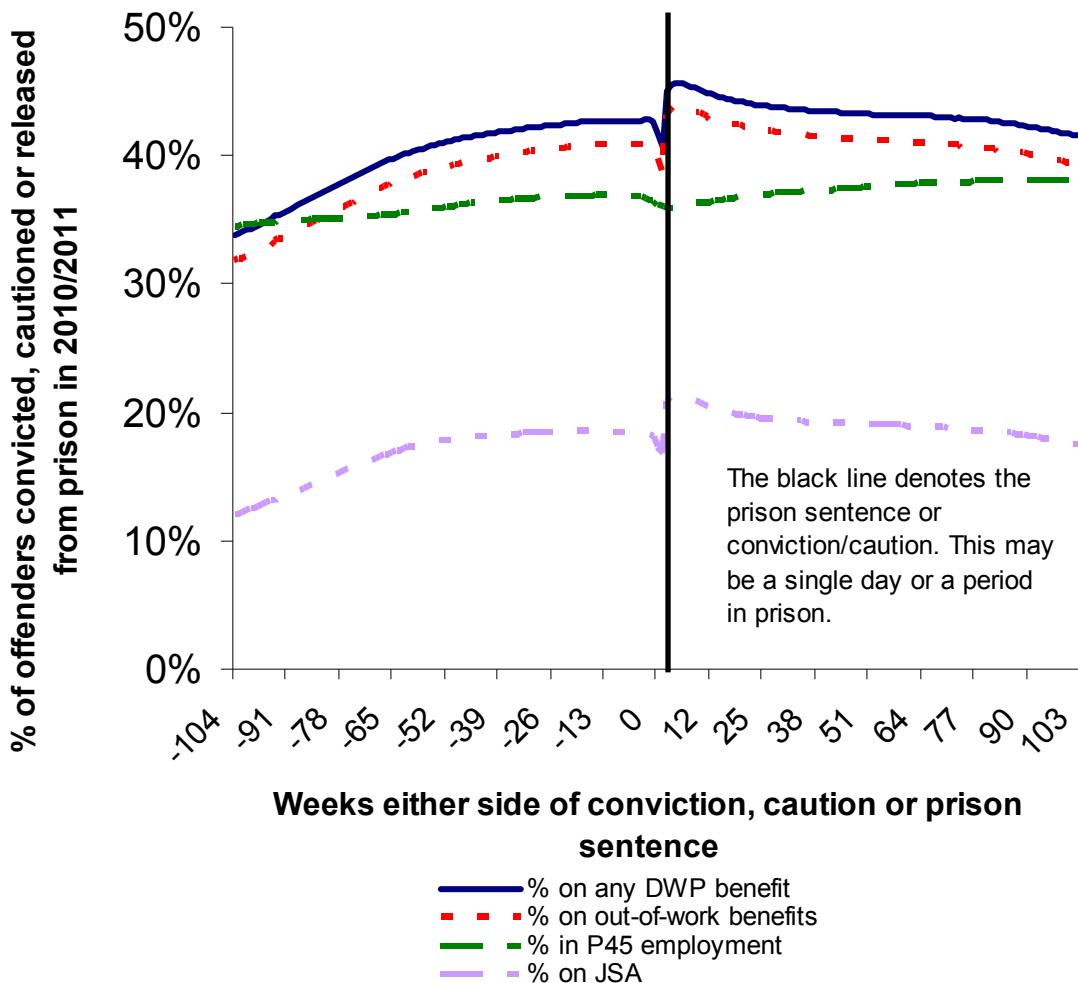
Full statistics on the proportion of offenders and those released from prison are available in the following tables in **Annex C**:

- Table 1.2a: Benefit and P45 employment status of offenders at the point of conviction, caution or release from prison in 2010/2011, and one month, one year, two years either side of the conviction/caution/ custodial sentence.
- Table 1.2b: Benefit and P45 employment status of offenders released from prison in 2010/2011 at point of release from custody and one month, one year, and two years either side of the custodial sentence.
- Table 1.3a: Proportion of offenders who claimed benefits or had at least one start in P45 employment at some point in the first month, year and two years following their caution, conviction or release from prison.
- Table 1.3b: Proportion of offenders released from custody who claimed benefits or had at least one start in P45 employment at some point in the first month, year and two years following their release.

43% of working age offenders were claiming any DWP benefit one month (4 weeks) before their conviction/caution, almost all of those who claimed benefits were claiming out-of-work benefits - 41% of offenders claimed an out-of-work benefit. At one month following their conviction/caution or release from prison, the proportions are slightly higher; 46% were claiming any benefit with 44% claiming an out-of-work benefit.

The proportion of working age offenders on benefits increases in the two years prior to the conviction/caution, peaks in the first few weeks following the conviction/caution or release from prison and then starts to gradually decrease during the following two years (Chart 1.1).

Chart 1.1 Proportion of working age offenders on benefits or in P45 employment in the two years either side of their conviction/caution or release from prison in 2010/2011



P45 employment levels remain stable in the two years prior to the conviction/caution and increase slightly in the two years following the conviction/caution or release from prison. This increase is largely due to the ages of the offenders involved: the proportion of offenders aged 21-62³⁹ in P45 employment remains broadly constant over the two years either side of the conviction/caution or release from prison (37%-38% in P45 employment at any given time), whilst the proportion of those aged 18-20 increased from 22% in P45 employment two years prior to the conviction/caution to 36% in P45 employment two years after conviction/caution or release from custody (Table 1.2). This increase is due to the younger group entering the labour market for the first time during this period. Further statistics on age are given in Tables 1.2a and 1.2b in **Annex C**

³⁹ Based on their age at the date of conviction/caution or release from prison in 2010/11.

Table 1.2: Proportion of working age offenders in the matched data convicted/cautioned or released from prison in 2010/2011 who were in P45 employment in the two years either side of their conviction/caution or custodial sentence

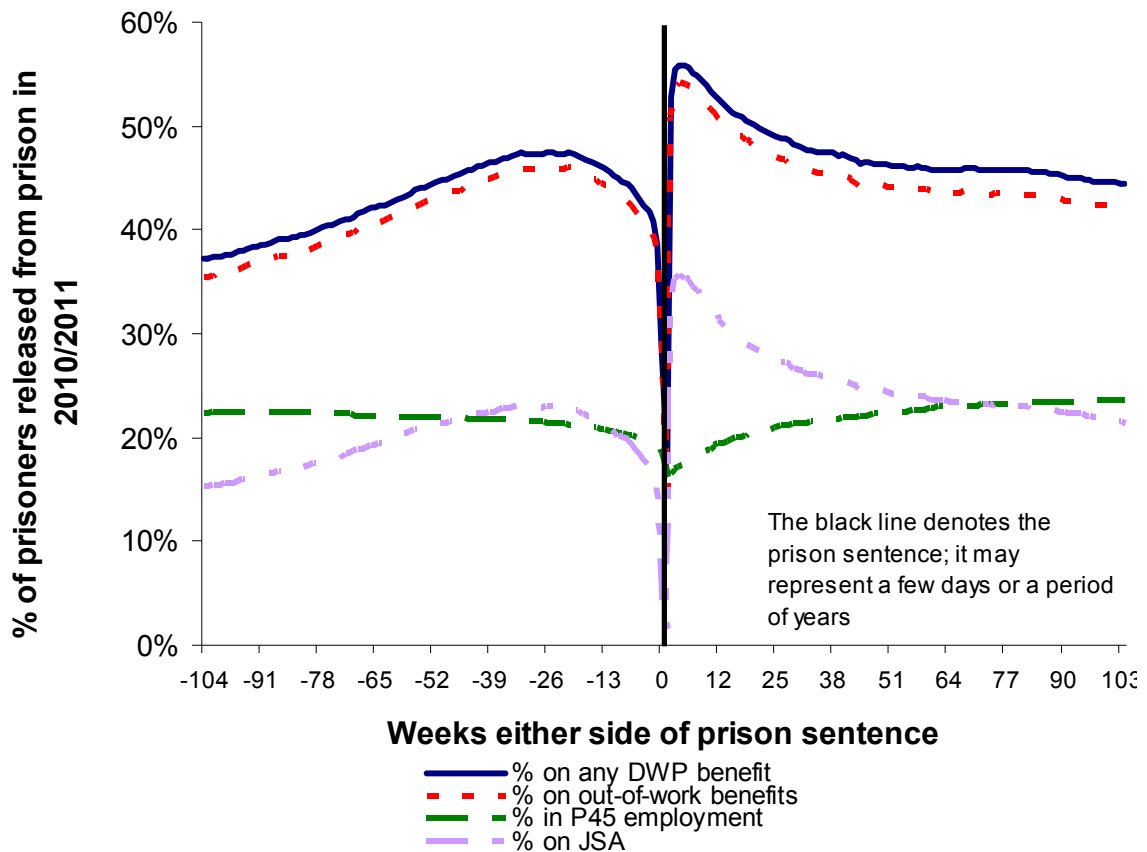
	Before conviction/caution			At conviction/caution or release from prison	After conviction/ caution or release from prison		
	2 years before	1 year before	1 month before		1 month after	1 year after	2 years after
In P45 Employment (All)	34%	36%	37%	36%	36%	38%	38%
Young Adult (18-20)	22%	27%	31%	30%	30%	34%	36%
Adult (21-62)	37%	38%	38%	37%	37%	38%	38%

In the two year period either side of the conviction, caution or custodial sentence, some of the offenders included in this cohort will have committed further offences resulting in a custodial sentence which will have impacted their ability/eligibility to claim benefits or be in P45 employment over this period. This analysis has not controlled for this; all offenders are included in the analysis at all points, regardless of whether they would have been available to claim benefits or be in work. In addition, some of the offenders will have been involved in other activities, such as education or training. We do not hold information on this type of activity for this group of offenders.

The proportion of offenders on benefits among those released from prison in 2010/2011 is higher than the proportion of all offenders on benefits both before date of conviction/caution and after the date of conviction/caution or release from prison. In particular, those who have been in prison are more likely to be on JSA following their release than other offenders are following their conviction or caution. For those released from prison in 2010/2011, around a fifth were on JSA shortly before their prison sentence, compared to 35% one month after release (Chart 1.2).

P45 employment levels are lower for the those offenders released from prison in 2010/2011 than the overall working age offender population, but follow the same pattern of remaining relatively stable over the four year period. 23% of adults released from prison in 2010/2011 were in P45 employment one year prior to their sentence, and 23 % one year after release, following a drop to 17% at point of release.

Chart 1.2: Proportion of working age offenders in the matched data who were released from prison in 2010/2011 on benefits or in P45 employment from two years before their sentence to two years after their release from prison⁴⁰



Overall, just over two-thirds of offenders had at least one period on DWP benefits at some point in the two years following their conviction/caution or release from prison (Chart 1.3)⁴¹. Almost all of these were claims for out-of-work benefits and just under half of offenders (47%) claimed JSA at least once during this two year period, whilst over half (54%) had at least one start in P45 employment at some point in that period.

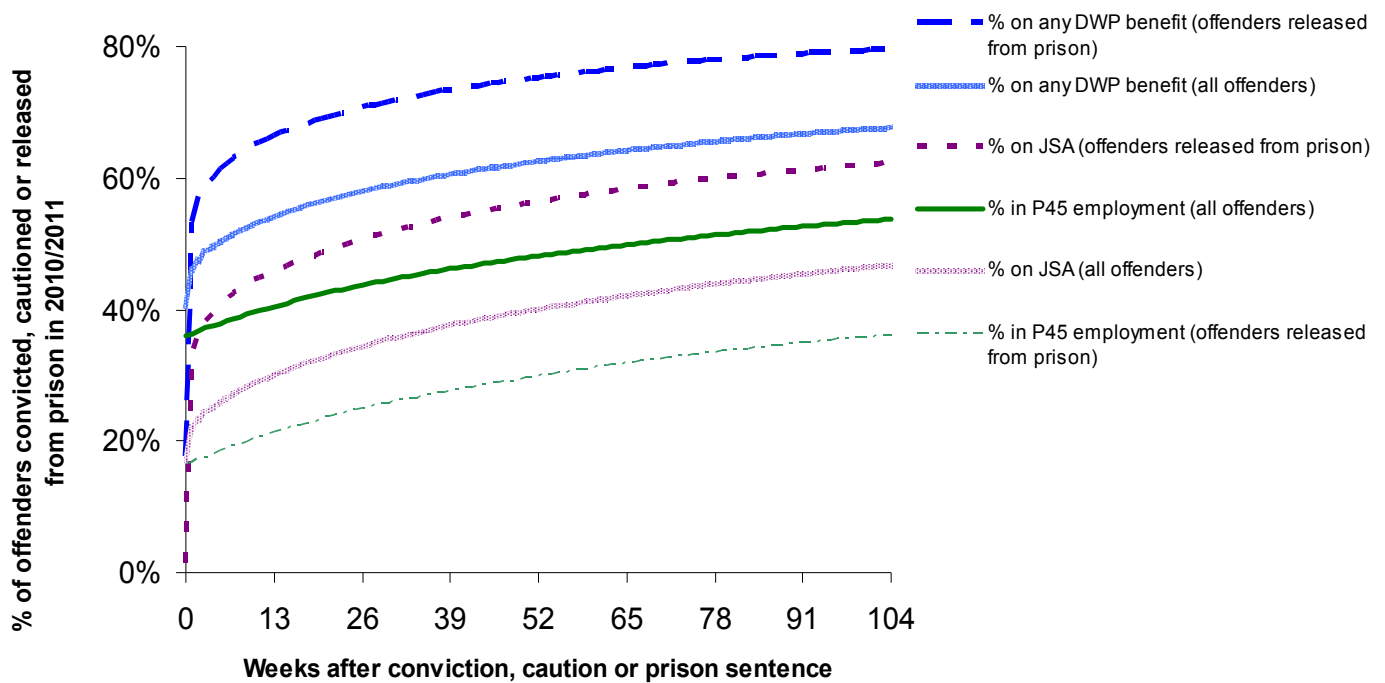
Offenders released from prison were more likely than all offenders to claim benefits in the two years following release; 80% made at least one claim in that

⁴⁰ The decrease in the proportion of offenders released from prison claiming benefits immediately prior to their prison sentence, may in part be explained by the fact that for a small proportion of offenders, their period in prison on remand is not captured in the data share. See Chapter 1 for further details.

⁴¹ To produce these cumulative figures we have taken any spell in the two years following conviction/caution or release from prison; the individual may not have been on benefits at the two year point following conviction/caution or release from prison.

period with almost all of these claiming out-of-work benefits. In particular, the offenders released from prison were more likely to claim JSA in this period – 62% made at least one JSA claim at some point in the two year period – and less likely to start a period of P45 employment (36%).

Chart 1.3: Cumulative proportion of offenders convicted/cautioned or released from prison in 2010/2011 who had at least one benefit or P45 employment spell at some point in the two years following their conviction/caution or release from prison



Benefit and P45 employment status by offender characteristic

This section investigates the out-of-work benefit⁴² and P45 employment status by age, disposal type, offence type and ethnicity of working age offenders shortly before and after a conviction, caution or custodial sentence. As in the previous section, the analysis is based on all offenders who were convicted/cautioned or released from prison in the 2010/2011 tax year and aged between 18 and 62 at the time of conviction/caution or release from prison.

Counts of offenders included in the analysis, by characteristics, have been added

⁴² Jobseeker’s Allowance, Employment and Support Allowance, Income Support, Incapacity Benefit, Passported Incapacity Benefit or Severe Disablement Allowance

to tables in this chapter. The cohort of offenders used for this analysis (working age offenders in the data share who were convicted /cautioned or released from prison in 2010/2011) is a subset of all offenders recorded on the Police National Computer (as only 81% of PNC records were matched to DWP / HMRC data, and this analysis is restricted to working age offenders) and also the PNC is a subset of all cautions and convictions in England and Wales, as the PNC generally only includes cautions and convictions for recordable offences. Please see Chapter 1 for further details. Therefore numbers by characteristics will be lower than published MoJ statistics covering all offenders, however, generally the distributions/rankings of the characteristics in this analysis (proportion of cohort who are males for example) are consistent with published MoJ statistics on criminal histories and criminal statistics. Any large differences between published figures on all offenders are highlighted throughout the analysis⁴³.

More detailed tables looking at the out-of-work benefit and P45 employment status of offenders convicted, cautioned or released from prison over the two years either side of their conviction, caution or custodial sentence can be found in **Annex C**.

Benefit and P45 employment status by age

The likelihood of claiming out-of-work benefits either side of the conviction/caution or custodial sentence increases with age, peaking for the 45-54 age group, with 49% of this group claiming an out-of-work benefit one month after their conviction/caution or release from prison (Table 1.3a). Offenders in this age group who are released from prison are the most likely group to be on benefits following release (60%) (Table 1.3b).

Benefit levels for those aged 18-20 and aged 21-24 are lower than for the other age groups with 38% and 39% claiming out-of-work benefits one month after their conviction/caution or release from prison.

⁴³ Links to key published MoJ criminal justice statistics: www.gov.uk/government/publications/criminal-justice-statistics-quarterly-march-2013
www.gov.uk/government/uploads/system/uploads/attachment_data/file/203851/7-offending-histories-tables-dec12.xls

Table 1.3a: Proportion of working age offenders claiming out-of-work benefits one month either side of their conviction/caution or custodial sentence in 2010/2011, by age

Age Group	No. of offenders	Before conviction/caution	After conviction/caution or release from prison	
		1 month before	At conviction/caution or release from prison	1 month after
Young Adult (18-20)	81,000	34%	33%	38%
Adult (21-62)	407,000	42%	40%	45%
21-24	90,000	36%	33%	39%
25-34	147,000	42%	38%	44%
35-44	101,000	46%	44%	49%
45-54	54,000	47%	45%	49%
55-62	15,000	43%	42%	45%
Total	487,000	41%	39%	44%

Table 1.3b: Proportion of working age offenders released from prison in 2010/2011 claiming out-of-work benefits one month either side of their sentence in 2010/2011, by age

Age Group	No. of offenders	Before prison entry	After release from prison	
		1 month before	At release from prison ⁴⁴	1 month after
Young Adult (18-20)	6,000	33%	7%	51%
Adult (21-62)	48,000	42%	15%	54%
21-24	10,000	33%	8%	51%
25-34	20,000	41%	14%	53%
35-44	12,000	47%	21%	57%
45-54	5,000	49%	21%	60%
55-62	1,000	45%	19%	49%
Total	54,000	41%	14%	54%

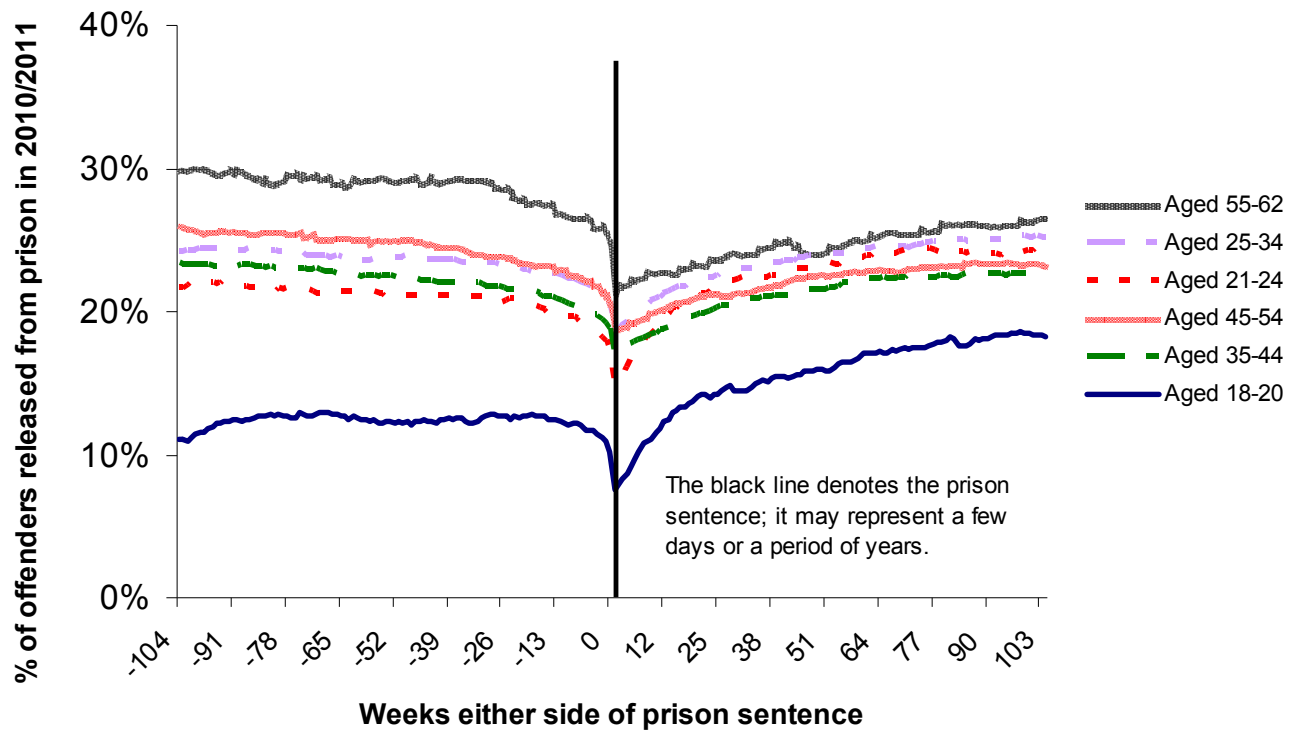
P45 employment rates remain relatively stable for adult offenders (age 21-62) either side of caution/conviction or release from prison, with 38% of adult offenders in P45 employment both one year before and one year after caution/conviction or release (Table 1.2). A prison spell appears to have a greater short-

⁴⁴ These are benefits claimed on the day of release from prison. In all cases, these are claims that were open throughout the prison spell

term impact on the P45 employment rate for adult offenders, which falls from 21% one month before sentence to 17% at release and 19% one month after release. However, one year after release P45 employment rates for adult prison leavers have recovered to 24%, the same level as one year before sentence.

For those aged 18-20, the proportion in P45 employment increases steadily over the total four year period (only dipping slightly around the time of the sentence); as with the out-of-work benefit levels, this is due to this group entering the labour market for the first time (Chart 1.4).⁴⁵

Chart 1.4: Proportion of offenders released from prison in 2010/2011 in P45 employment in the two years before sentence, and two years after release from prison, by age



Those under 21 at the time of release from prison have the lowest P45 employment levels across the entire period, but see the biggest increase in the proportion in P45 employment following release from prison. As previously, this is due to some of these individuals being too young to be in P45 employment in the two years prior to the prison sentence.

⁴⁵ Further statistics on the P45 employment status of offenders by age can be found in Table 1.4A and 1.4B in Annex C.

Benefit and P45 employment status by disposal type

The disposal type for each offence in the data share is the most severe sentence received for the primary offence. An offender may be given more than one disposal type per offence and more than one offence per conviction/caution. The data used here refers to the primary disposal type given for the primary offence. Full definitions of each disposal type can be found in the glossary.

In the 2010/2011 cohort from the matched data, police cautions and fines are the most common disposal types for working age offenders convicted/ cautioned or released from prison in 2010/2011 with 53% receiving these types of convictions/cautions. 11% of working age offenders in the cohort were released from a prison sentence (recorded in the charts and tables below as “immediate custody”). (This is consistent with the distribution of disposal types for the overall offender population).

For all disposal types, the proportion of the working age offenders in the matched data on out-of-work benefits one month after the conviction/caution or release from custody is higher than one month before (Table 1.4). The biggest increase is for those who served a custodial sentence (recorded as “immediate custody” in the tables). For offenders who received a custodial sentence of 12 months or less⁴⁶, 47% were on benefits one month before the prison spell whilst 52% were on out-of-work benefits one month after release. For those serving longer prison sentences, the gap is greater: 32% were on out-of-work benefits one month before the prison spell with 57% on out-of-work benefits one month after release.

⁴⁶ Sentence length here refers to the sentence received at conviction; the amount of time actually spent in prison may be lower.

Table 1.4: Proportion of working age offenders claiming out-of-work benefits one month either side of their conviction/caution or custodial sentence in 2010/2011, by disposal type⁴⁷

Disposal Type	No. of offenders	Before conviction/caution	At conviction/caution or release from prison ⁴⁸	After conviction/caution or release from prison
		1 month before	1 month after	1 month after
Police Caution	155,000	34%	35%	36%
Absolute Discharge	1,000	46%	48%	48%
Conditional Discharge	41,000	55%	55%	55%
Fine	102,000	36%	36%	37%
Community Sentence	90,000	49%	50%	51%
Suspended Sentence Order	30,000	46%	47%	48%
Immediate Custody: All lengths	54,000	41%	14%	54%
Immediate Custody: <12 months	32,000	47%	20%	52%
Immediate Custody: >12 months	22,000	32%	5%	57%
Other	14,000	51%	51%	52%
Total	487,000	41%	39%	44%

Those receiving conditional discharges are the most likely to be on out-of-work benefits (55% at the time of conviction) whilst those receiving cautions or fines are the least likely to be claiming out-of-work benefits: 35% of those receiving fines and 36% of those receiving police cautions at the time of the conviction/caution.

For all disposal types, P45 employment levels remain broadly stable either side of the conviction/caution or custodial sentence (Table 1.5). Offenders receiving cautions are the most likely to be in P45 employment with 43% in P45 employment at the time of conviction/caution, rising to 45% one year after. Offenders who serve a prison sentence are the least likely to be in P45 employment, with just over a fifth in P45 employment one year after their release

⁴⁷ The number of offenders in this analysis are lower than MoJ published statistics as this only includes offenders in the PNC who were matched to DWP/HMRC data, and offenders of working age. However, the proportions/ranking by disposal are fairly consistent with MoJ published statistics – the main differences are that the data share only includes convictions / cautions for recordable offences, and therefore excludes a lot of the less serious summary offences. (for example, around 20% of offenders in the cohort used in this analysis were sentenced to a fine, whereas MoJ’s Criminal Justice Statistics publication shows that 56% of all cautions / convictions were sentenced to a fine. See Table Q1.6i of www.gov.uk/government/uploads/system/uploads/attachment_data/file/231088/main-tables-march-2013.xls)

⁴⁸ For those with a disposal type of immediate custody, these are benefit claims open on the day of release from prison. In all cases, these benefit spells overlapped the prison spell – see chapter 1 ‘Overview of the data share’ for further details. For the remaining disposal types, these are benefit spells that overlap the day of conviction/caution.

from prison.

Table 1.5: Proportion of working age offenders in P45 employment one month and one year either side of their conviction/caution or custodial sentence in 2010/2011, by disposal type

Disposal Type	No. of offenders	Before conviction/caution		At conviction/caution or release from prison ⁴⁹	After conviction/caution or release from prison	
		1 year before	1 month before		1 month after	1 year after
Police Caution	155,000	42%	44%	43%	43%	45%
Absolute Discharge	1,000	29%	29%	30%	31%	32%
Conditional Discharge	41,000	29%	30%	29%	30%	31%
Fine	102,000	41%	43%	43%	42%	42%
Community Sentence	90,000	33%	33%	33%	33%	34%
Suspended Sentence Order	30,000	34%	34%	33%	34%	35%
Immediate Custody: All lengths	54,000	22%	20%	16%	17%	22%
Immediate Custody: <12 months	32,000	22%	20%	17%	18%	22%
Immediate Custody: >12 months	22,000	22%	18%	15%	16%	23%
Other	14,000	27%	27%	26%	27%	28%
Total	487,000	36%	37%	36%	36%	38%

Benefit and P45 employment status by primary offence type

Where more than one offence is considered in a court case or cautioning occasion, the offence that attracts the most severe sentencing outcome is deemed to be the Principal offence and other offences also dealt with in that case would be ignored. If two offences in the same case attract the same sentence the offence with the statutory maximum sentence is deemed the 'principal offence'. Only primary offences are included in the data share.

The most common principal offence for offenders in the matched data who were convicted/cautioned or released from prison in the 2010/2011 tax year were summary offences (47% of the cohort), theft and handling stolen goods (14%) and drug offences (13%). (This is generally consistent with the distribution of offence types for the overall offender population).

Across all offence types, the proportion of offenders claiming out-of-work benefits is generally higher after the conviction/caution or release from prison than before (Table 1.6). The biggest increases are for sexual offences, robbery and burglary;

⁴⁹ For those with a disposal type of immediate custody, these are spells of P45 employment that were active on the day of release from prison. In all cases, these are P45 employment spells that overlapped the prison spell – see chapter 1 'Overview of the data share' for further details. For the remaining disposal types, these are spells of P45 employment that overlap the day of conviction/caution.

this is largely due to the type of sentence handed down for these crimes. As shown in Table 1.4, those who serve prison sentences are more likely to be on out-of-work benefits after their release from prison than before their sentence. Over 80% of those convicted/cautioned of robbery in the data share served a prison sentence for their offence (this is in line with published MoJ statistics on all offenders): 29% of offenders convicted/cautioned or released from prison for robbery offences were on out-of-work benefits one month before their sentence compared to 56% after release from prison. The increase pre- and post-sentence is likely to be exaggerated as the data share does not capture all time in prison on remand. See Chapter 1 for further details.

Those convicted of breach offences or theft and handling stolen goods are the most likely to be claiming out-of-work benefits either side of the conviction/ caution or release from prison (over 50% one month after the conviction/ caution or release from custody), whilst those convicted/cautioned of summary motoring offences are the least likely to be claiming out-of-work benefits (26% one month after the conviction/caution or release from prison).

Table 1.6: Proportion of working age offenders claiming out-of-work benefits one month either side of their conviction/caution or custodial sentence in 2010/2011, by offence type⁵⁰

Offence Type	No. of offenders	Before conviction/ caution		After conviction/ caution or release from prison	
		1 month before	At conviction/ caution or release from prison ⁵¹	1 month after	
Violence against the person	38,000	40%	34%	46%	
Sexual offences	4,000	34%	23%	47%	
Burglary	12,000	44%	32%	55%	
Robbery	4,000	29%	11%	56%	
Theft and handling stolen goods	67,000	53%	51%	55%	
Fraud and forgery	16,000	36%	34%	38%	
Criminal damage	6,000	45%	43%	49%	
Drug offences	64,000	43%	40%	46%	
Other indictable offences	26,000	41%	36%	46%	
Indictable motoring offences	3,000	29%	22%	33%	
Summary offences excluding motoring	172,000	40%	40%	41%	
Summary motoring offences	56,000	23%	24%	26%	
Breach offences	19,000	56%	49%	56%	
Total	487,000	41%	39%	44%	

P45 employment levels for offenders tend to remain stable before and after conviction/caution or release from prison across the offence types (Table 1.7). The main exception is for those who are convicted/cautioned of sexual offences: for this group, P45 employment levels fall from 42% one year before the conviction/caution to 32% one year after conviction/caution or release from prison⁵². The drop in P45 employment is particularly marked for those who are imprisoned for a sexual offence: around 40% of these prisoners are in P45

⁵⁰ The number of offenders in this analysis are lower than MoJ published statistics as this only includes offenders in the PNC who were matched to DWP/HMRC data, and offenders of working age. However, the proportions/ranking by offence type are consistent with MoJ published statistics (for example, summary offences, theft and handling stolen goods and drug offences are the three most common offences in the cohort, and published statistics) – the main differences are that the data share only includes convictions / cautions for recordable offences, and therefore excludes a lot of the less serious summary offences.) See Table Q7I of the following MoJ publication for comparison to all offenders on the PNC: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/203851/7-offending-histories-tables-dec12.xls

⁵¹ For those with a disposal type of immediate custody, these are benefits claims that were open on the day the person was released from prison. These are all claims that were open throughout the prison spell. For all other disposal types, these are people who had claims that started before the conviction/caution and ended after the conviction/caution.

⁵² Further statistics on the P45 employment status of offenders by principal offence can be found in Tables 1.6A and 1.6B in Annex C

employment one year prior to their sentence compared to 25% one year after release. This could be explained by the fact that in the general offending population, offenders convicted of sexual offences tend to be older than other offenders⁵³ and that they have a higher average custodial sentence length than all other offenders given custodial sentences (around 56 months, compared to 15 months for all offenders serving custodial sentences⁵⁴) – therefore they will be older on release from prison, and therefore potentially less likely to be in or return to P45 employment.

Table 1.7: Proportion of working age offenders in P45 employment one month and one year either side of their conviction/caution or custodial sentence in 2010/2011, by offence type

Offence Type	No. of offenders	Before conviction/ caution		At conviction/ caution or release from prison	After conviction/ caution or release from prison	
		1 year before	1 month before		1 month after	1 year after
Violence against the person	38,000	35%	35%	34%	34%	34%
Sexual offences	4,000	42%	38%	32%	32%	32%
Burglary	12,000	19%	18%	18%	18%	18%
Robbery	4,000	17%	16%	13%	15%	15%
Theft and handling stolen goods	67,000	28%	28%	27%	26%	26%
Fraud and forgery	16,000	41%	41%	40%	40%	40%
Criminal damage	6,000	33%	34%	33%	34%	34%
Drug offences	64,000	31%	32%	32%	32%	32%
Other indictable offences	26,000	33%	33%	32%	32%	32%
Indictable motoring offences	3,000	43%	42%	41%	41%	41%
Summary offences excluding motoring	172,000	39%	40%	40%	40%	40%
Summary motoring offences	56,000	51%	53%	52%	51%	51%
Breach offences	19,000	24%	25%	24%	24%	24%
Total	487,000	36%	37%	36%	36%	38%

Those convicted of robbery or burglary had the lowest P45 employment levels before and after conviction/caution or release from prison. Offenders convicted of summary motoring offences had little change in terms of levels of P45 employment either side of the conviction/caution. 53% of those convicted/cautioned or released from prison for summary motoring offences were in P45 employment one month before caution/conviction, while 51% were in P45 employment one month after conviction/caution or release from custody. This is linked to these offenders being less likely to receive a prison sentence which may affect their P45 employment status.

⁵³ www.gov.uk/government/publications/criminal-justice-statistics-quarterly-march-2013

⁵⁴ Table Q5.5 of www.gov.uk/government/publications/criminal-justice-statistics-quarterly-march-2013

Benefit and P45 employment status by gender

The majority of working age offenders in the matched data who were convicted/cautioned or released from prison for a recordable offence in 2010/2011 were male (81%) (which is consistent for all offenders⁵⁵). For those released from prison, this was 92%.

Female offenders are more likely to be on out-of-work benefits either side of their caution/conviction or prison spell than male offenders (Table 1.8). 53% of female offenders were on an out-of-work benefit one month after conviction/caution or release from prison, compared to 42% of male offenders. In the general population, men are more likely to be on benefits than women: in February 2010, 14.1% of the male population of Great Britain and 12.6% of female population were claiming out-of-work benefits. Over half of the out-of-work benefit claimants (56%) in February 2010 were males⁵⁶.

The gender difference in out-of-work benefit status remains for those released from prison with just under two-thirds of female offenders claiming out-of-work benefits one month after release, compared to just over half of male offenders. However, the change in benefit levels is greater for men following their prison sentence: 54% of female prisoners were claiming benefits one month before their sentence, increasing by 7 percentage points to 61% claiming out-of-work benefits one month after release. For the male prisoners, the increase is 13 percentage points with 40% claiming benefits one month before their sentence compared to 53% after release.

Part of the reason for the change not being as marked for females may be because they are more likely to have shorter sentences and are less likely to be given custodial sentences; 70% have under 12 month sentences, compared to 59% for the men, and in particular, a third of females have sentences of less than 3 month, compared to a quarter of the men. Female offenders serving short sentences (<12 month) are the most likely to have a benefit that overlaps the prison spell and carries on (around a third). However this does not fully explain the differences as even when just looking at shorter sentences (under 12 months), the increase in benefit levels are still greater for men. And for both genders, there is a particularly big jump in pre and post prison sentence benefit levels for those serving 12 month plus sentences, but again the difference is greater for men (20 percentage points for women, 26 for men).

⁵⁵ Table 7.1 of www.gov.uk/government/uploads/system/uploads/attachment_data/file/203851/7-offending-histories-tables-dec12.xls

⁵⁶ The source for the DWP Work and Pensions Longitudinal Study taken from the DWP Tabulation Tool: http://83.244.183.180/100pc/wapopg/tabtool_wapopg.html. The figures differ slightly as Pension Credit is included in the general population figures but not the offender figures.

Table 1.8: Proportion of working age offenders on out-of-work benefits one month either side of their conviction/caution or custodial sentence in 2010/2011, by gender

Gender	No. of offenders 1 month before	Before conviction/caution	After conviction/caution or release from prison	
			At conviction/caution or release from prison ⁵⁷	1 month after
All male offenders	396,000	39%	36%	42%
Those who served a prison sentence	50,000	40%	13%	53%
All female offenders	89,000	51%	50%	53%
Those who served a prison sentence	4,000	54%	25%	61%
Total	487,000	41%	39%	44%
 Those who served a prison sentence	54,000	41%	14%	54%

P45 employment levels are very similar for both male and female offenders with 36% of male offenders and 34% of female offenders in P45 employment at the time of conviction/caution or release from custody. The P45 employment levels for both genders remain similar and stable in the two years either side of the conviction/caution or custodial sentence.⁵⁸

Benefit and P45 employment status by ethnicity

The ethnicity classification used for this analysis is based upon the police officer's visual perception of the ethnic appearance of the offender. General population comparators have not been included in this section as DWP statistics are based on a different ethnicity classification and as such are not comparable.

The majority of offenders in the matched data who were convicted/cautioned or released from prison for a recordable offence in 2010/2011 are White North Europeans (81%), with Chinese, Japanese or South East Asian forming the smallest ethnic group in the offender population (less than 1%). This is consistent with the ethnicity breakdown of all offenders (although different ethnicity classifications are used).⁵⁹

White North Europeans and Black offenders were the most likely to be claiming

⁵⁷ For those who served a custodial sentence, these are benefit spells that were open on the day of release from prison. These all overlapped the prison spell – see chapter 1 ‘Overview of the data share’ for further details.

⁵⁸ Further statistics on the P45 employment status of offenders by gender can be found in Table I.7b in Annex C.

⁵⁹ Table 5.9 of www.gov.uk/government/publications/criminal-justice-statistics-quarterly-march-2013

out-of-work benefits with 45% claiming benefits one month after conviction/caution or release from prison whilst Chinese, Japanese or South East Asian offenders were the least likely to be on these benefits (17%) (Table 1.9).

Table 1.9: Proportion of working age offenders on out-of-work benefits one month either side of their conviction/caution or custodial sentence in 2010/2011, by ethnicity

Ethnicity	No. of offenders	Before conviction/caution	At conviction/caution or release from prison ⁶⁰	After conviction/caution or release from prison
		1 month before		1 month after
White - North European	395,000	42%	40%	45%
White - South European	9,000	30%	29%	33%
Black	41,000	40%	37%	45%
Asian	27,000	29%	27%	33%
Chinese, Japanese or South East Asian	2,000	15%	14%	17%
Middle Eastern	3,000	33%	31%	34%
Total⁶¹	487,000	41%	39%	44%

P45 employment levels are similar across all the ethnicity groups: Middle Eastern and Black offenders are the least likely to be in P45 employment with 31% and 33% in P45 employment one year after conviction/caution or release from prison, respectively. Chinese, Japanese and South East Asian offenders are the most likely to be in P45 employment, with 41% in P45 employment one year after conviction/caution or release from prison (Table 1.10).

⁶⁰ For those who served a custodial sentence, these are benefit spells that were open on the day of release from prison. These all overlapped the prison spell

⁶¹ The total number of offenders is greater than the sum of individual ethnicities as offences where the ethnicity was unknown have been included.

Table 1.10: Proportion of working age offenders in P45 employment one month and one year either side of their conviction/caution or custodial sentence in 2010/2011, by ethnicity

Ethnicity	No. of offenders	Before conviction/ caution		At conviction/ caution or release from prison ⁶²	After conviction/ caution or release from prison	
		1 year before	1 month before		1 month after	1 year after
White - North European	395,000	36%	37%	36%	36%	38%
White - South European	9,000	33%	35%	34%	34%	35%
Black	41,000	30%	31%	31%	31%	33%
Asian	27,000	37%	38%	37%	37%	39%
Chinese, Japanese or South East Asian	2,000	38%	39%	38%	38%	41%
Middle Eastern	3,000	29%	30%	30%	30%	31%
Total⁶³	487,000	36%	37%	36%	36%	38%

⁶² For those who served a custodial sentence, these are P45 employment spells that were open on the day of release from prison. These are benefit spells that overlapped the prison spell

⁶³ The total number of offenders is greater than the sum of individual ethnicities as offences where the ethnicity was unknown have been included.

Chapter 3: Experimental statistics on the long term P45 employment and benefit status of offenders and P14 income of offenders

Summary

Around a third (30%) of working age offenders who were convicted/cautioned or released from prison in 2003/04 had no recorded P45 employment⁶⁴ over the next nine years (2004/2005 to 2012/2013), and a half spent under 2 years in P45 employment over the period. Conversely, a fifth (20%) of these offenders spent almost all of the next 9 years in P45 employment.

The median P14⁶⁵ gross income for working age offenders one year after conviction/caution or release from prison in 2003/04 was £8,600⁶⁶. This means that in 2004/2005, half of the offenders had P14 income under £8,600 and half had P14 income over £8,600.

A quarter of offenders had a P14 income less than £2,500 in 2004/2005 – this could be P14 income from low paid jobs, or more likely to be part-time and/or part-year P14 income. Conversely, a quarter of offenders had a P14 income above £17,800 in 2004/2005.

Offenders' median P14 income increased year on year from £8,600 in 2004/05 to £14,300 in 2011/2012 (eight years after conviction/caution or release from prison) after adjusting for the effects of earnings inflation. This increase will be partly related to the increase in age of the offenders. No direct general population comparison is available, however the Annual Survey of Hours and Earnings⁶⁷, which calculates the figures on a different basis, shows that the median amount of earnings for UK employees aged 16 and over in 2011 was £21,100.

⁶⁴ Caution needs to be applied when interpreting these figures, particularly for those showing with no recorded employment as P45 data does not include all employment types.

⁶⁵ P14 income includes information on gross income derived from P14 forms sent to HMRC by employers. Income from self-employment or cash-in-hand jobs is not included. P14 income includes income for part-year and part-time work, so does not only reflect full-time, annual income. The P14 income records do not include all income as HMRC only required to be notified via a P14 record if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year). Despite these exclusions, the data should provide a useful proxy of income.

⁶⁶ P14 income in the analysis has been adjusted to take into account the effects of earnings inflation over time. Income has been deflated using the Seasonally Adjusted Average Weekly Earnings - excluding bonuses, excluding arrears statistics from the Office for National Statistics, taking 2012/13 as the base year

⁶⁷ See Annual Survey of Hours and Earnings, 2011 Revised Results for more details: www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-280145

Offenders' median P14 income varies considerably depending on the characteristics and disposal/offence types of offenders. For example, offenders serving custodial sentences had the lowest median P14 income one year after release from prison in 2003/2004 at £5,100, whereas offenders who received a fine⁶⁸ for a recordable offence had a median P14 income more than double this, at £11,400.

Introduction

The first section in this chapter provides estimates of the long term P45 employment status of offenders, and is split into two parts:

Part 1 looks at working age offenders who were cautioned/convicted or released from prison in the tax year 2003/04, and follows them for the following nine years. The figures show the proportions in P45 employment on the anniversaries of each year after their conviction/caution or release from prison. As such, these figures are on a yearly *snapshot* basis. The proportions claiming out-of-work benefits are shown alongside for comparative purposes.

Part 2 provides estimates on the *combined* length of time these offenders were in P45 employment during a nine year period (between tax years 2004/05 to 2012/13), so this could range from 0 days in P45 employment to being in P45 employment for the entire 9 year tracking period.

The second section tracks the P14 gross income records of working age offenders who were convicted, cautioned or released from prison in tax years 2003/04 and 2010/11, with breakdowns by disposal type, offence type, age, gender and ethnicity for the 2003/04 analysis.

Methodology

There are two sections to this analysis. The following notes on methodology apply to both sections in this chapter:

Cohort

The analysis looks at all offenders in the matched data who were either:

a) Sentenced by the courts (excluding custodial sentences) or received a caution at some point in tax year 2003/2004, or

⁶⁸ The data-share only includes data on recordable offences that are recorded on the Police National Computer –only around a fifth of all fines given out by the courts are included in the PNC. This is because the PNC does not generally cover the less serious summary offences (such as TV licence evasion) which are more likely to receive a sentence of a fine.

b) Released from prison in 2003/2004 (for offenders serving an immediate custodial sentence)⁶⁹.

Section 2 on the P14 analysis also looks at those convicted/cautioned or released from prison in 2010/11 to provide more recent information.

Age restricted to working age:

Data has been restricted to include only offenders aged 16-55 so that they are within working age (16-64) both at the beginning and end of the nine year tracking period. This is to ensure the figures include all offenders who *could* have been in P45 employment during the entire period being looked at. This is also the criteria that has been used for Table 2.5 which tracks median P14 gross income for those convicted/cautioned or released from prison in 2010/11. This was to enable a like for like comparison to be made to the 2003/04 statistics. Including only those aged 16-64 is in line with how employment rates are presented in other Official Statistics⁷⁰.

Note that only this cohort of offenders are tracked for the analysis in this chapter (this equates to 530,000 offenders for the 2003/2004 analysis).

Offences

If an individual had more than one conviction/caution or release from prison for a recordable offence in the year, the first conviction/caution or release from prison in that tax year was used. This means that the individual may go on to re-offend and spend time in prison, which would impact on P45 employment and P14 gross income levels over the tracking period. Offences are derived from the Police National Computer (PNC), which means that mainly only 'recordable' offences are included. The PNC does not generally cover less serious summary offences such as TV license evasion and less serious motoring offences, which are more likely to receive a sentence of a fine. As a result, care must be taken when interpreting these findings, particularly for the analysis on offenders receiving a fine. The analysis only covers primary offences and the most severe disposal⁷¹ given for the primary offence.

The specific methodology used in the two sections of this chapter is as follows:

⁶⁹ Custodial sentences are treated differently to ensure that all offenders included in the analysis *could* in theory have been in P45 employment or receiving P14 income during the whole period being looked at. These offenders are tracked following the release date as they would have been unable to enter P45 employment whilst in prison.

⁷⁰ For example, the Labour Market Statistics published by the Office for National Statistics take employment rates for those aged between 16 and 64 years old: www.ons.gov.uk/ons/rel/lms/labour-market-statistics/index.html

⁷¹ Disposal type is another way of expressing the sentences/decisions made by the courts (i.e. custodial sentence, fine).

Section 1: Long term P45 employment status for working age offenders

The first part of this analysis takes all working age offenders cautioned/convicted or released from prison in the tax year 2003/04, and tracks them over the following nine years. Yearly snapshot figures are derived by taking the proportion in P45 employment or claiming out of work benefits on the anniversaries of each year after conviction/caution or release from prison. A nine year period has been chosen to provide a summary of employment over a longer time period.

The second part of the analysis looks at the estimated combined number of years these offenders were in P45 employment during the entire 9 year period between 2004/05 to 2012/13. The estimated length of time in P45 employment is the number of days (later converted to years) in P45 employment during this 9 year period – therefore the maximum possible time in P45 employment is 9 years. P45 employment spells do not need to be continuous. For example, an offender who spent 2 years in P45 employment over the period could have had one sustained 2 year period in P45 employment, or up to 730 individual one day spells in P45 employment over the 9 year period.

The second part of the analysis only includes time in P45 employment during the nine years between the tax years 2004/05 to 2012/13 (referred to as coverage period). Therefore, if an offender had a P45 employment spell that started prior to 6 April 2004 and/or ended after 5 April 2013 then only their time in P45 employment between 6 April 2004 and 5 April 2013 is included in the analysis. If an individual was convicted/cautioned or released from prison in August 2003, say, then only their employment between 2004/05 and 2012/13 is considered – so the analysis does not capture what happens between the caution/conviction or release from prison, and the start of the 2004/05 tax year (6 April 2004). This is to ensure the figures are consistent, and for all offenders only days in P45 employment within the same 9 year coverage period are included.

P45 employment spells often have estimated start or end dates. Where the exact start or end day is unknown, a date within that tax year has been randomly allocated instead. This could affect the length of employment spells and should be kept in mind when using these estimates.

Section 2 – Annual P14 earnings for working age offenders convicted/cautioned or released from prison in 2003/2004 and 2010/11

This analysis tracks the P14 income records of all working age offenders who were convicted, cautioned or released from prison in tax years⁷² 2003/04 and 2010/11. There may not always be a P45 record for every P14, and vice-versa, so the terms P45 employment and P14 income have been used to describe these two separate types of record in this report.

Offenders are only included in the analysis if they had a P14 employment record in that tax year⁷³. For example if an individual had a P14 record in 2004/05, but not in 2005/06, then their P14 income would be included in the 2004/05 figures, but not in the 2005/06 figures. The analysis therefore excludes offenders with no recorded P14 income.

For the time period covered by the data, P14 records were only required for employment which exceeded the National Insurance Lower Earnings Limit⁷⁴. Some employers still submit P14 records for employee's income below this threshold, but are not obliged to do so. Therefore the income data will exclude:

- some employment income which was below the NI threshold;
- self-employment income;
- cash-in-hand income.

P14 income includes gross income for part-year and part-time work as well as for full-time work.

The P14 income data used for 2012/13 was incomplete at the time the extract was taken for the data share as P14 records for 2012/13 were still being processed by HMRC. Statistics for 2012/13 have been included but should be treated as provisional and subject to change.

The following figures should be treated as estimates due to the data quality and coverage limitations highlighted in the introduction. Please see Chapter 1 and Annex B for more details on data quality and coverage

⁷² Tax years run from the 6th April to the 5th April; so tax year 2003/04 refers to the year 6th April 2003 – 5th April 2004

⁷³ In a small number of cases in the data, income is recorded as zero or negative. These have been included in the analysis as there are genuine cases of zero or negative income. Around 4% of P14 tax year income is recorded as zero or negative.

⁷⁴ For National Insurance rates, see HMRC website:
www.hmrc.gov.uk/rates/nic.htm

Results

Section 1 – Long-term P45 employment status of working age offenders

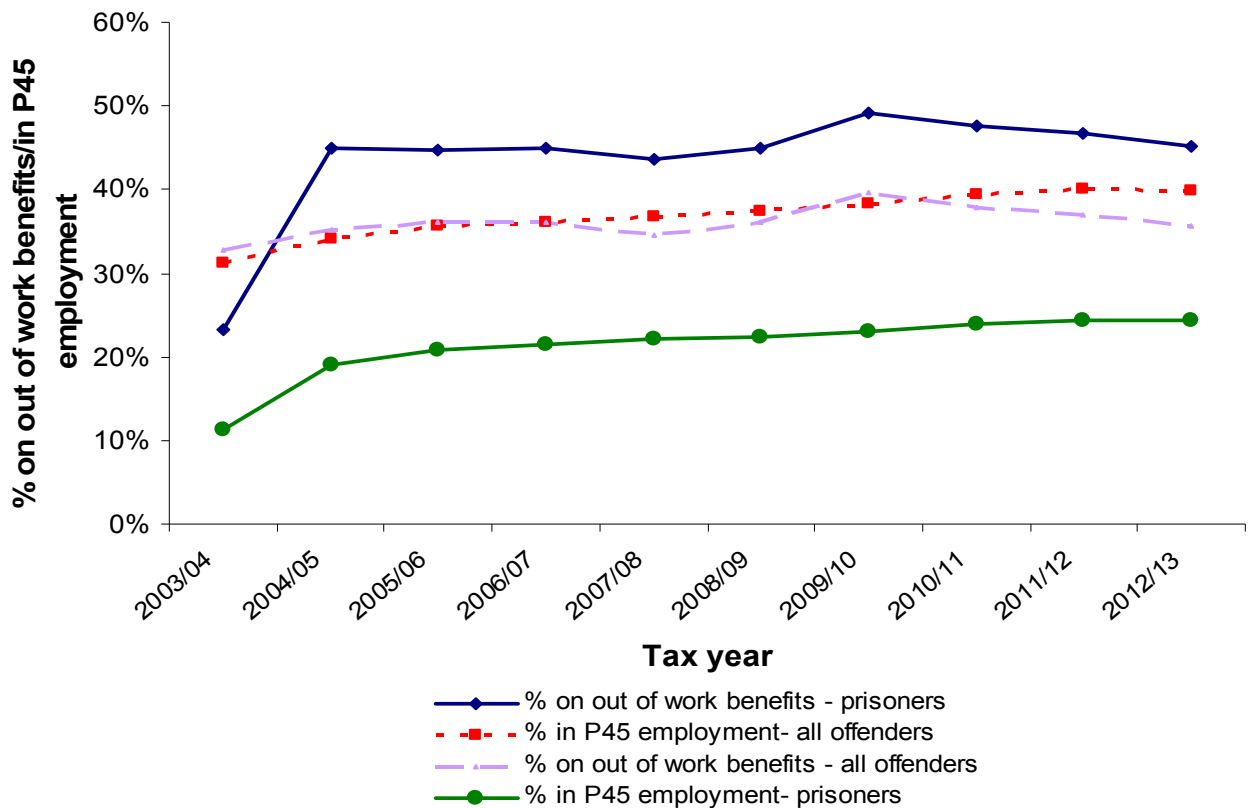
Part 1: Snapshot P45 employment and out-of-work benefit status of working age offenders in the 9 years after conviction/caution or release from prison in 2003/04

This section takes all offenders convicted/cautioned or released from prison in the tax year 2003/04 and follows them over the following nine years, by looking at what proportion were in P45 employment or claiming out of work benefits on the anniversaries each year after conviction/caution or release from prison.

Chart 2.1 shows that 9 years after their conviction/caution or release from prison in 2003/04, 40% of offenders were in P45 employment, this is the highest proportion of the 9 year follow-up period. This suggests offenders may find it difficult to find P45 employment. However the proportion in P45 employment does rise over time, with 31% in P45 employment at the time of their conviction/caution or release from prison, rising to the 40% after 9 years. This may be explained by the increase in age of this group of individuals. The proportion claiming out-of-work benefits also increases between 2007/08 and 2009/10 but then decreases to just over a third claiming out of work benefits at nine years. This pattern may be explained by the recession during this time period.⁷⁵

⁷⁵ The higher proportion of working age offenders in P45 employment at point of conviction/caution or release from prison in 2010/2011 compared to in 2003/2004 could be due to the fact that there was a slightly lower proportion of young offenders in 2010/2011 than in 2003/2004. As younger people are less likely to be in P45 employment than the general population, this is likely to contribute to the differences in P45 employment levels between 2003/2004 and 2010/2011.

Chart 2.1: Snapshot P45 employment and out-of-work benefit status of working age offenders in the 9 years after a conviction/caution or release from prison in 2003/04



Part 2: Estimated length of time in P45 employment during 2004/05 to 2012/13, for working age offenders who were convicted/cautioned or released from prison in 2003/2004, and working age (16-64) during the entire tracking period.

30% of all working age offenders included in the data share who were convicted/cautioned or released from prison in 2003/2004 had no recorded time in P45 employment during the nine year period 2004/2005 to 2012/2013. Further analysis is needed to find out the characteristics of these offenders (age, disposal type for example) to better understand why so many offenders are not in P45 employment over such a long time period.

Half of all offenders spent under 2 years (out of a total of 9 years) in P45 employment over the nine year period.

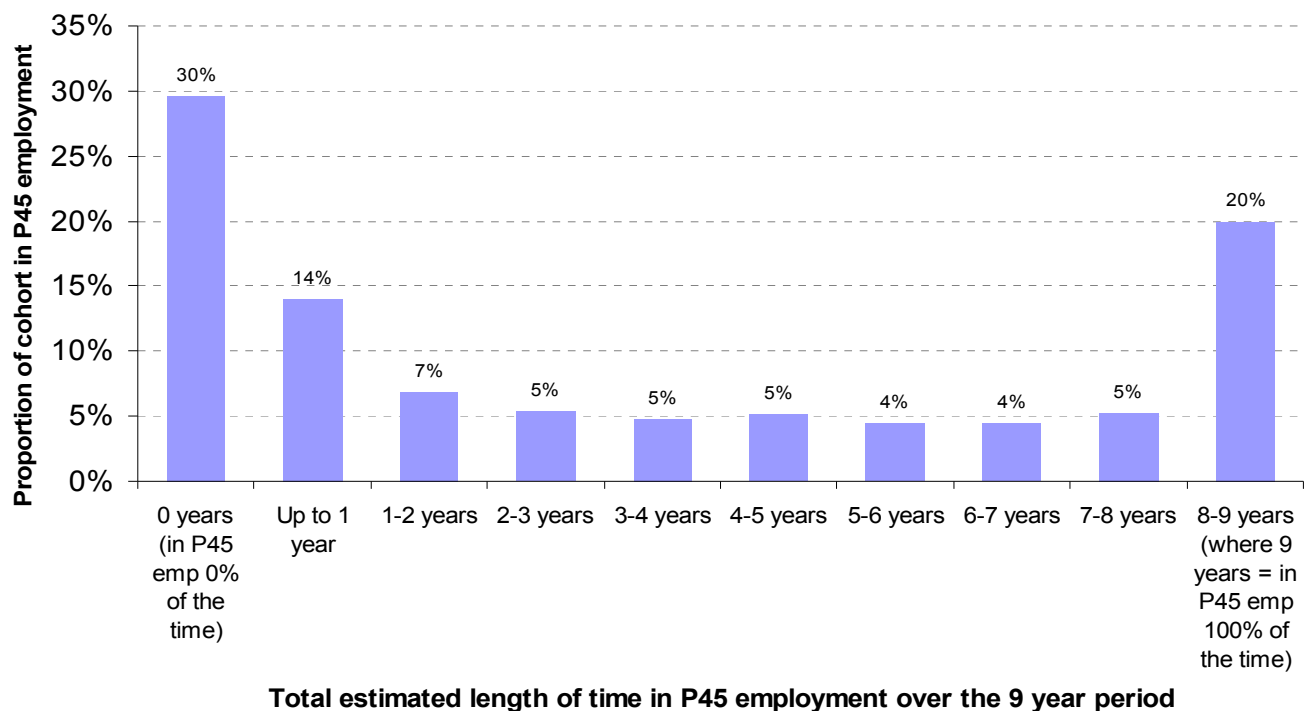
Similarly to the P45 snapshot analysis in the first section, these estimates suggest that offenders find it difficult to get P45 employment or to remain in the labour market for long periods.

Caution needs to be applied when interpreting these figures, particularly for those showing with no P45 employment, as noted in the methodology section P45

employment spells do not usually record employment paid at levels below National Insurance thresholds, self-employment or cash-in-hand informal employment – this means that offenders who do not have a P45 employment record are not necessarily unemployed.

At the other extreme, a fifth of all offenders were recorded as being in P45 employment for almost all of the nine year period (8 – 9 years) which shows that not all offenders have problems with gaining or staying in P45 employment for long periods of time.⁷⁶ As with offenders who spent no time in P45 employment, further work will be done to look into the characteristics of this group (for example, to see if offenders who are in P45 employment are more likely to be older offenders, or convicted for particular offences).

Chart 2.2: Proportion of working age offenders (aged 16-64) who were convicted/cautioned or released from prison in 2003/2004, by estimated length of time in P45 employment during 2004/05 to 2012/13.



⁷⁶ Caution should be taken with this figure as this may be affected by data quality issues where P45 spells are showing as open in the data share, whereas in fact they have already ended

Section 2 – Annual P14 gross income for working age offenders, who were convicted/cautioned or released from prison in 2003/2004, broken down by offender characteristics, with a comparison to P14 gross income for those convicted/cautioned or released from prison in 2010/11

The distribution of income generally includes a large number of cases with a lower income, and a smaller number of high-income cases, therefore the median provides a useful measure for understanding income as it is not distorted by the relatively few high earners. The median income provides a measure of the middle point in the distribution of income, with half of individuals receiving less than the median income, and the other half earning more.

Statistics for 2012/13 are based on incomplete data and therefore have not been included in this commentary. P14 incomes for 2012/13 are provided in **Annex C** for information, and should be treated with caution, as provisional and subject to change.

The median P14⁷⁷ gross income for working age offenders one year after conviction/caution or release from prison in 2003/04 was £8,600⁷⁸. This means that in 2004/2005, half of the offenders had P14 income under £8,600 and half had P14 income over £8,600.

Offenders' median P14 income increased year on year from £8,600 in 2004/05 to £14,300 in 2011/2012 (eight years after conviction/caution or release from prison) after adjusting for the effects of earnings inflation.

This increase will be partly related to the increase in age of the offenders. No direct general population comparison is available, however the Annual Survey of Hours and Earnings⁷⁹, which calculates the figures on a different basis, shows that the median amount of earnings for UK employees aged 16 and over in 2011 was £21,100.

P14 income data is the actual (or nominal) amount of income received by each individual for the tax year, i.e. unadjusted for the effects of wage inflation. The chart and commentary describe how gross incomes have changed over time.

⁷⁷ P14 income includes information on gross income derived from P14 forms sent to HMRC by employers. Income from self-employment or cash-in-hand jobs is not included. P14 income includes income for part-year and part-time work, so does not only reflect full-time, annual income. The P14 income records do not include all income as HMRC only required to be notified via a P14 record if earnings were above the Lower Earnings Limit (The Lower Earnings Limit is the level below which no National Insurance Contributions are accrued. This is around £100 a week, or around £5,000 a year). Despite these exclusions, the data should provide a useful proxy of income.

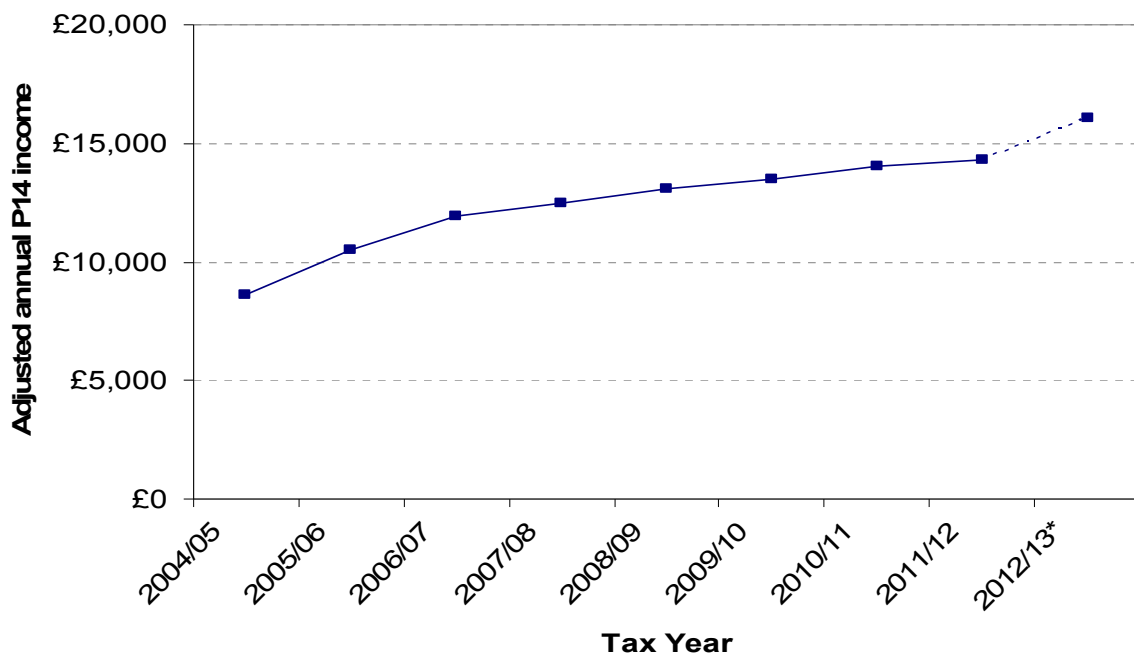
⁷⁸ P14 income in the analysis has been adjusted to take into account the effects of earnings inflation over time. Income has been deflated using the Seasonally Adjusted Average Weekly Earnings - excluding bonuses, excluding arrears statistics from the Office for National Statistics, taking 2012/13 as the base year

⁷⁹ See Annual Survey of Hours and Earnings, 2011 Revised Results for more details: www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-280145

The analysis has been adjusted (using earnings in 2012/2013 as the base) to take into account the effects of earnings inflation over time – all figures included in the commentary have been adjusted. This means that more accurate comparisons can be made over time as these adjusted P14 income figures take into account the effects of earnings inflation. For a table including both adjusted and actual gross P14 income, see **Annex C**.

Offenders’ median gross P14 income (after adjusting for earnings inflation) increased year on year, which is likely explained due to the increase in age of the cohort – those who were 16 in 2003/04 will be 24 eight years later, and income tends to increase with age.⁸⁰ The rate of increase slows in years 2007/08 to 2011/12 which is likely explained by the financial crisis and recession during this period. Figures have been provided for 2012/13 in Chart 2.3 and **Annex C**, but care should be taken when looking at P14 income for 2012/13, as the P14 data for this year was incomplete when the data extract was taken.

Chart 2.3: Offenders’ median P14 gross income after release from prison or caution/conviction in 2003/04, for those with a P14 income record, by tax year. Incomes have been adjusted to take into account earnings inflation.



* P14 data for 2012/13 is incomplete and should therefore be treated as provisional and subject to change

⁸⁰ Separate analysis has shown that the increase in offenders’ median gross P14 income over time is unlikely to be caused by any bias introduced due to the fact that the Lower Earnings Limit threshold increases over time (HMRC only required to be notified via a P14 record if earnings were above the Lower Earnings Limit – analysis was therefore conducted to check that the effect of the LEL threshold increasing over time did not exclude lower paid offenders in the P14 income data, and therefore introducing bias into the median P14 income figures).

Range of P14 incomes

A box plot can be used to show the range of P14 incomes present in the data. Each of the crosses within the boxes in Chart 2.4 show the median amount of income for each tax year – that is, half of the individuals for each tax year earn less than the median, and half earn more.

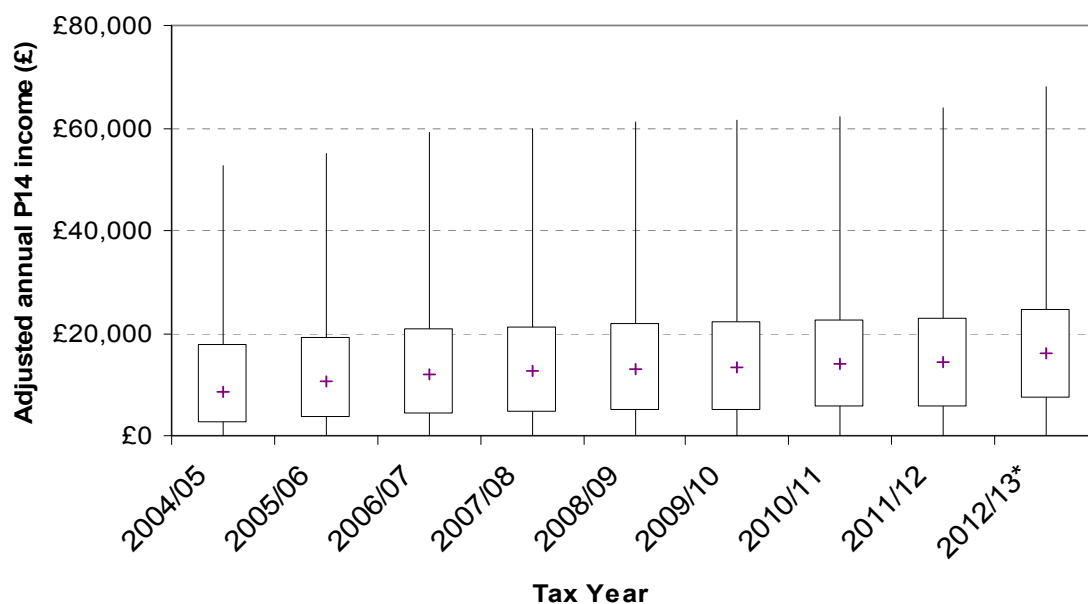
The boxes show the range of incomes for the middle 50 percent of individuals in the data. Therefore the box represents the middle 25 to 75 percent of individuals in the data. These are referred to as the lower and upper quartiles respectively.

The vertical lines in this chart, also referred to as whiskers, represent the 1st to 25th percent of individuals, and the 75th to 99th percent of individuals in the data.

A quarter of offenders (the lower quartile) had a P14 income less than £2,500 in 2004/2005 – this could be P14 income from low paid jobs, or more likely to be part-time and/or part-year P14 income. Conversely, a quarter of offenders (upper quartile) had a P14 income above £17,800 in 2004/2005.

The lower and upper quartiles of gross P14 income, for offenders eight years after their conviction/caution or release from prison (so in 2011/2012), were £5,400 and £22,700 respectively. Again, comparisons to the general population are difficult due to the different methods used, but the Annual Survey of Hours and Earnings reports lower and upper quartiles figures of £12,600 and £32,700 for 2011. This suggests in general, that offenders' employment gross income is less than that of the general population.

Chart 2.4: Working age offenders' P14 gross income distribution after caution/conviction or release from prison in 2003/04, for those with a P14 record. Incomes have been adjusted to take into account earnings inflation.



* P14 data for 2012/13 is incomplete and should therefore be treated as provisional and subject to change

Breakdown by characteristics

In addition to looking at P14 income over the years following release from prison or conviction/caution in 2003/04, these statistics have been broken down by variables which may be of interest: disposal type, offence type, age, ethnicity and gender. The commentary and tables below contain median P14 gross income details for this group of offenders for the first, fifth and eighth years following 2003/04 - all P14 income figures have been adjusted to take into account earnings inflation. Statistics for the full set of tax years, in both actual and adjusted terms, are provided in **Annex C**.

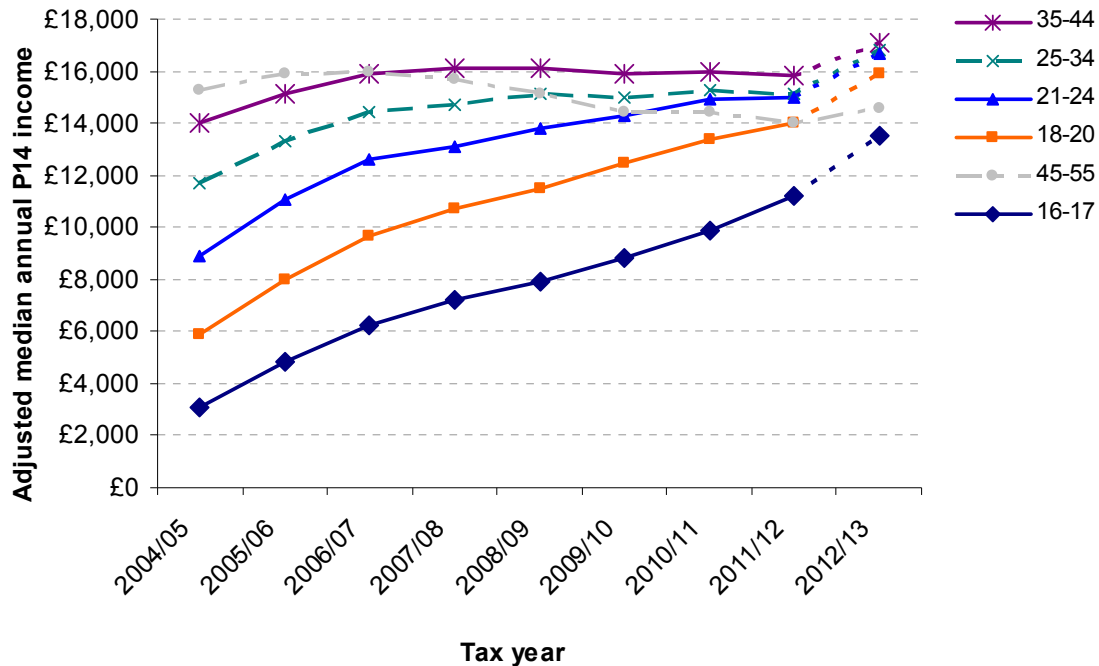
Age

Working age offenders' median P14 gross income increased over the 8 years following release from prison or conviction/caution in 2003/04, among all age groups apart from the 45-55 year old category. The drop in P14 income for this age group may be due to some individuals reaching retirement age and reducing hours or working part-years. This pattern is consistent with findings on general taxpayers, where income peaks in the 45-49 age category, and then starts to drop⁸¹.

⁸¹ Statistics on the distribution of median income by age range can be found in table 3.2 here: <http://www.hmrc.gov.uk/statistics/income-by-year.htm>

This also matches analysis in Chapter 2 which show that, for those cautioned/convicted or released from prison in 2010/11, P45 employment levels increase with age in general, up until the 55-62 age group.

Chart 2.5: Working age offenders’ adjusted P14 median gross income after caution/conviction or release from prison in 2003/04, for those with a P14 record, by age. Incomes have been adjusted to take into account earnings inflation.



Disposal Type

Those sentenced to a fine had the highest median P14 gross income across the tax years. These P14 income figures will not be representative of all offenders receiving fines as they only include recordable offences which resulted in a fine.

Those receiving custodial sentences had the lowest median P14 gross income in general, apart from those in the “other” category. The “other” category includes a wide range of offences, including football banning orders, restraining orders and confiscation orders for example.

This ties in with the findings in Chapter 2 which show that P45 employment levels are highest among those receiving fines and police cautions, and lowest among those released from prison.

Table 2.1: Working age offenders' adjusted median P14 gross income, after release from prison or caution/conviction in 2003/04, for those with a P14 employment record, by tax year and disposal type. Incomes have been adjusted to take into account earnings inflation.

Disposal type	2004/05	2008/09	2011/12
Police caution	£8,800	£13,700	£15,200
Absolute discharge	£5,400	£11,500	£12,300
Conditional discharge	£7,400	£11,700	£12,500
Fine	£11,400	£15,000	£15,700
Community sentence	£6,700	£11,100	£12,700
Suspended Sentence Order	£9,500	£12,600	£12,400
Immediate custody all lengths	£5,100	£9,300	£10,300
Immediate Custody: <12 months	£4,800	£8,900	£10,200
Immediate Custody: >12 months	£5,400	£9,900	£10,600
Other	£6,100	£10,100	£11,100
Total	£8,600	£13,100	£14,300

Offence Type

Median P14 gross income was highest among those who were convicted/cautioned or released from prison with the offence types of summary motoring offences or indictable motoring offences. Analysis in Chapter 2 also shows that this group of offenders had the highest levels of P45 employment.

Offenders who were cautioned/convicted or released from prison for robbery or burglary offences had the median lowest P14 gross income in the 8 years after conviction/caution or release from prison in 2003/04, and again analysis in chapter 2 shows this group also had the lowest levels of P45 employment.

Table 2.2: Working age offenders' adjusted median P14 gross income after release from prison or caution/conviction in 2003/04, for those with a P14 employment record, by tax year and offence type.

Incomes have been adjusted to take into account earnings inflation.

Primary offence	2004/05	2008/09	2011/12
Violence against the person	£8,600	£13,300	£14,300
Sexual offences	£9,600	£13,800	£14,300
Burglary	£3,400	£7,900	£9,300
Robbery	£3,100	£6,000	£7,900
Theft and handling stolen goods	£5,300	£9,800	£11,700
Fraud and forgery	£6,900	£11,100	£11,900
Criminal damage	£7,300	£12,100	£14,100
Drug offences	£7,700	£12,600	£14,200
Other indictable offences	£7,600	£12,600	£13,700
Indictable motoring offences	£10,900	£14,600	£15,300
Summary offences excluding motoring	£9,600	£13,800	£15,000
Summary motoring offences	£12,500	£16,100	£16,600
Breach offences	£4,600	£8,100	£9,300
Total	£8,600	£13,100	£14,300

Gender

Median P14 gross income was lower for female offenders than for male offenders for all years following conviction/caution or release from prison in 2003/04. The data includes income for part-year and part-time working so gender differences may also reflect differences in working time.

These findings are consistent with findings on general employees, where the Annual Survey of Hours and Earnings, which calculates the figures on a different basis, shows that the median amount of earnings for UK employees aged 16 and over, in 2011, was £26,300 for males and £16,200 for females.

Chapter 2 showed that levels of P45 employment two years after caution/conviction or release from prison in 2010/11 were also slightly higher for males than females (38% and 36% respectively).

Table 2.3: Working age offenders' adjusted median P14 gross income after release from prison or caution/conviction in 2003/04, for those with a P14 employment record, by tax year and gender.

Incomes have been adjusted to take into account earnings inflation.

Gender	2004/05	2008/09	2011/12
Male	£9,200	£14,100	£15,300
Female	£5,900	£8,900	£9,400
Unknown	£11,800	£14,700	£15,800
Total	£8,600	£13,100	£14,300

Ethnicity

The ethnicity variable used for this analysis is based upon the police officer's visual perception of the ethnic appearance of the offender.

Of the known ethnicities, offenders in the White – North European category had the highest median P14 gross income, whereas those in the Middle Eastern category had the lowest median P14 gross income.

Table 2.4: Working age offenders' median P14 gross income after release from prison or caution/conviction in 2003/04, for those with a P14 employment record, by tax year and ethnicity.

Incomes have been adjusted to take into account earnings inflation.

Ethnicity	2004/05	2008/09	2011/12
White - North European	£8,700	£13,300	£14,600
White - South European	£7,300	£9,700	£10,700
Black	£6,300	£10,000	£11,400
Asian	£6,800	£11,000	£11,700
Chinese, Japanese or South East Asian	£6,800	£11,000	£12,400
Middle Eastern	£6,300	£9,000	£8,700
Unknown	£12,400	£15,700	£16,500
Total	£8,600	£13,100	£14,300

Comparison to those cautioned/convicted or released in 2010/11

To provide information on P14 income for a more recent group of offenders, the following analysis is based on offenders released from prison or convicted/cautioned in 2010/11, compared to 2003/2004. Median P14 gross income for those offenders with a P14 income record in these years, adjusted for earnings inflation, was as follows:

Table 2.5: Working age offenders' median P14 gross income after release from prison or caution/conviction in 2003/04 and 2010/11, for those with a P14 employment record, by tax year.

Incomes have been adjusted to take into account earnings inflation.

Median P14 gross income of those convicted/cautioned or released from prison: (adjusted for earnings)	Time following release from prison or conviction/caution	
	First year	Second year
in 2003/04	£8,600	£10,500
in 2010/11	£7,900	£10,600*

* P14 data for 2012/13 is incomplete and should therefore be treated as provisional and subject to change

Some offenders included in the 2003/04 analysis may also be included in the 2010/11 analysis if they were convicted/cautioned or released from prison in 2010/11 as well as 2003/04.

Adjusted median offenders' P14 gross income was slightly lower in the first year following release from prison or conviction/caution in 2010/11 compared to the 2003/04 cohort, which may be linked to the recession during this period. Gross income in the second year after conviction/caution or release was similar.

P45 employment levels two years after conviction/caution or release from prison were also similar for those released in 2003/04 and 2010/11 (36% and 37% respectively).

Glossary of terms

Absolute discharge	When the court decides someone is guilty, but decides not to punish them further at this time, they will be sentenced to a 'discharge'. Discharges are given for minor offences. An 'absolute discharge' means that no more action will be taken.
Article 8 of the European Convention on Human Rights	Article 8 of the European Convention on Human Rights sets out the legal obligations to balance the rights of the individual to private and family life, with the rights of the wider community.
Benefits	Includes all DWP administered benefits, as opposed to out-of-work benefits only (see below).
Breach offence	A breach is when an individual person fails to comply with the conditions of their disposal.
Cautions	A caution can be administered when there is sufficient evidence for a conviction and it is not considered to be in the public interest to institute criminal proceedings. Additionally, an offender must admit guilt and consent to a caution in order for one to be administered. A formal caution may be given by, or on the instructions of, a senior police officer
Conditional discharge	When the court decides someone is guilty, but decides not to punish them further at this time, they will be sentenced to a 'discharge'. Discharges are given for minor offences. A 'conditional discharge' means that the person won't be punished unless they commit another offence within a set period of time (no longer than three years).
Conviction	A conviction is where a person or a company is found guilty of a criminal offence at either the magistrates' courts or the Crown Court.
Custodial sentence	Prison sentences are given when an offence is so serious that it is the only suitable punishment. A prison sentence will also be given when the court believes the public must be protected from the person. There are three different types of prison sentence: suspended sentences (a custodial sentence which is suspended – see 'suspended sentence' in glossary for more information), determinate sentences (those having a fixed term) and indeterminate sentences (which have only a minimum term and include life sentences) Figures on offenders released from prison in this report

	only include individuals with determinate sentences so that only individuals who have served at least one day in prison are included. Technically those with indeterminate sentences should also be included, however currently the actual prison spells data in the matched data does not include indeterminate sentences
Data Protection Act	An act that sets out the legal obligations to protect personal information about individuals, which covers obtaining, holding, use or disclosure of personal information - www.legislation.gov.uk/ukpga/1998/29/contents
Data Sharing Agreement	The Data Sharing Agreement here is an agreement between Department for Work and Pensions, Her Majesty's Revenue and Customs, and the Ministry of Justice for an annual data-sharing project.
Disposal	Disposal is an umbrella term referring both to sentences given by the court and pre-court decisions made by the police.
Employment & Support Allowance (ESA)	A DWP benefit providing support for people who are ill or disabled, offering financial support to those unable to work and personalised help to work for those assessed as able to work. Replaced Incapacity Benefit and Income Support paid on the grounds of incapacity for new claims from October 2008.
Fine	Fines are the most common criminal sentence. They're usually given for less serious crimes that don't merit a community or prison sentence. They limit the amount of money offenders have to spend. How much someone is fined depends on how serious a crime is, and the offenders ability to pay.
Incapacity Benefits (IB)	A DWP benefit paid to people who are assessed as being incapable of work and who meet certain contribution conditions. Incapacity Benefit was replaced by Employment and Support Allowance (ESA) for new claims from October 2008.
Income Support (IS)	A DWP benefit to help people on low incomes who do not have to be available for employment. Main recipients include lone parents, the long and short-term sick, people with disabilities.
Jobseeker's Allowance (JSA)	A DWP benefit that Can be claimed by people who are available for and actively seeking employment, including those in remunerative work for less than 16 hours a week

	on average, and by people on a government training scheme.
Labour Market	All individuals who are either in or actively seeking employment.
Master Index	The Master Index is a DWP dataset which links benefit and programme information held by DWP on its customers.
National Benefits Database (NBD)	The National Benefit Database is an administrative database held by DWP that contains detailed information on benefits.
Offenders	In this publication, offenders are those who have committed Recordable offences which are recorded on the Police National Computer (see also Recordable Offences).
Out-of-Work Benefits	Out-of-work benefits includes Jobseeker's Allowance, Employment and Support Allowance, Income Support, Incapacity Benefit, Passported Incapacity Benefit or Severe Disablement Allowance.
P14 Income	An assessment of individuals' income based on P14 forms returned from employers to Her Majesty's Revenue & Customs and the end of each financial year.
P45 Employment	<p>The employment data used in this publication from the Work and Pensions Longitudinal Study is derived from P45 forms sent to HMRC by employers.</p> <p>Individuals earning below the income tax threshold may appear as having no P45 employment because it is only compulsory to submit forms to employees earning enough to be subject to income tax.</p> <p>From April 2013 Her Majesty's Revenue & Customs required employers to report PAYE information in real time, which improved the coverage of P45 data. As the data share included data up to March 2013, that change does not apply to the findings in this report.</p>
Passported Incapacity Benefit	When Severe Disablement Benefit was stopped in 2001 some individuals were moved from that benefit onto PIB. It is now being replaced by Employment and Support Allowance.
Police National Computer (PNC)	The Police National Computer (PNC) is the polices administrative IT system used by all police forces in England and Wales and managed by the Home Office. As with any large scale recording system the PNC is

	<p>subject to possible errors with data entry and processing. The Ministry of Justice maintains a database based on weekly extracts of selected data from the PNC in order to compile statistics and conduct research on re-offending and criminal histories. The PNC largely covers recordable offences – these are all indictable and triable-either-way offences plus many of the more serious summary offences. All figures derived from the Ministry of Justice’s PNC database, and in particular those for the most recent months, are likely to be revised as more information is recorded by the police.</p>
Primary/Principal offence	<p>Where more than one offence is considered in a court case or cautioning occasion, the offence that would/did attract the most severe sentencing outcome is deemed to be the Principal offence and other offences also dealt with in that case would be ignored. If two offences in the same case attract the same sentence the offence with the statutory maximum sentence is deemed the ‘Principal offence’. The data share only includes the primary offence.</p>
Prisoners	<p>Offenders who have spent at least one day in prison</p>
Privacy Impact Assessment	<p>The Privacy Impact Assessment here outlines the steps taken to minimise and control the risk of disclosure of personal data from the data sharing project.</p>
Probation commencement, termination and caseload	<p>Detailed information on the supervision of offenders (at the individual offender level) has been submitted by probation trusts on a monthly basis. These monthly ‘probation listings’ include information on offenders starting and terminating probation supervision and those supervised on the probation caseload at the end of each month. This includes community sentences.</p>
Recordable offence	<p>Recordable offences are those that the police are required to record on the Police National Computer and included in this publication. They include all offences for which a custodial sentence can be given plus a range of other offences defined as recordable in legislation. They exclude a range of less serious summary offences, for example television licence evasion, driving without insurance, speeding and vehicle tax offences.</p> <p>Indictable offence: These offences are the most serious breaches of the criminal law and must be tried at the Crown Court before a judge and jury. These ‘indictable-only’ offences include murder, manslaughter, rape and robbery.</p> <p>Triable-either-way: These offences may be tried either at the Crown Court or at a magistrates’</p>

	<p>court. These offences include criminal damage where the value is £5,000 or greater, theft, burglary and drink driving.</p> <p>Summary offences: These offences are usually heard only by a magistrates' court. This group is dominated by motoring offences, for some of which fixed penalties can be issued, but also includes such offences as common assault and criminal damage up to £5,000.</p> <p>As mentioned the PNC does not generally cover the less serious summary offences such as TV license evasion and less serious motoring offences, which are more likely to receive a sentence of a fine.</p> <p>In July 2013, the Office for National Statistics (ONS) re-designed the classifications used to present police recorded crime statistics, following recommendations from the National Statistician's review of Crime Statistics in England and Wales in June 2011. Due to the time periods presented in this report, offence group breakdowns presented in this publication are based on the old classification basis</p>
Remand	<p>Police remands are the decisions made by a police officer on whether to detain or bail a defendant pending their first appearance in court or send a notice summoning them to appear in court. Court remands are the court's decision on whether a defendant charged with a criminal offence should be held in custody or released on bail during the period up to and including the trial, or while awaiting sentence.</p>
Sentence	<p>When someone is convicted of a crime, they will be given a sentence by a court which reflects the seriousness of the offence or offences committed by the offender. Sentences are generally time spent in prison, a community sentence, a fine or discharge</p>
Severe Disablement Allowance	<p>Replaced Non-Contributory Invalidity Pension and Housewives Non-Contributory Invalidity Pension from 29 November 1984. Until April 2001, people who were incapable of work and did not satisfy the contribution conditions for Incapacity Benefit (IB) could get SDA.</p> <p>Severe Disablement Allowance is being phased out - people with severe disabilities can get Employment and Support Allowance instead</p>
Suspended sentence	<p>A court may give an offender a 'suspended' prison</p>

	<p>sentence if the time they would otherwise spend in prison is under 12 months. With a suspended sentence, the offender doesn't go directly to prison but they do have to meet conditions in the community, set by the court. These conditions can last for up to two years. If the offender breaks these conditions, or commits another offence, they will usually have to serve the original sentence in prison.</p>
<p>Work and Pensions Longitudinal Study (WPLS)</p>	<p>The Work and Pensions Longitudinal Study links benefit and programme information held by DWP on its customers (the "Master Index"), with employment records from Her Majesty's Revenue & Customs (HMRC).</p>

Annex A: Data matching methodology and results

Summary

This data share matched MoJ offence data (held on the Police National Computer and court data) with DWP benefits data and HMRC P45 employment data. A good match rate was achieved⁸² overall 74% of offenders (4.8 million unique offenders) were matched to DWP/HMRC data. The match rate for PNC individuals was higher, this was 81% (4.3 million unique offenders). All figures in this publication are based on PNC matched offenders only.

As part of the quality assurance of the matched data, testing was carried out on the matched and unmatched data to check the representativeness and quality of the matched data. Overall, the matched data had similar characteristics to the unmatched dataset. However some differences were found; there was a higher level of 11-17 year olds in the unmatched dataset compared to the matched dataset. There was also a higher proportion of “White - North European” individuals in the matched data, and a lower proportion of most other ethnicities.

Following matching, the data was cleaned to protect the integrity of the matched data including removal of duplicated entries, checks for completeness, and the cleansing of inconsistent data based on business intelligence.

The matching process and rules applied are largely based on the method used in the 2011 data share as this was successful and has been thoroughly quality assured.

This section includes:

- Data matching methodology
- Quality assurance of the matched data; bias testing and cleaning of the data
- Results (includes numbers and proportions of PNC individuals matched, and the number of matched benefit, P45 employment and P14 incomes spells this results in)

Data matching methodology

Overview

Data matching is a technique used to link together different data sources. In the absence of a unique identifier in each administrative data source (National Insurance Number for example), we needed to link MoJ data to DWP/HMRC data using data matching techniques - this is possible by developing matching

⁸² The match rate figures included are the final post cleaning rates

rules using common variables between the different data sources. For this data-share, the variables that were used in the matching process were forename, surname, postcode, date of birth and gender. The 5 variables identified here are the only variables in common between DWP, HMRC and MoJ data sources that could be used for matching. Matching rules were agreed between MoJ and DWP and included combinations of at least an exact match on 3 of the 5 variables as well as using fuzzy matching techniques on names⁸³. A linking identifier is retained so that personal details could be removed at the earliest opportunity, so that the matched data is anonymised. It was agreed that it was more proportionate for DWP to do the data matching given that they hold data on many more people than MoJ.

A description of the input datasets

Personal details of 5.2 million offenders from MoJ's extract of the PNC and 1.4 million offenders from the court data were sent securely to DWP for matching. This includes offenders on the PNC extract who were cautioned or convicted for a recordable offence between 2000 to early 2013, and individuals with recorded guilty verdicts on the court data between 2008 to 2012.

Personal details included names (including forename and surname), date of birth, full postcode history, gender, and a unique reference number allocated by MoJ. Alias⁸⁴ information was also included for names and date of birth in order to get the best quality match. Previous analysis carried out on the 2011 data share demonstrated that alias information plays a key role in matching MoJ data with DWP/HMRC, we found that approximately 20% of the best matches used the alias information and for 30% of offenders with alias information we only manage to find matching using their alias details.

The MoJ PNC and court data was linked by DWP to DWP's Master Index database and to HMRC's P45 employment data already held by DWP. Matching was based on the agreed matching algorithm (outlined below).

A description of the matching method used

The matching methodology in this data share is largely based on the method used for the initial 2011 data share, as that matching methodology was thoroughly quality assured and proved to be successful. Checks were carried out to ensure it was still suitable for the new data - the quality assurance section later on in this Annex provides full details.

⁸³ Fuzzy matching is used to improve match rates when there is no unique common identifier and matching on exact variables (names) is not successful (due to data quality issues in the different data sources and so on). Given the exact matching is very strict (either a word matches or it does not), fuzzy matching attempts to improve match rates by reducing words to their core and then matching all forms of the word – for example, Elizabeth, Beth, Liz, Lizzie and so on.

⁸⁴ Alias information is other names and date of births that are recorded for the same offender on the PNC

A 20 step matching algorithm previously applied and tested between MoJ and DWP was used. This used a scoring system and combinations of at least 3 of the 5 variables (forename, surname, date of birth, postcode, gender). In addition, initial of forename was used as was soundex⁸⁵ on forename and surname in order to get the best possible match. For example match rule 1 was an exact match on all five variables and had the highest score (as we believe this to be the strongest match); match rule 2 was a match on five variables with soundex forename instead of exact forename, match rule 3 was initial of forename and exact matches on the remaining four rules, and so forth.

The matching process worked by:

(i) taking all MoJ records and looking for a match between the MoJ data and DWP data based on the first match criteria (all 5 variables match exactly), splitting into those where a match was found and those where a match was not found. Unmatched records were then matched against the HMRC data using this same rule. This process of matching the most stringent rule to DWP data, and then immediately followed by matching to HMRC data is an improvement on the previous methodology. The previous process was to match MoJ data to DWP data on all 20 match rules, and then any unmatched records were matched to HMRC data. This was to ensure a good balance between efficient processing and high quality matches. This time around for rule 1 only, the process was amended so rule 1 was applied to HMRC data immediately as this was thought to result in better high scoring matches.

(ii) Unmatched MoJ records were then matched to DWP data through the same process where unmatched records were matched using the second match rule, and any unmatched records following this stage were matched on the third rule and so forth until the last match rule.

(iii) once all matching rules were completed against the DWP data, the process was repeated for the unmatched records against the HMRC data.

⁸⁵ Soundex is used in fuzzy data matching and is a phonetic algorithm for indexing names by sound, as pronounced in English so that names can be matched despite minor differences in spelling.

Figure B.1: Example of the data matching methodology (note: the data is not real, created for illustrative purposes only)

Firstly: Matching on first match rule only- MoJ records matched to DWP data, unmatched records matched to HMRC data using the same rule.

Match rule 1: Exact match on all 5 variable: firstly MoJ data is matched to DWP data

MoJ records					DWP records				
Forename	Surname	Dob	Sex	Postcode	Forename	Surname	Dob	Sex	Postcode
Daisy	Duck	05/04/1960	F	AB 12CD	Dasy	Duck	05/04/1960	F	AB 12CD
Eeyore	Bear	06/05/1973	M	AB34CD	Jessica	Rabbit	12/04/1987	F	BC34CD
Mad	Hatter	08/10/1979	M	AB56CD	Mad	Hatter	08/10/1979	M	AB56CD
Mary	Poppins	28/02/1981	F	AB78CD	Micky	Mouse	01/01/1940	M	AB90CD
Mickey	Mouse	01/01/1940	M	AB90CD					
Snow	White	01/03/1977	F	BC 12DE					

Unmatched MoJ cases are then matched to HMRC data, again using match rule 1 (exact match on all 5 variables)

Unmatched MoJ records					HMRC records				
Forename	Surname	Dob	Sex	Postcode	Forename	Surname	Dob	Sex	Postcode
Daisy	Duck	05/04/1960	F	AB 12CD	Daisy	Duck	05/04/1960	F	AB 12CD
Eeyore	Bear	06/05/1973	M	AB34CD	Mad	Hatter	08/10/1979	M	AB56CD
Mary	Poppins	28/02/1981	F	AB78CD	Mary	Poppins	28/02/1981	F	AB78CD
Mickey	Mouse	01/01/1940	M	AB90CD	Snowe	White	01/03/1977	F	BC12DE
Snow	White	01/03/1977	F	BC 12DE					

Secondly : Unmatched MoJ records from the steps above were matched to DWP records on rule 2 through to 20:

Match rule 2: All 5 variables with soundex forename (instead of exact forename)

Unmatched MoJ records					DWP records				
Forename	Surname	Dob	Sex	Postcode	Forename	Surname	Dob	Sex	Postcode
Eeyore	Bear	06/05/1973	M	AB34CD	Dasy	Duck	05/04/1960	F	AB 12CD
Mickey	Mouse	01/01/1940	M	AB90CD	Jessica	Rabbit	12/04/1987	F	BC34CD
Snow	White	01/03/1977	F	BC 12DE	Mad	Hatter	08/10/1979	M	AB56CD
					Micky	Mouse	01/01/1940	M	AB90CD

Unmatched MoJ records were then matched on rule 3 to DWP data, and so forth until match rule 20 applied.

Thirdly : The same process as above but here MoJ 'unmatched' records are matched against HMRC data.

Match rule 2: All 5 variables with soundex forename (instead of exact forename)

Unmatched MoJ records					HMRC records				
Forename	Surname	Dob	Sex	Postcode	Forename	Surname	Dob	Sex	Postcode
Eeyore	Bear	06/05/1973	M	AB34CD	Daisy	Duck	05/04/1960	F	AB 12CD
Snow	White	01/03/1977	F	BC 12DE	Mad	Hatter	08/10/1979	M	AB56CD
					Mary	Poppins	28/02/1981	F	AB78CD
					Snowe	White	01/03/1977	F	BC12DE

Unmatched MoJ records matched to on rule 3 to HMRC data, and so forth until match rule 20 applied.

Following the matching process any MoJ records not found were marked as unmatched and were not included in final shared dataset. These records were deleted by DWP. All personal details such as names, dates of birth etc were

deleted after the matching was complete and tested so that the final matched data is anonymised.

Quality assurance

The matching process was subject to a quality assurance process to lower the instance of error. More specifically there can be two measures of error in data matching:

- Type I - an identified but incorrect match (false positive). This is where two records have matched on the MoJ and DWP/HMRC data and thus are treated as being the same person but in reality they are not.
- Type II - an unidentified but correct match (false negative). This is where the same individual does appear in both MoJ and DWP/HMRC data but is not picked up as a match

An ideal match process will minimise the risks for both these types of error. In reality, it is usually the case that reducing the chances of missed matches increases the chances of false positives, and vice versa. It is generally felt that the type I error is more serious, and so steps must be taken to minimise false positives even if this loses some additional true matches.

For this data share the final 20 matching rules that were developed and applied in the 2011 data share were used because we were confident in the checks and quality of the matches. Previously 37 matching rules were originally specified and applied. To quality assure the process, a sample of cases where a match was found from each rule were selected, and the personal details were manually examined to see if human judgement agreed or disagreed that the same person had been found. After examination of the test results and discussion between MOJ and DWP analysts, 17 of the 37 match criteria were abandoned on the grounds that they gave rise to too many false positives (generally, a rule was excluded from the final matching algorithm if there was more than 5% of records that were identified as false positives). This left 20 match rules to be used in the final version of the matched data. The matching methodology was also quality assured by an ONS methodologist who specialised in data matching.

To check that the matching rules were still suitable and resulted in high quality matches on the new data, as before a sample of matches from each rule were selected and personal details were manually checked. From this we are confident with the results that the correct individuals are being matched and in particular that type 1 errors were minimised.

Representativeness of the matched data

As part of the quality assurance of the matched data in the data share, testing was carried out on the matched and unmatched offender files to check the representativeness and quality of the matched data. The matched dataset used in the analysis for this report was compared against the individuals on the Police

National Computer who did not match with any of the DWP/HMRC datasets (unmatched dataset).

Overall, the matched dataset had similar characteristics to the unmatched dataset, in terms of disposal type, offence class and gender.

Some differences were found for age and ethnicity. There was a higher level of 11-17 year olds, as at 1st January 2013 in the unmatched dataset compared to the matched dataset (1% matched, 9% unmatched). This is likely to be those aged 11-17 are less likely to have a DWP or HMRC record as they are less likely to have entered the labour market and be claiming benefits or in P45 employment.

There was also a higher proportion of “White - North European” individuals in the matched data, and a lower proportion of most other ethnicities⁸⁶ (81% matched, 66% unmatched). This is likely due to the variables used to match in the data – Western names are more likely to be correctly recorded and therefore matched across datasets and also more likely to have a better soundex match.

The matched data therefore appears representative in general, although care should be taken when making conclusions on the basis of ethnicity.

The data-share has been produced using administrative data sources whose main purposes are not statistical. Therefore, as with any large scale recording system, the data are subject to possible errors with data entry and processing. Quality assurance procedures were applied to protect the integrity of the matched data including removal of duplicated entries, checks for completeness, and the cleansing of inconsistent data based on business intelligence.

Cleaning

The data-share has been produced using administrative data sources whose main purposes are not statistical. Therefore, as with any large scale recording system, the data are subject to possible errors with data entry and processing. Quality assurance procedures were applied to protect the integrity of the matched data. This included removal of duplicated entries (for example where the same DWP/HMRC individual matched to two or more different MoJ individuals), removing invalid records (for example, the P45 employment and P14 income data includes some benefit spells. Where possible, benefit records have been removed from the P45 employment and P14 income analysis. However, it is not possible to identify all benefit records from the data so some benefit spells and benefit income may remain), and the cleansing of inconsistent data based on business intelligence (for example where benefits spells started before an offender had left prison).

Overall around 116,000 offenders were removed from initial 4.38 million matched PNC offenders, resulting in 4.26 million matched offenders in the final dataset

⁸⁶ The ethnicity variable used for this analysis is based upon the police officer’s visual perception of the ethnic appearance of the offender.

We will be regularly updating this part of the process as we learn and understand more about the intricacies of the data.

Results

Number and proportions of PNC individuals matched

Overall following cleaning 74% of offenders (4.8 million unique offenders) were matched to DWP/HMRC data. The match rate for PNC individuals was higher, this was 81% (before cleaning this was 84% of PNC offenders). All figures in this publication are based on post cleaning PNC matched offenders only. This is a similar match rate to that achieved in the 2011 exercise (86% of PNC offenders) although the figures are not directly comparable because of the changes made. For example in this 2013 data share all offenders were included whereas in 2011 we restricted the age range to those over 16. Also we have identified additional cleaning required this time around.

This means for the unmatched PNC offenders (19% of offenders in the PNC data), we do not have any DWP/HMRC data⁸⁷ This is unlikely to affect the results of analysis however, as work has been undertaken to look at the representativeness of the matched and unmatched data which suggests there is only very limited bias in the matched data (as explained earlier in the 'representativeness of the matched data' section).

Table B.1 provides more details of the match results, including the 20 matching rules used in the final matching algorithm and at which stage the matches were found.

Just under half (48%) of all successful matches were exact matches on all five variables used in the matching algorithm (so they had the same forename, surname, postcode, date of birth and gender), and around 85% of successful matches were exact matches on all five variables, or an exact match on four variables (all excluding postcode) which gives us confidence in the quality of the match⁸⁸

⁸⁷ This includes both a) offenders who genuinely have no benefit or P45 employment records (as for example they are still in some form of education and have not claimed or are self employed and have not claimed benefits), and b) offenders that we have been unable to successfully match who did have a valid benefit or P45 employment record. Unfortunately it is not possible to know the reason why offenders were unmatched.

⁸⁸ We would expect there to be significant numbers of cases where recorded postcode would differ between MoJ data and DWP/HMRC data. DWP data on benefits should reflect the most up to date information on address at the time of benefit claiming, whereas the information on the PNC may be quite old if the offender has not offended recently and has moved home.

Table B.1: Summary of data matching results: MoJ/DWP/HMRC data-share project

Numbers are based as a proportion of the MoJ PNC data sent for matching, and are the results after cleaning.

Match rule	Match criteria (combinations of forename/surname/date of birth/gender /postcode)	Matches	Percentage of	Matches	Percentage	Overall match	
		found with DWP data	all DWP matches	found with P45 HMRC data	of all HMRC matches	(combining DWP and HMRC stages)	Percentage of all matches
1	Exact match on all five variables	1,251,988	43%	772,704	58%	2,024,692	48%
2	Five with soundex forname (instead of exact forename)	30,350	1%	13,423	1%	43,773	1%
3	Five with intial of forename (instead of exact forename)	101,778	3%	10,995	1%	112,773	3%
4	Five with soundex surname (instead of exact surname)	22,909	1%	15,007	1%	37,916	1%
5	Five with soundex forename and surname (instead of exact forename and surname)	1,258	0%	1,074	0%	2,332	0%
6	Five with soundex surname and initial of forename	2,509	0%	759	0%	3,268	0%
7	Exact match on all four variables (excluding gender)	7,092	0%	3,566	0%	10,658	0%
8	Four variables (excluding gender) with soundex forename	326	0%	245	0%	571	0%
9	Four variables (excluding gender) with soundex surname	185	0%	251	0%	436	0%
10	Exact match on all four variables (excluding forename)	7,802	0%	11,415	1%	19,217	0%
11	Exact match on all four variables (excluding postcode)	1,145,976	39%	426,973	32%	1,572,949	37%
12	Exact match on all four variables (excluding surname)	23,208	1%	12,560	1%	35,768	1%
13	Four variables (excluding postcode) with soundex forename	40,646	1%	18,622	1%	59,268	1%
14	Four variables (excluding gender) with soundex surname and initial of forename	1,101	0%	227	0%	1,328	0%
15	Four variables (excluding forename) with soundex surname	346	0%	549	0%	895	0%
16	Four variables (excluding postcode) with initial of forename	286,046	10%	26,696	2%	312,742	7%
17	Four variables (excluding surname) with soundex forename	1,423	0%	827	0%	2,250	0%
18	Four variables (excluding surname) with initial of forename	4,426	0%	1,086	0%	5,512	0%
19	Exact match on all three variables (excluding gender and postcode)	8,052	0%	4,980	0%	13,032	0%
20	Exact match on all three variables (excluding gender and surname)	282	0%	234	0%	516	0%
Total number of individuals matched		2,937,703		1,322,193		4,259,896	
Unmatched individuals		2,292,177		969,984		969,984	
Total numbers of individuals included in data matching						5,229,880	
Match rate						81%	

Numbers and proportion of matched benefits, P45 employment and P14 income spells

Of the 4.3 million matched offenders, the proportion of offenders with each type of record are:

- 77% have at least one benefit spell
- 84% have at least one P45 employment spell
- 80% have at least one P14 income spell

This results in the following number of records:

- 18.6 million DWP benefit spells
- 25.2 million P45 employment spells
- 28.9 million P14 income spells

Frequency distribution of the number of spells:

Benefits

3.3 million offenders in the data-share have at least one benefit spell (77%), where there were 18.6 million benefit spells in total. Table B.2 shows the frequency distribution of the number of benefit claims in the matched data by offenders who made at least one benefit claim over the period Mid 1999 to March 2013. 539,000 offenders have one benefit spell in the dataset. 213,000 offenders have 15 or more benefit spells on the dataset – 5% of all offenders.

The table does not take into account the length of the spell, so the 539,000 million offenders who only had one spell will range from offenders having a sustained benefit claim (for example, covering the whole period) to offenders only having a one day benefit claim. Similarly, offenders with multiple benefit claims are not necessarily on benefits for a longer period of time than those offenders with only one sustained benefit claim.

Table B.2: Frequency distribution of the number of benefit claims by offenders in the matched data between Mid 1999 to March 2013

Number of benefit spells	Number of offenders	Percentage of offenders	Number of spells	Percentage of spells
0	992,000	23%	0	0%
1	539,000	13%	539,000	3%
2	453,000	11%	906,000	5%
3	407,000	10%	1,221,000	7%
4	357,000	8%	1,427,000	8%
5 to 9	953,000	22%	6,260,000	34%
10 to 14	346,000	8%	4,025,000	22%
15 or more	213,000	5%	4,176,000	23%
	4,260,000	100%	18,553,000	100%

Numbers have been rounded to the nearest thousand.

P45 Employment

In total, 3.6 million offenders (84% of the total matched) have had 25.2 million P45 employment spells over the period April 1998 to August 2013. 680,000 offenders have no recorded P45 employment spells over this period.

Table B.3 shows the frequency distribution of the number of P45 employment spells in the matched data for those offenders who have had at least one P45 employment spell. It shows, for instance, that 443,000 offenders have one P45 spell on the database – 2% of the total number of spells, but 10% of all offenders.

As the table does not take into account the length of the spell, the 443,000 offenders who had one spell will range from offenders having a sustained P45 spell (for example, covering the whole period) to offenders only having a one day P45 spell. Similarly, those offenders with multiple P45 spells will not necessarily have had a longer time in P45 employment than those offenders with only one spell.

Table B.3: Frequency distribution of the number of P45 spells by offenders in the matched data between April 1998 to August 2013

Number of P45 employment spells	Number of offenders	Percentage of offenders	Number of spells	Percentage of spells
0	680,000	16%	0	0%
1	443,000	10%	443,000	2%
2	413,000	10%	827,000	3%
3	377,000	9%	1,132,000	4%
4	334,000	8%	1,338,000	5%
5 to 9	1,123,000	26%	7,526,000	30%
10 to 14	504,000	12%	5,881,000	23%
15 or more	384,000	9%	8,041,000	32%
	4,260,000	100%	25,187,000	100%

Numbers have been rounded to the nearest thousand.

P14 income

In total, 3.4 million offenders (80% of the total matched) have had 28.9 million P14 employment spells over the period 2003/04 to 2012/13⁸⁹. 840,000 offenders have no recorded P14 employment spells over this period. 380,000 of the offenders with at least one spell had one P14 income spell, with 498,000 having 15 or more spells.

As with the other tables, caution needs to be applied when using these tables as the figures do not show the length of the spell.

Table B4: Frequency distribution of the number of P14 income spells for offenders in the matched data between the period 2003/04 to 2012/13⁸

Number of P14 income spells	Number of offenders	Percentage of offenders	Number of spells	Percentage of spells
0	840,000	20%	0	0%
1	380,000	9%	380,000	1%
2	259,000	6%	519,000	2%
3	227,000	5%	682,000	2%
4	212,000	5%	850,000	3%
5 to 9	959,000	23%	6,709,000	23%
10 to 14	883,000	21%	10,290,000	36%
15 or more	498,000	12%	9,496,000	33%
	4,260,000	100%	28,925,000	100%

⁸⁹ Some records from 2001/02 are also included

Further information and feedback

If you require further information on the matching methodology or the quality assurance carried out please do contact us. We would welcome any feedback on our data matching methodology and results. In an ideal world we would have a matching methodology with absolutely no error but obviously with real life administrative data that is difficult to achieve, however we are always looking to develop our matching process and minimise error as much as possible, so would welcome any thoughts or suggestions for improvements.

Contact details are available on the last page of this publication.

This publication has been produced by the Ministry of Justice and Department for Work and Pensions. The statistics are produced free from any political interference.

Contact points for further information

Press enquiries should be directed to the Ministry of Justice press office or the Department for Work and Pensions press office:

MOJ

Media Enquiries: 020 3334 3536

Out-of-hours: 07659 173270

Website: www.justice.gov.uk/

DWP

Media Enquiries: 0203 267 5129

Out of hours: 0203 267 5144

Website: <https://www.gov.uk>

Ideas and advice or any enquiries about this analysis should be directed to:

Justice Statistics Analytical Services

7th Floor, 102 Petty France, London SW1H 9AJ

Tel: 020 3334 3737

E-mail: statistics.enquiries@justice.gsi.gov.uk

General enquiries about the statistical work of the Ministry of Justice can also be e-mailed to: statistics.enquiries@justice.gsi.gov.uk

General enquiries about the statistical work of the Department for Work and Pensions can also be e-mailed to: igs.foi@dwp.gsi.gov.uk

Other National Statistics publications, and general information about the official statistics system of the UK, are available from www.statistics.gov.uk